

WriteLog for Windows™

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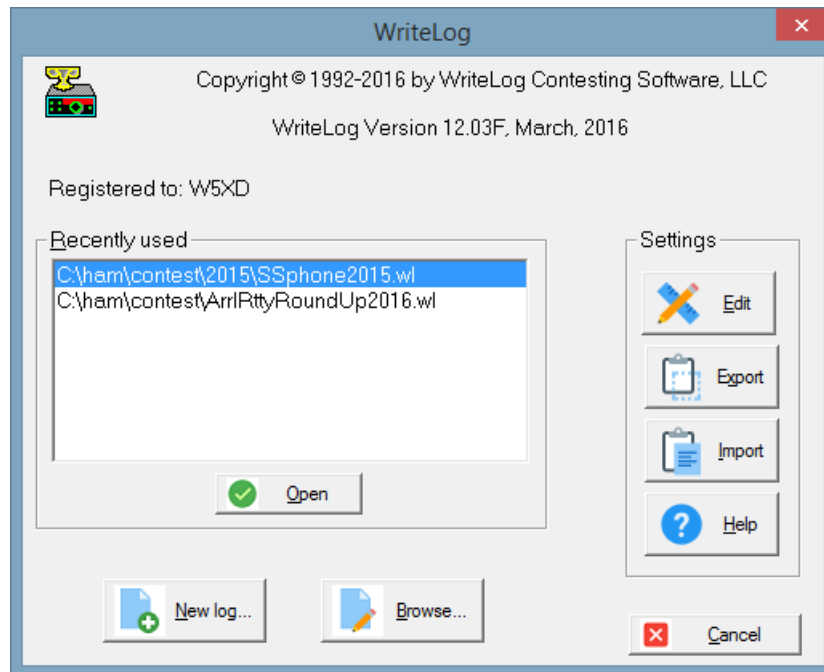
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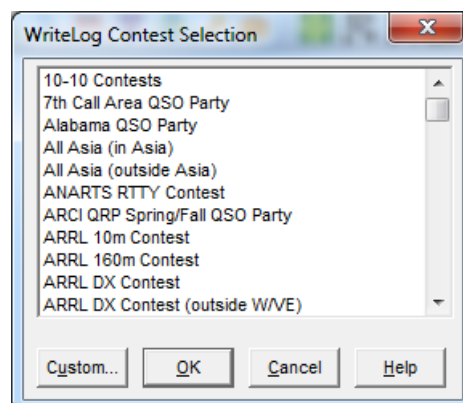
Getting Started with WriteLog

WriteLog takes full advantage of the features of Microsoft Windows so you are free to do many operations in any order you please rather than in the forced order required by DOS programs. This tutorial takes you through one particular order to show you the ropes. Feel free to experiment later, but follow the instructions in this section if you want the screens to look like the tutorial.

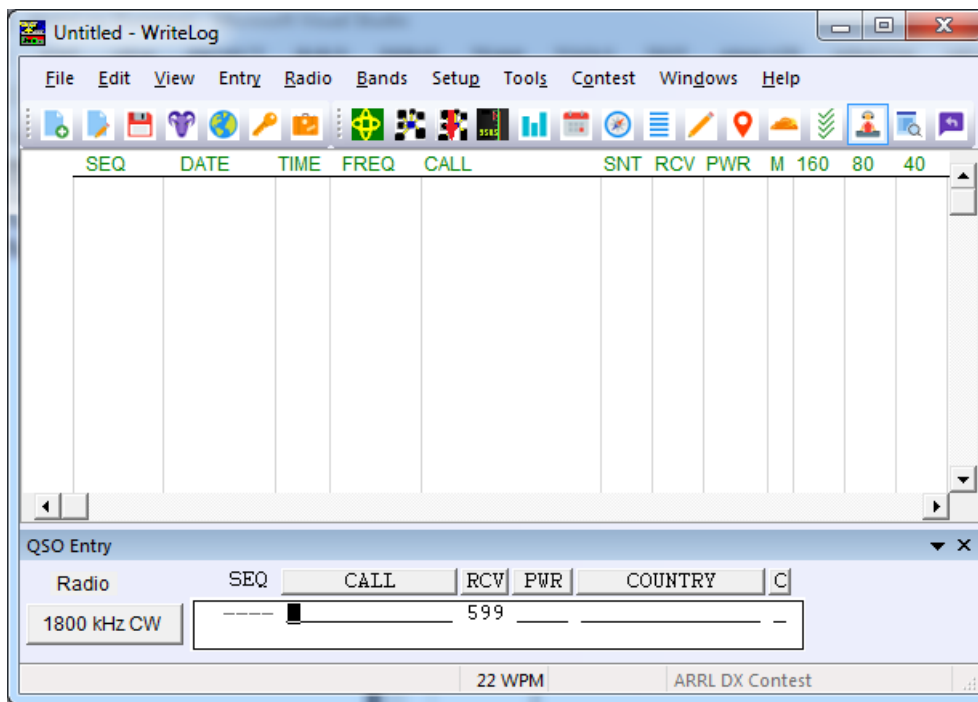
Start WriteLog from the Start Menu group named WriteLog V12. The first screen you see is the startup screen. [More information on the startup screen...](#)




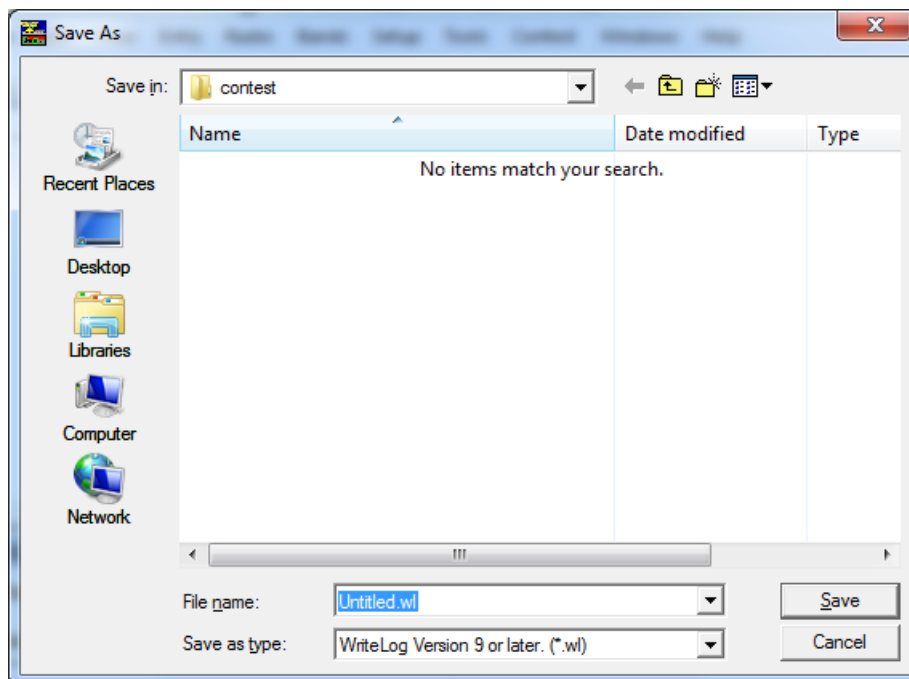
For this example, choose "Start a new log..." WriteLog responds with a dialog box showing the list of contests supported, as shown:



For this example, click on "Arrl DX Contest", and then "OK". The Entry Window has reconfigured to log the contest exchange for the ARRL Dx Contest. It comes up the first time with the screen split into two windows, the [Entry Window](#), and the [Log Window](#). The smaller one, the Entry Window, handles all the transmitter control for sending CQs and messages, and also receives any typed in QSO information from you. (If you're not familiar with the terms "mouse click", "drag", "active window", or "caption bar", then start with a basic tutorial on Microsoft Windows—those concepts aren't covered here. Come back when you're ready.)



The next thing to do after selecting a contest, is to save a copy of what you've done so far. Use the File Save icon  and you get WriteLog's File Save Dialog:



Type in "arrrl dx phone" and that's the name of the file WriteLog will use for the contest.

If you are used to running DOS software, here's an opportunity to deal with Windows ability to run several programs simultaneously: WriteLog has two windows on the screen and will respond quite differently based on which of its windows you have made active. WriteLog shows you when the Entry Window is active by flashing a rectangle. A mouse click on the desired window makes it active. *And you almost always want the Entry Window to be active*

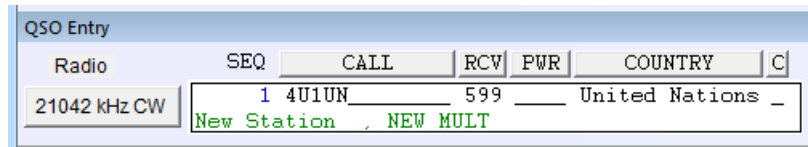
With the [Entry Window](#) active, you can type in information for a QSO and log a QSO, and, if you've told WriteLog how it is connected to your transmitter (see [Setup Ports](#)), transmit CW, digitized voice, or RTTY using the function keys F2 through F11. Note that if the Entry window is *not* active, then you *cannot* type in QSO info, log a QSO, or command your rig to change bands, etc.

With the Log Window you can view and edit existing information for all the QSOs already in the log (there aren't any yet in this example).

Say its the SSB weekend for the ARRL DX Contest and you're tuning 20m. The Entry Window shows "3500KHzCW" which means it is currently set to log QSOs as that frequency and mode, so you need to tell WriteLog what's really happening. Click on the Entry Window to make it active. Then hold down ALT and type the F2 key twice to get to 14000KHz, and hold down CTRL and type the F2 key again to go from CW to USB. (Alternatively, you can click the Entry Windows Band menu,

find the Band Up menu item and click it. Similarly for Mode.) CTRL+F2 again to go back and forth between SSB and CW.

Say you hear 4U1UN. Type in his call, followed by the Space bar (or tab). Your Entry Window looks like this:

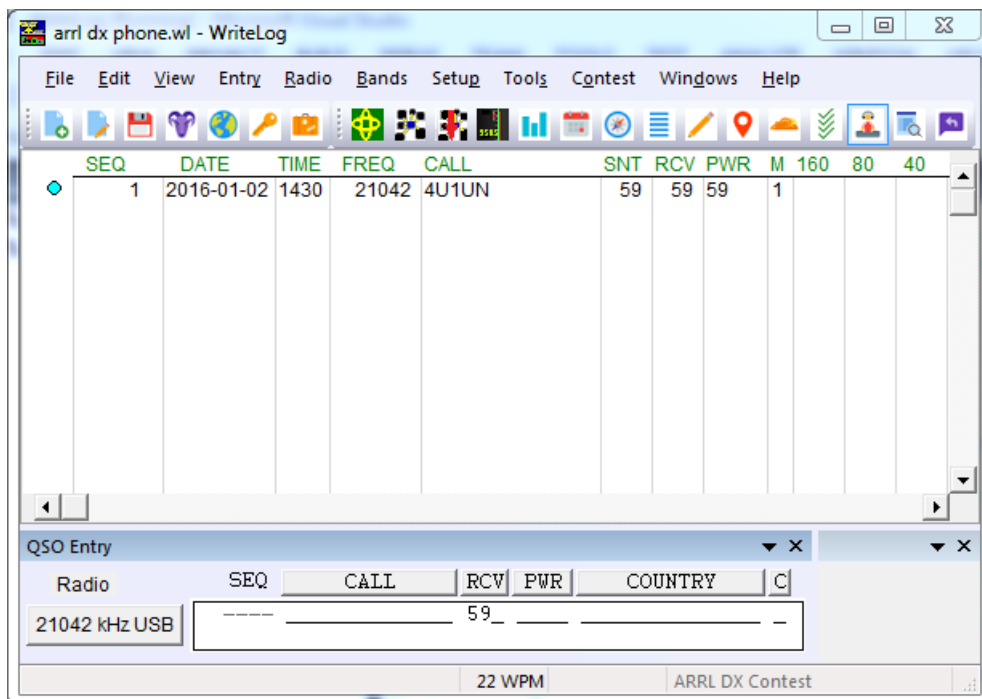


Radio	SEQ	CALL	RCV	PWR	COUNTRY
21042 kHz CW	1	4U1UN	599		United Nations

New Station , NEW MULT

If WriteLog doesn't respond to the characters you typed, then look again at all the windows on your screen. Does WriteLog's Entry window have blinking cursor? If not click on it and try typing again.

WriteLog has run a dupe check on 4U1UN and indicates its a new call on this band. It also can tell from the call that its a DXCC country you haven't worked yet and indicates that by the "NEW MULT" message. Later you can configure WriteLog to control your transmitter, but for now assume you don't have a sound board or DVK and you work him the old fashioned way. Say you send him "59 Texas" and he sends you "59 Kilowatt". You need only type the "KW" in the blanks labelled "PWR". The 59 RST is assumed. Then type the Enter key and the QSO is added to your log. The Entry Window is cleared for the next QSO information and the Log Window now has your QSO logged and you're ready for the next QSO as long as you remain on 20 meters.



SEQ	DATE	TIME	FREQ	CALL	SNT	RCV	PWR	M	160	80	40
1	2016-01-02	1430	21042	4U1UN	59	59	59	1			

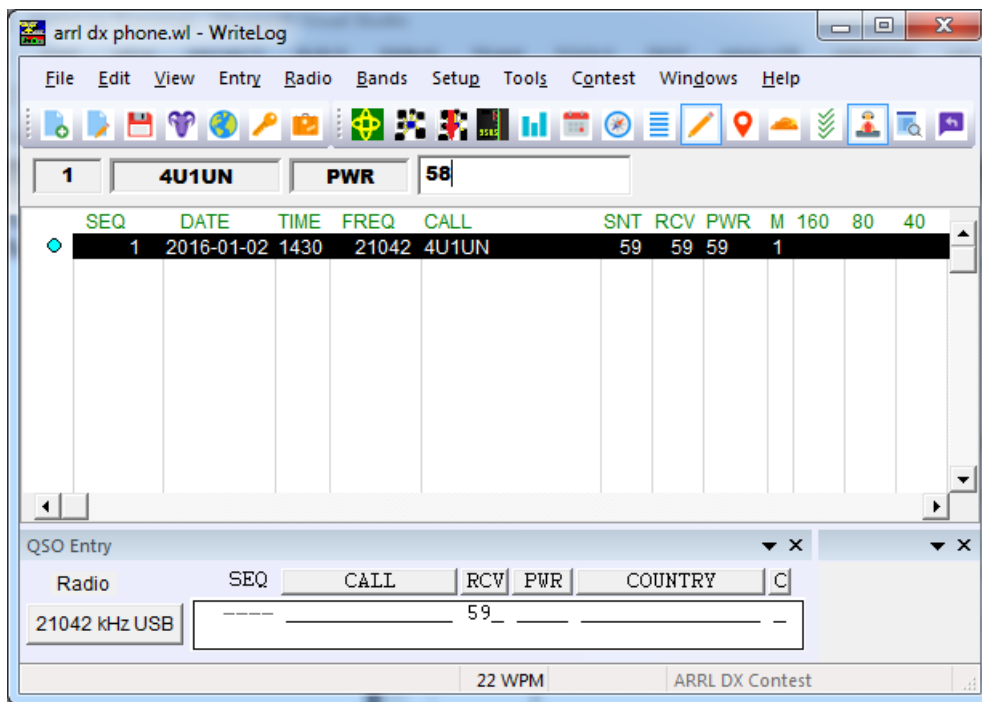
QSO Entry

Radio	SEQ	CALL	RCV	PWR	COUNTRY
21042 kHz USB			59		

22 WPM ARRL DX Contest

Just for practice, assume that you logged the QSO with a 599 but then realized that 4U1UN sent you 589. You can fix this quickly.

In the Log Window, click on the 59 on the 4U1UN row, in the RCV column. The entire QSO row becomes highlighted. Click again in the same place and the Log Window re-arranges itself to make room for an Edit Qso Tool that allows you to edit the RCV data for the QSO:



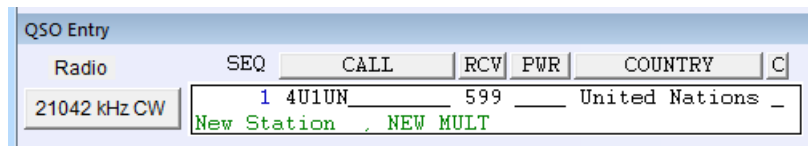
Type in the 58 he sent you and then Enter to modify the previously logged QSO.

That's it. You can log QSOs and save the log. To configure WriteLog to control your rig, look at [Setup Ports](#).

To explore running RTTY, see [RttyRite](#).

QSO Entry

You enter QSO data in the log via the QSO Entry Window:



The screenshot shows the 'QSO Entry' window with the following fields and values:

Radio	SEQ	CALL	RCV	PWR	COUNTRY
21042 kHz CW	1	4U1UN	599		United Nations
		New Station	NEW MULT		

Type in the QSO data and press Enter to log the QSO. This window also responds to mouse clicks to place the text cursor, or to manipulate the frequency memories, or to send [CW](#) messages. You can have multiple QSO Entry Windows up at once by selecting the [Radio Number of Radios](#) menu entry.

Serial numbers

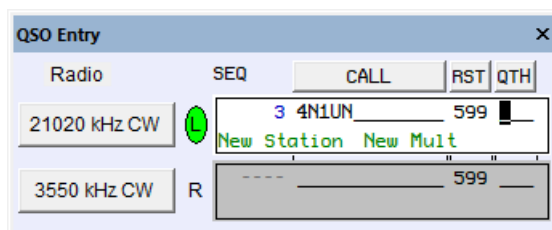
The field labelled SEQ in the Entry Window shows you the serial number that WriteLog will (a) send as a CW, RTTY or voice message and (b) record in the log as the transmitted serial number. Because in a network or when running two radios it is possible for the number of QSOs in the log to change between the time you transmit a number and time you log it, WriteLog calculates the next serial number when you first enter anything in the CALL field. At first it is displayed as gray text. When you make the cursor leave the CALL field (or transmit anything with an F key), it changes the display color to blue. It remembers this blue number during the QSO--i.e. as long as the QSO remains in the Entry Window--and then clears the serial number memory when you log the QSO (with ENTER). It also clears the QSO number on ALT+W and calculates a new one the next time you enter something in the CALL field.

There are three ways to get WriteLog to forget the blue number and assign a new number for the QSO before you log it:

1. Clear the CALL field.
2. Use SHIFT+UP/DOWN to move the keyboard focus to another Entry Window (for two-radio operation) and leave it away for 60 seconds.
3. With the cursor over the left most field in the Entry Window, type Backspace.

You can [edit a serial number](#) after WriteLog enters it as well.

If you set Radio/Number-of-Radios to 2, you get two Entry Windows. The one with keyboard focus has the bright background, while the others are gray.



The screenshot shows two 'QSO Entry' windows. The top window is active and has a bright background. It contains the following fields and values:

Radio	SEQ	CALL	RST	QTH
21020 kHz CW	3	4N1UN	599	
		New Station	New Mult	

Below the top window is a grayed-out version of the same window, labeled 'R' on the left. It contains the following fields and values:

Radio	SEQ	CALL	RST	QTH
3550 kHz CW			599	

If you also set Radio/This-Radio-Is-Left and Radio/This-Radio-is-Right, then you get the L and R indicators shown above, along with a green circle highlighting which of the radios has the transmit focus.

Special characters

The character editing capabilities of the QSO Entry Window are:

BACKSPACE deletes the character to the left of the cursor.

CTRL+D and DELETE are identical and delete the character under the cursor.

CTRL+A moves the cursor to the beginning of the first (left most) field in the entry window.

HOME moves the cursor to the beginning of the current field.

CTRL+E moves the cursor to the end of the last field in the entry window.

END moves the cursor to the end of the current field.

CTRL+F (or right arrow) moves the cursor one character to the right.

CTRL+B (or left arrow) moves the cursor one character to the left.

ALT+W (or CTRL+BACKSPACE) clears all the fields in the Entry window, and places the cursor in the CALL field.

CTRL+W clears the current field.

ALT+T brings up the timed CQ dialog and turns timed CQ on or off.

ALT+C brings up the RttyRite call queue, if you're running RTTY. Otherwise it does nothing.

ALT+L forces a switch to LTRS if you're running RTTY. Otherwise it does nothing.

Keypad * clears the RIT setting on your rig if it is attached and if it supports such an operation.

CTRL+K clears the current field to the right of the cursor.

TAB exits the current field and moves the cursor to the next one to the right, unless there isn't one. SHIFT+TAB goes to the previous one to left.

ENTER causes the current values in the Entry Window to be entered in the log at the end. (See also [Special Message Shortcut Keys](#). If you are calling CQ, you may want to turn on the preference that causes ENTER to simultaneously send CW, move the cursor through the entry fields, and log QSOs.) WriteLog can refuse to enter the QSO if there is something wrong with the entry. If so, it presents a message just below the CALL field saying what its complaining about.

SHIFT+ENTER logs the values in the Entry Window likes ENTER does, but bypasses any error checking and logs the QSO regardless of any errors.

The QSO [fields](#) configured to not accept the SPACE character (*i.e.*, the callsign and numeric fields) usually respond to SPACE by moving the cursor to the beginning of the next field. However, SPACE from the right most field always goes to the CALL field. Typing a SPACE to the CALL field in the rare case (Sweepstakes only) where it is not the left most field goes either to the right, or to the first field whichever is opposite from the way it went the time before.

A right mouse click in this window brings up a menu of items that affect the window, or the radio it controls.

Programmed message transmission

While the most common way of initiating computer controlled message transmission is with the F keys F1 through F11, additional messages are sent using the buttons in the Entry Window that title each column. Edit the message contents for CW transmission by holding down SHIFT when you click on the button. The SSB versions are edited under Setup Edit CW/SSB/RTTY messages. Also, a right click on any of these buttons aborts any message transmission in progress.

Note that **all** the above keyboard keys can have their functions customized using [Tools Keyboard Shortcuts](#). The messages sent from the column title buttons can be programmed using the Keyboard Shortcuts named MessageColumn1 through MessageColumn9;

See also

[Search and Pounce Frequency Memories](#)

[Keyboard Navigation](#)

[Setting the Logging and Duping Frequency](#)

[INI File Options](#)

[Keyboard Shortcuts](#)

[Special Message Shortcut Keys](#)

Search and Pounce Frequency Memories

The Search and Pounce displays the frequency memories and can be turned on and off with the View Search and Pounce menu command.

STO	Station	Frequency	RCL
1	W1AW	3579	1
2	K5DJ	14085	2
3	W57I	7079	3
4	call	0	4

A mouse click in the STO column in the window and on the memory number, will store the current transceiver frequency and display it in the window on the appropriate row. In addition, all the QSO information in the window at that time is stored by WriteLog. A mouse click in the RCL column tunes the transceiver back to the stored frequency, and restores the QSO information to the stored version. Using SHIFT+mouse click exchanges the current data with the memory. The STO and RCL fields in the Entry window work properly for SPLIT operation, recording and restoring both transmit and receive frequencies, and operating mode. The only restriction is that cross mode split operation is not supported.

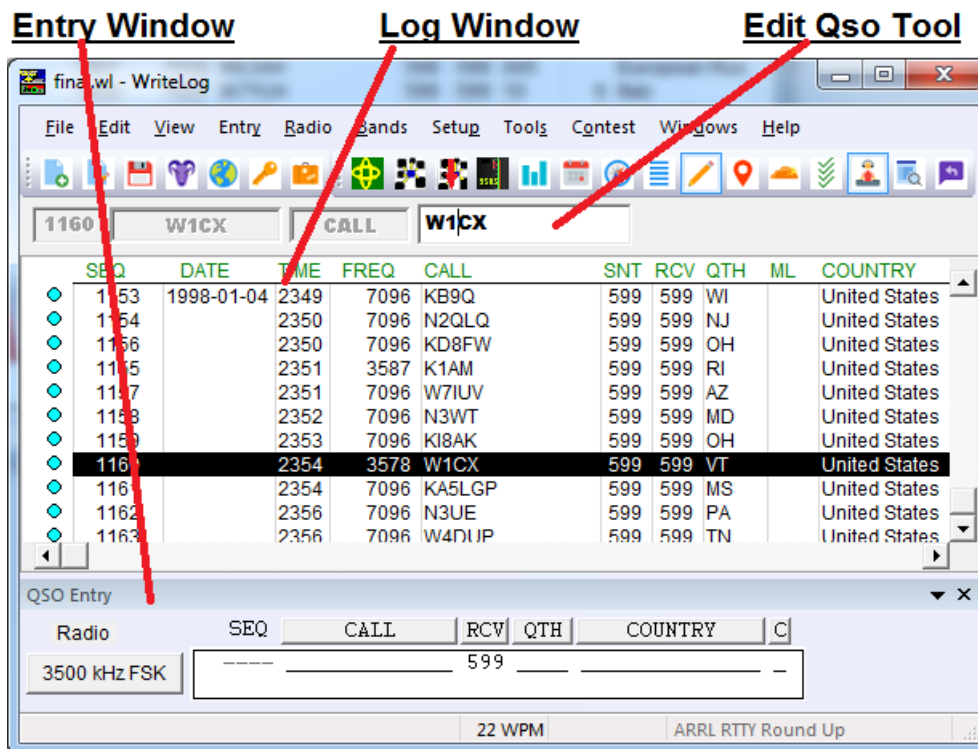
Right click in this window to bring up a menu to set the number of visible memories from 1 to 4.

See also

[Keyboard Navigation](#)

Data Entry and Edit

The two window interface is modeled after what you might do with paper and pencil contest logging. The next blank line on the log or a scratch sheet of paper might be used to copy a callsign or QSO information as it is heard. Once the exchange is QSLed you move on to the next line and update the dupe sheet.



If you make an error entering the data, it can be easily corrected. If the error is still in the [Qso Entry Window](#), then the arrow keys, BACKSPACE, and other control keys are used to quickly correct it. If the error has already been entered into the log, then you activate the [Log window](#) by a mouse button click and edit the QSO data.

Editing in the Log Window

The Log Window is used to select a QSO to be edited. Click on the QSO you want to change--WriteLog will highlight it. Another click on the desired field opens that field for editing which is indicated by the [Edit QSO Tool](#) added to the top of the Log Window (if it wasn't already displayed).

Click on the QSO time or date to modify the date in the log. The up and down arrows can be used to modify the day, month, year, hours and minutes of the QSO. If you have multiple QSOs selected when you edit the time or date, WriteLog will offer to shift all the selected QSOs by the same amount.

To change the frequency or the mode of a QSO in the log, click on the frequency or mode display and then change the entries in the [frequency correction](#) dialog box.

Duplicate QSOs are marked in the log with a single "D" character following the sequence number in the Log window. If a QSO needs to be manually marked as invalid (for example you work a DX station during Sweepstakes), this field can be set to show `X' by highlighting the appropriate QSO (click on it), and typing `X'. This status can be canceled by typing a space instead of an `X'. If you highlight a series of QSOs (using a drag or SHIFT+click operation) the editing operation is applied to all highlighted QSOs.

The above functions are also available if you right-click on a QSO in the log.

Out of band QSOs (for single band entries) are marked in with a "B" character in the same column as duplicate QSOs.

See also

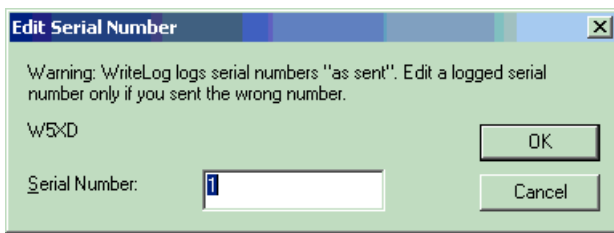
[Keyboard Navigation](#)

[QSL Records](#)

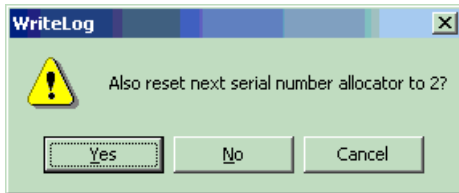
Paste

Serial Number Correction

In the Log Window, click on the Serial Number of a QSO to get the Edit Number dialog box. You may type in a new serial number to be logged with the QSO.



If you select OK, you will get another prompt.



This second prompt is to tell WriteLog to reset its serial number allocation data according to this QSO that you are editing. This is helpful if a wildly incorrect serial number gets logged, especially with networked PCs. If the wrong serial number is higher than any already logged, WriteLog will use the wrong one to calculate new ones. Use this edit box to fix that problem.

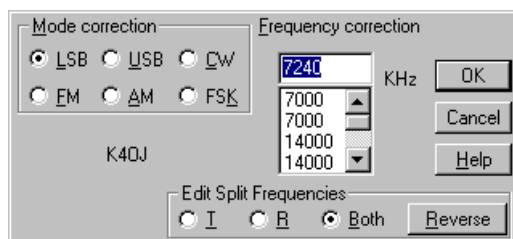
See also

[Editing in the Log Window](#)

[QSO Entry](#)

Frequency Correction

In the Log Window, click on the frequency or mode of a QSO to get the frequency correction dialog box. You may either type in a new frequency, or selection one from the list.



See also

[Keyboard Select](#)


Toolbars

The File toolbar is displayed in a floating or docking bar. The toolbar provides quick mouse access the most-often used File menu entries in WriteLog,





To hide or display the File Toolbar, choose Toolbar from the View menu (ALT, V, T, F).

ClickTo


 Open a new log.


 Open an existing log. WriteLog displays the Open dialog box, in which you can locate and open the desired file.

 Save the log under its current .wl file name. If you have not named the log, WriteLog displays the Save As dialog box.

 Export the log in Cabrillo format for submitting an entry to the contest sponsor. (Why is the icon a goat? Well, that is because the Spanish and Portuguese word for goat meat is *cabrito*.)

 [Download and install country file data](#) from country-files.com. Will ask for an administrator password if necessary

 [Export the log in TQSL format](#) for submission to Logbook of the World

 Export the log in ADIF format for import into other logging programs.

The Window toolbar is displayed in a floating or docking bar. The toolbar provides quick mouse access the most-often used Window menu entries in WriteLog,



To hide or display the Windows Toolbar, choose Toolbar from the View menu (ALT, V, T, W).

ClickTo

 Open the [RttyRite](#) window.

 Open the [Packet terminal](#) window.

 Open the Incoming-only Packet terminal window.

 show/hide the [Band map](#) for the current Entry Window.

 show/hide the [Rate Graph](#) Window.

 show/hide the [Sked editing](#) window.

 show/hide the [Great circle bearings](#) window.

 show/hide the [Band summary](#) window.

 show/hide the [Edit entry](#) window.

 show/hide the [Search and pounce memory](#) window.

 show/hide the [Spots](#) window.

 show/hide the [Qso Entry Window](#).

 show/hide the [Super check partial](#) window.

 show/hide the [Network Gab](#) window.

File Backup

The entire QSO data base is stored in memory, but is written to disk, or read from disk using the File Save and File Open operations. As with important data on any computer, the QSO data base should be periodically written to magnetic storage to protect against loss of data in a power failure.

WriteLog automatically protects newly entered, but not yet saved data. A separate journal file of just the QSO data is kept between Save operations. This journal file (with extension `_jou.adi`) is used in the case of a failure when there are QSOs that had been added to the log (and therefore to the journal file as well), but no Save operation had been used on the full data base. The recovery is automatic: just do a File Open of the WriteLog file you last saved and WriteLog will offer to recover the QSOs in the journal file.

Whether you chose to recover the journal or not, WriteLog renames the journal to `<filename>_bck.adi` (where `<filename>` is the name you have chosen for the file.)

WriteLog deletes the journal file at the end of a successful Save operation, so the journal file contains only those QSOs that do not appear in the newest WriteLog file.

Keyboard Navigation

For fast access, or if you don't have a mouse, WriteLog functions can be accessed using only the keyboard. The scrolling and keyboard focus control are available through the following keyboard shortcuts:

- CTRL+P makes the entry window the active window.
- CTRL+N makes the log window the active window
- CTRL+Y [Edit Keyboard Select](#)

The following apply only to the [Log window](#):

- CTRL+UP ARROW scrolls the window up one line.
- CTRL+DOWN ARROW scrolls the window down one line.
- PAGE UP scrolls the window up one page.
- PAGE DOWN scrolls the window down one page.

The various dialogs containing toggle buttons, radio buttons and push buttons, etc. respond to keyboard commands according to the Windows standard. See your Windows documentation.

See also

[CW Keyboard](#)

[Special Message Shortcut Keys](#)

[Window Edit QSO Tool](#)

[Keyboard Shortcuts](#)

CW Keyboard

The CW keyboard is enabled whenever the [current operating mode](#) is CW. WriteLog sends CW as a background process, meaning that it is not necessary to wait for a CW message to complete before going on to the next operation-like editing a previous QSO, positioning the cursor in the QSO [Entry window](#) to receive the exchange or a fill, or dupe checking a callsign you hear on a second radio. The keyer has its own window which is displayed by the Tools CW keyboard menu entry, however the keyer is available whenever the currently logged mode is CW regardless of whether the keyer window is visible. The following keys are dedicated to CW:

F2 -F11

send the [pre-programmed messages](#).

ALT+K

toggles between displaying the CW keyboard window and shrinking it to an icon.

ESCAPE (as well as SHIFT+HOME)

Aborts the CW message in progress.

ALT+F10

Increases CW speed

ALT+F9

Decreases speed

ALT+SHIFT+F10

Increases CW speed on 2nd radio (one without the current transmit focus)

ALT+SHIFT+F9

Decreases speed on 2nd radio

The following keys affect the CW keyer if the keyboard focus is on the Entry Window:

SHIFT+PAGE UP

Makes CW weighting heavier.

SHIFT+PAGE DOWN

Makes keying lighter.

PAGE UP

Increases CW speed

PAGE DOWN

Decreases speed

+, INSERT, ENTER

are shared with the voice keyer. [See Special Message Shortcut Keys](#).

The CW speed is set to one of 16 speeds between 5 and 50 WPM. If you are running two radios, the Left and Right radios have separate speed settings. You can program the 16 speeds using the CW Speeds button under [Setup Ports](#). The optional outboard keyer has dot and dash paddle inputs for its internal iambic keyer. Pressing either paddle aborts any WriteLog programmed CW output in progress.

While the CW window is active, BACKSPACE deletes the last character in the type ahead buffer. It will not delete the character if the cursor is at the beginning of a line, or if the character has already been sent (or has been transferred into the keyer's 8 letter buffer). If you detect a mistake after it has already been transmitted, type the DELETE key which sends 7 dots.

The keyboard allows typing ahead about 100 characters. Below 15 wpm, individual characters are sent at 15 wpm and the space between them adjusted to provide the lower speed.

The serial number sent by the “%” character by the memory is calculated by WriteLog depending on whether the call sign

field in the Entry window is blank. If the call sign is still blank then the sequence number for the previous QSO is sent; otherwise, the number sent is for the subsequent QSO.

So take care when asked for a repeat of this serial number. If you have already typed Enter, then the memories may only be used if the call sign field is still blank because they will otherwise send the number for the next QSO.

In addition to the CW memories accessed by the keys F2 through F11, there is a separate CW memory associated with each [field](#) in the [Entry Window](#). A click on the title text for that field in the Entry Window sends the message for that field, and a SHIFT+click on that same text brings up a dialog box allowing modification of the CW message to be sent. This useful for programming the query messages to be sent when asking for a fill. For example, the CW message programmed for the "P" field in the Sweepstakes exchange could be programmed to send "PREC?".

See Also

[Special Message Shortcut Keys](#)

[Setup Keyboard Shortcuts](#)

[Setting the Logging and Duping Frequency](#)

[Rig Interfacing](#)

[LPT Port pin Assignments](#)

[CW Interfacing](#)

[Outboard Keyer](#)

Log Preparation

WriteLog prints log sheets and dupe sheets through the standard Windows printer drivers you have installed on your system. It also can generate email messages for Cabrillo entries and for Logbook of the World submissions.

See also

[File Print Setup](#)

[Page Heading](#)

[Print QSOs by Callsign](#)

Print QSOs Chronologically

[QSL Records](#)

[Spreadsheet Formats](#)

[Logbook of the World](#)

[Cabrillo logs](#)

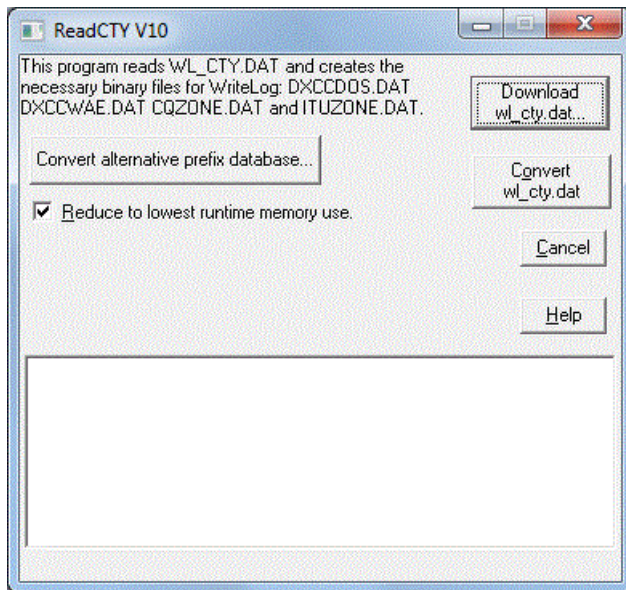
File Web Update Data Files

This menu entry downloads and installs the latest data file updates from the WriteLog website at <http://www.writelog.com>. Click the Download button to initiate the download. If it succeeds, the OK button is enabled. If you want to disable updating of any individual file in the download, then click that file to turn off its highlighting. Similarly, Web Update Country Files updates country files from <http://country-files.com>

Customizing the DXCC list with CTY files

This is an advanced topic. The recommended way to keep the WriteLog country files up to date is using [File Web Update Country Files](#).

WriteLog multiplier modules calculate the DXCC country of callsigns as you enter them. Because the data base used for this calculation must change as world politics change, it is kept in its own files, one for the ARRL DXCC list (used in ARRL contests), and one for the Worked All Europe countries list (used in CQ WW contests). The names of the files used at run time are DXCCDOS.DAT (for the ARRL DXCC list) and DXCCWAE.DAT (for the WAE list), . These two files are updated by the READCTY32.EXE program--included with WriteLog (the one with a globe in its icon), which, in turn, reads WL_CTY.DAT. When processing WL_CTY.DAT, REACTY32 also produces secondary databases, CQZONE.DAT, IARUZONE.DAT, DXCCDOSMM.DAT, and DXCCWAEEMM.DAT, which it places in WriteLog's ProgramData folder. These files are used by various functions internal to WriteLog. (Reacty32-console.exe is the same program, but runs in Windows console mode.)



If you don't have the current wl_cty.dat file on your system, the "Download WL_CTY.DAT" button will download it from <http://www.country-files.com>. (This URL can be changed in writelog.ini, [configuration]wl_cty_dat_url=).

Using the "Convert alternative prefix database" button, ReadCty32 can convert any properly formatted text file to a .bin database suitable for the [Great Circle Bearings](#). In that case, the entries in the CTY file need not be DXCC countries. The Beam Headings window will use the CALL to look up the "country" and latitude and longitude in the CTY file you build, and will display the country and the beam headings and sunrise/sunset for the corresponding latitude and longitude.

READCTY32.EXE reads the same format as the CTY.DAT file used by the CT contest logging program version 9, and translates it into the necessary binary files. To use READCTY32 to translate a CTY file, double click its icon in the Program Manager and click OK and it will create a new DXCC data base for WriteLog multiplier modules.

The CTY file is ASCII and can be maintained with a text editor (like Notepad). Its syntax is:

Every entry in the CTY file corresponds to a single country.

An entry begins with the long name for the country terminated by a colon character.

The next field is the CQ WW zone number, and is also terminated by a colon character.

The next field is the ITU zone number, and is terminated by a colon character.

The next field is the continent abbreviation, and is terminated by a colon character.

The next field is the latitude, and is terminated by a colon character.

The next field is the longitude, and is terminated by a colon character.

The next field is the offset in hours from UTC, and is terminated by a colon character.

The next field is the usual prefix for the country, and is also terminated by a colon character. If you start the prefix with an asterisk, "*", then the country is valid only for CQWW and WAE lists and is ignored for ARRL lists of DXCC countries. If a matching callsign prefix is entered for both a WAE country as well as an ARRL country, that prefix appearing in the ARRL country is ignored for contests that use the WAE list **but** the WAE country **must** be in the file before the ARRL country with

the matching prefix.

The next field is the list of prefixes assigned to that country, each one separated by a comma, and terminated by a semi-colon. If all the prefixes will not fit on a single line, simply continue on a new line.

If the country spans multiple zones, then the prefix may be followed by a CQWW zone number in parenthesis, and it may also be followed by an ITU zone number in square brackets, or both, but the CQ zone number in parenthesis must precede the ITU zone number in square brackets.

A "prefix" can be preceded by an equals sign, "=", to indicate it is not a prefix, but a full call. For example, the entry N3BB(4)[7] applies to N3BBA through N3BBZ as well. But the entry =N3BB(4)[7] leaves N3BBA through BBZ in zones (5)[8].

For example, the following entry:

```
Rotuma: 32: 56: OC: -12.30: -177.70: -12.0: 3D2/r:  
3D2AG,3D2AP,3D2DD,3D2RJ,3D2RW,3D2XR,3D2XV,3D2XX;
```

Causes WriteLog to assign all calls starting with the letters 3D2AG, 3D2AP, etc. to the country Rotuma in CQ zone 32, ITU zone 56. In addition, WriteLog shows "3D2/r" as the prefix in the multiplier display.

Note that WriteLog does not limit a call sign prefix to a single DXCC country--you may put the same prefix in more than one country and WriteLog will indicate to you when the call is entered that it is ambiguous and allow you to select from among the options using the column labeled "C".

Of the several possibilities, the usual prefix ("3D2/r" in the example) for the following countries is required by the multiplier modules. Note that for the multiplier modules, the case of prefixes does count--all must be in upper case:

"K"	United States (note this is <i>not</i> "W")
"VE"	Canada
"KP4"	Puerto Rico
"KH6"	Hawaii
"KP2"	Virgin Islands
"KL7"	Alaska

Because WriteLog can also read a slightly enhanced format of the countries file, it looks for the file WL_CTY.DAT to distinguish it from an unmodified version for CT. The enhancement is necessary because WriteLog derives **all** of its country and zone data from the. The missing information that WriteLog needs but is missing in CTY.DAT is the CQWW zone information for several countries including: Canada, Australia, and China. Because each of these countries is allocated a multitude of prefixes, but the CQWW zone is determined by the call area regardless of prefix, a very large number of entries would be necessary to spell out all the combinations. Instead, WL_CTY.DAT contains special "macro" commands that indicate how the CQWW zones are determined for that country. Here is a simplified example:

```
Asiatic Russia: 17: 30: AS: 55.00: -83.00: -7.0: UA9:  
# U8: U8T(18)[32], U8I(18);  
# U9: U9T(18)[32], U9I(18);  
# U0: U0T(18)[32], U0I(18);  
R0, R8, R9, U0, U8, U9, RA0, RA8, RA9, RB0, RB8, RB9,  
UA0, UA9, UA9, UB0, UB8, UB9;
```

The macros start with # and end with the next ; In this example, there are three macros: U8, U9, and U0. The U8 macro only gets applied to the prefixes from the call area number 8 (which are R8, U8, RA8, RB8, UB8 in this example). Applying the macro means that not only is U8T in zones (18)[32], but R8T, RA8T, RB8T, UB8T are in (18)[32] as well. The macro is just a way to simplify making all those entries into WL_CTY.DAT.

Details of how the macro is applied by READCTY32.EXE

The macro is applied to the prefixes in the list for the country depending on whether a call area number appears in the macro definition, and whether a call area number appears in the prefix list for the country. The macro is applied only to prefixes that have the call area number that matches the call area number in the macro definition, and if the macro has no call area number in its definition, then it is applied only to prefixes that also have no call area. Macros are never applied to prefixes that are marked to be a whole call (using the "=" flag), prefixes containing the slash character ("/"), and prefixes that have any letters after a call area number. (A call area number is considered to appear in a macro definition if it has a digit that is not the first character in the definition, and the same rule applies to the prefixes).

Updating Multiplier Lists

Many contests that have a list of named multipliers that you work for multiplier credit. WriteLog gets the list of multipliers from a file or files in the WriteLog folder in the system-wide Windows Common AppData directory, which is C:\ProgramData\WriteLog on normal Windows desktop installs. All multipliers for all contests are in this folder. The files as installed with the program may be come outdated. The recommended way to get the latest multiplier definitions is to use WriteLog's File menu, [Web Update commands](#).

If you find you want to edit it, editing may be done with a text editor.

Various contests have individual sections in NAMEDMUL.INI, starting with its name in square brackets. For example:

```
[NAQP]
CT=1
MA=1
NJ=2
NY=2
DE=3
```

The names that count as multipliers appear to the left of the equal signs, and the number of multipliers in the contest is the number of lines with equal signs in the section (up to the next square brackets).

The digits (or letters--it doesn't matter) to the right of the equal sign are used only to group the multipliers together in the display.

Each contest also has a second section with the name "-ALIAS" appended:

```
[NAQP-ALIAS]
OKLA=OK
CN=CT
CON=CT
```

In this section, the letters to the right of the equal sign are an "alias" or alternative name for the multiplier named on the left of the equal sign. WriteLog silently ignores any aliases in this section that have something on the right hand side that does not match any multiplier in the contest's other section.

Other contests have individual INI files in that same Common AppData folder.

See Also

<http://writelog.com/writelog-versions#MULTIPLIER>

Setting the Logging and Duping Frequency

The frequency and mode information for QSOs are acquired according to the settings in the [Setup Ports](#) dialog. If RS-232 rig control is enabled, then the frequency and mode are acquired from the rig directly. If not, then the values you have entered in the Band Set Frequency dialog are logged. In either case, the same mode information is also used to determine whether the F2 through F11 keys transmit CW or voice.

In the automatic case, split frequency operation is supported--both transmit and receive frequencies are stored internally for all QSOs but only the transmit frequency is used for the dupe check.

Normally WriteLog will either get its frequencies from either manual input to the Entry Window, or from a computer controlled rig attached to a serial port. You use the Band Set Frequency&Mode menu entry to indicate your choice. Any radio you have connected may be selected from the list. If you have configured any antenna relays to be switched according to manually entered frequencies, they will also appear in the list.

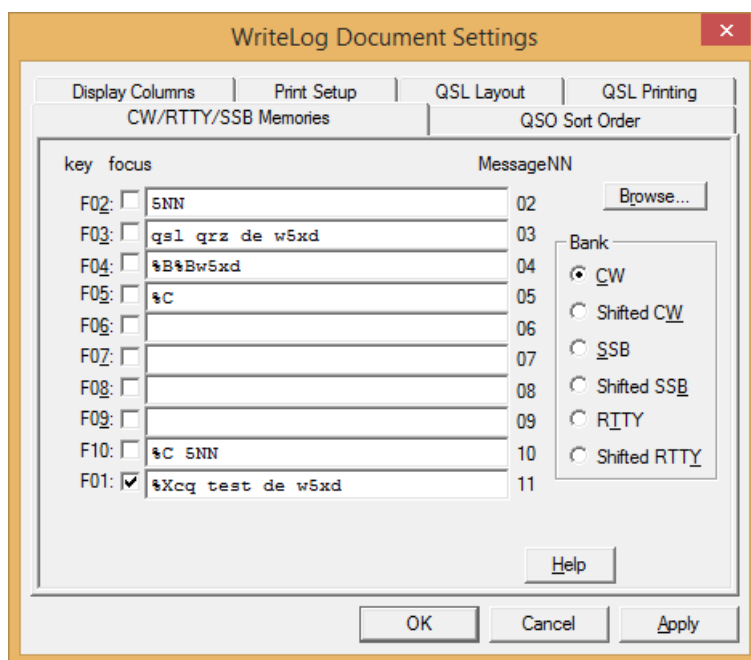
The result of a dupe check is displayed in the Entry window and is either "New Station" or "Dupe on FFF at TTT RRR" where FFF is the frequency recorded for the previous QSO, TTT is the time and RRR is part of the text from the log entry of that QSO. (You control which [field](#) in the exchange this text comes from when you [edit the exchange](#).)

See also

[Quick Band and Mode Selection](#)

CW and RTTY and Voice Memory Setup

The CW (and RTTY) memories for the messages on function keys F2 through F11 are programmed using this dialog box. Hint: you will normally want to add a space character as the last character in the memory so that if you type message keys in succession, a space is sent between them.



There are twenty memories you may program to send transmissions for each mode, CW, RTTY, and Phone. They are labeled "Normal" and "Shifted" because WriteLog's default keyboard shortcut settings put the first ten on F2 through F11, and the second ten on Shift+F2 through Shift+F11. (Why not start with F1? its a long story going back to Windows 3.0 where F1 was designated as a Help key. Current versions of WriteLog put the same message on F1 as F11, and you are free to remove this redundancy using Setup Keyboard Shortcuts.)

The key column shows what keyboard key is currently mapped (using Setup/Keyboard-Shortcuts) to the message, and the *MessageNN* column shows the message number (which you cannot change.)

The *focus* column indicates which of the memories has a leading %X character sequence (see [below](#).)

WriteLog reads the mode from the rig (or from your manually entered mode setting, if you do not have a rig on a COM port) to decide which of the 3 sets of memories it will use, CW, Phone, or RTTY.

If you have a .WL file saved from some other contest, you can read the CW memories from it by clicking on the Browse button.

The memories have the following special properties if there is a "%" character followed by a:

digit n (in the range 1 through 5)

the current QSO number is substituted for the % when that message is sent. The number sent will be preceded by enough zero characters in Morse (or "0" digits in RTTY) to ensure that at least n characters are transmitted. In CW mode, the character that is sent taken from the INI setting for LeadingZero in [\[Cut-Numbers\]](#). For example, if the sequence number is one, and there is a "%3" in the F3 field, then pressing F3 will send "TT1". This is for contests that require a "three digit serial number".

the letter "A"

This marks the beginning of an atomic string that is flagged from being interrupted by an external plugin like the [dual run mode dll](#) that uses the automation call [AbortOrShortenCwCQ](#). The atomic string begin with the space or a dot-length space ("^") that *must* follow the %A, and ends at the next space or dot-length space, or the end of the message.

the letter "B"

The characters in the memory between a %B and a following %B are ignored (and not sent) unless the current Entry window has at least one character in its CALL field and that call sign is a duplicate on the Entry window's current band. Under these conditions, the characters between the %B's are sent, and any characters following the final %B are ignored. If there is a %C before the %B in the memory, then when the "*Special case*" for %C described above is in effect, the dupe check is also held until you tab or space out of the CALL field. In this special case, only one pair of %B characters will be correctly processed, and they must appear after the %C.

the letter "C"

the contents of the "CALL" field in the entry window are sent. If the CALL field is blank, then the CALL from the previous QSO is sent.

Special case: If, when you press the function key corresponding to a memory with %C in it, you also have the cursor in the CALL field of the Entry window, then WriteLog switches to live CW transmission from the Entry window. Each key you type not only is recorded in the CALL field but is also transmitted as CW at the appropriate time. WriteLog shows you it has entered this mode by drawing a red rectangle around the CALL box. Typing BACKSPACE attempts to not send the last character. (Some CW keyer options (PK-232 and W5XD keyer) do not support this option.) Any characters following the %C in the memory are held until you tab or space out of the CALL field, or until the message being sent catches up to your typing, or if you stop typing for more than 1 second. (You can extend or shorten the 1 second delay using the LiveCwDelayMs entry in the [configuration] section of WRITELOG.INI.)

the letter "D"

Like "C", the contents of the "CALL" field in the entry window are sent, but the special handling when the cursor is in the CALL field does not happen, and, if the CALL field is blank, it does *not* send the previously logged call.

the letter "E"

an end-of-transmission character is added to the transmit buffer to switch back to receive mode (only useful for RTTY).

the letter "F" followed by a digit n

the exchange field number n from the entry window is sent. The numbering of exchange fields is left to right starting with one. If the name of field n is "SNT", then "599" is sent as "5NN".

the letters "GA" followed by digits

The rig command number indicated by the digits is sent to radio number 1.

the letters "GB" followed by digits

The rig command number indicated by the digits is sent to radio number 2.

the letters "GC" followed by digits

The rig command number indicated by the digits is sent to radio number 3.

the letters "GD" followed by digits

The rig command number indicated by the digits is sent to radio number 4.

the letters "GK" followed by digits

The rig command number indicated by the digits is sent to the radio with the keyboard focus. (Except a leading %X will cause the entire message, including this command, to the transmit-focused rig instead.)

the letters "GP"

WriteLog polls the rig through its COM port driver to detect the end PTT. WriteLog invokes this polling only if the message is otherwise empty, that is, sends no CW, RTTY or SSB WAV messages. Therefore make sure there are no blank spaces in the message. Note that programming %GK to invoke an external (non-WriteLog) DVK does otherwise leave the message blank, and is processed along with the %GP in the order they appear. So %GKnn followed by %GP enables WriteLog to use an external DVK as if it were a supported one as long as the %GK has the effect of getting the rig's PTT set to on. WriteLog ignores %GP if the rig driver does not support PTT polling. Only certain WriteLog rig drivers support this feature. Currently, only the [Elecraft K3 rig driver](#) is supported.

the letter "H"

The callsign in the Entry window is looked up in "Friend.ini". If it is found then the text corresponding to the call is sent. So if, for example, Friend.ini contains the entry "W5XD=HI WAYNE", then, if W5XD is the call in the Entry window, then "HI WAYNE" is sent instead of the "%H". By default, the section in Friend.ini that is used is "[HI]", but the "HI_SECTION" entry in the "[Configuration]" section of WriteLog.ini can be edited such that WriteLog will lookup some other section in "Friend.ini". The file friend.ini is looked up first in the default data files folder, normally My Programs\WriteLog\contest (the folder specified in [configuration]datafiles). If its not found there, then it looks in WriteLog's installation directory for the file.

the letter "I"

A type-in box pops up and any characters typed into the box are inserted in the message in place of the "%I". Clicking the Cancel button on the type-in box cancels the entire message.

the letter "L"

The QSO in the Entry Window is logged.

the letter "M" followed by digit(s) n

the entire contents of the memory Fn are inserted into this message. For example, %M2 inserts the message for F2. Add 20 for shifted memories, so %M22 inserts the message for SHIFT+F2.

the letter "N" optionally followed by a digit n

the serial number is sent, padded with leading zeros if necessary to get to n digits. If the mode is CW, all the digits in the serial number are translated to letters according the [\[Cut-Numbers\]](#) section in WRITELOG.INI.

the letter "O"

The RIT is cleared on the connected radio (if its radio interface supports this function).

the letter "P" followed by a digit n

the exchange field number n from the previous QSO is sent. The numbering of exchange fields is left to right starting with one. If the digit n is zero, then the previously logged serial number is sent. If networking is enabled, then the "previous QSO" is the one on the same radio as the message.

the letter "R"

a newline character is sent (only useful for RTTY).

the letter "T"

the time of day in four digits is sent.

the letter "W"

The Entry Window is cleared.

the letter "X"

In two-radio operation, sending a f-key message normally switches the transmit focus to match the keyboard focus. The leading %X instead retains the current transmit focus. The %X sequence is ignored if it appears anywhere other than the very beginning of the message, and it is ignored if the transmit focus and keyboard focus are already the same. This command interacts with the [Auto-Resume CQ](#) function. Placing a %X at the beginning of a message for *any* mode gives this retain-transmit-focus behavior for *all* modes. (Why? Because in a multi-mode contest it is possible to run SO2R on two different modes and it makes no sense for one mode to do what the other does not.)

the letter "Z" followed (optionally) by a letter A-Z and (optionally) the decimal point ("." character) and (optionally) a digit n

If there is a letter, the networked station of that letter and its radio specified by the number n is sent. If there is no letter between Z and the digit, then the frequency for the radio in Entry window number n is sent. If there is a decimal point, the frequency is sent in 100Hz resolution. If n is 1, it is the top window, if n is 2 its the next one down, and so on. If there is no digit, then the corresponding Entry window is the below the currently active one, or the top one if currently active window is the bottom one.

any other character

the current QSO number using the minimum number of digits is sent.

The programming of the memories can get a little complex. Here is an example for the Sweepstakes exchange:

```
"%C %BQSO B4%BNR % B W5XD 71 STX"
```

This means: send the other station's call followed by a space. Then do a dupe check on the call in the current Entry window. If the station is a dupe, then send "QSO B4", otherwise send NR, compute the next sequence number and send it, followed by "B W5XD 71 STX". There is no way to override the dupe check. If you want to send the exchange to someone that is a dupe in your log, then you must program an additional function key without the %B characters.

Sound Board Voice keying only

Use the SSB button (or [Shifted SSB](#) button) to edit the memories WriteLog uses when the mode is a voice mode. You may use the "<" and ">" characters to include the name of a WAV file to be transmitted instead of sounding out letters. For example:

```
%C<MSG2.wav>%1<MSG3.wav>
```

sounds out the callsign, transmits MSG2.wav, sounds out the current serial number, and transmits MSG3.wav.

CW Only

The CW keyer can also be programmed to temporarily change the CW speed during the transmission of a CW memory message. A "<" character in the message causes the speed to step up one step and a ">" character causes the speed to step down one. These characters should be matched in the message (i.e. every "<" should have a matching ">") although the speed will revert back to the normal speed within 5 seconds after the transmission of a CW message with unmatched speed steps.

Morse prosigns are entered in the memories using ASCII characters that don't appear in the Morse alphabet:

SK	[
AR	@ (also TAB on the CW keyboard)
AS]
AA	+
BT	-
KN	#
	^ dot-length space (also called half space, but its a dot-length) The caret is upper case 6 on U.S. keyboards.

RTTY Only

Programmed RTTY messages are processed the same as CW messages. Earlier versions of WriteLog used the same programs for both CW and RTTY. When you use WriteLog to open a .wl file created by such an older version, the CW/RTTY messages in the .wl file are duplicated into the RTTY-only messages.

See also

[Sound Board Voice Keying](#)

[Cw Keyboard](#)

[Special Message Shortcut Keys](#)

Setup Ports

Use the this menu entry to tell WriteLog how you have made your connections. Note, WriteLog's [packet window](#) and [RTTY window](#) also can use COMM ports. No two WriteLog windows can simultaneously use the same COMM port.

Rig Type	COM	CW	DVK	Ant relay	Baud Rate	Poll	Comm PTT
Elecraft K2	COM9	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	4800	<input checked="" type="checkbox"/>	NO
Flex-6000 series	Mayfield	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	default	<input checked="" type="checkbox"/>	YES
No Rig	COM3	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	default	<input checked="" type="checkbox"/>	NO
No Rig	COM4	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	default	<input checked="" type="checkbox"/>	NO

DVK type	LPT1	LPT2	LPT3
Windows sound board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CW keyer type
w5xd multi-MK1100

SO2R Control
w5xd multi-MK1100

Start on the left by setting the right-most column, Rig Type, because it may change the options in the columns to the right.

The COMn entries can be changed. WriteLog is limited to controlling at most four rigs on four different COM ports, but those COM port numbers can be any from COM1 through COM16.

LPT support is deprecated in Windows 10. It remains in this Setup dialog only for the case that you have installed a third party LPT driver that enables Windows 95-style LPT access using x86 IN/OUT instructions.

You may select up to four rigs to be controlled but only one CW output and only one DVK output.

Rigs

Any type of rig can be on each COMM port. WriteLog is programmed to drive the rig at a baud rate set from the rig's documentation, but some rigs are capable of higher speeds with special settings. You may override WriteLog's speed setting for each rig.

Poll

Normally leave this button on. But if you have an older rig that behaves poorly when being continuously polled, you can turn this button off. With this button off, WriteLog only queries the rig when it does a dupe check. The bandmap won't follow as you tune the dial this way, but logged QSOs will be on frequency.

Comm PTT

The purpose of this setting is to accommodate rigs that have synchronization restrictions between being polled for their frequency and accepting PTT commands. This setting only has an effect if the rig supports PTT commands over its serial port. Most Kenwood and Yaesu do. Most Icom do not, but some do. The available settings if you have rig on the comm port:

NO

WriteLog never sends PTT commands to this rig on its serial port.

YES

WriteLog sends PTT commands to the rig with no timing restrictions with respect to frequency polling. This is the higher performance than the Sync setting, but there are rigs that cannot be commanded to PTT during a frequency poll.

Sync

WriteLog does not poll the rig during a transmission, and, if you happen to press an F key during a poll, WriteLog delays the transmission until the rig completes its response to the poll. This is for rigs that cannot transmit and talk on their serial port simultaneously.

RTS

Instead of any of the above, WriteLog asserts the RTS line on the rig's COM port for PTT.

If you have "No rig" for Rig Type, the available settings are:

NO

Does not touch the corresponding COM port

RTS

WriteLog puts a PTT signal on this COM port in addition to anywhere else you have WriteLog configured to assert PTT.

Or if you have the COMM port row set to send CW and also have set either the K1EL WinKey or K1EL WinKeyer2, then the Comm PTT settings are for the RTS line on that COMM port.

RTS ON

WriteLog keeps the RTS signal ON. (This is the normal setting.)

RTS OFF

WriteLog keeps the RTS signal OFF.

RTS PTT

WriteLog puts a PTT signal on this COM port in addition to anywhere else you have WriteLog configured to assert PTT.

DVK

Select an LPT port in this column to tell WriteLog which port you have a NA-style DVK, or which port you have set up for a W9XT card.

DVK Type

The NA Interface is line printer port based. If you choose sound board, the DVK LPT port you select is not used for DVK transmission, but is still used for PTT and A/B output.

CW Keyer Type

Tell WriteLog whether you have the W5XD CW keyer, an AEA PK-232 multimode controller on its own comm port, WinKey (also on a dedicated COMM port) or whether WriteLog should send CW over a comm port DTR line, or on an LPT port. The K1EL Winkeyer2 setting differs from WinKey only in that WriteLog sets its output pins on Radio L/R according to the active radio, and WriteLog offers no sidetone options for the K1EL Winkey setting (only PTT is supported on pin 5.) Note on the PK-232: WriteLog uses the WRITELOG.INI [Ports] settings for the COMM port you select for this device. Be sure to set "8 bits NO Parity". The baud rate is usually 1200, but the PK-232 has an internal battery that backs up its baud rate settings, so you must set your Windows Control Panel to match the PK-232 settings. The "WinKey+OTRSP pipes" setting needs no COMM ports, but requires a version of OTRSP that supports pipes.

SO2R Control

For all Single-Operator-2-Radio controllers except the Open Two Radio Switching Protocol are built into their respective CW keyers. Some of them require an associated COM port. Select that COM port to the right of the SO2R Control.

Antenna Relay

WriteLog will assert the band number on the selected LPT port. If you select any antenna relays, then you get an additional dialog box so that you tell WriteLog where to get the frequency that drives the antenna relays. The decision point for the bands is 100KHz below the legal band edge. The pins used are: 9 (MSB), 8, 7, and 2(LSB). The codes are: 160m (0001), 80m(0010), 40m(0011), 30m(0100), 20m(0101), 17m(0110), 15m(0111), 12m(1000), 10m(1001), 6m (1010), 2m (1011), 222(1100), 420 (1101), 900(1110), 1.2G (1111). Operation on the microwave bands above 1.2G also appears on the selected LPT, but the codes are reused: 2.3G (0001), 3.3G(0010), 5.6G(0011), 10G(0100), 24G(0101), 47G(0110), 75G (0111), 119G(1000), 142G(1001), 241G(1010). You may override the code assignments using the [\[BandRelayEncode\]](#) section in WRITELOG.INI

PTT on CW Port RTS

If you select CW on a COM port, WriteLog will put PTT signals on the same port on its RTS output. This is for all modes, not just CW, and this PTT signal is in addition to any that WriteLog might put on an LPT port or through rig control.

The settings in this dialog box are written to WRITELOG.INI by the [Setup Save Configuration](#) menu entry. The file is written to the Windows system directory, and WriteLog will automatically set these values from that file the next time you start it.

LPT port PTT and A/B radio select

WriteLog outputs a rig A/B output on pin 14 and outputs a PTT signal on pin 16 on the LPT port selected for CW, and on the LPT port selected for the DVK, and on all LPT ports selected to have antenna relays.

microHAM M2KR

Using this device from WriteLog requires two COMM ports. The one with the K1EL WinKey (see the microHAM documentation) is the one you specify in the upper left of this dialog. The MK2R control port is specified in the SO2R Control area.

W9XT card

WriteLog supports transmitting CW, and supports recording and transmitting recorded voice transmissions on the W9XT card, but only on Windows 95/98, not Windows NT/2000. The card has 4 voice messages on it. They are on F3, F4, F5 and F6. Pressing SHIFT+F3 (or F4, F5, or F6) starts a recording on the corresponding memory and pressing ESCAPE terminates the recording.

LPT ports on Windows XP/2000

WriteLog normally does not support any LPT port functions on Windows XP or later. However, there are 3rd party products that can enable this feature. Try <http://www.direct-io.com>. WriteLog automatically detects whether you have installed such a product. Without them, WriteLog grays out the LPT columns in the Port Setup dialog box as in the example above.

See also

[Setup Rotators](#)

[SO2V Options](#)

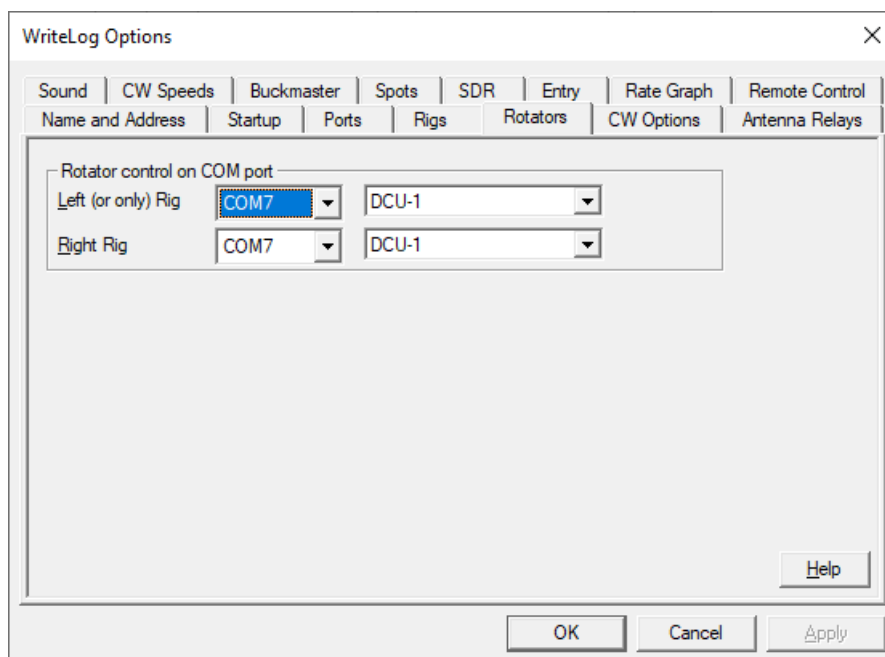
[Rig Interfacing](#)

[LPT Port pin Assignments](#)

[Wave File Locate](#)

[Setup CW Options](#)

Setup Rotators



Rotator control on COM port

WriteLog can control up to two antenna rotators on COM ports. Such a COM port cannot be shared with rig control or CW or PTT. Selecting a COM port in this box also enables the Radio Antenna to this Azimuth menu command. Both the L and R rig may control the same rotator if you select the same COM port number and type for both.

These protocols are supported:

DCU-1: the COMM port is set to 4800 baud, no parity, 8 bits, 1 stop bit. No INI settings affect this.

Yaesu: the COMM port settings are determined by the appropriate COMn: entry in the [Ports] section of WRITELOG.INI.

TIC: the COMM port is set to 2400 baud, no parity, 8 bits, 1 stop bit. No INI settings affect this.

Sartek: WriteLog uses the Sartek program to drive the antenna rotator. The COMM port settings are determined by the Sartek software, not WriteLog. Use the MSG setting in the Port setting.

RC2800/RC2800PX: the COMM port is set to 9600 baud, no parity, 8 bits, 1 stop bit. No INI settings affect this. The difference between the PX model and the older one is significant. Check your rotator documentation, or try both and use the one that works.

ARSWIN: WriteLog uses the ARSWIN program to drive the antenna rotator. No COMM port is used. Use the MSG setting.

The COMM port setting for Rotator control can be None, COM1: through COM8: or MSG. The None setting disables rotator control altogether, the COMn settings use the indicated COMM port, and the MSG setting indicates the rotator control uses a message interface to some other program.

See also

[Setup Ports](#)

[Rig Interfacing](#)

[LPT Port pin Assignments](#)

[Wave File Locate](#)

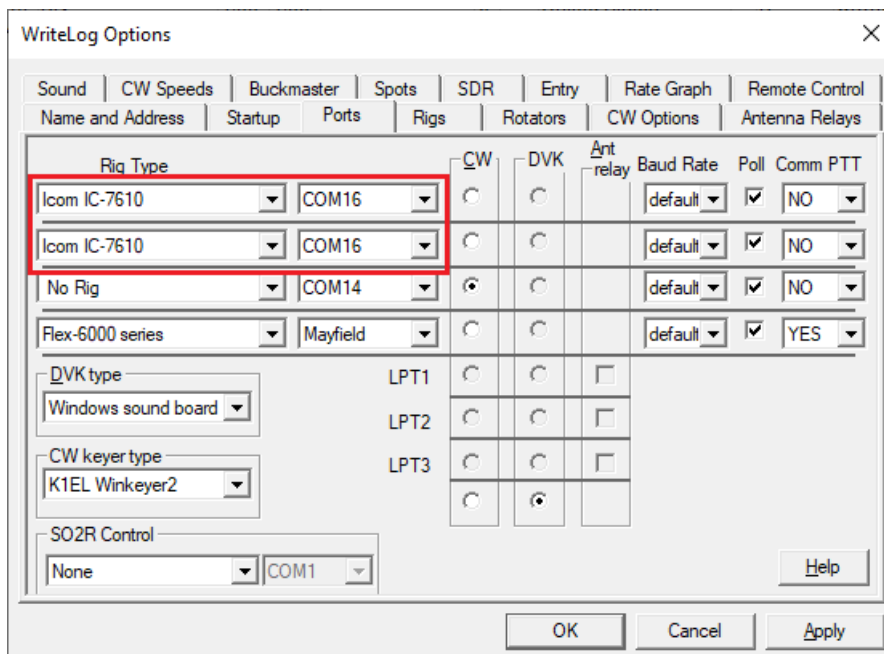
[Setup CW Options](#)

Rig Options

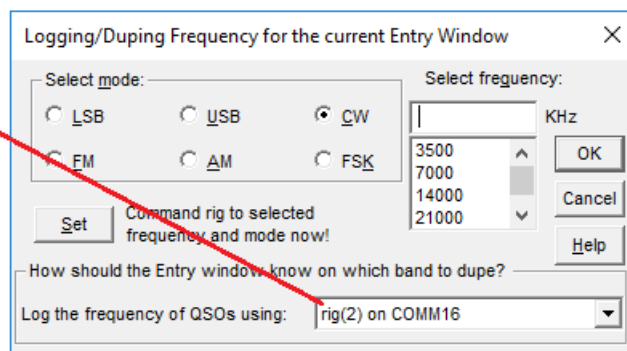
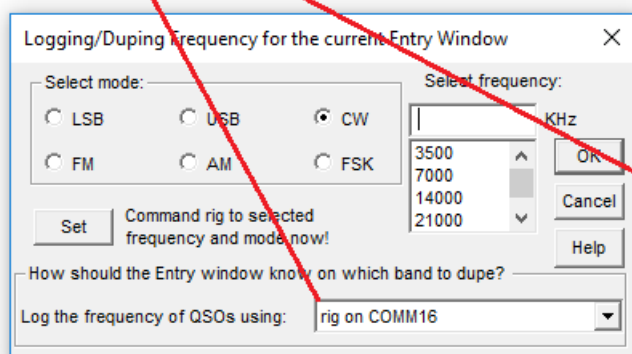
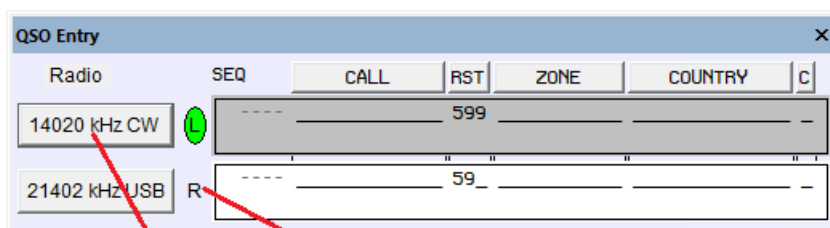
In WriteLog, SO2V means a single rig that can have multiple Entry Windows attached to it.

Each Entry Window has its own TX and RX frequency. When Setup/Ports is configured with two rows with the same Rig Type and COM port, it is configured for SO2V operation. Only some WriteLog rig drivers enable this feature. If its not enabled, you get an error message about having the same COM port appearing to many times in the left column.

For example, here is [Setup/Ports](#) configured for SO2V operation on an Icom-7610:

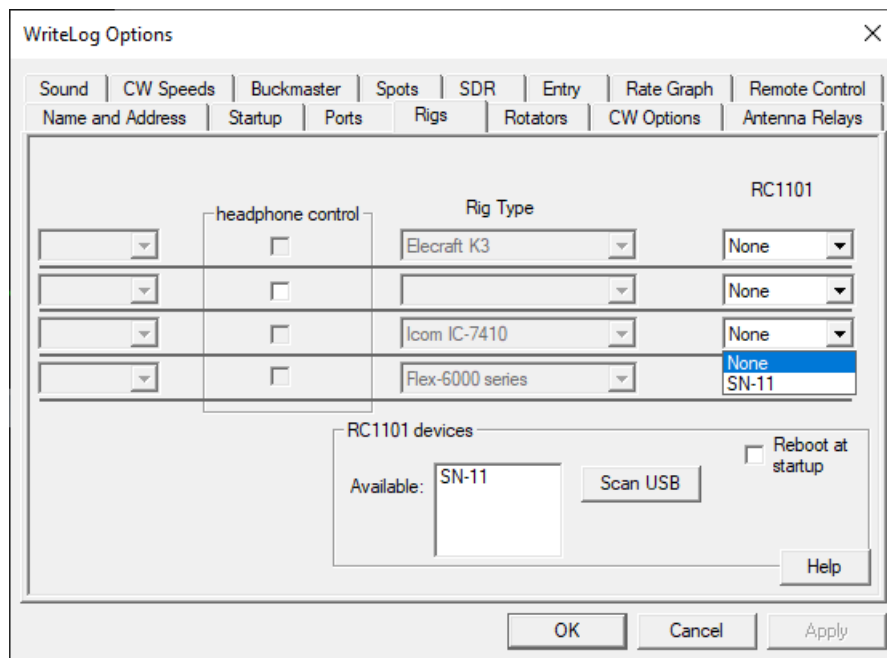


Don't overlook clicking each of the Radio buttons for your Entry Windows. Each must be set to one of the rigs. For the SO2V headphone controls to work, Entry Window must be L and the other R. Your choice of whether "rig on COMM16" or "rig(2) on COMM16" is L or R depends on the radio itself, but all currently supported radios put their main receiver on L and subreceiver, labeled (2), on R, and require the configuration illustrated here:



In addition, you may use the headphone control button to enable or disable WriteLog commands to the rig when you use Radio/Headphones-Normal, Radio/Headphones-Split, and, while set to Headphones-Normal, sending commands when the keyboard focus moves among the rig's multiple Entry Windows.

The Rigs tab



Don't be confused when WriteLog sets the rig to split TX/RX frequencies when you put its transmit focus on the rig's R (right) Entry Window. That transmit focus indicates you intend to transmit on the Rig's VFOB (or Sub VFO, or another Slice or whatever terminology your rig manufacturer chooses to use to indicate the rig can receive simultaneously on multiple frequencies.)

For most rigs, there is restriction that that R Entry Window cannot itself be placed into split TX/RX frequencies mode. (That is because most rigs only have two distinct VFO frequencies.) WriteLog simply ignores its menu Entry/Set-Split for the R window. And for those same rigs, using Entry/Set-Split from the L Entry Window causes the R's VFO frequency to disappear from the rig display while remaining in WriteLog's R Entry Window Radio readout. WriteLog is storing it internally until you revert the L Entry back to tranceive TX/RX, at which point WriteLog will restore the R Entry Window's tranceive frequency to the rig's VFOB (or Sub VFO).

RC1101 support

This Rigs tab doubles as the place you can assign an RC1101 on a USB port to control your rig. Click the Scan USB button first and WriteLog will fill in the RC1101 column with any devices it finds attached. The *Reboot at startup* makes WriteLog spend 10 seconds at startup rebooting the configured RC-1101 devices. This reboot is usually not necessary.

When the RC1101 is controlling the rig, WriteLog polls the rig much less frequently. Use the VFO knobs on the RC1101 and not on the rig for best response.

While the WriteLog Control Site, when remotely controlling rigs, will connect the RC1101 to any WriteLog rig at the remote, this is not the case when running stand alone. Only WriteLog rig drivers that have the custom support for the RC1101 can use it. Those rigs are:

- Elecraft K3
- Elecraft K2
- Icom rigs IC-756Pro and later

See also

[Setup Ports](#)

[Elecraft K3 Rig Driver](#)

Rig Interfacing

The connection between the computer and the rig is straight through: 1 to 1, 2 to 2, etc., and all 25 pins may be connected. For all radios at least pins 2, 3, and 7 are necessary. If you have a 9 pin connector on your serial port instead of 25, here is the correspondence:

		9 pin	25 pin
Carrier Detect	CD	1	8
Receive Data	RXD	2	3
Transmit Data	TXD	3	2
Data Terminal Ready	DTR	4	20
Ground	GND	5	7
Data Set Ready	DSR	6	6
Request To Send	RTS	7	4
Clear to Send	CTS	8	5
Ring Indicator	RI	9	22

Here are the baud rates and other parameters assumed by the WriteLog rig drivers:

rig	baud rate	Icom Address
Kenwood	4800	
Elecraft K2	4800	
Elecraft K3	38400	
Yaesu	4800	
Ten Tec Omni V	1200	
Ten Tec Omni VI	1200	0x04
Ten Tec Delta II	1200	0x02
Icom 271	1200	0x20
Icom 275	1200	0x10
Icom 375	1200	0x12
Icom 471	1200	0x22
Icom 475	1200	0x14
Icom 575	1200	0x16
Icom 706	1200	0x48
Icom 725	1200	0x28
Icom 735	1200	0x04
Icom 736	1200	0x40
Icom 737	1200	0x3C
Icom 746	1200	0x56
Icom 751	1200	0x1C
Icom 756	1200	0x50
Icom 756 PRO	1200	0x5C
Icom 761	1200	0x1E
Icom 765	1200	0x2C
Icom 775	1200	0x46
Icom 781	1200	0x26

WriteLog asserts RTS (pin 4) and DTR (pin 20) on the rig port unless you have also configured the Port Setup to send CW and do rig control on the same port, in which case the DTR/RTS lines are used to send CW.

If you want WriteLog to run CW on the rig port's DTR and/or RTS lines, more wires are required as described in [Outboard Keyer](#). WriteLog supports either "PC generates" CW or the "W5XD Keyer" settings on the same COM port as a rig is

connected. Some rigs require the RS-232 modem control lines (RTS/DTR) to be active. Kenwood rigs are an example. It is still possible to send CW and control such a rig on a single COM port, but you must build a cable with jumpers to satisfy the rig's modem control requirements.

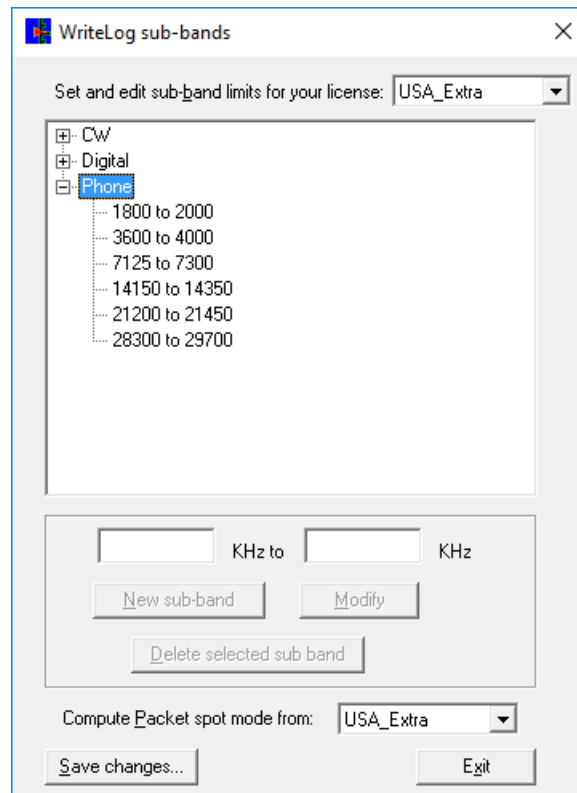
The rigs that may be controlled from the RS-232 port are determined by thewLOGRIGS.DLL file. You use the [Setup Ports](#) menu entry to select your rig type.

See Also

[Outboard Keyer](#)

Editing Sub-bands

The Band map can restrict you from tuning to stations that are out of band. But what is “out of band”? You can edit the frequency edges of the sub-bands WriteLog uses for band edges. Use the Windows Start Menu, and click Edit sub-bands to bring up this window.



New sub-band

Selecting any of the three modes in the window enables the frequency range type-in boxes. Type in a lower and upper bound, then click “New sub-band” to add it to the list.

Modify

Select any of the sub-bands and the frequency range type-in boxes are enabled. Change the values, click Modify and the new values replace the old, but only after you Save changes.

Delete selected sub-band

Select any of the sub-bands and click Delete and that sub-band is removed for that mode.

Open

WriteLog saves sub-band selections in files of type .SubBands in WriteLog’s ProgramData directory. Click on Open to edit any of them, and to select that one for display in the Band Map. The selected SubBands restrict the Band Map to tune your rig only within the sub-bands in this dialog.

Save

Use the Save button to replace an existing sub-band file, or to create a new one. Type in a new name to create a new one. Like the Open button, the Save button selects the given .SubBands file for use in the Band Map.

Compute Packet spot mode from

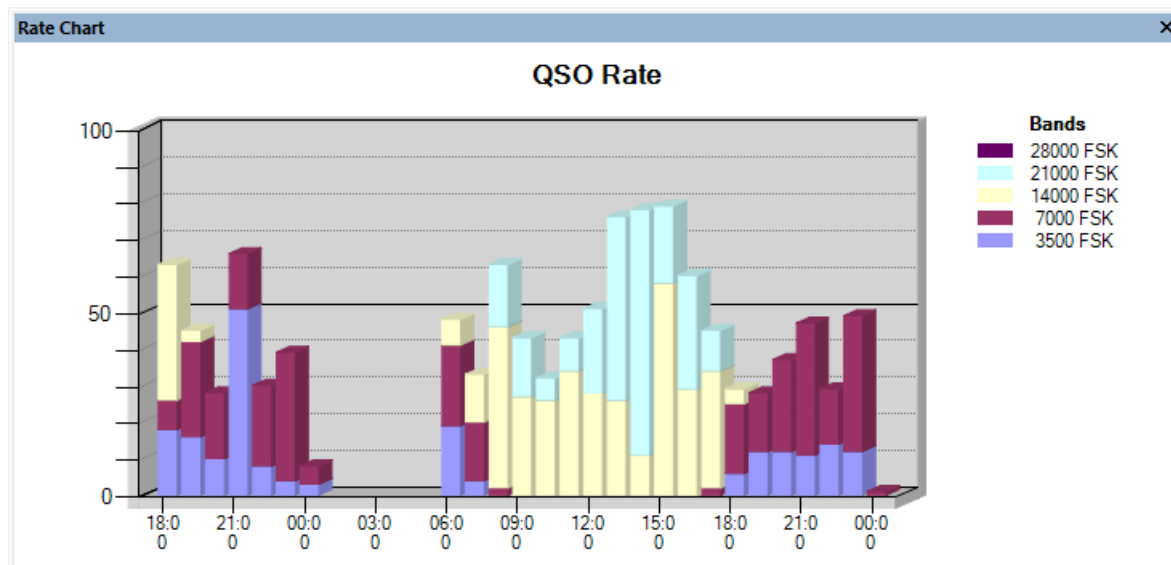
When a packet spot is marked only with a frequency and not a mode, WriteLog uses the selected SubBands file to guess the mode for packet spots. The SubBands files for this conversion can be different than the one by Open to handle the case where your own license terms restrict you to different sub-bands than those of the stations that might be spotted.

See Also

[Band Map](#)

Rate Graph Setup

The default for the Rate Graph is to plot your QSO rate performance.



Right Mouse and then Setup on that dialog to tell WriteLog to graph other parameters. Choose first between the Entire Period (pictured above) or the Real time rate.

Real time Rate

Minutes per bar	Each bar represents this number of minutes
My band	Only QSOs on the band you are currently operating are counted.
All bands	All QSOs in the log are counted
Show Legend	Turn legend display on/off

Entire period

Graph type:	Choose the type of graph from the list. none turns the graph off.
Graph Qso rates	Graph the QSO count in each hour (excluding dupes).
Graph Other field	Graph the result of counting (or totaling) the value in a field designated by the Graph the exchange field labeled list.
Graph the exchange field labeled:	The list consists of the names of the exchange fields (the column headers in both the QSO Entry and Log Windows .) Select the field (i.e. column) that you want graphed.

Count the entries in the field	Any non-zero entry in the field counts as one.
Total the entries in the field	The value in the field is added to the sum for each hour. (This is disabled if the selected field is not a numeric field.)

So, for example, you can graph your point total per hour, or your QSO count per hour, or your multiplier total per hour.

Special case for real time

If this Rate Graph window is displayed while you are logging QSOs, and if the Graph QSO Rates selection is on, then the graph for the current hour (that is, for the hour that is right now) is displayed using the last 10 QSO rate. That is, the current hour (which is always right-most in the graph) does not display the number of QSOs during the hour, but instead displays the QSO rate over the previous 10 QSOs.

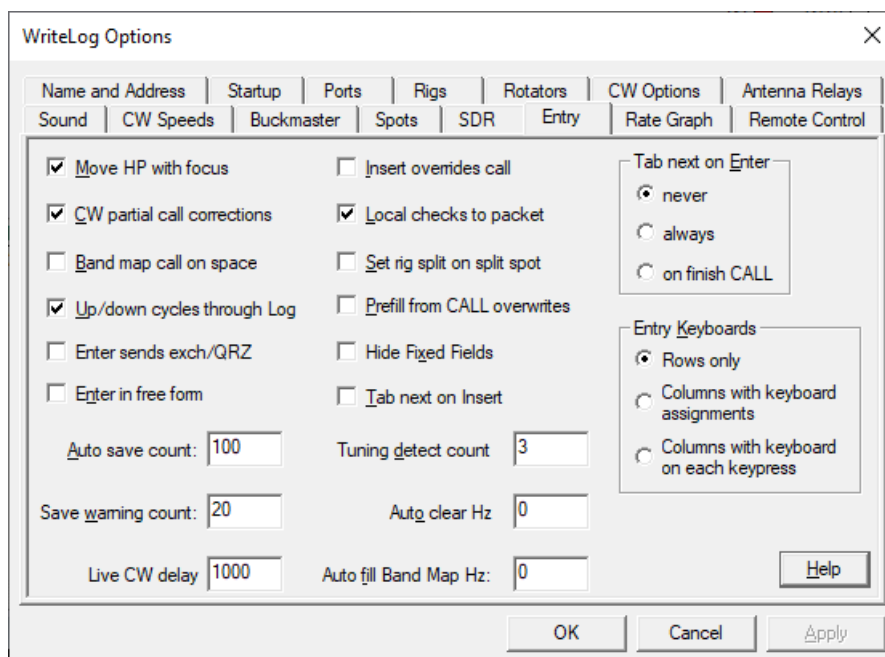
[RateBar]

The entry in writelog.ini,

```
[RateBar]
GraphUpdateSeconds=10
```

The rate graph normally updates every 10 seconds. The real time update rate can be turned off by setting GraphUpdateSeconds=0.

Entry Options



Prefill from CALL overwrites

With this check off, WriteLog won't overwrite an existing Entry Window column from ADIF prefill when you tab away from its CALL field.

Entry Keyboards

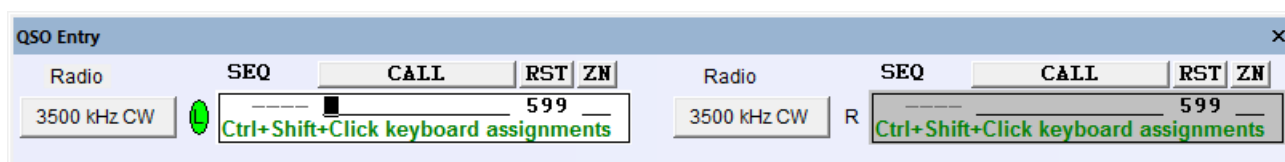
Rows only arranges Entry windows into rows in a single column. All keyboards on the PC are treated identically. This is the traditional mode for WriteLog in all versions prior to 12.36.

Assigning keyboards

Both the other Entry Keyboard options arrange WriteLog's Entry Windows in two columns, and *enable* the setup process to tell WriteLog to send keystrokes to a given Entry Window based on which of multiple keyboards you touch.

Complete the multiple keyboard setup process, after an OK here, by using the mouse and each keyboard as described below. Any number of Entry Windows and any number of keyboards can be configured, although each keyboard can be assigned to at most one Entry Window. Any keyboard that you do not assign continues to float (i.e. its keystrokes are sent wherever the Windows keyboard focus is at the time.) Turning on either of the *Column* buttons initially only arranges the Entry Windows into columns. They do not *require* you to assign keyboards. If you happen to prefer the side-by-side Entry Window layout, yet want to retain the usual Windows behavior where your keystrokes on any keyboard to follow the Windows focus, then you're finished when you OK this dialog.

WriteLog arranges its Entry Windows in two columns with *Entry columns and keyboards* checked on:



Tell WriteLog which Entry Window gets a keyboard by holding down both CTRL and SHIFT on the desired keyboard and then left mouse click in the desired Entry Window. WriteLog responds with a Keyboard assigned message.

Once assigned, do a Setup/Save-Configuration and the assignments will be restored when you restart WriteLog. When multiple keyboard support is initialized, the CTRL+SHIFT+Click message appears in all the Entry Windows to remind you that is how to make the assignment. Its only the message that appears at that time. No assignments are made. You may assign or reassign a keyboard at any time even after the messages have been wiped away. Or you might never assign any keyboards to Entry Windows if that is your preference. Until you Ctrl+Shift+Click, using a keyboard, that keyboard retains its usual Windows default floating assignment. To reset previously assigned keyboards to floating, go to the *Rows only* button.

Keyboard focus

Only the *keyboard* focus moves with the keyboard device when you press keys on the different keyboards. The *transmit* focus is unchanged. Typing an f-key that initiates a transmission first moves the keyboard focus to the assigned Entry Window, and the transmission will then move the transmit focus (unless you have used the special %X prefix in the message programming, which is defined not to move the transmit focus.)

Regardless of the Entry Keyboard setting, any focus change by keystroke per keyboard applies only while the Windows keyboard focus is on any of the Entry Windows. If, for example, you activate an editing dialog or anything other than an Entry Window, all keystrokes on all keyboards are equivalent (per the usual Windows conventions.) They are sent to the window with focus. The one exception: the keyboard shortcut `EntryGetsFocus` (by default on CTRL+P) takes the focus to the keyboard where it is typed, regardless of where the focus is when you type it.

Columns with keyboard assignments

Only the first keypress on an assigned keyboard after keypresses from (a) any other keyboard, or (b) any mouse button, will cause WriteLog to move the Windows keyboard focus to the keyboard's assigned Entry Window. In this mode, a keyboard command that moves the Windows keyboard focus to another Entry Window (e.g. and UP or DOWN arrow) moves the keyboard focus and leaves it there for any more keys that you type on that keyboard.

Columns with keyboard on each keypress

This setting puts the Windows keyboard focus in the keyboard's assigned Entry Window on every keypress on that keyboard. The difference in this mode compared to above is that it is not possible to, for example, use an assigned keyboard to enter received QSO information into any Entry Window other than the one the keyboard is assigned.

WriteLog clears all its keyboard assignments if you click *Rows only* and Apply.

An alternative way to assign a keyboard to an Entry Window is to use the [keyboard shortcut](#) named `EntryAssignKeyboard` on a keyboard key. Set the windows focus to the desired Entry Window. Press the assigned key on the desired keyboard. WriteLog will respond with a message indicating the keyboard assignment.

Clear an individual keyboard assignment using the [keyboard shortcut](#) named `EntryUnassignKeyboard`. Type its shortcut key on a keyboard and that keyboard now floats with the windows keyboard focus.

Ini settings

This dialog also sets up the INI entries documented [here](#).

See also

[\[Entry\]](#)

[\[Configuration\]](#)

QSO Exchange Fields

WriteLog deals with the differences between the exchanges of the various contests using a concept called a field. A field is made up of one or more characters (*i.e.* letters or digits), and a contest exchange is made up of one or more fields. All the QSOs in a single contest must have the same exchange (*i.e.* set of fields), but different contest files may have very different fields.

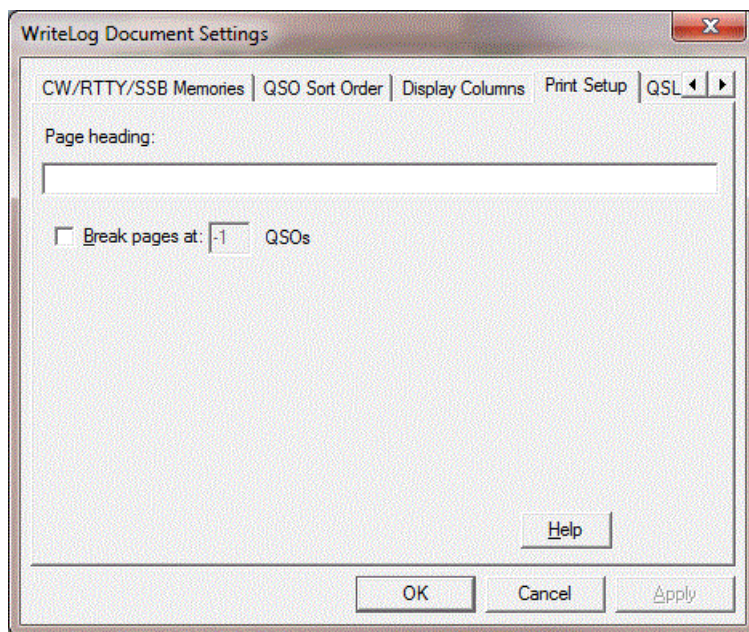
A field has properties that are configured to match the contest. A field has a length. For phone contests, for example, the field used to store the signal report will have a length of two, and for CW contests, a length of three. A field has a caption which is used as the column heading whenever it is displayed or printed (*e.g.* "RST" is the caption used for CW signal reports).

See also

[Editing QSO Exchange Fields](#)

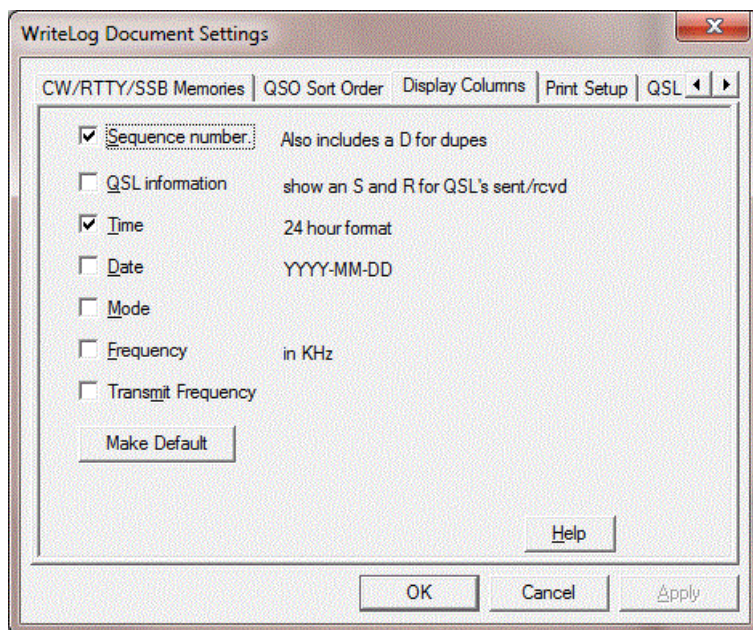
Page Heading

Using Setup Page Heading you can indicate a line of text to be printed as a page heading on each page when you print a log or [print a dupe sheet](#).



QSO Display Format

Setup Display Format gives you the ability to control the display of the QSO data that WriteLog maintains for all QSOs. The data is collected and stored for all QSOs and you may use this menu entry to turn its display on or off at any time.



The toggle buttons mean:

Sequence number	controls the display of <i>both</i> the sequence number of the QSOs and its dupe field. The dupe field is normally blank, but is a D for dupes, an X for QSOs you have explicitly disallowed, and B for out of band QSOs.
QSL Info	controls the display of the QSL sent/received columns. The Received column is normally blank, but will have an R if you have indicated. Similarly, the Sent column is either blank or has an S. See QSL Records .
Time	controls the display of the time of the QSOs.
Date	controls the display of the date of the QSO. Note that WriteLog only displays the date of the top QSO in the Log window unless the date changes down the page.
Mode	controls the display of the mode of the QSOs.
Frequency	controls the display of the frequency of the QSOs.
Transmit Frequency	controls the display of the transmit frequency. This is interesting only if you are working split and are logging the frequencies directly from your rig.

The Make Default button saves the current settings in Writelog.ini [configuration] section such that subsequent logs created with File/New will have these default columns displayed.

QSL Records

The format of the printing on the QSL is controlled by the dialog box available under File QSL Comment.

The QSL Printing dialog "**Print RST from field labeled:**" list box selects which column in the log will provide the data for printing the RST on the card. When a QSL is printed for a QSO that is blank in that selected field, then 599 or 59 is printed on the QSL depending on the mode of the QSO.

The text you enter in the "**Print this on each QSL**" box is printed on the fourth line of QSLs as they are printed.

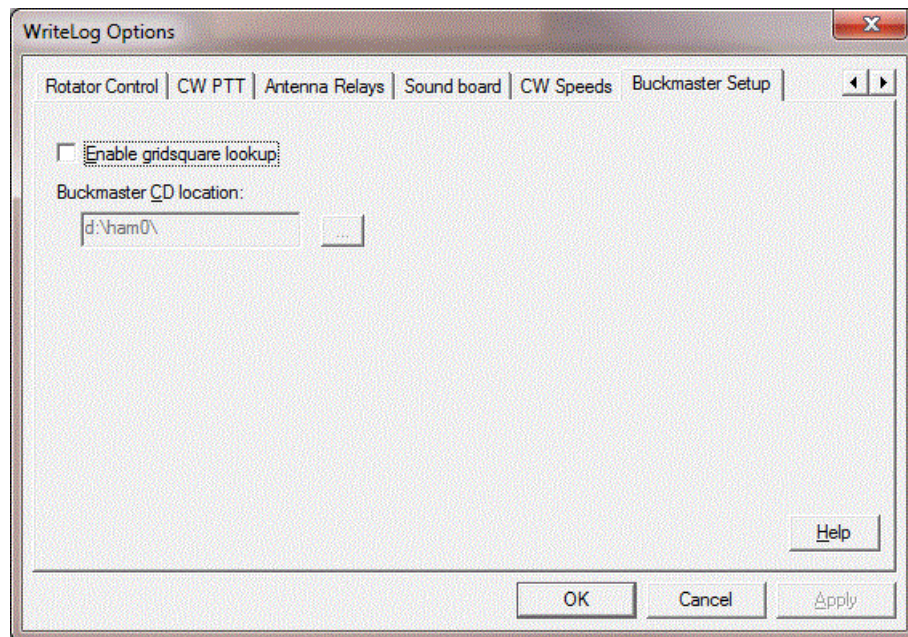
And the text you enter in the "**Comment for records in .QSL file**" is added to the .QSL file (see below) the next time you do a File Save.

For record keeping, WriteLog maintains a QSL sent and QSL received flag for each QSO. This flag is displayed if the appropriate button is activated under the [Setup Display format](#) menu entry. The sent flag is turned on (and so indicated by an "S" in the display) for every QSO for which a [QSL is printed](#). Turn it off or on by making the [Log window](#) active, highlight the desired QSO, and type S to toggle the sent flag, R to toggle the received flag. Additional QSL information is stored in a .QSL text file at File Save time. The additional file is always named with extension QSL, and is always appended to-*i.e.* WriteLog doesn't alter existing data in QSL files, although you may do so with an editor.

Tools Station Location Database Setup

If you turn on the Enable checkbox, WriteLog will lookup the callsign in the CALL field at the time you space or tab off of the CALL. If the Buckmaster CD software reports a grid square for the call, then WriteLog will update the the Great Circle bearing to the call from the grid square. WriteLog also makes the looked up grid square available to the multiplier module.

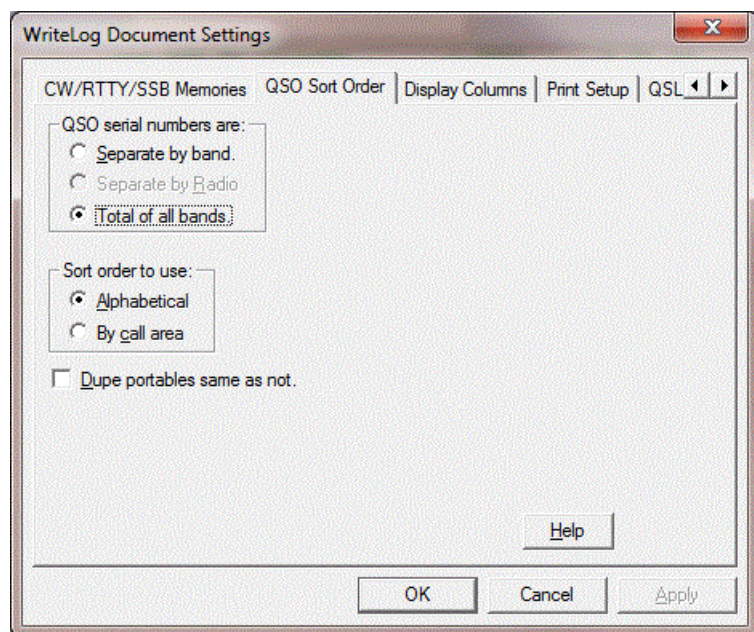
WriteLog needs to know where your Buckmaster CD is installed. Either type it in or use the ... button and browse to a .dat file on the CD.



Setup Log Which Radio Makes the QSO

Selecting this menu option makes WriteLog add a new column to the log labelled with a lower case 'r'. When you log a QSO, WriteLog records which Entry Window logged the QSO into the 'r' column. A 1 is recorded for QSOs logged from the top Entry Window, a 2 for the next lower one, 3 for the next, etc.

Setup QSO Sort Order and Serial Numbers



The Setup Sort Order menu entry controls two things:

QSO serial numbers:

Separate by band	Start the serial numbers at 1 on each band. The bands it uses are displayed by Band Show.
Separate by Radio	Start the serial numbers at 1 for each radio in the network. This entry is disabled if there is no NETW column in the log (i.e., if the log has never been used on a network)..
Total of all bands	Start the serial numbers at 1 for the first QSO and count up for all QSOs.

Sort order to use: (only controls the order of calls in the printed dupe sheets)

Alphabetical	Straight ASCII sort order. This is most useful for DX contests.
By call area.	The first digit in the callsign is the most significant in the sort. This is most useful for stateside contests.
Dupe portables same as not	Turning this on causes WriteLog to treat <i>callsign/x</i> as a duplicate of <i>callsign</i> where "x" is any single digit or letter.

Any of these may be changed at any time, however WriteLog must re-dupe the entire log when you make a change. For a long log this can take several seconds.

Select Radio L/R

If you are running two radios, then you will want two [Entry Windows](#) on the screen, one for each radio. WriteLog can control which radio will transmit programmed messages if you use this menu entry to indicate that a particular Entry Window corresponds to one radio or the other. These menu entries don't do anything when you click them except check off the box indicating radio L or radio R.

If you have checked the "Select Radio L" menu item, then subsequent transmissions using the F2 through F11 keys with this Entry Window active will cause WriteLog to set the L/R output on the line printer port selected for CW or on the [Outboard W5XD CW keyer](#). That L/R output can be connected to appropriate relays for microphone inputs or PTT inputs or CW keyer inputs or headphone audio outputs so that the transmission goes out on the appropriate radio.

The RTTY Stereo Sound Board options won't work properly until you set up your Entry windows for separate Left and Right operation.

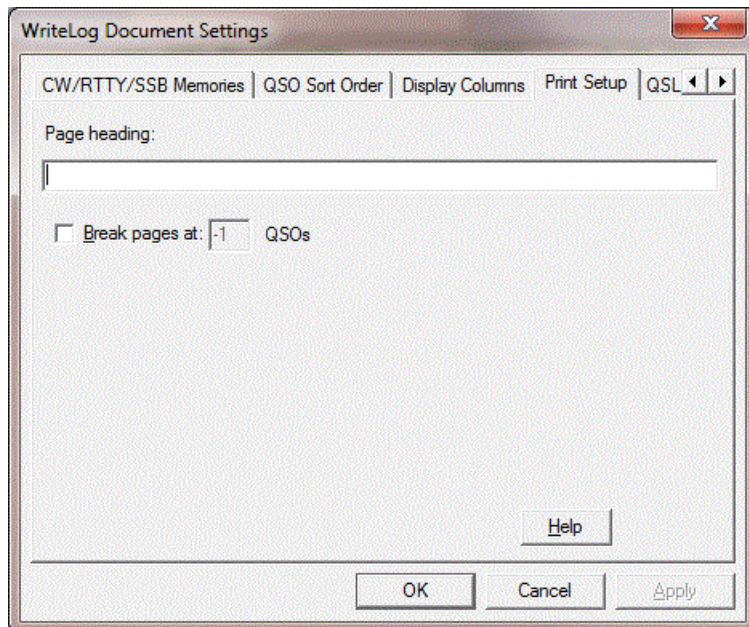
Fonts

Setup Fonts lets you select any installed font for the [Log Window](#). This same font is also used when WriteLog prints.

The [Entry Window](#) font is controlled with Setup Entry Window Font. The edit bar in the Log Window also uses the Entry Window font.

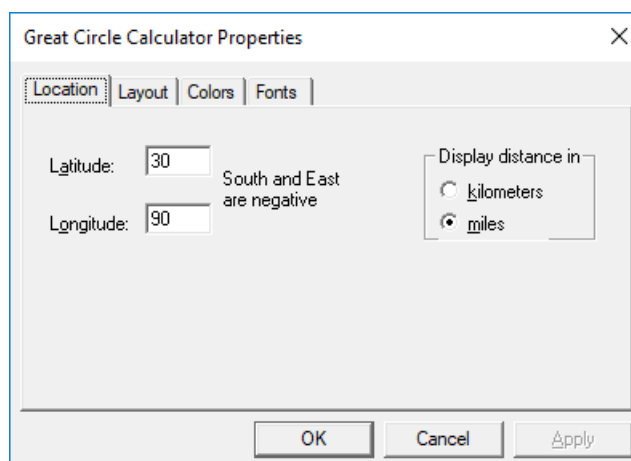
File Page Setup

The **Break pages at *n* QSOs.** button causes log sheets to be limited to the number of QSOs you select for *n*. WriteLog automatically breaks the page when it runs out of room, so setting a large number, or turning the toggle button off prints as many QSOs as will fit.



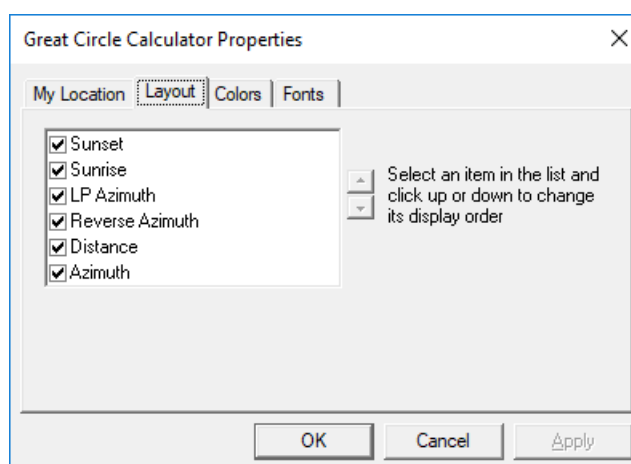
Setup Great Circle

Set your station latitude and longitude for the bearing calculations. Also set the color and units of the display. These settings are saved when you Setup Save Configuration.



The screenshot shows the 'Great Circle Calculator Properties' dialog box with the 'Location' tab selected. The 'Latitude' field contains the value '30' and the 'Longitude' field contains '90'. To the right of these fields is the text 'South and East are negative'. Further right, under 'Display distance in', there are two radio buttons: 'kilometers' (which is unselected) and 'miles' (which is selected). At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

In the Layout tab, the check boxes turn the selected item on or off in the Great Circle display. Select an item with a click in the list and then the up or down arrows move its display order.

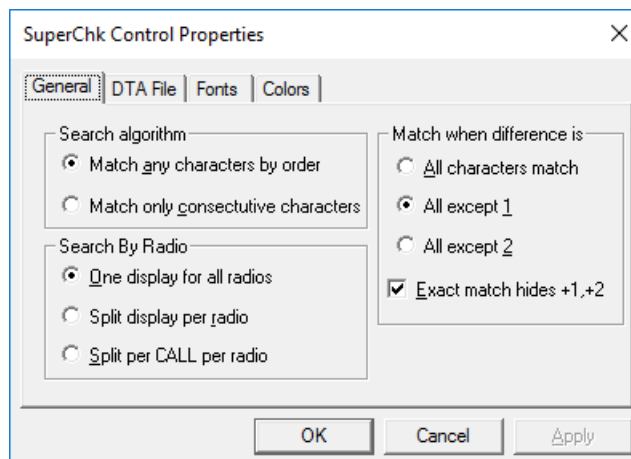


The screenshot shows the 'Great Circle Calculator Properties' dialog box with the 'Layout' tab selected. The 'My Location' tab is also visible. A list box contains six items, each with a checked checkbox: 'Sunset', 'Sunrise', 'LP Azimuth', 'Reverse Azimuth', 'Distance', and 'Azimuth'. To the right of the list box are two small up and down arrow buttons and the text 'Select an item in the list and click up or down to change its display order'. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

Setup Super Check

Select colors, font, and DTA file for super check. These settings are saved when you Setup Save Configuration.

General Tab



The Search algorithm settings adjust the matching criteria.

The Split display by radio splits the window equally among the number of radios you have set (and therefore has no effect if you have WriteLog setup for only one radio). The same calls are displayed on each radio, but each split pane is color coded according to whether the call is a dupe or multiplier on that radio.

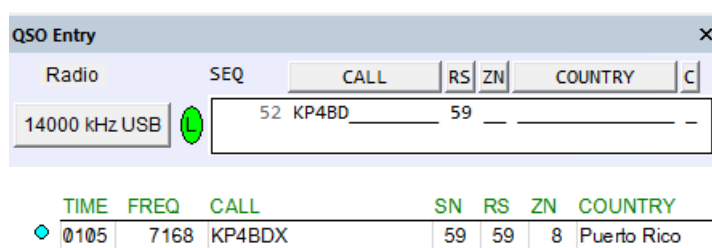
Split per CALL per radio also splits the window equally among the number of radios, but the calls displayed in each are those matched to the CALL entry in its corresponding radio.

Match when difference is

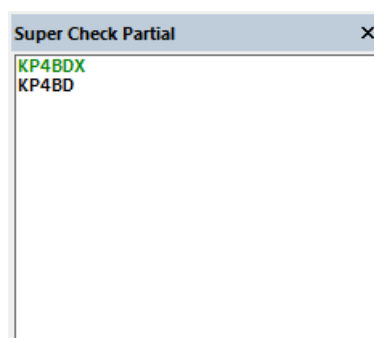
- *All characters* match requires all characters in your Entry Window CALL to appear in the database call.
- *All except 1* shows database calls that are off by one (one letter different, missing, or extra). Off by one (or two) matches are drawn with a different background color (which you may change in the Colors tab, see below.)
- *except 2* is the same, but for off by two.
- *Exact match hides +1,+2* causes the SCP to show off by one (or two) calls only if there is no exact match to the CALL you have currently entered.

Match When Difference examples

For all the examples below, the CALL is currently KP4BD, we're tuned to 20m SSB, and the log contains a QSO on 40m with KP4BDX, but the DTA file does not have that call. The DTA file does have, the CALL we have entered, KP4BD.

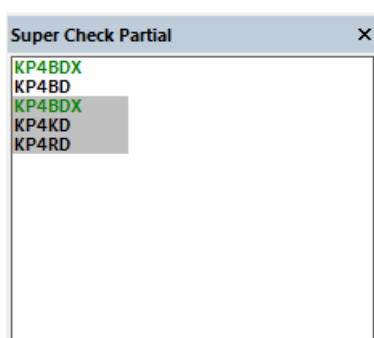


Here is the result with **All characters match**:



KP4BDX appears because we have worked him and our KP4BD entry has all characters matching. Its green because we have worked him, but not on 20m. KP4BD appears because its in the DTA file, is black because we have not worked him, and it appears after KP4BDX even though it is alphabetically before earlier because the black calls always appear after the red and green ones.

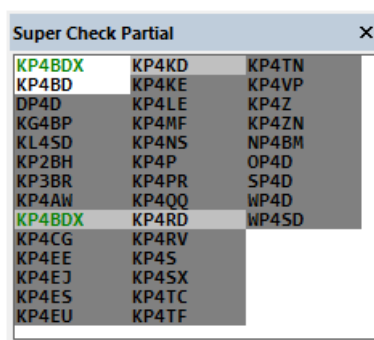
Here is the result with **All except 1**:



The same calls appear as before, but now KP4KD and KP4RD are added because they are in the DTA file, differ from KP4BD by one character, and are drawn with a light gray background because they are off by one.

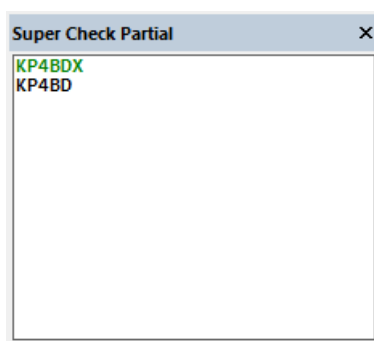
KP4BDX appears again because, not only does it contain all the characters from our CALL (which puts in a white background above), but it also differs by one character (it has an extra) and therefore is drawn the second time with a gray background.

Here is the result with **All except 2**:

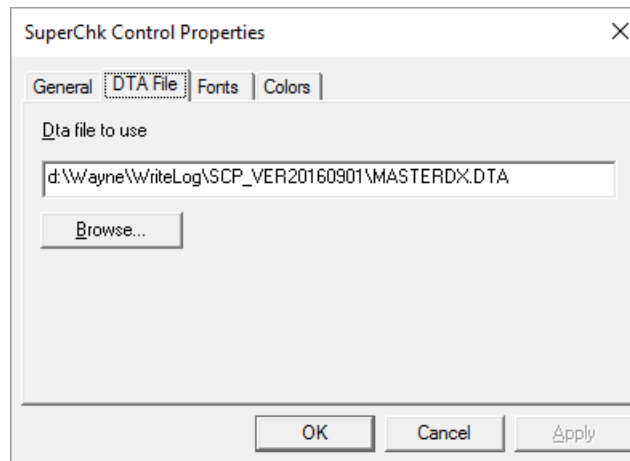


The result is all the calls as above, but with a large number of different-by-two calls from the DTA file, and which are drawn with a darker gray background.

If you click on the "Exact match hides" button, none of the light gray or dark gray background calls are displayed because what you have typed, KP4BD, is an exact match to a call in the DTA file, so you get the top display, even with +1 or +2 turned on:



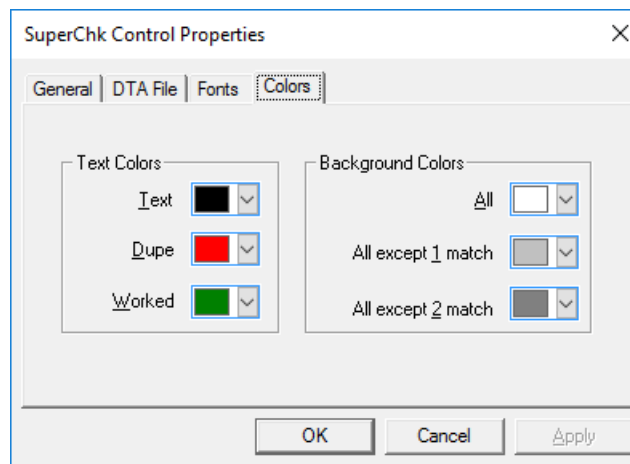
DTA file setup



WriteLog does not install any dta files. Use this page to browse to dta files you might have, for example, from <http://supercheckpartial.com>

Colors Tab

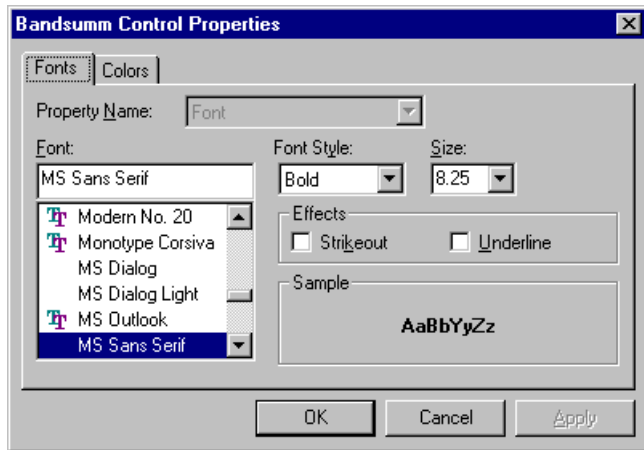
You may change the colors used to display the Super Check results.



- The Text color is used for call signs that match.
- The Dupe color is used to draw calls that match, are in the log, and would be a dupe if you work on them on your current frequency.
- The Worked color is used to draw calls that both match and are already in your log.
- The background colors indicate how good the match is.
- The "All" background color means all the characters in your CALL match the corresponding call in the SCP display.
- The "except 1" background color means one character does not match (or is missing or extra.)
- The "except 2" background means two don't match (or are missing or extra.)

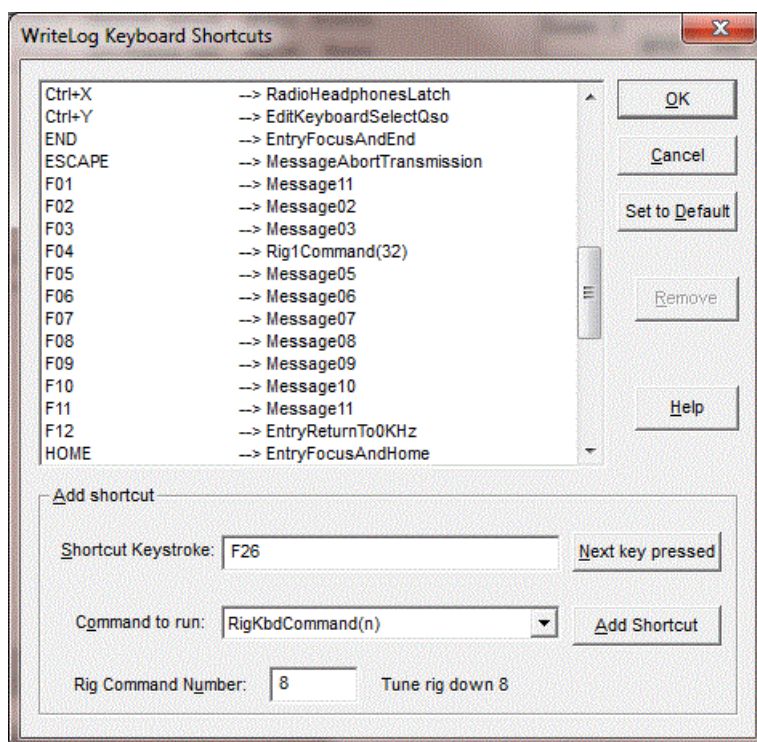
Setup Band Summary

You may chose the font and color for the band summary. These settings are saved when you Setup Save Configuration.



Setup Keyboard Shortcuts

A Keyboard Shortcut is a designated keyboard key that causes WriteLog to do one of its functions (called commands). You may use the Tools Keyboard Shortcuts menu item to customize which key does what command.



The list on the left is all the keyboard shortcuts in effect, and, in the right column is the WriteLog command that will happen if you press that key. All the other functions on this dialog modify this list of keyboard shortcuts that WriteLog will use. After pressing OK, WriteLog will use the new assignments until it exits. It will write the assignments to WRITELOG.INI on the [Setup Save Configuration](#) command, and starting WriteLog later will restore those saved mappings.

What about keys that apparently have no command assigned?

Keys that have no function assigned are handled by the WriteLog window that has the keyboard focus when you press the key. Examples are the LEFT and RIGHT keys. They are generally used to move the cursor left and right in whatever window has the focus. It is not a good idea to assign them (but SHIFT+LEFT or SHIFT+RIGHT are probably OK to assign.) By contrast, the shortcut keys setup here execute the same command regardless of which WriteLog window has the keyboard focus at the time.

Naming the Keyboard keys

The names WriteLog uses for keys match the labels on most, but not all keyboards. You can experiment with the Next Key Pressed button (see below) to get WriteLog to display the name it uses for a given key. The function of a key can also be modified by holding down one or more of the three special keys on the keyboard: Ctrl, Alt and Shift. Some keys (described below) are also affected by whether the keyboard Num Lock function is engaged when you press it. On the other hand, the state of the Caps Lock key does not affect which shortcut is invoked when you press a key.

WriteLog will allow you to modify the function of any key that Windows allows to be modified, but many keys should not be modified as the key's original function is lost.

Entry Windows focus

Shortcut definitions for "bare" keys (without Alt or Shift or Control) are active *only* when an Entry Window has the keyboard focus. This means that if you, for example, define shortcuts for UP and DOWN, they are in effect only on Entry Windows. Otherwise UP/DOWN work according to the focussed window (e.g moving the highlight in the Packet Spot window.) The keys across the top row of the keyboard, Escape and F1 through F12 are exempt from this restriction. That is, shortcuts on the bare versions of the top row keys are in effect regardless of keyboard focus.

Num Lock

On keyboards with a numeric keyboard, there is usually a Num Lock key. Such keyboards can (*and will!*) have two separately programmed commands on the digit keys and the decimal point key. In fact, the key has a different name when the Num Lock is turned on than when it is off. It gets even more confusing, however. If the Num Lock is on, and you hold down SHIFT when you press a keypad key, then the keyboard reports the key as its non-Num Locked version (and does not report the SHIFT key is down)—but holding down SHIFT while Num Lock is off does not do the reverse.

This behavior with Num Lock is built into the keyboard. You can use this dialog to put the identical command on more than one key in order to reduce the number of variations, or, if you want the maximum number of commands available and can remember the keyboard conventions, you can use this dialog to put a different command on each combination.

Extended keyboards

Some keyboards have more than one key with same label. (ENTER is a common example—one on the numeric keypad and the one at the right edge of the main layout.) WriteLog will treat both those keys the same—a shortcut created using the key name ENTER will apply to both such keys. But you can add a separate shortcut for the extended one using the name Ext_ENTER and the new shortcut will apply only to the extended ENTER key. Other common examples of extended keys are the Insrt, Home, Delete, End, and cursor keys—they often have dedicated keys along with their counter parts on the numeric keypad, (but the counterparts are their names only when Num Lock is off).

Set to Default

This button clears all the existing keyboard shortcuts and replaces them with the standard ones built into WriteLog, and makes the keyboard match the behavior as documented in this help file. When you press this key, it prompts you whether to use include the CT compatible keys.

WriteLog Functions

The "Command to Run" list has all the possible commands for any keyboard shortcut assignment. Many of the command names match the menu item they duplicate. For example, the FileSave command matches the "Save" entry in WriteLog's "File" menu. The commands starting with "Message" are not in the menus, but have to do with transmitting programmed messages, and the commands starting with CW and RTTY are specific to those modes. Message01 through Message10 send the programmed message for the current mode (CW, RTTY or SSB). MessageShift01 through MessageShift10 send the shifted message for CW/RTTY, but for SSB start the DVK file recording process for the message 1 through 10, using whatever DVK type is selected. MessageShiftPh01 through MessageShiftPh10 send the shifted message regardless of mode, and for the appropriate mode. MessageColumn1 through MessageColumn9 send the messages programmed onto the column heading buttons in the Entry Window, and send the same message regardless of mode because there are no SSB-specific or RTTY-specific messages for the column header messages.

The commands Message11, MessageShift11 and MessageShiftPh11 are redundant and are aliases for Message01, MessageShift01 and MessageShiftPh01, respectively. This is for compatibility back when F1 was the designated HELP key.

Add Shortcut

Once you have the Shortcut Keystroke and the Command to Run entered, press the Add Shortcut button to add the shortcut to the list. If there is an existing shortcut using the same keystroke, the old one will be removed.

Next Key Pressed

Press this button to get WriteLog to fill in the "Shortcut Keystroke" field with the correct name for any key on your keyboard that you press next. On certain keyboards, WriteLog is unable to determine the label on the key, but it can still program the key, but it will use the name VirtualKey_nn where nn are hexadecimal digits.

Rig Commands

The 6 commands that start with "Rig" program a keyboard key to send a command to the rig. There are 6 different commands because there are 6 different ways to select which rig gets the command.

Rig1Command(n)
Rig2Command(n)
Rig3Command(n)
Rig4Command(n)
RigKbdCommand(n)
RigTxCommand(n)

The first 4 send the rig command to the corresponding rig using its slot number (ordered top to bottom in the Setup/Ports dialog box). The RigKbdCommand(n) sends the command to the rig with the keyboard focus (indicated by the highlight on its Entry Window), and the RigTxCommand sends the command to the rig with the transmit focus (indicated by the green circle in its Entry Window).

The "Rig Command Number" entry is a number from 1 to 128. The first few of those numbers are known commands that are valid for all rigs:

1. Tune rig up one step
2. Tune rig up two steps
3. Tune rig up four steps
4. Tune rig up eight steps
5. Tune rig down one step
6. Tune rig down two steps

7. Tune rig down four steps
8. Tune rig down eight steps
9. Clear RIT

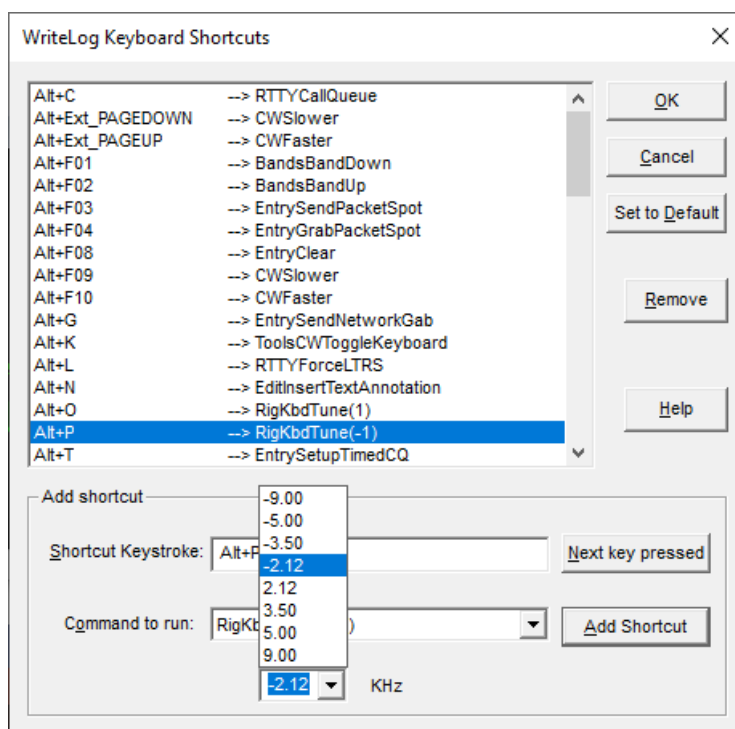
The step size is set by [MOUSE_WHEEL_HZ](#)

Command numbers 10 and up are those are made available by the various rig drivers.

Rig Tune Commands

There are two commands to tune the radio(s) by a specified step in KHz: RigKbdTune(KHz) and RigTxTune(KHz). The former applies to the radio with keyboard focus (the same as RX focus) and the other applies to the radio with TX focus. If you have only one radio, you cannot separate the RX from the TX focus, in which case the two commands are interchangeable.

WriteLog supports four step sizes, which you may change in this dialog box. Type a number in the the box labeled "KHz" and the existing step size closest to the number you type is replaced with your typed number. WriteLog always arranges the available positive step sizes to match the negative ones. With one of the commands selected in the *Command to run* selector, the dialog changes to display the KHz box and enable you to edit the number. It looks like this:



The step sizes in the screen shots are an example, and are not the defaults. The defaults are 1.25KHz, 2.5KHz, 3.75KHz and 5.0KHz. The keyboard assignment steps the radio by one of these four step distances, as selected in the KHz selector on this page.

See Also:

[Keyboard Navigation](#)

[QSO Entry](#)

[Special Message Shortcut Keys](#)

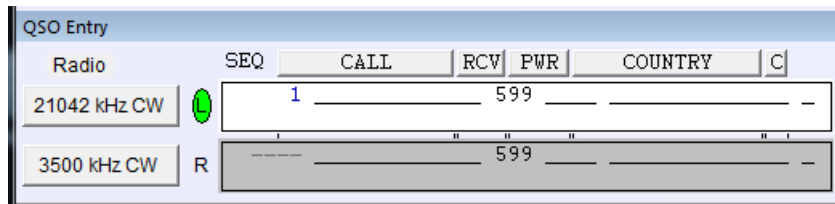
[Cw Keyboard](#)

[Setup Save Configuration](#)

Two Radio Contesting

The key to two rig contesting is getting effective use of the secondary rig-especially its receiver-while the primary rig is transmitting. WriteLog's multi-window input is designed to support this kind of operation.

WriteLog changes its screen appearance when you're running two radios:



Radio	SEQ	CALL	RCVR	PWR	COUNTRY	C
21042 kHz CW	1		599			-
3500 kHz CW	R		599			-

the "L" and "R" show which window goes with which radio, and the green circle shows which one has the audio. These controls move the audio mute between the left and right channels:

Cursor UP/Down move the keyboard focus and move the radio selection

SHIFT+Cursor Up/Down move only the keyboard focus

CTRL+Cursor Up/Down move only the left/right radio selection

CTRL+R sets the transmit radio selection to the window with the keyboard focus

F2 through F11 move the transmit focus to match the keyboard focus before transmitting . You can change this behavior on a message-by-message basis by adding a %X at the beginning of the message buffer, which retains the transmit radio focus.

a mouse click in an Entry Window

If, in addition, you have the MK-1100 external CW keyer you have a circuit for headphone audio switching that responds when WriteLog signals it over the RS-232 control lines in response to selecting a Left or Right radio. Its use is most easily illustrated in an example:

With rig L (and its corresponding Entry Window set as active), start a CQ on say, 20 meters using F2. Use the Radio Headphones Split menu to get audio from each receiver in an ear.

Tune rig R looking for a new station to work. In the second entry window you can enter a call sign for a dupe check without altering your info for the QSO in progress on the primary rig.

When the CQ on rig L finishes, if you get an answer, work the station normally, unless, of course, you are willing to give up the QSO for something you heard on 40m.

If you get no answer, and if you have found a new station on rig R switch to it with a mouse click (or up/down arrow) and work that one, switching back to rig L as you finish and then CQ again-if you still have your frequency.

This sequence applies whether you are running CW or phone. The function keys used for the CW keyer and the voice keyer are also the same.

See Also

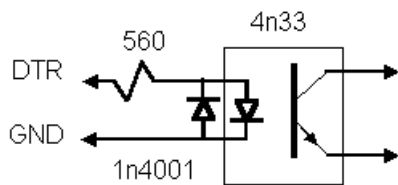
[Sound Board Intefacing \(transmitting\)](#)

[Timed Repeat CQ Operation](#)

CW Interfacing

COMM port CW

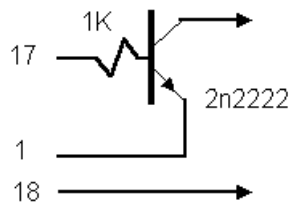
When configured for "PC Generates" CW on a COMM port, WriteLog sends CW on the DTR line of the COMM port.



WriteLog also puts the PTT signal on the RTS line of the same comm port. WriteLog allows you to use the same COMM port for both CW and for rig control, but you will have to build your own Y cable that sends the appropriate wires (TXD, RXD) to the rig control port and the appropriate wires (DTR, RTS) to your CW and PTT circuits.

LPT port CW

When set for "PC Generates" on an LPT port, the signal is on pin 17 of the LPT port. (LPT ports are not supported on Windows NT or Windows 2000)



The LPT port CW keying is also compatible with the W9XT board, which needs none of these circuits but instead has a built-in CW relay.

See Also

[Outboard Keyer](#)

[LPT Port pin Assignments](#)

CW Speed Setup

WriteLog Options

Name and Address

Startup

Ports

Rigs

Rotators

CW Options

Antenna Relays

Sound

CW Speeds

Buckmaster

Spots

SDR

Entry

Rate Graph

Remote Control

CW Speeds (WPM)

12

13

14

15

16

18

20

22

25

28

32

35

40

45

50

Defaults

Reset

Help

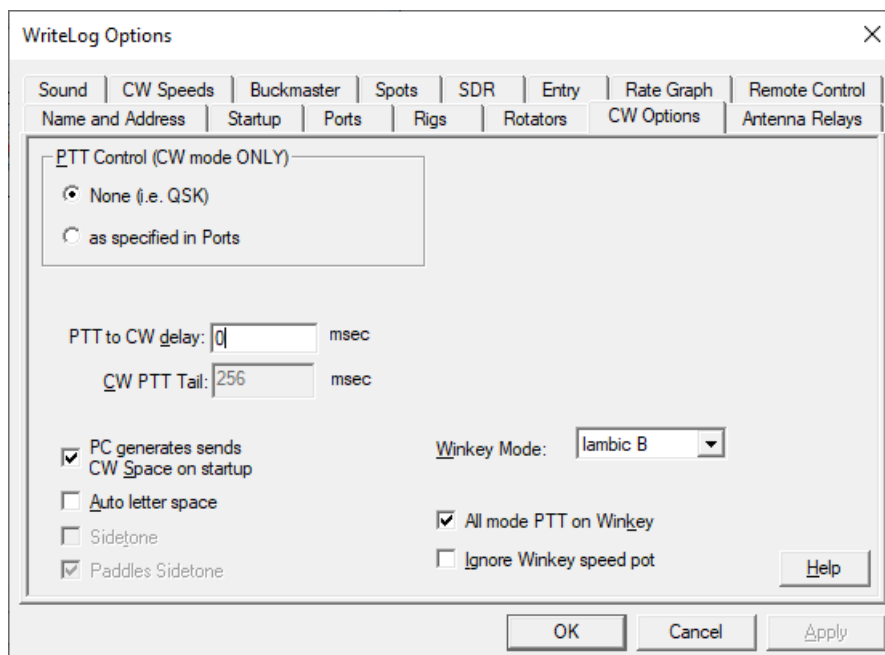
OK

Cancel

Apply

Setup CW Options

Setup the way WriteLog controls PTT for CW. This dialog affects the way WriteLog does PTT for the CW mode only. In all other modes, the [Setup Ports](#) controls how WL does PTT. When running FSK RTTY, there is yet another PTT signal available in addition to all the above on DTR and RTS on the same COM port that has the FSK.



The screenshot shows the 'WriteLog Options' dialog box with the 'CW Options' tab selected. The 'PTT Control (CW mode ONLY)' section has two radio buttons: 'None (i.e. QSK)' (selected) and 'as specified in Ports'. Below this are two input fields: 'PTT to CW delay: 0 msec' and 'CW PTT Tail: 256 msec'. There are several checkboxes: 'PC generates sends CW Space on startup' (checked), 'Auto letter space' (unchecked), 'Sidetone' (unchecked), and 'Paddles Sidetone' (checked). The 'Winkey Mode' dropdown is set to 'Iambic B'. There are also checkboxes for 'All mode PTT on Winkey' (checked) and 'Ignore Winkey speed pot' (unchecked). At the bottom right is a 'Help' button. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

PTT Control (CW mode ONLY)

None is useful for QSK.

Otherwise WriteLog asserts PTT during CW transmission using the same DVK/SO2R-controller/Rig-port setup as for all other modes.

The Sidetone checkbox controls the sidetone for CW sent from Writelog. This checkbox is enabled only for CW Types with internal sidetone that WriteLog can control.

The Paddles Sidetone checkbox turns off all sidetone on Winkey2.

The *Ignore Winkey speed pot*, *All mode PTT on Winkey*, and *PC generates sends CW Space on startup* apply only to their respective CW keyer settings, WinKey and PC generates.

If you're looking how to set the way WriteLog controls the RTS line on the Winkey, its moved to the [Setup/Ports](#) screen.

See also

[\[Winkey\]](#)

[Setup Ports](#)

Wave File Locate

This button, in the [Setup Ports](#) dialog, tells WriteLog where to find WAV files for SSB transmission. Record your MSG2.WAV through MSG11.WAV files and put them in this directory. Then use the file selector that comes up when you click this button to select any of the WAV files in the directory.

For multi-op operations, WriteLog will create and use subdirectories of this directory to store operator-specific WAV files and the directory selected by Wave File Locate becomes the default WAV file directory that is only used when the Change Operator option is blank. When you do an [Entry Change Operators](#), WriteLog will automatically switch to the directory named the same as the operator to find (and create) WAV files.

See also

[Setup Ports](#)

[Entry Change Operators](#)

[Sound Board Voice Keying](#)

DVK Interfacing

WriteLog NA DVK mode asserts LPT port pin 2 to abort a transmission in progress, and asserts pin 3 through 9 to transmit voice memory numbers 1 through 7 respectively. If an LPT port is selected for the DVK, then WriteLog puts PTT and rig A/B signals on that LPT port as well as DVK signals--even if the DVK type selected does not require an LPT.

See Also

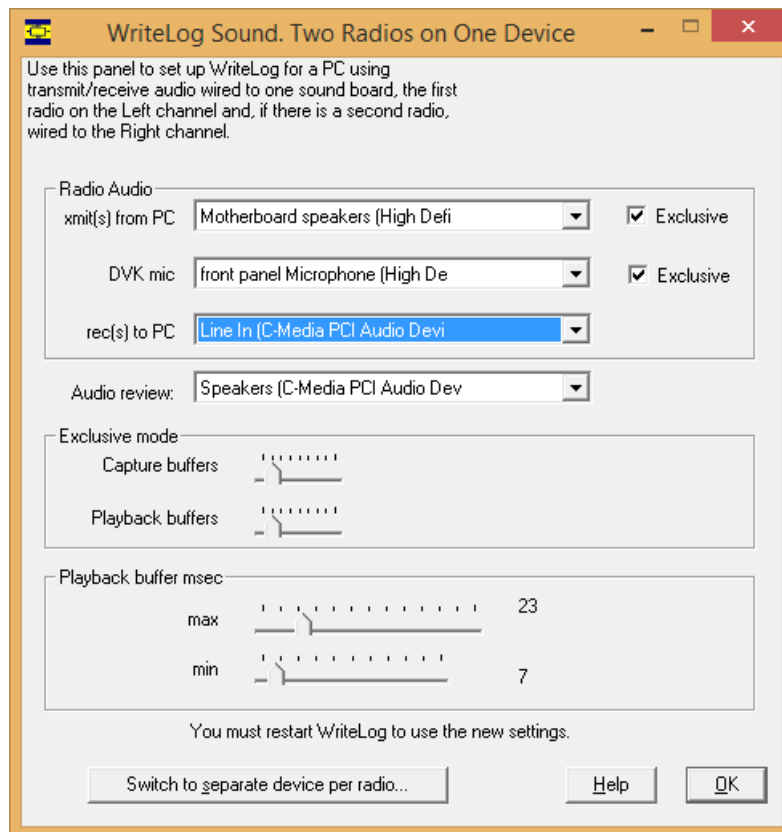
[LPT Port pin Assignments](#)

[CW Interfacing](#)

[Outboard Keyer](#)

How WriteLog sets up sound board mixers

You can adjust the sound board mixers with the WriteLog Sound board mixer control that you can reach from the Start Menu, WriteLog program group.



This is the setup for a shack cabled for one rig, or for two rigs using Y cables with the L/R channels on a single sound board input for receivers and single sound board output for transmitters.

On this screen, you indicate to WriteLog:

- Which sound board output device goes to your transmitter(s). Left/Right from one board to two rigs.
- Which sound board input device has audio from your receiver(s) connected. L/R to one device from two rigs.
- What sound board input has your microphone connected.
- What sound board output should play back recorded receiver audio.

The alternative and more capable setup, wiring a separate sound device per radio, is described [here](#).

You use the "Volume Control Options" built into the Windows OS to control the levels. WriteLog does not attempt to set the levels. The names that appear in this WriteLog Sound Mixer Control [can be changed](#) in the Windows Sound control panel. The dialog above arranged to read "FT-1KMP Mic", "Shack Mic" and "FT-1KMP Rcvr".

Also note that you must select the two Recording inputs, "DVK mic" and "rec to PC," on two separate sound boards in order to have both the "echo microphone" feature and the "continuous audio record to file" feature. If you attempt to turn on Echo Microphone with these settings on the same sound device, then WriteLog will put up a message about the "resource in use".

Exclusive access

Its worth experimenting with the Exclusive check boxes. Per the Microsoft Windows sound driver documentation, exclusive access provides lower latency, which is desirable for driving a rig from your desk microphone via WriteLog. However, not all sound board drivers properly support exclusive access. The only way to find out is to try with the button one way and then the other. The playback device setting is separate from the recording device setting, so you have 4 combinations to experiment with.

Tuning parameters

The tuning parameters adjusted by the sliders on this dialog are the same ones documented in the [WISound](#) section. The INI entries EchoMicCaptureMultiple, EchoMicRenderMultiple, EchoMicBufferMsec and EchoMicBufferMaxMsec are adjusted by the slider bars on this dialog. Positions to the left give lower latency, but, on some devices/PC combinations, the PC cannot keep up and distorts the audio. Move the bar to the right in that case which increases the latency. In this dialog, any bar all the way to the left removes the corresponding entry from WriteLog.ini which causes it to use its default setting.

See Also

[\[WISound\]](#)

[Tools Sound Board Options](#)

[Sound Board Interfacing \(transmitting\)](#)

[Two Radio Contesting](#)

[Enable Recording Loop](#)

[Pause Recording Loop During SSB Xmit](#)

[Echo Microphone](#)

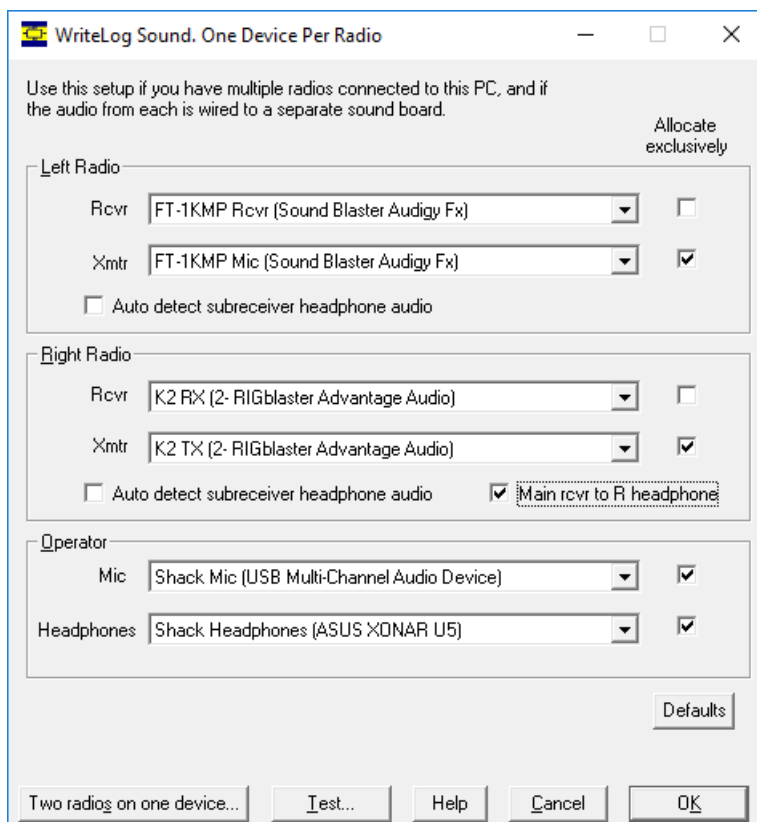
[If WriteLog chooses the wrong Line In input](#)

[Sound Board Voice Keying](#)

Sound Board Setup for sound device per radio

WriteLog is most capable when setup to use a dedicated sound device for each radio in a SO2R configuration.

If you prefer using the older [Two Radios on one device](#) option, which limits the hardware expense to a single sound card, click the button in the lower left. The difference is important only for two-radio configurations. If you have just one radio, then you get more tuning options with the WriteLog configuration on this page—one device per radio.



On this screen, you indicate to WriteLog:

- Which sound output device is wired to each transmitter.
- Which sound input device is cabled for audio from each receiver.
- What sound input device has your microphone connected.
- What sound output device has your headphones connected. WriteLog routes the Rcvr audio to the Headphones device.
- The sound device used by WriteLog's Audio Review is the Windows default sound board and cannot be changed from this dialog.

Exclusive mode devices versus Shared mode devices

Normally you will want to accept the default check box settings for which devices are accessed by WriteLog in exclusive mode. The dialog puts a message at the bottom of its page if you have changed the *Allocate Exclusively* from its default. Restore the *Allocate Exclusively* settings using the **Defaults** button and the message will disappear.

WriteLog uses the [Windows Core Audio APIs](#). They can attain lower latency (less time delay from input of a sound to output of it) with the *Allocate Exclusively* checked on. However with that setting—and this is especially important for receiver audio—other sound-processing packages cannot read the receiver audio concurrent with WriteLog. Digital decoders like MMTTY will need this capability. By default, WriteLog uses *Allocate Exclusively* for all sound access except receiver audio. A constraint for shared mode allocation is that WriteLog **must** comply with the sample rate set in the Advanced Tab/Default-Format in the Windows Sound Control Panel.

Transmit audio, in contrast, need not be Shared Mode in WriteLog, even for sound board modulators, because WriteLog allocates those devices only for the duration of a transmission, and only one program is going to transmit at a time.

Subreceiver audio

For radios with subreceivers, there are additional considerations. WriteLog's cabling standard is that main receiver audio is always wired to the device's Left channel. Subreceiver audio, if present, is on the Right channel.

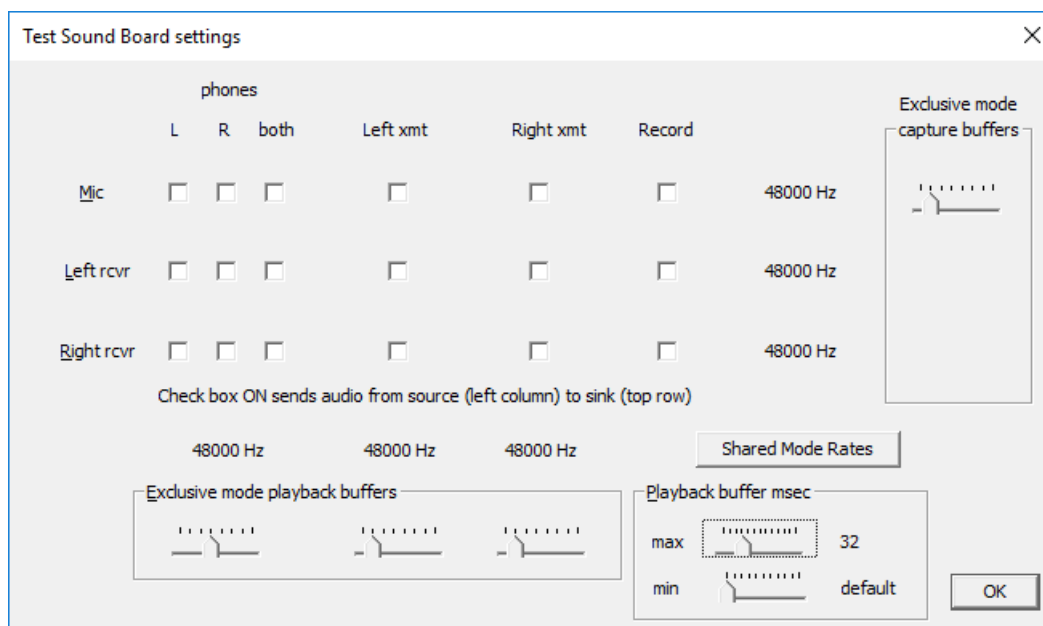
The *Main rcvr to R headphone* button affects what happens in the headphones when you switch to Headphones **Split** (one

radio in each ear) from Headphones **Normal** on the Right radio. Without this button checked, the main receiver audio "jumps" from your Left headphone to your Right headphone. With this button checked, WriteLog swaps the L/R channels when it routes Right rig audio to both headphones. Therefore, the switch between Split and Normal leaves the Right rig main receiver on the Right ear.

The *auto detect* button is useful for a radio that has stereo output with the subreceiver audio permanently on the Right channel and goes silent while you have the subreceiver off. (The FT-1000MP constant-level rear panel audio jack is an example.) With *Auto detect subreceiver audio* turned on, WriteLog monitors the signal power in the right audio channel and if its very low compared to the left, WriteLog duplicates the receiver's left channel to the right so you hear the main receiver in both ears rather than silence in your right ear while you have the subreceiver off. You can tweak WriteLog's [power detection parameters](#) in writelog.ini.

Test your setup

The **Test** button brings up this dialog.



Click on any check box and the Test dialog routes audio from the input device specified by the row to the output device specified by the column. Any audio that is flowing when you move a slider (i.e. if you have any check box on) then the WriteLog audio flow is immediately adjusted to use that changed slide value. You can hear if there is a problem.

The *Shared Mode Rates* displayed are diagnostic. It simplifies experimenting with setup changes if you use the Windows "Playback devices" and "Recording devices" control panels to set all the sound devices used by WriteLog all to one shared-mode sample rate. Making them match avoids the "no compatible format" messages on attempts to route audio from a capture device to a playback device. WriteLog can internally do some format conversions; those that involve interpolating or decimating sample rates that are a small integer factor of each other. If your preferred solution is 48000Hz sampling then you'll need to manually change WriteLog.ini's [MicSampleRate=12000](#), which causes recording F-key messages for SSB to be at the given rate.

For all the sliders, moving all the way to the left gets WriteLog's internal default, which is for minimum latency. There are devices, however, that WriteLog might service fast enough on your PC hardware to avoid distortion. Sliding to the right extends the buffering (which also increases delay) and will help reduce audible artifacts that can happen when, for example, WriteLog switches audio between Split and Normal. WriteLog needs to be enough audio in memory to fade out the old channel and fade in the new one on a given ear. Lower buffering reduces the delay, but also reduces the time available to accomplish those fades. A faster fade gives a louder artifact.

WriteLog cannot change the Shared Mode Rate for a device. Instead, use the Windows Control Panel, Sounds. Go to the Recording tab and find the "Advanced" setting. While there, if you are considering the device for receiver audio, also note if the number of channels is 1 (monophonic). With only one channel, monophonic input, a dual-receive radio feature will be missing from WriteLog. WriteLog needs two channel decoding from the sound board in order to route the main receiver into the Left headphone and the subreceiver into the Right headphone.

Tuning for minimum latency

For devices allocated in **Shared Mode**, most of the performance parameters are built into the Windows audio engine. WriteLog has no tuning parameters for *Recording* Shared Mode devices (which is WriteLog's default for your receiver audio.) It has these two tuning parameters for *Playback* Shared Mode Devices: the minimum and maximum buffered audio length in milliseconds. Those two are displayed as *Playback buffer msec*.

For devices allocated in **Exclusive Mode** WriteLog uses the same *Playback buffer msec* max setting as for Shared Mode to determine the overall buffer length it maintains on a playback device. For each Exclusive mode device there is a second parameter: the size of the buffer used to transact audio with the sound board device driver. They are called capture buffers for a recording device, playback buffers for a playback device. The device driver specifies a minimum size (corresponding to minimum latency) but that small size means WriteLog has to service the device more often, which might require more CPU cycles than available. The slider controls labeled *Capture buffers* and *Playback buffers* direct the WriteLog to use larger buffers, but that increases latency.

The range of buffer size is a multiple from one through five of the minimum buffer size. The leftmost position of each bar gives the least buffering (and least latency) but some sound devices cannot run reliably at their minimum latency setting. Move the slider to the right if the audio output is distorted.

This Test panel routes the audio immediately on clicking any of the the check boxes. Click the Both button under phones and on the Mic row, for example, to route mic audio to the headphones and hear the result in real time. For the left and right receiver audio devices, the same test works: just route the left or right receive audio to your headphones and adjust the slider bars to the left for low latency, and move them to the right if you get distortion.

If you hear distortion using this Test panel, it is not immediately obvious whether the problem is coming from the Record side or the Playback side. You have to try moving the sliders for each.

For the audio devices labeled Xmt, you probably don't hear the audio directly from this test dialog although this panel routes the audio to the appropriate device as soon as you click the check box. You'll need to plug headphones into the appropriate sound output, in order to listen to the playback device under test.

The button in the lower right changes its label to show diagnostic metrics for your settings as you click it. Click on the Shared Mode Rates button to cycle the dialog labels through the list of rates (48000 Hz) in the example above, the Buffer Frame Count, and the Initialized Period as displayed here. The buffer size displays are zero until the device is activated by clicking one of the check boxes.

	phones			Left xmt	Right xmt	Record	
	L	R	both				
Mic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	288
Left rcvr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1056
Right rcvr	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0

Check box ON sends audio from source (left column) to sink (top row)

576 0 0

Exclusive mode playback buffers

Playback buffer msec

max 32

min default

Buffer frame count

OK

The Buffer Frame Count is the number of samples in a single sound device buffer. The Windows driver for the sound board sets the minimum size of the buffer (selected by the left-most slider setting). WriteLog can only increase the size in integer multiples of the driver's minimum.

Test Sound Board settings

phones

L

R

both

Left xmt

Right xmt

Record

Mic

☐
☒
☐
☐
☐
☐

6000 usec

Left rcvr

☒
☐
☐
☐
☐
☐

0 usec

Right rcvr

☐
☐
☐
☐
☐
☐

0 usec

Check box ON sends audio from source (left column) to sink (top row)

12000 usec

0 usec

0 usec

Initialized period

Exclusive mode playback buffers

Playback buffer msec

max

min

32

default

Exclusive mode capture buffers

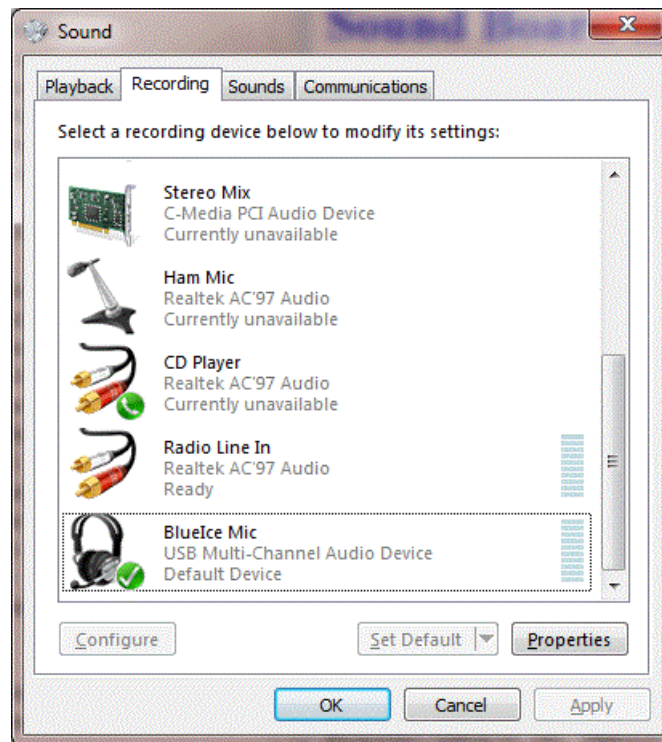
OK

The Initialized Period is defined to be the Buffer Frame count divided by the sample rate. However, WriteLog simply displays here what the sound board driver says its period is, in micro seconds.

Sound Board Interfacing (transmitting)

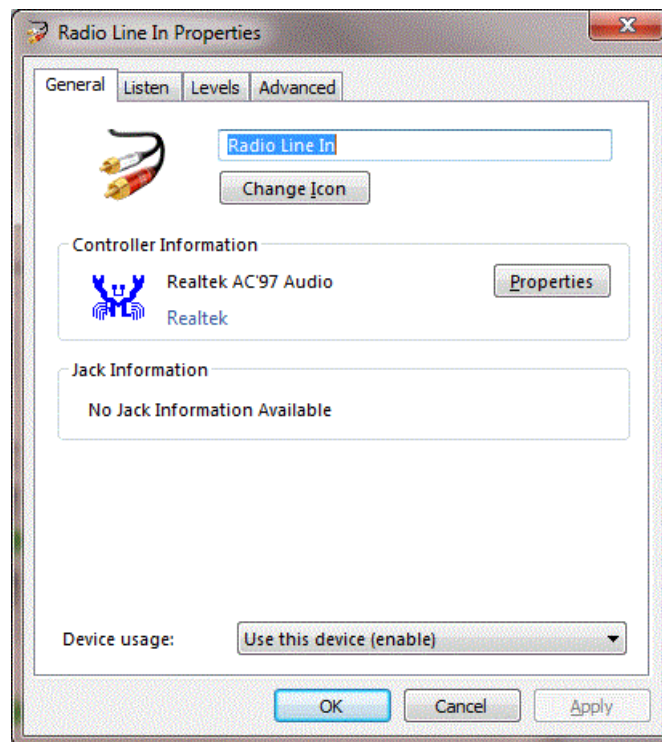
The first thing to do is outside of WriteLog. Identify which Windows device corresponds to which connector on your PC. You can use the Windows controls to rename them to make more sense in your environment (how to do that is described below). On the Windows desktop, there is a little speaker icon. If you just hover the mouse over it, it puts up a small box indicating the volume level of the "Default Device" for Playback. If you click it with the left mouse button, it pops up a box with level controls, one each for all the Playback Devices on your system. For WriteLog, to work best, you need at least two sound cards installed, so it should show at least two controls. If instead, you right mouse click the speaker icon, that has, among other entries, one named "Playback Devices" and another named "Recording Devices".

To do things in a systematic order, start with Recording Devices. This brings up a tabbed dialog box with the "Recording" tab activated.



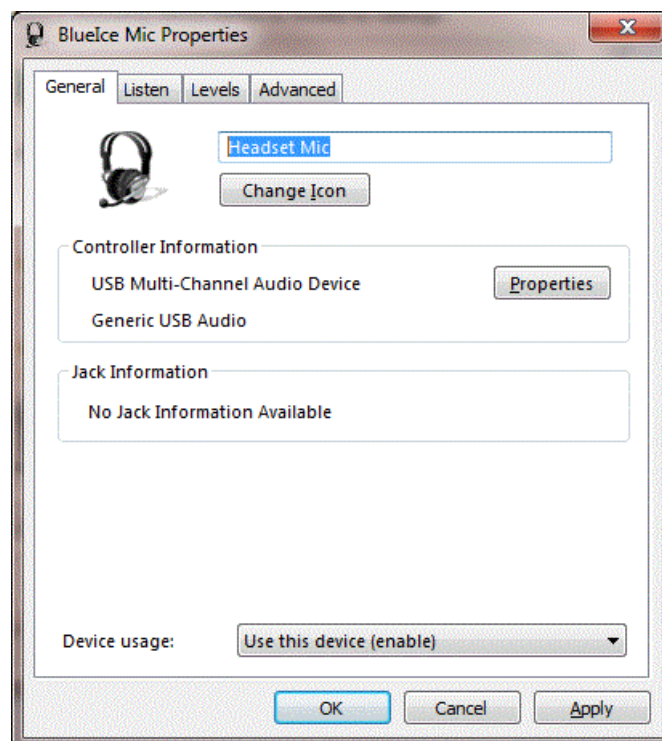
To help understand which is which, the display shows which sound board each comes from. On the pictured system's case, there are 3 sound boards with recording capability, one called "C-Media", another called "Realtek AC'97", and a third called "USB Multi-Channel Audio Device". In the pictured example, the receiver audio is wired to the L/R channels of the Realtek AC'97 Audio, and a headset mic is wired to the "USB Multi-Channel Audio Device".

Do the received audio first. Label it more nicely by highlighting that row in the main dialog, and click Properties. In the box that comes up, you can change the label in the top box. In the picture, it has been changed to "Radio Line In", and you can also change the icon (there is not an icon that looks like a ham receiver available to choose from, but you can at least make it distinct from the other sound boards).

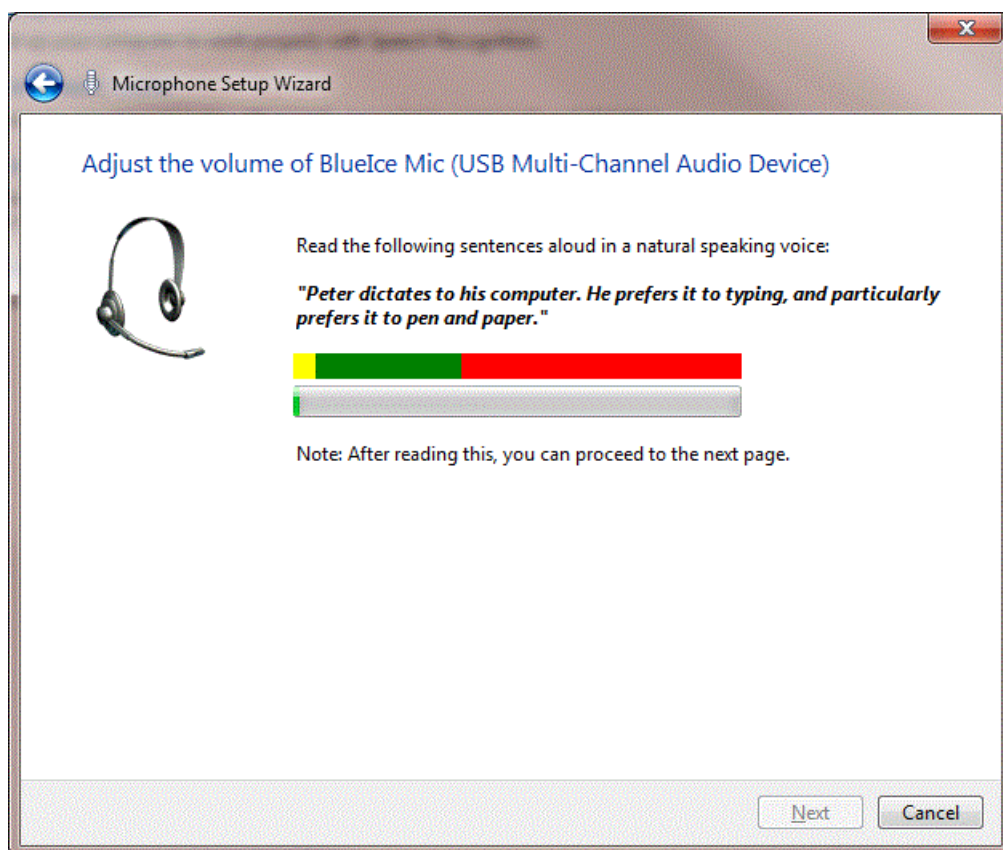


There is also a "Levels" tab in the dialog. The main dialog box has VU meter active all the time and, if you have receiver audio actually connected to the line in, you can see the effect of changing the level on that VU meter. This is how you can set the level of the received audio that will be recorded if you turn on "continuously record". If your audio levels from your L/R receivers are significantly different from each other, that you have to guess what the balance control should be and experiment by playing back received audio. You want to remember the name you give this device. You'll use it later in WriteLog's mixer setup as the "rec to PC" setting.

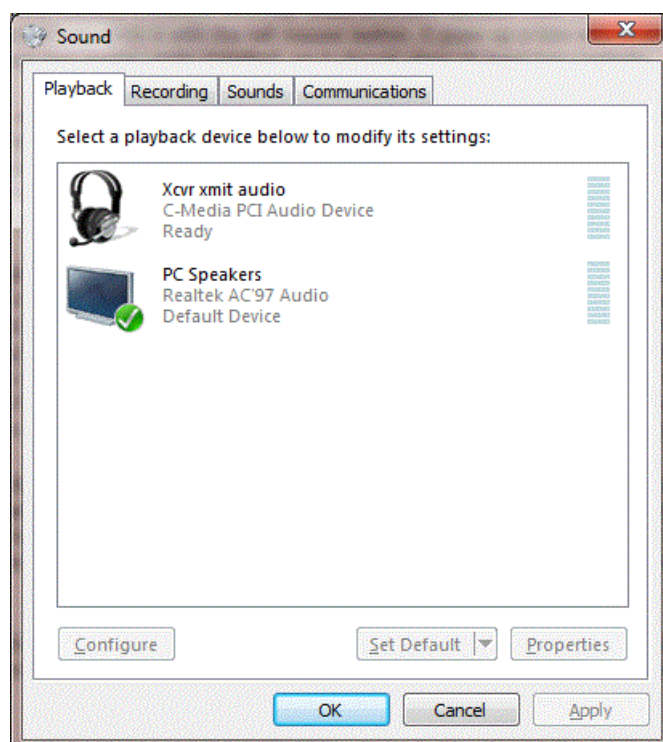
Back in the "Sound" dialog box, set your mic gain knowing that the "USB Multi-Channel Audio Device" is your headset microphone. Change its name using the Properties button to, say, "Headset Mic".



You can set the levels from the Properties page as well, but, back on the "Recording" tab of the "Sound" dialog, you can highlight the Headset mic and click "Configure" and a Windows wizard will set the level for you. In the page that comes up, you can click "Set up your microphone", this example selected "headset" in the next dialog, and then it goes to a wizard that will auto-set the level.



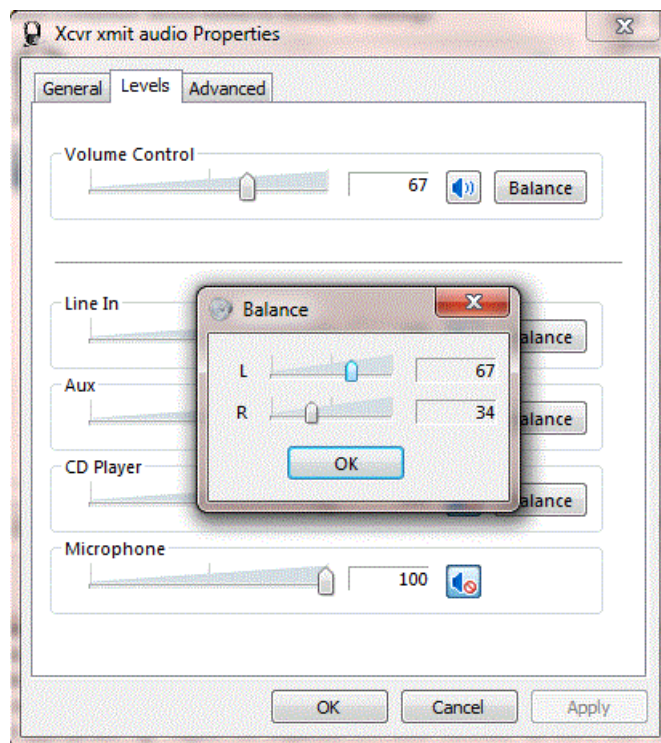
Read the sentence aloud and the wizard sets the microphone recording level. Remember the name you gave the device, Headset mic, to use as "DVK mic" in WriteLog's mixer setup. At this point, the record levels are set. You can switch the Sound dialog to the "Playback" tab. Equivalently, you can close the Sound dialog and get it back on the Playback tab with a right click on the little speaker icon and then "Playback Devices".



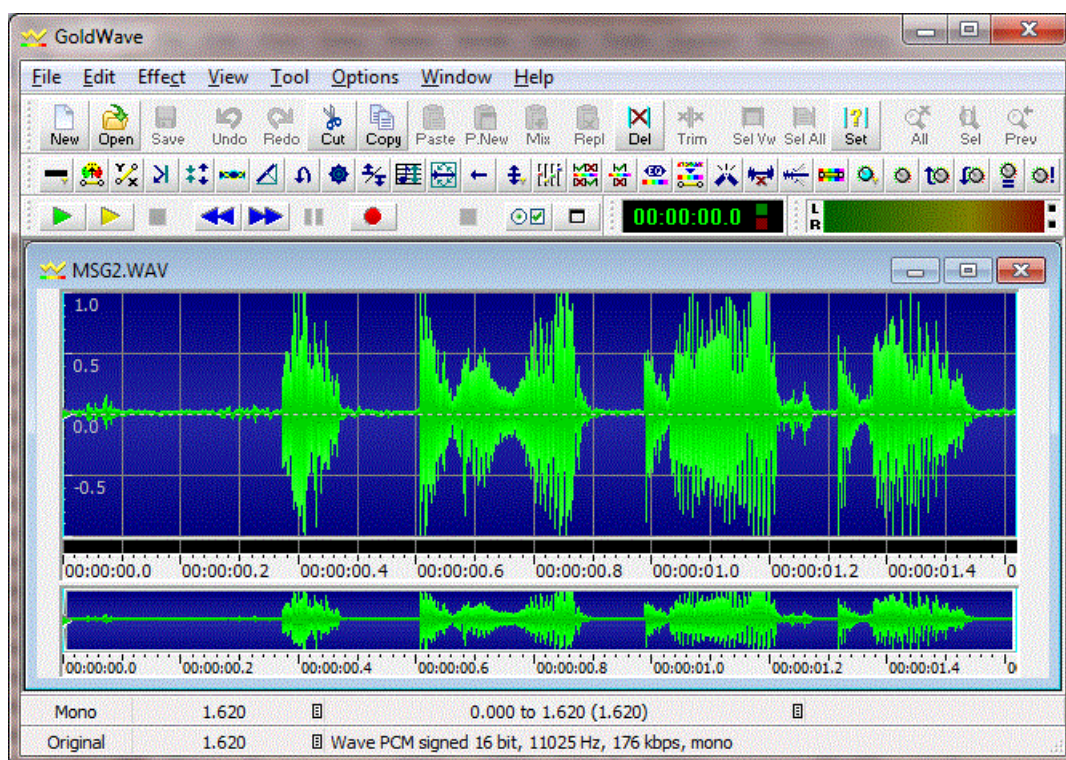
One of them should go your normal PC speakers and be set as the "Default Device". That one is the one to use for "Audio Review" in WriteLog's mixer setup.

Another device in the Playback tab is for the output you have connected to your transmitter mic inputs. In the picture, its the "C-Media" output. Highlight it, and click "Properties", and change the name to "Xcrr xmit audio". Remember this name as it will appear in WL's soundboard mixer controls by this name. It should be set as "xmit from PC". To setup the level for this one, set up your rigs (both Left/Right) for SSB and connect them both to dummy loads and set them on VOX. The easiest way to set the levels separately for the L and the R rigs is to click on the "Balance" button, which will then bring up a separate level control for the L and R channels. At this point you need WL actually running and Echo Mic turned on. Speak into the mic and it should trigger the VOX for the appropriate rig. Adjust the separate L/R level controls, do the L with WL on

the L rig, and the R level with WL on the R rig.



There is a final check you can do to double check. Use WL SHIFT+F2 to record a new MSG2.wav file. Then open that MSG2.wav file in a sound editor and confirm the levels are OK. Here is an example using [GoldWave](#).



The recorded audio waveform should be at least half of full amplitude. If you don't like the levels in the recorded file, the only adjustment that will affect them is the "Recording" tab, Properties, levels. And when you change that, it also changes the mic levels output by "Echo microphone", so you might want to go back and set those Playback levels as well. Not all ham microphones are compatible with all sound board microphone inputs. There are some sound boards that simply do not have enough microphone gain and the only solutions are to change the microphone or change the sound board.

See Also

[Tools Sound Board Options](#)

[LPT Port pin Assignments](#)

[Two Radio Contesting](#)

[Enable Recording Loop](#)

[Pause Recording Loop During SSB Xmit](#)

[Echo Microphone](#)

[How WriteLog sets up sound board mixers](#)

Enable Recording Loop

This menu option turns the sound board recording loop on or off. Note that the WinRTTY Stereo sound board options automatically turns the recording loop on. If you turn the recording loop off while running the stereo sound board option in WinRTTY, WinRTTY stops receiving (don't do that). The WinRTTY standard sound board option automatically turns the recording loop off.

Normally, you will have no reason to toggle this option. But you may use it to pause RTTY reception when you're using WinRTTY, or to reduce the memory and CPU use load on your machine when you are running SSB. You will not be able to save an audio snapshot if you turn this option off.

See Also

[Tools Sound Board Options](#)

[Pause Recording Loop During SSB Xmit](#)

[Echo Microphone](#)

[Sound Board Interfacing \(transmitting\)](#)

[How WriteLog sets up sound board mixers](#)

[Continuously record audio to file On/Off](#)

Continuously record audio to file

Turning on this menu selection causes WriteLog to record all received audio to disk. It does not stop until your disk is full, so you have to watch your disk space. WriteLog automatically turns this selection off if it fails to be able to write output (that is, if your disk is full). This setting is saved when you do a [Setup Save Configuration](#), so if you want WriteLog to automatically start recording every time WriteLog is started, then check this menu item and do a Setup Save Configuration.

WriteLog breaks the WAV files up automatically to keep them from getting too large. There are three ways it decides when to close of a WAV file and open a new one. (1) a maximum of one hour of audio is recorded to a single file. (2) when you record a new SSB WAV file using SHIFT+Fn or (3) If you have the Tools Recording loop pauses during transmit, the file is broken every time you transmit a WAV file. In any case, it puts all the files in the folder selected in the [Sound Board Options page](#). and generates a new name of the form ReceivedAudioNNN.wav for each file. WriteLog starts with 001 for NNN and counts up as it fills your disk. WriteLog never deletes a WAV file in the directory, so you need to clean out the directory when you start a new contest.

WriteLog also maintains a text file, StartingTimes.txt in the same directory. The UTC time of the beginning of each WAV file is recording in StartingTimes.txt.

WriteLog comes with a special program, AudioReview that knows how to read the StartingTimes.txt file and automatically switch from one WAV file to the next.

Compression

Use the Wave File Compression... button in [Tools Sound Board Options](#), you can set WriteLog's sound recording to compress the audio as it is being written to disk. This will make the WAV files smaller (they are about 160MB per hour without compression), but may also limit the ability for AudioReview to analyze them. We have not investigated the effects of compression on the behavior of the PSK,CW, RTTY decoders in AudioReview. When you set up compression, be aware of the limitations:

The compression settings do not take effect until the next time WriteLog starts a new WAV file. Any recording in progress when you make the change will retain the old settings.

The only format that preserves the exact sound that was used in real time is PCM 16bit, 11.025KHz stereo. This is the format used when you turn off the Enable Compression box.

You may select a monophonic format for the WAV file. WriteLog will continue to run in stereo for CW and RTTY decoding, SSB transmission, etc if you choose a mono option, but the WAV file will have only a single channel of audio and it will be the left and right stereo channels mixed.

AudioReview reads WAV files regardless of how they compressed and, will tolerate changes made in the compression settings during the contest. But compression may affect the performance of the RTTY, PSK, and/or CW decoders in AudioReview.

Some compression selections may not work at all. For example, the MP3 compressor, while extremely fast at playback time, requires a large amount of processing as the audio is compressed and your CPU may not be able to keep up. Experiment **before** the contest weekend!

See Also

[Tools Sound Board Options](#)

[Enable Recording Loop](#)

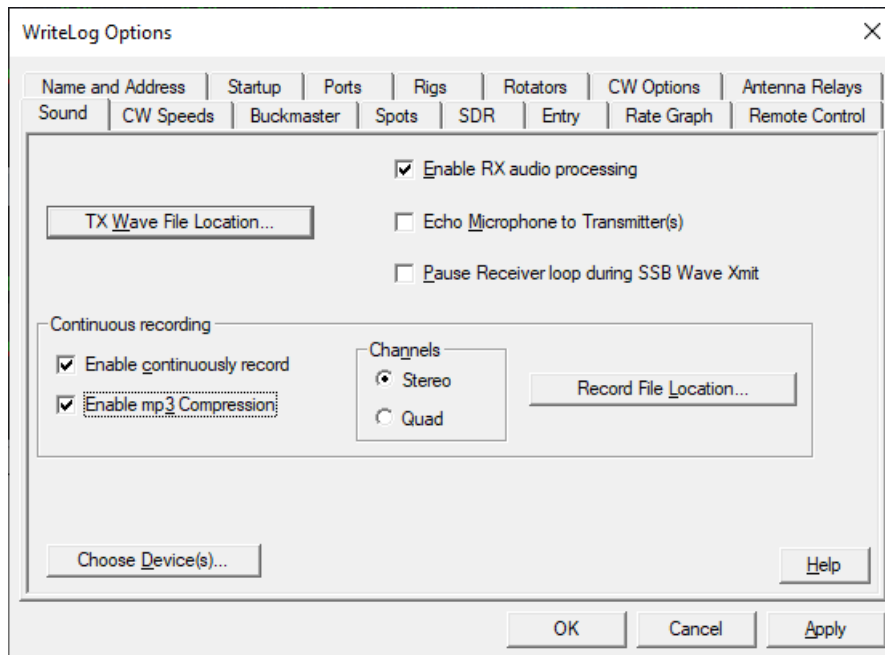
[Pause Recording Loop During SSB Xmit](#)

[Echo Microphone](#)

[How WriteLog sets up sound board mixers](#)

Tools Sound Board Options

The Tools Sound Board options menu entry brings up a dialog box that enables setting up your sound board.



Turn on Enable RX audio processing to enable WriteLog to use the selected RX devices in the Sound Board Mixer control.

For both Wave File Location and for Record File Location, you browse to an existing directory and select any file in the directory. If you want to select the directory and there is no file in it, then just type in a file name and click OK. No file will be created but the directory will be selected.

The "Pause Receiver loop" setting is only useful for sound boards that internally cannot support simultaneous reading of their Line In while also sending a WAV file on their Line Out. Very few devices have this limitation, so this button should be off unless you have found that SSB and/or RTTY transmission fail when you have "Continuous Record Audio..." turned on.

For the [One Sound Device per Radio](#) configuration, the "Pause Receiver loop..." option is disabled because it is not useful in that setup.

With continuous recording turned on, the status bar is updated when a new file is created (every hour) and, with a red background, if there is an error while recording. **The error status is only visible on the screen if you leave WriteLog's View/Status-Bar item checked on.**

Recording Channels

Stereo records two channel stereo, with audio from your Left and Right receivers only. Whatever your receiver puts on its audio output is recorded. The Quad option records four channels. The first two, Left and Right, are your receiver audio channels as is the case with the stereo setting. The second two channels are labeled Back Left and Back Right. They contain WriteLog's record of your transmitted audio on your left/right transmitters, respectively. With Echo Microphone turned on, it records your microphone continuously, whether or not you have engaged PTT or tripped the rig's VOX. Regardless of the Echo Microphone setting, the two Back channels also record your transmitted WAV files (for SSB) and any digital transmissions that were done with AFSK on the sound boards designated for Left and Right transmitters in the WriteLog Sound Board Mixer setup.

WAV files recorded in the Quad setting use a format that was new in Windows Vista. Beware: some older audio processing and playback software might fail to read files recorded with Quad. Also note that the Quad setting takes twice as much disk space per hour as stereo.

Changing the Quad setting only takes effect after you Choose device(s) or else stop and restart WriteLog.

Compression

Mp3 compression is supported. Compared to the standard WAV file format:

- When WriteLog breaks its recording files every hour, the first second of the new file contains the same audio as the final second of the previous one. AudioReview uses this overlap to perform a seamless splice. WriteLog's WAV format recordings do not have nor need this overlap.
- WriteLog's mp3 supports at most two channels. If you select Quad channels along with Compression, WriteLog

records two separate mp3 files. The one with "-tx" appended to its file name has the station microphone audio.

MP3 support is implemented using [LAME](#) under the LGPL.

Device Selection

Choose device(s) brings up the same Sound Board Mixer Control as the Start menu option of the same name.

See Also

[Continuously record audio to file On/Off](#)

[Enable Recording Loop](#)

[Pause Recording Loop During SSB Xmit](#)

[Echo Microphone](#)

[How WriteLog sets up sound board mixers](#)

Pause Recording Loop During SSB Xmit

If your sound board does not support simultaneous playback and record (duplex), then you need to check the button on for SSB operation. If you do a Setup Save Configuration after setting this button, then this option will automatically be checked every time WriteLog starts.

If you set this button off and your sound board doesn't support duplex, then you will get an error message whenever you try to transmit a WAV file in the SSB mode.

See Also

[Tools Sound Board Options](#)

[Enable Recording Loop](#)

[Continuously record audio to file On/Off](#)

[Echo Microphone](#)

[Sound Board Interfacing \(transmitting\)](#)

[How WriteLog sets up sound board mixers](#)

[Setup Save Configuration](#)

Echo Microphone

WriteLog uses the low-latency interfaces (introduced in Windows Vista) to read the microphone input, and those same interfaces to repeat the microphone audio on the selected output sound board. On these operating systems, there is no requirement that the microphone input be connected to the same sound board as the transmitter audio.

Using WriteLog in RTTY mode automatically turns off the Echo Microphone feature.

See Also

[Tools Sound Board Options](#)

[Enable Recording Loop](#)

[Pause Recording Loop During SSB Xmit](#)

[Continuously record audio to file On/Off](#)

[Sound Board Interfacing \(transmitting\) on Windows 7](#)

[How WriteLog sets up sound board mixers](#)

TCP/IP configuration issues for WriteLog networking

Essentially all PC's are configured these days to be able to browse the internet, which uses TCP/IP, and therefore a working TCP/IP installation is almost certainly already on your machines, and these WriteLog instructions won't elaborate on how to get TCP/IP installed. However, in a home network there is an issue of workstation naming that you will have to deal with that doesn't come up when configuring TCP/IP for internet browsing. WriteLog requires that every workstation in the network have a name that can be used to connect from any other workstation in the network. Each Windows version has its own quirks for getting TCP/IP names distributed to the stations in a home network. If you are running Windows XP and a modern router supporting DHCP (like from DLink or LinkSys) then your network almost certainly has this working correctly already. But if your home network has no router with DHCP, then you may have to know some details about TCP/IP and lmhosts files and such in order to get the names working. (DHCP is the lingo for support of the "get an IP address automatically" option in the Windows network setup).

These instructions won't tell you how to get Windows TCP/IP setup such that those names are available, but there is a universal way to test whether the names are working for all Windows operating systems. Use a command window and type the "ping" command. All workstations in the WriteLog TCP/IP network must be able to successfully ping all other workstations by name in order for WriteLog TCP/IP networking to work.g all other workstations by name in order for WriteLog TCP/IP networking to work.

This example shows how the workstation named "w5xd" is reachable from where I typed the command. This command must succeed as shown from *all* workstations in the network, and, on each station in the network, a ping must succeed for all other stations on the network.

```
f:\wl10>ping w5xd
Pinging w5xd [192.168.1.75] with 32 bytes of data:
Reply from 192.168.1.75: bytes=32 time<1ms TTL=128
Reply from 192.168.1.75: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.75: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms
f:\wl10>
```

Note that WriteLog TCP/IP networking will accept the IP numbered address (192.168.1.75 in the example above) as an alternative to the name (w5xd in the example). But using numbers in a network with DHCP enabled comes with its own risks. The "D" in DHCP stands for "dynamic", which means that the DHCP server can, under certain conditions, decide to change or re-use numbers when machines get rebooted. For convenience in restarting logging operations, WriteLog remembers the names used in previous sessions when restarting, and if you have typed numbers into WriteLog, and if DHCP has moved the numbers around, then the names remembered by WriteLog will be wrong.

By default, WriteLog uses TCP port 1054 for all links, but you can change the [Network], TCP_PORT setting to use another port. All machines in the WriteLog network must have the same setting else they won't link to each other.

Network Operations

WriteLog can maintain a consistent copy of the log for a multi-transmitter operation with a separate computer at each transmitter using the networking capabilities of Microsoft's Windows 2000, XP, Vista, Windows 7 or later. You must have a network card installed in each computer. The network can be mixed between computers running.

Step 1: setup the Windows protocols

WriteLog supports TCP/IP for networking protocols.

WriteLog's TCP/IP implementation circumvents Windows security settings, and therefore has no username/password issues to setup. .

Windows install issues for the TCP/IP option for WriteLog networking

See the [Writelog TCP](#) help topic for installation issues.

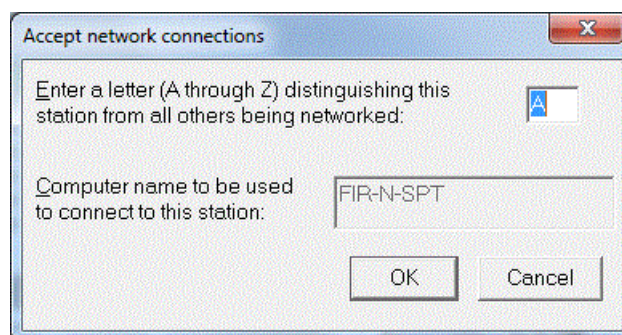
Step 2: share and copy a common WL file

All stations participating in the network must be logging the same contest and the same exchange format. An easy way to ensure this is for at least one workstation to place a WL file in a directory shared on the network. *Important: the workstation that creates the WL file must do a Setup Register to accept network connections **before** saving the WL file* Then a new participant should do a File Open on that WL file to get started. But it must immediately do a File Save As... to create a local copy because each WriteLog installation is designed to keep its own redundant copy of the entire log on its own disk so that it can carry on logging in the event of network failure. (Note that it is not possible for two stations to simultaneously open the same WL file over the network. So the workstation that is sharing the original WL file must not be using that file, but must be using a different file.)

WriteLog minimizes the impact of failures in individual computers or in the network by allowing individual computers to join or leave the network at any time. If a station goes down, it should recover its local copy of the log first, including any [_jou.adi file](#), before rejoining the network. Whenever a station joins the network, it exchanges copies of the entire log with the rest of the network so there is no need to later merge the various logs if stations fail to stay on the network for the entire contest.

Step 3: Invoke Setup Register to accept network connections

Each station must invoke WriteLog's Setup Register to Accept Network Connections... menu.

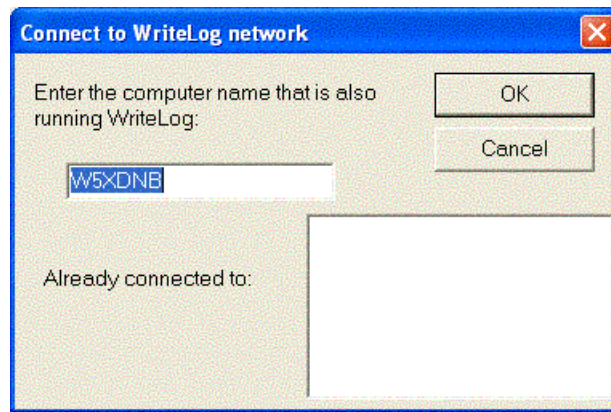


Enter a different letter designation for each station. It is important that each station contributing to the log have a different letter designator because WriteLog uses that letter to distinguish QSOs being logged from different stations. With this command WriteLog will also confirm that the exchange being logged has the special field labeled "NETW" which it will add if its missing.

If your network will have more than two stations in it, you should designate one of the computers as the "server" that will route all of WriteLog's information to the others. This server computer can itself also be used to log QSOs, etc. and is otherwise no different from the other stations. Using this one station to route the traffic is an easy way to minimize the necessary network traffic.

Step 4: Every station except the server does a Setup Link...

Finally, each station should actually join the network by invoking the Setup Link To Network menu entry and link to the server station .



For convenience, the dialog box lists the stations already connected, and if you are using one station as a server as suggested, only the server will show more than one station in the list. WriteLog puts an asterisk, "*", after a station name where the initial protocol setup is in progress but not yet complete. The listings are the numeric IP addresses of the connected stations, which is what WL internally uses to maintain connections. WriteLog automatically establishes a link in both directions, so in a two station network, only one of the station operators need establish the link; or, in a bigger network, the operator of the server station need not request any links as all other stations will connect to it.

As QSOs are logged, they are relayed to all stations in the network and appear in their logs as well. Editing operations in the Log Window's Edit Tool are also relayed to all stations and any station can edit any QSO in the log. The convenience of editing any QSO from anywhere has one caveat due to the network: it is possible for two stations in the network to edit the same QSO at precisely the same time. There is no way for WriteLog to determine which change is "correct", but it can detect the problem and logs a message to this effect in the WriteLog Network Status window when it occurs.

See Also

[View Network Frequencies](#)

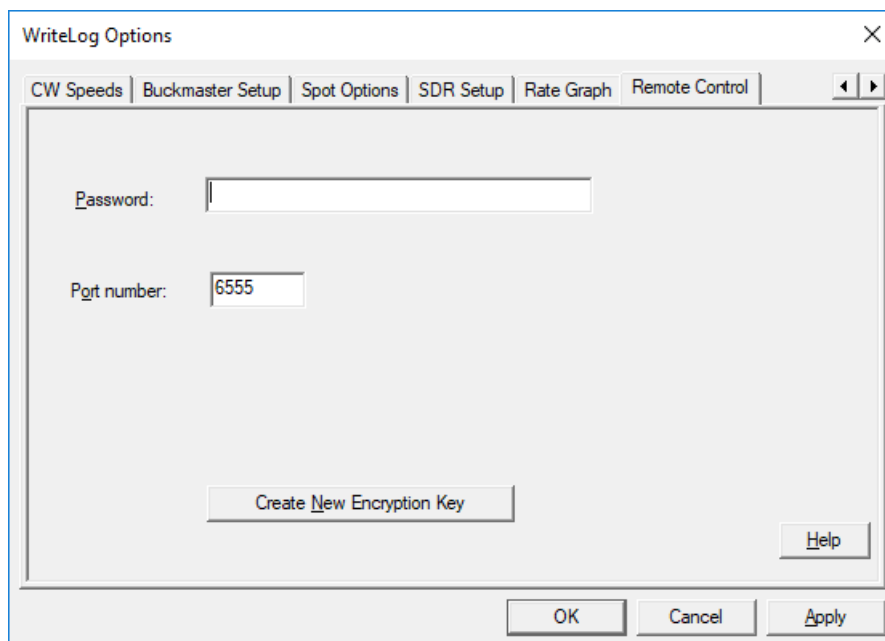
[Network Frequency Display Tag](#)

[Entry Send Network Gab](#)

[View Network Gab](#)

Remote Rig Control

Setting the password in the Remote Control dialog turns on WriteLog's Remote Control server. Clearing out the password and clicking Apply (or OK) stops the server.



The port number must match what you use from the controlling site, and if your WriteLog machine is on a home router, you will need to set that router's forwarding (or firewall setup) to pass your chosen port number to the PC on your home network that is running WriteLog.

WriteLog does not ship with an encryption key, and the Remote Control server will fail to start until you once use the Create New Encryption key button to create one for yourself. That button will create and use the file named **writelogremoterigcontrol.crt** in (with default writelog.ini settings) My Documents\WriteLog\contest\public_key. That .crt file must be copied to the controlling machine in order to connect to your WriteLog Remote Control server. There is no particular reason to create new encryption keys later—only if have reason to believe some has taken a copy of your private_key directory.

Why is there both a .crt file and a password? The answer is that the WriteLog server sides needs the password to be certain that the remote is authorized, and the remote needs the .crt file to know she is actually talking to the WriteLog remote she took the crt from rather than an imposter. And both need the encryption provided by the .crt and .key file combination to ensure that an eavesdropper cannot gather enough information to later pose as either the control site or the remote server site.

If a given control site needs to connect to two different WriteLog servers, then that control site needs both a crt file and a password for each (although nothing prevents the two remote server sites from installing identical files in their public_key and private_key directories).

Arranging the Windows

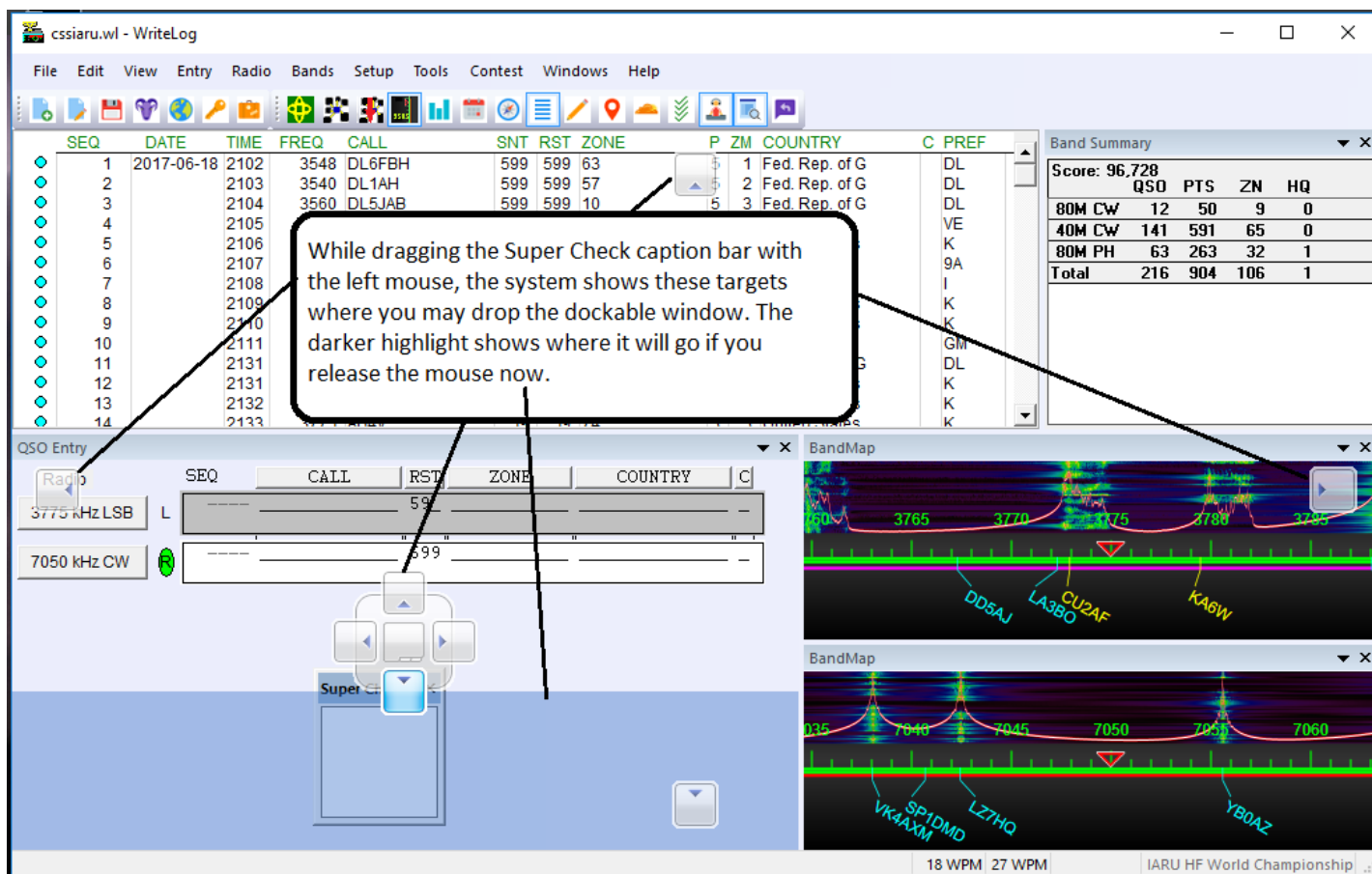
The windows listed in the Window menu can each be displayed or hidden individually based on how you are using WriteLog at the time. Two of them (the Edit QSO tool and the Status Bar) have fixed positions, but the others can be individually placed on the screen.

Moving windows

- The check box in the View/Docked-Captions menu must be **on**. Otherwise, the window positions are locked, but no screen space is taken for the captions.
- Move the mouse over the window caption and then press and hold the left mouse button, then move the mouse a bit more.
- Targets are drawn where you may drop the window (see the screen shot below). You may.
 - use the left mouse button to drag the window around. Before you release the mouse, you can control the way the window docks with either of two keys:
 - holding CTRL as you release the left mouse prevents the window from docking.
 - ESCAPE drops the window where it is, but not docked.

Docking windows

Docking to a horizontal or vertical edge of the window is more easily explained with pictures. This is the Band Summary window docked to the right edge of the log window (whose position is fixed.)



Release the left mouse above, and the Super Check partial window takes the position of the highlighted background:

cssiaru.wl - WriteLog

File Edit View Entry Radio Bands Setup Tools Contest Windows Help

SEQ DATE TIME FREQ CALL SNT RST ZONE P ZM COUNTRY C PREF

SEQ	DATE	TIME	FREQ	CALL	SNT	RST	ZONE	P	ZM	COUNTRY	C	PREF
1	2017-06-18	2102	3548	DL6FBH	599	599	63	5	1	Fed. Rep. of G	DL	
2		2103	3540	DL1AH	599	599	57	5	2	Fed. Rep. of G	DL	
3		2104	3560	DL5JAB	599	599	10	5	3	Fed. Rep. of G	DL	
4		2105	3560	VA2RAC	599	599	30	3	4	Canada	VE	
5		2106	3560	N2ADE	599	599	67	3	5	United States	K	
6		2107	3560	9A7W	599	599	68	5	6	Croatia	9A	
7		2108	3560	I2BJS	599	599	2	5	7	Italy	I	
8		2109	3560	AE4WG	599	599	67	3		United States	K	
9		2110	3560	AC2N	599	599	7	3	8	United States	K	
10		2111	3560	MM0BQI	599	599	46	5	9	Scotland	GM	
11		2131	3775	DC1NSK	59	59	40	5	1	Fed. Rep. of G	DL	
12		2131	3775	WA8ZBT	59	59	62	3	2	United States	K	
13		2132	3775	AD4IE	59	59	68	3		United States	K	
14		2133	3775	AR4V	59	59	74	3	3	United States	K	

Band Summary

Score: 96,728	QSO	PTS	ZN	HQ
80M CW	12	50	9	0
40M CW	141	591	65	0
80M PH	63	263	32	1
Total	216	904	106	1

QSO Entry

Radio: 3775 kHz LSB L

SEQ CALL RST ZONE COUNTRY C

7050 kHz CW

Super Check Partial

BandMap

BandMap

18 WPM 27 WPM IARU HF World Championship

Resizing windows

Each border between two windows can be dragged. As you move the mouse over that border, its cursor changes. While that cursor has the "drag border arrows" on it, press the left mouse button and hold it as you drag the border either left/right or up/down.

Two windows don't move or size

The Edit QSO tool, when it is turned on, always appears immediately adjacent the top of the Log window, and the Status Bar, when it is turned on, always appears at the very bottom of the frame.

All window positions become the startup default when you do [Setup Save Configuration](#).

Window Edit QSO Tool

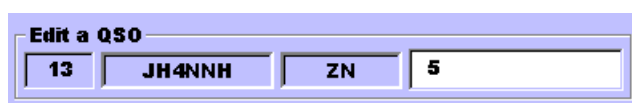
Use this window to modify entries that are already in the log. Use the [Log Window](#) to view the QSO to be edited, and then click on the entry to change.

ENTER	writes the field you have modified
CTRL+Z	restores the field as it was when you started.
TAB	switches to the next QSO field to edit. (Any changes made so far are not committed yet)
UP ARROW	commits any changes you have made and opens the previous QSO for editing.
DOWN ARROW	commits any changes you have made and opens the next QSO for editing.

The ARROW keys circulate through the Entry Window. That is, if you edit the last QSO in the log and press DOWN ARROW, the cursor moves to the Entry Window.

The label fields for the QSO's serial number and call sign are gray if you have made no changes the QSO, and they are dark if you have.

Double click on the background of this window and it disappears.



The screenshot shows a window titled "Edit a QSO". Inside the window, there are four input fields arranged horizontally. The first field contains the number "13" and has a gray background. The second field contains the call sign "JH4NNH" and has a dark background. The third field contains the letters "ZN" and has a dark background. The fourth field contains the number "5" and has a gray background.

See also

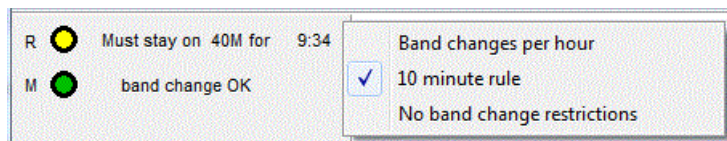
[Arranging the Windows](#)

[Editing in the Log Window](#)

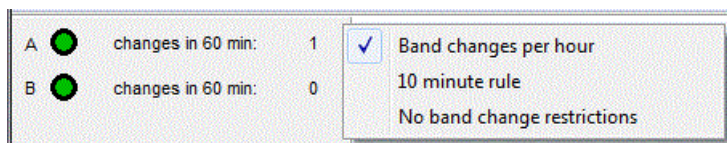
Window Band Changes

This window displays your status with respect to band changes and helps keep a multi-operator/single transmitter operation within the rules. The M/S 10 minute display operates in one of three modes:

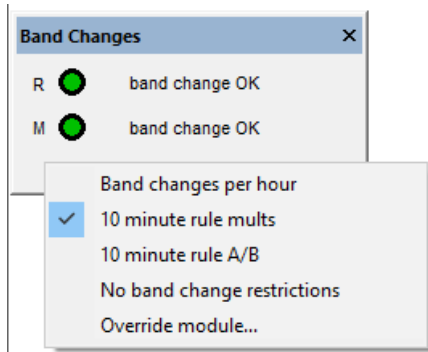
1. showing the CQ WW DX contest 10 minute rule display. This contest allows QSOs on only one band for a 10 minute period, with the exception that multipliers can be worked on one other band for a 10 minute period.



2. showing the number of band changes you have made in the "hour". With this setting, WriteLog does not distinguish RUN from MULT QSOs. By default, the "hour" is the previous 60 minutes, but if the selected multiplier module indicates the contest rules are per clock hour, then WriteLog calculates the band changes accordingly.



3. showing the NAQP contest 10 minute rule display. A multi-two entry requires a transmitter to stay on a band for 10 minutes with no restrictions on who can be worked.



Use the right mouse button to change the mode.

The Band Change window's behavior depends on whether there is a multi-single column in the logbook, and depends on whether the contest module is programmed to tell WriteLog about what multi-single and/or multi-two operations are allowed.

For this window to run keep both the A & B rows current (or labeled R & M) you configure the logbook for logging RUN or MULT QSOs (or Multit-2 A/B QSOs). Otherwise, WriteLog counts all the QSOs as RUN (A) and only the top row (A or R) in this window updates. Use the Radio This is RUN (A) Radio/This is MULT (B) radio menu entries. The first time you select one of these, WriteLog asks to add the "m" column to the log, which is necessary for multi-single operation. This same "m" column will become the "txid" column in the Cabrillo output.

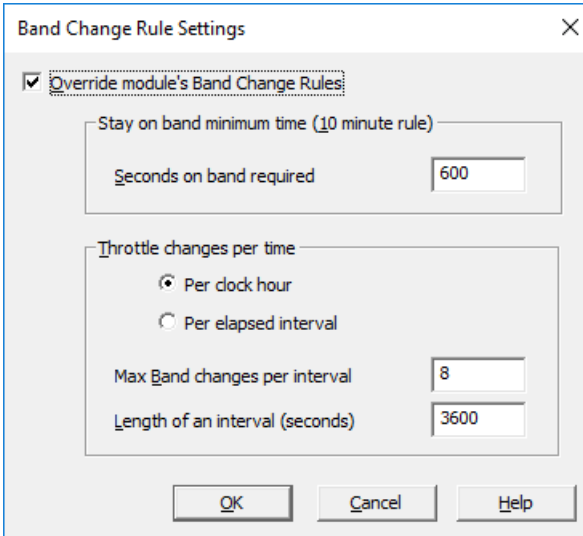
WriteLog will restrict the possible right mouse mode setting for this Band Change window depending on which contest is selected. If the multiplier module for that contest indicates what rules are allowed. Not all WriteLog modules correctly indicate which of many band change rules are in effect. If the module doesn't indicate anything, then WriteLog allows you to manually switch between the two modes, and assumes band changes should be counted over the previous 60 minutes. If the contest module indicates only a maximum band change rule or only a 10 minute rule, then only the appropriate display will be allowed, and likewise for a band-change-per-hour rule. If you right click in this window, it will pop up a menu to allow you to change the setting, if the contest allows it.

The color code in this window is:

- green: band change is OK
- yellow: one more band change is OK.
- red: may not change bands
- blue: a 10 minute rule violation has been detected in the previous 10 minutes.

Override Multiplier Module

If you right click the Band Change window and choose Override, you get this dialog.

The image shows a Windows-style dialog box titled "Band Change Rule Settings" with a close button (X) in the top right corner. Inside the dialog, there is a checked checkbox labeled "Override module's Band Change Rules". Below this, there are two main sections. The first section is titled "Stay on band minimum time (10 minute rule)" and contains a label "Seconds on band required" next to a text input field containing the number "600". The second section is titled "Throttle changes per time" and contains two radio buttons: "Per clock hour" (which is selected) and "Per elapsed interval". Below these radio buttons are two more text input fields: "Max Band changes per interval" containing the number "8", and "Length of an interval (seconds)" containing the number "3600". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Most multiplier modules provide appropriate Band Change rule settings information. But if not, you can improvise with this dialog. The "10 minute rule" mode is available only for those multiplier modules that report whether a given QSO is a multiplier. The other modes assume that all stations may be worked by any transmitter.

- Seconds on Band required is for the 10 minute rule calculation. You may change the timer to something other than 10 minutes.
- Per Clock Hour counts band changes in a clock hour (from :00 minutes through :59 minutes) while Per elapsed interval counts the changes prior to now.
- Max Band Changes per interval sets the alarm condition.
- Length of an interval sets how far back from now the band change counting is done.

See Also

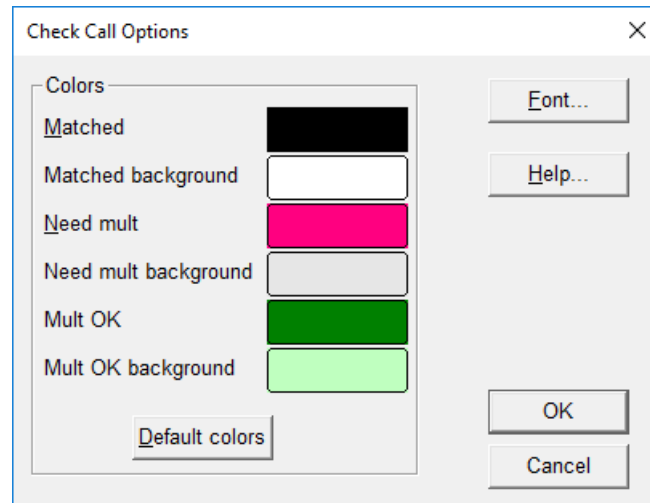
[\[Multipliers\]](#)

Check Call

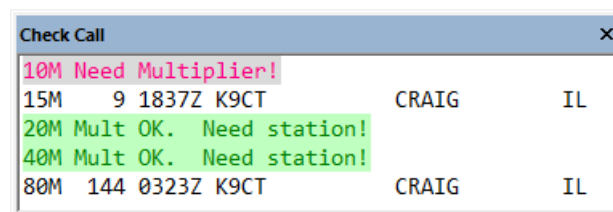
Make the Check Call window visible using the menu entry Windows/Check Call. The Check Call Window displays all callsigns in your log that match the string currently in the CALL field in the [Entry Window](#).

Right click to change the sort order. There are three sort settings: Sort check is off is the order set by the multiplier module. Sort check ON is alphabetical either ascending or descending.

The Properties page customizes the colors and font it uses.



Default colors have the same background for the three possible Check Call states, but they can be customized like this.



The Defaults button resets the colors to the built-in WriteLog defaults.

The [multiplier module](#) for a multi-band contest makes the Check Call window update to display a summary of bands on which the current QSO would be a new multiplier.

The same stored font in [\[CORREL\]](#) is used by the [Check Call Window](#), the [Packet Spots Window](#), the [CW Display Windows](#), and by the [Net Gab Window](#).

Rates



A right mouse click on the center line in the display brings up a menu showing the selections for the Rate display.

WriteLog can calculate rates either of two ways.

Show last 10 QSO/ last 100 QSO rates

The top display is averaged over the most recent 10 QSOs, and the lower one is averaged over the most recent 100. But in both cases, they will look back no more than 2 hours (if you don't have 10 or 100 QSOs in that time) and instead will compute the rate over the past 2 hours. As you get started, they will both show the same rate because of the limit to how far back they will search, but over a long operating period, they show your short term and long terms QSO rates.

Show last 10 min/ last 60 min rates

In this mode, WriteLog simply displays your rate for the last 10 minutes or the last 60 minutes.

Singleband /all bands

The band for which the rates are calculated and displayed is the band of the last QSO entered on this workstation and changes bands with you.

Time on/off

The bottom two lines are the time **on/off** calculation. It is updated each time you log a QSO and also every minute. WriteLog assumes that any gap of 30 minutes or more between QSOs is time **off**, any smaller gap is time **on**. It starts the clock with the first QSO in the log. WriteLog doesn't notice a break until you accumulate 30 minutes without logging a QSO, so during the first 30 minutes of a break, it will add the break as **on** time, but as soon as the break exceeds 30 minutes it will correctly recalculate the **on/off** times.

Mult worth

The bottom line is a display of how long you would have to maintain your current last-10 rate in order to raise your score by the same amount as working one new multiplier. This display uses whichever last-10 rate you have selected: either last 10 minutes or last 10 QSOs. The display is MM:SS. The formula for this display (thanks to K3NA) is:

$$M = ((p0 + pavg) / (R * m0)) + [pavg / R]$$

where

M is the number of minutes that the next new multiplier is worth

p0 is the current QSO point total.

pavg is average points per QSO over the last-10 QSOs.

R is points per minute averaged over the last-10 QSOs

m0 is the current multiplier total.

WriteLog only displays the "Mult worth" line if the current multiplier module provides the appropriate scoring info. The display is only appropriate for contests whose final score is the product of a multiplier total with a point total, so not all contest multiplier modules support this display.

See also

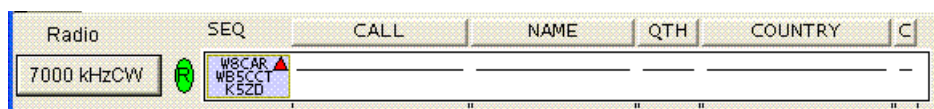
[Edit Time On/Off](#)

Entry Push/Pop Call Queue

The three menu items *Push call to queue*, *Pop call from queue*, and *Wipe QSO and pop* simplify working more than one station responding to a CQ. Enter a call in the Entry Window, and then select *Push Call to Queue* to save the call and clear the Entry Window, and repeat for as many calls as you want to save. Each call is recovered automatically into the Entry Window, first in/first out, as you enter QSOs into the log (by typing ENTER). You can also manually pop calls from the queue with the *Pop Call from Queue* menu item, or you can use the *Wipe QSO and pop* item to wipe the QSO, which will additionally pop the next call if there is one.

For frequent use, these menu entries can be placed onto dedicated keyboard keys using the "EntryPushCallToQueue", "EntryPopCallFromQueue", and/or the "EntryWipeAndPopFromQueue" [shortcuts](#).

The RttyRite screen can push calls onto the queue as well. Use the right mouse button on the call in the screen, and select "Push Call <call>".



When there are calls on the queue and the Entry Window is empty, the oldest 3 calls in the queue appear on the screen instead of the serial number. An additional small triangle appears when there are more than 3 calls in the queue. The colors used can be changed in [WRITELOG.INI](#).

Window QSOs by Callsign

This command brings up a Print Preview window of your log printed as a dupe sheet. Use the Print command to print it. Use the View Normal command to restore the Log Window. Dupe sheets are printed by the File Print by call sign entry.

See Also

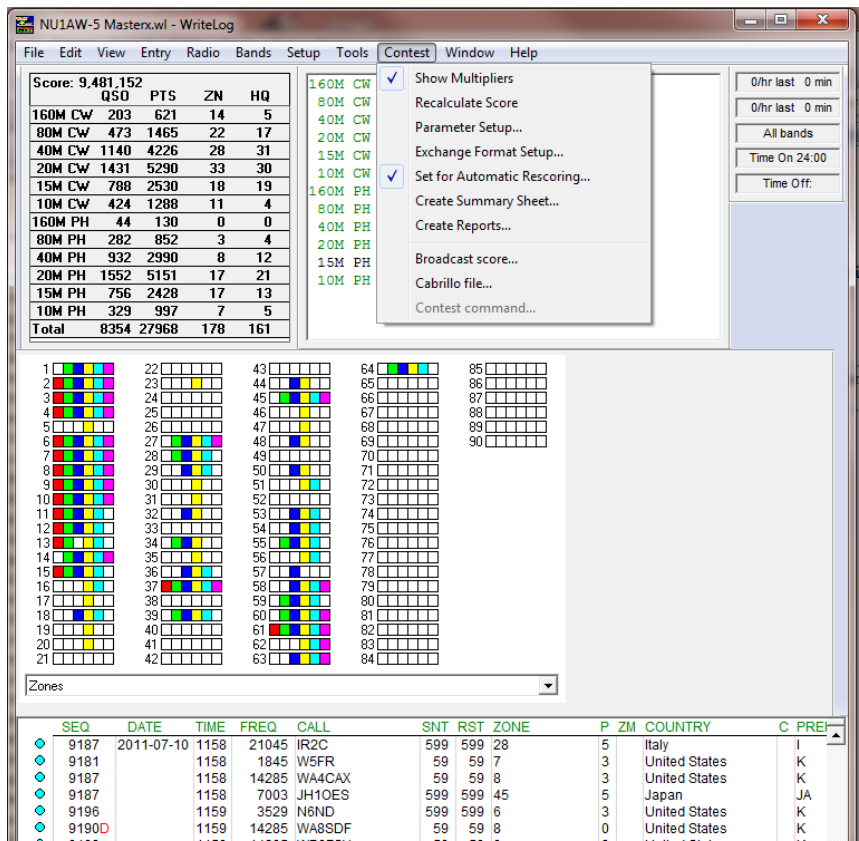
[Log Preparation](#)

Print QSOs Chronologically

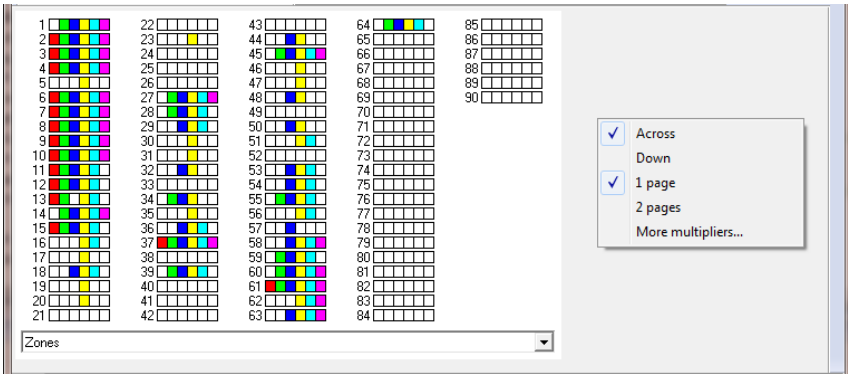
[File Page Setup](#)

Multiplier Status Display

Each multiplier module has its own status display available at Contest/Show Multipliers... In most cases, it is a graphic showing multipliers yet to be worked in red, and already logged multipliers in gray, or color coded by band.



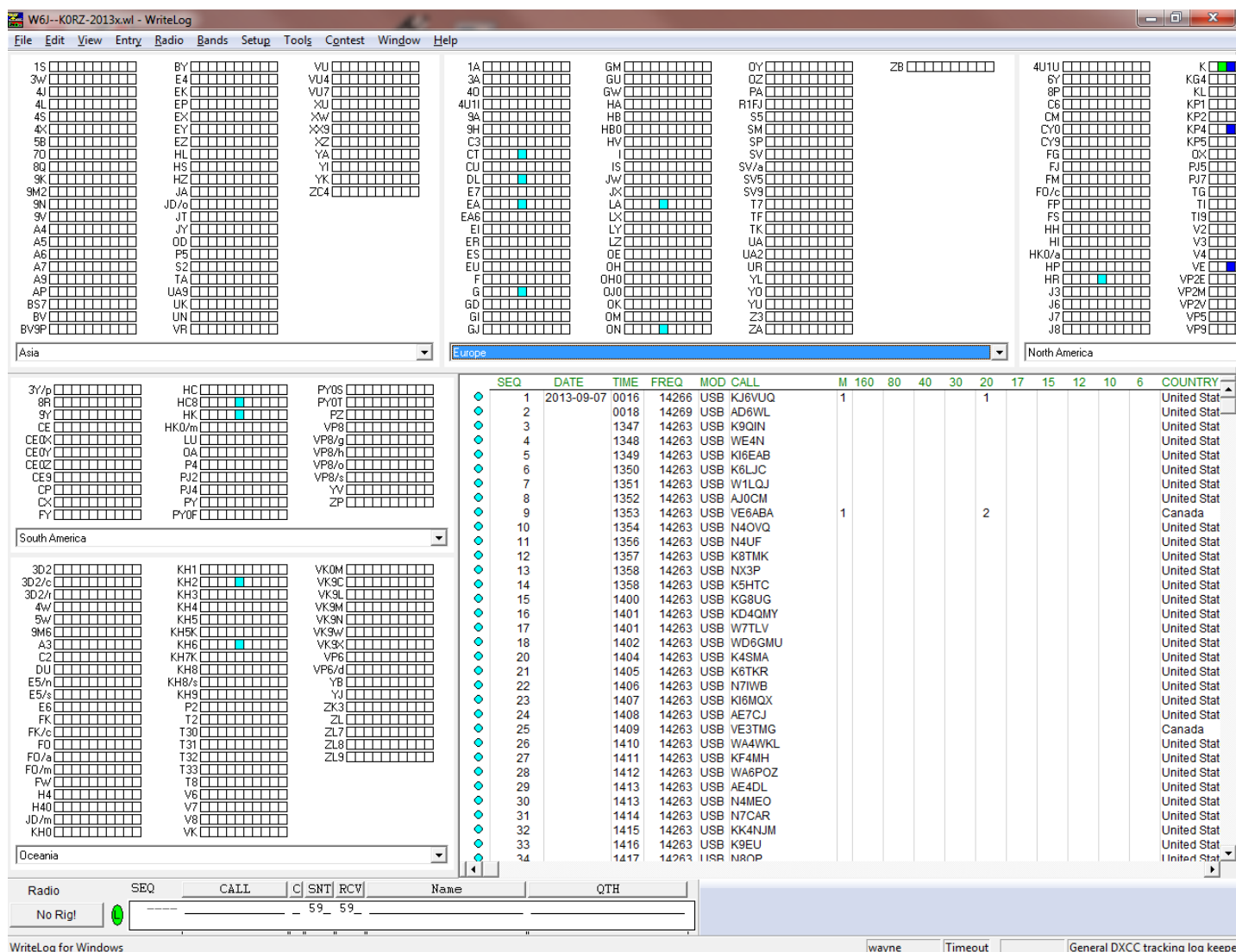
WriteLog displays the multiplier status in a docking window. Click the Right mouse button in the background of the multiplier display and it pops up a menu enabling display of multiple pages of multipliers concurrently.



The **1 Page** and **2 Pages** settings show one or more pages of multipliers while the **Across** and **Down** settings indicate whether the subsequent pages are stacked across or down. The **More Multipliers...** selection adds a second docking multiplier window, which has the same menu options on its right mouse button.



If you really want to fill your screen with multiplier displays, then here is an example



This docking behavior is new in version 11.17. The old behavior, with the multiplier status in its own top level window, can be restored by [editing WRITELOG.INI](#). And you can modify the font that it uses by editing the same [Multipliers] section in [WriteLog.ini](#).

The window remembers its previous position on the screen. If you want it to come up at its default position, hold down the CTRL key when clicking this menu item.

See also

Window Band Summary

This window displays a band by band breakdown of your scoring, along with your total score. It is updated with every QSO you enter. Each contest customizes the display according to its rules for points and multipliers, but the first column is always the number of valid QSOs on each band. If there are 6 or fewer bands in the contest, then it always shows them all. If there are more, then it only has rows in its display for those bands on which you have made QSOs.

This window may be expanded and shrunk. Move the mouse cursor over any of its corners and watch for the re-size cursor (with four arrow points). Use the left mouse button to drag the corner to a new position.

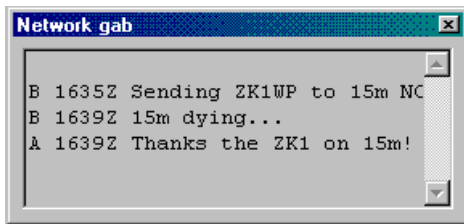
Right click to set its properties, copy its text to the Windows clipboard, or change its sort order. The sort order has three different settings: Sort check is off is the order the multiplier module sets them, and Sort check on is alphabetical in either ascending or descending order.

See also

[Arranging the Windows](#)

Window Network Gab

The Network Gab view shows all the gab message sent over the network. Each message is tagged with the network letter of the station that originated the message, and with the time the gab message was received. You may scroll to see older messages. To view messages too wide for the window width, press the left mouse button down anywhere in the window and then drag the mouse to the right. This will scroll the window to the right.



WriteLog will save gab messages to a log file if you set these INI file entries in WRITELOG.INI:

[\[NetGab\]](#)

LogFile=c:\temp\netgab.log

WriteLog never erases the gab log file. Instead, it appends new gab messages to it as they are received.

Font

The same stored font in [\[CORREL\]](#) is used by the [Check Call Window](#), the [Packet Spots Window](#), the [CW Display Windows](#), and by the [Net Gab Window](#). If you modify the Check Call font, you must Save Configuration, shut down and restart WriteLog for the NetGab window to change to the new one.

See Also

[Window Network Frequencies](#)

[Network Frequency Display Tag](#)

[Entry Send Network Gab](#)

[INI File Options](#)

Window Packet Spots

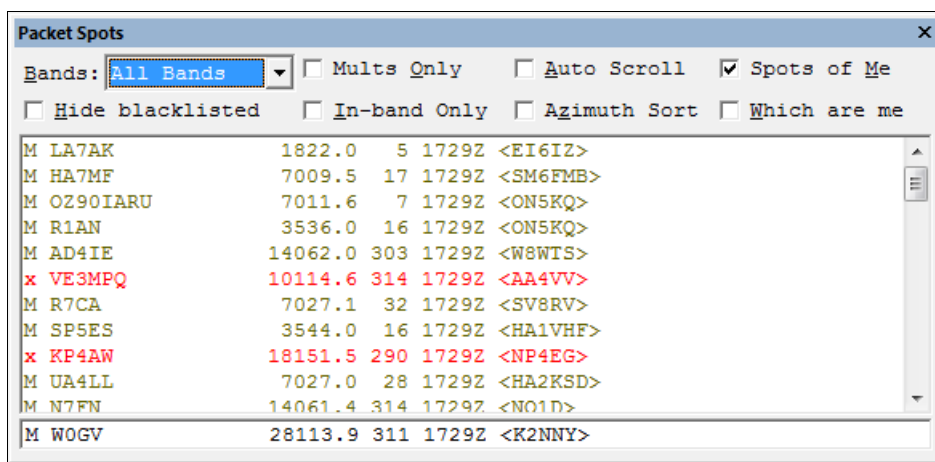
If you have connected to a Packet Cluster, packet spots are sent to the View Packet Spots window. The columns in the window are: 1 character multiplier indicator (M), the call sign, the frequency of the spot, the calculated beam heading azimuth to that station, the time of the spot given by the cluster software, and the spotting station's call in angle brackets "<>". Packet cluster connections made from the Window Incoming-only packet menu entry are marked with (1) for the first Incoming-only connection, (2) for the second, etc.

You can filter spots by band, or see all spots for all bands, and you can filter out spots that are not new multipliers. The order of the spots in the window is normally the newest ones on bottom and the oldest at the top of the window. Double click on a spot (or single click it and type ENTER) and your Entry Window will be filled in to match the spot and your radio will be tuned to the appropriate frequency (or split) if your radio is PC controlled. Type the DELETE key while a spot is highlighted to remove it from the window.

Right mouse click on a spot entry to pop up a menu to manipulate the blacklisting for the spotter and for the call being spotted.

Changing the Band list just changes the way spots are presented. All the spots are saved internally for 60 minutes and then dropped from the internal list.

The "Follow Me" option presents the spots for whatever band you are operating on based on the frequency of the Entry Window with keyboard focus.



Mults Only

Limits the display list to only those spots that are new multipliers. You can turn this switch on or off any time.

In-band Only

Removes any packet spots that are out of band with respect to your selected sub-bands. You select your sub-bands using the Edit sub-bands menu entry in the Writelog group in the Windows Start menu.

Auto Scroll

With this button on, the arrival of new packet spots causes the window to scroll to the top. With this button off, the window does not scroll when new spots arrive.

Azim. Sort

With this button on, the packet spots are sorted by beam heading azimuth.

Hide blacklisted

Blacklisted calls and spots made by blacklisted spotters are normally not shown. Turn this checkbox on to see them.

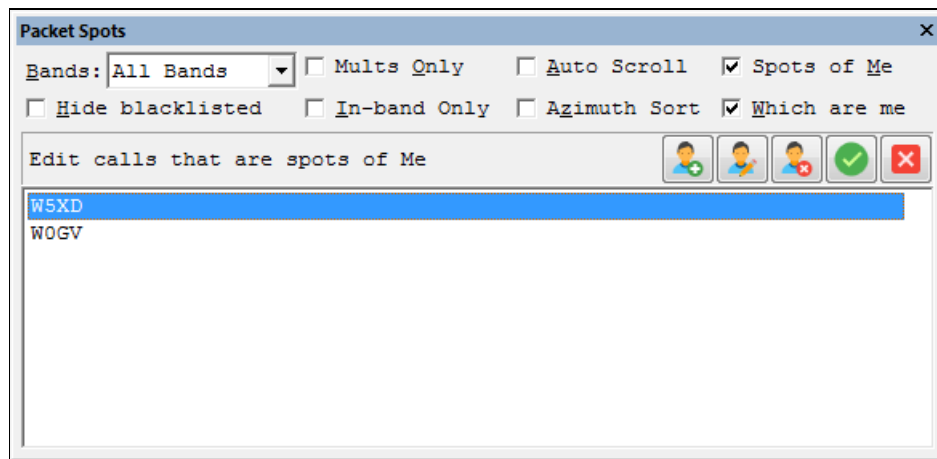
Spots of Me

Splits the window to filter only spots that are of your callsign.

Which are me

Switches to the view show below for editing the list of calls that are "me." By default, the only call that is "me" is the CALL registered for this WriteLog installation. But you may add more. The *Which are me* calls are also used by RttyRite to prohibit highlighting them in its window.

In the previous example, W0GV has been added to the list of spots "Which are me" so they show in the Spots of Me pane on the bottom.



The buttons are, left to right, add another CALL, edit the highlighted CALL, remove the highlighted CALL, OK the list of calls and switch back to the main view, or Cancel the changes you edited and switch back to the main view.

Keyboarding

This Packet Spots docking window is unique among WriteLog's docking windows in that its own keyboard accelerators take precedence over any you might have programmed into [Setup/Keyboard-Shortcuts](#). This is because there are a lot of packet options. Once you get the keyboard focus on any of them, then all of the underline markers displayed on the buttons work, and the keyboard shortcuts displayed when you hover the mouse over some of its button are all in effect and take precedence over Setup/Keyboard Shortcuts. One Windows standard shortcut is not displayed, but does work: ALT+F4 cancels any packet spot option in progress and moves the keyboard focus back to the Entry Window.

Font

The same stored font in [\[CORREL\]](#) is used by the [Check Call Window](#), the [Packet Spots Window](#), the [CW Display Windows](#), and by the [Net Gab Window](#).

See Also

[Window Packet Terminal](#)

[Grab Packet Spot](#)

[Return to 0.0 kHz](#)

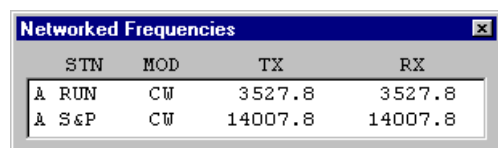
[Edit Sub-bands](#)

[Edit Packet Spot Black Lists](#)

Window Network Frequencies

Selecting this menu command shows/hides the network frequencies display. Each row in this display is a radio on the network. It shows the network letter assigned to the station, the operating mode of the radio (CW, SSB, FSK, etc.), and the transmit and receive frequencies of the radio. If the radio is connected for control by WriteLog, this display will track the radio as it is tuned. If the radio is not connected, but instead the operating frequency is being manually entered by the operator at that station, then Network Frequencies shows the last entered frequency. But if two minutes elapse without a QSO on that radio, the frequency is removed from the display. It will re-appear when the next QSO is logged.

The R column indicates whether the radio is Running (calling CQ) or searching & pouncing. A radio is considered to be “running” if it has logged at least 2 QSOs within the last 10 minutes within 400Hz of its current frequency.



	STN	MOD	TX	RX	R
A	RUN	CW	3527.8	3527.8	
A	S&P	CW	14007.8	14007.8	

See Also

[Network Operations](#)

[Network Frequency Display Tag](#)

Window Great Circle Bearings

Selecting this menu command shows/hides the great circle bearing window. You may move the window, undock it, or set its colors, etc. at Setup Great Circle.

The beam headings in this window are calculated from the CALL field in the entry window whenever you update it. It uses the latitude and longitude it looks up in the file WL_CTY.DAT, including the WAE countries as well as the DXCC countries.

The Beam Heading window also loads alternative callsign-to-location mapping files according to the [\[GreatCircleLookups\]](#) section in WRITELOG.INI. That section is normally updated at install time to contain the appropriate CTY files, but you can create your own CTY file, compile it with WriteLog's ReadCty32.exe, and add its corresponding .BIN file entry to the [\[GreatCircleLookups\]](#) section.

See also

[Customizing the DXCC list with CTY files](#)

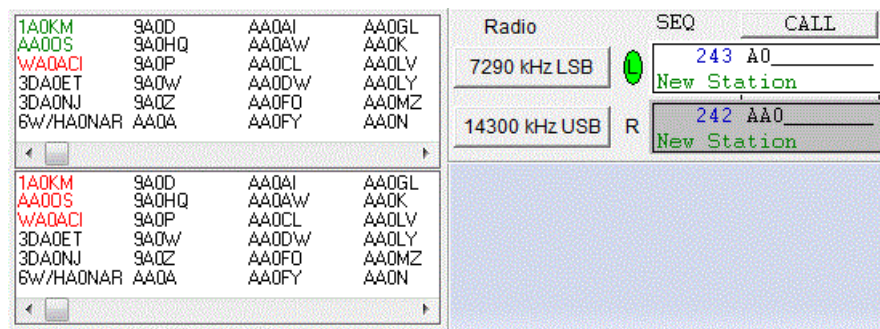
[\[GreatCircleLookups\]](#)

[Arranging the Windows](#)

[Setup Great Circle](#)

Super Check Partial

The Super Check Partial window automatically scans a call sign data base and indicate calls that partial match what's currently in the CALL field in the Entry window. The "?" and "*" characters restrict the search as in Goto QSO. Activate Super Check Partial from the View Super Check menu entry. It will search the file master.dta for matching calls when you have at least two characters typed in the CALL field. Use Setup Super Check if you want it to search a file other than master.dta, or copy master.dta into the WriteLog program area and Super Check will use it without prompting. The format of the master.dta file is the same as that used by CT. If you click on any entry in the Super Check window, that call will be copied to the CALL field in your Entry window. If you want WriteLog to always bring up the Super Check Partial window when you start it, see [Setup Save Configuration](#).



The screen shot is with Super Check Partial in its Split Display Per Radio Mode. In this mode, its display is divided equally among the number of radios that WriteLog is set up to use. Typing any call in any Entry Window updates the display for all, but the color coding for Dupe and Multiplier checking takes into account the frequency setting for the corresponding radio. Use [Setup Super Check](#) to turn the Super Check Split Display on or off.

Super check uses the current log as well as the selected DTA file. It shows calls previously logged on another band as green. Dupes are red and new calls are gray.

No master.dta file is supplied with WriteLog.

See also

[Setup Super Check](#)

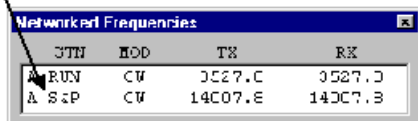
[Goto a QSO](#)

[Goto a QSO](#)

Network Frequency Display Name

Use the Setup Network Frequency Display Name menu (or right click in the [Entry Window](#)) to set the display string that the other stations in the network will see along with your frequency when they turn on [View Network Frequencies](#). You can set this display tag to, say **RUN**, or **S&P** so others will know whether to move stations to your current frequency. If you are operating split, the letter **S** appears between the display of your TX and RX frequencies.

Network Frequency Display Tag

A screenshot of a software window titled "Networked Frequencies". It contains a table with four columns: "JTN", "MOD", "TX", and "RX". There are two rows of data. The first row shows "A RUN" in the JTN column, "CW" in the MOD column, "0527.0" in the TX column, and "0527.0" in the RX column. The second row shows "A S&P" in the JTN column, "CW" in the MOD column, "14007.8" in the TX column, and "14007.8" in the RX column. An arrow points from the text "Network Frequency Display Tag" to the "JTN" column header.

JTN	MOD	TX	RX
A RUN	CW	0527.0	0527.0
A S&P	CW	14007.8	14007.8

See Also

[View Network Frequencies](#)

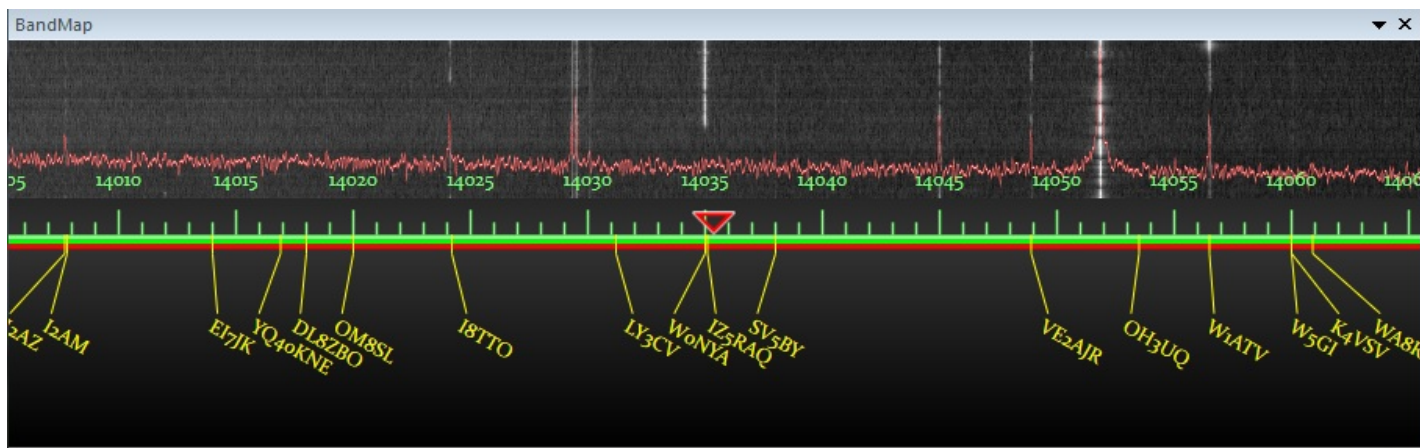
[Network Operations](#)

[Entry Send Network Gab](#)

[View Network Gab](#)

Band Map

WriteLog includes a spectrum display showing what stations are currently known to be operating on frequencies close to where you've tuned your rig. If you have a computer controlled rig connected to WriteLog, then the center frequency of the display scrolls as you tune your rig.



Stations can be entered into the band map in any of three ways:

All stations appearing in packet spots are added to the band map. These stations are checked for dupes and are color coded appropriately: dark blue for dupes, light blue for new stations, and yellow for new multipliers.

All stations that you enter in your log are entered as dark blue.

You can manually enter calls using the File Add To Band Map menu from the [Entry Window](#) (these are displayed in green).

Keyboard

When oriented vertically, the UP/DOWN cursor keys scroll the bandmap up/down. When oriented horizontally, its the LEFT/RIGHT cursor keys that scroll it.

Mouse wheel

While the mouse cursor is over the Band Map, the edge of the window highlights, and the mouse wheel tunes the radio its attached to.

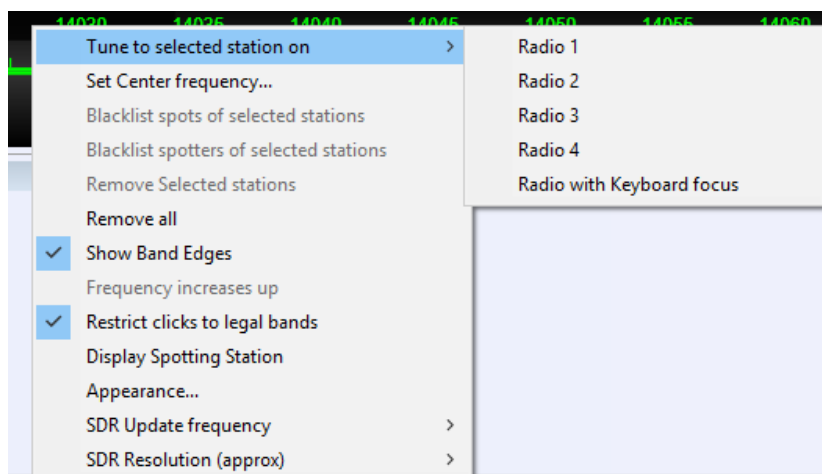
Click on it

The band map display itself is also active. A double click on a station will tune your radio to it. Or left click (SHIFT+left click to select multiple stations). Selected stations are drawn with a red border. Then right click and Remove-Selected-Stations.

Double click in the spectrum display to tune the associated rig to that frequency.

Click and drag close to the dial pointer, and you may drag it to scroll the band map.

A right mouse click in the band map brings up the bandmap's menu.



The topmost menu entry, Tune to selected station, does not appear if you have no stations highlighted. And if the Band Map is

a fixed frequency one (i.e. not tied to an Entry Window) then the submenu for selecting a Radio from 1 through 4, and Radio with Keyboard Focus appears. WriteLog remembers your choice of radio and will send subsequent click and double click commands to that radio.

Hold down SHIFT with right click and the band map zoom's in. Hold down CTRL instead, and the band map zooms out. Alternatively, left mouse click in the Band map anywhere to set the keyboard focus to it. Then hold down CTRL and rotate the mouse wheel to zoom in or out. The startup frequency scale/zoom of the display can be adjusted using the PixelsPerKhz entry of the [BandMap section](#) in WRITELOG.INI. Or you can map [keyboard shortcuts](#) BandMapZoomIn and BandMapZoomOut to keyboard keys.

The menu's "Display Spotting Station" checkbox when turned on causes the bandmap to show the station the packet cluster said spotted the station, if the bandmap listing came from a packet spot.

SDR Update Rate and Resolution

These two numbers that you set with the right click menu are approximate (the Band Map only approximates the rate and resolution you select) and they are advisory (the Band Map will not allow itself to consume more than one CPU core.)

The rate and resolution settings interact. Computing a spectrum at the relatively coarse 32Hz resolution requires 1/32 second of data from the SDR. The Band Map does not pause between computations and therefore will update roughly 32 times per second, even if you have set the rate slower. Computing a spectrum at the relatively fine 2Hz resolution, however, requires 1/2 second of data. If you set the update rate faster than 2Hz, then the Band Map overlaps enough spectrum computations to provide the (approximate) rate you specify. However, a Band Map will never consume more than an entire CPU core. If one core is not enough, the Band Map will not update as fast as the rate you select. One effect of this approximation is that the time scale on the waterfall is not calibrated. It is only an approximate visual indication of activity on the band.

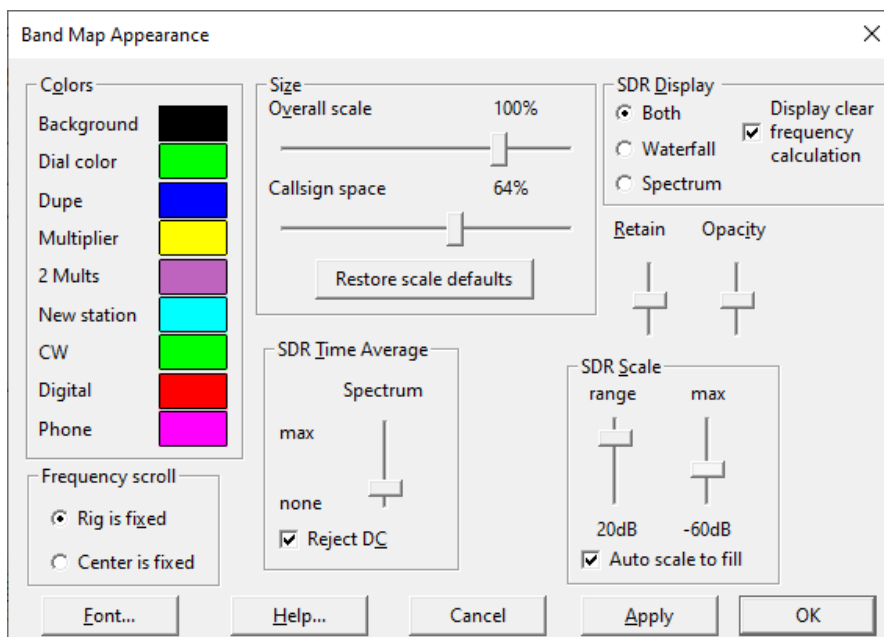
If you have multiple Band Map windows visible, each one limits itself to a single CPU core. If you run out of CPU resources (*i.e.* WriteLog responds unacceptably slowly) you can close a Band Map. Or, the computation required to convert the SDR IQ signal to a spectral display takes more CPU cycles for finer (smaller) resolutions, so you can reduce the CPU load by making the resolution coarser, or the update rate slower.

The SDR resolution number you select is approximate. For computational efficiency reasons, the Band Map instead chooses a nearby resolution that is a negative integral power of two of the SDR's sample frequency. For example, if you choose 32Hz for a 48000Hz SDR sample rate, then the Band Map will actually compute at a resolution of 48KHz times 2 to the power negative 11, which is about 23Hz.

The SDR update rate you set is the maximum rate it will update. It may update more slowly if it runs out of compute resources to update as fast as you select.

Appearance

The Appearance menu brings up this dialog:



Choose colors and font with the appropriate buttons.

The Overall scale zooms the band map display in and out.

The Callsign space decreases and increases the amount of space on the band map allocated to show the callsigns.

The Frequency Scroll determines what happens as you tune your rig. Either the rig's tuned frequency stays in place, or the center frequency on the Band Map stays in place (except if the rig tunes off the edge, the Band Map jumps to center the rig frequency.)

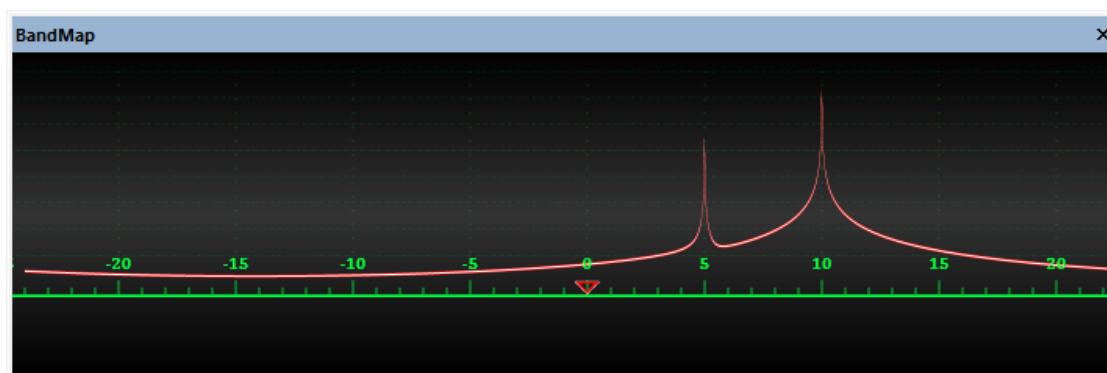
The Display lets you select the waterfall and/or spectrum display. You can the same results mapping [keyboard shortcuts](#) BandMapSdrModeBoth, BandMapSdrModeSpectrum and BandMapZoomOut to keyboard keys.

Display clear frequency calculation enables a yellow spectrum line showing the "clearest frequencies" calculation. See [Move Clearest Frequency](#).

The Scale range and max set the minimum and maximum amplitudes for the colors displayed for the waterfall and the position of the spectrum. *Auto scale to fill* calculates an average amplitude from the lowest-valued bins in the spectrum, and arranges it at the bottom edge of the display. The Range is settable regardless of the Auto scale check box. Setting the range smaller looks "cleaner" but limits the display of weaker signals. The default range setting is 20dB, which is set if you right click on the .range slider.

The spectrum is time-averaged for a cleaner looking display. Set the slide to the bottom to remove the averaging. The waterfall averaging is fixed at a very small amount. Reject DC removes the large artifact at 0Hz that happens with certain SDRs (e.g. the DC introduced by quantization to 8 bits unsigned on RTL2832U devices.)

If the waterfall is off, the Band Map draws a graticule with 10dB amplitude divisions on the spectrum display. Pictured here is the output of the demo ExtIO dll with two carriers. One is at 5KHz and -20dB down from the other at 10KHz.



Retain affects only Waterfall displays. It controls how long a (frozen) waterfall remains on the Band Map after the SDR producing it tunes away and out of range of the Band Map's frequency display.

Opacity affects only Waterfall displays, and only comes into play when two SDRs have spectra that overlap. A high opacity causes the SDR defined on the higher row on the main SDR setup page to obscure any defined lower. A low opacity causes the one defined lower to show through, and a minimum opacity causes the one defined higher to not show at all. Again, this opacity setting only changes *overlapping* waterfalls from multiple SDRs.

Band edges

The Band map can display band and sub-band edges. Use the Show Band Edges menu item to turn this feature on and off. The Band map can also be set to refuse to tune your radio to any station that is out of band using the Restrict clicks to legal bands menu item. If you click on a station that is out of your legal band, it will highlight in a red outline instead of the usual white outline. You can edit the settings for legal band edges using the Edit Band Edges tool that WriteLog installs in your Start menu.

Polling rate

WriteLog's ability to follow your radio as it tunes depends strongly on what kind of radio you have. Some computer-controlled radios can be queried very quickly, but others respond very slowly as you tune the dial. This behavior cannot be controlled by WriteLog. Some radios will themselves slow down as they are polled, so WriteLog includes a configuration option to allow you to slow WriteLog's polling down if you notice it is slowing down your radio. See the RigPollInterval in the [Configuration section](#) of WRITELOG.INI.

Settings

The bandmaps on screen position is recorded in the .wl file when you File/Save. WriteLog normally enters stations so that they will automatically be deleted from the map in 20 minutes. You can change this number as DefaultTimeoutSeconds under the [BandMap section](#) in WRITELOG.INI.

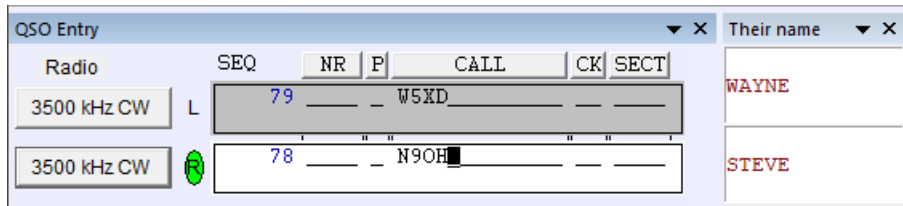
See Also

[Edit Sub-bands](#)

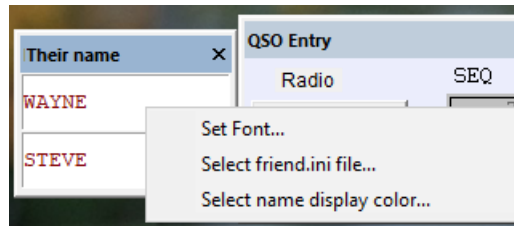
[\[BANDMAP\]](#)

Their Name for Call

Turn on the smiley face and WriteLog displays the window *Their Name*. It has as many rows as you have configured radios. The CALL in the corresponding radio's Entry Window is used to look up the operator's name in an ini file. An appropriate ini file is **not** supplied with WriteLog.



To configure WriteLog to scan an appropriate file, use the Right Mouse and *Select friend.ini file...*



The contents of the INI file is read for lines of the form:

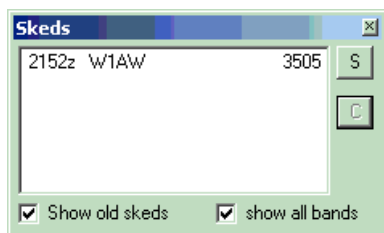
CALL=*Operator Name* Examples:
W5XD=Wayne
N9OH=Steve

- Lines of the form [*Section Name*] may be present, but are ignored.
- Any space characters found to the left of the equal sign are ignored.
- Any spaces to the right of the equals are displayed as part of the name.

Band Map on 2nd VFO

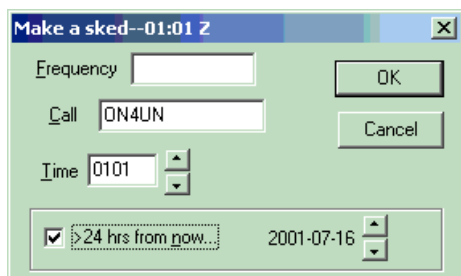
For rigs with drivers that support separately reading a 2nd VFO, this command brings up a bandmap on that vfo.

Window Skeds



WriteLog's Sked Window shows the skeds you have made in the contest. The toggle buttons at the bottom turn off display of skeds in the past, and turn off display of skeds on bands other than the one you're on now (for multi-multi operation).

The "S" button enables you to enter a new sked, and the "C" button cancels a sked already in the list. The "S" button brings up this dialog.



The Call is filled out to the last call you logged, and the time is filled out to "right now" (which is useful for passing multiplier's between stations in a multi-multi setup). Type in a new time, or click the up/down spin buttons to move the sked one minute per click. By default, the sked is set for no more than 24 hours into the future. Click the **>24 hrs** button to set the sked the further into the future. With the **>24 hrs** button on, the actual date of the sked is displayed. Click OK to enter the sked in the log.

As the time of the sked approaches, the appropriate line in the sked display flashes red. If you click on the line, it stops flashing. If you double click on the line, the Entry Window is filled in and your radio is tuned to the sked frequency. 90 seconds after the scheduled time, the sked disappears from the display (unless you turn on the Show Old Skeds button.) The skeds are saved in the .WL file. If you have a network, all the skeds are repeated to all the stations in the network.

Window CW Display

The View CW Display menu item turns the CW display on or hides it. Note that the RttyRite screen also has a CW capability. The CW display on the main screen and RttyRite's CW screen use the same underlying sound board decoders, but *cannot* be used simultaneously. The two displays have different features. See the [CW for RttyRite](#) topic for more information.

Font

The same stored font in [\[CORREL\]](#) is used by the [Check Call Window](#), the [Packet Spots Window](#), the [CW Display Windows](#), and by the [Net Gab Window](#).

See Also

[Setup CW Decoder](#)

[CW for RttyRite](#)

Packet Terminal

WriteLog uses the TNC as a dumb terminal and uses the COMM parameters (baud rate, parity etc.) you have set in the [Ports] section of WriteLog.ini. The packet window cannot share a COMM port with the main WriteLog screen. See [Setup Ports](#).

If you want to save the text in the Packet Terminal display area (i.e. the area that shows incoming packet information) or otherwise share it with some other Windows program, select the text using the mouse and use Edit Copy to copy it to the clipboard. If the TNC works, but you can't see what you type into the packet window, try turning the TNC's ECHO to ON.

After you have opened the Packet window, WriteLog watches the messages you receive for Packet Cluster spots. The most recent spots show in the selection window, and a mouse click on one tunes your radio (if RS-232 control is enabled) to the frequency and fills in the Call field in the [Entry window](#). To limit the spots to those on the band you're operating, use the Edit Single Band Spots menu command. You may minimize the Packet window at any time using its System menu, but it remains active and connected.

Telnet

As an alternative to a TNC connected to a Packet Cluster, WriteLog supports connecting to any of the Packet Clusters available on the internet as telnet connections. Just use the File Telnet command and type in the name of the telnet node (or its IP address) to make the connection. You will have to keep your internet connection up as long as you want to send or receive packet spots, of course.

The standard Port number for telnet is 23, which is how WriteLog initializes its prompt. If the telnet node you want operates on a nonstandard port number, you can type it into the dialog.

Local Network

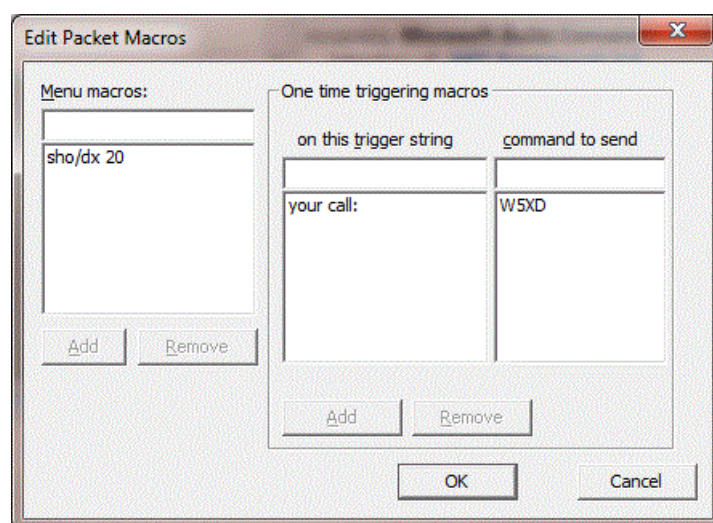
If you are running multiple networked machines at your station, you need have only one of the machines connected to a TNC for packet. Set that machine up in the usual way. Telnet can be used as an alternative to a TNC as well.

On the other machines in the network, use the File Local Network menu command and type in the machine name for the machine that has the TNC. There is one restriction on the packet windows connected this way: you can't type CTRL+C to get the TNC to go to command mode over the network. That has to be done from the Packet window that actually is connected to the TNC.

Edit Setup Macros...

Use the dialog at the Packet Window menu *Edit/Setup Macros...* to configure macros to interact with packet clusters. The panel on the left, labeled Menu macros, edits the eight macros available under the Send-Macro menu entry.

The panel on the right, sets up macros that are triggered by text coming from the packet cluster. A triggering macro is primarily useful for automating the login process. In this screen, for example, a cluster that sends the prompt "your call:" triggers the macro that sends the command "W5XD". The "one time" for the trigger starts when you first connect to the packet cluster. If you make a change in this dialog and click OK, the triggers won't happen until you disconnect and connect to a cluster again.



The macros are stored in writelog.ini. They may also be invoked as keyboard shortcuts in the main WriteLog screen using its [Keyboard Shortcuts](#) setup settings PacketMacro1 through PacketMacro8.

Single Operator.

If you turn on this menu entry, then WriteLog allows you to originate spots, but it does not use any incoming spots for the band map or multiplier display.

The System menu also has a Fonts... entry which you can use to change the font it uses. If you want WriteLog to always bring up the packet window when you start it, see [Setup Save Configuration](#).

Your most recent QSO data is sent as a spot when you use the [Entry Send Packet Spot](#) menu entry.

See Also

[Window Packet Spots](#)

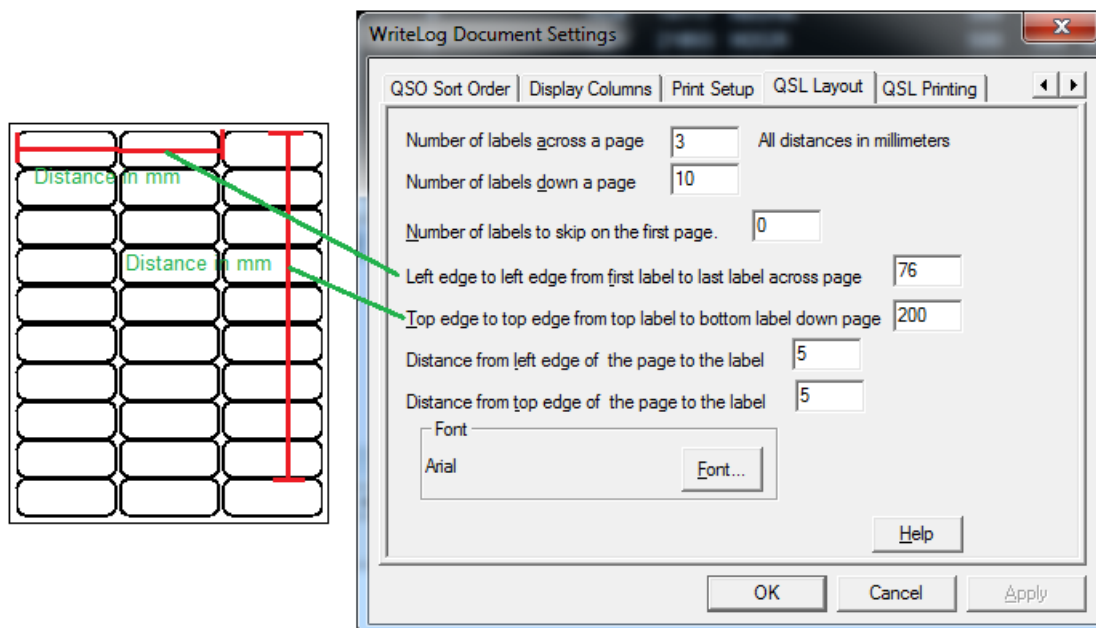
[Edit Packet Spot Black Lists](#)

[Tools Keyboard Shorcuts](#)

QSL Printing

Printing QSLs is a two step process. First you use the Edit Mark QSO to Print QSL to mark each QSO that needs a QSL printed. All highlighted QSOs at the time you select the command get marked. Or a right click on a QSO pops up a menu with a selection to mark to print a QSL. If you have the [Setup Display Format](#) set so that QSL information is displayed in the Log Window, then each QSO to have a QSL printed will be marked with a "P" symbol.

Use WriteLog's menu entry File/QSL/QSL-Page-Setup to bring up this page:



Fill in the blanks for the number of labels on each page, and for the two distances (in millimeters) shown in the diagram. Note which edges you are to measure. The final two distances (also in millimeters) are the left and top margins from the edges of the page to the edge of the first label.

Then use File/QSL/Print QSLs to select the printer, get a print preview of how your QSLs will be printed, and then the Print command in that window to send the QSLs to the printer. The printer selected from File/QSL/Print QSLs is separate from the one in File Print Setup... and the QSLprinter settings are saved in the Windows registry. Hold down the CTRL button when you click File/QSL/Print QSLs to prevent WriteLog from reading the printer settings from the registry.

Or you can use File/QSL Labels to File to make a file of the QSOs to have QSLs printed. (Both of these menu options will write only those QSOs that have been marked using Edit Mark QSO to Print QSL, unless none have been marked, in which case they will write all the QSOs in the log.)

If you want just a text file with all the QSL information in it, then use the File/QSL/Print QSL Labels to File... entry. The resulting file can be reformatted to match the label layout that you have. The format of the printing on the QSL is controlled by the dialog box available under [Edit QSL Comment](#).

Alternatively, WriteLog will write the QSOs into an ADIF formatted file using File QSL Labels to File, ADIF. In this case, the label you have entered in File QSL Comment is written to the ADIF file as a column named COMMENT_ON_QSL_CARD. This option is useful for answering a number of QSLs in one sitting: go through your QSLs, open .WL files as needed to find the corresponding log entries, mark the QSOs to print a QSL and when you finish with a .WL file, use File QSL Labels to ADIF which will create an ADIF file with just those QSOs in it. Finally, create a new empty log, add a COMMENT_ON_QSL_CARD column to it, and File Import all the ADI files you created, which will make a log of all the QSOs (and only the QSOs) that you marked for QSL printing. File Print QSLs now will print them all.

When you do a File Print QSLs, the comment from File QSL comment is put on each QSL, unless there is a column in the log named COMMENT_ON_QSL_CARD, in which case the entry from that column is what is printed.

File Merge

Use the File Merge command to merge two logs into a single log. Both logs must be for the same contest. This command steps you through the process of opening both logs and then networking the two so that WriteLog's networking software will merge the two into one.

Start by using File Open to open one of the files you want to merge.

Then do the File Merge command. If you have not already started the networking software, WriteLog will start it at this point and you will need to choose a letter to designate QSOs logged from this file.

Then WriteLog will prompt you to open the other file you want to merge.

See also

[Network Operations](#)

File Import

WriteLog can read ADIF files. All the QSOs in the ADIF file are added at the end of the current log. Any QSO data in the ADIF file that WriteLog does not recognize as fitting in one of the columns is ignored. In general, if WriteLog wrote the ADIF file, and if WriteLog is configured for the same contest as the ADIF file, then WriteLog will recover all the QSO data. But if WriteLog is configured for a different contest when reading than it was when writing, then any QSO info for the original contest is ignored.

Callsign Search

The File QSO Search menu entry searches .WL files for callsigns:

Search for exact callsign	looks for an exact match of what you enter.
Search for partial callsign	looks for any callsign that contains the characters you enter, in the order that you enter them. "?" and "*" characters further restrict the search.

When a match is found, WriteLog displays a modeless QSO SEARCH dialog box containing QSO information from the QSO. Modeless means that the box does not block your use of the rest of WriteLog--you may leave the box on the screen and continue with other WriteLog operations. The QSO SEARCH modeless dialog has the following buttons:

Next	looks for another match further down the log. When it gets to the end of the file, it presents a new file selection box.
Load	creates a new WriteLog window loaded with the file that was being searched.

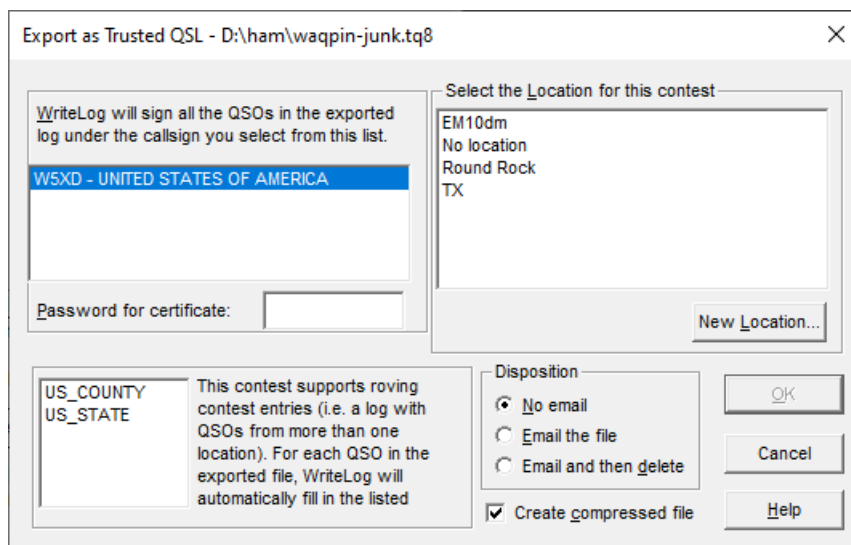
See Also

[Goto a QSO](#)

[Super Check Partial](#)

File Export Trusted QSL

WriteLog can generate a Trusted QSL format file for the Logbook Of the World (LOTW) if you already have the Trusted QSL software installed and a certificate for your callsign.



Please maintain the integrity of contest submissions: *don't upload your contest logs to LOTW until after the contest log submission deadline has passed!*

In the left panel you select a certificate for the callsign you operated during this contest. WriteLog lists only the certificates on your machine that have a valid date for the date of the first QSO in the log. If that certificate needs a password, then enter it in the Password area. In the right panel you select the Station Location that corresponds to the location of your operation for this contest. WriteLog populates the selection with only those Station Locations you have previously created in the Trusted QSL software for the selected certificate. Or you may create a new one here with the *New Location...* button. That button brings up the Trusted QSL station location wizard which you can use to create a new station location. When you finish the wizard, the newly created location will be permanently added to this dialog.

QTH for Rovers

WriteLog has special handling for multiplier modules that support rover stations. If the contest module has that support, then the lower left panel shows the Trusted QSL entries that need **not** be correct on your selected Station Location. That list is for your information only—you need not make any selections in it. WriteLog will fill those entries in separately for each QSO it writes out to the Trusted QSL file. All the other entries in the Location must be correct for all the QSOs in the contest, as each will appear in each logged QSO in the TQSL export.

Take care you use a Location that is *blank* for those items that change when you rove for the contest. You must create a TQSL "Location" entry that is *blank* for those items that are not part of the contest. For example, for a contest where you rove among counties, the GRID entry in the TQSL Location **must** be blank. Or if the contest has you rove among GRIDs, then the COUNTY entry in the TQSL Location **must** be blank. Click the *New Location...* button to create such a location if you don't already have one.

If the contest supports multiple locations for a single QSO (e.g. a county line operation in a state QSO party), then WriteLog will write two separate entries into the Trusted QSL output for each such multi-location QSO, and the subsequent ones will be recorded one second later so that the LOTW database will recognize them as separate.

Email

If your email software allows a program to originate an email, then WriteLog will enable the radio buttons that you can select to create an email with your exported file. WriteLog will address the email to the LOTW entry in its LogSubmission.ini file (found in WriteLog's \programs folder) and the [SponsorEmailAddress] section.

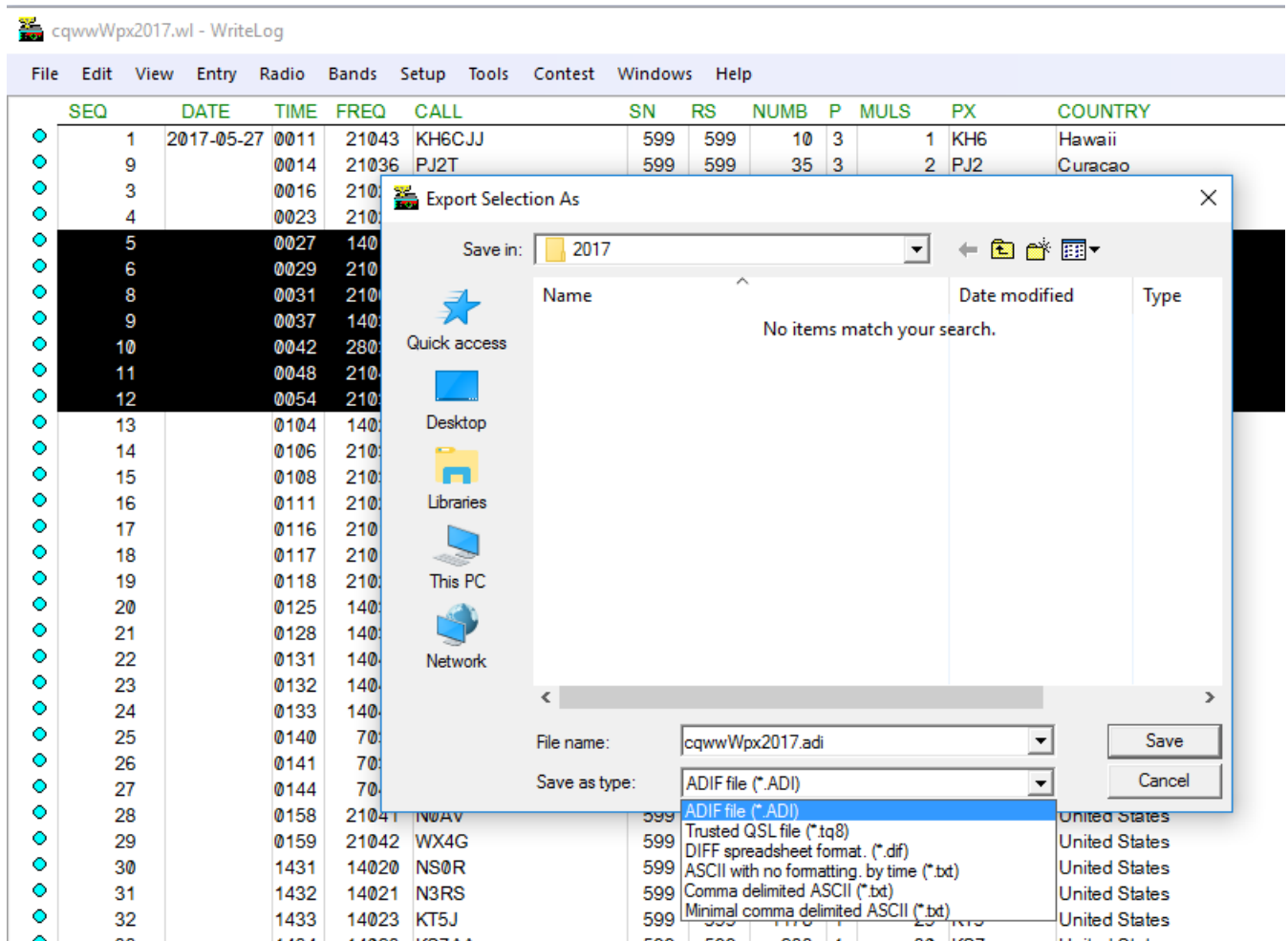
File format

By default, the file written out is a .tq8 file, which is compressed and cannot be inspected by ordinary editors. If you uncheck the Compressed button, WriteLog will create an uncompressed .tq7 file instead, and you can use an ordinary text editor to inspect the exported output. The LOTW email receiver will accept either the compressed or the uncompressed format.

File Export Selection As

The File Export-Selection-As menu entry is enabled when you have highlighted one or more QSOs.

Select this entry to export a file containing only those QSOs.



The Save-As-Type box on the file selector controls the file format.

Paste Link

Paste Link is enabled only if there is a linkable object on the clipboard, and if you have a single QSO highlighted in the log window. Selecting this item will add an annotation to the highlighted QSO and change its icon to the red push-pin. The annotation is a link which refers to the annotated object elsewhere on your computer--the object's data is not contained in the WriteLog file.

See also

[Linking and Embedding Annotations](#)

Interpolate QSO Times

If you type all your QSOs in after the contest, getting the individual QSO times entered can be simplified using the Edit Interpolate QSO times function. This function is enabled only if you have at least 3 QSOs highlighted, and modifies the QSO times of all the highlighted QSOs between the first and the last to equal intervals between them.

Linking and Embedding Annotations

The station log is traditionally the document where station records of all kinds are kept--not just QSOs. WriteLog allows you attach essentially anything to QSOs in the log using OLE objects. Each QSO in the log can be a containing site for an OLE object as denoted by the icon in the far left column of the log. The normal indicator is the blue dot which means there is no object associated with the QSO. An object can be associated with the QSO using either the Edit Insert Object... menu entry, or using the Edit Paste menu entry after you have placed an OLE object on the clipboard from some other application. In either case, you must first highlight the desired QSO with a mouse click or a Edit Goto QSO operation, and the highlighted QSO will receive the annotation.

The red push-pin icon indicates the presence of an object associated with the QSO, and a click on the push-pin displays the object. The open box icon indicates the object is being displayed and a click on it hides the object and changes the icon back to a push-pin. An embedded object, or a link to an object can be deleted by highlighting the desired QSO and pressing the Delete key.

WriteLog makes its QSO data available for linking and embedding as well. Use Edit Copy View To Clipboard to make you log data available to other applications for linking and embedding.

See also:

Paste

[Paste Link](#)

Edit Type a note for this QSO

This menu entry brings up a dialog that allows you to type a note which WriteLog will save to disk in a file named _Notes.Txt where is the name of your .WL file. The note is automatically tagged with the number of the current QSO and the current time of day.

The [CONFIGURATION] entry [AddCallToNotesFile](#)=1 will cause the note to also have the current CALL field in the file.

Edit Insert a text annotation

This command brings up the Windows Word Pad tool in a special editing window. Type in any note you would like to keep with the QSO, and then type ESCAPE (or click in the Log Window outside of the note's borders) to finish the note. It is saved in the .WL file as an embedded object.

Keyboard Select

Edit Keyboard Select (CTRL+Y) allows the use of the keyboard to click on an item in the [Log window](#). It switches the mouse cursor to a wrench and, while it is a wrench, moves the cursor according to the four arrow keys; the CTRL versions of the keys continue to work as described below. Once the cross hair is on the field you want to edit, press ENTER. If you want only to highlight the QSO, you may press SPACE instead.

See also

[Keyboard Navigation](#)

Deleting a QSO

Highlight the errant QSO with a mouse click on it in the Log window, or a Goto QSO and select Edit Delete QSO. You will be prompted about whether you really want to do this. Because the networking software cannot instruct all the other stations in the network to also delete the QSO, this menu entry is disabled if you have connected WriteLog in a network.

See also

[Undo the Last QSO.](#)

Undo the Last QSO

After a warning, removes the most recent QSO from the log. To delete a QSO that's not the last one, see [Deleting a QSO](#).

Goto a QSO

Using the Edit Goto QSO menu entry (or its keyboard shortcut CTRL+G) searches through the logged QSOs for any call that contains the string in the CALL field in the Entry window as a substring. (If you have more than one Entry window open, the CALL field of the one that was active most recently is used.) The search starts at the QSO following any highlighted QSO, or at the first QSO in the log if none is highlighted. If a match is found, the search stops at the match and highlights the matching QSO.

For all callsign searches, if you have a "?" or a "*" character in the CALL field, then WriteLog performs a more restricted search. With these characters, a match occurs only if every character matches except that:

?
matches any single character

*
matches any string of zero or more characters.

If you enter only digits into the CALL field and type CTRL+G, then the log window scrolls to the QSO of that number in the log.

See also

[Callsign Search](#)

[Super Check Partial](#)

Select All

Selects all the QSOs in the log so that Edit Copy View to Clipboard copies the entire log.

QSO Reorder by Time

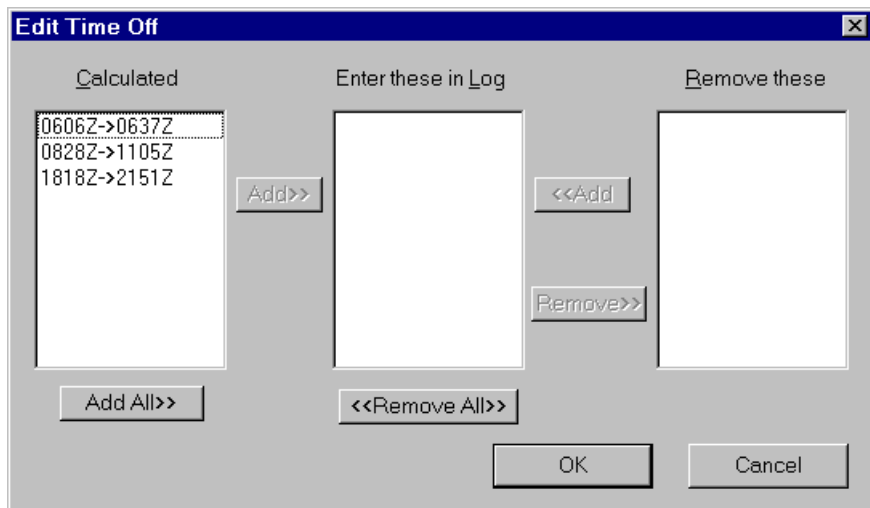
Use this command to reorder the QSOs in your log by time.

Usually, your QSOs are logged in the order you made them. However you may edit the times afterward, or you may merge two logs made over the same time interval. In these cases you will want to be able to reorder the QSOs in the log according to time.

You can control the set of QSOs being reordered by highlighting a range of QSOs to be reordered and then using the Edit Reorder QSOs by Time command. Only the highlighted QSOs will be reordered.

Edit Time On/Off

For contests that have required times off, use WriteLog's Edit Time On/Off dialog to manage how you report your time off.



WriteLog automatically calculates time on/off from the time gaps between QSOs and lists those times in the box labelled "Calculated". If you have already logged any times off, WriteLog shows how you've logged them in the box labelled "Enter these in log". To use WriteLog's calculated off times, just click on the Add All button and then click OK.

WriteLog doesn't commit any changes you make in this dialog until you click OK. That's what the "Removed" box is for. If you remove any logged Times Off from the log book, WriteLog shows those removed choices in the Removed box. You can add them back in with the Add button.

To manually enter off time for a contest, you don't use this dialog box. Just scroll to the QSO where you want to show a time off, and click in the column labelled "TIME-OFF". Type in the starting and ending times of the off period in UTC.

Other features of this dialog:

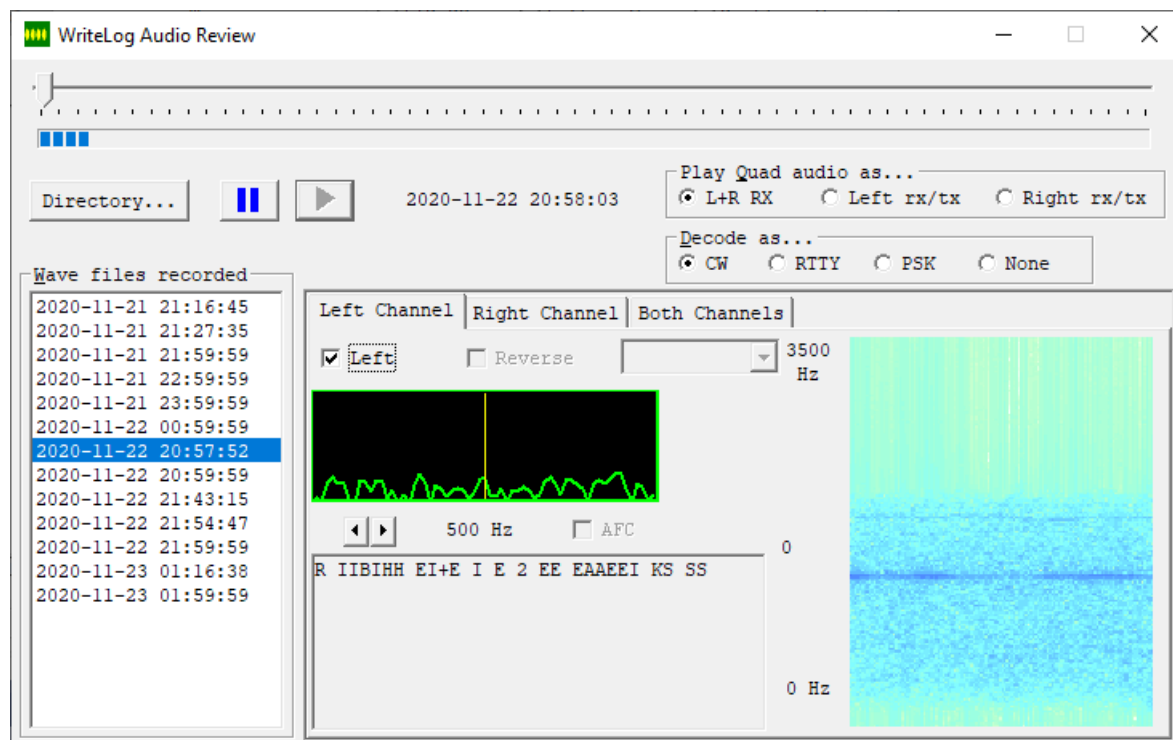
- If you double click any entry in any of the three lists and WriteLog does an Add or Remove as appropriate.
- When you Remove an off time from the "Enter these in log" box, WriteLog remembers whether it was originally a manually entered off time or a calculated one and puts it back in its original list.
- WriteLog scrolls the log to show you the corresponding QSO if you click on any entry of the three lists.

See Also

Rates

Edit Play Audio from QSO

If you have recorded your received audio to WAV files, WriteLog can bring up the Audio Review program and scroll it automatically to the position in the WAV file that contains the QSO for a QSO. WriteLog sets the playback audio to 10 seconds before the QSO time. This operation is also available if you right mouse click on a QSO in the Log Window.



The *Play Quad Audio as...* buttons are enabled only if the original recording was done with four channels.

- *L+R RX* plays back with the Left RX in the left audio channel and the Right RX in the right.
- *Left rx/tx* plays back with the Left RX in the left and the Left TX in the right.
- *Right rx/tx* plays back with the Right RX in the left and the Right TX in the right.

See Also

[Continuously record audio to file On/Off](#)

View Normal

After printing, WriteLog shows a view of what was printed in the Log Window. Use View Normal to switch the Log Window back to its usual view.

See also

[Arranging the Windows](#)

View Only the Log

Sometimes its convenient to expand the Log Window to use all of WriteLog's screen space, but be able to come back to your customized view quickly. This menu command temporarily hides all WriteLog's windows except the Log Window and the Edit QSO bar. Clicking it again restores the customized views.

See also

[Arranging the Windows](#)

View By PC on Network

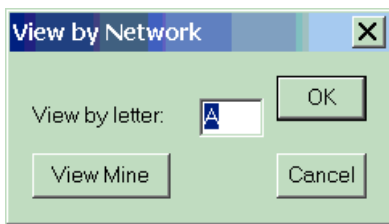
If the log you are viewing has ever been networked, then WriteLog can restrict its view of QSOs to those logged by a given PC. Only the Log Window view on screen is restricted. All QSOs are still in the log. You can return to the view of all QSOs using [View Normal](#).

See also

[View Select PC to View](#)

View Select PC to View

When viewing by Network PC, you can select which QSOs to view by Network letter. The “View Mine” button is a shortcut to your own network letter, but it only is enabled if you have turned on networking.



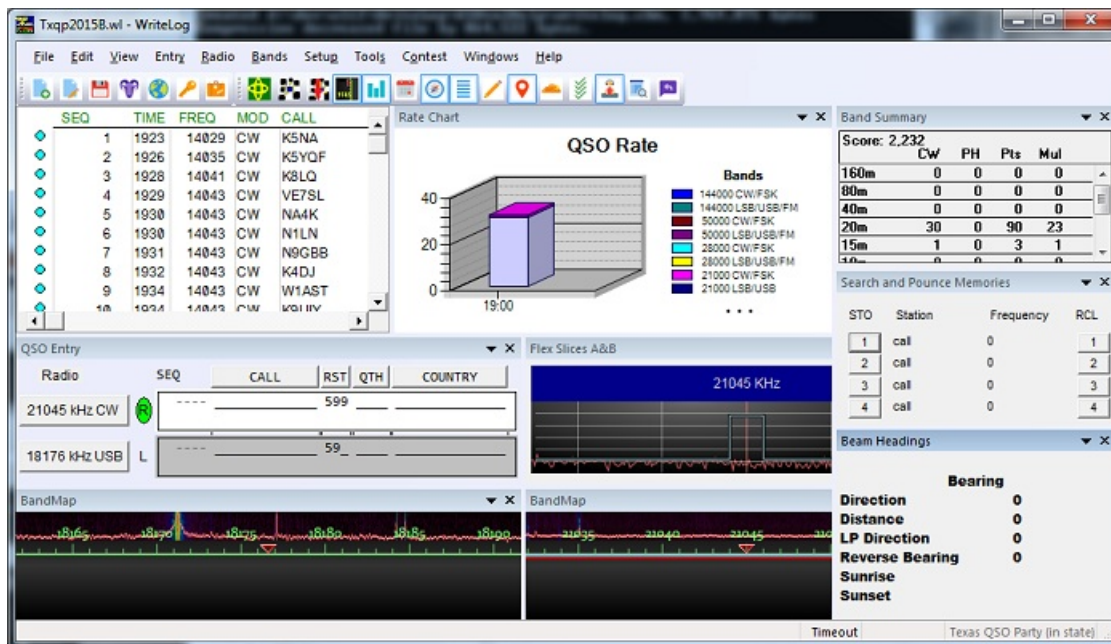
See also

[View by PC on Network](#)

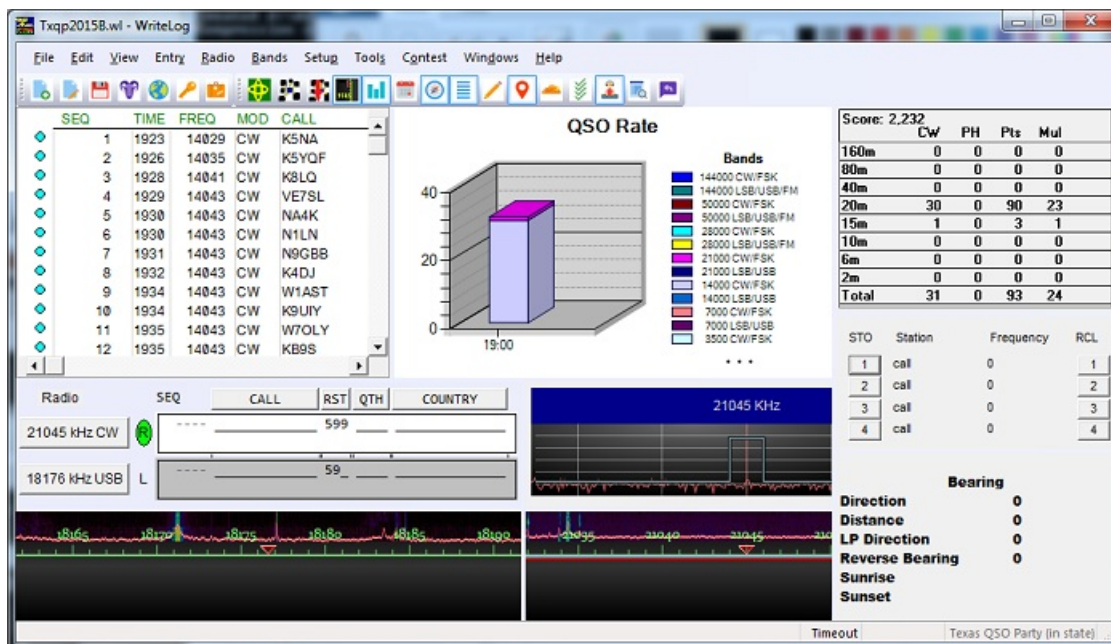
View Docked Captions

Turn this off to remove the caption bars from the docked windows. This can save screen space. But you can no longer drag docked windows to new positions (because the capture bar is missing). Turn this back on to be able to drag them.

The screen layout is only subtly different. Here is an example with it ON:



Here is an example with view docked captions OFF:



View Log chronologically by band

This command displays the log sorted by band in print preview mode. You may print this view using the Print command. Or you may just close it.

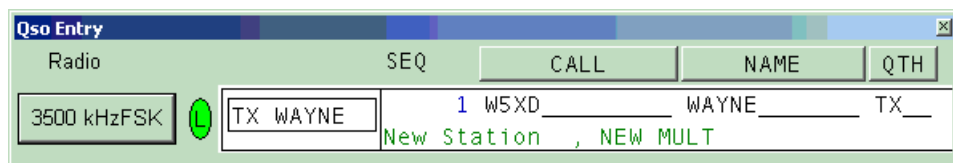
Use View Normal to restore the screen when you've finished.

See also

[Arranging the Windows](#)

Entry Enter in Free From

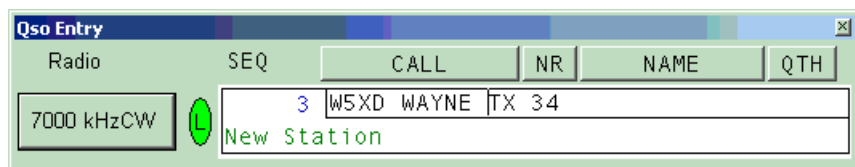
Turning on this menu entry rearranges the Entry Window to include an additional type in text field:



The screenshot shows the 'Qso Entry' window. The 'Radio' field is set to '3500 kHzFSK'. The 'SEQ' field contains '1'. The 'CALL' field contains 'W5XD'. The 'NAME' field contains 'WAYNE'. The 'QTH' field contains 'TX'. Below these fields, the text 'New Station , NEW MULT' is displayed.

Type received exchange information into the free form entry field and, whenever you type a space character, tab character, or <enter>, WriteLog takes the characters you have typed so far and places them into exchange fields by computing their “best” fits.

You can also use Entry Hide Fixed Fields to limit the screen to *only* the free form entry:



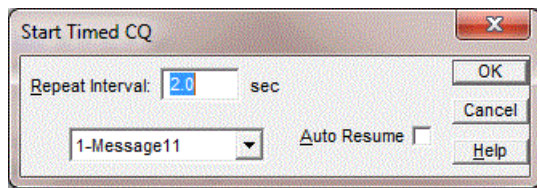
The screenshot shows the 'Qso Entry' window. The 'Radio' field is set to '7000 kHzCW'. The 'SEQ' field contains '3'. The 'CALL' field contains 'W5XD'. The 'NAME' field contains 'WAYNE'. The 'QTH' field contains 'TX 34'. Below these fields, the text 'New Station' is displayed.

Individual contest modules can customize WriteLog’s default behavior. The default is:

- Any string with both digits and letters is the call sign
- A string with only letters is placed into the narrowest entry field that contains letters that is wide enough for what you have typed.
- A string with only digits is placed into the narrowest entry field that contains digits that is wide enough.
- The RST sent and received fields are never automatically filled this way.

Timed Repeat CQ operation

Use the Entry Timed CQ menu entry to launch a repeating CQ on a timer. The CQ stops if you type anything into the Entry Window that launched the CQ. Typing into a second Entry Window (for a second radio) does *not* affect the auto CQ.



You set the CQ interval to seconds and tenths of a second. The time you enter is how long WriteLog waits from the end of one transmission to the beginning of the next. (The old W5XD external keyer--16 pin chip--is an exception exception is if you are running CW--it times from beginning to beginning.)

Once you have done an auto-CQ on a function key, WriteLog remembers that you have done so and will CQ on a timer again so that the next time you press that function key, you not only get the CQ, but another one will follow it at the prescribed Auto-CQ interval. To turn this off, select the Entry Timed CQ menu again.

The "Auto Resume" button only has an effect in two radio operation, and only comes into play in one situation. That situation is when an auto CQ is in progress on one rig and your keyboard focus is on the other, and when you start a Message NN without a leading "%X" in its message. In this case, the auto CQ will resume on the original rig at the end of the transmission on the second rig, but only if you started the auto CQ with the Auto Resume button turned on. This same logic applies if the Message is launched on the second rig is itself the CQ message. In this case, the CQ's alternate between the two rigs. The result is that it takes three keys to start alternating CQ's: Message NN on one rig, SHIFT+UP/DOWN to move to the second rig, and then Message NN on the other.

Message NN is invoked by a keyboard shortcut. The default keyboard mapping is for both keyboard keys F1 and F11 to be mapped to Message11, and F2 to Message02, etc. But you may have used [Keyboard Shortcuts](#) to change that.

The Auto CQ mode is indicated on the status bar (if you have turned on [View Status Bar](#)) and is also shown as a check mark on the Entry Timed CQ menu.

See also

[Two Radio Contesting](#)

Return to 0.0 kHz

When you grab a packet spot, or when you click on a band map entry, or when you make two consecutive QSOs less than 500 Hz apart, this menu command is set to allow you to quickly return to the frequency (and mode and split) settings you had right before you grabbed the spot, and clears the Entry Window.

See Also

[View Packet Spots](#)

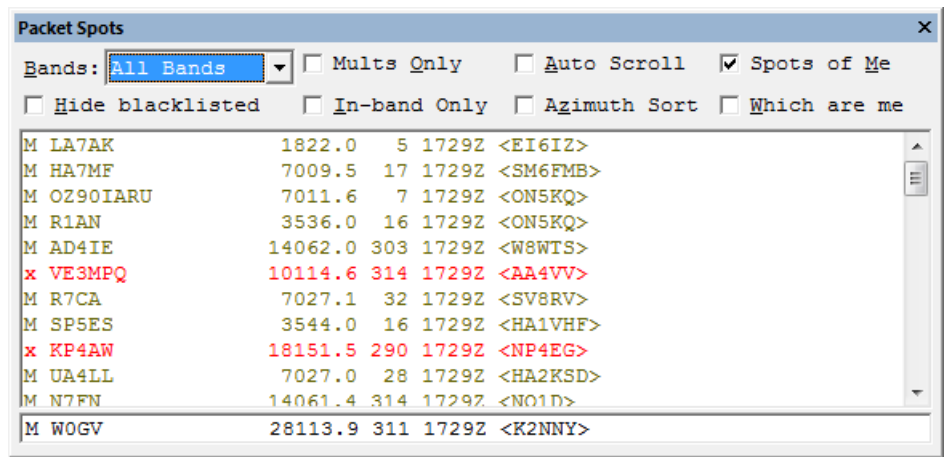
[View Packet Window...](#)

[Grab Packet Spot](#)

Grab Packet Spot

This command brings up the Packet Spot view and sets the keyboard focus to the list of packet spots, and with the most recently received spot as the selected item. Use up/down arrow or page up/page down to move through the list of spots. When the one you want to grab is highlighted, type Enter. Tab and SHIFT+Tab move the keyboard focus to the packet band filter and the Multiplier filter check box.

This command is most useful from the keyboard. If your hand is already on the mouse, just point at the spot you want and double click it.



See Also

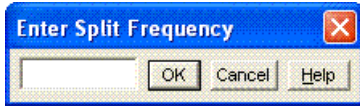
[Window Packet Spots](#)

[Return to 0.0 kHz](#)

[Window Packet Window...](#)

Set Split

Set the rig to split operation



Typing the minus key, "-", to the Entry window brings up the Split frequency dialog, which only has an effect if you have rig control through a serial port enabled. Type in the desired transmit frequency in kHz (either with or without the MHz--the split is limited to within the current band) and WriteLog sets your rig to split frequency operation. If you enter nothing and type ENTER, WriteLog sets split mode off on your rig. ESCAPE cancels the dialog with no action.

See also

[Setting the Logging and Duping Frequency](#)

[Keyboard Band and Mode Selection](#)

Entry Undo Wiped QSO

The menu item *Undo Wiped QSO* restores the previously wiped entries from the Entry Window. This can be handy if you inadvertently "wipe" the QSO before it is logged or complete.

This menu entry can be placed onto a dedicated keyboard key using the "EntryUndoWipedQso" [shortcut](#).

Entry Change Operators

The Entry Change Operators menu entry is for multi-operator entries. It simultaneously does two things:

- (a) Saves the operator name (or call) so that all subsequent QSOs logged are tagged in the column named "OPERATOR" with that operator's name (or call).
- (b) Switches the directory WriteLog uses for sound board wave files.

Normally, all you need to do is select a name from the list and click OK. If your name (or call) is not in the list (because you haven't used this machine before), then just type it in and click OK. WriteLog won't be able to send any WAV files until you record them, but you can record them by using SHIFT+F2, etc.

To clean up or modify the WAV files, you need to know more about where the files are. WriteLog constructs the list of known operators that it proposes in this dialog from the names of any subdirectories in the default directory set by the [Wave File Locate](#) button in the [Setup Ports](#) Dialog. And if you type in a new name to Entry Change Operators, WriteLog automatically creates an empty directory by that name. Any subsequent WAV file recordings you make with WriteLog will be placed in that directory.

If you clear the operator name in this dialog and click OK, then WriteLog will revert to using the default wave file directory.

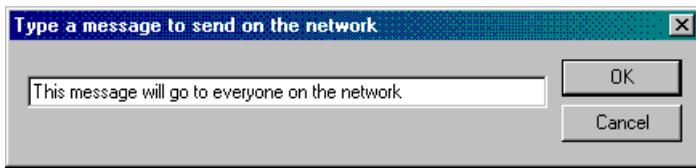
See also

[Wave File Locate](#)

[Setup Ports](#)

Entry Send Network Gab

Use the Entry Send Network Gab menu selection to type in a message to be sent to all stations on the network. The Gab messages end up in the [Network Gab](#) window.



See Also

[Network Operations](#)

[View Network Gab](#)

Entry Packet Spot

When you do Entry Send Packet Spot (or CTRL+T or ALT+F3), WriteLog constructs a command line to be sent to the Packet Cluster, including the frequency. If you need to change it or add a comment, do so, and then type Enter or press OK. This feature is disabled until you have created the packet TNC connection in [Window Packet Window...](#)

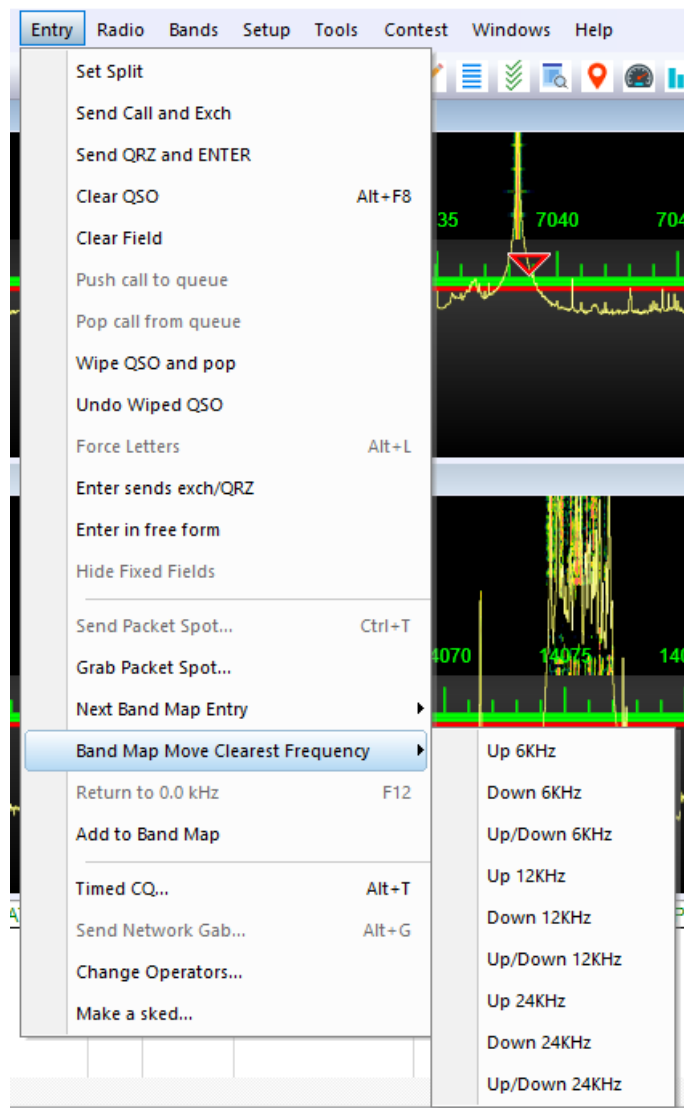
Entry Spot Self does the same thing, but with your own call.

See Also

Set a frequency offset for digital modes. See [COMn_DIGITAL_OFFSET_HZ](#).

Entry Move Clearest Frequency

These commands use the SDR spectrum to search up and/or down the band for the lowest energy frequency within the range specified. The range of frequencies it will search depends on the menu entry (or keyboard shortcut command) that you invoke. The ranges available are 6KHz, 12KHz and 24KHz, with the search going either up the down, or down, or both up and down. The command takes into account the bandwidth of the radio's current mode setting and the band edges.



The bandwidth WriteLog uses for each mode in this calculation can be changed if you edit the [SEARCH_CLEAREST_BW_KHZ...](#) settings in WriteLog.ini.

The band edges are edited by [Edit Sub-bands](#).

See also:

[Band Map](#)

[Configuration]

[SEARCH_CLEAREST_BW_KHZ_CW=.17](#)

...

[BandMap]

[ClearFrequencyLookbackSeconds=45](#)

Entry Next Bandmap Up/Down

These commands fill in the Entry Window and tune the associated radio (if any) to the next band map entry up (or down) the band, skipping to new multipliers (or not—depending on the menu entry).

Adding an Entry Window

You may have from one to four [Entry Windows](#) on the screen simultaneously. Having two is useful for [two-radio operations](#) so that you can have partially entered QSO data in one while completing a QSO on the other. If you turn off the Window QSO Entry Window menu, none are visible.

Radio Xmit focus this Radio

This menu entry is disabled until you indicate to WriteLog that this Entry Window is radio L or radio R using the [Select Radio L/R](#) menu entry items. Once setup this way, clicking this menu item asserts (or de-asserts, as appropriate) the radio L/R output on the CW LPT port or the [Outboard W5XD CW keyer](#).

Pressing any function key to begin a transmission automatically accomplishes the same function as Set transmit focus to this Radio but also moves the keyboard focus.

Radio Headphones Split/Normal/Toggle

Headphones Split sets one radio in each ear regardless of which radio is active. Normal puts the active radio in each ear. The Headphones so2r box Latch (CTRL+X) function, which latches the non-active radio into both headphones for the duration of a transmission, also only works with support SO2R switching boxes (Outboard W5XD CW keyer, OTRSP) and you can only hear its effect if you have your radio RX audio routed through that keyer.

These menu entries are only enabled if you are running an SO2R controller. One SO2R controller is selectable in the [Setup Ports](#) dialog, but certain radio drivers also have a virtual SO2R controller that is activated when you assign more than one radio slot to the same COMM port.

The Headphones Split Toggle turns split off if it was on, or on if it was off.

Radio Headphones Reverse Toggle

This command puts the headphones on the radio without the transmit focus, or back on the transmit radio if they were already on the non-transmit radio. Only works for those CW keyer types that support it, otherwise this menu entry is gray.

Radio Tune

Commands CW key down until you type any key or press a paddle. Only works with those CW keyer types that support it. Otherwise this menu entry is gray.

Radio Antenna to this Azimuth

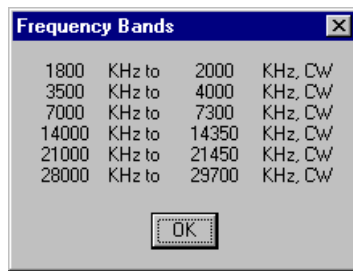
Turn Antenna to the azimuth indicated by the call sign in the current Entry Window. If the "call sign" is digits indicating a number from 0 through 359, then that number is taken to be the desired rotator azimuth. This menu entry is disabled (gray) if WriteLog does not detect antenna control software installed.

Radio Exchange L/R VFOs

Tune the Left VFO to the Right VFO's frequency and mode, and the Right VFO to the Left's.

Bands Show

Shows the bands that are to be duped separately.



Keyboard Band and Mode Selection

The Band menu on the Entry Window provides for a quick band change using the Band Up (ALT+F2), Band Down (ALT+F1), Mode Next (CTRL+F1), Mode Previous (CTRL+F2) commands or their keyboard shortcuts. WriteLog cycles through the allowable modes for the contest you have selected, and through the allowed bands. If the contest has no bands, then it cycles through the HF contest bands, 160m through 10m.

Another quick method to get to another band is to type the frequency (only digits--no decimal point) you want into the CALL field of the entry window, followed by ENTER. WriteLog adds zeros to the right until it finds a frequency inside a ham band and sets the logging frequency to it. If you follow the digits with the letter 'K' or the letter 'M', then interprets the frequency in KHz or MHz respectively rather than looking for a ham band by adding zeros.

Some examples:

- 70344
tunes the rig to 7034.4KHz
- 18133
Tunes the rig to 1813.3 KHz (not 18133KHz as you might have thought). Type "18133K" to go to 17 meters.
- 24192
Tunes the rig to 2.4192GHz (not 24192Ghz).

Note: WriteLog uses the bands for the current contest to decide what frequencies are inside a ham band. So the second example doesn't apply to contests that exclude the 17m band, and the final example above only applies to VHF contests.

See also

[Set Split](#)

Single Band Entry

For multi-band contests, you may use the Bands Single Band... menu entry to indicate that only QSOs on one band (or mode) count. QSOs outside the band of interest (the one you selected in the menu entry) are tagged with a "B" in the field where dupes are usually indicated.

You may change your mind at any time-WriteLog will recalculate your scores and duping appropriately.

Bands LSB is really FSK

If your rig must be in LSB mode to run FSK, set this check box to tell WriteLog that when your rig is in LSB, it should record and report the mode as FSK instead.

Band Setup

Many contests allow working the same station more than once for credit, usually on a different band. To use the built-in multi-band dupe checking, use the Band Setup entry. This entry is disabled if there are any QSOs in the data base. The controls mean:

Low edge	Enter the low frequency edge of the band.
High edge	Enter the high frequency edge.
Select modes for this band	Turn on all the modes that count as this band.
Add this band	Push this button after all the above are filled correctly. Repeat for each band you want to dupe separately.
Clear All Bands	Push this button to start over.
Cancel	Push this one when you're finished.

In order to support operation in contests with various rules, WriteLog can dupe separately by mode as well as frequency. To dupe separately by mode on frequency ranges that overlap, you do a Band Setup Add operation for each mode, and use the form presented to create a separate band entry with only the appropriate mode buttons activated. For example, Novice Roundup is duped separately by mode, regardless of frequency. So make two band entries with frequency edges from 0 to, say, 999999, but with the phone modes indicated in one, and the digital modes in the other. For a QSO to be considered part of a "band" by the dupe checker, it must have a frequency within the edges specified, and its mode must match one of the modes specified.

Another example: ARRL Sweepstakes allows working a station once in the contest regardless of band from 160 meters through 10 meters. Set up for Sweepstakes by making one band entry with edges 1800 and 29700 KHz, and with all the mode buttons on. The dupe checker internally maintains one more "band" than you enter in which it places QSOs which aren't in any other bands (usually an error condition). The only time that WriteLog explicitly indicates which band has a given QSO is when it prints out the dupe sheets and when it writes a WK1 file, but it does tag out of band QSOs with a "B" in the dupe field.

If you have a [multiplier module](#) selected, don't change the Band Setup.

Tools RTTY Single Transmitter Lockout

There are two modes for doing transmitter lockout's for RTTY.

Both of these lockout modes also work for CW and SSB except that WriteLog cannot lockout manual PTT, VOX or paddle operation.

Last one wins mode

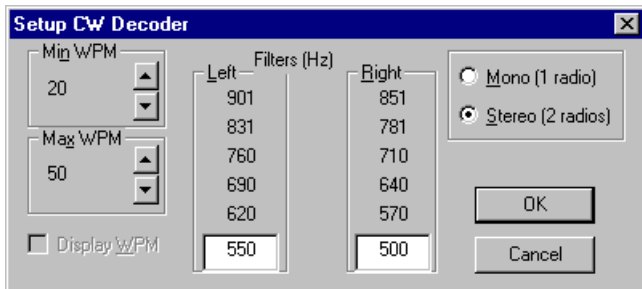
Transmission is allowed by any station on the network (or any of the radios on a single station). If some other station (or radio) has already started a transmission, it is aborted. This lockout works on a single station with no network. That is, if you would like to lock out two-radios on a single computer such that only one can be on the air at a time, this mode is the one to use.

First one wins mode

No station is allowed to transmit while any other station on the network is already on the air. This mode is only supported for networked stations. That is, this mode only locks out stations with a single radio connected.

Setup CW Decoder

Use the Setup CW Decoder menu selection to enter your choices for setting up your sound board.



The Min WPM and Max WPM selectors let you restrict the speed ranges that the CW decoder looks for. Restricting the speed range has two advantages: (a) it makes the CW decoder run faster and (b) it reduces the number of false character detections from noise.

The Left and Right filter frequency settings allow you to adjust WriteLog's CW decoder coverage of pitches to match your preference and your radios' behavior. You set only the lowest pitch and WriteLog automatically spaces the other pitches about 70 Hz apart.

The Mono/Stereo buttons tell WriteLog to run CW decoders on just the left channel of your sound board (Mono), or both left and right (stereo). If you chose stereo, WriteLog automatically displays two CW displays.

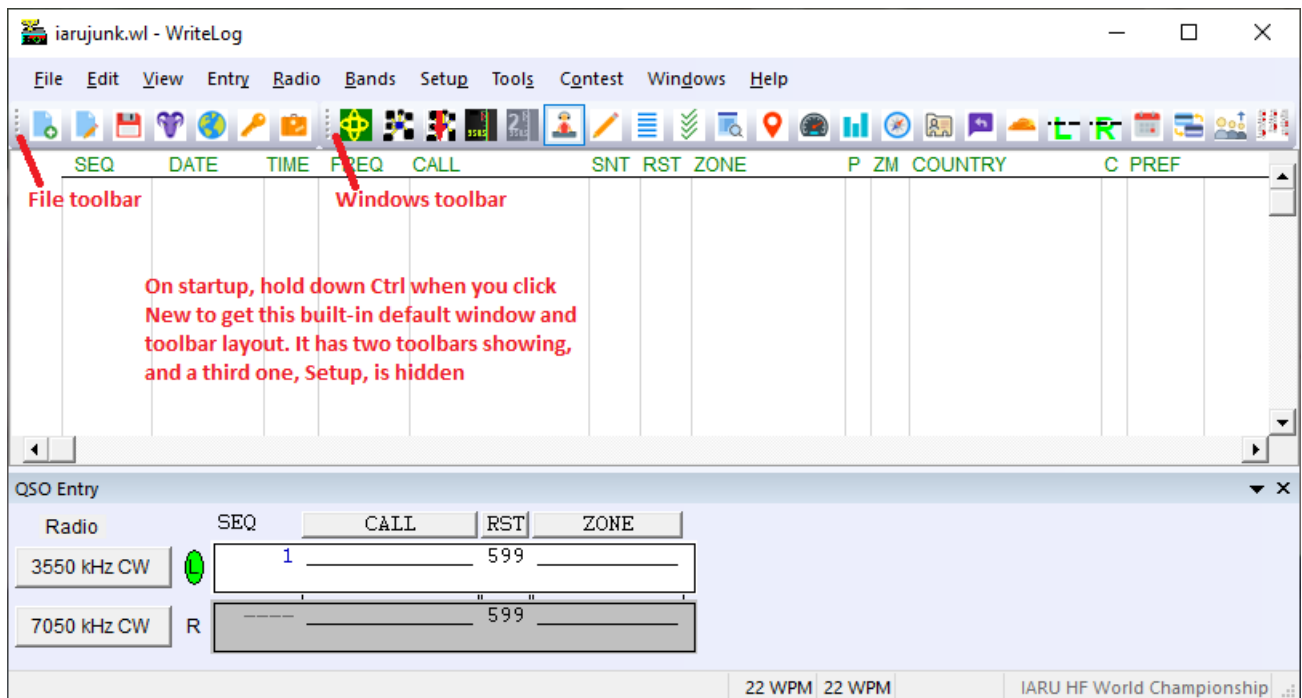
See Also

[Window CW Display](#)

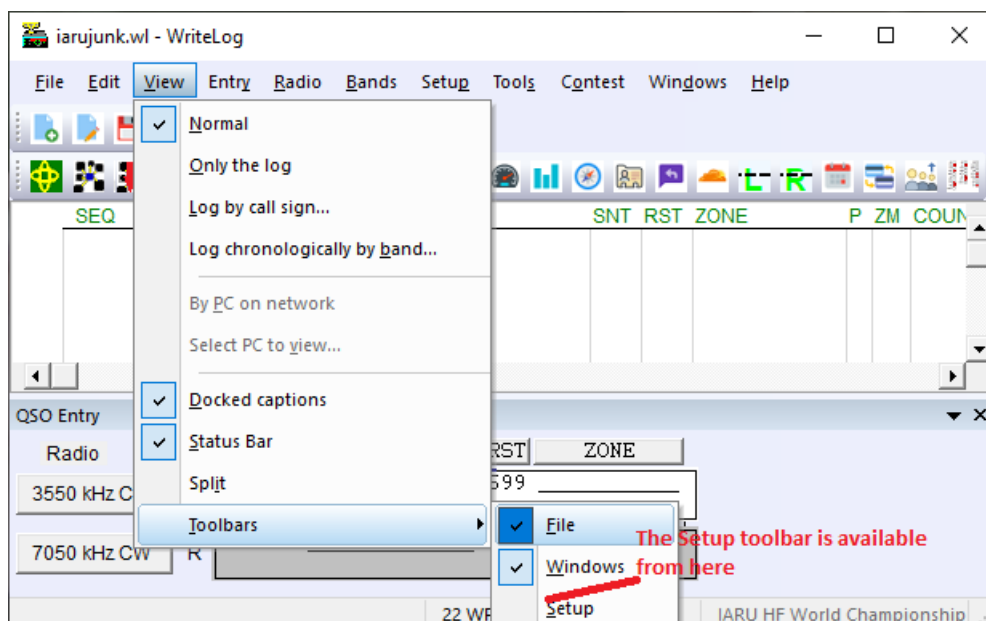
[CW for RttyRite](#)

Editing the WriteLog Toolbars

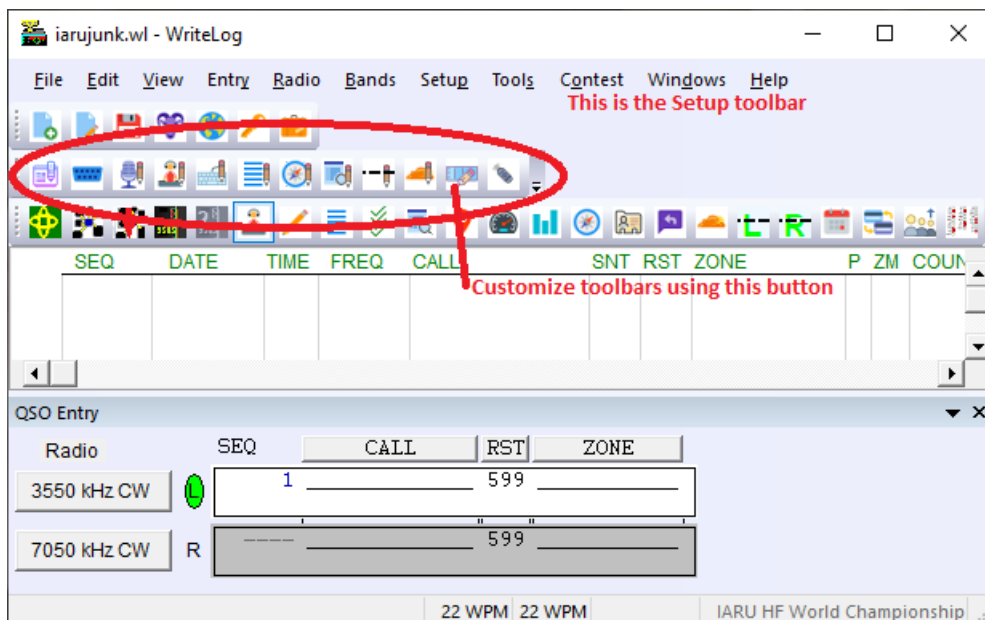
The default toolbar layout for WriteLog is set if you hold down the Ctrl button when you click on the *New log...* button on WriteLog's startup screen. Here is the result.



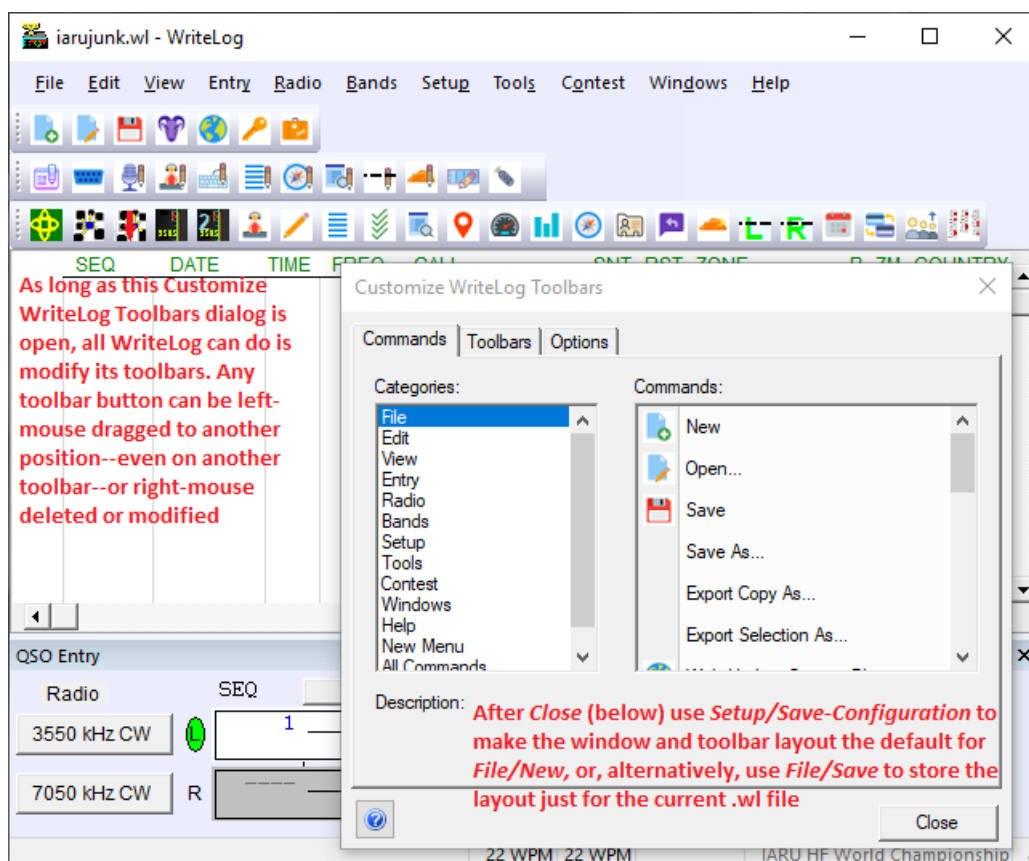
The two default toolbars don't show the customizing feature. If you want to customize toolbars, turn on the Setup toolbar using WriteLog's View menu.



Once enabled, that Setup toolbar has a little drop down triangle on its lower right corner. Click it to get *Add or Remove Buttons*.



If you then choose the *Customize...* menu options, WriteLog goes into a toolbar edit mode, and stays in that mode with all other operations locked out until you *Close* the Customize window.

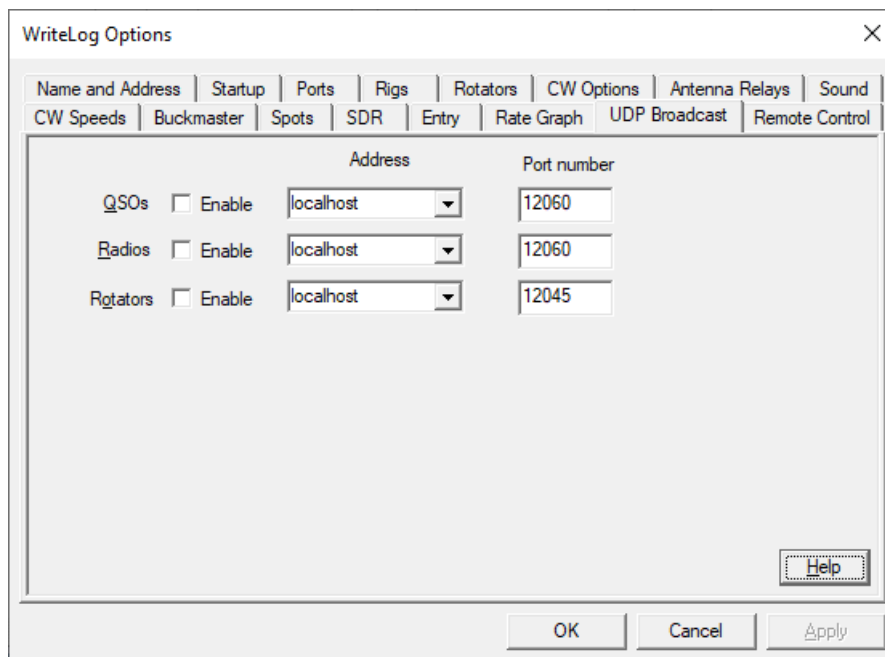


In the Customize mode, every toolbar button is now individually editable. Right click on any of them—on any of the three toolbars—and its menu shows what you can edit. Each button is also now draggable with the left mouse. Drag any button to any toolbar and it will stay there as long as you run WriteLog.

Use WriteLog's Setup/Save-Configuration menu item to make your customized layout the default for any future File/New. Or do a File/Save and the layout is specific to the .wl file you save it to.

UDP Broadcast Setup

WriteLog's Setup menu, WriteLog Options, UDP brings up this dialog:



The image shows the 'WriteLog Options' dialog box with the 'UDP Broadcast' tab selected. The dialog has a title bar with a close button (X). Below the title bar is a tabbed interface with the following tabs: Name and Address, Startup, Ports, Rigs, Rotators, CW Options, Antenna Relays, Sound, CW Speeds, Buckmaster, Spots, SDR, Entry, Rate Graph, UDP Broadcast (selected), and Remote Control. The main area of the dialog is divided into two columns: 'Address' and 'Port number'. There are three rows of settings, each with an 'Enable' checkbox, a text field, and a port number field. The first row is for 'QSOs', the second for 'Radios', and the third for 'Rotators'. All 'Enable' checkboxes are unchecked. All text fields are set to 'localhost'. The port numbers are 12060 for QSOs and Radios, and 12045 for Rotators. At the bottom right of the main area is a 'Help' button. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Apply'.

	Address	Port number
QSOs <input type="checkbox"/> Enable	localhost	12060
Radios <input type="checkbox"/> Enable	localhost	12060
Rotators <input type="checkbox"/> Enable	localhost	12045

The *Enable* check boxes in this dialog control the same UDP export as their corresponding menu entires in WriteLog's Tools and Contest menus. With the addresses set as shown here to localhost, the messages stay on the WriteLog PC and Windows Firewall will likely not intervene. The drop down lists also offer All local networks, which sends the UDP packets to all the network devices attached to WriteLog's computer, or you may type in an ip address of the form n1.n2.n3.n4 or as a DNS-resolved address.

All local networks finds the same devices as the Windows console application [ipconfig](#).

See Also:

[Broadcast Rotators UDP](#)

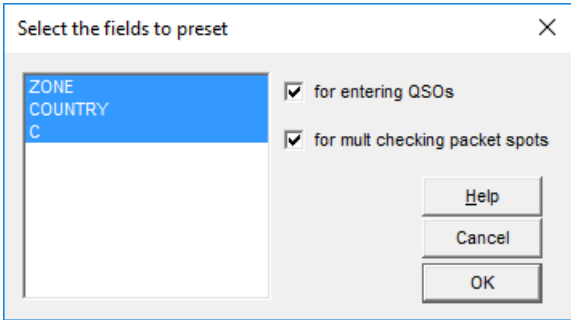
[Broadcast Radios UDP](#)

[Broadcast QSOs UDP](#)

Tools Preset Exchange From ADI File

This menu entry loads an ADI file of an old log so that whenever you enter a call sign, the remainder of the exchange fields are automatically entered from the ADI file if the matching call is in it.

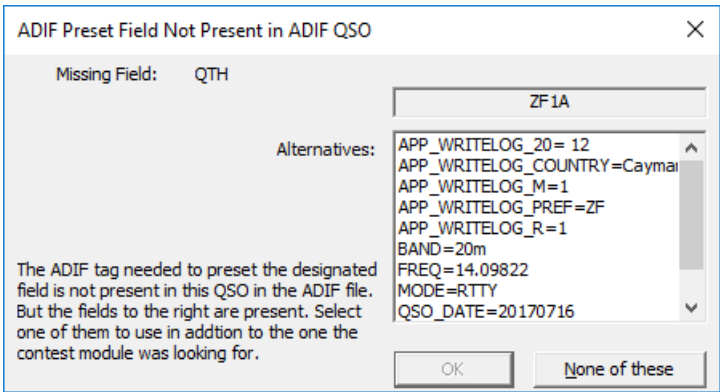
After selecting the ADI file, you also select which fields to have WriteLog automatically fill in, like in this dialog box:



for entering QSOs	turn this on for WriteLog to fill in QSO data from the preset file as you enter QSOs
for mult checking Packet spots	turn this on for WriteLog to use the data in the preset file to guess whether a CALL is a multiplier

When you save the file as a .WL file, WriteLog stores the ADI file, the exchange settings, and the check box settings in the .WL file so that when you open that file later, the ADI file of exchanges is also reloaded. You can turn off preset exchanges by clicking the menu entry again.

If the ADIF file you choose has QSOs without the necessary matching ADIF tags for the currently loaded multiplier module, WriteLog offers you (once) the opportunity to choose among any fields that are present:



If you OK this dialog, then the preset function will accept QSOs in the preset file with either tag: the one module called out, or the tag you select here. You only get one chance. If you click Not this one (or None of these) then WriteLog will not propose those ADIF tags for this field in your exchange again. If you decide you did not choose correctly, you have to turn off the Preset Exchange function and then turn it back on, and WriteLog will re-read the preset QSO ADIF file and present the same dialogs again.

Tools Recover Window Layout

When you do a File Save, WriteLog saves its current window layout in the .WL file. Use this command to recover just the window layout.

Internet Logbook

See the information on the internet at:

<http://writelog.com/support2/multioperator-support>

Tools Network Status

This window shows messages from the networking software. If a severe error occurs, the window flashes. You can stop the flashing by clicking in the window.

Edit Packet Spot Black Lists

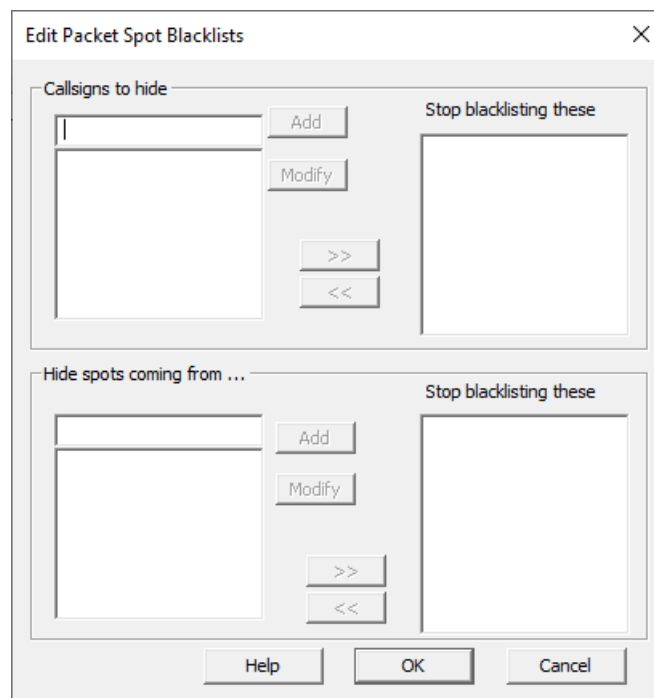
This dialog is available at the menu entry Tools/Edit Packet Spot Blacklists...
There are two separate blacklists:

- Calls you do not want to see, even if they are spotted.
- Calls of spotters whose spots you do not want to see.

You can edit the first in the top half of the dialog, the second in the lower half of the dialog. Typing into the box in the upper left allows you to edit a callsign—either a new one or one you have already selected from the list. The *Add* button adds a new call to the list, the *Modify* button does the same, but removes the call selected when you started editing. Calls may be removed using the >> button, and a pre button, and a previously removed call can be restored using the << button. The memory of previously removed blacklisted calls only lasts until you click OK or Cancel.

When clicking the >> or << buttons, hold down the SHIFT key to remove or restore all calls, respectively.

The lists are saved and restored in the .wl file for the contest, so you start each contest with empty blacklists.



See Also

[Packet Terminal](#)

[Grab Packet Spot](#)

[Window Packet Spots](#)

Broadcast Radios UDP

Turn this option on (*i.e.* check its menu item) to broadcast the status of the radios via UDP.

The radio packet XML format is:

```
<?xml version="1.0" encoding="utf-8"?>
<RadiolInfo>
  <app>WriteLog UDP 12.0.70.3</app>
  <logger>WriteLog UDP 12.0.70.3</app>
  <Freq>2140020</Freq>
  <TXFreq>2140020</TXFreq>
  <IsSplit>False</IsSplit>
  <Mode>USB</Mode>
  <RadioNr>3</RadioNr>
  <FocusEntry>460972</FocusEntry>
  <StationName>WL-PC1</StationName>
  <station>WL-PC1</station>
</RadiolInfo>
```

- app and logger is WriteLog UDP and the build version of its UDP broadcast component.
- Freq is the receive frequency in 10's of HZ.
- TXFreq is the transmit frequency in 10's of HZ.
- IsSplit is True or False
- Mode is one of LSB, USB, CW, FM, AM, or FSK.
- RadioNr is one of 1, 2, 3 or 4.
- FocusEntry is the Windows HANDLE for the WriteLog window currently with keyboard focus
- StationName and station is the Windows NETBIOS name for the computer running WriteLog.

The default destination for the UDP packets is localhost:12060, which can be changed in the [\[network\]](#) section of WriteLog.ini.

See also

[UDP Broadcast Setup](#)

[WRITELOG.INI \[Network\]](#)

Broadcast Rotators UDP

Turn this option on (*i.e.* check its menu item) to broadcast the status of the rotators via UDP.

The rotator packet XML format is:

```
<?xml version="1.0" encoding="utf-8"?>
<Rotator>
  <logger>WriteLog UDP 12.0.70.3</app>
  <frequency>2140020</Freq>
  <radio>3</radio>
  <station>WL-PC1</station>
  <azimuth>80</azimuth>
  <goazi>80</goazi>
  <go>True</go>
</Rotator>
```

- logger is WriteLog UDP and the build version of its UDP broadcast component.
- frequency is the transmit frequency in 10's of HZ.
- radio is one of 1, 2, 3 or 4.
- station is the Windows NETBIOS name for the computer running WriteLog.
- azimuth and goazi is the antenna direction in degrees
- go is always True

The default destination for the rotator UDP packets is localhost:12045, which can be changed in the [\[network\]](#) section of WriteLog.ini.

See also

[UDP Broadcast Setup](#)

[WRITELOG.INI \[Network\]](#)

Contest menu "Contest special"

If the contest has its own menu command, it will appear as the bottom slot on the Contest menu. This is usually a command to save the log in a file format requested by the contest sponsor, but not always. The command in the menu depends on the contest.

Contest Parameter Setup

Contests that need to know things about you or your operation (your age, your state, your grid square, etc.) must be setup with this command.

Editing QSO Exchange Fields

If you have a [multiplier module](#) for the contest it will automatically set the exchange fields appropriately for the contest, but WriteLog has the ability to augment that setup. For other contests you can setup the [fields](#) from scratch.

Each contest has its own exchange and WriteLog can be configured to log any of them. The only requirement is that every exchange must at least have a CALL field-the editing procedure enforces this requirement. WriteLog also configures the CALL field to always be 13 characters wide, and to accept any character except a space. The fields of the contest exchange and their settings may be changed at any time using [Contest Exchange Setup](#) format setup menu entry. If the log is empty you can either define the exchange from scratch (select the "YES" response to the Initialize Format query). Otherwise, you can only add fields to the existing exchange. Selecting the menu entry brings up a form to fill out. You fill out this form once for each field in the contest exchange (like call sign, received report, sent report, etc.). The fields you enter will appear, left to right in the order you fill them out, on the log and in the entry window.

The fields in the form mean:

Caption	This is the title of this field in the exchange and will be used to label the field in the log window and on the log hard copy. When you add a field the text entered here determines its width. Use spaces if necessary to make the field wider than its title. When modifying a field it is not possible to change its width, although the text in its caption can be changed.
Call	Activating this button indicates that this field is the call sign field. The call sign field always has a standard width and no lower case so WriteLog ignores any other buttons if this one is on. WriteLog also requires that there be a call sign field, so it activates this button on this form for every entry until you have turned it on once and added a call sign field. Therefore you must deactivate this button when adding every field that appears to the left of the call sign.
Number	Activating this button indicates that this field is all numeric, and WriteLog will not allow any non-numeric characters to be entered. For convenience in CW operations, certain letters will be converted to digits when attempting to enter them in a NUMBER field: "n" is converted to "9", "o" to "0", "a" to "1", and "t" to "0"
Prompt	By default this button is on, but turning it off makes the corresponding field not appear in the QSO entry window. Data may be entered into such a field only by editing it in the Log window's Edit tool. The MUL field in the default exchange is an example. In this case, multipliers are not entered in real time, but are added after the contest, so the MUL field is set to not clutter the QSO entry window.
Print	This button defaults on, and turning it off prevents this field from being printed, but it will show in the Log window.
Dupe	When WriteLog checks previous QSOs for duplicates it can display one field from the duplicate QSO. Only one field may be so displayed, so this display is disabled after being used once.
lower	Activate this one to allow lower case letters. If its off, any lower case letters typed into the corresponding field are converted to upper. This is ignored if the CALL button is set and all lower case letters in the call sign are converted to upper.
Tab Only	A field with this button selected will not auto-tab to the following field when you type enough characters to fill it. This is useful for situations where you have unconsciously learned to type a tab or space when receiving, say, the NR field in Sweepstakes, but the first time you work a station with a four digit number you fumble. Turning on this field means you must type the tab or space, even if the field is full

Overstrike	Selecting this button means that new characters typed into the field overstrike existing ones rather than pushing the existing ones to right.
No Space	Selecting this button prevents typing a space character into it. Instead, typing a space causes the cursor to tab to the following field.
Required	Turning on this button causes WriteLog to refuse to enter a QSO into the log if the field is blank. And if there is a multiplier module loaded, it can also validate the field and refuse to allow entering the QSO.
RST	Turning on this button causes WriteLog to treat the field as an RST. It defaults to 59 or 599 according to mode. This should normally be turned on in combination with the Number button.
Move Up / Move Down	Reorders the context exchange by moving the selected field earlier or later in the exchange.
Insert	Creates a new field (column) for the log before the currently selected one. A field created this way can be removed by selecting it and pressing the Delete key, but only before you OK this dialog.
OK	Ends the dialog and commits all your changes.
Cancel	Ends the dialog and cancels any changes.

Multiplier Automatic Enabling

As of WriteLog version 12.68, there is no menu entry for this feature. It remains available only if you program a [Keyboard Shortcut](#) to access it. Turning Automatic Off is desirable after you have submitted your log entry and don't want to recalculate the multipliers when you subsequently load the file again.

That is, after the end of the contest, the multiplier module may be updated to reflect rules changes, new DXCC countries or ARRL sections, etc. and as long as you leave Multiplier Automatic enabled, WriteLog will apply the current rules to your entire log every time you load it. Turn off Automatic so that the points, DXCC country assignment, etc. remain unchanged even when the multiplier changes.

Contest Create Summary Sheet

WriteLog will create a summary sheet for your contest in either TXT format (suitable for email) or RTF format (with nice formatting for printing). Use the Save As Type selector in the file selector to select TXT or RTF.

For TXT format summary sheets, WriteLog supports creating summaries with fixed column spacing using the "<" and ">" characters this way:

xyz	WriteLog substitutes something for the *xyz*
<*80mqso*12>	WriteLog substitutes the same thing, but fills on the left with spaces to 12 characters wide.
<*80mqso*12L>	the same again, but WriteLog fills on the right with spaces to 12 characters wide.

The same symbols are permitted in RTF format files, but they are ignored.

cqcontest.net upload

The "Contest/Broadcast score..." menu command starts posting your score to cqcontest.net. This feature is supported only when WriteLog is installed on Windows XP and later.

Log submission details

Call used: W5XD Location: SOUTH TEXAS

Operator: SINGLE-OP Overlay: Station:

Power: HIGH Xmtr: Mode: Band: ALL

Assisted: Time:

Club:

Calls of all operators: W5XD

State/Province: Country:

Create Cabrillo File | Address for Cabrillo | Soapbox for Cabrillo | Scoreboard Upload

Network Address: http://scoredistributor.net UDP Port: 9871

Password:

Active Contests: IARU-HF

Upload: Post Score every: Manual min Now ☒ post qso&mult breakdown also

OK Cancel Help

Because of the specifications at cqcontest.net, WriteLog will require you to make an entry for the Power, Xmtr and Mode selectors before it will let you post a score. The settings here are retained as the same as for Cabrillo file submissions, and are saved in the .WL file when you File/Save.

The **Call Used** is the callsign that you opened the contest, and need not be the same as the call registered for your installation of WriteLog. The **Password** is used to login to the posting website (and not the WriteLog installation registration code). The usual setting for **Network Address** is <https://cqcontest.net/authpostscore.jsp>, which sends your score to cqcontest.net. The other settings are available only for the case of interacting with third party software. For cqcontest.net, [create a user account](#) under the CALL that you will post to that website. And that same website is where you set or change the **Password**.

The information you enter in the top part of the dialog is also used for [Cabrillo export](#). WriteLog will automatically highlight the the **Active Contest** corresponding to the Cabrillo contest designator. The **Active Contest** setting should normally be the Cabrillo name for the contest you are participating in. You may change it to "Post to test page", which switches WriteLog's submission to "GENERAL QSO", which is the test page on cqcontest.net. Checking **post qso&mult breakdown** also causes WriteLog to post your per-band qso and multiplier totals; otherwise, only your current total score is posted. Only if you are told to do so by the score posting web administrator, you may override WriteLog's name and type in a contest name here.

Click the **Now** button to send your score just once. Or select **Post Score every** and click **Start** for WriteLog to automatically post your score on timed intervals. Only the **Start** button and not the **OK** button does *not* start score posting.

When you create a new contest log with File/New, no posts will be made until and unless you activate posting with this dialog. When you open a previously saved contest log that had the posting timer started, posts will resume automatically, but only after you add a new QSO to the log. Almost all the information in this screen is preserved when you File/Save and then File/Open the old log. The exceptions are that the **Network Address**, **UDP Port**, and **Password** are stored in WRITELOG.INI. That is, these three entries are saved for all contests, while the set according to the contest loaded by WriteLog.

A word about what WriteLog actually posts to cqcontest.net. The numbers it has available to post are those in the Band Summary window. If there are QSO count columns, multiplier columns and/or points columns in the Band Summary, then they should show up on cqcontest.net. But if the multiplier module does not calculate points (e.g. CQWW) then only zero points show up on cqcontest.net.

Third party software may specify alternate settings for Network Address and UDP Port. If the Network Address setting starts

with "*http*", which is the case for cqcontest.net, then the UDP Port setting on this page is not used, and instead WriteLog does an HTTP POST operation using the Network Address as a URL. Alternatively, without the "*http*", WriteLog uses the UDP protocol on the specified UDP port. Note that WriteLog only posts to and never reads from UDP. You will need to use the third party software to verify the UDP postings can be read. Here are some of the details of what WriteLog supports: For UDP, WriteLog sends one message to the IP address and port specified. Note that the UDP standard specifies special behavior for the case of the value "255" for any of the four subnet numbers of an IP address. In the "All local networks" setting, WriteLog scans your machine's network adapters, computes the appropriate broadcast address for the subnet each is attached to, and sends a UDP message (on the port specified) to each adapter that Windows report is status "Up".

See also

[WRITELOG.INI \[ScoreUDP\]](#)

[INI File Options](#)

[Cabrillo Export](#)

Broadcast QSOs UDP

Turn this option on (*i.e.* check its menu item) to broadcast each QSO via UDP as it is logged or edited.

The QSO packet XML format is based on http://dxlog.net/docs/index.php/Additional_Information#QSO_information:

```
<?xml version="1.0" encoding="utf-8"?>
<contactinfo>
  <logger>WriteLog UDP 12.0.70.3</logger>
  <mycall>W5XD</mycall>
  <qsoid>A415000070000</qsoid>
  <stationid>A</stationid>
  <contestname>ARRL-SS-CW</contestname>
  <mode>CW</mode>
  <snt>5NN</snt>
  <rcv>5NN</rcv>
  <nr>8</nr>
  <call>W1SRD</call>
  <txfreq>2104600</txfreq>
  <band>21</band>
  <xqso>False</xqso>
  <duplicate>False</duplicate>
  <exch1>27</exch1>
  <exch2>U</exch2>
  <exch3>75</exch3>
  <exch4>SV</exch4>
  <timestamp>2022-11-05 21:17:57</timestamp>
  <newqso>True</newqso>
</contactinfo>
```

- logger is WriteLog UDP and the build version of its UDP broadcast component.
- mycall is WriteLog's call sued.
- qsoid is a unique ID for this QSO.
- stationid is which station this is on the local network.
- contestname is the cabrillo name for the contest.
- mode is one of SSB CW FM RTTY PSK FT4 FT8 .
- snt is sent RST.
- rcv is received RST.
- nr is sent serial number.
- call is received callsign.
- txfreq is frequency in 10's of Hz.
- band is ham band in MHz.
- xqso is False if not a claimed QSO.
- duplicate is True if this QSO duplicates another in the log.
- exch1 is received exchange.
- exch2 is received exchange.
- exch3 is received exchange.
- exch4 is received exchange.
- timestamp is recorded time of the QSO.
- newqso is False if this notification is due to editing a QSO already in the log.

The default destination for the UDP packets is localhost:12060, which can be changed in the [\[network\]](#) section of WriteLog.ini.

See also

[UDP Broadcast Setup](#)

[WRITELOG.INI \[Network\]](#)

Contest Cabrillo File

For many contests, WriteLog can generate a cabrillo format file suitable for electronic submission to the contest sponsor. This menu item is grey for contest modules that don't support this format.

Log submission details

Call used: W5XD Location: SOUTH TEXAS

Operator: SINGLE-OP Overlay: Station:

Power: Xmtr: Mode: Band: 10M

Assisted: Time:

Club: Central Texas DX and Contest Club

Calls of all operators: W5XD

State/Province: TX Country: USA

Create Cabrillo File | Address for Cabrillo | Soapbox for Cabrillo | Scoreboard Upload

☐ Include Tx ID My email address: wayne@w5xd.net

☐ Submit log ☐ Upload to SuperCheckPartial

☐ Display when done ☒ Show this page on File/New

Create Cabrillo Now

OK Cancel Help

WriteLog attempts to set the Include Tx ID button checkbox correctly based on your log. But if your submission is rejected, try toggling this button. It is disabled if there is no column in your log that identifies which transmitter made each QSO.

The Submit button will fill in an email with the information provided by the contest module. The email address WriteLog fills for the destination comes from WriteLog's ProgramData folder, the file LogSubmission.ini and the [SponsorEmailAddress] section. Updates for this file may be available at <http://writelog.com/downloads/writelog-versions>, or can be installed using File/Web-Update-Data-Files.

Show this page on File/New tells WriteLog to automatically bring up this Cabrillo dialog every time you create a new log using the menu item File/New.

Contests marked to support only web submissions will present a link to the sponsor's URL instead of an email, like this:

WriteLog

Use the sponsor's web app to upload your log.

☒ Copy full Cabrillo file path to clipboard

Click this link to submit log:

<http://contest-log-submission.aml.org/>

Cancel

When you click the link, WriteLog replaces the Windows clipboard contents with the full path name of the Cabrillo file, unless you turn off the top checkbox. With that path name on the clipboard, you can more easily click any Browse link on the sponsor's web page and Paste the file path for upload.

If you select any MULTI transmitter category, WriteLog will generate the required "transmitter" column as the last (right-most) column in the Cabrillo output. If you used the [multi single](#) indicator in WriteLog during the contest, then RUN station QSOs are tagged with transmitter id '0' and MULT QSOs are tagged with '1'.

If you didn't use the multi-single indicator, then WriteLog generates the transmitter id tags from the NETW column in the log.

The *Upload to SuperCheckPartial* checkbox silently sends a copy of your cabrillo log to supercheckpartial.com for including in their database.

See also

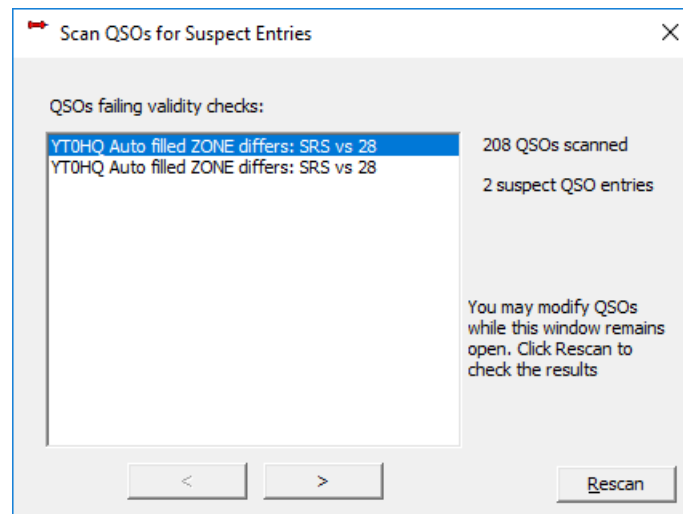
[INI File Options](#)

[\[REPORT\]](#)

[cqcontest.net Upload](#)

Scan Log For Suspect Entries

Selecting this menu entry scans the log for entries that are flagged by the multiplier module as invalid multipliers, or as out-of-band, or as not matching what the multiplier module or ADI presets would have set it to.



This dialog allows you to click back on the QSO entries in the log and modify them while keeping your place. Click the next (>>) or the previous (<<) buttons to move the highlight through the QSOs that fail the validity check.

Examples of what this checker does:

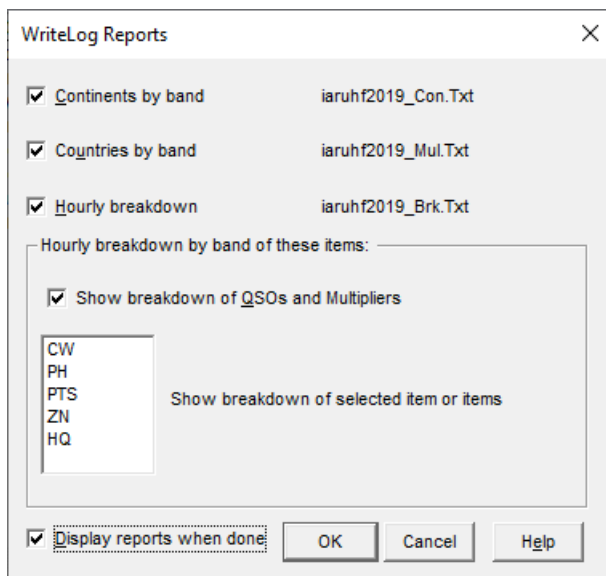
- For contests that have an identifier to match against a fixed list (like state, province, county, etc.) it flags QSOs with entries that are not in the list.
- For contests that the multiplier module can fill in from the callsign, like IARU or CQ zones, or from any ADI file presets, it flags QSOs whose entries don't match what would otherwise auto-fill.
- It flags all QSOs that have the "B" designator for out-of-band. If you are running a single-band entry with QSOs off of your designated band, then all such QSOs will be flagged.
- This checker uses the Tools/Preset-from-ADI-file mode labeled "for mult checking packet spots." That is, you must turn on that button for this validity checker to compare the presets to the logged QSOs.

Score Recalculation

When you edit QSO data in the [Log Windows](#) Edit tool, it is possible for WriteLog to get multipliers out of order. Contest Recalculate Score makes a pass over the QSO data in order ensuring that multipliers are flagged the first time they appear in the log.

Create Reports

Use the Contest Create Reports to bring up the report dialog.



The image shows a Windows-style dialog box titled "WriteLog Reports" with a close button (X) in the top right corner. The dialog contains three checked checkboxes with corresponding file names:

- ☒ Continents by band iaruhf2019_Con.Txt
- ☒ Countries by band iaruhf2019_Mul.Txt
- ☒ Hourly breakdown iaruhf2019_Brk.Txt

Below these is a section titled "Hourly breakdown by band of these items:" which contains a checked checkbox and a list box:

- ☒ Show breakdown of QSOs and Multipliers

The list box contains the following items: CW, PH, PTS, ZN, HQ. To the right of the list box is the text "Show breakdown of selected item or items". At the bottom of the dialog is a checked checkbox and three buttons:

- ☒ Display reports when done
- OK
- Cancel
- Help

For DX contests you can get breakdowns by continent and by country. For all contests you can get breakdowns by QSOs and by multipliers. Multiple items in the *Show breakdown of selected item or items* selection box may be selected.

The Display when Done button brings up a notepad window for each selected report after you click OK.

About RttyRite

RttyRite Contesting software for Windows has all the features you need for a winning contest effort, and it helps you have fun along the way. With WinRtty software, you don't even need any external hardware to run RTTY. The sound board in your computer functions as a terminal unit.

See also

[Getting Started with Rtty](#)

[Viewing the RttyRite window](#)

[Port](#)

[Mode](#)

[TU Type](#)

[WinRtty](#)

[Left Mouse Click](#)

[Right Mouse Click](#)

[Special Keys](#)

[Call Capture](#)

[Force LTRS](#)

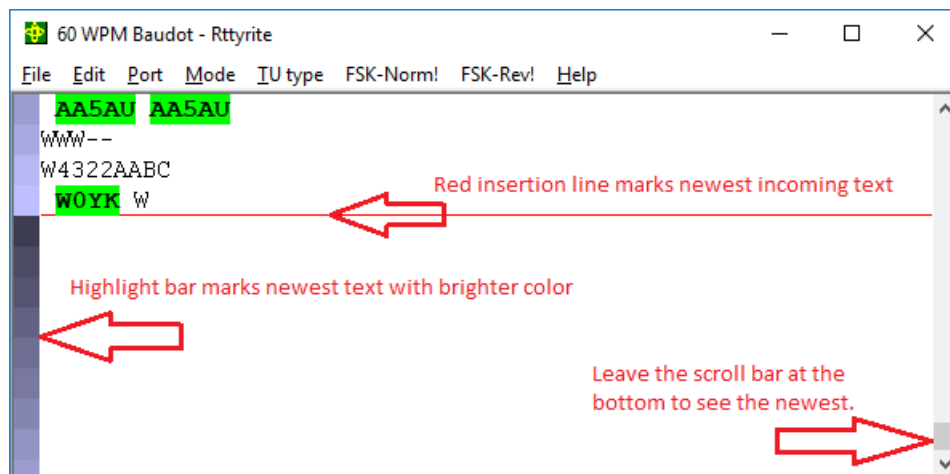
[Low Tones and High Tones](#)

[FSK Polarity](#)

[Scan for DE](#)

Viewing the RttyRite window

The components of the RttyRite window are labeled here:

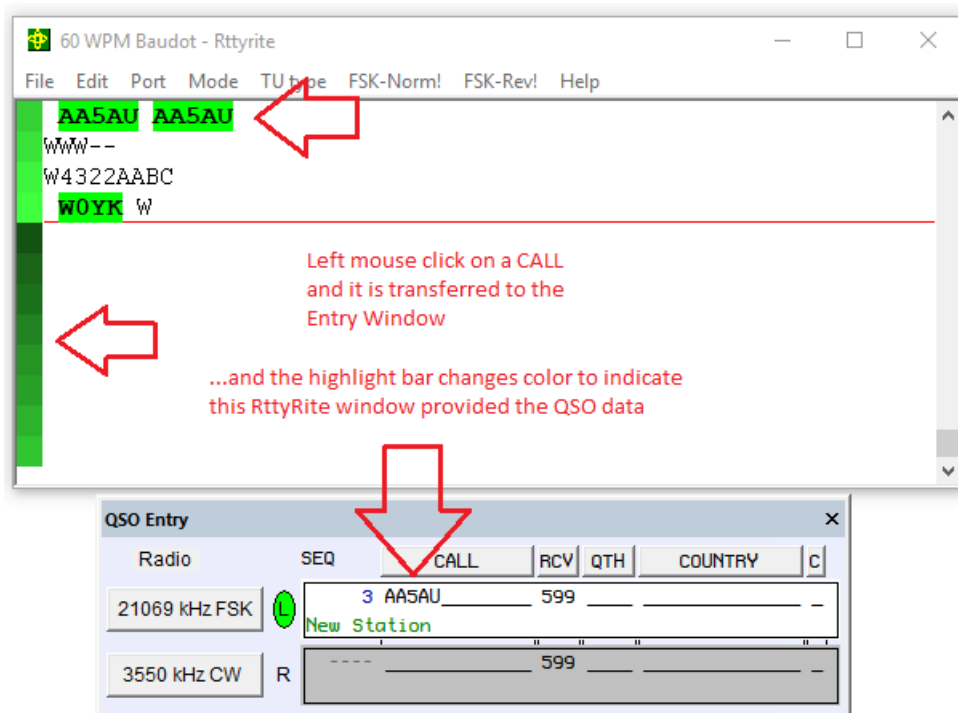


Incoming characters, once displayed, never move on the screen. To make room for new text when the screen is full, the red insertion line wraps back to the top and overwrites the oldest that is displayed.

Scrolling

You may use the scroll bar to look back at old text. Bring it back to the bottom for normal operation.

The RTTY window has a vertical scroll bar that allows viewing of the most recent 2000 lines of RTTY transmission and reception. If you move the scroll bar off of its bottom-most position you will not be able to see the newest incoming RTTY characters. Scroll to the bottom to see them.



Click using the left mouse button on a CALL in the RttyRite screen and two things happen. (a) the QSO information is transferred to the Entry Window that started this RttyRite window. And (b) the highlight bar changes colors to green.

Getting Started with Rtty

This chapter (by K5DJ) is for those who just received their copy of WriteLog for Windows. If you were to read the whole manual before trying the program, you might think the program is difficult to use because of all the **options** available.

This part of the manual is for the ones that load WriteLog thirty minutes before the contest and hope to use it thirty minutes later. (If you can read fast enough it just might be possible. hi) I shall try to make that possible. WriteLog is a user friendly program. Since it is a Windows based program it has tons of help files for everything. (Please consider reading them. They will save you lots of aggravation and time spent on the phone or sending e-mail.)

I will get you started with the most important features you will need. WriteLog has Super Check Partial, The largest Name File (HI File) in any RTTY contest software, Beam direction heading, Rate window, Check Call window, Summary window, Auto CQing, and much more . All or any of these windows can be up and running at all times if you want them. After you have installed the program (see install chapter) here is what you do.

I'm assuming your using WriteLog for the first time and using Win95, also using only one radio. (More about two radio use in another chapter.) My computer is running Win95 and has an icon on the main screen, You may want to put one there first. Click the icon saying Writelog.

You now have the basic WriteLog screen running.

Lets say you're wanting to participate in ARRL's Roundup contest. Click [Contest Select](#), you will see a list of all contests (even contests for other modes, this software does all modes as well.) Click ARRL RTTY Roundup, click Ok at the bottom of the window. Now Roundup contest is selected, you won't see much of a change to the screen as yet. Nothing saying Roundup is showing right now. Click File in the Writelog window (The contest log, or [Log Window](#)). Click save in the same window. Writelog File Selection will appear on screen, type in what you want to name the contest (Example would be ARRL98) in the File Name box, after naming the file click Ok, you will see Writelog File ARRL98 in the logging window, the Roundup contest is now saved. If you want to check on it, click File in the Writelog File: ARRL98 Window. You will see (arrr98.wl) in larger box under Files in C:\ham\Contest. At this time click cancel since arrr98 is already running. Go through the same steps to set up each contest in the future.

You have three windows showing, the call window at the bottom of your screen [says 3500 Khz CW](#) (AUTO) (make sure it is high lighted, you do this by clicking anywhere in that window), now you need to have FSK and the proper band, in that window click bands Click Previous mode or (CTRL+F2) you will see it changed to FSK now click bands again and click Band up or down to select the proper band or (ALT+F2 or F1). This changes the bands.

Entry Window (or call window—labeled 3500KHzCW)

The call window has several functions within itself. When you go through the steps and select a contest (In this example Roundup) all the slots (or [fields](#)) are listed that you will need to do the Roundup contest. When you go to the call window always make sure it is selected. (by clicking anywhere in the window) the display will be highlighted when it is selected. Here are some little extras that go along with the Call window. If your looking at the screen now Shift Click on CALL: you will see a new window pop up that can have any type of message or exchange you want in it. You activate it during a contest by simply clicking CALL. Same thing goes for RCV, QTH, COUNTRY and C, in the window. You have five extra memory keys that can be activated by mouse if you should want them. To see what's in each pop up window Shift Click any of them. To get out, press Esc or Enter. After you have filled all you want to use and press Esc, Click File under (Writelog File) and click Save. Then and only then will it be saved if you should have to get out of the program. If you have radio control the exact frequency will be displayed where the Frequency is in the Call window. After you get set up for a contest (if on 20m) it will display the frequency as 14000 KHz FSK, it's good practice to type in the frequency where you want to start the contest in the call window and press enter. Your rig and the display will change to that Frequency.

RTTY Screen (labeled Rttyrite 60 WPM Baudot)

The neatest thing about this viewing screen is that all in coming information doesn't enter from the bottom of the screen. It starts at the top and goes down the screen like you normally read. The red line moves down as the print comes in. Calls and exchanges stay where they were printed until over written. If you have ever chased a new callsign up the screen and have had a hard time trying to click on the call or exchange while it's moving up the screen, you will learn to **love** this feature immediately. All incoming print is colored Black, all outgoing print is colored Blue. Another neat feature, you can go the Rttyrite screen (a mouse click on the caption bar for the windows does this) and type in practice call etc. you can type in: DE OH2LU 599 001 DE SM5FUG 599 010 DE TY1PS 599 039. After each (DE Callsign) and a space you will see all the calls get a yellow back ground which means a new mult. (There has to be a DE in front of any call.) If the call you type is a new call, you can use on the band your on, but not a mult, the back ground turns Green. If the call you typed was a dupe the back ground will turn Red. After you have typed in a few calls return to the call window. (click anywhere in the Call window) now you can bring down call from the Rttyrite screen to the call window, along with any other parts of the exchange you typed in. Remember, in this program the Enter Key logs the contact, use space bar or tab to move from slot to slot, not the enter key.

The Log Window

The logging window has some real nice features also. You can have the log full screen at any time, Home, End, Page up and Page down keys moves you up and down the log very quickly, Editing the log after a QSO has been logged can be done very quickly right on the screen where the contact is listed.

Editing the Log: Editing the WriteLog log is as easy as pie and very quick. If you have WriteLog program running right now, log TY1PS 599 001 and press enter. Lets just say the time and frequency were logged wrong. In the Log Window, click the time 1350 (what ever time yours says.) The whole line will become highlighted. Click the time and then click the up/down arrows under hour box, change that to 14, now change the minutes the same way, also the day-month-year, click ok, you will see it changed on screen. If you're not running Radio control your frequency will be 14000,7000, 3500 etc. if you want to change that and you're on 20m, click 14000, the box colored green is flashing, press back space and type in the exact frequency 14080 and click ok, you will see it changed to 14080. Click TY1PS, backspace and change it to TY1RY and press Enter, it also changed. You can do the same to any and all boxes. Now log KC4AAC or any KC4-call 599, CA and press Enter. You will see it logged Antarctica, well he was in California. There are parts of the log you can't see right now. Click the right arrow at the bottom of this window until it get to CE9 under C PREF, this is the **only** place you can change a country, click CE9, backspace or replace CE9 with a "K" and press Enter. You will see it changed from CE9 to K and Antarctica changed to United States. Log is corrected.

If you want to delete a contact from the log, you can, but not if you are networked to another computer. It is much easier to not claim a QSO by highlighting the appropriate line with a click and then press "X" it marks the contact and doesn't count any points or mults etc. If you decide to keep the contact later on simply highlight the contact and press the spacebar, it is now un-deleted, if the score didn't change automatically click multipliers next to Help above and click Recalculate. The log is now updated. All this will become second nature very quickly I assure you.

Important Menu items and Dialogs:

The most important menu entry for RTTY contesting is [Edit CW/RTTY messages](#).

In this window you can set all your memory keys F2 through F11 and Shift F2 through F11. You can make them anyway you want them, long -short, it's up to you. There are a few thing you need to know here. A percentage sign goes in front of all the special control characters.

%R means, Carriage return.

%D means, The station's call you have in the window will be sent.

%E means, Return to receive mode.

%H means, Name (Hi) file.

I would set my buffers up something like this.

F2 %RCQ CQ ROUNDUP TEST DE K5DJ K5DJ %R%E

F3 %R%D %H UR 599 TX/TX %D DE K5DJ %R%E

F4 %R%D QSL DE K5DJ QRZ %R%E

Another very important window for contesting is on [View Check Call](#). If you have this window open on each contact that you log it will show all the bands you have worked this call on and what bands you haven't

If you still have time please read the remainder of the help files. The files are very good, and will help you through getting started with WriteLog. Once you have learned WriteLog you will never want to use anything else. Like anything it takes a little time and practice before your a master user.

I know most of this was put in front of you real fast, I think you will see that 30 minutes isn't exactly adequate time to learn this program. However I wish you luck in the contest. :-)

File View Wide Band Decode

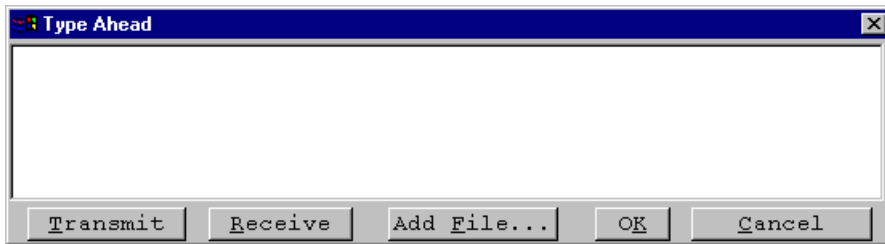
When running WinRTTY on your sound board, Rttyrite can display an alternate decoding of the incoming RTTY. This alternate decoding comes from wider Mark/Space than the normal ones and under some circumstances the wider filters print better than the narrow. When the received signal is badly mis-tuned, or when the signal has been subjected to flutter or other propagation characteristics that spread it out from the normal 170 Hz.

File Font

Use this menu entry to adjust the font size for your own comfort. WriteLog remembers the settings automatically.

File Type ahead

This window is especially useful for ragchewing. This is activated from the Rttyrite Window by clicking on File, Type Ahead.



Text typed here will not be transmitted until you click on transmit, so you can make corrections. Notice that when you reach a point in your typing where you wish to place your transceiver back to receive, click on receive (this produces the deferred receive character, \$, which looks like a large S). The message may be sent by clicking on transmit, and when the deferred receive character is reached, the transceiver is placed back into receive. To close this box, click on Cancel.

The Add File... button allows you to add an entire file to your type ahead buffer.

Edit

Copy

If you wish to save any text, you must do so while the text is still on the screen, because you cannot retrieve it once it has been erased. To save any text, click on Edit on the Rttyrite window, then Copy. The text on the Rttyrite window is Copied to the clipboard, from which it may be Pasted into a file for permanent storage.

Port

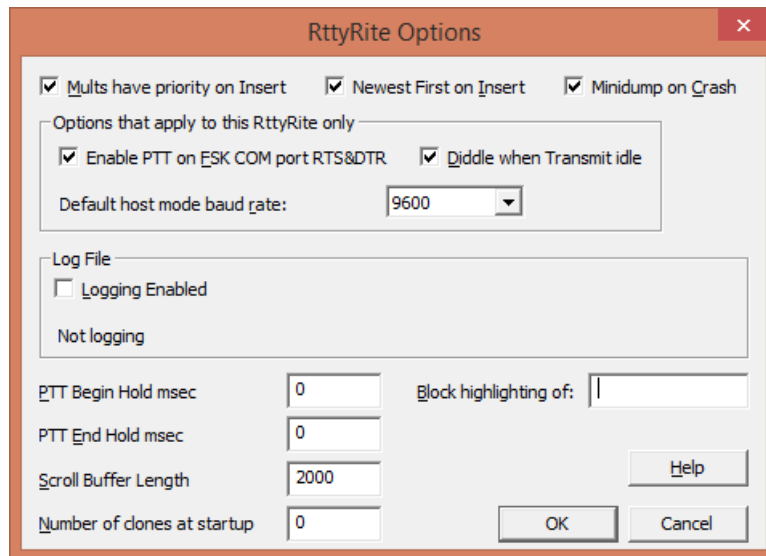
If you're running a TNC that requires a COM port, then select one using this menu. HAL boards and running AFSK with a sound board do not need one. The RTTY screen cannot share a COMM port with either the [Packet screen](#) or the main WriteLog [Setup Ports](#).

Share Transmit FSK Port

For certain TNCs that RttyRite uses a COM port for transmit FSK, RttyRite can share that COM port among multiple RttyRite windows for FSK transmit (and only for transmit--not receive.) The sharing can be done with either hardware FSK or software FSK or TinyFSK ([with special restrictions](#)), and it is not required that all RttyRite windows sharing such a port match their hardware/software settings.

Rtty Edit Options

The Edit menu / Options brings up this dialog.



Options that apply to all RttyRite Windows

Mults have priority on Insert causes WriteLog to select highlighted multiplier callsigns over others on invoking the Insert key.

Newest First on Insert causes WriteLog to select the newest (last) call on invoking the Insert key, as opposed to the oldest (first.)

Minidump on Crash enables RttyRite to create a minidump file should it crash.

PTT Begin Hold Msec controls the time delay between asserting PTT and writing the first transmit character.

PTT End Hold Msec controls the time delay writing the final transmit character and dropping PTT.

Scroll Buffer Length controls the number of lines RttySaves for scroll back.

Options that apply only to this RttyRite Window

Enable PTT on FSK COM port RTTY&DTR causes RttyRite to assert both RTS and DTR as a PTT on signal. Unchecked and Rttyrite leaves them deasserted always.

Diddle when Transmit Idle causes RttyRite to transmit the baudot LTRS character when it is in transmit mode with nothing to send.

Default host mode baud rate sets the baud rate RttyRite uses for TNCs that operate in host mode.

Log File Location

Set a file location for writing a log of RttyRite's received and transmitted text. If the menu item is checked, RttyRite is already writing a log. RttyRite appends the date to the name you choose, in the form YYYY-MM-DD and appends to any existing file with that date.

Number of clones at startup controls the number clone RttyRite windows the first RttyRite window creates at startup.

Block highlighting of: enter calls you want to not highlight on receipt. Multiple calls can be comma separated.

Mode

Select one of the baudot speeds, 60WPM through 100WPM, or ASCII at 110 baud. Or select one of the PSK modes. The PSK modes are enabled only if you're running a sound board TNC.

See also

[PSK for RttyRite](#)

RITTY

WriteLog supports using K6STI's RITTY program in a DOS window for your TNC. This works on Windows 95/98 only.

You will need to make one INI entry in order for WriteLog to communicate with RITTY

```
[RTTYRITE]  
RITTY_LOCATION=C:\RITTY
```

Where the "C:\RITTY" is the folder where you have installed RITTY. You also need to create a PIF file in that directory named WL-RITTY.PIF. If you did not get such a file from the RITTY vendor, you can create one using the Windows Explorer. Right click on RITTY.EXE, and select Create Shortcut. This will create a new shortcut. Rename the new one to WL-RITTY. You should also right click the newly created short cut, choose the Properties menu, go to the Misc tab, and set the "Idle Sensitivity" all the way to low (to the left).

TU Type

Rttyrite supports numerous TNCs. Just select the one you have.

Don't forget to also select a COM port if your TNC requires one. Except for the "Dumb Terminal Unit" setting, Rttyrite needs to know how to setup the COM port to talk to the TNC. It gets this information from WRITELOG.INI.

It is necessary to edit WRITELOG.ini directly. Here is what you look for:

```
[Ports]
COM3:=1200,n,8,1,
```

For most TNCs (KAM, PK-232, DSP-4100, SCS PTC-II) the setting shown here will work. Just substitute the name of the COM port that you are using, and be sure your TNC is also set to run at the same baud rate.

If you are running a HAL board using a port address *other than the factory default*, then you must edit WRITELOG.INI:

```
[Rttyrite]
P38_PORT=0X360
PCI4000_PORT=0X360
PCI3000_PORT=0X260
```

For the SCS PC II TNC, for the KAM, and for the PK-232 TNC, Rttyrite reads the TncInit1, TncInit2, etc. entries in WRITELOG.INI as long as it continues to find commands and sends them to the TNC. (For the PK-232 and KAM, these are HOST mode commands.)

```
[Rttyrite]
TncInit1=your favorite custom command
TncInit2=your second favorite custom TNC command
TncInit3=
...
```

If you run Rttyrite for two TNCs at once, the second Rttyrite window uses the ini section named **[Rttyrite2]** instead.

See also

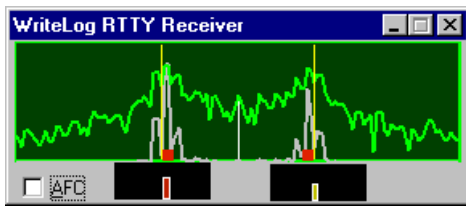
[WinRtty](#)

[Low Tones and High Tones](#)

[FSK Polarity](#)

WinRtty Tuning

WinRTTY's tuning indicator gives you a frequency display of the received signal along with an indication of the optimum tuning position to receive the signal.

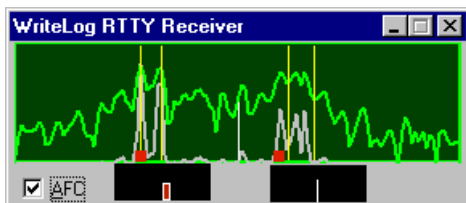


The picture is 500Hz wide and the two yellow vertical lines show you the mark and space tones. The space tone is on the left (lower frequency) and the mark is on the right unless you select FSK Reverse. The two red boxes show the frequencies of the loudest tones being received.

Tune until the red boxes line up with the yellow lines.

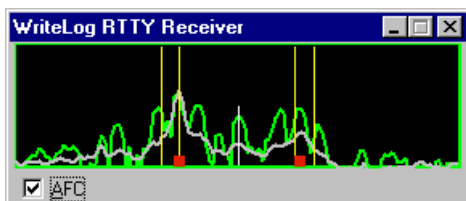
For most receivers, turning the tuning knob clockwise moves the red boxes to the right, and counterclockwise moves the boxes to the left.

If you turn the AFC button on, then WinRTTY automatically tracks the loudest signal within ± 60 Hz of the mark and space. It tracks the mark and space separately. Here's a picture of what it looks like with AFC on, and with the RTTY tones too low:



*Important: if you are operating search and pounce in a contest **do not** turn the AFC on! Doing so will make you off-frequency from the CQing station and make it harder for you to make QSOs!*

You can see the shift of the incoming signal on the tuning display. For example, a narrower-than-170Hz signal looks like this:



WinRtty

Rttyrite can transmit and receive RTTY on your Windows sound board. For receive, simply connect your receiver audio to your sound board's line input. Use the Windows Sound Recorder to confirm that received audio is available and that the level does not overdrive the sound board. The Windows Sound Recorder makes a nice graphical display of the incoming signal that you can use to set the level. Use the LEFT channel Line In and speaker out (or line out) to connect if you have only one radio.

WinRtty automatically produces a scope display to aid in tuning that you may size and place on the screen where you like.

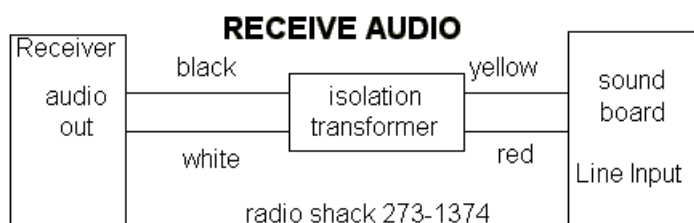
WinRtty Transmission

You may use either FSK transmission or AFSK transmission. Use the Rttyrite TU Type menu to select your choice. FSK transmission requires a COM port. WinRtty asserts DTR and RTS to transmit, and puts the outgoing RTTY FSK on COM port.

AFSK transmission does not require a COM port, but instead produces audio on your sound board's speaker (or line out) terminal. WinRtty's output level is fixed. Use the Windows control panel to set the audio level.

Connecting your sound board to your rig

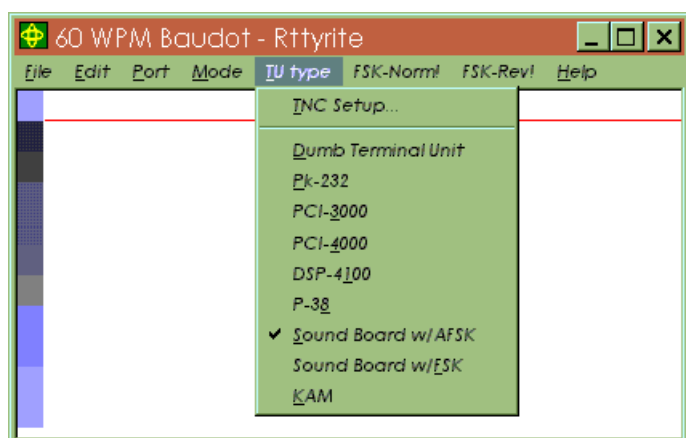
You need signals going in two directions. The signal from your receiver needs to make it to your sound board, and the PC needs to be able to somehow key your transmitter and make it put FSK (frequency shift keying) on the air. For the receive side, you don't have a choice: the receiver audio must somehow make it to the sound board's input.



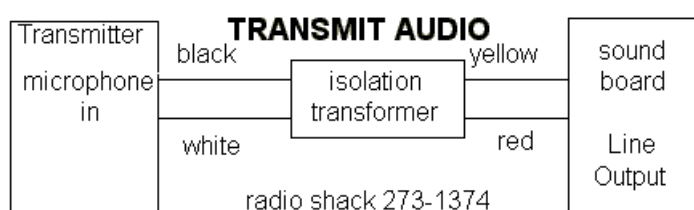
While the isolation transformer is optional, it is highly recommended as a precaution against introducing ground loops that get 60Hz hum into the signal. With this connection, you have enough to do receive only RTTY.

Transmit connections-AFSK

For transmitting RTTY, you have a choice to make. You can either run AFSK (audio frequency shift keying) tones from your sound board to your rig's microphone input jack, or, if your transmitter supports FSK, you can add additional hardware to connect a COM port on your PC to your rig's FSK input. You tell RttyRite you want to run in this mode by selecting the TU Type "sound board w/AFSK":



Running AFSK requires a connection that looks like this.

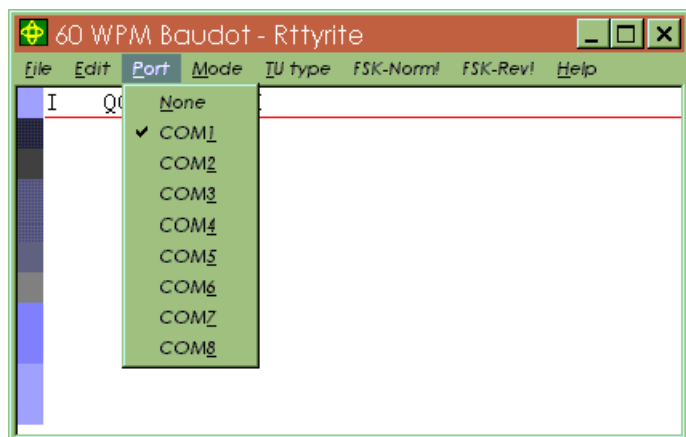


Your sound board might not have a line output, so the speaker output can be used instead. As with the receive case, the isolation transformer is optional, but recommended. No PTT (push to talk) connection is necessary because RttyRite is designed to key your transmitter's VOX (voice operated transmission). If for some reason you decide you must have a PTT activation instead of VOX, then RttyRite supports that too, but you have to construct an appropriate interface. Look at the PTT connection in the next section

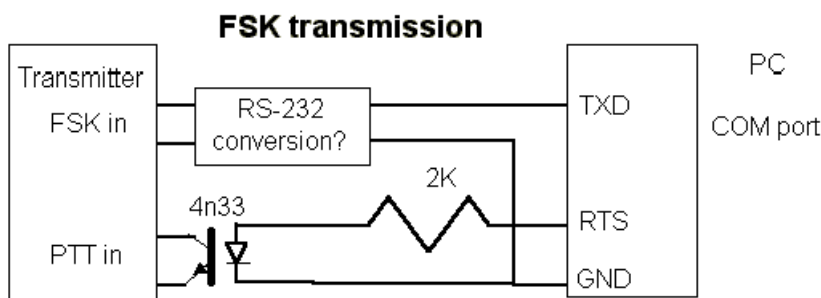
If your rig supports PTT operation over its rig control port, then WriteLog will control the rig that way.

Transmit connections-FSK

If your transmitter has an FSK input, then RttyRite can be configured to product an FSK and a PTT signal on one of your PC's COMM ports. Use RttyRite's TU Type menu to select "sound board w/FSK". And also use the Ports menu to select a COM port:



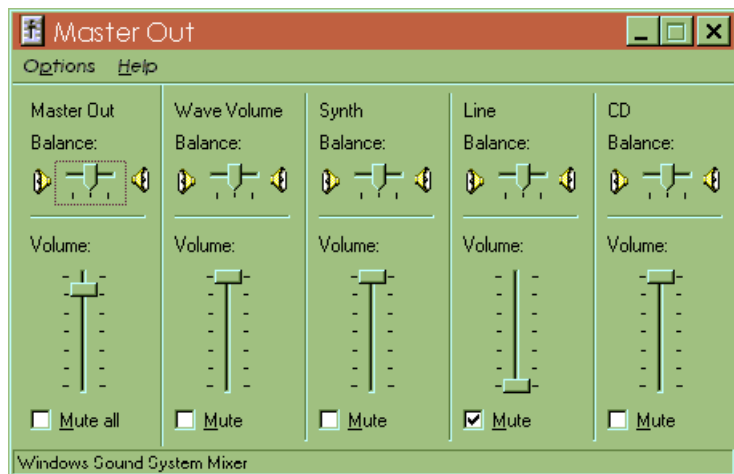
Connect your transmitter to your PC this way:



What goes in the "RS-232 conversion" box depends on your transmitter's FSK input. Odds are, it can be exactly the same as the circuit shown for the PTT connect: use an opto-isolator with a series resistor to convert the RS-232 levels to open/close keying.

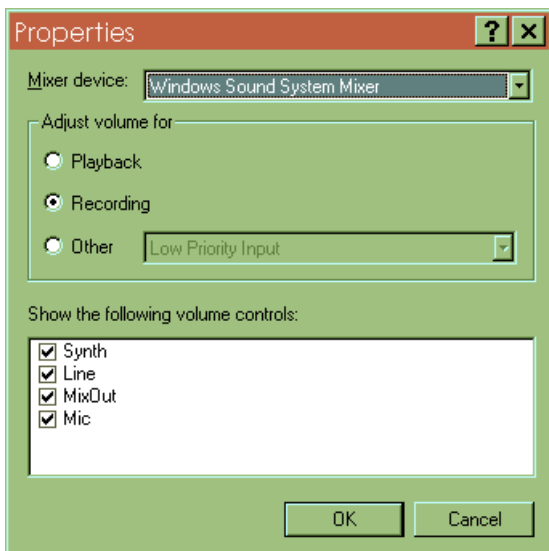
Setting the levels

Windows 95 has all the tools you need to set the transmit and receive levels for RTTY. They're just not labeled for RTTY work. Use the menu entry Start/Programs/Accessories/Multimedia/Volume Control (or else double click on the little speaker icon on the task bar tray). The volume control comes up configured to set your output levels, and looks like this:

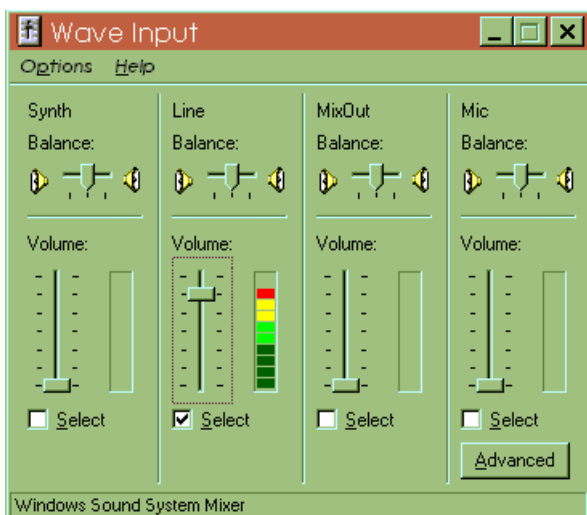


The "Wave Volume" control is the one that controls the AFSK output level (and so does the Master Out). Don't overlook the

other controls! Be sure to turn off the Line control-that is the Line *in* and the audio from your rig. You don't want it tripping your VOX. To set the receive levels, use the Options Properties menu command and you get this dialog:



Click the "Recording" button under "Adjust volume for" and turn on the "Line" (or "Mic") buttons and click OK. You get the next picture:

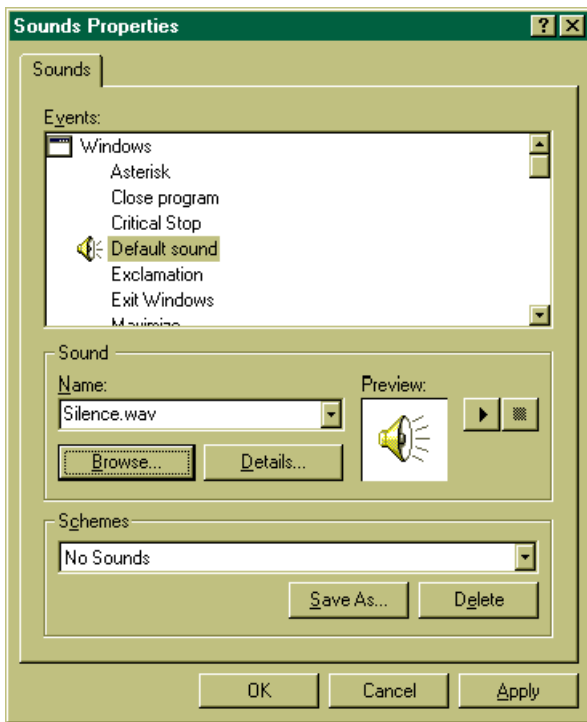


If you want to see the display with the color coded level meters as shown here, then you need to be running RttyRite in receive mode (or run the Windows Sound Recorder and press its Record button). You want to not see any red indicators as shown in this picture. That means the receiver audio is overloading the sound board's receive input. Lower the slider position until you see only green and yellow peaks.

The "Select" buttons in this picture enable/disable the corresponding input to the sound board, so if you have your receive audio connected to the connector on the sound board labeled "Mic" then you need to turn the Mic control on. And the same for the Line control. The Line input is preferred because its input impedance and sensitivity are more suited to direct connection to receiver audio.

Turning off the system sounds

It is necessary to prevent the Windows system from using the sound board while running Rttyrite and you have to use the Windows Control Panel to set this up. From the Start menu, chose Settings and Control Panel. Double click the Sounds icon to get this panel:



At the bottom, use the "Schemes" selector to select "No Sounds".

Then click on the "Default sound" in the top window, select Browse, and then "c:\ham\programs\silence.wav".

This last step may seem redundant if you're are Windows sound expert, but it may be necessary on machines that have no standard PC speaker built in (e.g. notebooks). On those machines, the PC speaker beeps appear at the sound card output even with the "No Sounds" scheme.

The same connections can be used for both [SSB](#) and RTTY.

See Also

[RTTY in Stereo](#)

[WinRTTY Tuning](#)

The Xmmt.ocx TNC

To use the Xmmt.ocx, you need to download some components from here:

<http://hamsoft.ca/pages/programmers/programmer-downloads.php>.

You need **two** things for MMTTY:

1. MMTTY_Engine168a.zip, or a more recent version. (the *only* thing WriteLog needs from that zip is MMTTY.EXE--all else can be discarded or ignored)
2. xmmt102.zip, or a more recent version. (the *only* thing you need from that zip is XMMT.ocx--all else can be discarded or ignored.)

Installation

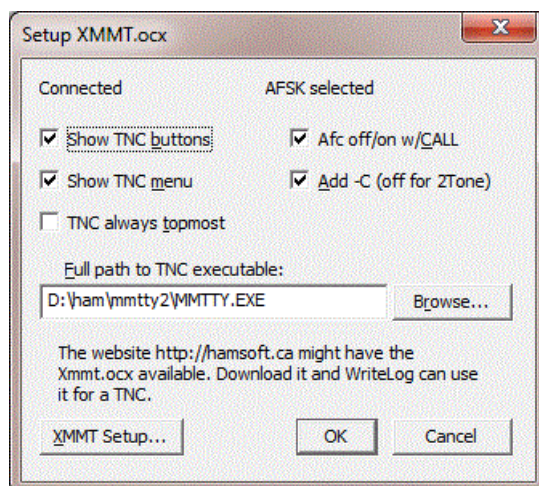
MMTTY.exe needs to be placed in a folder that you can read/write and you should run it once without WL to make it create the various support files (MMTTY.ini for example) in this directory. Plan on maintaining this directory as your MMTTY setup directory. It is strongly recommend *against* having a space character anywhere in the directory name.

If you want multiple MMTTY's concurrently on the same machine, create multiple directories using the same procedure as the first. Run MMTTY and set it up to talk to a different sound board, or a different channel on the same sound board.

The XMMT.ocx file can live anywhere on your disk. It just needs to be somewhere, and it needs to be "registered" with Windows. WL will help you register it if you have the file on your disk. When you select the Xmmt.ocx TNC in WriteLog, it will offer a file dialog. Use that dialog to browse to where you downloaded Xmmt.ocx

If you have previously installed the MMTTY plug-in for WriteLog (which appears as an MMTTY menu entry under TNC Type), then you may uninstall it because xmmt.ocx supercedes it. However, you may also have both installed at once.

Setup



The critical setting is the "Full path to TNC executable". Use the Browse... button to select the MMTTY.EXE (or compatible) TNC program. If you intend to run more than one of these TNCs concurrently (either for multiple radios, or for cloned views on the same sound board channel) then duplicate the MMTTY.exe into multiple folders, and use this menu entry on each of the RttyRite windows to browse to one in a different folder.

The Afc off/on w/CALL button enables automatic setting of AFC when the CALL entry of the corresponding Entry Window is empty, and clearing it when CALL has characters in it. With this button off, the TNC's AFC is not changed by RttyRite.

The Add -C button adds the corresponding command line argument to the command sent to MMTTY. Leave this button check on when running MMTTY. Other TNC executables (like 2Tone) might do better without.

RTTY in Stereo

If you've configured WriteLog to use your sound board as a Digital Voice Keyer, then you can also run RTTY separately in its left and right channels just like you can in SSB. You can transmit on only one rig at a time, but the other rig continues to receive during the transmission.

Just select the TU Type "Stereo Sound Board Afsk" or "Stereo Sound Board Fsk". Just like the non-stereo options for TU Type, Afsk generates RTTY tones in your sound board's speaker output, while the FSK option uses a COM port to generate RTTY instead.

Setup

Running RTTY in stereo requires the cooperation of the logging program and the RTTY screen, so there are several steps to telling software everything it needs to know to route your sound board's left and right channels to the right destinations:

1. In WriteLog Port Setup, set the "DVK Type" to Windows sound board
2. In WriteLog use Radio Number of Radios to set the number to two (or more)
3. Click in the WriteLog Entry Window for the left radio to highlight it
4. In WriteLog use Radio This is Radio Left for the left radio.
5. In WriteLog use View RTTY Window to start the left RTTY screen (Or right mouse click in the Entry Window for the Left radio)
6. Click in the WriteLog Entry Window for the right radio to highlight it
7. In WriteLog use Radio This is Radio Right for the right radio
8. In WriteLog use View RTTY Window to star the right RTTY screen (Or right mouse click in the Entry Window for the Right radio)
9. In the left RTTY screen, use TU Type Stereo Sound Board AFSK (or FSK)
10. in the right RTTY screen use TU Type Stereo Sound Board AFSK (or FSK)
11. You now have two Tuning windows on the screen (one for each RTTY screen.)
12. In WriteLog use Setup Save Configuration and all the above will be saved.

See Also

[Two Radio Contesting](#)

[Tools Recording Loop On/Off](#)

[Tools Recording Loop Stops During Xmit](#)

[Tools Echo Microphone](#)

[Sound Board Interfacing \(transmitting\)](#)

[Setup Port Setup](#)

[How WriteLog sets up sound board mixers](#)

FSK Norm/Rev

These menu entries take immediate action. Note that some TNCs (a dumb terminal in particular) do not support this operation. Both transmit and receive are switched to reverse together, except for the sound board FSK option can switch only its receive to reverse.

Show Menu

To save screen space, you can turn off the Rttyrite menu display. This menu entry is not on Rttyrite's main menu but on its Windows System menu. Click in the uppermost and leftmost corner of the Rttyrite Window to access the System Menu.

Left Mouse Click

Rttyrite copies the text under the mouse click into WriteLog's Entry Window. Exactly what gets copied depends on several things:

Special feature: if you hold SHIFT when you click, Rttyrite inverts the FIGS/LTRS settings for the characters as it copies them. No need to remember what TOO means!

If Rttyrite has highlighted the letters you clicked, then the entire callsign is copied regardless of the position of the click. You can override this behavior by holding down CTRL when you click, which will cause Rttyrite to ignore its highlighting.

Otherwise, Rttyrite copies the letters and figures going to the right from the one directly under the point you click. Where the characters arrive in the Entry window depends on what contest you have selected. If you have selected none at all, then the characters go into the field that currently has the blinking cursor.

Right Mouse Click

A right mouse click in the Rttyrite screen pops up a convenient context menu that can launch two of your preprogrammed messages, or log the QSO or clear the Entry window, or add the call sign you last clicked into the band map.

Special Keys

WriteLog sends Alt+L to Rttyrite to force baudot copy to LTRS case.

Alt+K (or F12) brings up the “talk” window that allows you to send RTTY directly from the keyboard.

Alt+C Brings up the Call Capture window.

ESCAPE aborts any transmission in progress.

Call Capture

Call-capture means "calls" are recorded automatically as they are received without having clicked on them. The call-capture feature of WriteLog is used like this: with the entry window active, press Alt+C. This brings up the Call Capture window with a list of "calls" which have been recorded (captured) by the DE(space) method. If you wish to work a "call" in the list, click on it, placing the "call" in the entry window, and the "call" is automatically dupe-checked. "Calls" which are dupes are *not* captured, but a "call" is not removed from the list after the "call" is worked (so some dupes are in the list).

Keyboard Transmission

Alt+K brings up the keyboard type ahead window. If you type fast enough to get ahead of the transmission, you can delete mistakes and retype them, but WriteLog knows how far along it is and blocks you from deleting characters it has already sent.

Force LTRS

If the LTRS (unshift) character is missed in a long word, the print will come out as figures (numerals and special characters. Typing Alt+L immediately shifts to LTRS (for those TNCs that support this feature.) As an additional tool for dealing with characters in the wrong case, Shff+left mouse click copies the characters to the Entry window inverted as well.

Low Tones and High Tones

While the most common setup for sending and receiving RTTY on an HF rig is with the 2125Hz, 2295Hz tones, some rigs perform better when setup to send and receive at audio tones closer to middle of the passbands normally used for voice communications, so Rttyrite supports the use of the so called "low tones", 1275Hz, 1445 Hz tones for those TNCs that support it. For the TNCs that support low tones, you can set up Rttyrite to run them using the "TU Type menu TNC Setup... entry".

Note that the choice between high tones and low tones affects **only** the way your TNC and rig communicate and **do not** affect your ability to work people on the air running the other tone pair because on the air, only the 170Hz difference between the two is significant.

However, there are some issues running low tones that **will** affect your ability to get on frequency with other stations, and whether or not your tones are upside down. If you are running AFSK, getting on frequency is not a problem if you simply tune in the other station until he prints correctly. However if you are meeting on a frequency by dial setting, then you have to know how to calculate your actual frequency: your signals on the air differ by your dial setting by the frequencies of your tones.

Another problem getting on frequency with low tones is when you're running a rig that has built in FSK. You have to setup both your TNC receive side and the rig's transmit FSK for low tones or both for high tones, else you won't be able to get on frequency with stations on the air. You will be off frequency from stations you call by the 850Hz difference between high and low tones.

Also, some TNCs are setup to run low tones with your rig in upper side band. If you run such a TNC with Low Tones and LSB you will be upside down.

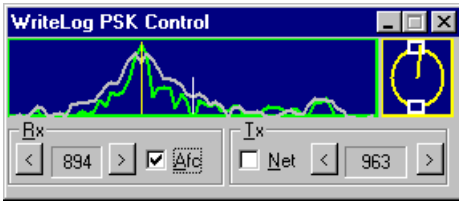
FSK Polarity

While many HF rigs have built-in support for FSK, there is no standard for how the TNC is to tell the rig to shift to mark or to shift to space. Because of this, when you are running FSK it is very easy to get setup backwards: you print stations rightside up, but when you transmit you are on frequency with them but they tell you that you are upside down.

Rttyrite supports getting on frequency with these TNCs using the TU type, TNC Setup menu entry. Because there is no standard, there is no way to say what distinguishes "FSK polarity A" from "FSK Polarity B", but all you need to do is choose the one that works with your rig. Rttyrite remembers your previous setting the next time you run it. Note that this command has no effect when you are running AFSK.

PSK for Rttyrite

Rttyrite can send and receive G3PLX's PSK mode on the sound board TNCs. Just use the Mode menu to select one of the PSK modes. BPSK is the same whether your radio is configured for USB or LSB operation, but QPSK operation requires you to select the appropriate side band.



The WriteLog PSK Control screen automatically appears when you select the PSK modes. The frequency display is the top left panel. It always displays the frequency ranges $\pm 250\text{Hz}$ from your transmit frequency. The light blue vertical bar in the very center is your transmit frequency. The yellow vertical bar shows your receive frequency.

You can tune your receive frequency with a coarse adjustment with a left mouse click in the frequency display. The yellow bar will move to the frequency you click. Fine tune your receive frequency with the arrow buttons to the left and right of the Rx display.

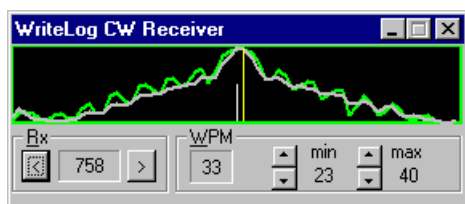
Use the phase scope, the yellow circle at the right, to know which way to find tune your receive frequency. The phase indicator is mostly vertical when properly tuned. Straight up indicates an inphase signal and straight down is 180 degrees out of phase. For practice, tune in the WWV carrier. You have it properly tuned with the scope is straight up. And idling PSK signal is continuously switching phases, and so gives a straight down indication.

The Net button forces the transmit frequency to match the receive. You should turn this button on when you search and pounce and turn it off when you are calling CQ.

The AFC button causes WriteLog to automatically tweak the receive frequency to compensate for drift. The AFT and the NET buttons may not both be on simultaneously.

CW for Rttyrite

Rttyrite can copy CW on the sound board “TNC” settings. Just use the Mode menu to select CW. Here is the CW receive control panel.



The WriteLog CW Receiver screen automatically appears when you select the CW mode. The frequency display is the top left panel. It always displays the frequency ranges +/- 250Hz from a center frequency shown by the light blue vertical bar in the very. The yellow vertical bar shows your receive frequency. You can set the center (transmit) frequency in WRITELOG.INI using the CW_XMIT_FREQ setting.

```
[Rttyrite]
CW_XMIT_FREQ=750
```

You can tune your receive frequency with a coarse adjustment with a left mouse click in the frequency display. The yellow bar will move to the frequency you click. Fine tune your receive frequency with the arrow buttons to the left and right of the Rx display.

WPM controls

The CW receiver tracks and displays the speed of the CW currently being decoded. You can control the limits of how fast and slow it will track using the “min” and “max” controls on the CW receiver screen. Making the range narrower results in fewer false detections and also has a lower CPU load.

Two different ways to receive CW

WriteLog has two ways to receive/view CW. It can display decoded CW on the RTTY screen, which does super check partial, and allows you click on call signs. The main WriteLog screen also has a View CW Display command which adds a CW pane to the main WriteLog screen (or two panes if you tell it to run your sound board in stereo).

The differences are:

	RttyRite CW display	Main WriteLog View CW Display
Can copy more than one CW signal in the passband		yes
passband frequency amplitude display	amplitude/versus frequency graph	highlighting of loudest pitches in the passband
can click on calls to copy to Entry Window	yes	no
can resize the screen area for CW reception	yes	no

The two different display modes cannot be run simultaneously.

How WriteLog receives CW

WriteLog’s CW receiving functions are optimized for contesting operations where:

Most CW is machine-sent and has accurate dot and dash timing.

The speed range of interest is fairly narrow (25 to 40 WPM).

Transmissions are very short.

You are expected to copy calls and the exchange the first time.

To work under these conditions, WriteLog employs a three stage decoding technique. (1) the audio is filtered to a 120Hz bandwidth. Then (2) detection is done simultaneously for all speeds (you select how many speeds it tries—up to 25) and all Morse symbol lengths (Morse code has 10 different character lengths: the letter E is length 1 and the digit zero is length 10)

which totals to as many as 200 different detectors. The detectors send all detected characters along with a quality estimate for each symbol to a final (3) sorting stage that combs through the characters and their quality estimates to deduce the CW speed rate. The final stage sends only the highest quality characters for printing on the screen.

The controls WriteLog puts on the screen are only for the center frequency of the bandpass filter (stage 1) and for the speeds of the detectors (stage 2). The rest is automatic.

This scheme allows WriteLog to adapt instantly to changes in speed. No training sequence is necessary as a transmission begins like in RTTY and PSK. WriteLog decodes the first character in the transmission as well subsequent ones.

WriteLog's CW decoder:

is insensitive to changes in speed *between* characters

is insensitive to variations in spacing *between* characters

is sensitive to the accuracy of the timing of the dots/spaces/dashes *within* a character. The closer these ratios are to 1:1:3, the better it will decode the character. These ratios are also called weighting.

has two separate detection stages. One is optimized for detection in noise, but does not tolerate fading within a character very well. The other is optimized for detection during severe fading within a character, but is disrupted by noise. They work better on the low HF bands and the high HF bands respectively.

makes a larger CPU load for a wide speed range setting than a narrow. Roughly 8% of a 350MHz Pentium II is required for detecting 20 speeds simultaneously. When running two radios in stereo, the load is double.

See Also

[View CW Display](#)

[Setup CW Decoder](#)

WRITELOG.INI

[RttyContextMenuEntries]

This section can be used to override the default context menu in the RttyRite window that pops up with a right click. If this section is present, it sets the content of the right click context menu. Each entry in this section must be of the form ***number=command*** where *number* determines the place in the menu (entries with lower numbers go higher in the menu) and *command* must be one of the strings PUSHCALL, SENDF3, SENDF4, ENTERINLOG, CLEARENTRYWINDOW, MAPSTATION, or ABORTTRANSMISSION. The *number* may be any integer. If you put only one entry in this section, then that command is invoked on a right click in the RTTY window without any intervening pop-up menu.

This example sets up the RttyRite context menu to match the defaults that you get if this section is not present.

```
[RttyContextMenuEntries]
1=PUSHCALL
2=SENDERF3
3=SENDERF4
4=ENTERINLOG
5=CLEARENTRYWINDOW
6=MAPSTATION
7=ABORTTRANSMISSION
```

File Scan for DE

This menu entry turns on and off the automatic scan for incoming "DE" characters. With this entry checked on, Rttyrite scans the incoming characters for "DE" followed by space, and then interprets whatever follows as a call sign and highlights the call. If "DE" is not found, Rttyrite highlights any call in any string of characters it receives from the super check database.

With this menu entry unchecked, WriteLog does not scan for "DE", but will still highlight calls found in the super check database. Since the "DE" scan has precedence, the menu unchecked will give different results when "DE" appears in the input.

Hardware FSK

This menu entry shows checked for those TNC settings where RttyRite is using the COMM port hardware UART to generate FSK. Only for certain TNC's is this menu entry enabled such that you may change it. (Currently, only for the custom TNC and the Xmmt.ocx can you change this setting).

If you turn this setting **on** then RttyRite takes over the FSK generation function and uses the selected TNC only for reception.

Software FSK and TinyFSK

Not all COM port hardware is created equal. Until recently, all motherboards and notebook PCs had at least one COM port built-in, and those built-in COM ports almost always have the capability to transmit 5 bit Baudot FSK as is needed for RTTY. But this hardware is not always present on new machines. So it is common to add a COM port to your machine using USB, but these devices rarely have 5bit baudot support.

TinyFSK

The high performance solution is to generate the 5 bit timing in dedicated hardware. The TinyFSK product is, as its name suggests, a very small outboard device that generates FSK (along with a PTT signal.) The device is documented at [TinyFSK](#). Note that Baudot *reception*--used for Dumb Terminal TU only--is a different matter, and RttyRite only supports its Dumb Terminal TU on hardware with a 5 bit Baudot UART.

To configure RttyRite to use TinyFSK for outgoing RTTY, use the Port menu, and click TinyFSK after having selected a COM port.

If, at startup time, RttyRite cannot get a satisfactory response to the TinyFSK's abort-transmission command, it displays a box indicating it cannot initialize TinyFSK. This happens if you select the TinyFSK option on a COM port that is not actually a TinyFSK device.

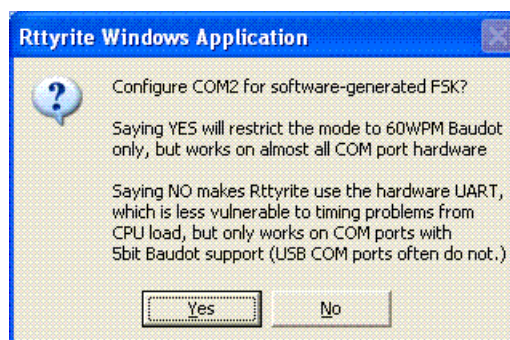
Note for using TinyFSK in Shared Transmit Port mode

On *some* Arduino hardware, [Shared Transmit Port mode](#) *may* not work acceptably if it triggers the Arduino bootloader when switching RttyRite windows. See the section [Automatic \(Software\) Reset](#) for details on the Arduino startup process. RttyRite does the only thing it can do to prevent triggering—keeping the Win32 API for the RS-232 DTR line clear— but its up to the Windows USB driver for the specific device to hold the hardware DTR signal properly. The Arduino documentation advises "make sure that the software with which it communicates waits a second." But that recommended one second interval does not include the startup time of the TinyFSK firmware itself, which on some hardware totals up to 2 seconds. Should you experience very long delays switching among RttyRite shared transmit ports while using TinyFSK, there is a hardware modification possible on most Arduino hardware. On the Nano, for example, C4 can be removed. On the UNO, there is the jump labeled "RESET-EN". Note that the modification makes it harder (but not impossible) to reload firmware on the board.

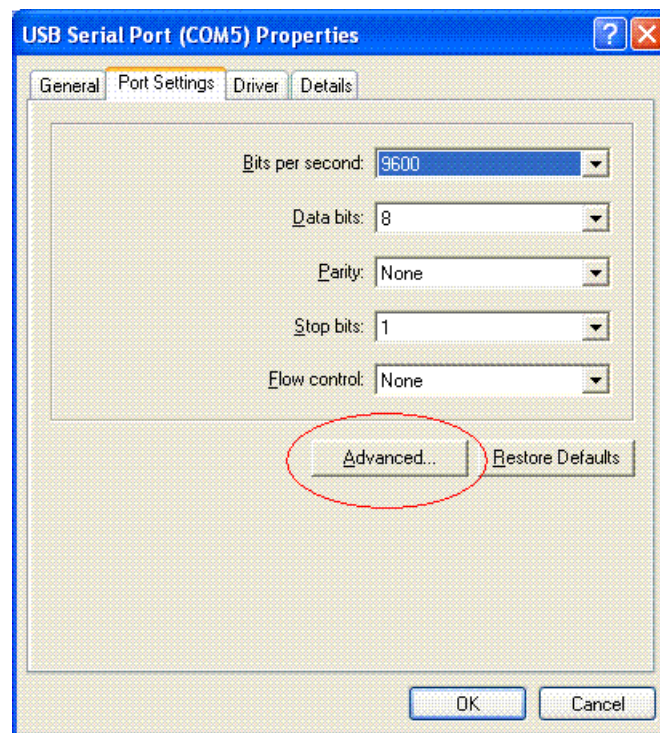
Software FSK

This solution for transmission is to generate the 5 bit timing in software. Any PC about 800MHz or better should be able to accomplish this--although the risk that FSK timing can be disrupted by other applications on your PC cannot be eliminated. Note that Baudot *reception*--used for Dumb Terminal TU only--is a different matter, and RttyRite does not support Dumb Terminal on hardware with no 5 bit Baudot UART.

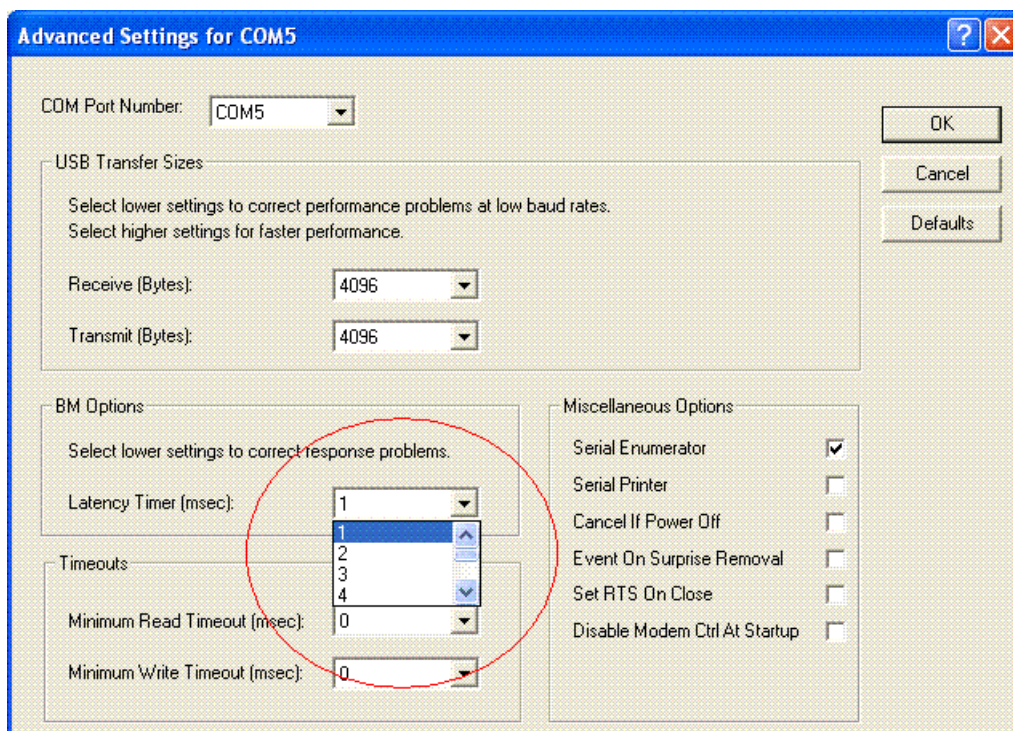
To configure RttyRite to use software-generated FSK, use the Port menu, and click Software generated FSK after having selected a COM port.



USB port hardware is designed to be shared among several devices, and internally there is hardware polling in progress that can affect the ability for RttyRite to generate accurate FSK. Your hardware **may** have device properties you can change to improve the timing. Here is an example property setup for a particular USB COM device. The "Advanced" button brings up the crucial settings.



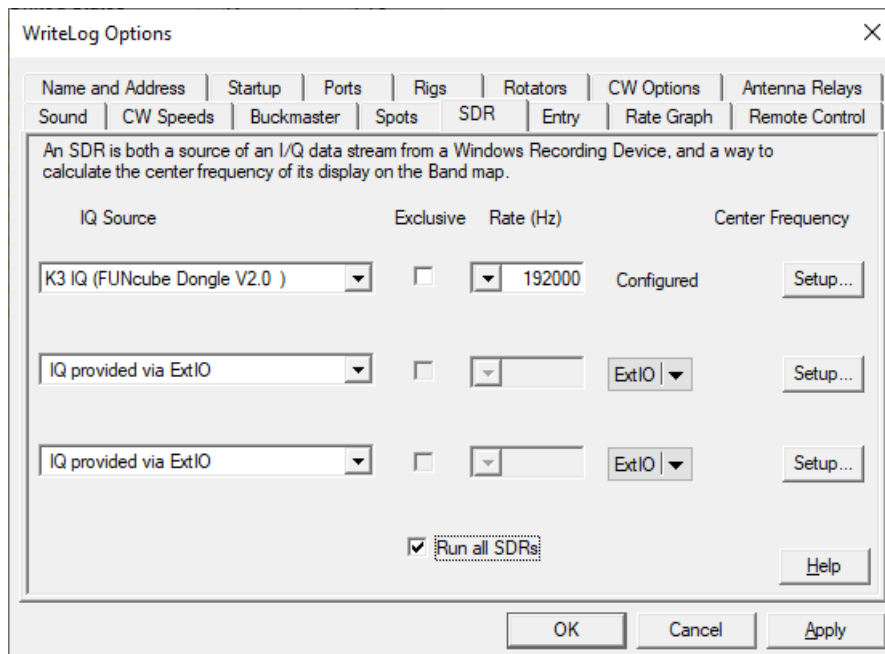
In this dialog, you can set the "Latency timer" to 1msec on this device. 60WPM RTTY has timings of about 22msec, so a 1msec latency could cause the desired 22msec to vary +/- 1 msec, which is acceptable to most RTTY decoders. However, the 16msec default latency setting for this hardware causes timing errors that prevent decoding in many cases.



SDR Properties

WriteLog can display SDR spectra on its BandMaps from up to three Software Defined Radios. An SDR produces IQ (in-phase and quadrature) signals, must be available to your PC via either a standard Windows Recording Device, or the ExtIO interface (defined for WinRad, HDSDR, or similar). ExtIO is documented at http://winrad.org/bin/Winrad_Extio.pdf. Also required is a way for WriteLog to know the center frequency that the IQ data was acquired, either from your rig, or a fixed-frequency you provide to WriteLog. The wizards on the Setup... buttons below help you through specifying the details.

An IQ signal does not automatically come with a center frequency. A spectrum computed without center frequency information will be centered on 0Hz, aka DC, which, for WriteLog's Band Maps, would not be very useful. Use the Setup buttons on this page to describe to WriteLog how to compute the spectrum center frequency.

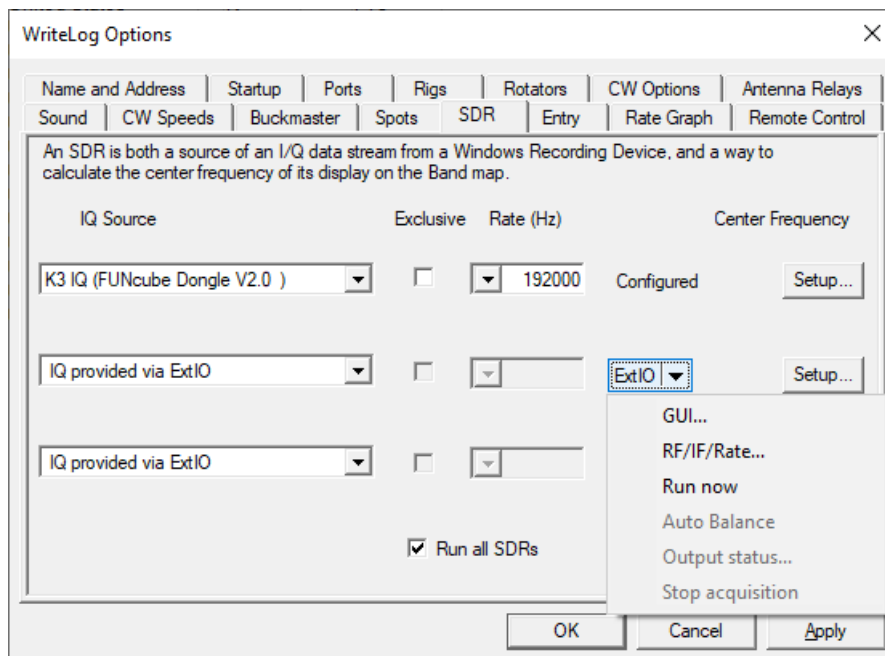


- The IQ source is either a Windows Sound Device in this list, or instead is IQ provided via ExtIO. You need to know whether your SDR provides its IQ data on one or the other.
- The Exclusive checkbox should be off to enable other applications (e.g. CW Skimmer) to also access the Windows Recording device.
- The Rate sets the width of the spectrum on the band map. Wider spectrum calculation costs more CPU. Because of the way Windows supports Sound Devices, the Rate is only selectable within WriteLog if the Exclusive checkbox is on. To change the rate for a non-exclusive device, you must use the Windows Recording Devices panel. Go to the Properties page for the desired device, and its Advanced tab, and change the "Default Format."
- The Setup... button starts a wizard you use to tell WriteLog how it should know the center frequency of the IQ data.
- The *Run all SDRs* button is applied, either starting or stopping all, on OK or Apply.

Using ExtIO with WriteLog

WriteLog can use the [WinRad ExtIO](#) interface to interface to your SDR. For use with WriteLog it is recommended that:

- First get your SDR working with the software recommended by its manufacturer.
- For WriteLog, you need not make a copy of the ExtIO file used with your other software. WinRad and HDSDR (for example) using ExtIO, you normally copy the manufacturer's ExtIO .dll file into the program's directory. Do not do that with WriteLog.
- Instead of making a copy, use WriteLog's Select ExtIO button (on a later page in the wizard) to browse to the location where you had to place it to make your other software work.



The ExtIO GUI item

Some ExtIO dll's have settings that you must change from their defaults in order to work with WriteLog. The *ExtIO GUI* button on this page brings up its dialog. Some ExtIO dll's disable certain options if the SDR is currently running. If you want to change a disabled item, try the *Pause acquisition* button.

If the DLL GUI changes sample rates, doing so while the SDR is running will stop it from updating WriteLog's Band Maps. Click off the Run SDRs button, click Apply, and then click it back on and Apply again to restart the SDRs with the changed sample rate.

To get back to the ExtIO dll's default settings, WriteLog has a special key sequence to start the ExtIO with its default parameters. With the SDR not running (to stop it if necessary, click the Run the SDRs box *on*, then *off*, then Apply) hold down the keyboard CTRL key when you click the ExtIO GUI button.

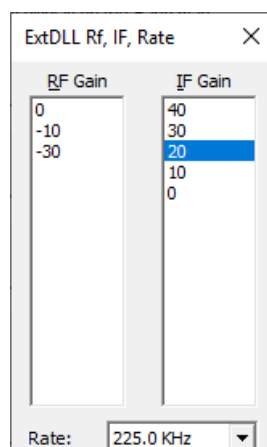
Run now starts the SDR manually. Normally, you want to use the OK/Apply buttons and Run the SDRs to start them all at once. But some SDRs need to have parameters set on their GUI

Output status... brings up a window that shows statistics if you have the SDR configured to [copy from the ExtIO IQ device](#) to a Windows sound device.

Stop acquisition is useful for the case of the GUI... dialog having grayed out items while the SDR is running. Stop it and see if the GUI enables them. *Run the SDRs* followed by OK or Apply restarts the SDR.

The ExtIO RF/IF/Rate item

Some ExtIO dll's have more settings that you must select in order to work with WriteLog. The *ExtIO RF/IF/Rates* button on this page brings up WriteLog's RF, IF, Rates dialog.



Higher gain is higher up the lists. Each list box is enabled only if the DLL offers the corresponding gain setting.

The Auto Balance item

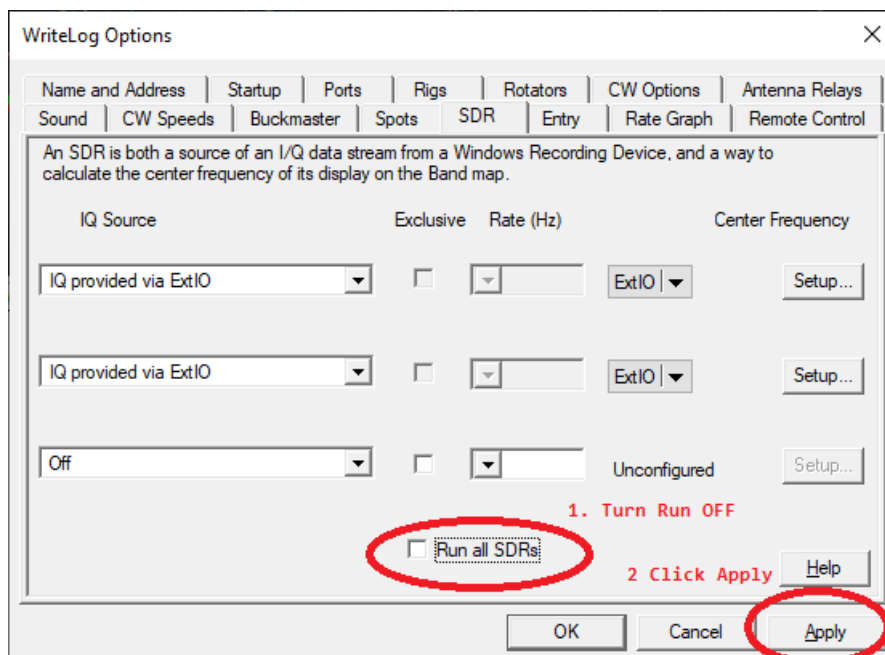
The effect of this button is subtle. For some SDR hardware, it can enhance image rejection by a few dB. Turning *on* Auto Balance causes WriteLog to separately monitor the power in the I channel versus the Q channel for the SDR and to automatically scale the weaker channel to match the power in the higher. Because WriteLog is changing the gain (slowly) over time, if you want repeatable spectrum amplitude readings, you want to turn this check *off*.

Overlapping Waterfalls

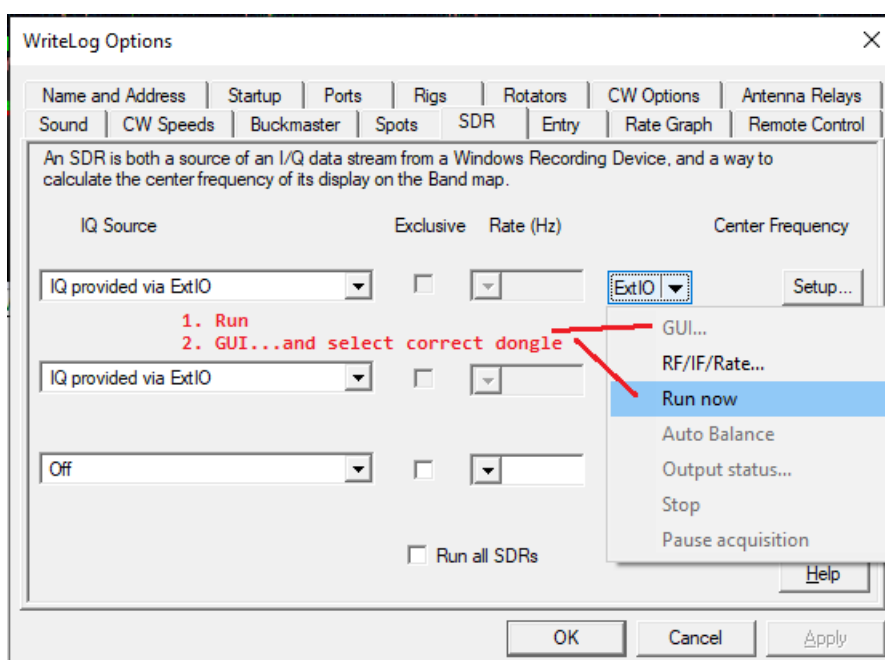
This page can define up to three SDRs. When multiple of them provide overlapping frequencies, the Band Map prioritizes drawing the overlap. The priority is the top row here draws on top of lower ones. There is also an opacity setting in the Band Map, which allows the lower priority ones to show through the higher priority ones. Why would you get an overlap? One example is if you have two radios, each with an SDR on its IF, you can get an overlap if you tune the radios to the same ham band.

Multiple Identical ExtIO DLLs

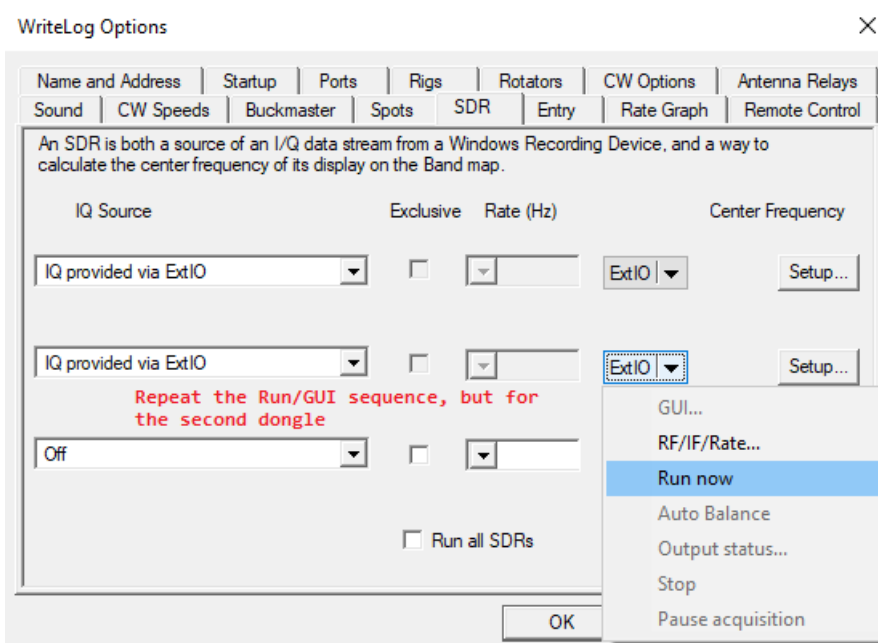
The initial setup for multiple identical dongles requires setting each up one at a time while the others are not running. First, stop all SDRs by turning off the *Run all SDRs* button and click Apply.



Then start one of the SDRs manually using the ExtIO menu's Run item. And then bring up its GUI to select which dongle it will use.



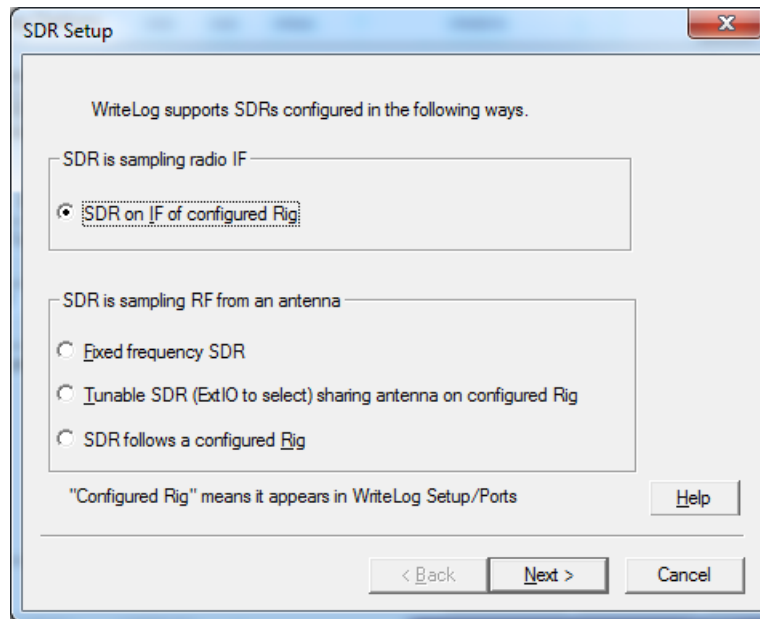
Now stop the first one (not shown in the screen shot!) using its Stop menu item. Start the second one using the same buttons as for the first, but on the second SDR row.



Finally, click the *Run all SDRs* button on and Apply.

SDR Type Selection

There are four very different schemes WriteLog supports for determining the center frequency of the IQ data.

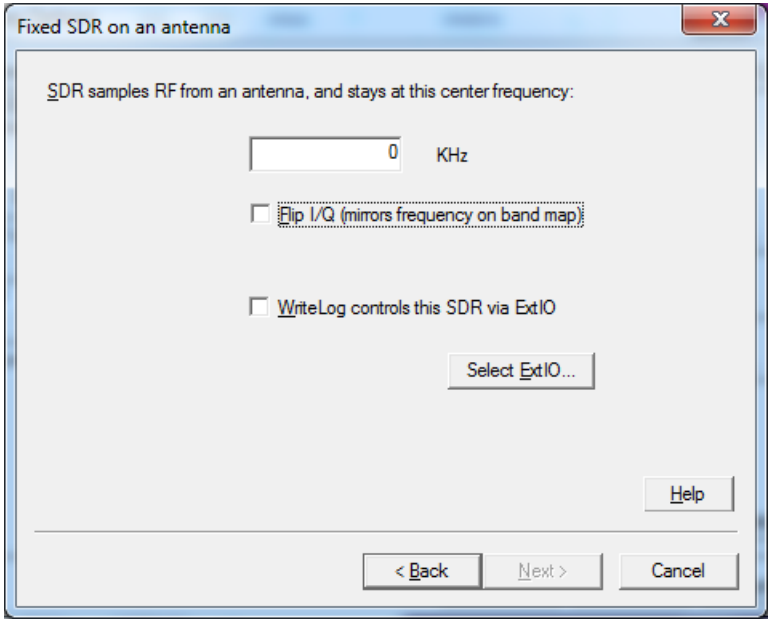


Each of the four schemes continues with different wizard pages:

- Many rigs have (and many older rigs can be easily modified to have) an IF port that can be cabled directly to an SDR.
- A fixed frequency SDR. You type that number into the next page on this wizard. Either WriteLog controls it via ExtIO, or you set up the SDR's tuner manually outside of WriteLog.
- A tunable SDR sharing an antenna. This means that you have already configured WriteLog to control some rig using WriteLog's [Setup/Ports](#) dialog. And that SDR is connected to the same antenna as that rig, presumeably via some kind of T/R switching that protects the SDR from the rig's transmit signal.
- SDR follows a configured rig means that there is a rig that WriteLog is connected to, and that the receiver frequency of that rig happens to track the SDR center frequency through some mechanism unknown to WriteLog. [HDSDR](#) happens to do this, and WriteLog can read the HDSDR's tuned frequency via its [OmniRig](#) rig driver.

SDR on Fixed Frequency

This setting is for an SDR on a fixed frequency and connected to an antenna. Its center frequency does not change once set up in this dialog.



Center Frequency	The spectrum will be centered on the band map here.
Flipped	its I/Q channels are reversed (toggle this if the band map goes backwards.)
WriteLog controls	With this off, WriteLog assumes you have setup the SDR outside of WriteLog.
Extio	If WriteLog is to control this SDR, you must select an ExtIO to do so.

SDR Follows a Rig

This setting is for the case that the SDR's center frequency (or Local Oscillator, or LO) happens to be a fixed offset from a rig that WriteLog can be configured to control and read.

SDR Follows RX

WriteLog reads the Rig frequency and calculates the SDR center as an offset from the rig RX. HDSDR can be so configured using OmniRig

Rig with SDR: rig on COMM5 ☒ Pause during PTT

Offset from Rig receive to SDR's center frequency. (can be negative)

0 KHz ☐ Flip I/Q (mirrors frequency on band map)

Optional

WriteLog commands above rig to follow this rig: Not used

Help

< Back Next > Cancel

In addition to computing the SDR center frequency from the rig you select in the Rig with SDR, WriteLog can read one of its other connected rigs (selected in that lower box) and then command the Rig with SDR to follow that other rig.

To make this sound a little less mysterious, this configuration specifically works for the case where you have an SDR connected to some external antenna, and that SDR is being controlled by [HDSDR](#). HDSDR can be setup to fix the SDR's LO at a fixed offset from the HDSDR receive frequency. Enter that offset into this WriteLog dialog. Also configure HDSDR to be controlled from [OmniRig](#). Finally, configure WriteLog's [Setup/Ports](#) to have one of its rigs be the OmniRig that corresponds to HDSDR.

In addition, you might want the HDSDR frequency to be, in turn, controlled from some other rig you also have connected to WriteLog. Select that other rig in the lower dialog box, and WriteLog will periodically read its receive frequency, and command OmniRig (and therefore HDSDR) to tune to that same frequency.

SDR on Rig IF

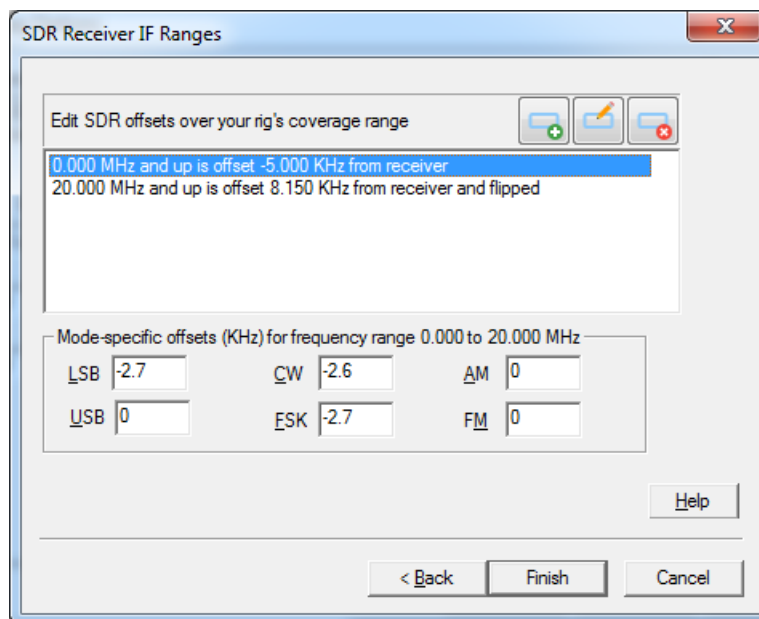
This is to setup an SDR who's input is cabled to the IF output of a rig that WriteLog is controlling.

The screenshot shows a dialog box titled "SDR on Receiver IF". Inside, there is a text block explaining that the SDR is connected to the rig's IF and that WriteLog computes the SDR center frequency as an offset from the rig's RX frequency. Below this, there is a "Rig:" dropdown menu set to "rig on COMM5" and a checked checkbox for "Pause during PTT". Two radio buttons are present: "Fixed frequency SDR on IF of configured Rig" (unselected) and "Tunable SDR set to IF of configured Rig" (selected). Below the radio buttons, there is a text input field containing "8210", followed by "KHz", and then "ExtIO_FcdProPlus". To the right of this is a button labeled "Select ExtIO...". At the bottom right is a "Help" button. At the very bottom are three buttons: "< Back", "Next >", and "Cancel".

- A simple crystal-controlled or fixed frequency SDR set near the rig's IF needs no further input. The SoftRock Lite is an example. Use the "Fixed frequency" button to select such an SDR.
- An SDR controlled via an ExtIO can be tuned for its LO (local oscillator) near the rig's IF by WriteLog. You have to know the rig's approximate IF frequency range. For an SDR driving a Windows sound board, you might want to tune the LO off to one side because the LO frequency at the rig's IF corresponds to 0Hz (aka DC) at the sound board input, and most sound boards have a limit to their low frequency response. That limit corresponds to a small hole in the Band Map spectral display.

SDR Edit Receiver IF Ranges

For WriteLog to overlay SDR input on its bandmaps, it must compute the actual center frequency of the I/Q data stream. This dialog is how you describe the necessary parameters for an SDR connected to the IF port on a superheterodyne rig (i.e. a rig that mixes the on-the-air RF frequency to an intermediate frequency--aka IF.)



Why even deal with this?

First understand the big exception. Certain WriteLog rig drivers return a mode-independent IF passband center frequency. Currently, that list is only the Elecraft K3. For such rigs, do *not* enter any mode-specific offsets. You *may* need to add one row to this table to either (a) flip the passband to reverse its frequency and/or (b) enter a single frequency offset that calibrates the center frequency, regardless of mode.

This dialog will accept your input even if you leave it completely blank, and with all zeros for the mode-specific offsets. Such settings correspond to an SDR connected to the IF and set to the center of the IF of a theoretical receiver that translates all bands and all modes to exactly the same IF, and always mixes "right side up" such that the USB on-the-air becomes USB in the IF. But its likely your SDR is offset from the IF center frequency by at least a few KHz, and real receivers often use the same crystal filters for all modes and arrange their VFO and BFO frequencies and their display in ways that vary from band to band.

As an example to show the complexity is not so large, the above dialog is filled in for an Elecraft K2 rig and works for that rig operating on any band 160m through 10m.

A Recommended procedure

There is more than one way to calculate the various frequencies necessary to calibrate your SDR to get correct band map presentations. There is even more than one set of good set of entries that present correctly. That sounds good at first, but that also means its possible to change one parameter and then another, only to break the thing you were fixing with the first.

Start by setting the SDR's LO


If you are using, for example, a SoftRock Lite, you decided on the LO frequency when you installed the crystal on the circuit board, and you should have selected the **Fixed** as opposed to the **Tunable** on the [SDR on Rig IF](#) page. If instead you are using a frequency agile SDR (like, for example, the [FunCubeDongle](#)) then you need its manufacturer to provide an ExtIO for use with software radios like HDSDR. And you need to choose and enter a Local Oscillator frequency near your rig's IF. It is generally advisable to set the SDR's LO off to one side of the IF if you are using a sound card to decode its output. Decide on this LO and stick with it as you enter the offsets on this page. Any change in that LO on that [SDR on Rig IF](#) page requires all the offsets on this page to change!

Add the zero-frequency row using USB

[Start the SDRs](#) and open a Band Map on for the rig you chose in this wizard, or open a Fixed band map near the frequency you chose for a fixed frequency SDR. On your rig, turn off any IF Shift and RIT functions. Choose USB mode and stick with it as you work through this process on all the bands, from low frequency up. Start on 160m. First note whether the band map goes "backwards". If it correct, as you tune your rig, the signals will stay put on the band map frequency scale. But if the band map is backwards (or "flipped") as you tune your rig, the signals will move across the waterfall in diagonal lines you


tune. If the flipped setting is correct in this dialog, as you tune the rig the waterfall will show signals more-or-less at constant frequency. Backwards-tuning means you need to change the Flipped bit in this dialog.

Now tune to a loud signal that you can identify on the band map. (If you have a second rig, set it to CW and put a low power tone into a dummy load.) This is best done for a CW signal because of its narrow bandwidth, and its best to determine the signal's frequency with a narrow filter engaged, and with the rig in CW mode. Note the rig frequency and then switch to USB mode to note where it now displays on the WriteLog band map. When tuned to that signal, it should not be more than a few KHz off-frequency on the band map. Then note the difference between the signal's frequency display on the band map

and on your rig, and note the direction of the error. Click the  Add Row button and the first row added will be the range that starts at 0KHz. The number to type in is the frequency difference. A positive offset setting will move signals up the band map. Finish this dialog, and OK the Setup/SDR's with the "Run SDRs" button turned on. At this point 160m should display correctly for your favorite mode.

Now switch the receiver to the other modes, LSB, CW, etc. The signals on the band map will likely shift away from the correct positions you setup on USB. Again, with a strong signal of known frequency, select the various modes on your receiver, and then enter the mode-specific offsets on this panel to correct the band map display. Don't proceed to the next band until you are convinced.

Try all the bands, working your way up in frequency

Its likely the setting you added for zero frequency will work not only for 160m, but also 80m and on up the rig's frequency range. Keep going up and on some and, its likely the band will tune backwards. To calibrate the SDR, use the  Add Row button again. This time, the dialog will allow you to type in a low band edge. Choose a number below the low edge of the band that tunes backwards. For my K2, for example, 15m was the first that tuned backwards, and I typed in 20000 KHz and turned on the Flipped bit.

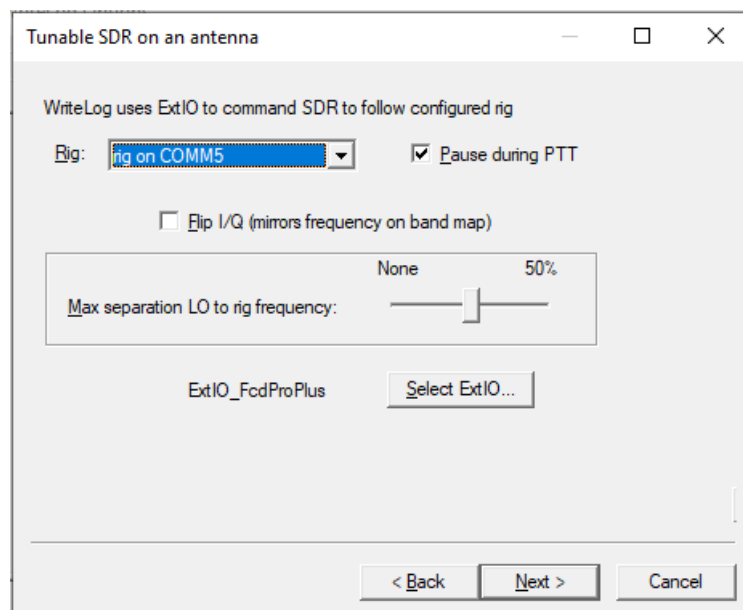
The range of values you can expect for the offset setting depends on the difference between your SDR LO frequency and your rig's IF frequency. The further the LO is from the IF, the bigger the numbers. And those ranges that need the flipped bit turned on will have an offset of opposite sign from those that are not flipped.

Caveats

Rigs that implement an IF shift function generally do so in such a way that will introduce a shift in WriteLog's presentation of the SDR on its Band map. WriteLog rig drivers do not currently report IF shift to WriteLog, which would be required in order to present the spectrom on-frequency with the IF shift engaged.

SDR to Tune with Rig

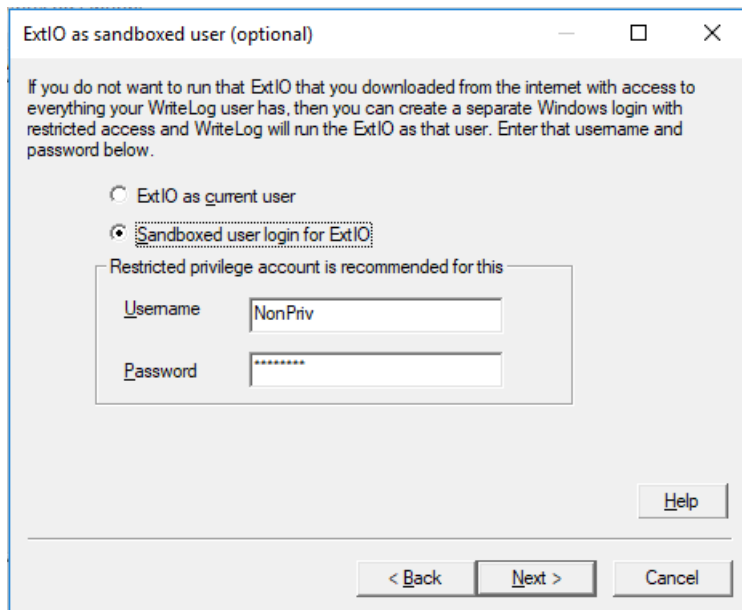
This dialog is how you setup WriteLog to read the receive frequency from one of its rigs, and then command the SDR to set its Local Oscillator (LO) to a frequency near the rig receive.



Use the flip check box if the data in WriteLog's BandMap is reversed in frequency.

SDR ExtIO Sandbox

WriteLog runs ExtIO dll's in a separate Windows process from WriteLog itself. This separation avoids the possibility of the code in ExtIO from corrupting WriteLog's operation. And the protection goes both ways. If WriteLog crashes running an ExtIO dll, it cannot be the ExtIO dll's fault because of this process separation.

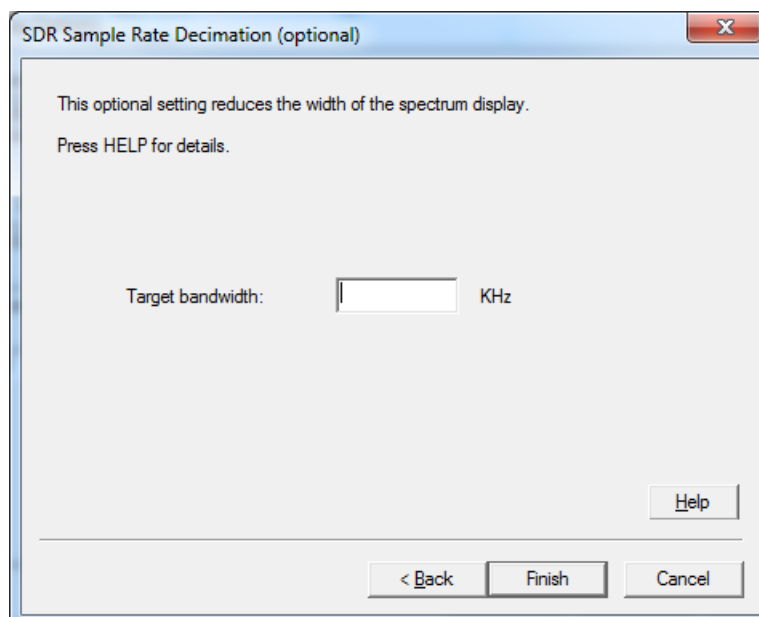


An additional security feature provided is for the case that you don't really know much about the ExtIO dll you put on your system and you cannot be certain it does not contain spyware. (You cannot be certain WriteLog itself does not contain spyware, either, but WriteLog does provide GPG signatures for its downloads which you might use to convince yourself you at least know who provided the download, and can then decide how much you trust the entity that provided that download.)

Providing a username and password in WriteLog ExtIO dialog causes WriteLog to use that Windows account to run the ExtIO. If you furthermore use Windows administrator tools to arrange for that account to have little or no access to anything else on your machine other than the SDR device it accesses, and the .dll file it loads, then you can have some assurance that external code does not snoop on your PC for other data that it should not.

SDR Sample Rate reduction by Decimation

The width of the spectrum width computed matches the sample rate of the I/Q channels. For example, a 48000Hz sample rate on the I/Q channels results in a spectrum display on the Band Map that is 48KHz in width. But for some configurations that is wider than is useful. For example, there are SDR devices with fixed sample rates (the FunCubeDongle circa 2016 samples I/Q at 192KHz only.) Connect a fixed-rate 192KHz SDR to a filtered transceiver IF limited to, say, 20KHz bandwidth (e.g. an FT-1000MP 70MHz IF with its built-in 20KHz roofing filter) and WriteLog computes a spectrum display 192KHz wide on the bandmap. But only the 20KHz that made it through the IF filter it is useful.

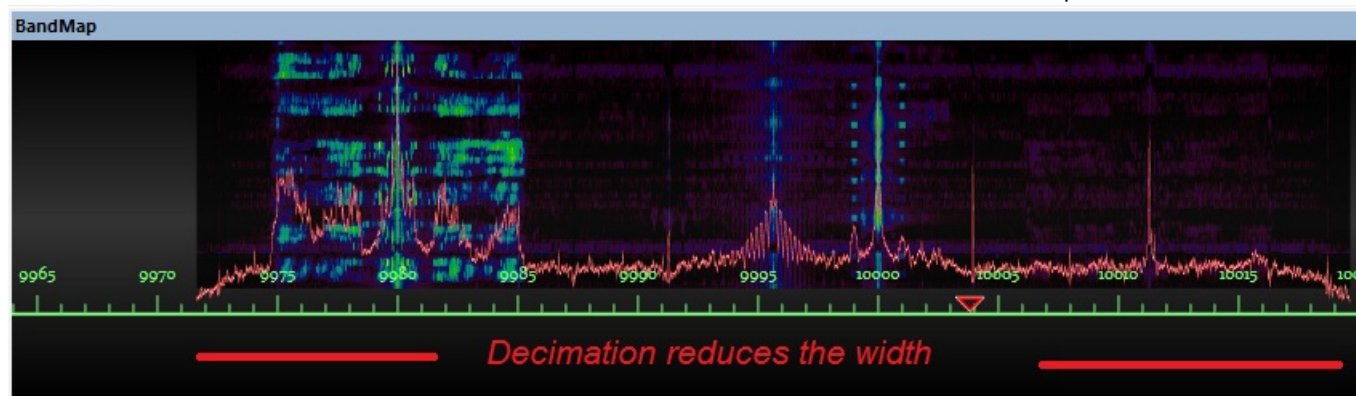


The setting on this page allows you to reduce the 192KHz sample stream for a more compact display that is faster to compute. The signal processing term for reducing the sample rate is *decimation*. The compute cost of decimation is far less than the savings computing the resulting narrower spectrum. This savings enables WriteLog to update the Band Map faster.

WriteLog takes the number you enter on this page as advisory. Because WriteLog decimates only by integer factors using this page results in a rate of half the incoming rate or slower. But only if you enter a number here that is less than half the sample rate. Enter any larger bandwidth and the full SDR bandwidth is displayed. WriteLog only divides by the integers 2 or 3 or 5 or a combination of these integers.

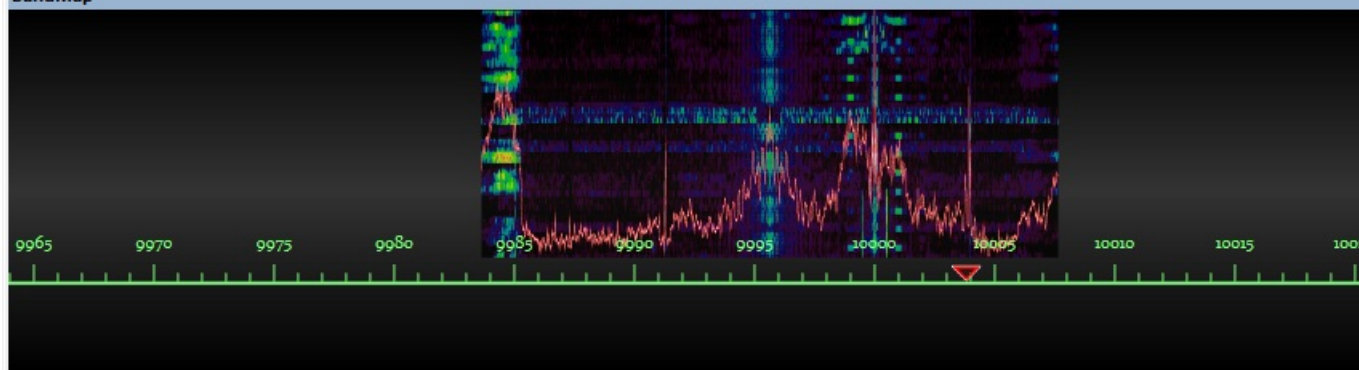
The optimum way to reduce the bandwidth of the spectrum is first to reduce the sample rate setting on the [SDR Properties](#) page and not use decimation. But if that lowest rate still gives a wider than necessary spectrum on the Band Map, then use this decimation page to reduce the rate.

SoftRock on K2 IF tuned to 10MHz WWV. The sound board is set to 48K sample/second.



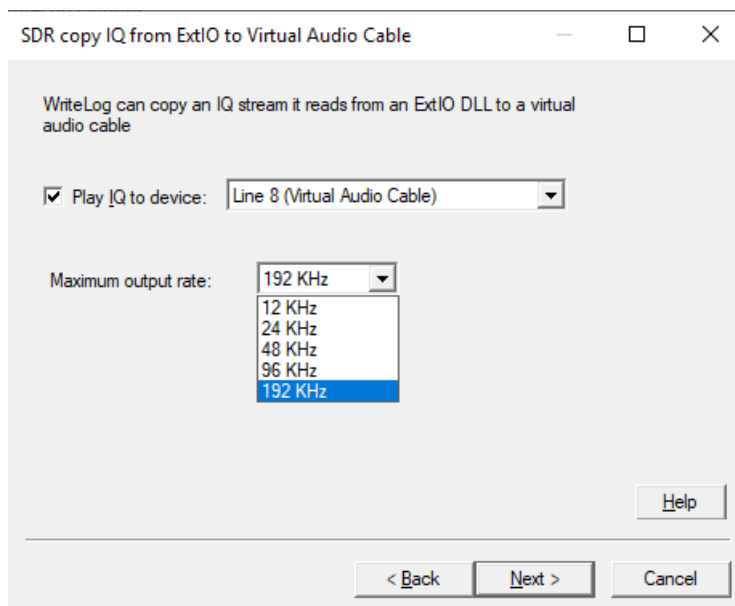
The same setup, but with decimation set to 24KHz target bandwidth

BandMap



SDR copy IQ from ExtIO to Virtual Audio

When WriteLog is configured to read an SDR IQ stream from an ExtIO dll, this page appears in the SDR setup wizard. Its purpose is to configure WriteLog to forward that IQ stream to a Virtual Audio Cable so that some other application, for example CW Skimmer or HSDR, to also process it.



If you don't have another application to process the IQ stream, then leave the "Play" button checkbox off, ignore the rest of this page, and click Next.

The rate you click here is a maximum. WriteLog will only write at a rate less than or equal to the ExtIO dll output. It will automatically lower its output rate if the ExtIO is producing a lower rate, so you don't need to know what rate the ExtIO.dll is using. WriteLog always converts to one of the standard Windows audio driver rates listed. Its conversion is simple interpolation. Leave this set at the highest rate, 192KHz, unless you also want to read and understand the following paragraph.

Aliasing

Set Maximum Output Rate to 192KHz unless you have a good reason to lower it. WriteLog does not low pass the ExtIO IQ stream before resampling. This means **all** the signals digitized by the ExtIO dll **will** appear at the output of the Virtual Audio Cable, even if the output rate is lower than the input rate. For example, if you have an SDR-RTL dongle set to digitize at its lowest rate, 225KHz, the output of the Virtual Audio Cable here will have 225KHz of signals. What happens to the extra 33KHz of signal (225 minus 192)? Its the 16.5KHz at each edge of the input appears at the wrong output frequency, overlapped with the 16.5KHz of the edges output. This "aliasing" of the edges of the input into the edges of the output is not an issue for most ham applications where you only care about 48KHz or even 96KHz on the band. The center of the output has no aliased signals in it, so must make sure your ExtIO dll is set to digitize within that band of interest.

An exception is that if you happen know that the input to the SDR-RTL (its connected to the IF output of your rig, probably) has already passed through an analog filter and is, for example, only 48KHz wide, then you can safely lower WriteLog's setting on this page. It remains true that all the input signals appear in the Audio output, but the analog filter made sure that only the middle 48KHz has anything in it.

Selecting a Contest

In the WriteLog unlimited version, a multiplier module is available for the following contests:

[CQ WW DX](#) (phone and CW)

[CQ WW 160m](#)

[ARRL Sweepstakes](#)

[ARRL 160M contest](#)

[ARRL 10M contest](#)

[ARRL DX contest](#) (phone and CW)

[North American Sprint](#)

[North American QSO Party](#)

[CQ WW RTTY](#)

[ARRL RTTY Roundup](#)

[ARRL Field Day](#)

[BARTG RTTY Contest](#)

[World Wide RTTY WPX Contest](#)

[CQ WW WPX](#)

[WAE Contest \(All modes and QTHs\)](#)

[General DXCC logging](#)

[California QSO Party \(inside CA\)](#)

[California QSO Party \(outside CA\)](#)

[Pennsylvania QSO Party \(inside PA\)](#)

[ARRL VHF Sweepstakes](#)

[ARRL VHF Qso Parties](#)

[ARRL UHF Contest](#)

[IARU HF World Championship](#)

[Stew Perry, W1BB, 160m Distance Challenge](#)

[DxPedition Mode](#)

[7th Call Area QSO Party](#)

[AL QSO Party](#)

[ARCI QRP Spring/Fall QSO Party](#)

[ARS Spartan Sprint](#)

[CIS DX Contest](#)

[Spanish CNCW](#)

[Colorado QSO Party](#)

[CW OPS Mini CWT](#)

[D-STAR Contest](#)

[Elecraft QSO Party](#)

[EU Sprint](#)

[FISTS CW Sprint](#)

[FOC Marathon](#)

[Georgia QSO Party](#)

[Helvetia Contest](#)

[Hawaii QSO Party](#)

[Iowa QSO Party](#)

[Illinois QSO Party](#)

[Indiana QSO Party](#)

[International Naval Contest](#)

[Jock White Memorial Field Day](#)

[King of Spain](#)

[Kansas QSO Party](#)

[Louisiana QSO Party](#)

[LZ DX Contest](#)

[Makrothen Contest](#)

[Marac County Hunters Contest](#)

[Maritime QSO Party](#)

[Maryland-DC QSO Party](#)

[Mid-Atlantic QSO Party](#)

[Michigan QSO Party](#)

[Minnesota QSO Party](#)

[Missouri QSO Party](#)

[Mississippi QSO Party](#)

[North Carolina QSO Party](#)

[North Dakota QSO Party](#)

[New England QSO Party](#)

[New Jersey QSO Party](#)

[New Mexico QSO Party](#)

[NRAU Baltic](#)

[Nevada QSO Party](#)

[New York QSO Party](#)

[Ohio QSO Party](#)

[Oklahoma QSO Party](#)

[Ontario QSO Party](#)

[Oregon QSO Party](#)

[RF Championship](#)

[RF Cup](#)

[ARRL Rookie Roundup](#)

[RSGB 80m Club Championship](#)

[RSGB National Field Day](#)

[South Carolina QSO Party](#)

[School Club Roundup](#)

[QRP TAC Sprint](#)

[Tennessee QSO Party](#)

[TOEC WW Grid Contest](#)

[10-10 QSO Party](#)

[United Kingdom DX Contest](#)

[UKSMG Sporadic-E Contest](#)

[US Counties QSO Party](#)

[Virginia QSO Party](#)

[Washington Salmon Run](#)

[Wisconsin QSO Party](#)

[YO DX Contest](#)

[YU DX Contest](#)

A module is selected using the Contest Select menu entry, which has to be done prior to entering any QSOs in the log (use File New to clear all the QSO data). Selecting a module sets the [bands](#) appropriately for the contest and sets the exchange [fields](#) to the minimum set required for the contest. You may [add additional fields](#).

See also

[Multiplier Modules](#)

Contests

Select a contest using [Contest Select...](#)

When you're entering data in the [Entry Window](#) and the cursor leaves a field that affects whether the QSO might be a new multiplier, WriteLog checks to see if the QSO would be a new multiplier. If so, it puts a "NEW MULTIPLIER" message in the Entry Window display.

The [Contest Exchange Format Setup](#) menu entry may be used to add fields (e.g. a QSL route or comment field), but the initialize option is protected by a warning that the multiplier program will be disabled. This is because the multiplier module sets up its own exchange format, which must be used (with the exception that you may add additional exchange fields).

Several of the modules maintain multiplier fields under column headings labeled "ML" and "M". These are aids to tracking progress with multipliers. The "M" column contains one of the following characters:

"1"	This is the first station worked for that multiplier.
"0" (or blank)	This is a subsequent station with that multiplier.
"?"	This QSO could not be matched against any multiplier.

For example, if you enter the NVD section in Sweepstakes, you'll get the "?" display because the correct abbreviation is "NV". To get credit for that section, use the [Log window](#) to bring the QSO into view and edit the SECTION field and make it a NV.

The ML column is the program's best effort at counting the current multiplier total. It is the total of the number of "1" s that have been added to the M column since last reading a file from disk. It can become out of date if a QSO that was tagged with, for example, a "1" is subsequently edited such that it is no longer a new multiplier and becomes a "0". To update all QSOs to the exact total use the [Contest Recalculate Score](#) menu entry.

Any module that tracks DXCC countries uses either the DXCCDOS.DAT file (ARRL countries list) or the DXCCWAE.DAT file (includes WAE European countries) to get its DXCC prefix data. It uses the call sign field to determine the DXCC country, and automatically updates a QSO field called COUNTRY, and another called PREF. For those cases where call signs don't completely determine the country, it offers a list of letters in the COUNTRY field separated by commas. You resolve the ambiguity by typing one of those letters into the QSO field that is one character wide and labeled "C".

If the country is still wrong, enter the QSO into the log anyway, and then use the Log Window to edit the PREF field for the QSO and type in the usual prefix for the right country. If you're not sure of the prefix, the Contest Display Multipliers menu entry for most multiplier modules lists the known prefixes.

The currently selected module can be deselected by clearing the QSO data base with File New.

See also

[Setting your DXCC country](#)

Setting your DXCC country

The point value and multipliers are calculated assuming your station is located in the DXCC country indicated by an entry in [WRITELOG.INI](#). You can modify the CALLPREFIX line in the [Multipliers] section in [WRITELOG.INI](#) in your Windows directory (normally c:\windows). The value must be the prefix of the country of operation, all upper case. If the prefix by itself does not determine the country of operation, then also add a PREFIX_XTRA value which is the letter that you would enter in the C field (see previous section) to specify which country. For example, if you are operating as CE0DX from Easter Island, you would modify (or add) a section to WRITELOG.INI that looked like this:

```
[Multipliers]
CALLPREFIX=CE0
PREFIX_XTRA=E
```

WriteLog automatically sets this INI entry using your callsign when you install the software. But if you are on a Dxpedition you will want to change the INI entry manually.

CQ WW DX Contest

CQWWDX uses the DXCCWAE.DAT multiplier list.

The [Contest Parameter Setup...](#) option creates an ASCII file for each band on which you have QSOs: 160M.TXT, 80M.TXT, etc.

[Exchange Fields:](#)

SNT	Transmitted RST. Leave this blank if its 59(9).
RST	Received RST.
ZN	Received zone number.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules.
PREF	WriteLog fills in the usual country prefix.
P	WriteLog fills in the points for this QSO.
ZM	WriteLog fills in your zone multiplier total per band.
CM	WriteLog fills in your country multiplier total per band.

CQ WW 160M Contest

The points field in the exchange shows "2" and "5" for in-country and out-of-country contacts, respectively. Ten point intercontinental contacts show as ":" in order to fit the value into a single column. This module can be used for entries from anywhere in the world. See [Setting your DXCC country](#). It uses DXCCWAE.DAT which has the Worked All Europe countries in addition to ARRL DXCC.

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RST	Received RST.
QTH	Received QTH.
M	WriteLog flags new multipliers.
ML	WriteLog fills in your multiplier total per band.
P	WriteLog fills in the points for this QSO.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules .
PREF	WriteLog fills in the usual country prefix.

ARRL November Sweepstakes

Misspelled sections are noted with a "?" in the M field. The [Multiplier Score](#) entry allows you to enter your exchange and write an ARRL format file named ARRL.TXT.

Exchange Fields:

NR	Received serial number.
P	Received precedence.
CK	Received check.
SECT	Received section.
M	WriteLog flags new multipliers.
ML	WriteLog fills in your multiplier total.

ARRL 160M Contest

ARRL Sections and DXCC countries are multipliers. The ARRL format file is available under [Multiplier Score](#).

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RCV	Received RST.
SECT	Received section.
M	WriteLog flags new multipliers.
ML	WriteLog totals the multipliers.
P	WriteLog fills in the points for this QSO.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules .
PREF	WriteLog fills in the usual country prefix.

ARRL 10M Contest

The ARRL format file is written as ARRL.TXT.

There are three different kinds of multipliers:

<i>States/Provinces.</i>	These are recognized if the call sign is in the US or Canada, and is also assumed if you enter a alphabetic character in the QTH field.
<i>DXCC countries</i>	You must enter only digits in the QTH field (a serial number according to the rules of the contest.
<i>ITU regions</i>	This multiplier counts instead of a DXCC country. Enter MMR1, MMR2, or MMR3 in the PREF column to claim this multiplier.

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RCV	Received RST.
QTH	Received QTH.
M	WriteLog flags new multipliers.
CW	WriteLog totals the multipliers.
PHO	WriteLog totals the multipliers.
P	WriteLog fills in the points for this QSO.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules.
PREF	WriteLog fills in the usual country prefix

ARRL DX Contest (outside W/VE)

ARRL DX Contest

The [Multiplier Score](#) entry allows you to enter your exchange and write an ARRL format file named ARRL.TXT.

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RCV	Received RST.
PWR	Received power.
M	WriteLog flags new multipliers.
80-10	WriteLog totals multipliers per band.
P	WriteLog fills in the points for this QSO.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules.
PREF	WriteLog fills in the usual country prefix.

North American Sprint

Multipliers are North American countries, each of the United States, and the provinces of Canada. The "Countries" display does include indicators for "K", "KL7", and "VE", but they cannot be worked as countries-only as states and provinces.

Misspelled sections show as "?" in the ML column, and will not be counted as multipliers until you correct them. DXCCWAE.DAT is used to calculate the country, but only countries in North America count as multipliers.

Exchange Fields:

NR	Received number.
NAME	Received name.
QTH	Received QTH.
M	WriteLog flags new multipliers.
ML	WriteLog totals the multipliers.
P	WriteLog fills in the points for this QSO.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules.
PREF	WriteLog fills in the usual country prefix.

CQ WW RTTY DX Contest

There are three separate multipliers:

States and provinces

CQ WW Zones

DXCC countries

Each contact can be any or all of these multipliers (e.g., if your first QSO is in the U.S. or Canada the multiplier count is three no matter who you work.)

This module maintains a separate column for accumulating multipliers on each band, and indicates the number of multipliers on that band for each QSO. For US and Canadian QSOs, the count can mean:

1 means the QSO is a state/province multiplier

2 means it is both a state and province and country.

3 means it is all of the above, plus a zone multiplier

DX QSOs can only count as a 1 multiplier (a country multiplier) or as 2 (a zone multiplier in addition.)

[Exchange Fields:](#)

SNT	Transmitted RST. Leave this blank if its 59(9).
RST	Received RST.
ZN	Received zone number.
QTH	Received QTH.
M	WriteLog flags new multipliers.
80-10	WriteLog totals multipliers per band.
P	WriteLog fills in the points for this QSO.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules.
PREF	WriteLog fills in the usual country prefix.

DxPedition Mode

The DxPedition mode keeps separate dupe sheets for CW, separate from phone, separate from RTTY for all bands, 160m through 6m including the WARC bands.

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RCV	Received RST.
PWR	Received power.
M	WriteLog flags new DXCC countries as they are worked.
160-6	WriteLog totals multipliers per band. These totals are <i>not</i> separate by mode.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules .
PREF	WriteLog fills in the usual country prefix.

ARRL RTTY Roundup

BARTG RTTY Contest

World Wide RTTY WPX Contest

General DXCC logging

The General DXCC logger differs from the other modules because it is not designed for contesting. Instead, it is designed to be the station master logbook and track the DXCC country of stations you work. To start a new master logbook for your station, select this "contest" and File Save As to the file name you want.

While this contest comes with no "NAME" column in the log, it will notice if you add one, and automatically fill in the column with the name from previous QSOs in the log. To add a NAME column, do this:

The "Name" field won't be there yet. You have to add it by hand. Here are the steps:

1. Click "Contest, Exchange Format Setup..."
2. If there are no QSOs in your log, you'll get a question "You may either define...". The correct answer is NO. If there are no QSOs in your log, then you won't see this question.
3. Click the "New" button.
4. Type in the title of the column you want, followed by 7 spaces (or more or fewer if you want the column wider or narrower):

Name<SPACE><SPACE><SPACE><SPACE><SPACE><SPACE><SPACE>

5. Click the "Prompt" button (to turn on its check box)
6. Click the "Save" button.
7. Click the "OK" button.

You now have a "Name" column in your log. Now, whenever you tab out of the CALL field, WriteLog will search your log for a previous QSO with that CALL, and fill in the NAME column to match.

CQ WW WPX Contest

Up to 16000 unique prefixes may be logged. The [Multiplier Score...](#) menu entry dialog provides the ability to create a WPXPREF.TXT file which lists all the prefixes worked, 70 characters per line. The same menu entry lets you create a [summary sheet](#). Note that for a [single band entry](#), the [summary sheet](#) will show your out of band QSOs in the band break down, but will not count them in your score calculation.

Use [WRITELOG.INI](#) to indicate your country of operation if outside the continental U.S.

The rules indicate the sponsor requires hardcopy logs for entries, but optional floppy versions in various formats. Either the Export ASCII or the WK1 files under File Save As... might be helpful to them.

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RST	Received RST.
NUMB	Received serial number.
P	WriteLog fills in the points for this QSO.
MULS	WriteLog counts multipliers.
PREF	WriteLog indicates the actual prefix.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules .
NORM	WriteLog fills in the usual country prefix.

WAE Contest (all modes and QTHs)

The WAE contest appears in the Contest Select menu in two separate places: WAE RTTY and WAE Phone/CW. The RTTY contest rules allows anyone to work anyone and QTCs sent from anyone to anyone, while the phone/cw rules allow QSOs only to Europe and QTCs sent to Europe only. WriteLog uses the call prefix you have entered in the [Multipliers] section, Callprefix entry in writelog.ini to decide how to score your log.

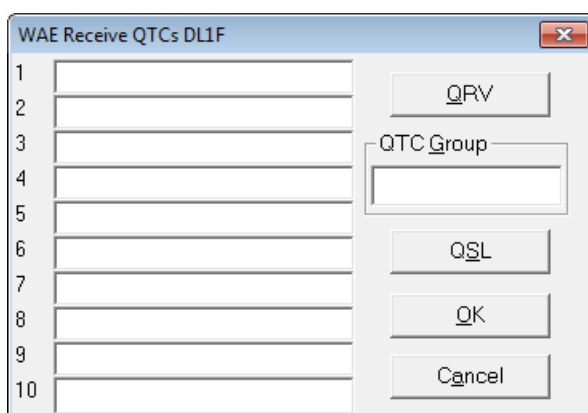
The Journal file

When you send or receive QTCs, WriteLog automatically updates earlier entries in the logbook. ***These changes are not written to the journal file and cannot be recovered if you exit or crash without saving your log.*** It is strongly recommended that you File Save your log regularly in this contest and do not depend on the journal file.

QTCs

As you enter a call, WriteLog shows you the number of QTCs that you can exchange with the station in the "Tx-Qtc" field in the Entry Window. (Note for EU stations in phone/cw because of the way WriteLog supports both sent and received QTCs, this indicator will say your QTC limit is the number of QSOs in your log for your first 10 QSOs, but will correctly indicate the number of QTCs you may receive after QSO #10).

Receive QTC Dialog



ALT+R in WriteLog's Entry Window brings up the Receive QTC dialog. (Only if received QTCs are allowed by the rules). Clicking the QRV or QSL button sends a programmed message (see below for programming). The other fields in the dialog allow you to type in the received QTC information. (In RTTY mode, you can fill in the information by clicking in the Rttyrite window).

The QRV button transmits the message on SHIFT+F9.

The QSL button transmits the message on SHIFT+F8

The keyboard shortcuts for the Receive QTC dialog listed here do **not** work if overridden by WriteLog's Setup/Keyboard-shortcuts, which has the priority for selecting what happens with the keyboard. For this reason, this dialog processes the underlined letter keys (Q, G, S, O and a above) the same way without pressing ALT.

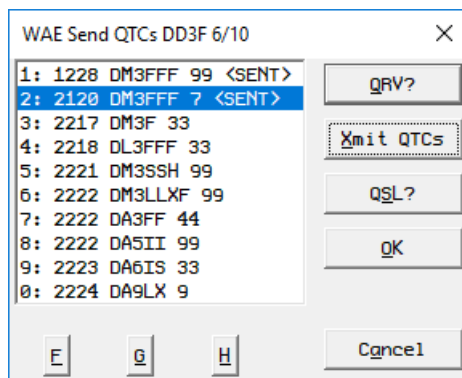
Fills: Type ALT+1 to ask for a fill for QTC #1, ALT+2 for QTC #2, etc. and ALT+0 for #10 (You may change the fill request message in WRITELOG.INI. See below). Pressing the ALT key for the digits is required in order to distinguish them from typing into the QTC Group input.

ALT+Q, ALT+A, etc. activate the button with the corresponding letter underlined as is usual with Windows dialogs.

Click OK to log everything you have entered, or click on Cancel to log *none* of what you have entered.

The usual CW function keys work: ALT+K brings up a CW keyer type in window, ALT+F9 and ALT+F10 adjust the sending speed.

Send QTC Dialog



ALT+S in WriteLog's Entry Window brings up the Transmit QTC dialog. (Only if transmit QTCs are allowed by the rules of the contest).

The **QRV?** button transmits the QTC group/count followed by the SHIFT+F11 message.

The **Xmit QTCs** button transmits the group/count, followed by each of the QTC messages, followed by the SHIFT+F10 message.

The **QSL?** button transmits the SHIFT+F10 message

The keyboard shortcuts for the Send QTC dialog listed here do **not** work if overridden by WriteLog's Setup/Keyboard-shortcuts, which has the priority for selecting what happens with the keyboard. For this reason, this dialog processes the underlined letter keys (**Q**, **X**, **S**, **O** and **a** above) the same way without pressing ALT.

ALT+1 transmits the QTC message #1, ALT+2 #2, etc. and ALT+0 for #10. A mouse click on the display of the QTC message also transmits just that message and also sets the focus to the list. With the focus on the list, the **up/down arrow** will send the previous/next QTC message.

ALT+Q, ALT+A, etc. activate the button with the corresponding letter underlined as is usual with Windows dialogs.

The keyboard keys **F**, **G**, and **H**, with or without ALT, send just the currently selected serial number, call or number. (Why those keys? because they are in the middle of the QWERTY) Similarly, in this Send QTC dialog only, for the digits **0** through **9** without ALT.

Click OK to log everything you have entered, or click on Cancel to log *none* of what you have entered.

The usual CW function keys work: ALT+K brings up a CW keyer type in window, ALT+F9 and ALT+F10 adjust the sending speed.

Keyboarding

The keyboard shortcuts unique to this module are not changeable using WriteLog's Setup/Keyboard-shortcuts. Because the shortcuts defined in WriteLog's Keyboard-Shortcuts take priority, customizing the keys described here means the functions described above are unavailable. This includes Alt+S and Alt+R for sending and receiving QTCs.

Entry Window Font

Both the Send QTC and Receive QTC dialogs will use the saved Entry Window font, if you have every changed it from its default.

Special use of programmed memories

SHIFT+F11 message	Sent after the group/count when you click on QRV? in the QTC Send dialog
SHIFT+F10 message	Sent when you click on QSL? in the QTC Send dialog.
SHIFT+F9 message	Sent after the group/count when you click on QRV in the QTC Receive Dialog
SHIFT+F8 message	Sent when you click on QSL in the QTC Receive Dialog.
SHIFT+F7 message	Sent before the group/count when you click on QRV in the QTC Receive Dialog. For RTTY messages like prior WriteLog versions, you must now program the RTTY message SHIFT+F7 to "%R %C QTC:"

Exchange Fields:

SNT	Transmitted RST.
RCV	Received RST.
NR	Received number.
x	When a QSO is sent as a QTC, it is tagged with an "X" in this column so it will not be sent again.
Tx-Qtc	WriteLog fills in the QTC group number and count. This field is not editable, so you must transmit QTC's using the ALT+S command.
Rx-Qtc	WriteLog sets the second Q field nonzero when the QSO has been QTC's back to an EU station.
QTC-1 thru QTC- 10	WriteLog records what you sent (or received) for a QTC with this QSO. You may edit these in the Log window. WriteLog assumes anything you enter in one of these columns is a QTC and counts it in your QTC total.
M	WriteLog flags new multipliers.
80-10	WriteLog counts multipliers per band.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Multiplier Modules.
PREF	WriteLog fills in the usual country prefix.

Use of a DVK for QTCs

WriteLog is able to sound out your QTC transmission on the sound board DVK. You can turn this feature on using the Contest Parameter Setup menu.

Special WRITELOG.INI settings

[WAE]

QTC_FILL_REQ=%RPSE AGN QTC %Q %Q %Q%R%E

If WriteLog detects either the string %Q or %C in the QTC_FILL_REQ, then WriteLog substitutes as described here. The string in QTC_FILL_REQ can have any number of these four sequences in any order. WriteLog substitutes as follows.

- %Q substitutes the QTC number that needs to be filled.
- %C substitutes the other station's CALL.
- %E substitutes end-of-message PTT off.
- %R substitutes CR/LF

Backwards compatible seeting using %s: If you have a QTC_FILL_REQ setting and neither %Q or %C appears in it, it is used to generate the transmitted message when you type ALT+1 through ALT+0 in the receive QTC dialog box. It is required that your QTC_FILL_REQ setting have all four of the sequences starting with %. You may remove any of the corresponding items from the computed transmit message in this way: you may change any of the three %s strings to %.0s instead of %s (That is the % character, the dot character, the digit zero, and the letter s.) The first %s sends CR/LF, the second %s sends the other station's CALL, the third %s sends CR/LF and the end-of-message (known as %e in the message memories, but do not attempt to add any further % characters to QTC_FILL_REQ).

SEND_QTC_WITH_DVK=0 this saves the setting of the "Use DVK" button in Contest Parameter setup.

See also

[Setting your DXCC country](#)

North American QSO Party

Multipliers are North American countries, each of the United States, and the call areas of Canada. The "Countries" display does include indicators for "K", "KL7", and "VE", but they cannot be worked as countries-only as states and provinces.

Misspelled sections show as "?" in the ML column, and will not be counted as multipliers until you correct them.

DXCCWAE.DAT is used to calculate the country, but only countries in North America count as multipliers.

Exchange fields:

NAME	Received name.
QTH	Received QTH.
M	WriteLog flags new multipliers.
80-10	WriteLog totals the multipliers.
COUNTRY	WriteLog fills in the country.
C	For ambiguous callsigns. See Section 3.
PREF	WriteLog fills in the usual country prefix.
ON/OFF	Place for you to fill in your time on/time off indications.

ARRL Field Day

If you are running WriteLog's network and are also running a Novice/Technician station in this contest, then the Novice/Tech station must use the letter N when it does the Setup Register To Accept network Connections. QSOs logged on network letter N are only duped against other QSOs logged with that same letter.

IARU HF World Championship

Multipliers are ITU zones and IARU headquarter stations per band, but each station can be worked per band *and* per mode.

You **must** use *Multiplier Score...* to fill in your own ITU Zone before this module will score you contacts correctly!

Exchange Fields:

SNT	Transmitted RST. Leave this blank if its 59(9).
RST	Received RST. Leave blank if its 59(9)
ZONE	Received zone number.
P	Points for this QSO
ZM	Running tally of multipliers on this band.

California QSO Party (inside CA)

Selecting this multiplier modules brings up the Dupe Sheet Selection dialog. Select the county in which you are located, and if you are on a county line, also indicate the additional counties by selecting the "on county line with ..." buttons and selecting the counties in the adjacent list boxes. If you change counties during a contest (i.e. you are a rover), you become a new entry and may work all stations again. WriteLog allows you to keep all the county entries in the same log file and create new county entries or switch among the existing ones as you move (or as you prepare your entry forms later).

If you are a rover, you need to create a new county as you change counties. Use the COUNTY field in the Entry Window. Clear the field, type TAB and the Dupe Sheet Selection dialog appears and allows the selection of a new county, which internally creates a new set of dupe sheets (one per band and mode) for the new county, or, to go back to a previous county, you may select an existing county entry. The multiplier module maintains the current county selection for rovers internally and uses it for logging and duping new QSOs, for the Contest Show Multiplier... display, and for the Score on the Contest Parameter Setup... calculation. When preparing entries for a rover, you will need to select Multiplier Score... once for each county of operations and create a new summary sheet or ASCII file submission because each county (or county line) entry is separate. For a rover, [the Band Summary](#) display shows the totals for all counties, but the score for the current county..

Exchange fields:

NR	Enter the received serial number for a QSO
QTH	Enter the state or province received.
COUNTY	WriteLog will fill this in automatically with each QSO. But if you are a rover, when you change counties clear this field and type TAB to bring up the Dupe Sheet Selection dialog.

LOTW/tq8 Export

If you operate from California, and if you log QSOs from more than one California county (either as a Rover, or by setting WriteLog's county line dialog up for more than one) then the LOTW/tq8 export from WriteLog requires you to specify a TQSL Location for your CALL. That Location can also specify a county, but WriteLog will override the US_STATE and US_COUNTY at export time, and, for the case of a county line operation, WriteLog will automatically emit additional LOTW QSOs for the additional counties, the additional QSOs being logged at one second intervals later than the one logged in WriteLog.

California QSO party (outside CA)

This multiplier module tracks the counties of the state of California as you work them. You will need to enter the county abbreviations as per the recommended abbreviations from the contest sponsors (the Northern California Contest Club) for WriteLog to recognize them. WriteLog displays the abbreviations when you do a Contest Show Multipliers... An incorrect county abbreviation is flagged with a "?" in the M column in the Log Window.

If a station is on a county line, enter the additional counties in the CTY2, CTY3 and CTY4 fields and WriteLog will separately indicate which of these counties is new using the M column.

When a California station changes counties, you may work them again for both QSO point and multiplier credit. WriteLog will recognize this, but not until you enter the received county in the CNTY field of the Entry Window. As long as the CNTY field is blank, WriteLog reports the station as a dupe, but fill in the new county and press TAB and, if the station has changed counties, WriteLog will give you the "NEW STATION" indicator.

Exchange fields:

NR	Enter the received serial number for a QSO
CNTY	Enter the received county. When entering data into this field in the Entry Window, if WriteLog detects that the station being logged is a rover that has moved to a county where you have not worked him yet, then the dupe indicator switches from "DUPE" to "NEW STATION"
CTY2, CTY3, CTY4	Use these fields to log stations that are on a county line. The adjacent "M" columns in the Log Window indicate which of these, if any, is a new multiplier.

Pennsylvania QSO Party (inside PA)

Selecting this multiplier modules brings up the Dupe Sheet Selection dialog. Select the county in which you are located, and if you are on a county line, also indicate the additional counties by selecting the "on county line with ..." buttons and selecting the counties in the adjacent list boxes. If you change counties during a contest (i.e. you are a rover), you become a new entry and may work all stations again. WriteLog allows you to keep all the county entries in the same log file and create new county entries or switch among the existing ones as you move (or as you prepare your entry forms later).

Multipliers are PA counties, ARRL sections, and 1 DX multiplier. WriteLog automatically credits the EPA and WPA sections when you work your first county in each. When you work a station on a county line Pennsylvania, enter the counties in the QTH field with a comma or slash character between them. To claim the DX multiplier, enter DX in the QTH column.

If you are a rover, you need to create a new county as you change counties. Use the COUNTY field in the Entry Window. Clear the field, type TAB and the Dupe Sheet Selection dialog appears and allows the selection of a new county, which internally creates a new set of dupe sheets (one per band and mode) for the new county, or, to go back to a previous county, you may select an existing county entry. The multiplier module maintains the current county selection for rovers internally and uses it for logging and duping new QSOs, for the Contest Show Multiplier... display, and for the Score on the Contest Parameter Setup... calculation. When preparing entries for a rover, you will need to select Multiplier Score... once for each county of operations and create a new summary sheet or ASCII file submission because each county (or county line) entry is separate. For a rover, [the Band Summary](#) display shows the totals for all counties, but the score for the current county.

Exchange fields:

NR	Enter the received serial number for a QSO
QTH	Enter the state or province received.
COUNTY	WriteLog will fill this in automatically with each QSO. But if you are a rover, when you change counties clear this field and type TAB to bring up the Dupe Sheet Selection dialog.

LOTW/tq8 Export

If you operate from Pennsylvania, and if you log QSOs from more than one Pennsylvania county (either as a Rover, or by setting WriteLog's county line dialog up for more than one) then the LOTW/tq8 export from WriteLog requires you to specify a TQSL Location in the STATE of Pennsylvania. That Location can also specify a county, but WriteLog will override the US_COUNTY at export time, and, for the case of a county line operation, WriteLog will automatically emit additional LOTW QSOs for the additional counties, the additional QSOs being logged at one second intervals later than the one logged in WriteLog.

Stew Perry, W1BB, 160m Distance Challenge

There are no multipliers in this contest, but this module does calculate the points for each QSO according to the grid squares in the exchange. Your grid square is entered in the "Contest Parameter Setup..." dialog. Until you do so, all your QSOs will show as zero points, but your scores will be correctly recalculated after you enter your grid.

Exchange fields:

SNT	The RST you send for the QSO. By default this field is not in the prompt window, but, should you decide to send an RST (it is optional in this contest) you should use Contest Exchange Format Setup to add this field to the prompt/QSO entry window. If you do that, you need only enter the "S" of the "RST" and the "R" and "T" will be automatically entered as "5" and "9". Another aid for you should you decide to transmit an RST is that "%F2" in a CW memory will send the RST you just typed in.
RST	Enter the received RST. You need enter nothing if you receive "599". If you enter only the "S" value, then "5" and "9" will be automatically entered for "R" and "T"
GRID	Enter the received grid. Leave it blank if there is none, and it will be scored as a 1 point QSO.

ARRL VHF Contests

WriteLog supports the ARRL VHF Sweepstakes, the UHF contest, the VHF QSO parties, and the 222MHz and up DX contest. Selecting any of these presents a box asking you to indicate what grid you are operating from. If you're operating as a rover, then enter any grid you will operate from. If not, indicate your home grid.

The exchange for all of them is the same.

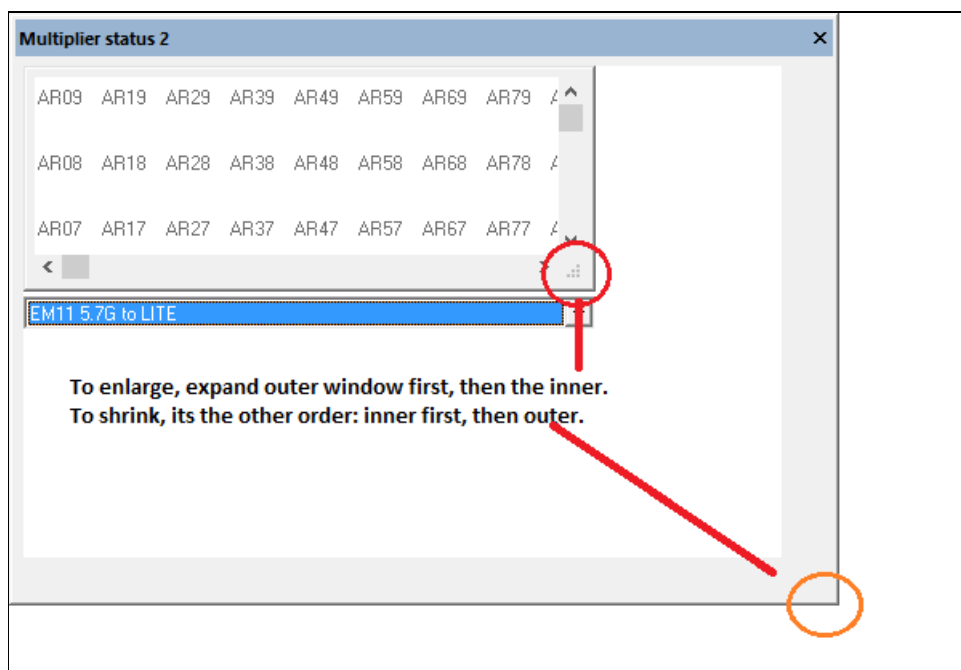
RST	received RST. (optional)
GRID	Enter the received grid. When entering data into this field in the Entry Window, if WriteLog detects that the station being logged is a rover that has moved to a grid where you have not worked him yet, then the dupe indicator switches from "DUPE" to "NEW STATION"
SNT	sent RST. (optional)
MYGRID	WriteLog fills this in automatically for each QSO. If you're a rover, modify this to tell WriteLog you've changed grids. Unless you're changing back to a grid you've previously operated from, WriteLog puts the grid selection dialog box up again to ask you confirm the need to create a new set of dupe sheets for the new grid.

To reduce keystrokes for sequentially working the same station through multiple bands, consider using [Setup Keyboard Shortcuts](#) to replace the standard BandsBandDown and BandsBandUp (on Alt+F1 and Alt+F2) with BandsBandDownRetainCall and BandsBandUpRetainCall, respectively. The latter will keep the CALL field populated as you change bands.

The Contest Show Multipliers... menu entry presents a map of the grids you've worked. Gray grids you haven't worked yet, and dark ones show worked grids with small color-coded squares indicating which bands you've worked the grid on. Eight bands can be displayed at once, and use the page selector that appears below the grid map to set which eight bands you can see. .

The default setting for which grids appear in your map can be controlled using the UpperLeftGrid entry in the Multipliers section of writelog.ini.

The Grids worked display is under the menu entry Contest/Show-Multipliers. It is a dockable window that can be resized. Resizing is a two step process because the docking pane size has to be manually matched to the grid display size. As shown below, expand the display by expanding the outer window first, then the inner. Shrink by reducing the inner window first, then the outer.



Notes for ARRL 222MHz and UP DX

This contest allows you to work a given station once per band, and for roving stations, again per 4-character grid square. The exchange of 6-character grid squares, along with assignment of QSO points by distance between roving stations leads to special consideration for the assignment of points for multiple QSOs between the same two 4-character grids but differing in the 6-character subgrid, and therefore in QSO distance. The rule is that the longest distance QSO is the one that counts.

When you type in a different sub-grid, WriteLog indicates the prospective QSO has more distance than any prior by adding the "Greater Distance" indicator to its Entry Window, as shown here.

arrl222junk3.wl - WriteLog

File Edit View Entry Radio Bands Setup Tools Contest Windows Help

SEQ	DATE	TIME	FREQ	CALL	SNT	RST	GRID	MYGRID	P
1	2017-04-19	1633	222000	W1AW	599	599	FN31pr	EM10dm	5108

QSO Entry

Radio: 222000 kHz CW

SEQ: 2

CALL: W1AW

GRID: FN31ps

MYGRID: EM10dm

Greater distance

Band Summary

Score: 5,108

QSO	Pts	Grids
222M	1	5108

Multiplier status

EM10 222M to 119G

When you then add the QSO, WriteLog's PTS column shows the **additional** points for the new QSO as shown here.

arrl222junk3.wl - WriteLog

File Edit View Entry Radio Bands Setup Tools Contest Windows Help

4 added points for the extra distance

SEQ	DATE	TIME	FREQ	CALL	SNT	RST	GRID	MYGRID	P
1	2017-04-19	1633	222000	W1AW	599	599	FN31pr	EM10dm	5108
2		1641	222000	W1AW	599	599	FN31ps	EM10dm	4

QSO Entry

Radio: 222000 kHz CW

SEQ: ---

CALL: ---

GRID: ---

MYGRID: ---

Band Summary

Score: 5,112

QSO	Pts	Grids
222M	2	5112

Multiplier status

EM10 222M to 119G

This shows working W1AW as a rover having moved further way, to the FN31ps subgrid, compared to our prior QSO from FN31pr. WriteLog does **not** update the PTS column of the prior QSO (which remains 5108) but instead retains those points displayed, and in addition shows the new QSO as worth 4 points, which is the additional value over the original QSO.

Because of the (theoretical) large number of points possible for a QSO, over 300k points for a QSO between antipodes, some scoring tests cause WriteLog's summary sheet to overflow its point calculation and present negative totals incorrectly. The PTS column for each QSO is displayed correctly, however.

LOTW/tq8 Export

If you are a rover (i.e. you log QSOs from more than one setting of MYGRID) then WriteLog automatically updates the GRIDSQUARE of the LOTW export for each QSO. Otherwise you must use a TQSL Location that has the proper GRIDSQUARE already set.

Texas QSO Party

In State

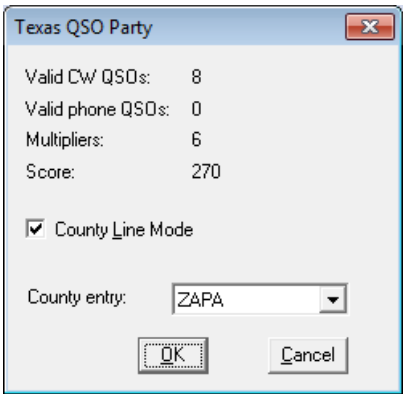
Exchange fields:

SNT	RST sent
RST	RST received
QTH	the received Texas county, state, province. WriteLog fills this in from a previous QSO with this station, except if multiple QTHs have been previously logged with it.
M	WriteLog indicates logged QSOs that are new multipliers
ML	Total multipliers
MY-CNTY	The Texas county transmitted. For multi-county operation, clear this field, set the caret to this field, and then press TAB and WriteLog offers the list of Texas counties so you may add a county of operation.
COUNTRY	WriteLog fills in the country.
C	
PREF	WriteLog fills in the usual country prefix.

Rovers and LOTW export

If you are a TX rover (i.e. you log QSOs from more than one TX county) then when you do a LOTW tq8 file export, WriteLog will automatically mark the QSOs with you in the appropriate TX county. WriteLog will set the STATE and COUNTY for your export, regardless of whether they are in the TQSL location you select to start.

County Line mode



The Contest/Parameter Setup menu brings up the above dialog. Setting the County Line Mode check box on turns on a feature that streamlines logging QSOs from a county line operation. This feature does this:

Once the first county QSO with a station is logged, pressing TAB (or SPACE) while the caret is in the CALL field fills in the CALL and MY-CNTY for the next county of your county lines that you have not yet logged.

Out of State

SNT	RST sent
RST	RST received
ML	Total multipliers
CNTY	the received Texas county.
M	WriteLog indicates logged QSOs that are new multipliers

Arizona QSO Party

In State

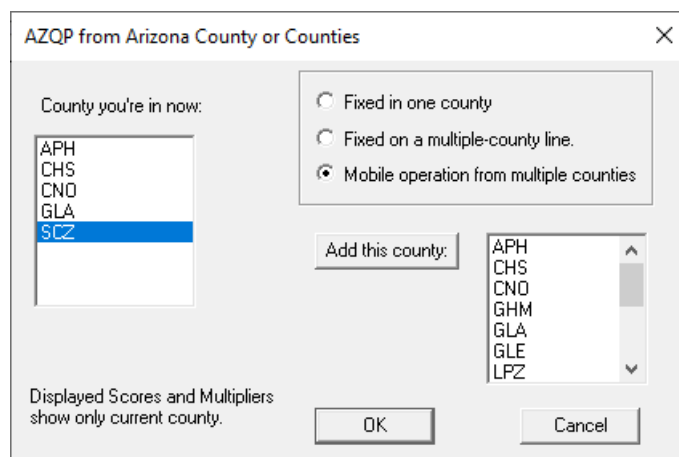
Exchange fields:

SNT	RST sent
RST	RST received
QTH	the received Arizona county, state, province. WriteLog fills this in from a previous QSO with this station, except if multiple QTHs have been previously logged with it.
ML	Total multipliers
MyCty	The Arizona county transmitted. Use WriteLog's Contest/Parameter-Setup menu to set what county will be logged if you leave this blank.

Rovers and LOTW export

If you are a rover in Arizona (i.e. you log QSOs from more than one AZ county) then when you do a LOTW tq8 file export, WriteLog will automatically mark the QSOs with you in the appropriate AZ county. WriteLog will set the STATE and COUNTY for your export, regardless of whether they are in the TQSL location you select to start.

County Line mode



The Contest/Parameter Setup menu brings up the above dialog. Setting the *Fixed on a multiple-county line* on turns on a feature that streamlines logging QSOs from a county line operation. This feature does this:

Once the first county QSO with a station is logged, pressing TAB (or SPACE) while the caret is in the CALL field fills in the CALL and MyCty for the next county of your county lines that you have not yet logged.

The other settings allow you to set MyCty to be logged for future QSOs.

Out of State

SNT	RST sent
RST	RST received
ML	Total multipliers
CTY	the received Arizona county.
M	WriteLog indicates logged QSOs that are new multipliers

Kentucky QSO Party

In State

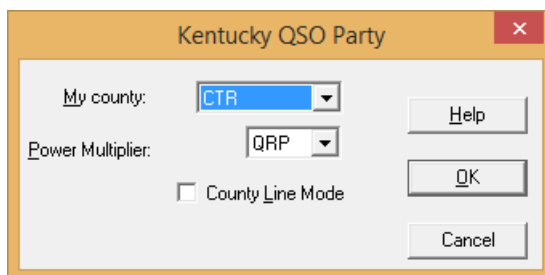
Exchange fields:

SNT	RST sent
RST	RST received
QTH	the received Kentucky county, state, province. WriteLog fills this in from a previous QSO with this station, except if multiple QTHs have been previously logged with it.
KY	The Kentucky county transmitted. For rover operation, you change the value in the KY column once and it "sticks" for subsequent QSOs. For county line operations, see below .
ML	Total multipliers
P	WriteLog fills in the points.

Rovers and LOTW export

If you are a KY rover (i.e. you log QSOs from more than one KY county) then when you do a LOTW tq8 file export, WriteLog will automatically mark the QSOs with you in the appropriate KY county. WriteLog will set the STATE and COUNTY for your export, regardless of whether they are in the TQSL location you select to start.

County Line mode



The Contest/Parameter Setup menu brings up the above dialog. Setting the County Line Mode check box on turns on a feature that streamlines logging QSOs from a county line operation. This feature does this:

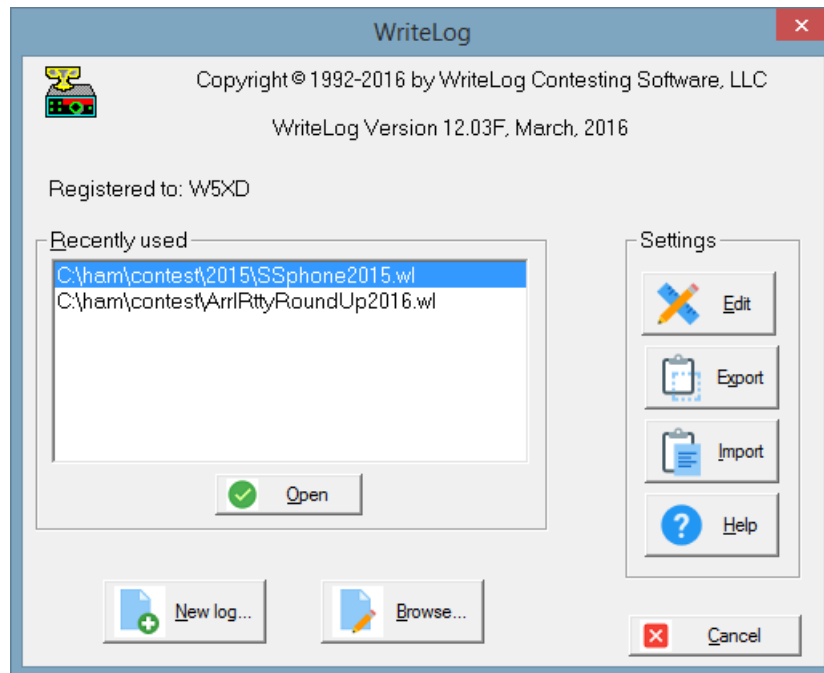
Once the first county QSO with a station is logged, pressing TAB (or SPACE) while the caret is in the CALL field fills in the CALL and KY for the next county of your county lines that you have not yet logged.

Out of State

SNT	RST sent
RST	RST received
QTH	the received Kentucky county.
ML	Total multipliers
P	WriteLog indicates the points.

writelog.ini and the registry

The first screen WriteLog presents on startup is its startup screen.



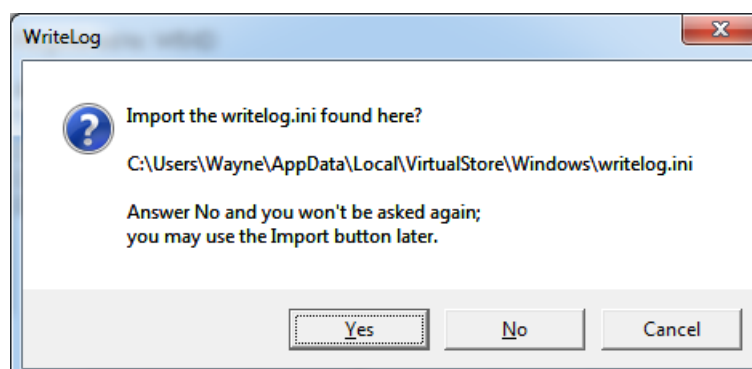
For this help topic, we describe the Settings on the right side.

The Edit, Import and Export buttons deal with WriteLog's program settings which are in the Windows registry.

The Edit button exports a snapshot of WriteLog's settings to an INI file of your choice. Then it invokes your INI file editor (by default, it is the Windows Notepad) on that exported file and WriteLog waits for you to exit that editor, and then offers to import the same file.

In order to manage backup files of various settings, you can use the Export and Import buttons. Use the former to snapshot WriteLog's settings to a file of your choice. And use the latter to read such a snapshot back in and replace WriteLog's settings with those in the snapshot. Note that Import first erases all of your WriteLog settings, so an Import of an empty INI file resets WriteLog's settings.

Prior to version 12, WriteLog stored its settings in the file writelog.ini located in various directories on various versions of Windows operating systems. Version 12 uses most of the same settings as earlier versions, so users of those versions will find that what they already have learned about customizing WriteLog also works in Version 12. But you must do any editing from this dialog. When WriteLog is run from a Windows account with no WriteLog customization settings, it looks for the presence of a legacy writelog.ini file. Should it find one, it presents this:



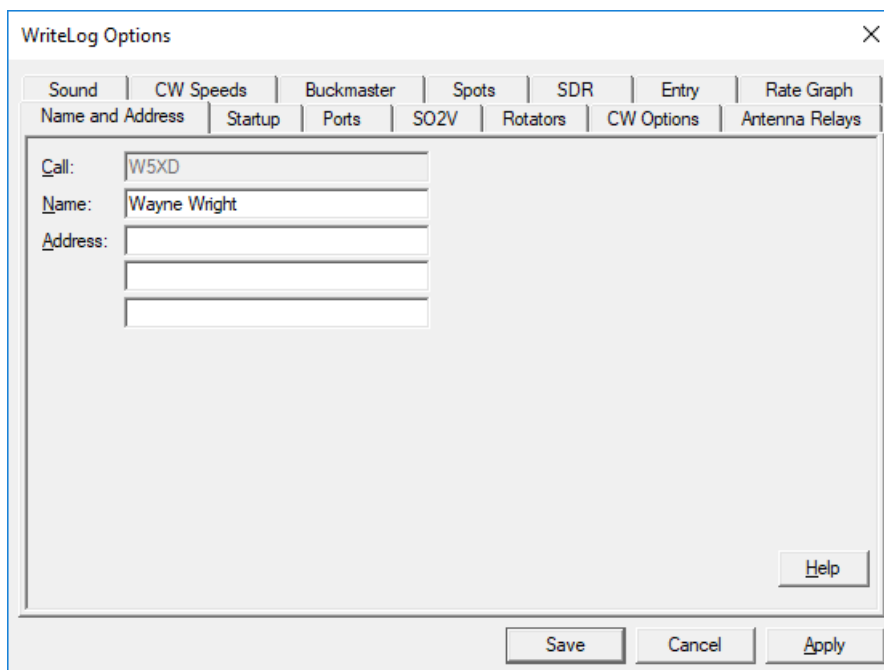
The Yes button imports the file it found with your settings from version 11.

The No button does not import them, and also prevents WriteLog from presenting this dialog in the future.

The Cancel button does not import them, but allows WriteLog to present this same dialog should you run WriteLog again later.

INI File Options

Enter your Name and Address in the Setup Save Configuration dialog. They are used by the [multiplier modules](#) to fill in blanks on [summary sheets](#). Or if you want WriteLog to start up with RTTY and/or packet windows displayed, then select the appropriate buttons in the dialog. These are saved in the Windows registry, along with the results of your entries in the [Setup Ports](#) dialog. WriteLog will automatically set these values from the file the next time you start it.



Reset Window Positions

Save Configuration saves your current window positions as defaults to be used when you later bring up WriteLog and create a new log. If you instead want the default window positions when you start new log, then hold down CTRL when you click the OK or Apply button. The CTRL key clears the Windows registry of WriteLog's default window positions.

When you start WriteLog and open an existing log, the window positions are read from the .wl file *unless* you hold down CTRL. So it takes several steps to completely reset the window positions for an existing .wl file. Use Save Configuration here and hold down CTRL. Exit WriteLog. Start WriteLog and select that .wl file while holding down CTRL.

Save button

This dialog has a button labeled Save that closes this dialog and saves all the settings in **all** the tabs in this dialog to the registry so that they will be used the next time you start WriteLog.

INI File sections:

[\[Ports\]](#)

[\[Configuration\]](#)

[\[WISound\]](#)

[\[Report\]](#)

[\[Packet\]](#)

[\[Editor\]](#)

[\[Entry\]](#)

[\[Summary\]](#)

[\[Multipliers\]](#)

[\[BandMap\]](#)

[\[BandChanges\]](#)

[\[PktSpotBar\]](#)

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[\[Sounds\]](#)

[\[Cut-Numbers\]](#)

[\[GreatCircleLookups\]](#)

[\[KeyboardShortcuts\]](#)

[\[Network\]](#)

[\[Winkey\]](#)

[\[MicroHAM_MK2R\]](#)

[\[BandRelayEncode\]](#)

[\[ScoreUDP\]](#)

WRITELOG.INI [Ports]

[Ports]

The settings from the [Setup Ports](#) dialog:

```
dvkport=2
dvktype=2
cwtype=3
cwport=1
AntRelayOnLpt3=YES,1
AntRelayonLPT1=YES
Comm1Used=CW,0
```

The COMn:= settings in this [PORTS] section are used by the WriteLog Packet window, the Yaesu and DCU-1 Rotator selection, and by the RTTY window. There are separate COMn: settings in the [RIGS] section used only for rigs.

```
COM1:=9600,n,8,1,
COM2:=4800,e,7,1,
```

There are 4 "slots" available for WriteLog rig interfacing. By default, CommSlot1 is COM1:, but you can change that by changing the number on the right of the equal sign. These settings are not used for RTTY or for packet

```
CommSlot1=1
CommSlot2=2
```

In this example, the third and fourth slots are on COM7 and COM8. COM15 is as high as is supported.

```
CommSlot3=7
CommSlot4=8
```

Frequencies (in MHz) to offset rig control for a VHF/UHF transverter, WriteLog has a separate offset for every amateur band. Specify all the offsets on one line in this ini file with a space between them, starting with the 1.8MHz amateur band. With this arrangement, WriteLog will not display the right transverter output frequency until after you use WriteLog to command the rig to a desired frequency once. So when you startup WriteLog, it will show your rig's frequency without the transverter offset (and it will log QSOs on that "base" frequency at this point as well.) To get WriteLog onto the right band, enter the actual frequency of operation in the CALL field and <ENTER> (like 144) and afterwards, WriteLog will remember you are using your 2 meter transverter. If your transverter has a high side mixer, then enter the offset as negative.

The CommSlotn variation on the INI entry supports the case of those (few) rig drivers that support more than one virtual rig on a single COMM port. For such a rig driver, using the Commn style causes the offsets to apply to all the virtual rigs on that Comm port. The CommSlotn applies to the rig at that "slot number". The slots appear in WriteLog's Setup/Ports dialog, slot1 through slot4 go top to bottom in the dialog.

```
Comm1Offset=0 0 0 0 0 0 0 0 26.010 116.002 -250.9
Comm1OffsetSsbSwap=0
CommSlot1Offset=0 0 0 0 0 0 0 0 26.010 116.002 -250.9
CommSlot1OffsetSsbSwap=0
```

In the above example, the rig is operating without transverters on the lowest 9 ham bands (160m through 10m), has a 26.010MHz offset for 6m operation, 116.002MHz offset for 2m operation, and a high side mixer of 249.9MHz for 222MHz operation.

The Comm1OffsetSsbSwap=0 overrides the default WriteLog behavior of swapping sidebands (USB for LSB and vice versa) for a high side mixer (negative offset value). This SsbSwap override applies to all negative offset values on the indicated COMM port.

You can override the port addresses WriteLog will use for LPT ports.
(Not on Windows NT/2000)

If you are running Windows 95/98, the program FPORT16.EXE in WriteLog's \programs directory will read your BIOS and set this section for you. WriteLog versions prior to 10.34 would run FPORT16.EXE every time you did Setup Ports. For 10.34 and later, you must manually run FPORT16.exe.

```
LPT1=0x378
LPT2=0x278
```

LPT3=0x100 You **must** override the LPT3 to get WriteLog to offer LPT3 as a choice.

Controls whether the WriteLog CW keyer attempts to control rig PTT and how. 0 is NONE, 1 is via rig COMM port, and 2 is via LPT port..

```
CWPTTCONTROL=1
```

Time in milliseconds WriteLog will delay sending CW after setting PTT.

CWPTTDELAY=50

For the multi-plus and WinKey keyers only. Time in milliseconds the keyer will hold the PTT on after ending paddle-sent CW. Maximum of 2000.

For Winkey devices, also sets the PTT tail timer value for CW messages sent via Writelog.

CWPTTIDLE=256

For the multi-plus keyer only. Set BUGMODE nonzero and the DASH paddle on the MK-1100 holds key down as long as the DASH is closed. (Only supported in 10.38 of the firmware and higher)

BUGMODE=0

WriteLog version 10.29 changed LPT port CW behavior to match NA/CT/TR on pin 1. This INI option makes WriteLog version 10.29 and higher behave like the older versions and put inverted CW on pin 1

CW_ON_PIN1=1

This INI entry controls the length of the DVK pulses on LPT port. Units of msec. Any entry over 1000msec is limited to 1000 (1 second).

LPT_DVK_PULSE_LENGTH=50

Some RC2800 rotators don't like the command WriteLog sends with S and A commands. This setting causes WriteLog to just send the azimuth and <CR>

RC2800AzOnly=1

The DCU-1 rotator protocol is built into WriteLog. It always will send two commands, and you may override them here. The "%03d" gives the azimuth in 3 digits, zero-filled.

DCU1ROTATORCOMMAND1=API%03d;
DCU1ROTATORCOMMAND2=AM1;

This setting is only for the old W5XD keyer (not the MK-1100). It is a time in microseconds, for WriteLog to wait between shifting bits on the COMM or LPT port. The MK-1100 uses an asynchronous transfer with no fixed timers.

KeyerDelay=333

Setting this non-zero switches LPT pin 9 over to the headphone split/normal control instead of message 7. This is ONLY functional for the NA DVK setting and is otherwise ignored.

NaDvkHpSplitOnPin9=0

WriteLog can send its Radio/Antenna to this azimuth commands to any Windows program that registers the appropriate window class. This is the default, or the window class can be changed here:

RotatorWindowClass=TfrmTransmit

See also

[INI File Options](#)

WRITELOG.INI [Configuration]

[Configuration]

These indicate whether WriteLog should create new windows at startup.

Run2EntryWindows=YES
StartPacket=YES
StartRTTY=YES
StartSdr=YES

The RigPollInterval is in milliseconds. WriteLog uses 500 msec by default.

RigPollInterval=60

PC generates key sends a SPACE to clear the attached keyer on startup. Unless you turn it off:

CwSpaceOnStartup=0

CW Speeds

cwspd00=7
cwspd01=12
cwspd02=13
cwspd03=14
cwspd04=15
cwspd05=16
cwspd06=18
cwspd07=20
cwspd08=22
cwspd09=25
cwspd10=28
cwspd11=32
cwspd12=35
cwspd13=40
cwspd14=45
cwspd15=50

The option lines named "cwwt00" through "cwwt04" control the five CW weighting settings of the CW keyer. A value of 128 corresponds to an equal length dot and its following space. For values above 128, each unit adds 512 usec to the length of a dot and subtracts the same amount from the length of the following space. Values below 128 make the dot shorter and the space longer. Setting these numbers such that the weighting exceeds the length of a dot (outside the range 83 to 173 for 50WPM) will prevent the keyer from being able to transmit code correctly.

cwwt00=113
cwwt01=123
cwwt02=128
cwwt03=133
cwwt04=143

This option sets the number of files WriteLog keeps in the most-recently-used file list. The default is 4.

MRU_LENGTH=4

For the W5XD multi+ keyer only.

CwAutoLtrSpace=YES Turns on auto letter space

CwSidetonePaddles=YES Turns on CW sidetone for paddle-sent CW

CwSidetoneMachineSent=YES Turns on CW sidetone for machine-sent CW

CwSidetoneCyclesOn=2 number of 1/2 milliseconds of sidetone ON

CwSidetoneCyclesOff=2

UseCDnotDSR=YES If your COMM port supports CD instead of DSR

Function keys for special messages

CqFunctionKey=9
QrzFunctionKey=4
SendCallExchangeKey=5

WaveFileLocation is where WriteLog looks to find SSB WAV files to transmit.

WaveFileLocation=d:\ham\phone\

DataFiles is where WriteLog saves WAV files on Tools Save Snapshot.

DataFiles=d:\ham\contest\

RecordingLocation is where WriteLog saves WAV files on Tools Continuously Record Audio.

RecordingLocation=d:\ham\AudioRecording\

Which section to use in friend.ini”

HI_SECTION=HI

Set this one to 0 to get summaries by default in TEXT (rather than RTF)

SUMMARIESINRTF=1

Set LptPttSense to 1 to reverse the sense of WriteLog’s use of the PTT line on an LPT port.

LptPttSense=0

To prevent WriteLog from putting a PTT signal on RTS

DisableCommPTT=YES

Set LptABSense to 1 to reverse the sense of WriteLog’s use of the Radio A/B line on an LPT port.

LptABSense=0

Set MOUSE_WHEEL_HZ to the frequency increment to turn for each mouse wheel message.

MOUSE_WHEEL_HZ=10

AddCallToNotesFile non-zero tells WL to also write the current CALL to the line it appends to the _Notes.Txt file it updates when [adding a note](#) to a QSO.

AddCallToNotesFile=0

WriteLog remembers the last Change Operator result.

CurrentOperator=Joe

WriteLog remembers headphone settings.

HeadphonesLatch=0

HeadphonesSplit=0

WriteLog will set rig PTT during voice recording by default. You can turn this off by setting this to 0.

PttDuringVoiceRecord=1

The Convert CTY to WriteLog program downloads wl_cty.dat from this URL.

wl_cty_dat_url=http://www.country-files.com/cty/wl_cty.dat

WriteLog will create the file WriteLogEventLog.txt in your Documents folder.

CreateErrorLog=1

WriteLog will write a (possibly large) .mdmp file in your Documents folder on a hard crash. This ini entry turns that feature off. There is a similar entry in the [\[RttyRite\]](#) section.

MiniDumpOnCrash=0

When using an ExtIO SDR, WriteLog uses a shared memory segment of this size to communicate. The default is 1MB.

SDR_SHARED_MEM_ALLOC=1048576

For an SDR using an ExtIO dll, WriteLog sends a watchdog timer message on this interval.

SdrControlWatchdogSeconds=2

For an SDR using an ExtIO dll, the WISdrExtDll.exe checks for a watchdog timer message this often. This setting must be higher than SdrControlWatchdogSeconds.

SdrExtDllWatchdogCheckSeconds=5

Contest Super Simulator spots are shown in the Packet and Band Map windows. You may turn that off:

EnableSimulatorSpots=0

Set this to 2 or above for WriteLog to immediately go into Auto-CQ mode on the given message number. To get auto-CQ on F1, you have set this value to 11 (for Message11.)

AutoCQMessage=2

The [Entry Move Clearest Frequency](#) commands use these bandwidths:

```
SEARCH_CLEAREST_BW_KHZ_CW=.17  
SEARCH_CLEAREST_BW_KHZ_SSB=2.8  
SEARCH_CLEAREST_BW_KHZ_AM=6  
SEARCH_CLEAREST_BW_KHZ_FM=6  
SEARCH_CLEAREST_BW_KHZ_DIG=.2
```

As of version 12.38, WriteLog sends mouse wheel events to the window that the mouse cursor is over. To restore the older behavior (send the mouse wheel to the focus window), set this entry:

MouseWheelToCursorWindow=0

The following INI entries, as of WriteLog version 12.29, are detected in this [configuration] section, removed, and placed in [Entry] when WriteLog starts up.

AutoSaveCount now in [\[Entry\]](#)

QsoWarningCount now in [\[Entry\]](#)

InsertOverridesCall now in [\[Entry\]](#)

CwSendPartialCallCorrections now in [\[Entry\]](#)

UpDownCyclesThroughLog now in [\[Entry\]](#)

MoveNextOnEnter now in [\[Entry\]](#)

LiveCwDelayMs now in [\[Entry\]](#)

This is the deprecated way to install an external keyboard shortcut processor .NET assembly. Two INI entries are required. One for the assembly name (omit the .dll from the end of the name) and the fully qualified class name in the assembly (use dot notation for namespaces). The preferred way to install is using the [ExternalShortcuts] section, below.

```
ExtShortcutAssembly=AssemblyName  
ExtShortcutClass=Namespace.ClassName
```

Multiple keyboard processors can be installed using these equivalent entries:

```
[ExternalShortcuts]  
TypeNameInAssemblyName1=AssemblyName1  
TypeNameInAssemblyName2=AssemblyName2  
...and so on
```

Further documentation on how to build a WriteLogKeyProcessor is available here:

<https://github.com/w5xd/WriteLogKeyProcessor>, and here: <https://github.com/w5xd/WriteLogShortcutInstallHelper>. [Here](#) is yet another example. It splits its features across the control-site/remote-site when WriteLog is remote controlled.

See also

[INI File Options](#)

WRITELOG.INI [WISound]

[WISound]

ContinuousRecord nonzero tells WriteLog to automatically begin audio recording on startup.

ContinuousRecord=1

Compression nonzero tells WriteLog to compress continuously recorded audio.

Compression=1

PlaybackBufferMsec determines the length of the playback buffers when .WAV files are transmitted.

PlaybackBufferMsec=1000

INI settings used only on Windows Vista and later

Only on these operating systems, WriteLog uses the following settings. The first specifies which sound output goes to your transmitter mic jack.

TxOutDevice=Xcvt xmit audio (Realtek AC'97

MicInDevice specifies which sound jack on your PC has your station microphone connected.

MicInDevice=Ham Mic (Realtek AC'97 Audio)

RxInDevice specifies which sound jack on your PC has received audio connected.

RxInDevice=Line In (Realtek AC'97 Audio)

FourChannelRecording nonzero means Continuous recording is 4 channels L/R receive and L/R transmit.

FourChannelRecording=0

Changing MicSampleRate requires re-recording all your f-key message recordings because all are required to be the same sample rate when splicing them together. MicSampleRate is the sample rate WriteLog will record its WAV files on recording F-key messages for SSB. WriteLog accepts a setting of either 11025 or 12000 (which are reduced rate versions of CD Quality and DVD Quality.) WriteLog's default is CD Quality, but it may be changed to 12000 in the rare circumstance that your microphone sound card or your transmitter sound card will not accept CD Quality rates. Setting this MicSampleRate to be compatible with the "Default Format" emphasized in [Device Per Radio mixer setup](#) simplifies (but not remove) any sample rate conversion that Windows makes when transmitting your recorded .WAV files.

MicSampleRate=11025

EchoMic settings

These four settings that start with "EchoMic" are used by the Two-Radios-on-one-device Echo Mic feature. The last two also set the defaults for the One-Device-per-radio feature.

EchoMicBufferMsec applies to both shared-mode One-Device-Per-Radio output, and to Two Radios on One Device. (Therefore it does not apply to exclusive mode, One-Device-per-Radio outputs.) It should be set non-zero only after finding the EchoMicRenderMultiple below fails to provide the desired result. Absent (or zero) causes WriteLog to use a delay of one render buffer. (The Windows driver for the sound device specifies the length of a single render buffer in exclusive mode.)

EchoMicBufferMsec=0

EchoMicBufferMaxMsec specifies the maximum msec delay allowed. It applies to both shared and exclusive mode and both one-device and two-radio modes. WriteLog uses EchoMicBufferMsec times 2, or this setting, whichever is longer. When WriteLog detects buffering exceeding this time, it omits samples (and therefore distorts the audio) until the delay is down.

EchoMicBufferMaxMsec=50

Buffer multiple settings. Applies only to Exclusive Mode

These apply to the Two-radios-on-one-device echo microphone feature because it (only) uses exclusive mode access to both its microphone and radio sound devices. In One Device Per Radio, these settings apply if you check the "Exclusive" box.

EchoMicRenderMultiple specifies a multiplier on the rendering (output) audio device base period. Testing indicates that operating at the base period itself distorts audio on some devices, so the default is 2. Valid values are 1 through 10. Only applies to exclusively allocated devices.

EchoMicRenderMultiple=2

EchoMicCaptureMultiple specifies a multiplier on the capture (input microphone) audio device base period. Testing indicates that operating at the base period itself is usually OK so the default is 1. Valid values are 1 through 10. Making it higher increases latency. Only applies to exclusively allocated devices.

EchoMicCaptureMultiple=1

One Device Per Radio

The last two settings above, EchoMicRenderMultiple and EchoMicCaptureMultiple, set the defaults for the One-Device-Per-Radio audio mixing feature. Because multiple playback and record devices are used and might not all work with the same settings, the defaults set above are overridden on a per-device basis by the following sections in the INI file:

```
[CaptureMultiple]
{0.0.1.00000000}. {529e383f-c113-4c87-aae8-ff1ce628c7ac}=1
[RenderMultiple]
{0.0.0.00000000}. {7d7f73db-a9d3-48d6-b935-00022a8159c7}=2
```

The slider controls in the [Test dialog](#) set the per-device settings.

In One Device Per radio mode, WriteLog routes receive audio to the headphones and switches the receivers between split radios on each ear and one radio in both ears. When it makes those transitions, it smoothes the audio over a short time period to reduce audio artifacts.

SmootherMsec=15

In One Device Per radio mode, and on the Right radio only, WriteLog can be configured to swap the rig's stereo output L and R. Doing so prevents the main receiver audio from "jumping" from the left ear to the right on switching Radio/Headphones-Normal to Radio/Headphones-Split.

RightReceiverHeadphonesSubreceiverOnL=0

See also

[INI File Options](#)

[Sound Board Voice Keying](#)

[Device Per Radio mixer setup](#)

WRITELOG.INI [Report]

[Report]
call=W5XD
name=John Q. Ham
adrline1=405 Memorial Drive
adrline2=Cambridge, MA 02139
adrline3=

The EmailPrefix is required to be "SMTP:" for most Microsoft email programs and that is the default if this INI entry is missing, but other programs want this blank, as shown here.

EmailPrefix=

On the Cabrillo Setup page, the "Upload to SuperCheckPartial" goes to this URL.

ScpUrl=https://www.supercheckpartial.com/api/v1/cabsubmit

On the Cabrillo Setup page, the "Upload to SuperCheckPartial" check box is by default OFF. Setting this entry makes the default checked ON.

ScpEmailDefaultCheck=1

See also

[INI File Options](#)

WRITELOG.INI [Packet]

[Packet]
PORT=2

X, Y, W, H save the window location

X=15
Y=536
W=410
H=237

Telnet, and TelnetPort record the cluster addresses recently used

Telnet=dx.ab5k.net
TelnetPort=23
Telnet1=dx.k3lr.com
TelnetPort1=23

The maximum number of saved IPs

Telnet-NumSavedIPs=4

See also

[INI File Options](#)

WRITELOG.INI [Editor]

```
[Editor]
FaceName=Arial
FontHeight=-13
FontWeight=400
FontFamily=34
```

Colors to use on screen. bb is blue, gg is green, rr is red

```
HeadingBackgroundColor=0x00bbggrr
ByRadioHeadingBackgroundColor=0x00bbggrr
HeadingTextColor=0x00bbggrr
DupeSymbolColor=0x00bbggrr
```

```
[EDITOR_V9]
X=190
Y=147
W=763
H=617
```

See also

[INI File Options](#)

WRITELOG.INI [Entry]

[Entry]
FaceName=Courier New
FontHeight=-13
FontWeight=700
FontFamily=49

SmartEnterKey=0 *"Enter Sends exch/QRZ" mode off at startup*

LR=1 *-1 for neither, 1 means Right, 0 means Left*

RotatorPort=1 *COMM1 through COMM8*

RotatorType=1 *DCU-1, Yaesu, etc*

RotatorOffset=-30 *Offset to add to the desired azimuth when instructing the rotator to turn.*

MapCallOnSpace=0 *Non-zero causes the current CALL to be added to bandmap if you SPACE out of the CALL field.*

AlwaysAdifPrefill=0 *Non-zero causes the ADIF Prefill to be applied when the caret leaves the CALL field to always overwrite any existing entry. As of WriteLog version 12.71, this setting is still honored, but for most users is unnecessary because from that version, WriteLog will, when you change the CALL, only preserve any of the preset fields if you have manually typed into that field since it was auto-filled by preset.*

LocalDupeChecksToPacket=1 *Non-zero causes WriteLog to send dupe checked calls that are to be sent to the band map, to also be sent to the Packet Window*

FreeFormCharWidth=11 *When running Enter in Free Form, the width of the entry field is controlled by this setting in number of characters..*

Colors to use on screen. bb is blue, gg is green, rr is red

OKMsgColor=0x00bbggrr
NotOKMsgColor=0x00bbggrr
UnselectedBackgroundColor=0x00bbggrr
XmitInProgressColor=0x00bbggrr
LockedSerialNumberColor=0x00bbggrr
SaveWarningColor=0x00bbggrr
EntryLRText=0x00bbggrr
XmitEnableOKColor=0x00bbggrr
XmitEnableNotOKColor=0x00bbggrr
CallQueueOutlineColor=0x00bbggrr
CallQueueBkColor=0x00bbggrr

WriteLog remembers the network display name set for this window

NetworkDisplayName=20m

Distance radio must tune in order to say its is tuning the band. Set this to zero and WriteLog will not clear the Entry window when the radio is tuned.

AutoClearOnTuneMinHz=200

If you tune closer than AutoFillFromBandmapHz to a bandmap station, the Entry window will be auto-filled from his frequency. Set this to zero and WriteLog will not auto fill. AutoClearOnTuneMinHz set to zero will disable AutoFillFromBandmap as well.

AutoFillFromBandmapHz=400

With AutoSetToSplitFromBandMap set nonzero, WriteLog will set the rig to the split frequency in the bandmap as you tune across it. AutoFillFromBandmapHz must be non-zero for this to function.

AutoSetToSplitFromBandMap=0

TuningDetectionCount is the number of consecutive polls of the rig that must be tuning to decide the operator really is tuning.

TuningDetectionCount=3

If your preference is to keep the headphones unchanged on SHIFT+UP/DOWN rather than have the headphones follow the keyboard focus, then set this entry to zero.

MoveHeadphonesWithFocus=0

On pressing the INSERT key and doing the normal Send-Call-and-Exchange processing, the keyboard entry cursor is advanced as if typing a [SPACE]. To leave the cursor alone, change AdvanceCursorOnInsert=0.

AdvanceCursorOnInsert=1

The timed cq interval, in msec is saved here.

TimedCqIntervalMsec=500

[ENTRY2] *For the 2nd Entry window*

LR=0

Set AutoSaveCount to the number of QSOs allowed between automatically saving the log. Set this to -1 and WriteLog will not autosave. If you make no entry here, WriteLog will auto-save after every 100 QSOs.

AutoSaveCount= -1

If this many unsaved QSOs are in the log, put a warning on the screen indicating so. If it is zero or negative, then never put a warning on the screen.

QsoWarningCount= 20

InsertOverridesCall non-zero and pressing the INSERT key on the keyboard will use the RTTY window to override any CALL entry. This entry affects only RTTY operation.

InsertOverridesCall=0

CwSendPartialCallCorrections non-zero tells WriteLog to send a partial call when the + key is pressed and the callsign has changed since you last sent it.

CwSendPartialCallCorrections=0

UpDownCyclesThroughLog non-zero tells WL to cycle through the Log Window and the Entry Window when you cursor Up or Down.

UpDownCyclesThroughLog=0

MoveNextOnEnter only has an effect if "Enter Sends QRZ/Exchange" is ON, and only affects what happens when you type ENTER with the cursor in the CALL field with it not empty. With this INI entry set non-zero, WriteLog moves the cursor to the next field. With this set to zero, WriteLog leaves the cursor in the CALL field.

MoveNextOnEnter=0

WriteLog can send live CW from the CALL field. If you don't type for this long, it will complete the transmission. In milliseconds. LiveCwDelayMs=1000

See also

[INI File Options](#)

WRITELOG.INI [Summary]

[Summary]

MULTSOUND=d:\temp\sound8.wav *Sound file for mult*

DOUBLEMULTSOUND=d:\temp\sound5.wav *Sound file for double mult*

See also

[INI File Options](#)

WRITELOG.INI [Multipliers]

[Multipliers]

This is used to find the RTF or TXT templates for the summaries.

LOCATION=c:\ham\programs\

This pair is the only way to control the fonts used in the Multiplier displays

FaceName=Arial

FontHeight=-10

Used for VHF contests with grid square displays

UpperLeftGrid=EM10

Used by multiplier modules to score your log according to your DXCC country. Also used as if it were a full call by the RttyRite window to exclude highlighting.

CALLPREFIX=W5

PREFIX_XTRA=x

Set ShowCountry to zero to make the COUNTRY and C fields not show in the Entry Window by default.

ShowCountry=0

Set BandChangePerHour to change the way Multi-Single 10 minute rule (for the Band Changes window) calculates the maximum Band changes per hour. WriteLog uses this INI setting only if the multiplier module does not indicate the number. If the multiplier module does indicate the maximum, then this INI setting is ignored..

BandChangePerHour=6

BandChangeSetting remembers the last right mouse click setting in the Band Changes window.

BandChangeSetting=0

*For the Band Changes Window **and only** with a multiplier module loaded that has no Band Changes Window setting, this INI setting sets whether the Band Changes Window counts band changes from the 60 minutes up to "now" (set BandChangelsPerClockHour =0), or for the current UTC clock hour (set BandChangelsPerClockHour=1).*

BandChangelsPerClockHour=0

Multiplier modules specify the behavior of the [Band Change window](#). Set this non-zero to allow manual selection of the mode.

BandChangeDisplayManualSelectMode=1

The multiplier display window uses the following colors for bands. If there are more than 17 bands, it cycles back to BandColor01 for color number 18, BandColor02 for 19, etc.

BandColor01=0x00bbgrr

BandColor02=0x00bbgrr

...

BandColor17=0x00bbgrr

For contests with multipliers on a single band, only these two colors are used.

WorkedMultColor=0x00bbgrr

NewMultColor=0x00bbgrr

The Show Multiplier Window remembers its on-screen position here:

X=20

Y=20

IARUHF contest by default keeps previously calculated Zone if you edit the CALL field. If you want it to always recalc the zone on edits of the CALL field, set AlwaysFillZone nonzero. As of WriteLog version 12.71, this setting still is still honored, but for most users is unnecessary because from that version, WriteLog will, when you change the CALL, only preserve the zone if you have manually typed into the zone field since it was auto-filled.

AlwaysFillZone=1

As of version 11.17, WriteLog displays the multipliers in a docking window. You can restore the top-level window behavior by setting DisplayInDockingWindow=0.

DisplayInDockingWindow=1

Put up no progress bar during QSO save if DisableWriteProgressBar=1.

DisableWriteProgressBar=1

See also

[INI File Options](#)

WRITELOG.INI [BandMap]

[BandMap]

DefaultTimeoutSeconds=1200

determines how long stations will remain the band map

PixelsPerKhz=15

determines the initial frequency scale of the band map

ShowBandEdges=1

The band map displays a stripe for band edges for CW, digital, and phone sub bands

LimitToBandEdges=1

When you click on a spot, the band map won't process it if its out of a valid sub band.

FrequencyIncreasesUp=0

Set non-zero to make vertical band maps present increasing frequency going up.

InitialSpectralResolution=0

Valid entries are the range of 0 through 5. Zero is off, and 1 through 5 correspond to 2Hz, 4Hz, 8Hz, 16Hz and 32Hz.

InitialSpectrumUpdateIntervalMsec=0

Sets the initial update frequency of the band map spectrum. Valid values are 0 through 1000;

WaterfallStartHue=0

The band map's waterfall display uses a color table computed from WaterfallStartHue. Set it to zero to get a monochrome intensity modulation of the waterfall. Any other value is taken as the starting hue in the HLS color wheel. The INI setting must be in the range of 0 to 255, which corresponds to 0 to 360 degrees. If you set the value negative, the starting hue is the same as the corresponding positive entry, but the colors in the table are computed going around the HLS color wheel in the other direction. The Bandmap color table only uses full saturated colors (saturation = 100%) and the bandmap scales the luminosity from zero for the lower amplitude, up to about WaterfallMaxLumPercent for the maximum.

WaterfallMaxLumPercent=70

Number in the range of 0 to 100. At 100%, the Band Map waterfall color for full maximum amplitude will be bright white. Lower numbers give less brightness for the maximum (and therefore also for lower amplitudes.) Less than 100% also leaves the hue setting some range to work, such that the maximum color is not white or gray, but is the hue in WaterfallStartHue.

CallsignSpaceAllocation=1

This setting can range from 0.2 to 2.0, where 1.0 means "normal" callsign space allocation.

OverallScale=1

This setting can range from 0.2 to 2.0, where 1.0 means "normal" scaling of the bandmap.

OversamplePointsLine=2.0

OversamplePointsWaterfall=2.0

These settings can range from 1.0 to 20.0, where 1.0 means one plotted point per logical pixel. Higher is more points plotted and slower.

SpectrumTimeAverage=8

WaterfallTimeAverage=1.05

These settings can range from 1.0 to 40.0, where 1.0 means no time-smoothing of the spectral data and 40 is maximum smoothing.

SpectrumOnCpu=1

Set this to 0 to compute the Band Map spectrum on the graphics card.

Set to 1 to compute on the CPU.

Set to 2 to compute the spectrum in double precision on the CPU.

WaterfallDisable=1

Set this to 1 to disable the computation of the waterfall display.

ShowWaterfall=1

Set this to 0 to disable the display of the waterfall.

ShowSpectrum=1

Set this to 0 to disable the display of the spectrum.

SpectrumMinDBM=-60

SpectrumMaxDBM=-20

If these settings are present, then the Band Map spectrum is presented on a fix scale with the given DBM settings.

Otherwise the Band Map spectrum is automatically scaled to cover the allocated space and to cover the color scale for the waterfall.

RetainStateSpectrumMsec=60000

A waterfall on a Band Map will be retained this long after the SDR is tuned to another band.

WaterfallOpacityPercent=50

When multiple SDRs provide spectra that overlap, this setting controls how much the lower-priority ones "show through" the higher. Priority is defined by their order in the [SDR setup page](#). A higher row in the table draws with higher priority.

BandEdgeFile=USA_Extra.SubBands

The .SubBands file that describes the band edges drawn on the band map, and that are used to determine whether a packet spot click tunes the radio.

PacketEdgeFile=USA_Extra.SubBands

The PacketEdgeFile setting determines the .SubBands file used to guess a mode for a packet spot frequency.

ClearFrequencyLookbackSeconds=45

The ClearFrequencyLookbackSeconds determines how much time history the [Move Clearest Frequency](#) commands take into account.

See also

[INI File Options](#)

[SDR Properties](#)

WRITELOG.INI [ScoreUDP]

[ScoreUDP]

Score posting timeout in msec. The default used by WriteLog is 30 seconds.

http_timeout_msec=30000

Your most recently entered setting for Network Address is saved here.

URL=http://cqcontest.net/postscore.jsp

WriteLog attempts to open a file by this name as a log file for its attempts to broadcast score messages. The file is deleted everytime WriteLog starts.

LogFileName=d:/temp/logfile.txt

Stores the password used to log your scores at the posting site.

Password=none

*IgnoreCertificateErrors nonzero tells WriteLog to ignore SSL certificate errors when posting scores via https. **Turning this on enables eavesdroppers to spoof SSL certificates in order to read the password WriteLog uses to post scores.** Only turn this setting on if the vendor running the score posting website tells you to turn it on.*

IgnoreCertificateErrors=0

See also

[Connection to cqcontest.net](#)

[INI File Options](#)

WRITELOG.INI [BandRelayEncode]

[BandRelayEncode]

Without any entries, WriteLog behaves as if the INI file has the entries shown below. You may add entries using the keys shown below and with any number from 0 through 15 for output from WriteLog's band encoding

LIT=11
241=10
142=9
119=8
75G=7
47G=6
24G=5
10G=4
5.6=3
3.3=2
2.3=1
1.2=15
902=14
432=13
222=12
144=11
50=10
10=9
12=8
15=7
17=6
20=5
30=4
40=3
60=2
80=2
160=1

See also

[INI File Options](#)

WRITELOG.INI [Winkey] and [Winkeyer2]

[Winkey]

The settings in this section apply only when running Winkey (and the MicroHAM MK2R).

Normally set potrange to 255, but set it to 127 for the alternative wiring

POTRANGE=255

Set keymode = 0:lambic B, 1:lambic a, 2:Ultimatic, 3:Bug Mode

KeyMode=3

Set paddleswap non-zero to swap dash/dot

Paddleswap=0

Set PaddleWatchdog zero to disable the watchdog (and turn off paddles after 128 dits/dahs)

PaddleWatchdog=1

Set ContestSpacing nonzero to shorten wordspaces to 6 dit lengths.

ContestSpacing=1

Set BatchCharacters zero to force WriteLog to send only one character at a time to the Operating System.

BatchCharacters=1

Set this entry and WriteLog creates a log file of its dialog with the WinKey on its serial port.

LogFilePath="c:\temp\winkey.log"

Set this entry non zero and WriteLog ignores the speed pot.

IgnoreSpeedPot=1

Set this entry non zero and WriteLog commands PTT on the WinKey for all modes.

AllModePttEnabled=1

In order to have the most flexibility to edit CW messages using the "red box", BufferLevelSetting should be as low as possible, but if CW messages pause during transmission, it is a sign that WriteLog needs to keep more characters in the WinKey. The valid settings are the range of 1 through 12. Higher settings keep more characters inside the WinKey as messages are transmitted.

BufferLevelSetting=6

WriteLog delays this long after aborting a CW message in progress. This helps in case the WinKey takes "a while" to actually finish aborting a message.

SleepAfterAbort_msec=100

WriteLog polls the WinKey for its status this often. Default is 50msec.

PollTimerMsec=50

When the Winkey reports it is no longer sending CW, WriteLog can trigger an auto-resume. It has been observed that sometimes the WinKey reports this status early. For every count added to this entry, WriteLog waits "PollTimerMsec" longer before initiating auto-resume.

EndOfMessageDelayCount=1

Normally the RTS line on the Winkey COM port is set to ON. Change this in Setup/Ports and the result is stored here.

RTSFUNCTION=1

When hand-typing CW to Winkey, its serial protocol, its possible for the PC to pass a new character to the Winkey concurrent with an idle STATUS message passing in the other direction. The timing of this event is complicated by delays in Windows system processing involving USB or virtual serial ports, or any other processing that introduces delays. WriteLog's PttBlackoutMSEC is the time after WriteLog writes a character to the WinKey that it ignores STATUS messages from the WinKey.

PttBlackoutMSEC=30

[Winkeyer2]

Reverse the sense of the L/R keyer outputs (only applies to Winkeyer2). 0 means normal, 1 means reverse, -1 means put all CW/PTT on channel L

ReverseLR=0

See the WinKeyer2 documentation. 4 corresponds to 1000Hz.

SideToneFreqIndex=4

The Winkey and Winkeyer2 also use these INI settings with other CW Keyer Types:

[Configuration]

CwAutoLtrSpace=YES

[PORTS]

CWPTTIDLE=256

CWPTTDELAY=50

CwSidetoneMachineSent=YES

For Winkey, turning CwSidetonePaddles to NO also disabled machine-sent sidetone, regardless of the above setting.

CwSidetonePaddles=YES

See also

[CW Options](#)

[INI File Options](#)

WRITELOG.INI [MicroHAM_MK2R]

[MicroHAM_MK2R]

The MK2R takes two COM ports. The first one you name in WriteLog's Setup Ports is the one with the WinKeyer support. The second one, the ControlPort is the one for MK2R control.

ControlPort=12

See also

[INI File Options](#)

WRITELOG.INI [PktSpotBar]

[PktSpotBar]

determines how long spots will remain the spot window

DefaultTimeoutSeconds=1200

Control the colors of packet spots with a number of the form: bb is blue color in hex, gg is green color in hex, and rr is red color in hex:

OutOfBandColor=0x00bbggrr

MultColor=0x00bbggrr

BackColor=0x00bbggrr

Calls that won't highlight in RttyRite, or show as spots of me. Multiple calls separated by comma.

CallsThatAreMe=W5XD,W5XD/QRP

See also

[INI File Options](#)

WRITELOG.INI [Qsl printing]

[Qsl Printing]

All these are setup in the File QSL Print Setup dialog

Across=2
Down=10
Height=30
Left=6
Top=15
Width=76
FaceName=Subway
FontHeight=-13
FontWeight=700
FontFamily=2
TotalHeight=229
TotalWidth=106

See also

[INI File Options](#)

WRITELOG.INI [Correl]

[Correl]

Font used by the [Check Call Window](#), the [Packet Spots Window](#), the [CW Display Windows](#), and by the [Net Gab Window](#).

```
FaceName=OCR-A  
FontHeight=-13  
FontWeight=400  
FontFamily=49
```

The Check Call Window can be customized with these six colors. Leaving the “Bk” color entries in the ini file blank defaults them to the system window background color (which changes with control panel settings). The text colors default to black, yellow, and green.

```
FoundColor=0x00bbggrr  
FoundBkColor=0x00bbggrr  
NeededColor=0x00bbggrr  
NeededBkColor=0x00bbggrr  
OKColor=0x00bbggrr  
OKBkColor=0x00bbggrr
```

See also

[INI File Options](#)

WRITELOG.INI [Rttyrite]

[Rttyrite]

time in milliseconds that certain TNC types will hold PTT at the beginning and end of a transmission. Those types are: Dumb TU, xmmt.ocx, Sound Board AFSK, Sound Board FSK, Parent SO2R Sound Board FSK, and Parent SO2R Sound Board AFSK

PTT_END_HOLD=250
PTT_BEGIN_HOLD=333

The CW settings in the RTTYRITE section do not apply to the CW view in WriteLog's main screen.

frequency in Hz of the center of the CW receive frequency display.

CW_XMIT_FREQ=749

CW_MIN=25 *slowest CW setting (not in WPM)*

CW_MAX=0 *fastest CW setting (not in WPM)*

Setting the Diddle entry to zero tells Rttyrite to not diddle the transmit RTTY stream with NULL or LTRS characters when it has nothing to say. The default is that diddle is on.

Diddle=1

Use CONTROL_ON_TOP=1 to make the CW, RTTY, PSK control dialogs stay always on top, or 0 to make allow them to be covered by the main WriteLog screen.

CONTROL_ON_TOP=0

The RTTY window can scroll back this many lines. 2000 is the default.

ScrollBufferLength=2000

NumClonesAtStartup causes the RttyRite screen to be cloned this number of times when WriteLog starts it.

NumClonesAtStartup=3

Colors to use on screen. bb is blue, gg is green, rr is red

ReceivedTextColor=0x00bbggrr
TransmittedTextColor=0x00bbggrr
DefaultBackgroundColor=0x00bbggrr
ReverseBackgroundColor=0x00bbggrr
DupeBackgroundColor=0x00bbggrr
MultBackgroundColor=0x00bbggrr
GoodCallBackgroundColor=0x00bbggrr
SpecialBackgroundColor=0x00bbggrr
UnderlineColor=0x00bbggrr

RttyRite will write a (possibly large) .mdmp file in your Documents folder on a hard crash. This ini entry turns that feature off. There is a similar entry for WriteL32.exe in the [\[Configuration\]](#) section.

MiniDumpOnCrash=0

FskShareCommXmit causes RttyRite to share the FSK COM port for transmitting, allowing several TNC's to drive a single transmitter. It applies to transmitting TNCs like Xmmt.ocx and Sound Board FSK that receive through some other mechanism than the COM port selected in the Ports menu. Dumb TU is not affected, and cannot share its COM port.

FskShareCommXmit=0

DisableFskPttOnDtrAndRts causes RttyRite to omit asserting and deasserting RTS and DTR for PTT when doing hardware or software FSK output on a COM port.

DisableFskPttOnDtrAndRts=0

LogFileName is the prefix of the name used for a log file of all of RttyRite's transmit/received text.

LogFileName=c:\temp\RttyRite.log

MultsQueueWithPriority causes RttyRite to take CALLs flagged as new multipliers in preference to those that are not.

MultsQueueWithPriority=0

QueueCallsFirstInFirstOut causes RttyRite search the received highlighted CALLs in order received, or, if set to zero, in reverse order.

QueueCallsFirstInFirstOut=1

When opening a RTTY view window, use this COM ProgId

ProgId=writelog.rttyrite.9

Do not highlight these calls in the RttyRite Window. Use commas to separate more than one

CallsThatAreMe=W5XD,W5XD/QRP

[Rttyrite2]

same as [Rttyrite] section, but for the second RttyRite window.

See also

[INI File Options](#)

WRITELOG.INI [NetGab]

[NetGab]

File name to append network gab messages to

LogFile=c:\temp\netgab.log

Color to use when flashing the net gab display. bb is blue, gg is green, rr is red

NetGabFlashColor=0x00bbgrr

Number of times to flash the netgab window when a message comes in.

FlashCount=1

Set AutoPopup nonzero to force netgab window visible on gab receipt.

AutoPopup=0

See also

[INI File Options](#)

WRITELOG.INI [Network]

[Network]

TCP port to use

TCP_PORT=1054

When requesting a TCP/IP connection, WriteLog hangs for this long if the connection can't be made.

TcpConnectTmoSeconds=3

When servicing a TCP/IP connection, WriteLog hangs for this long if the bytes can't be sent or received.

TcpSendRcvTmoSeconds=10

Log file version. Set to -1 to turn off diagnostic WlogNetDde_nn.log files

LogFileVersion=-1

When serving a request for WriteLog networking, limit buffers to this size

TcpBufferSize=64000

Additional settings enable the WlogNetDDE server to share local DDE shares on its TCP/IP protocol. By default, only the following two are defined by WriteLog:

Wlognet=1

Wlogpkt=1

*QSO UDP export to this IP address. Default is local machine only. Set to **All Local Networks** to broadcast on all network adapters.*

QSO_UDP_IPADDR=localhost

QSO UDP export to this UDP port number.

QSO_UDP_PORTNUMBER=12060

Continue QSO UDP export at WriteLog startup.

QSO_UDP_AT_STARTUP=1

*QSO UDP exports **all** QSOs in the log on the Contest/Recalculate menu. Or set QSO_UDP_LIMIT_MINUTES to limit the new QSOs broadcast to those more recent than this.*

QSO_UDP_LIMIT_MINUTES=0

*Radio UDP export to this IP address. Default is local machine only. Set to **All Local Networks** to broadcast on all network adapters.*

RADIO_UDP_IPADDR=localhost

Radio UDP export to this UDP port number.

RADIO_UDP_PORTNUMBER=12060

Radio UDP export unchanged radio information no more often than this.

RADIO_UDP_THROTTLE_SECONDS=10

Continue Radio UDP export at WriteLog startup.

RADIO_UDP_AT_STARTUP=1

*Rotator UDP export to this IP address. Default is local machine only. Set to **All Local Networks** to broadcast on all network adapters.*

ROTATOR_UDP_IPADDR=localhost

Rotator UDP export to this UDP port number.

ROTATOR_UDP_PORTNUMBER=12045

Continue Rotator UDP export at WriteLog startup.

ROTATOR_UDP_AT_STARTUP=1

See also

[INI File Options](#)

WRITELOG.INI [Rigs]

[Rigs]

The COMn:= settings in [RIGS], as of version 10.41, are used for rig control (only)—but just to control the baud rate and number of stop bits, and CTS/RTS flow control. WriteLog always sets no parity and 8 bit characters for rig control, regardless of the COMn: settings. Add the letter p to the end to enable CTS/RTS flow control, as in the second example here:

```
COM1:=9600,n,8,1,  
COM2:=4800,n,8,2,p
```

The COMn_RTS_INIT and COMn_DTR_INIT settings are for the ports used for rig control (only—not FSK or any other COM port uses) and change the way WriteLog initializes the RTS and DTR lines on the rig port. Setting the value to 0 (zero) causes WriteLog to initialize the line off. Setting the value to 1 (one) causes WriteLog to initialize the line on (which is the default if there is no entry). Setting the value to anything else, like -1 (minus one), causes WriteLog to not change the port. WriteLog supports RTS/CTS flow control for some rig drivers that turn that feature on, but only if you also set COMn_RTS_INIT = -2

```
COM1_RTS_INIT=-2  
COM1_DTR_INIT=1
```

*In some station setups for digital modes **only**, the rig reports TX/RX frequencies offset from the center frequency of the on-the-air transmission. (This is particularly likely in an AFSK setup.) The two INI entries below cause WriteLog to offset the TX/RX frequencies it uses compared to what the rig uses. With a second rig set to CW and listening to your digital mode transmitted signal, its received frequency is the on-the-air transmitted frequency. Note your transmitting rig's frequency and subtract it from the on-the-air frequency. This result, including any negative sign, becomes the COM_n_DIGITAL_OFFSET_HZ. WriteLog only applies these offsets if the rig reports a digital mode, or if the LsbIsFsk is option is set and the rig is in LSB mode. The n value corresponds to the COM port number that is used to connect to the rig.*

```
COMn_DIGITAL_OFFSET_HZ=0
```

*The following entries override WriteLog's default setting for the Icom rig address for the various Icom rigs. All rigs that have Icom rig addresses have corresponding entries in WriteLog.ini here under the name that matches the name in the Setup Ports dialog **including space characters!***

```
Icom IC-781=0x33  
Icom IC-756PRO=0x12
```

Setting IcomForceSplit to 1 causes the WriteLog Icom driver to send a split on/off command to the rig every time it polls the rig for its frequency. This means that WriteLog is sure to know whether the rig is set for split.

```
IcomForceSplit=1
```

Setting it to 2 causes WriteLog to do the same as setting to 1, but, in addition, If you tune the rig from its front panel more than 500Hz after WriteLog has set it to split, then WriteLog automatically turns the split off.

```
IcomForceSplit=2
```

Note: WriteLog versions 10.30 and older behave like option (2) above for all non-zero settings of this option.

The WriteLog Icom rig command driver will look up commands from the [Icom_Commands] section in writelog.ini based on the command number in keyboard shortcuts. The keyboard shortcuts numbered 1 through 9 are used internally by WriteLog, therefore the first command from this ini file section is number 10. Use the text "Macro_" followed by the number of the macro to specify the commands to be sent to the rig when you activate the corresponding keyboard shortcut. To the right of the equals sign, "=", list the byte values, in hexadecimal, that make up the command and with a space character between each byte. The WriteLog Icom driver adds the appropriate framing characters so do not present them here. (0xfe, rig addressing and 0xfd if you're reading the Icom CI-V documentation.) Leading "0x" is accepted in this ini entry but not required, and the value is converted as hexadecimal with or without the leading 0x.

These examples send the Icom cancel DVK message for keyboard rig command(10), and DVK message T1 on rig command(11):

```
[Icom_commands]  
Macro_10=0x28 0x00 0x00  
Macro_11=0x28 0x00 0x01
```

For WriteLog to talk to the Kachina front panel software, it must know where the Kachina software is installed.

```
KACHINA_LOCATIONnn=c:\kachina\kc
```

The nn is the number of the COM port the Kachina is connected to, as the Kachina software calls for a different directory for each radio.

WriteLog by default sets the Orion RIT to 0 Hz on an RIT clear command. However, the rig also disables RIT in response. If you set OrionRITClearHz to a small number, the RIT will remain on.

OrionRITClearHz=1

The Yaesu FTDX-9000 has antenna and preamp settings some operators want set per ham band. Set either or both of these non-zero to enable WriteLog to set the antenna and preamp when it sets the rig frequency.

FTDX9000_RECALL_AN=1
FTDX9000_RECALL_PA=1

The Yaesu FTDX-9000 cannot accept commands at COMM port speeds. But there is no documentation about this restriction, so this number has been guessed. Making this smaller might make your set split commands, etc. go faster. Also try adding COMn:=9600:8,1,x to turn on RTS flow control for this rig.

FTDX9000_DELAY_MSEC=333

The Elecraft K3 rig driver configured with two Entry Windows on a single COM port will, by default, use that rig's antenna switch to model one rig on Antenna 1 and another on Antenna 2. Use this ini entry to turn that behavior off.

K3_USE_ANT_SWITCH=0

The Elecraft K3 rig driver and Icom driver support the %GP polling macro in f-key messages. This is the interval it polls.

K3_PTT_POLL_INTERVAL_MSEC=25
ICOM_PTT_POLL_INTERVAL_MSEC=25

When processing a message with %GP, WriteLog does not itself assert PTT unless you set this non-zero. Note that a deadlocked PTT on situation can occur if you set this non-zero. WriteLog will assert PTT using whatever configuration you set in Setup/Ports and then wait for the rig to say PTT is off. If your station is configured such that your rig's PTT is controlled by WriteLog, the two will deadlock with PTT down. Pressing ESCAPE will end the message, but that is simply a fail-safe and not a useful work around.

ASSERT_PTT_DURING_GP_MESSAGE=0

*When processing a message with %GP, WriteLog normally waits for the rig to signal PTT **on** before accepting a PTT **off** as ending a message. Set this to zero and WriteLog's %GP processing will accept the very first PTT **off** signal from the rig as an end-of-message indicator.*

WAIT_FOR_PTT_ON_THEN_OFF=1

When RC1101-Reboot is set non-zero and when Setup/Rigs specifies an RC-1101, command it to reboot when WriteLog starts up. The reboot takes 10 seconds.

RC1101-Reboot=0

Set LogFileFolder to make WriteLog create a rig command log named wlogio.log.

LogFileFolder=C:\temp\

See also

[INI File Options](#)

WRITELOG.INI [Cw-Decoder]

[Cw-Decoder]

The settings in this section apply ONLY to the main WriteLog View CW Decode window. They do not apply to the RttyRite CW display.

Slowest CW setting. (Note this is NOT in WPM)

MinCwIndex=21

Fastest CW setting. (Note this is NOT in WPM)

MaxCwIndex=3

pitch, in Hz, of the lowest CW filter for the right/left channels of the sound board

lowpitch_right=500

lowpitch_left=550

Channels=1 for mono, = 2 for stereo

Channels=2

See also

[INI File Options](#)

WRITELOG.INI [AudioReview]

[AudioReview]

The settings in this section apply to the AudioReview program.

*Select sound board to use for AudioReview playback*Not used with Separate Sound Device per radio set in WriteLog mixer setup. In that case, AudioReview is only to the Windows default sound playback device. WaveOutIndex=0

See also

[INI File Options](#)

WRITELOG.INI [Sked]

[Sked]

FlashColor=0x00bbggrr

OldSkedBkColor=0x00bbggrr

WRITELOG.INI [SOUNDS]

WriteLog will play certain wave files in response to keyboard input in order to signal the result of the keystroke in WriteLog. By default, WriteLog will not play a sound. However, if certain entries appear in WRITELOG.INI, WriteLog will play the corresponding sound. The entries are:

[SOUNDS]

NowIn_CALL=<path to .WAV file> *play if the keystroke moves the cursor to the CALL field*

NowIn_RST=<path to .WAV file> *play if the keystroke moves the cursor to the RST field*

NowIn_ZN=<path to .WAV file> *play if the keystroke moves the cursor to the ZN field*

...etc for all fields in the exchange. The string in this INI file must exactly match the title of the field in WriteLog's Entry Window.

ErrorIn_NR=<path to .WAV file> *play if the keystroke moves the cursor to the CALL field*

ErrorIn_ZN=<path to .WAV file> *play if the keystroke moves the cursor to the ZN field*

...etc for all fields in the exchange

Mult=<path to .WAV file> *play if the keystroke moves the cursor to a new field and WL detects a new multiplier*

Dupe=<path to .WAV file> *play if the keystroke moves the cursor to a new field and WL detects the call is a DUPE*

In all cases, WL plays at most one sound, and it only does that in response to a keystroke. If the keystroke does not cause WL to move the cursor to a new field, it plays no sound. If there is no INI entry, then WL plays no sound (for example, the keystroke moves the cursor to the RST field, but there is no NowIn_RST entry).

The "ErrorIn_" sounds happen only when you press <CR> to log a QSO, and the sound is only played if WL refuses to log the QSO and moves the cursor to the bad field. WL plays the sound ErrorIn_XYZ corresponding to the name of the field it moves to.

WRITELOG.INI [Cut-Numbers]

This section contains the mapping for cut numbers for handing the %N command in CW transmission. Here is what you will get if you don't set up this section:

```
0=0
1=1
2=2
3=3
4=4
5=5
6=6
7=7
8=8
9=9
LeadingZero=T
```

The LeadingZero=T setting determines the leading zero character substituted by the message % macro with the defined digit count (the %N).

The 0=0 determines the rest of the zero characters.

See also

[CW and RTTY and Voice Memory Setup](#)

GreatCircle.ini [GreatCircleLookups]

[GreatCircleLookups]

FileLabel=ConvertedCtyFileName.bin

AnotherFileLabel=ConvertedCtyFileName2.bin

The Great Circle Bearings window will load all the callsign-to-location databases it finds in this section of GreatCircle.ini. The file GreatCircle.ini is located in WriteLog's ProgramData directory, which is different depending on your operating system. On Windows 7, the location is C:\ProgramData\Writelog.

The FileLabel to the left of the “=” sign is not used, but must be present in the INI file. The name to the right of the “=” sign must be the name of a file created by [ReadCty32.exe](#). If the entry is just a file name without the full directory path to the file, WriteLog looks for the file in its \programs folder.

DXCCWAE.DAT is always loaded, and is always used last by Great Circle Bearings when looks for a latitude and longitude and “country name” to go with a call sign.

See also

[Customizing the DXCC list with CTY files](#)

[Great Circle Bearings](#)

WRITELOG.INI [KeyboardShortcuts]

[KeyboardShortcuts]

Each definition in this section assigns a command to a given keyboard key. The keys and command must be spelled correctly, else WriteLog will silently ignore the entries here. Its better to set these entries using WriteLog's [Tools Keyboard Shortcut](#) menu item.

<key>=<command>

WRITELOG.INI

[Kenwood_Commands]

[Kenwood_TS850_Commands]

[Kenwood_TS2000_Commands]

[KENWOOD_TS590_COMMANDS]

The WriteLog Kenwood rig command driver will look up commands from this section in writelog.ini based on the command number in keyboard shortcuts. The keyboard shortcuts numbered 1 through 9 are used internally by WriteLog, therefore the first command from this ini file section is number 10. Use the text "Macro_" followed by the number of the macro to specify the commands to be sent to the rig when you activate the corresponding keyboard shortcut.

These examples send the Kenwood command Antenna #1 on keyboard rig command(10), and Antenna #2 on rig command(11)

```
[Kenwood_commands]
Macro_10=AN1;
Macro_11=AN2;
```

There are similar [Kenwood_TS850_Commands], [Kenwood_TS890_Commands], [Kenwood_TS990_Commands], [Kenwood_TS2000_Commands], [KENWOOD_TS590_COMMANDS] that correspond to their respective rig driver settings in the Setup/Ports dialog.

```
[Kenwood_TS850_commands]
Macro_10=UP;
Macro_11=DN;
```

```
[Kenwood_TS2000_commands]
Macro_10=DN;
Macro_11=UP;
```

```
[KENWOOD_TS590_COMMANDS]
```

See also

[Keyboard shortcuts](#)

WRITELOG.INI

[Elecraft_K2_commands]

The WriteLog K2 rig command driver will look up commands from this section in writelog.ini based on the command number in keyboard shortcuts. The keyboard shortcuts numbered 1 through 9 are used internally by WriteLog, therefore the first command from this ini file section is number 10. Use the text "Macro_" followed by the number of the macro to specify the commands to be sent to the rig when you activate the corresponding keyboard shortcut.

These examples send the Elecraft K2 command RIT up on keyboard rig command(10), and RIT down on rig command(11)

```
[Elecraft_K2_commands]
Macro_10=RU;
Macro_11=RD;
```

See also

[Keyboard shortcuts](#)

WRITELOG.INI

Elecraft K3 Rig Driver

This rig driver allows two rows (i.e. two "slots") in WriteLog's Setup/Ports dialog to both be configured to use the same rig on a single COMM port. The second slot can be connected from a second WriteLog Entry Window and the K3 subreceiver can be controlled from that Entry Window as if it were almost a separate rig. The restrictions are listed below.

1. VFOA is mapped to the "rig on COMMn" Entry Window.
2. VFOB is mapped to the "rig(2) on COMMn" Entry Window
3. TX focus on the rig(2) Entry Window puts the radio into split mode.
4. Antenna switching is as follows.
 - If there is no KAT3 option present, then WL does nothing with antenna switches.
 - If you set the K3_USE_ANT_SWITCH WRITELOG.INI option to 0, WL also does nothing with the antenna switch.
 - If K3_USE_ANT_SWITCH=1, then WL maps the MAIN receiver to ANT1 and SUB to ANT2, else if K3_USE_ANT_SWITCH=2, then WL maps the MAIN receiver to ANT2 and SUB to ANT1
 - With TX focus on Entry Window 1, the K1 SUB receiver relay is set to the "AUX" position. and the KAT3 relay is set according to K3_USE_ANT_SWITCH
 - With TX focus on Entry Window 2, the K1 SUB receiver relay is set to "MAIN" position (such that it shares the MAIN RX's antenna connection) and the KAT3 relay is set according to K3_USE_ANT_SWITCH, but opposite of the (d) setting

The guideline for setting K3_USE_ANT_SWITCH is that setting it to zero essentially means the sub receiver is restricted to the same band as the main receiver. Setting it non-zero means the sub receiver uses the the opposite KAT3 ANT connector as MAIN, and can therefore operate on a different band.

This is almost SO2R on one radio, but there are restrictions compared to what would happen if you had two separate radios:

1. The K3 sub receiver must be able to run full duplex (listen while transmitting). This may or may not be possible. The Elecraft web site indicates that under certain conditions it might be possible. But even if it is possible, it will only work with TX focus on Entry Window 1. With TX focus on Entry Window 2, both receivers must share an antenna connection, which precludes full duplex receive while transmit.
2. Split operation is possible only on Entry Window 1. Attempts to set split on rig(2) are ignored.
3. With K3_USE_ANT_SWITCH nonzero and TX focus on rig(2), both receivers listen on the VFOB antenna. With TX focus on VFOA, the two receivers are listening on different antennas which presumably is what you want (because K3_USE_ANT_SWITCH is not zero).
4. If you press the K3 front panel SPLIT button or the front panel RX ANT button, then the rig can be put in a state inconsistent with the software. If TX focus happens to be on VFOA and you set or clear SPLIT, then the rig driver need take no action and instead reflects the split changes back through to the rest of the program. But if TX focus is on VFOB and you turn SPLIT off, then the rig state is inconsistent with the software assumptions (The TX frequency does not match the VFOB frequency), so the rig driver issues the "FT1;" command to put the rig back in the state it wants. Similarly, if you press the RX ANT button, the rig will be inconsistent with the software and the driver issues the SWT25; command to put the rig in the state the software demands. Again, all of this only happens if K3_USE_ANT_SWITCH is nonzero.
5. if you switch ANT between 1 and 2 from the front panel, the driver can detect this, but does not attempt to fix it, assuming the operator knows what he is doing. The next time Transmit focus is changed the ANT switch will be put back to that dictated by K3_USE_ANT_SWITCH.

The WriteLog Elecraft K3 rig command driver will look up commands from the [Elecraft_K3_Commands] section in writelog.ini based on the command number in keyboard shortcuts. The keyboard shortcuts numbered 1 through 9 are used internally by WriteLog, therefore the first command from this ini file section is number 10. Use the text "Macro_" followed by the number of the macro to specify the commands to be sent to the rig when you activate the corresponding keyboard shortcut.

These examples send the Elecraft K3 command RIT up on keyboard rig command(10), and RIT down on rig command(11)

```
[Elecraft_K3_commands]
Macro_10=RU;
Macro_11=RD;
```

This rig driver also uses the[RIGS]K3_USE_ANT_SWITCH=0 setting.

See also

[Keyboard shortcuts](#)
[SO2V Options](#)

[\[RIGS\]](#)

WRITELOG.INI

[YAESU_COMMANDS]

Yaesu FTDX-9000, FTDX-5000, FT-2000 rig commands

The WriteLog Yaesu rig command driver will look up commands from the [YAESU_Commands] section in writelog.ini based on the command number in keyboard shortcuts. The keyboard shortcuts numbered 1 through 9 are used internally by WriteLog, therefore the first command from this ini file section is number 10. Use the text "Macro_" followed by the number of the macro to specify the commands to be sent to the rig when you activate the corresponding keyboard shortcut.

```
[Yaesu_commands]  
Macro_10=yaesu rig command;
```

See also

[Keyboard shortcuts](#)
[\[RIGS\]](#)

WRITELOG.INI [OneDevicePerRadio]

[OneDevicePerRadio]

EnergyDetectLookbackSampleCount=2000

The default value if no entry appears in writelog.ini

EnergyDetectRatio=50

The default value is 50. Zero forces the right channel to always be copied to left.

LeftReceiverHeadphonesAutoDetectSubreceiver=1

set nonzero and WriteLog monitors the power in the R audio channel compared to the L. It compares the most recent EnergyDetectLookbackSampleCount samples and if the power in the L channel is more than EnergyDetectRatio times the power in the R channel, then the L channel is copied to the R. This detects that the subreceiver is off and copies the main receiver audio to both ears. This INI setting affects only the audio going to the headphones.

RightReceiverHeadphonesAutoDetectSubreceiver=1

Same as above, but for the right receiver.

WRITELOG.INI

[ControlSite]

When operating as a control site, WriteLog can log its commands sent/received to the remote. This log can be useful for bug reports.

This example creates a log file at c:\temp\controlsitelog.

[ControlSite]

LogFileName=c:\temp\controlsitelog

WRITELOG.INI [TuneShortcuts]

The step sizes, in hertz, for the RigTune keyboard shortcuts appear in this INI section. When WriteLog's Keyboard Shortcuts editor changes the values here, it always places matching positive and negative values, and it maintains the sort order. You may change them with an editor such they are not sorted or matching, but the next time you edit them with WriteLog, it will replace the settings here with matching negative and positive values.

[TuneShortcuts]

Tune1ShortcutHz=-15000
Tune3ShortcutHz=-3000
Tune7ShortcutHz=3000
Tune9ShortcutHz=15000

LPT Port pin Assignments

As can be seen from the pin assignments, the NA DVK, the W5XD Outboard keyer, and the Antenna relay all have conflicting pin assignments on an LPT port, so no two of them can be selected for a given LPT port. However, the “PC Generates form of CW” and the WAV file transmission PTT assertion, and the rig A/B assertion conflict with nothing else and can be assigned to any LPT port regardless of anything else you have assigned to the LPT ports.

The PTT and A/B outputs appear on the LPT port selected for DVK. The CW output has a separately selectable LPT port, which can be the same as the DVK setting, or can be different.

LPT ports are supported on Windows 95/98 but not on Windows NT.

<u>Pin</u>	<u>NA DVK</u>	<u>W5XD</u>	<u>Ant rly</u>	<u>WAV</u>
<u>1</u>	<u>CW</u>			
<u>2</u>	<u>abort</u>	<u>used</u>	<u>LSB</u>	
<u>3</u>	<u>msg1</u>	<u>used</u>		
<u>4</u>	<u>msg2</u>			
<u>5</u>	<u>msg3</u>			
<u>6</u>	<u>msg4</u>	<u>high</u>		
<u>7</u>	<u>msg5</u>	<u>high</u>	<u>used</u>	
<u>8</u>	<u>msg6</u>	<u>high</u>	<u>used</u>	
<u>9</u>	<u>msg7 *</u>	<u>high</u>	<u>MSB</u>	
<u>10</u>				
<u>11</u>		<u>used</u>		
<u>12</u>				
<u>13</u>				
<u>14</u>	<u>A/B</u>			<u>A/B</u>
<u>15</u>				
<u>16</u>				<u>PTT</u>
<u>17</u>	<u>CW</u>			
<u>18</u>	<u>GND</u>	<u>GND</u>	<u>GND</u>	<u>GND</u>
<u>19</u>	<u>GND</u>	<u>GND</u>	<u>GND</u>	<u>GND</u>
<u>20</u>	<u>GND</u>	<u>GND</u>	<u>GND</u>	<u>GND</u>

You need to set one of the LPT port buttons in the DVK column in [Setup Ports](#) to tell WriteLog to control the A/B output on pin 14.

* For the NA keyer, instead of msg7 on Pin9, the [Ports] NaDvkHpSplitOnPin9 INI entry nonzero makes this pin controlled by the Radio Headphone Split/Normal menu items.

See Also

[Outboard Keyer](#)

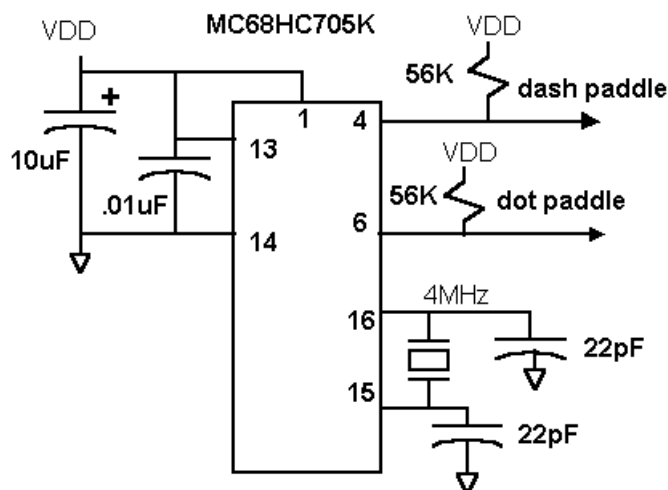
[Setup Ports](#)

Outboard Keyer

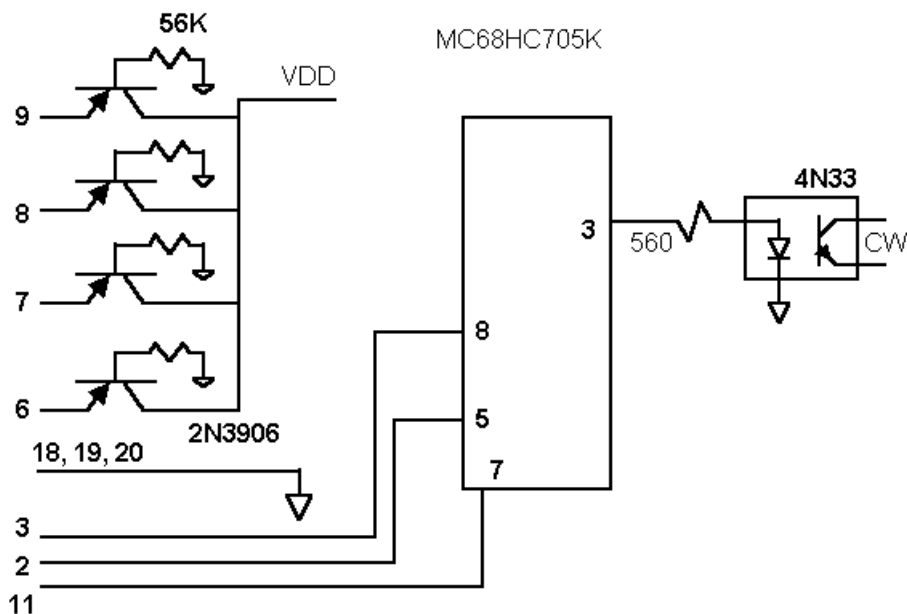
There are two keyer chips supported by WriteLog. This documentation page is for the older 16 pin chip. That chip is still supported by WriteLog, but if you're planning to build a keyer, please see the keyer information at <http://www.writelog.com> for the more recent models.

The W5XD keyer for CW is a microprocessor CW keyer that adds paddle inputs, A/B microphone switching, and latching A/B headphone control as options. The microprocessor is a programmed MC68HC705K1. They are no longer available.

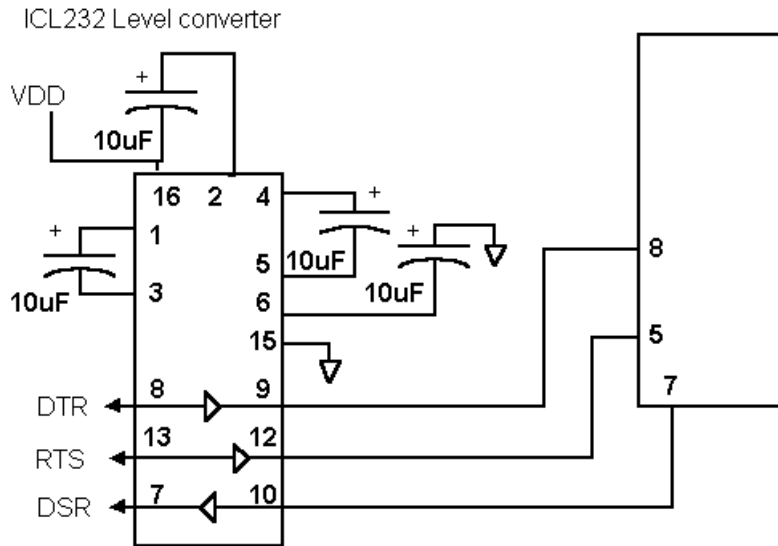
Several configurations are possible depending on exactly which circuit you build. It can be run from an LPT port, or it can be run from a serial port. And, in either case, it can be used simply to produce CW, or, optionally, it can be wired for various control functions. No matter how it is used, the chip must be wired for power and ground, and must have a 4MHz crystal connection, and the paddle inputs, even if no paddles are connected, must be wired to pull up resistors:



The keyer can be wired to derive its power from the LPT port (not supported on Windows NT), and the output can be as simple as providing CW for a single rig through an opto-isolator:

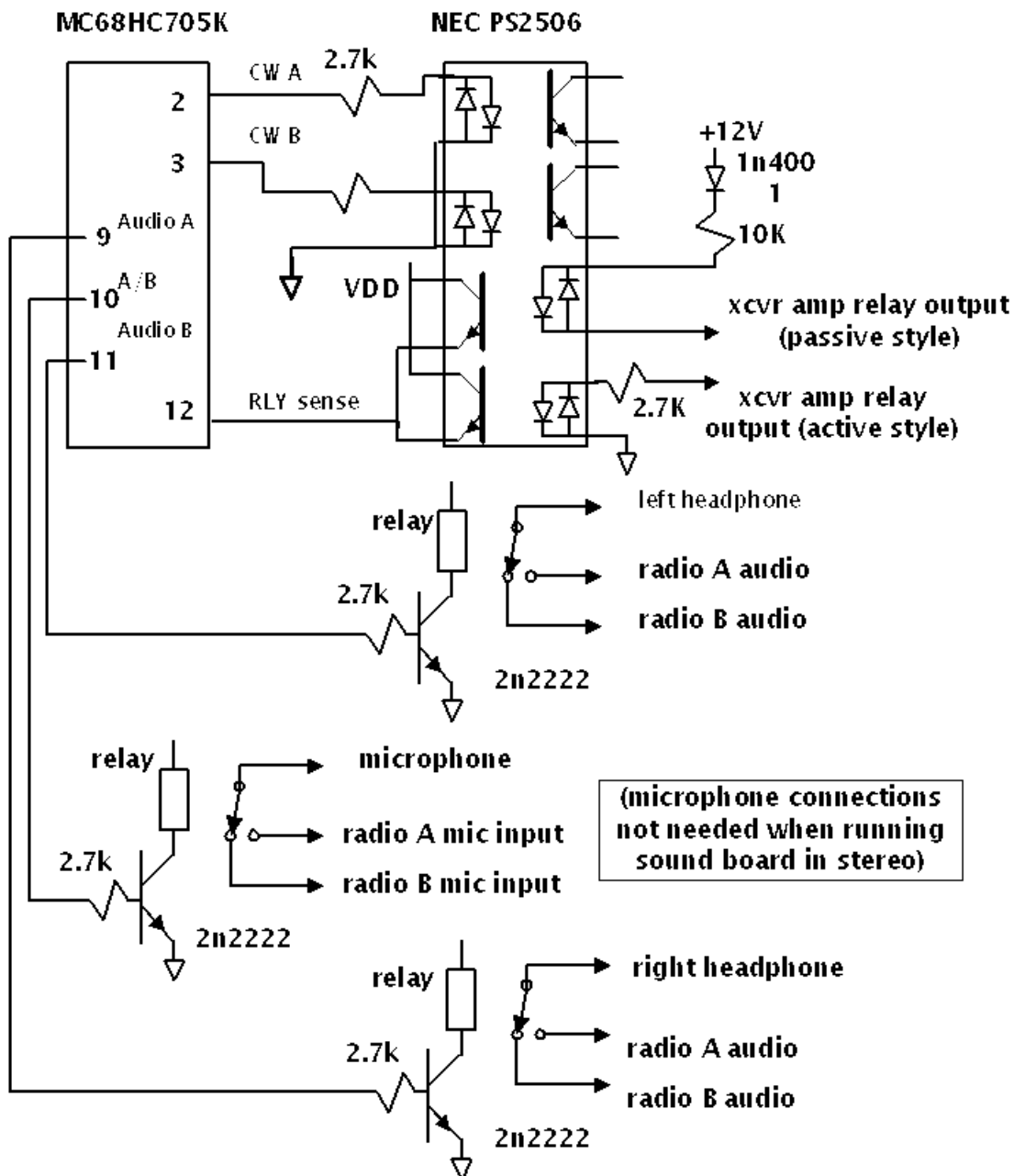


As an alternative to the LPT connection, the keyer can be wired to a serial port as shown. The serial port connection requires a 5V power supply, and requires an RS-232 to 5V level conversion:



Finally, the keyer chip can be wired for several control functions. Any of these can be omitted or used as desired by the builder:

1. Pins 2 and 3 of the 68HC705 provide two separate CW outputs, one each for two radios. They should be connected through opto-isolators as shown
2. Pins 9 and 11 of the 68HC705 are useful for controlling headphone audio for two radios. Each output is designed to control one earphone. The Entry Window "Radio" menu item controls whether the headphones play one radio or the other, or one radio in each ear. The Radio Headphone Latch menu entry (or CTRL+X) sets WriteLot to latch both ears onto the second radio during all transmissions. The keyer knows what "during a transmission" means if it is transmitting CW. Additionally it can sense the amplifier relay activation from your transceivers if you have connected as in the next item:
3. A high signal on pin 12 holds the headphones on the second radio from a CTRL+X keystroke as long as the amplifier relay is held active by the transceiver. The opto-isolator in the diagram below is wired to hold pin 12 high as long as there is current through either of its input diodes. There is no standard for how amplifiers sense the transceiver's PTT, so you will need to improvise the circuit. Two possibilities are shown. Note that two transceivers can be OR wired to pin 12 as shown. The chip need not know which radio is signaling PTT in order to hold the headphone latch properly.
4. pin 10 provides a rig A/B output controlled by the Entry Windows "Radio" menu items. This output is the same as is provided on pin 14 of an LPT port when using the "PC generates" CW option.



See Also

[CW Interfacing](#)

[LPT Port pin Assignments](#)

OLE Automation

WriteLog exports its functions for OLE programming tools, allowing you to customize it and integrate it with other applications. These section documents the WriteLog automation interface for customization by OLE programmers:

OLE is the old name for what Microsoft now calls COM.

[Writelog.document Object](#)

[Entry Object](#)

[Writelog.packet Object](#)

[SDR Automation Object](#)

Writelog.document Object

The WriteLog Setup programs registers the object named "writelog.document" in the Windows system registry. Using an OLE Automation tool to create an object of this name will launch the WriteLog program (unless it was already running). The object properties are:

Visible

A value of zero is invisible, and one is visible. The object is created invisible

The OLE Automation methods on this object are:

Activate

Takes the keyboard focus.

CreateEntry

This method creates a new Entry Window and returns a WriteLog Entry object (described in the next section) which has its own properties and methods

GetMemMsg(MemoryNumber)

This method takes an integer argument and returns a string indicating the value of the corresponding CW/RTTY memory. An argument of 2 returns the string corresponding to the memory at F2, a 3 argument gives the F3 string, etc.

SetFKeyMsgDigital(MemoryNumber, MemoryContents)

This method sets WriteLog's corresponding RTTY memory for FKey transmission. Memory numbers 0 through 9 correspond to F2 through F11, and 10 through 19 correspond to shift-F2 through shift-F11.

GetFKeyMsgDigital(MemoryNumber)

This method returns a string indicating the value of the RTTY memory. An argument of 0 through 9 returns the string corresponding to the memory at F2 through F11, and 10 through 19 return the shifted memories.

SetFKeyMsgCw(MemoryNumber, MemoryContents)

This method sets WriteLog's corresponding CW memory for FKey transmission. Memory numbers 0 through 9 correspond to F2 through F11, and 10 through 19 correspond to shift-F2 through shift-F11.

GetFKeyMsgCw(MemoryNumber)

This method returns a string indicating the value of the CW memory. An argument of 0 through 9 returns the string corresponding to the memory at F2 through F11, and 10 through 19 return the shifted memories.

SetFKeyMsgVoice(MemoryNumber, MemoryContents)

This method sets WriteLog's corresponding SSB/Voice memory for FKey transmission. Memory numbers 0 through 9 correspond to F2 through F11, and 10 through 19 correspond to shift-F2 through shift-F11.

GetFKeyMsgVoice(MemoryNumber)

This method returns a string indicating the value of the SSB/Voice memory. An argument of 0 through 9 returns the string corresponding to the memory at F2 through F11, and 10 through 19 return the shifted memories.

FileClear

Removes all QSOs from the log.

FileSave

Saves the current file in .WL format.

FileSaveAs(FileName, Format)

Saves the current data as FileName. The Format argument results in a file:

1. WriteLog compound file format
2. not used
3. WriteLog 6.0 binary format
4. ASCII formatted for printing
5. QSO data in DIFF format
6. QSO data in WK1 format
7. QSO data in ASCII, no formatting
- 8.
9. QSO data in comma delimited ASCII
10. minimal data per QSO in comma delimited ASCII
11. ADIF format
12. ASCII by band
13. ASCII by radio

FileOpen(FileName, Format)

Reads FileName. The Format means:

1 Read a .CNT file (either compound file or binary)

2-7 not used

8 Read a CT Version 8 BIN file

GetParent

Always returns zero

GetCurrentEntry

Returns the WriteLog Entry Object for the Entry window that currently holds the keyboard focus, if there is one.

GetFocusEntry

Returns a WriteLog Entry Object that is attached to the Entry window that has the keyboard focus, and switches among entry windows following the keyboard focus.

GetEntry(Radio)

Returns the WriteLog Entry Object for the corresponding Radio, where Radio = 0 means the top Entry window, Radio = 1 is the second one (and 2 and 3 are for the third and fourth).

Copy

Does the same as Edit Copy view to clipboard.

SelectAll

Selects all QSOs in the log and highlights them.

Paste

Does the same as Edit Paste.

PasteLink

Does the same as Paste Link.

SetRig(CommIndex, Mode, Transmit, Receive, Function, Split)

If rig control is currently enabled this function sets the rig to the state given:

CommIndex

An integer from 0 through 3 corresponding to the rig on COM1 through COM4.

Mode

The mode is an integer from 1 through 6 corresponding to: LSB, USB, CW, FM, AM, and DIG, in order.

Transmit, Receive

The frequency as an integer, in Hz.

Function

An integer. Zero means do the operation on VFO A, otherwise VFO B.

Split

Nonzero means set the rig for split frequency operation

GetMultiModule

Returns the OLE Automation object for the currently selected multiplier module. Returns zero if there is no multiplier module currently selected, or if there is one, but it does not support OLE automation

SendProgramMsg(MemoryNumber)

Sends the CW or phone message (depending on the current mode) corresponding to MemoryNumber where 2 means F2, 3 means F3, etc

void NewSpot(string Call, double Rcv, double Xmit, short Mode)

Tells WriteLog to add a spot to its spot list. The frequencies are in KHz. The mode is an integer from 1 through 6 corresponding to LSB, USB, CW, FM, AM, DIG, in that order.

void NewSpotEx(BSTR Call, double Rcv, double Xmit, short Mode, BSTR Note)

Tells WriteLog to add a spot to its spot list. Same as NewSpot, but adds a string Note that WriteLog displays in its packet spot window.

GetSummaryObject()

Returns the Band Summary object, which in turn has this method:

GetSummary(Score, BandTitles, ColumnTitles, SummaryArray)

Score is Long, BandTitles, ColumnTitles, and SummaryArray are all variants.

BandTitles will be set to a one-dimensional array of strings to match the band titles in WriteLog's band summary,

ColumnTitles a one-dimensional array of strings to match the column titles, and SummaryArray a two-dimensional array of

Longs. SummaryArray(Column, Row) gives the summary entry.

GetCurrentOperator()

Returns a string which is the current operator from Entry Change Operators

long GetRates(short BandNumber, short Flags, long* RateShort, long* RateLong, long* RateShortExt, long* RateLongExt)
Calculates QSO rates and returns them. BandNumber is the index of the band to calculate the rate for: 0 is the lowest frequency band, 1 is the next. -1 means to calculate the rate across all bands.

The low order bit of Flags determines whether the rate is calculated as the last 10 minutes or last 10 QSOs. The last four parameters are returned by the function. The first two are in units of QSOs/hour. The last two are in units of minutes.

void SetFKeyMsgDigital(short MemNumber, string value)

Sets the memory Message02 to MessageShift21 using MemNumber 0 through 19.

string GetFKeyMsgDigital(short MemNumber)

Returns the memory Message02 to MessageShift21 using MemNumber 0 through 19.

void SetFKeyMsgVoice(short MemNumber, string value)

Sets the memory message for SSB Message02 through Message21 using MemNumber 0 through 19

string GetFKeyMsgVoice(short MemNumber)

Returns the memory message for SSB Message02 through Message21 using MemNumber 0 through 19

void NewSpot2(string Call, double Rcv, double Xmit, short Mode, string Note, string Spotter)

Adds a spotted CALL at the given frequency in kHz along with the Note and Spotter.

short ModifyBlacklist(string Call, short AsSpotter, short RemoveCall)

Adds (or removes with nonzero RemoveCall) the designated Call from the designated blacklist.

string[] GetKeyboardCommandList()

Returns an array of all the "Command to run" strings in the keyboard mapping.

short InvokeKeyboardCommand(string command)

Invokes the given keyboard command. Returns 0 if it succeeded, or 1 if the command was not found.

propget short CALLFieldNumber()

Property giving the field number in the entry window corresponding to CALL.

propget, propput short TimedCqMessageNumber()

Property indicating which MessageNN will trigger timed CQ's. Value 2 corresponds to Message02. Anything less turns off timed CQ's. Can be read and set.

propget, propput short HeadphonesSplit()

Property indicating whether the headphones are split. Can be read and set. Non-zero means set the headphones split.

GetQsoCollection()

IQsoCollection is returned. Import WriteL32.exe (or use WriteLogClrTypes.dll for .net) to automate it. IQsoCollection supports notification callbacks on its AddNotifyCallback() method. See <https://github.com/w5xd/writelog-automation-demo> for an example.

GetFixedBandMap(unsigned short whichFixed)

If there is a fixed Band Map corresponding to whichFixed (one-based) then its IBandMapView is returned. Import BandMapWL12.dll from WriteLog's Programs folder to automate it.

GetFocusState()

Returns an object that can be queried for transmit or keyboard focus state. Its properties are KeyboardFocus and TransmitFocus. Each returns a one-based number indicating which Entry Window has the keyboard(or transmit) focus. A zero return means none of them.

short SetRigSlotDTR(short slot, short value)

slot must be in the range 1 through 4.

For value greater than zero sets the DTR signal on the rig port, or clears it if value is zero. Returns zero on success.

short SetRigSlotRTS(short slot, short value)

slot must be in the range 1 through 4.

For value greater than zero sets the RTS signal on the rig port, or clears it if value is zero. Returns zero on success.

short SetCwPortDTR(short value)

For value greater than zero sets the DTR signal on the CW Winkey port, or clears it if value is zero. Returns zero on success.

short SetCwPortRTS(short value)

For value greater than zero sets the RTS signal on the CW Winkey port, or clears it if value is zero. Returns zero on success.

property string CallUsed

Gets the CALL set up in the Cabrillo export dialog.

property object GetSdr(short which)

which must be in the range of 1 through 3 corresponding to the SDR setup in WriteLog Setup/SDR dialog. The return is non-null for configured SDRs. The type of the returned object is [IWriteLogSDRAutomation](#).

int AbortOrShortenCwCQ()

Attempts to abort a CQ in progress. Returns non-zero if the CQ is aborted, or zero if an atomic section is in progress. If an atomic section is in progress, the message transmission is terminated at the end of the atomic section.

Entry Object

This object corresponds to an Entry Window. Its properties are:

Callsign

This property corresponds to the string in the CALL field in the Entry Window. Note that the SetFieldN and GetFieldN methods (below) can also set and return the Callsign field by using the correct value of FieldNumber for the contest.

CurrentFieldNumber

An integer corresponding to the field number that currently has the caret in the Entry Window.

Value

The Value property is identical to the Callsign property.

Field(integer num)

is the string value of the "field" in the entry window. "Num" can be from zero the total number of fields in the exchange. This includes fields not in the prompt set in the Entry Window (which distinguishes this property from the SetFieldN/GetFieldN capability below).

FieldTitle(integer FieldNumber)

returns the title of the entry field.

The methods for the Entry object are:

Activate

Takes the keyboard focus.

GetParent

Returns the corresponding Writelog.document object

Dupe

This method takes no arguments. It runs a dupe check, updates the Entry window display line for dupes, and returns a value of 1 if the Callsign is a dupe of one already in the log, and a 0 otherwise.

ClearEntry

takes no arguments and clears all the fields in the Entry window.

EnterQso

takes no arguments and enters the QSO in the log. Its exactly like typing ENTER-the Log window is updated with the new QSO, the Entry window is cleared, and its ignored if the CALL field is blank.

GotoQso

looks for a QSO in the log with a call sign containing the characters in the CALL field of the Entry Object. The QSO is highlighted

SetFieldN(FieldNumber, Value)

puts the Value string argument into the Entry window field indicated by FieldNumber, and returns FieldNumber on success, or 0 on failure. The first field (the CALL field in many contest exchanges) corresponds to a value of 1 for FieldNumber.

SetCurrentField(Value)

puts the Value string argument into the Entry window field that currently has the caret, and returns FieldNumber on success, or 0 on failure.

PutBestField(Value)

puts the Value string argument into the Entry window field best fits the current contest, and returns FieldNumber on success, or 0 on failure. WriteLog must have a multiplier module loaded to select the best field. Otherwise the Value goes in the current field.

GetFieldN(FieldNumber)

returns the string in the Entry window field corresponding to FieldNumber. A fieldNumber of 1 is the first (left most) field in the display. It returns a 0 on failure. Note that a zero length string is different, and is a success return indicating the requested field is empty.

GetFieldWidth(FieldNumber)

returns the number of characters in the field numbered GetFieldWidth.

SetLogFrequency(Mode, Frequency)

Sets the frequency and mode for subsequent QSOs logged from the Entry window. Returns the mode number actually set, or -1 on an error. The mode numbers are integers from 1 through 6, as in SetRig, above. The parameters are

Mode

An integer from 1 through 6 for LSB through DIG as in SetRig, above, or 0 if the mode is to be read from the rig (for DupeMode equals 3) or calculated from the Frequency parameter (DupeMode equals 1 or 2).

Frequency

The frequency in kHz to be logged for subsequent QSOs.

SetLogFrequencyEx(short Mode, double ReceiveFrequency, double TransmitFrequency, short Split)

Sets the frequency and mode for subsequent QSOs logged from the Entry window. Returns the mode number actually set, or -1 on an error. The mode numbers are integers from 1 through 6, as in SetRig, above. The parameters are

Mode

An integer from 1 through 6 for LSB through DIG as in SetRig, above, or 0 if the mode is to be read from the rig (for DupeMode equals 3) or calculated from the Frequency parameter (DupeMode equals 1 or 2).

ReceiveFrequency

The frequency in kHz to be logged for subsequent QSOs.

TransmitFrequency

The frequency in kHz to be logged for subsequent QSOs.

Split

Non zero means log as split frequency.

GetLogFrequency(short *Mode, double *ReceiveFrequency, double *TransmitFrequency, short *Split)

Returns the frequency and mode for QSOs logged from the Entry window. Returns the mode number, or -1 on an error. The mode numbers are integers from 1 through 6, as in [SetRig](#). The parameters are

Mode

An integer from 1 through 6 for LSB through DIG as in SetRig, above, or 0 if the mode is to be read from the rig (for DupeMode equals 3) or calculated from the Frequency parameter (DupeMode equals 1 or 2).

ReceiveFrequency

The frequency in kHz to be logged for subsequent QSOs.

TransmitFrequency

The frequency in kHz to be logged for subsequent QSOs.

Split

Non zero means log as split frequency.

GetSubreceiverFrequency(short *Mode, double *Frequency)

Returns non-zero if there is a subreceiver, and the Mode and Frequency are set like GetLogFrequency above.

IsNewMultiplier(FieldNumber)

Returns one if a multiplier check based on the Entry field FieldNumber is a new multiplier, zero if that multiplier has already been worked, or minus one if the multiplier module could not determine the multiplier.

MapStation(Time, Status)

Causes WriteLog to forward the contents of this Entry Window to the Band Map with Time seconds of timeout, and color determined by Status.

Time

Number of seconds to remain in the map

Status

determines what color the Band Map shows.

SeenThisContest()

returns 0 if the station in the CALL field has not been worked before in this contest, 1 if it has been worked on the current band, and 2 if it has been worked on any other band.

CalcLineStatus(Line)

returns an array of unsigned characters corresponding to the string argument "Line". A non zero value in the returned array indicates that the multiplier module has flagged the corresponding character in "Line".

GetBand()

returns the band number of the current band for the entry window, starting with zero. Returns -1 on error.

SetQsoTime(short Year, short Month, short Day, short Hour, short Min, short Sec)

Sets the time/date of the QSO to be logged when you call EnterQSO. Year is full year (1999, 2000, etc.) Month starts with 1 for January.

SetAntennaAzimuth(short Azimuth)

Turns any antenna under WriteLog control to the desired Azimuth. If Azimuth is specified less than zero, then the azimuth WriteLog uses is that of the callsign currently in its CALL field.

GetAntennaAzimuth()

returns the great circle bearing to the callsign currently in the CALL field.

GetAdifNameN(short FieldNumber)

returns the ADIF name of the field.

GetFieldAttributesN(short FieldNumber)

returns an integer with the attributes of the field encoded. The encoding is a bit field of these values:

0x01 the field is the callsign field

0x02 the field is purely numeric

0x04 the field is included in the Entry Window

0x08 reserved

0x10 display this field when a dupe check matches

0x20 reserved

0x40 not printed when set

0x80 this field cannot be edited

0x100 allow lower case

0x200 only tab exits this field

0x400 field is in overstrike mode

0x800 space character is not allowed in this field

0x1000 this field is required and cannot be left blank

0x2000 reserved

0x4000 this field is an RST

long SendCustomRigCommand(string cmd)

If the rig driver for this Entry Window supports custom rig commands, send the string to the rig serial port. Returns:

0 on success.

1 if there the Entry is set for Manual frequency entry.

-2 if the rig driver does not support sending custom commands.

void SendProgramMsg(short MemoryNumber)

Valid MemoryNumbers are 2 through 21 for the main 2-11 and shifted 12-21

void SetFocusWithPhones(short ifNotSplit)

Sets the keyboard focus. Sets the headphones to this radio as well, unless they are split and ifNotSplit is set.

void SetHeadphones(short ifNotSplit)

Set the headphones to this radio unless they are split and ifNotSplit is non zero.

void SetTransmitFocus()

Sets the transmit focus to this radio. Aborts any transmission in progress if its on a different radio.

void SetKeyboardFocus()

Moves only the keyboard focus to this radio, leaving the transmit and headphone focus unchanged.

property short IsBlank

This property returns nonzero if there is any data entered into the Entry

void PushCall()

Pushes the CALL field onto the call stack.

short GetEntryId()

Returns 1 for the top Entry Window, 2 for the next down, etc.

property unsigned SerialNumber

Get-Set property that overrides the serial number in the Entry Window. Set to zero before Get to allocate a new serial number.

void SetDateTimeFromADIF(string AdifDate, string AdifTime)

Sets the time for the QSO, should it be logged, according to ADIF-formated time and date

long SetFieldNnoValidate(short FieldNumber, string Value)

Sets the Field without checking its characters for validation.

WriteLog.pkt Object

The Packet capabilities in WriteLog are provided through an OLE automation object of class writelog.pkt. This object provides the following methods:

SendSpot(SpotMessage)

Sends SpotMessage to the connected TNC

SetWLObject(WLObject)

The packet window may use the WLObject to check dupes, or any other calls on the WriteLog.document object.

If you are a programmer, you can replace the packet object and have WriteLog use yours instead of its own. The ProgId WriteLog uses to create its packet object is stored in the [WRITELOG.INI](#) file [OBJECTS] section using the keyword "pktObject". If you modify the line in writelog.ini to name the ProgId of some other object, WriteLog will create it on a Tools Packet View... command. Your object must provide the two OLE automation methods as above, SendSpot, and Activate.

Writelog uses pktObject for the Packet menu entry, and pktObject2 for the Incoming-only Packet

[OBJECTS]

pktObject=writelog.pkt.9

pktObject2=writelog.pkt.9

WriteLog.rttyrite Object

The RTTY capabilities in WriteLog are provided through an OLE automation object of class writelog.rttyrite. This object provides the following methods:

SendMessage(Message)

Sends Message via RTTY. Rttyrite immediately goes to transmit mode and sends the message. It does not, however, automatically go back to receive. You should program the message with a deferred receive character at the end in order to make it go back to receive at the end.

SetWEntry(Object)

Tells RttyRite which Entry Window to connect to.

Show

The rtty window takes the keyboard focus, and, if iconized, expands itself.

DoTalk

A dialog box pops up, the transmitter is activated, and any characters typed are sent via RTTY.

AbortMessage

Any pending transmitted characters are cancelled and the rig is forced back to receive mode.

If you are a programmer, you can replace the rtty object and have WriteLog use yours instead of its own. The ProgId WriteLog uses to create its packet object is stored in the [WRITELOG.INI](#) file [OBJECTS] section using the keyword "rttyObject". If you modify the line in writelog.ini to name the ProgId of some other object, WriteLog will create it on a Tools RTTY View... command. Your object must provide the four OLE automation methods as above.

SDR Automation Object

An application can query WriteLog's connections to its SDRs. This IWriteLogSDRAutomation object provides the following properties:

- CenterFrequencyKHz The current center frequency of the SDR's IQ stream, in KHz.
- SampleRateHz The sample rate of the IQ stream.
- EntryWindowIndex This is the index, in the range of 1 through 4, of the Entry Window that is connected to the rig that is supplying the IQ stream. -1 if the SDR's frequency is fixed and not controlled by an Entry Window rig.
- DeviceId This ID is the WASAPI ID string of the *capture* device WriteLog is reading for the SDR, except if WriteLog is reading IQ from an ExtIO dll IQ stream. Then this ID is the WASAPI ID string of the *render* device, if any, that WriteLog is copying the stream to.

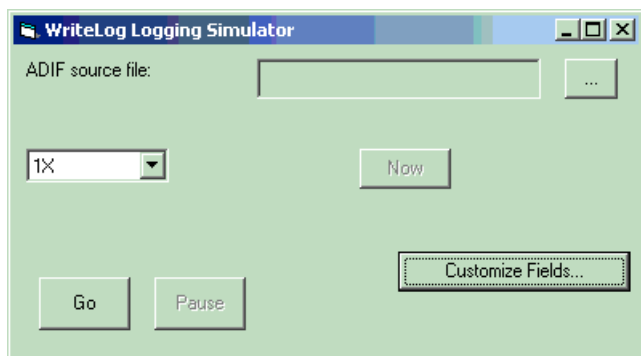
Acquire an IWriteLogSDRAutomation object from [IWriteL.GetSdr\(\)](#).

Logging Simulator

This Logging Simulator is a testing tool for WriteLog Software. It is not related to the [Contest Super Simulator](#).

The Logging Simulator reads an ADIF file of an existing log, and uses it to log QSOs into WriteLog using the same QSO information. It has options to log the QSOs at the same rate as they appear in the ADIF file, or to go 2X to 8X faster, or to log the QSOs as fast as it can get them into WriteLog.

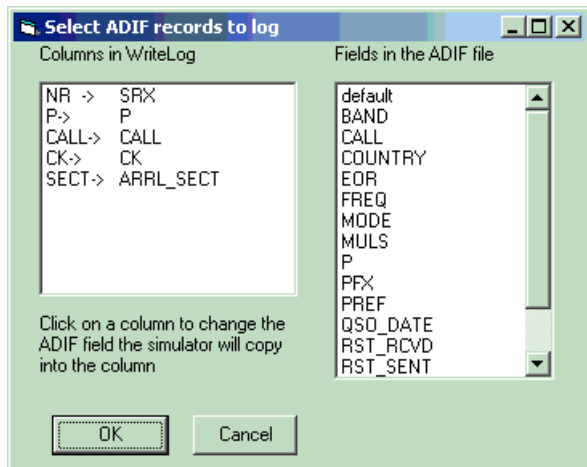
To use the simulator, first bring up WriteLog and select the contest you want to simulate. It does not matter if the log is empty—the simulator can add QSOs to any log, empty or not. Then bring up the simulator from the Windows Start menu, Programs, WriteLog V10, Logging Simulator



Click the (...) button and browse the the ADIF file you want the simulator to read. If the ADIF file is from the same contest as WriteLog, then you shouldn't need to modify the assignment the simulator makes from the columns in the ADIF log to the columns in the WriteLog log.

The simulator starts logging QSOs when you click the Go button, and it pauses when you click the Pause button. The Now button logs the next QSO immediately without waiting for the delay indicated by the time of the QSO in the ADIF file.

If you want to specify which column in the ADIF file becomes which column in WriteLog, then click the Customize Fields button to get this window:



In this window, click on an entry in the "Columns in WriteLog" list to select a WriteLog column. This will automatically highlight the ADIF column in the "Fields in the ADIF file" list that the simulator has chosen to copy to the WriteLog column. To override the selection, click on any of the entries in the ADIF file list.

The "default" entry in the ADIF list is special; the simulator simply enters nothing in the corresponding WriteLog column if you select "default".

File Extensions

All files end with a three character extension. By convention, files used for different purposes have different extensions. The conventions used by WriteLog are:

EXE	executable program files.
DLL	dynamic link library
WL	binary WriteLog Version 9 data file.
-DockingPanels.reg	on-screen window positions. See below .
CNT	binary WriteLog Version 8 (or earlier) data file.
TXT	chronological ASCII listing of the log.
CTY	user-editable listing of DXCC countries and their prefixes.
DAT	Binary data file with DXCC information encoded.
DIF	DIFF format. Also ASCII but can be read by some spreadsheets .
DUP	Dupe sheet listing. Identical to the printed File Print by call listing.
QSL	ASCII text listing of QSLs sent and received.
ADI	ADIF stand format. The <filename>_jou.adi is used by Keep backup...
WAV	Windows standard digitized audio
WK1	Spreadsheet format. (apache OpenOffice can still open this old format)
BIN	CT Version 8.0 binary format.
SubBands	Sub-band edges settings for the band map .

As of WriteLog version 12, the on-screen positions of the various docking windows is not saved in the .WL file, but instead is in the Windows registry. A snapshot of those registry settings is saved along with the .wl file when you File/Save. The name of the file is the same as the .wl file, but with -DockingPanels.reg appended to the name. *There is no routine reason to use this file.* Its only purpose is to enable recovering the on-screen window positions from the .wl file when you copy that file from one machine to another, and therefore to an environment where the Windows registry settings when you did File/Save are not available at File/Open. Even in this special situation, it might not be possible for WriteLog to make good use of the previous on-screen window positions because the screen size (and number of monitors) might not match what they were at File/Save time.

Spreadsheet Formats

To enable easy access to the sophisticated charting and reporting capabilities of spread sheets, WriteLog exports the log data base in the standard WK1 and DIF formats. All the details of the log are included in the export, including the captions for all the fields in the exchange, separate transmit and receive frequency, sequence numbers, and band number. The fields are written in their native formats-numbers as numbers and character strings as strings.

Pivot Tables

When exporting to WK1 format, WriteLog lays out the data in the spreadsheet such that its very easy to generate spreadsheet pivot tables. The special columns it provides are labelled:

Bnd	is the band of the QSO
Dupe	is zero if the QSO is not claimed, or one if it is
Hour	is the day/hour of the QSO. This is useful for rate sheets.
Continent	is the continent of the QSO. This column is only present for logs that have a PREF column.

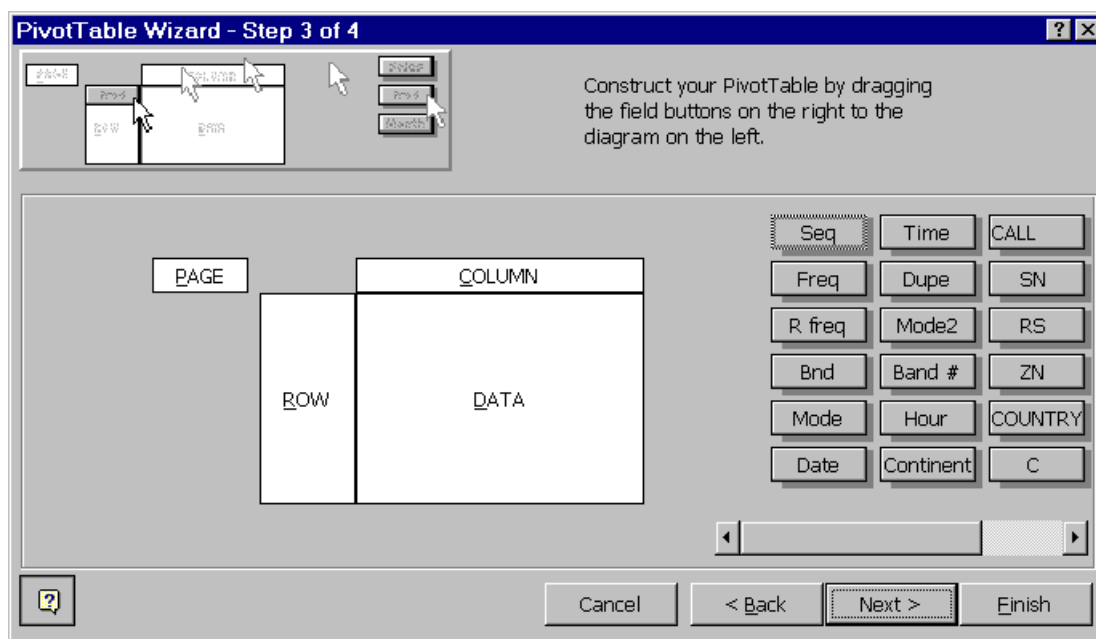
Also, WriteLog automatically adds rows to the very end of the WK1file for hours that you took time off. When you chose the Hour column for one of the sides of the pivot table, these added rows ensure the rate tables have rows for hours taken as off time.

Making a pivot table in Microsoft Excel is easy. Use WriteLog to Save As WK1 format. Then open the WK1 file from Excel, click on the top left cell (A1), then type the End key, then hold down SHIFT and type the Home key. Your entire log should be highlighted now. On Excel's Data menu, click Pivot Table and Excel starts its pivot table wizard. The wizard differs slightly from version to version of Excel. This description is for Excel 98:

The "data that you want to analyze" is an Excel List.

The "data that you want to use" is all of your log and the selection should be something like "\$A\$1:\$V\$1171". The \$A\$1 part is the same for all logs, the \$V\$1171 part depends on how wide and how long your log is.

Then you "Construct your pivot table by dragging the field buttons to the diagram". Here's what that screen looks like:



If you're not familiar with pivot tables, try this as an example:

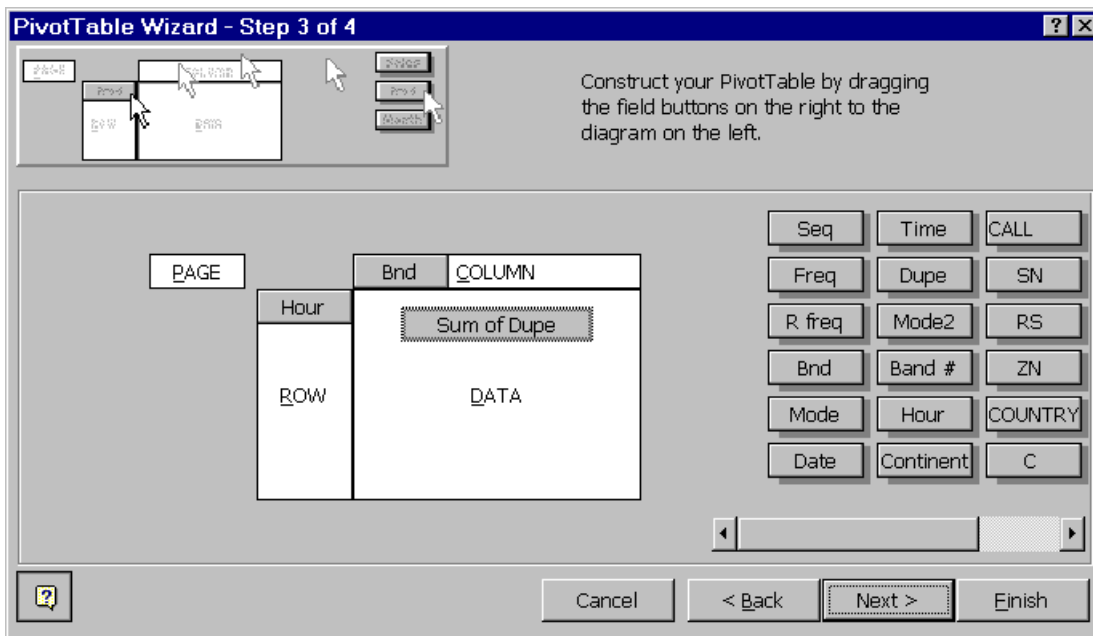
Drag the Hour button to the Row area on the pivot table.

Drag the Bnd button to the Column area on the pivot table.

Drag the Dupe button to the Data area on the pivot table

If the Dupe botton on the pivot area says "Count of Dupe", double click it and change it to read "Sum of Dupe".

Your screen should look like this:



Now click Finish and you should see your rate sheets broken down by bands like this:

	A	B	C	D	E	F	G
1	Sum of Dupe	Bnd					
2	Hour	10	15	20	40	Grand Total	
3	D1-1400Z			1		1	
4	D1-1500Z		3			3	
5	D1-1600Z						
6	D1-1700Z						
7	D1-1800Z						
8	D1-1900Z						
9	D1-2000Z						
10	D1-2100Z		3			3	
11	D1-2200Z	18	7			25	
12	D1-2300Z	20				20	
13	D2-0000Z	7				7	
14	D2-0100Z						
15	D2-0200Z				10	10	
16	Grand Total	45	13	1	10	69	
17							

This is a simple rate sheet. But you can experiment with adding other fields to the pivot table. For contests that have an ML column, for example, you can drag it along with the Dupe field into the Data area. This will give you a rate sheet with both your QSO rate and your multiplier rates. Or try the P column for points.

Tips:

1. The Row and Column areas of the pivot table should be used for fields that only have a few values. Good examples are Hour (has only as many entries as there are hours in the contest), Continent (there are only 6), Bnd (only as many bands as you operated).
2. Points and multipliers make interesting pivot tables in the Data area. Each contest has its own way of laying out the multipliers and points, but usually P is points, and ML is the multiplier total.
3. Try dragging the Continent field into the Page area of the pivot table.

Help menu commands

The Help menu offers the following commands, which provide you assistance with this application:

- [Help Topics](#) Offers you an index to topics on which you can get help.
- [About](#) Displays the version number of this application.

Paste command (Edit menu)

Use this command to insert a copy of the clipboard contents at the insertion point. This command is unavailable if the clipboard is empty.

Shortcuts

Keys:CTRL+V

Edit Paste (and its keyboard shortcut CTRL+V) paste the contents of the Windows clipboard into the currently active WriteLog window. The [Edit Window](#) will paste text into its edit bar if the keyboard cursor is currently in it, or, if you have a single QSO in the edit window highlighted, it will paste an OLE embedded object into the note for the highlighted QSO.

The [Entry Window](#) can paste text into field where its cursor currently is.

Status Bar command (View menu)

Use this command to display and hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button, and keyboard latch state. A check mark appears next to the menu item when the Status Bar is displayed.

See [Status Bar](#) for help on using the status bar.

Status Bar



The status bar is displayed at the bottom of the WriteLog window. To display or hide the status bar, use the Status Bar command in the View menu.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

The right areas of the status bar indicate which of the following keys are latched down:

IndicatorDescription

NUMThe Num Lock key is latched down.

SCRLThe Scroll Lock key is latched down.

CWIndicates the speed of the CW keyer.

AUTO CQIndicates that Auto CQ is on.

Split Command (View menu)

Use this command to split the active window into panes. You may then use the mouse or the keyboard arrows to move the splitter bars. When you are finished, press the mouse button or enter to leave the splitter bars in their new location. Pressing escape keeps the splitter bars in their original location.

About command (Help menu)

Use this command to display the copyright notice and version number of your copy of WriteLog.

Title Bar



The title bar is located along the top of a window. It contains the name of the application and document.

To move the window, drag the title bar. Note: You can also move dialog boxes by dragging their title bars.

A title bar may contain the following elements:

- Application Control-menu button
- Document Control-menu button
- Maximize button
- Minimize button
- Name of the application
- Name of the document
- Restore button

Print Preview toolbar

The print preview toolbar offers you the following options:

Print

Bring up the print dialog box, to start a print job.

Next Page

Preview the next printed page.

Prev Page

Preview the previous printed page.

One Page / Two Page

Preview one or two printed pages at a time.

Zoom In

Take a closer look at the printed page.

Zoom Out

Take a larger look at the printed page.

Close

Return from print preview to the editing window.

Links command (Edit menu)

Use this command to display a [Links dialog box](#) which lets you edit links between your document and other documents.

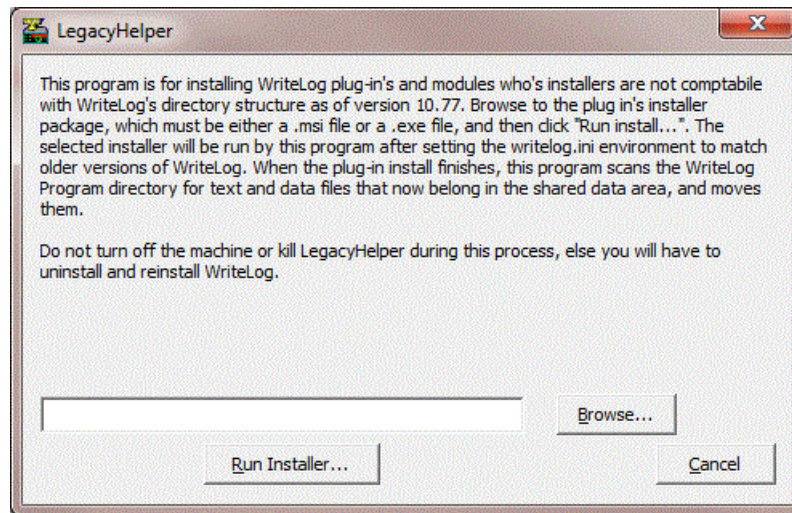
This command is unavailable if you have no links in your document.

Insert New Object command (Edit menu)

Inserts and embeds an object, such as a chart or an equation in a document. The application in which the object was created becomes active on the screen.

Select the object you want to insert into your document using the [Insert New Object dialog box](#).

Legacy Installer Helper



In order to support Windows Vista and later, WriteLog version 10.77 rearranged its directory structure. Certain module installers not provided with WriteLog itself do not install properly with the new structure. This program is provided to enable those installers to work. The providers of those modules are encouraged to upgrade their installers such that this installer helper is not needed.

Using the helper

- If the provided installer does not work, or reports errors, then use Windows control panel to uninstall the module.
- Then run WriteLog's Legacy Installer Helper from its program menu.
- Use the Browse... button to locate the .exe or the .msi file you want to install.
- Then click Run Installer...
- The Legacy Helper will disappear while the installer runs. It takes note of any .rtf, .ini, or .txt files added to WriteLog's \Programs directory by the installer.
- After the installer finishes, Legacy Installer reappears and presents a list of files it noted and moved.

WriteLog Version 12

Version

- 12.72 April, 2023
Fix bug in Broadcast scores that, for multi-mode contests, incorrectly reported per-mode QSO totals.
In Broadcast scores, mark IARU headquarters multiplier as "hq" per latest contestonlinescore specification.
Add [QSO_UDP_LIMIT_MINUTES](#) entry to limit QSO UDP export to most recent QSOs on Contest/Recalculate.
For both UDP QSO broadcast, and UDP Radio broadcast, support the address setting [All local networks](#).
Add [UDP Rotator broadcast](#) using [\[network\]ROTATOR_UDP_IPADDR](#). The default WriteLog settings for Radio broadcast and Rotator broadcast are confirmed to be compatible with Green Heron Engineering's GHE Client version 2.7.7.
Edit [UDP broadcast settings](#) dialog.
Add [setting](#) to throttle UDP Radio broadcast slower than RigPollInterval
Fix 7QP Cabrillo export bug.
- 12.71 March, 2023
When selecting a CALL from the Band Map, fix failure to hold the selection through processing of new incoming calls or window resize.
For Beam Headings display, if there is an ampersand (&) in the country name, present it correctly.
When changing the Entry Window CALL, overwrite fields that were [auto-filled](#) or [preset](#) from ADIF from that CALL, while preserving only fields that were typed over in the Entry Window **after** they were auto-filled.
Restore Beam Heading behavior removed in 12.69 that always displays the DXCC country of the current CALL, regardless of whether the beam heading is calculated from that country file, or a region-specific country file.
Fix intermittent bug that prevented Packet blacklist entries from being honored.
- 12.70 February, 2023
Separate DCU-1 from DCU-3. They are the same, except that the latter adds a newline to the commands to the COM port.
Update New Mexico QSO party to 2023 rules.
Ensure cabrillo options are set before saving summary file.
Add [broadcast Radios UDP](#).
Fix failure to honor the Blacklist menu entries on the Band Map window's right click
- 12.69 January, 2023
Add UDP QSO Export (for WRTC)
Fix bearing calculation when typing a GRID into the CALL field to give priority to an exact match callsign in the country files that happens to also be a valid grid square. RA80OW is a current example.
Always output STATION_CALLSIGN on ADIF export.
Update VAQP support for 2023 rules.
Speed up Winkey polling interval, which helps if there is delay in the WinKey/WriteLog COM port link.
Change the default at File/New to bring up the Cabrillo details form as you start a contest. Add a check box, [Prompt these details on File/New](#), which can be turned off to revert to the old behavior: ask for Cabrillo details later, on the Contest/Cabrillo-file menu selection.
Add menu item to [self spot](#).
Prompt update [CALLPREFIX](#) if you change your "call used" to a different DXCC country.
- 12.68 December, 2022
Move three Entry window options to submenu, and replicate those options on WriteLog [Entry Options](#).
Add 15m and 10m to SST contest definition.
The [Contest/Set for Automatic Rescoring](#) menu entry is removed because it has caused confusion.
Add [shortcut definitions](#) for commands to turn the TX or RX radio up/down by a specified frequency amount.
Add [Winkeyer setting](#) to prevent intermittent premature PTT off due to delays in serial transfers.
Fix ARRL 10m module failure to fill in QTH from the other mode when logging a station the second time.
Add console mode [Reacty32-console.exe](#)>
- 12.67 September, 2022
Improve scan-for-suspect-entries for WAE contest.

Control site screen for adjusting RC-1101 keypad brightness.

WAE contest module adds Entry Window accelerators when QTC dialog is up.

[WAE contest Send QTC now uses SHIFT+F7](#) to prepend to the QRV? message for ALL modes.

Fix Band Up/Down commands from setting split mode when moving to a band not visited before.

Fix WAQP, COQP and TNQP summaries to present QSOs instead of points.

Update NYQP to latest rules.

12.66 June, 2022

Support ARRL International Digital Contest

For VHF contests, fix incorrect "New Grid" message when either of the first two letters of the grid is typed in lower case.

Update WAQP Salmon Run module for 2022 rules.

Fix misaligned text headers in brk report file.

Fix IARUHF Band Summary layout to one row per band

Update Band Summary to accept "DG" and "DIG" as QSO count columns

Improve [Create Reports options and BRK file formatting](#).

12.65 May, 2022

Improve Cabrillo output for 7QP module.

Color code double mults for modules that report them. Currently only CQ WW.

Support Medium Speed Test CW.

12.64 April, 2022

WIQP cosmetic updates.

On BandMap, color "UNKNOWN" multiplier as new QSO and not new multiplier.

Support [web post to SCP database](#) instead of email.

GAQP Cabrillo header fixes.

Fix doubling of prompt whether to save a changed .wl file on closing WriteLog, introduced in 12.62.

12.63 March, 2022

WIQP 2022 rules changes.

Checkbox to enable [all mode PTT on WinKey](#)

12.62 January, 2022

Fix TS-990 rig driver split and digital support.

Fix intermittent problem with WinKey. (Don't send WinKey setpinconfig nor sidetone commands while CW output is in progress.)

12.61 October, 2021

Add IC-705 rig setting.

Add FT-891 rig setting.

FTDX-5000/2000 etc set default CW/DIG mode from main VFO only.

Update Colorado QSO party module.

Update Tennessee QSO party module.

Fix Cabrillo for in-state CAQP and PAQP modules when logging the other station on a county line.

Update Alabama QSO party module.

Nevada QSO Party export TQSL location

Update WA Salmon Run.

When exporting ADIF, export GRID column as ADIF standard GRIDSQUARE if there isn't also a standard entry.

12.60 July, 2021

Fix FLQP summary sheet auto-fill.

ND QSO Party fix logging of rovers

NM QSO Party find previous NAME field on subsequent QSOs

VA QSO Party fix QSO/Mult summary calculation

Fix failure to install on certain older Win7 systems.

Add [Move Clearest Frequency](#) commands.

For the SO2R device OTRSP, when using on a COMM port, signal PTT on the COMM port RTS line.

12.59 April, 2021

NCCC Sprint use standard ADIF tag for NAME.

Fix a problem when a new column is added to a log that already has QSOs.

Update internet logbook implementation to latest 3rd party tools.

Rig driver for recent Yaesu rigs, allow for large MOUSE_WHEEL_HZ settings.

VA QSO Party update affecting Check Call.

Add [Their Name for Call](#) window. Right click in the window to set it up.

12.58 March, 2021

Fix problem sending unsupported CAT commands to oldest Icom rigs (IC-735, etc.)

Redefine the shortcuts EntryFocusAndHome and EntryFocusAndEnd to move to the leftmost and rightmost fields in the current Entry Window. (They used to mean leftmost and rightmost character in the current field of the current Entry Window.)
Slow Speed CW contest W/VE are not DXCC multipliers.

- 12.57 February, 2021
Consolidate all PTT settings into the [Setup/Ports](#) screen.
Fix intermittent problem with sending commport CAT command PTT from RttyRite.
Fix failure to honor RTS PTT selection on second rig for SO2V setup.
Fix failure to honor CAT PTT for CW introduced in 12.56.
For MK-1100, fix failure to assert keyer PTT at the beginning of machine-sent CW. But was introduced in previous version.
Support FTDX-5000 (and other recent Yaesu rigs) for SO2V.
Increase number of selectable COM ports to COM64.
Present COM ports in dialog with precedence to those that Windows says currently exist on the system.
[Grab packet spot](#) puts keyboard focus on most recently received spot.
- 12.56 January, 2021
Default for ARRL 160m contest, SECT column is now "Required"
Add Slow Speed CW contest support.
Add option to compute [SpectrumOnCpu](#) in double precision.
[Add option to put PTT on RTS](#) of rig COM port with TX focus.
[CW PTT is now either on or off](#) (which is QSK), which deprecates the distinction between PTT types for CW.
Update to OpenSSL version 1.1.1
Fix failure to process mouse clicks in RttyRite window on certain multiple monitor configurations.
- 12.55 November, 2020
Support [rig-specific macros in f-key messages](#) for Icom.
Better document and fool-proof TX Wave File folder select.
Better error messages on missing .WAV files for certain f-key programming sequences.
Improve ability to customize WAE RTTY QTC [fill message](#).
Update build to use Visual Studio 2019
Remove RttyRite support for obsolete P38, PCI3000 and PCI4000 TNCs
Add options to [Audio Review](#) to playback quad-recorded audio with the TX/RX recorded channels output as Left/Right stereo.
Update TQSL to version 2.5.7
Remove actions from clicking on displays in Rate Window
Fix failure to honor Kenwood TS-590 DATA mode introduced in 12.50
A recent Windows update decommissioned WriteLog old method for determining whether it can automate sending an email, which disabled WriteLog's ability to email.
Use a newer method.
Restore Check Call / Properties menu on right click that was lost in previous update.
- 12.54 October, 2020
Add Kenwood TS-990 entry (matches TS-890 behavior)
Expand to maximum of 10 S&P memories.
Update NVQP to latest rules.
Update CQP cabrillo details.
- 12.53 September, 2020
Portable Operations Challenge
Comply with opening character in ADIF version 3.1 file export.
Improve ARRL Rtty RoundUp ADIF import.
CheckCall update from automation interface (used by DigiRite) now works regardless of multiplier module.
Restore Band Maps on changing port setup
- 12.52 August, 2020
Band Map appearance dialog applies immediately, and Cancel restores.
Update Makrothen module for latest rules.
Add option to pause SDR during PTT.
Improve [SDR wizard](#) details. The setup for two identical dongles in particular is now easier.
Improve [Band Map scaling](#) options. The range is now adjustable as Auto scale means set only the level.
Fix ADIF export of RTTY back to "RTTY" that was incorrectly exported as "DIG" in version 12.51.
Fix problem logging a QSO from OLE interface if Operator is set.
Undo change introduced in 12.46 that "log/dupe as digital" if RttyRite/DigiRite is open.
Improved waterfall display component.
- 12.51 July, 2020

On [multiple keyboard](#) "assign keyboard" mode, to determine Entry Window focus, treat mouse button click as if it were a keyboard click.

Add option to WriteLog remote control to send Band Map waterfall using UDP

Setting serial number from automation interface locks the serial number.

Add IC-9700 Icom and Kenwood TS890 rigs.

Change "FSK" label to "DIG" in WriteLog's menus, dialogs, and displays.

Add 23cm band to Field Day

Add automation interface to force update of Azimuth and check call

Fix failure to send CW message on f-key while RttyRite window is open

12.50 June, 2020

Improved support for RC-1101 on both control site and remote

TS-590 rig driver supports RC-1101

Icom RC-1101 improved. update uSD card required on RC-1101.

Make RC-1101 reboot at startup optional on check box.

RttyRite calls-that-are-me now honors the [PktSpotBar] section as well as [RttyRite]

section and the [Packet spot setup](#) now also disables those calls for RttyRite highlighting.

Broadcast score includes club.

12.49 April, 2020

Add RTTY mouse support to NCCC Sprint module.

Fix crash in RU DXC module when editing a previous QSO.

Add CQMMDX contest module.

RTTY Weekend Spring module.

Add HolyLand contest module.

Add NRRL Fylkest contest module.

Update waterfall module to show call signs.

12.48 February, 2020

Fix intermittent crash at exit in RttyRite.

Default country-files URL to https:

Remove bogus error message when control site connects to remote with RTTY clone windows.

CW Options to control Winkey [sidetones](#).

Support sending packet spot information to any controlled radios (e.g. Flex using SmartSDR.)

Update for NMQP rules.

12.47 January, 2020

Add Kenwood TS-590 rig driver for data mode support.

Don't create redundant DGTL column.

Make DGTL column repeat across network.

Add 115200 baud setting for rigs.

12.46 December, 2019

Fix intermittent sound transmit failure when pressing an f-key after an ESC, after an f-key (or multiple) that sent more than 10 seconds of sound.

Fix failure to initialize WinKeyer echoback on. Affects only WinKeyers that did not default to on.

For WriteLog remote control, fix occasional "pops" in remote audio that showed up mostly when you select very low bandwidths at Audio connect time.

Break continuous recording files at the top of the hour.

When Rtty or DigiRite window is connected, log/dupe as digital mode regardless of rig's reported mode.

12.45 November, 2019

Add Setup toolbar. And ability to [edit toolbars](#).

Add mp3 format support for [continuous recording](#).

Continuous recording updates the main status bar on file changes and, with a red background, on an error.

Add Yaesu FTDX-101D/MP rig setting.

Fixed Band Map center frequencies are saved on Setup/Save-Configuration

For WAE contests with QTCs and when reporting to score server, add the QTCs to the QSO total.

12.44 October, 2019

Enable RC-1101 knob to control per-radio AF gain.

Update WW Digi module to not complain that an empty grid entry is "unknown"

Support [atomic strings inside CQ message](#).

Add [f-key message edit](#) icon to File toolbar.

California QSO Party update remove 6m and 2m and accept DX as QTH for in-state.

12.43 September, 2019

WW Digi Cabrillo update.

ADIF export Mode before Submode.

Support digital modes in IC-7610, IC-7300, IC-7410, IC-7100 drivers.

- Fix K3's RC-1101 support for VFOA/VFOB broken in 12.41
- 12.42 August, 2019
 Make the default font for multiplier displays high-DPI aware. Note it may be changed in [writelog.ini](#).
 Update for latest WW Digi rules.
 Fix too-tall Entry Windows on startup if using Columns.
 Fix bug in control site code that causes issues after about 10 hours of operation.
 Ensure check call is updated on logging a QSO, including especially when WriteLogRunMode moves the keyboard focus before the QSO is logged.
 Add more virtual knobs to control site K3 "Softwin"
- 12.41 July, 2019
 Add setting to [tunable SDR sharing antenna](#). The new setting controls the "jump" distance as you tune.
 Update [RC-1101](#) support for K3, K2, and Icom.
 Fix several startup/shutdown intermittent bugs in using [RC-1101 on local rigs](#).
 Add Arkansas QSO Party.
 Add full manual [SDR startup option](#).
 Add cabrillo export to ARRL Field Day module.
 Change cabrillo export for CAQP and PAQP to issue one country per line, multiple lines per multi-county QSO.
 Add World Wide Digi contest module
 Add [\[entry\]AlwaysAdifPrefill](#). Filling Entry Window QSO fields will either overwrite a previous entry, or it won't, consistently for all sources.
 When filling fields from a CALL entry, enforce the same priority for all sources. Already-in-log is highest priority, then prefill from ADIF, followed by whatever the multiplier module does, which, for example, might be a zone lookup from a CALL.
- 12.40 June, 2019
 Fix 7QP Cabrillo output to enable power classification.
[SDR Automation Object](#)
 Enable WriteLog to [copy an IQ stream](#) it reads from an ExtIO dll to a Virtual Audio Cable.
 Do not transmit cut-numbers in any mode except CW. (This incorrect behavior was inadvertently introduced in 12.29)
 Reorder ExtIO dll startup to match HSDR. Latest Funcubedongle ExtIO no longer complains.
 ExtIO support includes changing the [sample rate](#).
 Update Check Call window on logging a QSO regardless of keystroke or other cause of it being logged.
 When creating a new contest log, if there is a digital band, ensure a "DGTL" column is part of the log.
 Export FT4 per most recent ADIF and LOTW specifications.
- 12.39 May, 2019
 Update GA QSO Party cabrillo output
 Add [Arizona QSO Party](#)
 Update AZQP, PAQP, and NVQP in-state modules for each to accept each other's county abbreviations as aliases for their state. Those QSO parties all run concurrently.
 Band Map and DigiRite waterfalls use 1000+ colors
 Band Map min and max replaced by [range and max](#).
 In-state TXQP, CAQP, PAQP, KYQP modules all now export LOTW overriding any US_STATE that might be specified in the staring TQSL Location, whether it is present or whether it is correct.
- 12.38 March, 2019
 Direct Mouse Wheel event to window with mouse cursor (or use [ini setting to send to focus window](#), compatible with previous versions).
 Increase control site RPC timeout to 30 seconds.
 Add CallUsed and get accessor to SerialNumber OLE automation methods.
 Writelog.ini [\[ControlSite\]LogFileNames=path-to-log-file](#) creates a control site log file.
 Ensure trailing slash in [configuration]datafiles=path-to-data.
 Packet Terminal source code update. No visible changes.
 Support digital mode plug-in interface.
- 12.37 February, 2019
 When running SO2V with the K3, give it time to switch between transmit vfos.
 Cabrillo generation emits "DG" instead of "RY" for digital QSOs.
 Prevent Check Call from mixing updates from multiple Entry Windows. Now it only shows the update from the most recently changed one.
 Fix Control Site bug. Setup/Restart-Control-Site failed to reconnect Band maps.
 Remote sound UDP 8 bit compander fills missing packets with companded zero.
 Fix failure to start SDRs on Setup/SDR-Setup OK button (worked on Apply)
 Check Call window presentation changes. Will update on click from RttyRite.

- Fix WriteLog Control Site "null object" exception that happens the very first time you run it on a fresh install.
 Fix failure to do SSB message recording on SHIFT+Fkey for certain configurations. Bug was introduced with remote control in version 12.33.
- 12.36 January, 2019
 Support Entry Windows [in columns with keyboards](#).
 Fix an intermittent hidden-hang-at-exit of WriteL32.exe for the case there had been at least one control site previously connected.
 Optimize the menu checkbox display for the control site Radio menu (that was really slow to update.) This breaks remote/control compatibility across versions. 12.36+ now required on both ends.
 Fix failure to auto-resume CQ for the case of pressing an f-key on an Entry Window while that same Entry Window is transmitting
 Update the [CW/SSB/RTTY memory edit](#) to enforce a leading %X on all modes if on any.
 Update the K3 driver to support K3's new SWR serial command for display on RC-1101.
 Lookup [friend.ini](#) in [\[Configuration\]Datafiles](#) directory in preference to the (protected) installation directory.
 Enable configuring and loading multiple shortcut processing assemblies.
 Shortcut processors can coordinate across control-site/remote-site. An example is the [ASW12V antenna switch](#).
[Add support](#) for the [RC1101](#) control device for local rigs.
 MN QSO Party cabrillo update.
 Allow leading minus or plus sign in RST fields.
- 12.35 December, 2018
 Expanded [automation interfaces](#) needed to log all the FT8 options.
 Fix hang at close for the case of one-device-per radio, Echo mic turned on, and a control site has previously connected.
 Add support for audio devices that provide exclusively 24 bit integer format.
 Change Control Site icon.
 Control site Band Map restore previous update rate and resolution on startup
- 12.34 November, 2018
 Improve remote audio quality.
 Remote audio with UDP if a UDP path exists.
 12.33 broke dueling CQs (auto-resume). Fix it.
- 12.33 October, 2018
 Add [Remote Rig Control](#).
 .NET 4.5.2 is now required and the installer checks for that version. WriteLog still requires Win7 or later. Microsoft's 4.5.2 installer works back to Win7.
 Make WriteLog's XMMT.ocx support more tolerant of the XMMT.ocx's ptt startup sequencing. The issue only happens when using XMMT.ocx to transmit AFSK. The symptom that is fixed is an intermittent termination of a transmission after just one second or less.
 Add ability to turn off exclusive sound device access for [two-radios-on-one-device](#).
 Support the K3's "FI" command. This means an SDR on a K3 IF will keep its frequency calibration regardless of mode, IF shift, etc. If you have a K3 already setup for an SDR, this update will invalidate any existing SDR per-mode offset settings, which you must manually remove using the SDR wizard.
 Fix setting Icom IF filter to 1 on certain Icom rigs.
 Add OLE Automation to [manipulate RTS and DTR of rig ports and CW keyer port](#)
- 12.32 September, 2018
 Update to PAQP rules
- 12.31 August, 2018
 Fix WriteLog hang if WinKey USB port or SO2R box interface is removed while WriteLog is running.
 Fix bug in Super Check Partial that failed to display matches of +1/+2 of in-the-log QSOs if there is no dta file to search.
 Third try to get[cut-numbers] right. LeadingZero is now in section defined by hyphen and not underscore, per the documentation.
 Update to latest AL QSO Party rules.
- 12.30 July, 2018
 SDR uses ExtIO set LO at startup.
 Fix misplaced caret in Entry Window for various scenarios, including Radio/ExchangeLR
 Update to use TQSL library version 2.4
 Import/Export FT8 QSOs via ADIF and LOTW.
[RttyRite on-screen indicator](#) of which among clones provided the current QSO info.
[Sound board mixer control](#) is now available within WriteLog as well as the Windows Start menu.
 Make the Exchange L/R shortcut abort any programmed message in progress.

On reading, comply with ADIF spec that <EOH> is missing if first character is <
Convert Shift-Fkey WAV file record to WIN6 API.
K3 rig driver optimizations for mouse wheel.
TS-2000 rig driver optimizations for mouse wheel.
Mouse wheel available is indicated by highlighting the edge of the Entry Window. And
this feature is added to the [Band Map](#).
The [CW cut-number](#) update in 12.29 didn't work. Now it does

12.29 June, 2018

Improvements to Icom rig drivers. Add SO2V support to IC-7600, 7610, 7800, 7850/1
Elecraft K-3 driver fix for 2-Entry Window split operation on "main" rig.
Add [SO2V options](#).
Add EntryClearUnfocused command.
Add [Entry options setup](#) tab.
Reorder Setup menu for consistency.
Make [CW cut-number](#) handling consistent with documentation, and allow a different
lead-zero cut number from zeros inside.
For SDR "tuneable and shares antenna" take into account Target bandwidth reduction
when moving the SDR LO

12.28 May, 2018

Enlarge the left mouse hit zone for clicking on the waterfall to cover the entire waterfall.
Remove the old x10 for points in PAQP left over from the days of 1/2 point QSOs in that
contest.

Update MS QSO Party to latest rules.
K3 and Kenwood rig settings honor the MOUSE_WHEEL_HZ ini setting.
More improvements to [Band Map display](#) of overlapping SDR waterfalls.

12.27 April, 2018

K0PC CWOPS and NCCC Sprint modules now part of WriteLog install kit by permission.
Fix problem with RTTY intermittently and incorrectly sending previously logged CALL on
Insert.

Auto-CQ function key selection is now sticky across a WriteLog restart.

Support [Kentucky QSO Party](#).

12.26 March, 2018

Reduce one Flex radio selection click
Force web Cabrillo submit to topmost window.
Insert with RTTY will return a dupe if that is all there is. Clone search through call queue
simplified.
Click on a CALL with RTTY now finishes with simulated SPACE character, which will tab
over RST.
The SendCallandExchange command (by default on [Insert](#)) will revert to the last sent call
if it cannot get any other.

12.25 February, 2018

On a Fixed Band Map window, having done a [Tune-to-selected-station/RadioN](#),
subsequent double-clicks go to that same radio.
Submit Cabrillo to a web link offers to [copy the full file path to Windows clipboard](#)
NAQP module returns correct Cabrillo tag now with zero QSOs in the log.
Fix bug introduced in 12.21 that intermittently inserted extra transmit characters when
using Hardware FSK, Software FSK TXD, or Software FSK DTR (and only these
settings.)
Fix bug introduced in 12.23 with TinyFSK that, for Hardware or Software FSK, but not
TinyFSK, followed every letter F by an extra letter, R.
Add RttyRite [option to block highlighting](#) of selected calls.

12.24 January, 2018

Enable SDR of type IQ on ExtUI to be "SDR Follows Configured Rig"
Enable SDR rig selections to include "Manual Entry Windows" with no connected rig.
Fixed SDRs preserve previously displayed waterfall as long as graphics remain valid.
(Scrolling OK, but zoom and resize are not.)
Band Map "tune to selected station" selection is saved across restarts.
Add IC-7610 rig entry.
Fix delay on abort transmission when running RTTY TinyFSK.
Improve drawing of overlapping SDR waterfalls.
Fix RTTY auto-CQ bug that, for certain configurations, used message begin-to-begin
time instead of the correct end-to-begin.

[INI entry](#) to begin auto-CQ on startup.

For contests that support only web submission, present [alink](#).

12.23 December 2017

Automation support for querying keyboard/transmit focus.
Fix keyboard handling for WAE QTC Receive dialog.
Add [support](#) for [TinyFSK](#)

In Setup/Ports, if CW is Winkeyer2 and SO2R is OTRSP, then send PTT and Radio A/B commands to both devices.

Save more URL's in Broadcast Scores.

Fix NAQP 10 minute rule countdown.

Add [10 minute rule display](#) for A/B

Add Fixed Band Map #6

Fix various issues with keyboard focus getting away from the Entry Window when it should not.

12.22 November 2017

SDR comply more closely with HDSDR ExtIO.dll spec.

Add SDR [RF/IF configuration](#) for ExtIO.dll SDRs.

Add diagnostics for why an SDR stops unexpectedly.

Broaden audio support to more 32b float formats.

Plug a hole in the SDR setup wizard that gave the spectrum around 0Hz unless you reselect Rig on COMMn even if it already showed selected.

More options for [Band Map Appearance](#).

Update JARTS-RTTY module for their changes to log submission format.

Support Cabrillo x-QSO: tag

12.21 October, 2017

HIQP. Don't falsely flag K/VE stations as country multipliers.

[WAE](#) cosmetic update to Send QTC dialog.

Restrict bare key [shortcuts](#) to Entry Window focus, except for top keyboard row.

Add automation access to [read subreceiver frequency](#).

Add ability for RttyRite to [share its FSK transmit port](#).

When WriteLog is first launched, if you open an existing file, it is scrolled to the bottom of the log.

Add ability for RttyRite to [continuously log its transmit/receive text](#) to a file.

Improve FSK write Port error handling to better work with Remote Rig.

Add [\[rttyrite\]DisableFskPttOnDtrAndRts](#). Disables COM port PTT from RttyRite

When one rig with supporting SO2R on two COM slots is setup in Port/Setup, retain the same COMM PTT setting for both slots at Save/Configuration time.

Add File/Web Update SCP Files...

The EntrySendCallExchange command (by default on the Insert key) in Rtty sets the CALL from the first RttyRite window if it has a call, else it tries its clones.

Add [RttyRite Edit Options](#)

Fix CQ WW RTTY missing "state" multiplier for scoreboard posting.

Display improvements in the [Great Circle](#) calculator.

Restore CRLF line endings in ADIF export that was switched to LF in version 12.17

12.20 September, 2017

The following modules, on Cabrillo export, used to convert received QTH using namedmul.ini and the [\[contest-Alias\]](#) sections in it. They now export the QTH as logged.

- ARRL DX Contest (outside W/VE)
- CQ World Wide RTTY Contest
- North American QSO Party (CW or Phone)
- RAC Canada Contests
- ARRL RTTY Round Up
- ARRL November Sweepstakes

Update ALQP to latest rules

Remove RST from ARRL 222MHz&Up Cabrillo export.

Add command to [scan the log for invalid entries](#)

Make ARRL November Sweepstakes respond to the "Scan-the-log" for PREC and CK entries..

Texas QSO Party in-state flag invalid state/country abbreviations

When calculating the mode from the frequency of a packet spot for a mixed-mode contest, restrict the selected modes in [Edit Subbands](#) to those modes actually in the contest.

Install a default .subbands file for calculating mode from packet spot frequency.

Honor update interval in Band Map better.

Keep the "local" spots a little cleaner by deleting spots of corrected calls.

Winkeyer fix. Some Winkey hardware stutters on its pinconfig command during transmission.

Add more keyboard shortcuts to [WAE contest](#) QTC dialogs, and change its multiplier display calculation to include the bonuses for low bands.

Fix various sequences that moved keyboard focus away from the Entry Window that should not.

12.19 August, 2017

Fix "flashing" band map introduced in 12.18. Happens only when docked and on certain Entry Window fields.

Removed long-time favorite annoyance: packet window can now be closed, which disconnects from the packet cluster.

For broadcast score posting, if don't know how to categorize the mult column, call it "state"

Add Properties dialog to [Check Call](#) window.

Multiple Entry Windows can [control one rotator](#) as long as they match COM port number and rotator type.

Honor the update interval in the Band Map.

When using combination of Winkeyer2 and sound board for SO2R, fix menu dropdown display of split/normal

DVK type of None routes MessageShiftnn commands on voice mode through the message memories just like CW/RTTY, rather than attempting DVK record on "None".

12.18 July, 2017

Fix [Edit Subbands](#) to require admin privilege.

Reduce audio artifacts in device-per-radio headphones switching between split/normal.

Display all the audio tuning parameters in the soundboard setup for both [one-device](#) and [one-radio](#) modes.

You can type in a contest name for [Broadcast Scores](#).

Fix crash that can happen on selecting a contest under File/New if there are spots already in the Packet Window.

Add [Main rcvr to R headphone](#) routing option for subreceiver audio.

Fix failure to send WAV files in one-device-per-radio mode for certain sound cards that take only stereo and silently ignore monochannel audio.

Fix the automation HeadphonesSplit method which was causing an intermittent issue supporting WriteLogRunMode headphone control over an OTRSP device

Use the Edit Bands .SubBands file to map packet spot frequency to mode.

[Preset Exchange from ADI file](#), on finding the needed ADIF tag missing and others present, presents a dialog of those present that might be used instead.

Support for [%GP macro](#) in message buffers. Currently only the Elecraft K3 rig driver.

Fix unintentional change in 12.11 that turned Super Check off with no DTA file specified.

[Band Summary](#) has right click to Copy-to-Clipboard and change its display order.

[Check Call](#) has right click to change its display order.

[Iowa QSO Party](#) rules update.

[Features Under Test](#).

12.17 June, 2017

Fix Rttyrite failure to access certain TNC's on USB serial ports.

Leading [%X honored for any mode](#)

Add support for [Hawaii QSO Party](#)

Make [cut-numbers] of 0 default to T to comply with the [documentation](#).

Keyboard focus on Band Map honors Keyboard Shortcuts.

Double click in [Band Map](#) spectrum tunes rig to that frequency.

Add [File/Export-Selection-As](#). Useful for LOTW export of part of the log.

Update Florida QSO party to multiply score by power level.

Honor documentation on [\[wlsound\]EchoMicBufferMaxMsec](#) in Exclusive mode, and default to 20msec.

Enter sends QRZ/Exchange gets a place on the status bar if you change its setting.

12.16 April, 2017

Super Check title is updated if the DTA file cannot be opened.

Improve [One-Sound-Board-Per-Radio Test](#) setup.

Fix long-standing bug in the Great Circle Bearings display that prevented display of sunrise or sunset times that happened to be 0000Z.

[Follow Me](#) follows Manual Entry rig as well as real rig.

Limit Band Map zoom range, and use finer zoom change per wheel click.

Fix LAQP band labels.

Update SCQP to latest rule changes.

Update band edges for 75G and up.

Improve handling of BandsBandUpRetainCall/BandsBandDownRetainCall. CALL is set only if it was blank before.

Add support for the new [ARRL 222MHz and up DX contest](#).

Add support exporting TQSL rover logs for [TQP](#), [CQP](#), [PAQP](#) and for all [VHF contests](#).

Fix installer bug that made File/Web-Update... for certain 12.09 through 12.15 installations break with a "can't unzip" message.

HAL DXP-38 and similar can set any tone pair.

12.15 March, 2017

Add API for real-time access to WriteLog's QSOs. Example at

<https://github.com/w5xd/writelog-automation-demo>.

- Fix failure to honor the "Dupe. Type this field with Dupe Check" setting in Contest/Exchange-Format-Setup
 Fix failure to show Check Calls if there are zero bands setup for band checking.
 Add ability to automate fixed Band Map
 Update for RSGB Commonwealth Contest
 Default RTTY messages are copied from CW, except 5NN becomes 599
- 12.14 February, 2017
 Tolerate non-compliant ERROR_IO_PENDING COM port driver for rig.
 K3 and TS-2000 drivers tolerate more than 150msec delayed response.
 Broadcast Scores to cqcontest.net sends "total" for single band contest.
- In RttyRite window, when using a font that has wider bold characters than its normal face (e.g. Lucidia) leave space for bolding. Leaves space at right edge of RttyRite window instead of obscuring the ends of lines with bolding.
 Fix NA Sprint CW and RTTY handling of KH6 multiplier.
 Update INQP to newest rule change.
- 12.13 January, 2017
 10 minute rule calculations take only clock minute logged into account, not seconds.
- 12.12 December, 2016
 Yet more keyboard focus improvements.
 Fixed Band Map right mouse can set radio from selection of 1-4.
 Arrow keys, when keyboard focus is on the [Band Map](#), scroll the Band Map.
 WAE RTTY Send QTC add end-of-transmission character to individual transmit QTC.
 Fix failure to read 8-bit quantized WAV files that was introduced in 12.09
- 12.11 November, 2016
 Remove Selected Stations from Band Map also removes them from Spot window.
 Delete from Spot Window removes from Band Map.
 Save Band Map Frequency-Increases-Up between runs.
 Improve keyboard focus handling when you switch away from WriteLog and back.
 Fix bug when ADIF prefix "for entering QSOs" is turned off.
[Super Check Partial](#) enhancements.
- 12.10 October, 2016
 More integration issues with WriteLogRunMode: Message02 is notified, too.
 INI entry to [turn off simulator spots](#).
 Fix intermittent failure to receive with XMMT.ocx after ALT+K
 Fix bug in Band Change window processing
 Fix PAQP Cabrillo export
- 12.09 September, 2016
 Better integrate with WriteLogRunMode. Avoid hang: don't notify empty messages.
 Improved support for [SSB WAV file transmission](#).
 Support Contest Super Simulator SSB mode.
 PAQP section list update for Canadian sections.
 Add [SuperCheck option](#) to use different CALL per radio.
 MNQP rules update.
- 12.08 August, 2016
 Better support for Contest Super Simulator (Radio/this-radio-is no longer required for SO1R support, for example)
 Add FT-991 and FT-1200 rig selections.
- 12.07 July, 2016
 For Two-Radios-on-One-Device audio, allow the Receiver audio selection to be blank.
 Mouse wheel tunes "manual entry".
 Arrl SS module uses official ADIF labels for CHECK and PRECEDENCE
 Support Contest Super Simulator frequency tuning and RTTY
 Correct WinKey2 pinconf, and improve timeout messages
 Close Band Map early in shutdown process.
 Warn RTTY messages with %E not at end
 Make TS-2000 driver more tolerant of various responses to FA/FB
 IARU-HF ADIF export uses official ITUZ ADIF tag now.
- 12.06 June, 2016
 Remove Winkey 1 calibrate sequence from Winkey2 setting
 Enable .NET version of internet logbook client to connect to an unsigned SSL certificate on [\[ScoreUdp\]IgnoreCertificateErrors=1](#)
 Fix crash on overflow of network message display window.
 More filtering in ICOM rig driver for bad received packets.
 Options for setting the [WinKey RTS line](#).
 Add IC-7300 rig..
- 12.05 May, 2016
 Fix scoring and bandmap checking of RUDXC.
 Update cqcontest.net support to send version and multi-mode summaries.

Add [\[winkey\]IgnoreSpeedPot](#)

ARRL SS pre-fills exchange from prior dupe QSO

Expand GAQP multiplier column for >99 multipliers

WinKey driver reliability changes

Add ability to disable CW space sent on startup.

Add OK-OM Dx Contest.

Remove WPX summary sheets.

Update Field Day, IARU, RTTY Roundup summary sheets.

Fix failure introduced in 12.01 to invoke first two External commands defined by plug-in assembly.

12.04 April, 2016

For receiver to headphone sound routing, support [auto-detect of subreceiver audio](#) on Right channel of stereo.

Add option to [decimate](#) SDR input.

Fix QSL printing skip labels on first page feature.

Add coarser SDR spectrum resolutions of 64Hz and 128Hz.

Update WriteLog rig i/o to conform to Microsoft documentation for overlapped i/o

Fix K2 driver to set split

Fix looping in DVK/voice mode when used with run-mode-processor

12.03 March, 2016

Fix intermittent crash on File/Open due to superchk restart.

Fix xmmt.ocx support to honor PTT_END_HOLD setting.

Fix intermittent crash on selecting CW COM port on or off.

Streamline [Texas QSO Party](#) in-state county line operation.

CTRL mouse wheel to zoom the [band map](#).

Fix failure of UP arrow key to cycle through Entry Windows with

UpDownCyclesThroughLog=0

Fix mousewheel tuning for hi-res mouse wheel.

Removing unwanted multiplier summary dialog on File/Open (WPX contests were doing this, among others).

Make F10 key either activate the menu (per Windows standard) or run a shortcut, but not both.

Fix use of [WAE QTC dialogs](#).

Add "My email address" to Cabrillo generation.

Ignore instead of crash on certain unusual GPU FFT failures.

Fix BandMap right click Remove-All. It worked, but did not appear to--it left them on the screen.

12.02 February, 2016

Fix sizing of text in certain windows that did not fit properly on hi-res displays. Startup most recently used and Check Call.

Scaling control for the [band map](#).

Bandmap now has right mouse menu command "Remove All" like WriteLog 11 had.

The Fixed Bandmap would open up blank on File/Open. Now it has a band map in it.

On Edit Settings in startup screen, use system default INI file editor.

To [real time rate graph](#), add check box to enable/disable the legend display.

During [Save Configuration](#), hold down CTRL to clear the WriteLog registry settings of window positions. After restart of WriteLog, File/New will show factory-default rather than Saved positions.

Fix issue with Edit QSO tool only 1 pixel tall. Also, keep it positioned next to the Log Window.

Add [View Docked captions](#).

Add keyboard shortcut commands that switch the rate graph to either entire period or recent real time.

Add support for SDRs that provide IQ via ExtIO, and change the nomenclature everywhere that 12.01 said "ExtDLL" to read "ExtIO".

Fix Band map resolution OFF setting...make it really turn off.

Fix crash if you use [entry]AutoFillFromBandmapHz

Add faster band map SDR spectrum update intervals. Save them in settings, and update all open band maps when you change them from one.

12.01 January, 2016

[Toolbars](#) with icons from [icons8.com](#)

[New band map display](#) with support to overlay [SDR spectra](#)

Support OmniRig as client--shares rig control with other apps

[configure SDRs](#) for band map display

Replace Export with Export-Copy-As. File/Save-As only creates .wl file

Button to [email CC of Cabrillo to scp](#)

Docking panes changed to use MFC Feature Pack.

Save [-DockingPanes.reg](#) file

add ADIF, LOTW, and Cabrillo export to the toolbar
Disable File/Open menu entry if there are unsaved QSOs in the log.
The [Packet spot window](#) has option to view spots of "me".
Add fudge-factor for packet spot Follow Me that fixes that setting for ARRL SS.
The [Rate Graph](#) is in a dockable window and the current hour updates in real time.
Settings are in the registry and are to be edited only from the [startup screen](#). They can be copied to/from an INI file, and imported from version 11 writelog.ini
Turn off creating a networking diagnostic file WlogNetDde_*nn*.log with
[\[network\]LogFileVersion=-1](#).
Add options for using the [preset exchange](#).

Features Under Test

The following features have implementations in this release, but have not been adequately tested by release time. Reports on their usefulness and functionality are welcome at support@writelog.com.

WriteLog Update History

Version

- 11.42 December, 2016
WAE RTTY Send QTC add end-of-transmission character to individual transmit QTC.
Fix failure to read 8-bit quantized WAV files that was introduced in 11.40
- 11.41 October, 2016
More integration issues with WriteLogRunMode: Message02 is notified, too.
Fix intermittent failure to receive with XMMT.ocx after ALT+K
Fix bug in Band Change window processing
Fix PAQP Cabrillo export
- 11.40 September, 2016
Better integrate with WriteLogRunMode. Avoid hang: don't notify empty messages.
Improved support for [SSB WAV file transmission](#).
PAQP section list update for Canadian sections.
Add [SuperCheck option](#) to use different CALL per radio.
MNQP rules update.
- 11.39 August, 2016
Add FT-991 and FT-1200 rig selections.
- 11.38 July, 2016
For Two-Radios-on-One-Device audio, allow the Receiver audio selection to be blank.
Mouse wheel tunes "manual entry".
Arrl SS module uses official ADIF labels for CHECK and PRECEDENCE
Correct WinKey2 pinconf, and improve timeout messages
Warn RTTY messages with %E not at end
Make TS-2000 driver more tolerant of various responses to FA/FB
IARU-HF ADIF export uses official ITUZ ADIF tag now.
- 11.37 June, 2016
Remove Winkey 1 calibrate sequence from Winkey2 setting
Enable .NET version of internet logbook client to connect to an unsigned SSL certificate on [\[ScoreUdp\]IgnoreCertificateErrors=1](#)
Fix crash on overflow of network message display window.
More filtering in ICOM rig driver for bad received packets.
Options for setting the [WinKey RTS line](#).
Add IC-7300 rig..
- 11.36 May, 2016
Fix scoring and bandmap checking of RUDXC.
Update cqcontest.net support to send version and multi-mode summaries.
Add [\[winkey\]IgnoreSpeedPot](#)
ARRL SS pre-fills exchange from prior dupe QSO
Expand GAQP multiplier column for >99 multipliers
WinKey driver reliability changes
Add ability to disable CW space sent on startup.
Add OK-OM Dx Contest.
- 11.35 April, 2016
Update WriteLog rig i/o to conform to Microsoft documentation for overlapped i/o
Fix K2 driver to set split
Fix looping in DVK/voice mode when used with run-mode-processor
Remove WPX summary sheets.
Update Field Day, IARU, RTTY Roundup summary sheets.
- 11.34 March, 2016
Fix sizing of text in certain windows that did not fit properly on hi-res displays. Startup most recently used and Check Call.
Fix intermittent crash on File/Open due to superchk restart.
Fix xmmt.ocx support to honor PTT_END_HOLD setting.
Fix intermittent crash on selecting CW COM port on or off.
Streamline [Texas QSO Party](#) in-state county line operation.
Fix mousewheel tuning for hi-res mouse wheel.
Update WAE handling of Alt+digit and update [WAE documentation](#).
Add "My email address" to Cabrillo generation.
- 11.33 January, 2016
update File/Save Commit sequence
allow for wider strings in packet macros
SCQP updated for 2015 rule changes
Remove getscores tab from Broadcast scores
Clean up error messages on failed country file download
Improve loopback capture of transmitted audio

Audio Review OK with 12KHz quad channel recordings

Fixed Xmmt support in RttyRite which did not reliably turn PTT off. Most noticeable with ALT+K type-in

previous version broke certain modules that put up dialogs on startup. fix it.

11.32 December, 2015

Fix bug with typed in zero and ENTER in CALL field.

Fix bug with XMMT.ocx support causing an intermittent RttyRite crash.

Update to TQSL version 2.1.3

Add File/Web-Update-Country-Files

Make [network]UseTcp=1 the default so it need not be added to make packet local network operate

11.31 November, 2015

Prefill exchange from ADIF, if turned on, is taken into account detecting multipliers for spots and bandmap.

11.30 October, 2015

[Yaesu FTDX-9000/5000/2000](#) recalls antenna and preamp settings per band.

Fix bug introduced in 11.29 with CW-only on a COM port failing to be restored at startup.

Disable File/New if there are unsaved QSOs in the log.

11.29 September, 2015

Continuous recording of only one stereo receiver records both its tracks.

Fix Cabrillo contest name for, or add Cabrillo to: Texas QSO Party, All Asia, CQP, IOTA, WAEDC, HADX, JIDX, Oceania.

Add ContestNames.ini to ProgramData. Helps with posting scores to cqcontest.net if the Cabrillo name doesn't match.

11.28 August, 2015

CW/SSB/RTTY memory setup defaults changed

Remove work around to old MFC bug that prevented restoring various WriteLog windows.

Fix hang for the case of device-per-radio shared access to TX audio channel.

11.27 July, 2015

Add RIT Clear command for recent ICOM rigs (7600, 7700, 7800, 7850, 7851).

Add IC-7100

Update documentation for the [Band Changes](#) window.

Support read split on recent ICOM rigs that support the newIC 03 command.

For long-running sound output, add heuristic for noticing and recovering from lagging output device.

Add Split per radio display for [Super Check Partial](#).

Add support for rig drivers to enumerate and identify radios not on COM ports.

Remove restriction to multiples of CD-Quality, 44100Hz, audio.

11.26 May, 2015

Correctly support combination of Echo Mic and L/R xmtr on same sound device

Take into account Quad recording setting when complaining about incompatible sound device sample rates.

Fix RttyRite Send Fn to use RTTY-specific memory.

Fix bug in internet logbook if Operator column is set before connecting.

11.25 February, 2015

Support SSB sprint

Turn off RttyRite highlight for both registered CALL and for CALLPREFIX

Same sound device is allowed to be selected for both Left/Right transmit.

Fix processing of %Mnn sequence in memory messages for RTTY mode.

Update MOQP module to latest rules.

Bandmap can be presented [frequency increasing up](#) or down.

11.24 January, 2015

CTY conversion utility to ignore {} country override.

WinKey initialization update and handling of paddle notification.

Packet spot window redraw efficiency improvement.

Support [separate sound device per radio](#).

Add dedicated Call Queue window for Push/Pop call to Queue

Support [continuous recording in quadrature](#).

Fix BandsBandUpRetainCall keyboard shortcut and BandsBandDownRetainCall

Separate [F-key memories](#) RTTY from CW

Automation methods [GetFKeyMsgDigital](#), [GetFKeyMsgVoice](#), [GetFKeyMsgCw](#) and their "Set" equivalents are all changed to now comply with their documentation (which is unchanged). Any 3rd party software that worked around the bugs in prior versions will no longer work with Writelog in the same way as before.

Disable use of internet cache for various http file downloads.

11.23 November, 2014

Fix Broadcast score for certain multi-band contests like CAQP.

Texas QSO Party in-state rover log submission improvement.
More automation support.

Save/restore [timed CQ interval](#) in writelog.ini.

Improve [WAV file selection dialogs](#).

Improve reliability of shutdown of background sound processor.

Fixed long-standing intermittent bug that would sometimes hang on non-zero CWPTTDELAY.

Add Message01 and MessageShift01 as aliases for Message11, etc.

Support PTT on its [own COM port](#).

Fix display of slowest CW speed

Update NJQP module to latest rules.

11.22 September, 2014

[Radio/Antenna to this azimuth](#) notices if the CALL is a number from 0 through 359 (instead of an azimuth lookup for the CALL from cty.dat).

Add Louisiana QSO Party

Add SendCustomRigCommand to automation interface

HADX rules changes for 2015

Fix scoring of ARRL VHF rover logs. (Rovers get mults per contest not per grid of operation)

11.21 June, 2014

Update FL QSO Party for correct Cabrillo tag.

Throttle back super check partial's search of in-log QSOs.

[Setup/Display](#) now has "Make Default" button that affects subsequent File/New.

Fix the status bar to limit the width of the left-most pane so CW speeds will always show.

Fix bug in WinKey driver that caused occasional crashes.

Create a crash dump file on hard crashes. Can be [turned off](#).

11.20 April, 2014

Update OK QSO Party for band edges.

Add automation methods to match keyboard shortcuts.

Add support for [external keyboard shortcuts](#).

Honor the timeout argument in the MapStation automation call

Timestamp in broadcast score is that of last QSO logged, if there is one.

[QSL Print](#) setup is separate from the main print setup, and the QSL print setup (only) is saved in the registry. All other printing functions still default to the Windows default printer.

11.19 February, 2014

Add KS QSO Party.

Enable hardware flow control for Ten Tec Omni. And restrict VFO strings @A and @B.

11.18 January, 2014

Improve reliability of internet score posting.

Update VAQP for 2014 rules change.

Add diagnostics to registry scan for contest list in File/New

11.17 December, 2013

[Multiplier status display](#) to docking window

Add score posting [timeout](#) setting, defaulting to 30 seconds.

Fix crash-on-exit after loading VHF modules.

Improve docking window behavior. Includes sizing, switching between floating and docked, and fix incorrect save/restore of certain floating positions.

Fix spacing in Check Call window when font is changed.

Cabrillo Mode setting improvement for ARRL 160m and NAS

11.16 November, 2013

[Update scores to cqcontest.net directly](#).

Save/Restore most cabrillo settings in .wl file.

SSB message sending shifted messages is restored to keyboard shortcuts named [MessageShiftPhnn](#).

Message sending of those associated with the Entry window [column headers](#) is now on the new keyboard shortcuts named MessageColumnn.

11.15 October, 2013

Fix 11.14 problem: Calculate mode properly for Bandmap.

11.14 October, 2013

Make File/Merge work properly with TCP networking

Make General DXCC tracking log keeper module repeat Name column across the network

Handle the SSB DVK memory numbers correctly from WAE SSB QTCs

Add 60min timer for CQ WW time off calculator

11.13 September, 2013

Fix Send QTC bug in WAE RTTY.

Add packet spot [blacklisting](#).

Add [File/Display Spotting Station](#) to bandmap.

Fix enable the various WriteLog control bars to resize when displayed on non-primary monitor

Fix to honor RigPollInterval in writelog.ini

Add macros to [packet terminal window](#).

Update for latest TNQP rules.

Update WAE module for 60 minute time-off calculation.

11.12 July, 2013

Update for latest NC QSO Party rules.

Send WinKey Close command on exit.

Convert CTY to WL now is *Run As Administrator* from the WriteLog start menu.

Switch to most recent tqslib2: version 1.14.3.

Update to latest Buckmaster software HAMCAL32.DLL.

11.11 April, 2013

Fix issues with support the old MMTTY plugin that broke in 11.10

11.10 March, 2013

Support for [XMMT.ocx](#). Replaces the MMTTY plugin

Update K3 rig driver to work better with Flex-3000 radio

Add [NumClonesAtStartup](#) ini entry.

Correct Russian DX Contest Cabrillo name RDXC

Update to latest NMQP rules

11.09 January, 2013

Rules update for MCC Maritime QSO Party.

Support for NRAU Baltic Contest.

11.08 December, 2012

Update WAQP module for latest rules

Fix crash on attempt to graph with PAQP module.

Switch order of K3 freq/mode set commands. Now freq first.

Add [Configuration] [CreateErrorLog](#)=0 to create a COM error log file.

11.07 September, 2012

Add ARRL School Club Roundup

COQP module which logs the DXCC prefix in the cabrillo log when the SPC is entered as DX

ILQP

- No longer counts US/Canada/AK/HI as separate DX mults
- Cabrillo log converts "DX" to "DX-prefix" for RCVD field

Update the list of VE mults for WAQP/Salmon Run

Improve the [exchange field/column editing](#). Columns may now be reordered.

11.06 July, 2012

Update for IOTA rules

11.05 July, 2012

Audio Review Set Directory... button works on Vista/Win7

Fix crash in All Asia module on receipt of certain out-of-band spots.

Fix failure to log Operator name. This has apparently been broken for a very long time.

Extend packet window width out to 1024 characters (was 80)

Add CWPTTIDLE setting to CW PTT dialog.

Update for SCQP rules.

Fix IARU bug introduced after last year's contest.

11.04 April, 2012

NMQP rules update

VAQP rules update

Fix installation files omitted from 11.03 for 60m support.

11.03 April, 2012

Update Convert CTY to WriteLog, process macros to affect country calculation as well as zone. And if a prefix appears in a WAE country as well as ARRL, ignore the second one for the WAE calculation.

Fix networking lockout messaging. Last-one-wins would not work (sometimes) with more than 2 machines networked.

Add DXCC country display to beam heading.

Add 60m band to DxPedition mode.

Encode 60m band properly in TQSL export.

11.02 March, 2012

Fix scoring of IARU (was broken in 1087--after 2011 IARU).

HADX contest has 4 digit serial numbers.

11.01 January, 2012

Version 11 updates.

- 10.90 October, 2011
Update many modules for cosmetic changes to GUI
- 10.89 September, 2011
FTDX-9000 driver updated for custom rig command timing correction.
- 10.88 August, 2011
Many modules changed to remove the chance of repeated setup dialogs.
Rookie Roundup module updated to click better in digital modes.
OHQP update 80m/40m band edges and 4 digit serial numbers.
- 10.87 July, 2011
Handle MOUSE_WHEEL_HZ=0 correctly for all rigs.
Maritime QSO Party, MCCMQP contest module update.
Add [YAESU COMMANDS](#) for keyboard macros for certain Yaesu rigs.
Add 1.2m, 70cm and 33cm bands to Field Day module.
On Windows Vista and later, create a "Edit Writelog.ini" entry in the Start Menu. Known limitation: if, before running WriteLog the first time, this icon is selected by a newly created user, or the first thing selected after a new full install of WriteLog, it will offer to create an empty writelog.ini, which will omit copying the installer-provided writelog.ini entries in the system area on those OS's. Don't do that.
Update OKQP, INQP, New England QP, TNQP, OHQP, FISTS for redundant setup dialogs.
Fix internet logbook failure to download network frequencies if it has none to upload.
Make IARU module Contest/Parameter Setup followed by Contest/calc restore respond to changed IARU zone
Fix problem that duplicates QSOs when recovering a journal while networked.
Fix failure to reinitialize Cabrillo settings when opening subsequent .wl files
Fix failure if too many operators are entered in Cabrillo output
- 10.86 June, 2011
Fix Win98 install.
Don't read docked window layout from WRITELOG.INI if holding CTRL on File New...
Add NS as alias for VE1 to 7QP module.
Support "pipes" mode for WinKey+OTRSP box as alternative to virtual COM ports.
Add FTDX-5000 rig driver and change RIT clear command for this, FTDX-9000, and FT-2000.
Update NVQP module.
Update MIQP module.
Update IOTA module.
Update NMQP, GAQP, WIQP, VAQP modules.
Initialize [Multipliers]CallPrefix= properly at install time.
Add Maritime QSO party.
- 10.85 May, 2011
Add "COMM PTT"=YES support to IC-7200 driver
Make WinKey driver work with certain Win98 COM port drivers.
Changed default for [WinKey]BufferLevelSetting=6. It was =2 before.
Add an [INI entry](#) that creates a Winkey log file.
Update WinKey initialization sequence to comply with WinKey spec.
Optimize the dupe/multiplier checking for both bandmap and packet.
Add ADIF tags PROGRAMID and PROGRAMVERSION.
Fix WPX band change tracking parameters.
Add "none" to Band Change Window setting and remember Band Change window setting in [\[Multipliers\]BandChangeSetting](#).
- 10.84 February, 2011
Winkey again. This time add [BufferLevelSetting](#) to the ini file and account for the fact that the half-space (a caret in WL's message buffer) is not echoed back.
Fix the Echo Mic again, and add more [tuning parameters](#).
Fix a crash if you setup a custom log with no multiplier checking.
Fix the K3 rig driver to not issue audio commands when Headphones are set split.
If the [\[RttyContextMenuEntries\]](#) only has one entry, then a right click invokes it without popping up a one-entry menu.
A PushCall operation, either from the RTTY window right click, or from the WriteLog Entry window menu, both push the call to the stack only on their own Entry Window, rather than to all Entry Windows that happen to be on the same band. (PushCall operations are still repeated over the network, and all networked machines with multiple Entry Windows will still stack the call on all Entry Windows that match the band of the push.)
- 10.83 January, 2011
Winkey driver batches characters through the OS, and supports [Winkey CT Spacing](#)
Winkey driver aborts auto-cq on touching paddles.
Add getscores script for: WAE RTTY contest, ARRL 10M, ARRL 160M, CQWW.

Make Echo Mic function. XP and before, revert to 10.76 behavior--require mic/xmit audio to be on same sound board. For Vista and later, no such requirement and reduce latency.

Update MNQP for 2011 rules.

Fix slow-to-read file in FOC module.

Add ARRL Round UP .gus file for getscores.org.

Update CTY_RUS.DAT.

10.82 November, 2010

Preserve time/date stamp of created files on File/Update Web Data Files.

Installer no longer creates a browser window to view relnotes.htm.

Moving the keyboard focus while a message transmission is waiting for the CALL field to complete (with its red box) no longer aborts the remainder of the message.

Remove erroneous "Can't create ASCII output file" message from SS contest module.

Simplify Writelog\ARU.gus script for getscores.org. No need to wire-in the name of the .wl file.

Fix the bug that prevents the getscores.org Universal Score Poster from posting multiplier totals who's column contains lower case letters (like "Sec" for ARRL SS).

Add a getscores.org script for ARRL SS.

10.81 October, 2010

Fix K3 rig driver to read split correctly (TX/RX were reversed)

Fix "local" spot in Packet window that appears when you use STO button in S&P memory to correctly have TX/RX frequencies for split (they were reversed)

Update IAQP.INI file for IAQP.

Enable override of RttyRite right click context menu entries using

[\[RttyContextMenuEntries\]](#).

Fix bug that fails to finish transmitting a message containing %C if the QSO is logged before the callsign is sent.

Add [% sequences in message buffers](#) that will execute rig commands.

Add the eight [custom great circle databases](#) from [www.country-files.com](#). The INI entries that control Great Circle lookups are no longer in WRITELOG.INI but instead are in GreatCircle.ini, which is always located in WriteLog's Application Data directory. The directory varies with operating system. It is c:\ProgramData\Writelog on Windows 7.

Fix %E processing for CW messages. The end-of-message character needs to be ignored for all CW drivers, not just some of them.

Add Kenwood TS-2000 rig driver.

Add [\[Kenwood_TS850_Commands\]](#) and [\[Kenwood_TS2000_Commands\]](#).

The [Elecraft K3](#) rig driver's support of two Entry Window operation is completely redone. It now maps VFOA to one window and VFOB to the other.

10.80 September, 2010

The Elecraft K2 and K3 rig drivers have been changed in this release in a way that is not backwards compatible for custom rig commands. If you are using the custom rig commands feature with commands in the writelog.ini section named [\[Kenwood_commands\]](#) then you must copy those macros to [\[Elecraft_K3_Commands\]](#) (for the K3) or to [\[Elecraft_K2_Commands\]](#) (for the K2) for them to function in this version. The [\[Kenwood_Commands\]](#) section is still defined for rigs of type "Kenwood" and "Kenwood TS-850".

Elecraft K3 rig driver update. The custom rig commands section for the [K2](#) and [K3](#) are no longer the same as Kenwood drivers.

AdvanceCursorOnInsert, if turned on, simulates typing [space] instead of moving to next field, but only if the current field is the CALL field.

At startup time, delay start of second RTTY window by 2 seconds because starting MMTTY twice in succession doesn't always start the 2nd window.

Fix the Pegasus rig driver that was broken by the "multiple rig" new feature in 10.79.

Update TS-850 rig driver to send both FT and FR commands going both into and out of split.

Add IC-7200 rig driver setting.

Fix split commands sent to FT-950.

Add EntryClearCallQueue command available for shortcuts.

For MMTTY TNC and RttyRite, add option to [take over FSK](#) and use COM port hardware.

Fix problem with missing "Save ARRL format" command when opening certain contest files at WriteLog startup time.

Reduce the latency/delay between mic audio and xmit audio for "Echo Microphone" function.

10.79 August, 2010

Telnet window can accept longer addresses than will fit in the dialog box.

AdvanceCursorOnInsert INI entry introduced in previous update now works.

Update rig driver interfaces to enable writing a rig driver that simulates multiple rigs. This update cannot be seen by running WriteLog, but involves writing a custom rig driver.
Update COQP for 2010 rules.
Update IAQP for 2010 rules.
Add [keyboard shortcuts](#) to control rig functions.
Add support for rig drivers to have custom commands. Updated WriteLog [Kenwood driver](#) to read custom commands from writelog.ini.
Save and restore the setup for third and fourth Entry Windows.

- 10.78 July, 2010
Fix installer failure to accept valid registration code on certain upgrade installs.
Add Download... button to [Convert CTY to WriteLog](#).
Extend rotator COM port support out to COM16: (was COM8:).
Add [\[Winkey\] settings](#) to ini file to delay detecting end of message.
Add CWOPS contest support.
Support 16 COM ports for RTTY.
Move D-STAR contest support into main installer.
%P followed by a digit selects the most recent previous QSO *on the same radio*.
The INSERT key on the keyboard now (after all these years), in addition to its original behavior, also moves the cursor to the first field in the exchange instead of leaving it alone. This new feature is turned off by default, but can be turned on with [\[entry\]AdvanceCursorOnInsert=1](#).
In the Rttyrite screen, the right click menu now has a [PushCall](#) entry, that puts the call in the call stack.
Certain settings of the Vista-style WlogSbControl, simply did not connect to the sound board.
Add support for logging ARRL Rookie Round up. Does not do real time logging to the network.
Update the COQP.ini for VE multiplier rules change
Replace the zlib.dll and tqslib.dll with newer counterparts because the old ones don't work on certain new OS's.

- 10.77 June, 2010
Update ARRL 10M Contest module to include Mexican states.
Update PAQP to 2010 rules.
Installer now supports Vista, Win7, and 64bits. Users need not turn off UAC. This is a pretty big change. See the relnotes.htm file for installer details
Support an offset between rig-reported frequencies and WriteLog's interpretation of them. Add COM_n_DIGITAL_OFFSET_HZ entry to [\[RIGS\]](#) section of INI file.
Add [Include Tx Id](#) checkbox to Cabrillo export.
If a mouse click in the entry window causes the field in the window to change, then do the same processing of the previous field as would happen if you had pressed a tab.
Fix incorrect LiveCwDelayMs handling to interrupt Auto CQ.
Support Windows Vista and later [sound boards](#).
Add [Legacy Installer Helper](#), a Start Menu program that patches existing WriteLog module installers to work with the directory layout new in this version.

- 10.76 February, 2010
Rttyrite error message of "internal error" log file improvement.
Fix problem with sending Network Display name longer than 5 characters to internet logbook.
Update Cabrillo dialog to use ADDRESS-CITY, ADDRESS-POSTALCODE, etc.
Entry Push Call pushes to local network. All Entry Windows on the network on the same band/mode see the push.
Fix crash in networking when a sked is added (came from compiler change in version 10.74).
Version 10.75 broke rig control on some Win98 systems. Fix that.

- 10.75 January, 2010
Add NMQP.
Update JI DX contest to latest rules.
Correct IC-7600 driver to use IC-7800 compatible commands.
K1EL Winkey setting for CW sends PTT ON/OFF commands if so configured.
Fix various problems with MK2R and OTRSP headphone handling.
Add new commands named EntryXmitFocusUpNoPhones and a "Down" version. The exiting commands without "NoPhones" at the end continue to move the headphones to match the transmitter if an SO2R control box is present.

- 10.74 November, 2009
Add IAQP.
Fix the default font selection code so that Paste/Link of a WriteLog document draws correctly if no font has been selected (and therefore the default is being used.)

[\[CONFIGURATION\] AddCallToNotesFile](#) enables the feature that automatically adds the current CALL to the _Notes.Txt file.

When the keyboard focus is on the log window, the mouse wheel scrolls that window.

Add [Entry Undo Wiped Qso menu item](#)

Use the ADIF standard FREQ_RX tag for split frequency ADIF export. Retain the ability to import both the standard tag and the old RXFREQ tag that previous versions of WriteLog export.

Fix the entry in WriteLogQsosClient.wsml that caused Network Frequencies to not display.

Update the internet logbook client-side to download more than the first 330 QSOs as quickly as possible. This update coincides with the new stand-alone internet log server (posted separately on writelog.com). That new server works with this update as well as with earlier versions of WriteLog.

Update some components to newer Microsoft compiler (2005).

Send Clear RIT command to rig on setting frequency from bandmap and packet window.

Call starting with MM/call is prefix, while ending with call/MM is maritime mobile.

Minor changes to Convert CTY to WriteLog: write back to where read from, and if you run it from the command line with -TEXT as an argument, it makes a human-readable output.

Packet window Telnet select dialog is always-on-top.

Add IC-7600 menu entry.

When changing keyboard focus away from WriteLog and back, preserve the entry window focus.

Add functions to band summary interface to make getscores.org easier.

Install WritelogIARU.gus file in WriteLog's programs folder. It can be used with getscores.org for the IARU contest.

10.73 September, 2009

ADIF export frequencies to WriteLog's maximum precision

MK2R support for "V" command

Support for the Open Two Radio Switching Protocol (OTRSP)

YO DX contest 2009 rules changes.

Colorado QSO party update for 2009 rules.

WA QSO party (Salmon Run) update for 2009 rules.

10.72 April, 2009

FT-950 RIT clear fix

Edit packet spot command uses most recent CALL/frequency regardless of last rig poll

Add NYQP support

Fix issue with not reliably setting rig on clock on bandmap or packet spots

Update YODX contest for latest rules

10.71 March, 2009

Add ND QSO Party

Change CQ WW WPX RTTY module to 8 band changes/hour per rules change

Packet windows can be iconized

10.70 broke internet logbook. Fixed in 10.71

10.70 January, 2009

Fix handling of %Z with no network letter

Fix Cabrillo generation for OK DX RTTY contest

Add settings to [\[RIGS\]](#) for initializing RTS/DTR for Rig COM ports

add IC 7700 rig entry.

[%Z in a message sends](#) "other" radio's frequency

%Z in a message sends frequency without units

%Z option to send 100Hz resolution.

Adding a call to the bandmap also adds it to the packet spot window labeled as "local".

This is turned on by default, but can be turned off with in the [\[ENTRY\]](#) section of WRITELOG.INI

10.69 October, 2008

COQP rules change

Support for multiple packet windows

Support for MS QSO Party added

Preset exchange now overrides any fields changed by contest module checking for multipliers

Add Comm_n_OffsetSsbSwap to the [\[PORTS\]](#) section of WRITELOG.INI

Fix Great Circle bearing's use of full calls in the WL_CTY.DAT file.

Support CQ zone for CQ WW 160 contest (rule change for 2009).

California QSO Party. Generate Cabrillo 3.0 tags

10.68 August, 2008

KOS cabrillo file s/n fix (ver 1.0.1.0)

ALQP add LEE county

Fix support for Cabrillo ASSISTED category
Add K3 Rig Driver (defaults to 38400 baud)
Add entry for [K1EL Winkeyer2](#)--only difference from Winkey1 is support for Rig A/B output
Add automation calls for getting and setting the Digital and Voice memory strings
Add selections for 38400 and 57600 baud for rig drivers
Fix per-band serial number assignment. Serial numbers were being lost in certain sequences that involved band changes

10.67 May, 2008

UK DX--Don't auto-fill previous s/n for non-UK stations
ALQP--various changes, v 1.0.0.3
Generate Cabrillo version 3.0--required for ARRL VHF contests
Remove RTTY-specific dupe checking rule from NA Sprint

10.66 March, 2008

Fixed compatability with Internet LogBook server. (and attempted but failed to update the server components to newer versions of Tomcat and Axis--the old Microsoft SOAP SDK tools used in WriteLog are not compatible with the newer open source SDKs). You have to install the exact (very old) versions of the server components for WriteLog to do an Internet Logbook, but the good news is that this version works with the old servers.
Fixed ONQP multiplier list
Improved PTT handling for CW QSK for MK-1100 and WinKey keyers
Fixed default handling of 160m band for antenna relay output. The default coding (what you get with no [BandRelayEncode] entry) for 160m incorrectly became 0 in 10.65. The correct output (one) is restored in this version.

Update GAQP module
Set mode properly for Omni VII rig
Fix auto-resume/dueling-CQ's

10.65 January, 2008

ARRL 160m Cabrillo files "DX" in section
Adjustment to activity times in TCP network to not disconnect stations idle for 5 min
Omni VII rig driver
FTDX-9000 rig driver honors CTS from rig
FT-2000 rig driver (same as FTDX-9000)
FT-950 rig driver
FT-450 rig driver
TenTec Argonaut V rig driver
Preliminary support for [microHAM MK2R](#)
Fix problem with networking contests with very short QSO exchange
Add support for [INI override of band relay encoding](#).
UK DX contest Additional ML column maintenance

10.64 December, 2007

RFCHAMP 1.0.0.2 - Increase # of supported oblast prefixes
Setup package has writelog.msi with no attempt to rename it from .setup_msi
Networking disables user input of local machine name, and otherwise automatically handles the issues with TCP/IP numeric addresses and host names.
Networking creates a circulating list of 10 most recent networking logs.
Various internal networking bug fixes. It is **strongly** recommended to upgrade all machines to be networked to 10.64 or higher. The [Link to Network](#) dialog now puts an asterisk for computers where network protocol initialization is in progress, and, in TCP/IP mode, the numeric IP's are listed.
Some information (like supercheck settings) at Save Configuration time was not always being saved where it could be found. Now it is
Right click in supercheck brings up its property page.
Left click on RST in RTTY window no longer skips the "T" in RST.
USA Sub bands for band map updated to current.
Country files for Nov 21, 2007 are included in FULL install. Upgrade install does not install new country files--use File Web Update Data Files.

10.63 April, 2007

GAQP DC&MD update
OKQP updates--RTTY
Kenwood driver supports rig frequency to 1000GHz
COQP support
ONQP ini file update
7QP update
MARAC contest support

10.62 January, 2007

RSBG updates
ILQP DX mult scoring fix

- Allow DVK mic input on different sound board than received audio
 Do Software FSK on DTR in RttyRite
 ESCAPE clears PTT on multi-keyer unconditionally
 Allow non-alpha characters in NAQP QTH column
[%Z supports networked rigs](#)
 NA Sprints automatically put "DX" in Cabrillo QTH column.
- 10.61 July, 2006
 Support AlwaysFillZone INI entry for IARU
 In CW messages, embedded "<" and ">" no longer overflow the number of speeds
 TNQP update for 2006 rules changes
- ALQP update re-arranges log fields
 Support [%Z in CW messages](#)
 Fix a PTT drop-out bug for doing 2 RTTY radios on one rig
 Dueling CQ--first CQ moves the keyboard/headphone focus now like the subsequent ones.
- 10.60 May, 2006
 Export RST to ADIF using ADIF standard names for GAQP and FLQP
 Yaesu FT-9000DX rig driver improvements
 IC-751 and other older Icom rig drivers do not attempt setting split, so set frequency works
 Pennsylvania Qso Party PSK and RTTY. File export not right yet.
 Fix Alabama QSO party registry for old installer
 7QP module updated
 Control FSK PTT properly on microHam FSK port.
 Fix problem with File Save at Exit after a File Save As...
- 10.59 March, 2006
 Delay COMM port buffer size/timeout initialization calls to prevent crash of USB/COMM drivers.
 OKQP fixes the band edges for 15m CW
 Reduce traffic on the K1EL/WinKey keyer even more
 Fix bug in K1EL/WinKey key support that caused loss of PTT off signal at end of CW.
 Support [animation of control of the sound card](#) left/right balance to accommodate sound cards that leave the requested channel muted even though the balance is set properly.
 Fix a problem in Rttyrite mode changing--sometimes you have to change twice (introduced in 10.58)
 Add Rttyrite menu entry to [turn off/on checking for "DE"](#).
 INQP update--no more than 2-county-lines
 VAQP Update: 220 and 440 bands added
 7QP module
 ILQP: Updated the default cabrillo submission email address
 Process KG44aa calls correctly
- 10.58 February, 2006
 previously logged QSO has precedence over preloaded ADIF file.
 GDI object allocation/deallocation for bandmap reduced (should stabilize Win 9X)
 ADIF export of 902MHz QSOs are now labeled "33cm" (was "35cm"), and Cabrillo exports are labeled "903" (was "902")
 Add ICOM IC-756PRO3 and IC7000 rig entries
 Add [grid square lookup from Buckmaster CDROM](#).
 Networking: once a successful dialog is established with another station, if the connection is lost keep retrying forever to reconnect. Also, a connection is deemed lost not only if the network reports it down, but also if no messages can be sent through it for more than about 5 minutes. Also retry packet window connect forever if it was ever connected.
 Typing the TAB character into the ALT+K window would hang the Winkey--fixed
 Trying to record .wave messages into a non-existent directory reports an error.
 ADIF export now uses "APP_WRITELOG_nnn" tags per the ADIF 2.0 spec. Also added STATE tag for QSOs that WL can identify as being states. Preset exchange can read .adi files written by older versions of WriteLog, but that is the only feature that still accepts the old tags.
 ONQP module updated for VA3CC0 bonus points
 Added a [call queue](#) feature for queuing more than one call heard in response to CQ and then working them one at a time.
 Fix spot handling of frequencies above 100MHz. Was also causing bandmap flashing.
 Any packet spot with RTTY in it is marked as RTTY and tuning to it set the rig to FSK.
 Also append the characters "RTTY" to any spot being sent that the rig is in FSK.
 Read the Xverter offsets from writelog.ini when the rig is setup in Setup Ports dialog (rather than requiring a Setup Ports followed by a Save Configuration, followed by a restart of WL in order to use offsets).

In the bandmap, CTRL+Left Mouse button is treated same as SHIFT+Left Mouse button (so CTRL will do multi-select like SHIFT currently does.

Add [Software-generated FSK](#) to Rttyrite.

Add International Naval Contest.

Tested basic functionality on Windows XP x64. No problems found.

10.57 December, 2005

Winkey--don't request status so often

Networking--bandmap networking is throttled. Fixes flickering problem

Networking--repeating alternating gabs fixed.

Back out the change to reset COMM port on "NO RIG". It didn't help with microHam, and it broke some other COM port drivers.

Add Yaesu FTDX-9000 rig driver.

Add Alabama QSO Party

10.56 October, 2005

Full install is .msi file and Microsoft installer.

Fix AudioReview window when showing both channels

Reset COMM port when "No Rig" is detected in an attempt to work around a hung comm port driver

WPX prefix calculation update: hard-coded list of non-WPX things that stations might send like /QRP /AM /MM /AG and others

Update SCP and country files to Oct 2005

10.55 August, 2005

Updates for ILQP, and for OHQP (adding a rover)

Support UVK-200/VK-64 keyers

UK DX Cabrillo update

Fix problems with TCP/IP networking having more than 2 workstations.

RSGBC debug message removed.

Fixed bug where Winkey speed pot change did not survive F key.

Fixed bug configuring "right"rig rotator port.

Added [Ports] NaDvkHpSplitOnPin9. Set this non-zero and the Headphone Split menu entries control pin 9 on the LPT port IF it is set for the NA dvk setting.

10.54 March, 2005

Winkey support fixed--don't send open command except to recover from errors.

Cabrillo output for CQ 160 contest preserves DX prefix for non NA calls

WL_CTY.DAT files from 2 March, 2004 (FULL install only)

King of Spain contest update

OKQP fix for removed QSOs

Time on/off calculation conforms to ARRL log checking

RSGB version 1.0.0.4 -- extra call areas

HADX change in multiplier names

CNCW Cabrillo format change

YUDX contest support

10.53 February, 2005

If no privilege to store Great Circle setup, etc. in HKEY_LOCAL_MACHINE, then try

HKEY_CURRENT_USER

Make a full call in WL_CTY.DAT have precedence over all other databases for bearing calculations. (Others include Russian and Australian prefix maps.)

Sound board mixer control finds the "real" mixer control on a sound board driver that claims more than one "Wave" mixer control where only one really has subcontrols.

RSGB 80m CC--RTTY auto-fill of serial number to right field

Elecraft QSO Party update for 2005 rule changes

Support for YO DX contest

VAQP update: RTTY accepted, mobiles: 10+ qsos from a cty

10.52 January, 2005

TenTec Orion driver tracks last used IF bandwidth

Timeout diagnostics added to TCP/IP networking log file

USCQP contest displays multiplier counts above 100 correctly

CIS DX Contest allows hyphen character in mult field

Helvetia Contest Cabrillo format change

10-10 QSO Party summary sheet format update

UK DX contest cabrillo output fixed, band summary window score display fixed

RSGB National Field Day module

RSGB 80m CC module

various 10-10 contest fixes

Icom rig driver more tolerant when rig refuses to respond

OKDX RTTY contest score calculation change

WPX multi-2/multi-single band change display fixed.

Bug fix to country checking of certain full calls.

- 10.51 November, 2004
 WAQP update
 Makrothen contest update
 Fix to W9XT card record from SHIFT+Fn
 MDCQP update (BCT to BCO)
 ARCI module update for 6 digit ARCI numbers in Cabrillo
 Add SCQP module
 %Fn key handles n greater than 9, and also, on an empty field, lookup its value as the F key is pressed.
 Fix failure to handle MK-1100 PTT properly on SSB transmission after pressing the CW paddles and before sending a CW Fkey message
 Support for RC2800PX rotator
 Preset exchange has priority over calculated fields even when the CALL determines the multiplier.
 When opening a file from the startup screen, the time off calculation wasn't restarting properly. Now it does.
 Support K1EL Winkey. Two [INI entries](#) added.
 Support D80 setting in LZDX contest
 Fix problem with incorrect LPT band output on SHIFT+UP/DOWN
 Fix TCP/IP networking reliability problem (also posted as wlnet1050Patch.zip)
- 10.50 October, 2004
 CIS contest update.
 Keyboard shortcuts for PTT on/off.
 Fixes to support more than 64K QSOs in the log.
Version 10.50 will not network with older versions!
.WL files with more than 65536 QSOs cannot be read by older versions!
 Add INI switch to say whether record-on-the-fly asserts PTT
 performance improvement for TCP/IP networking
[10m rule display](#) color code change--yellow means "one more OK".
- 10.49 August, 2004
 more fixes to typed-in frequencies for microwave bands
 support [networking on TCP/IP](#) in addition to NetDDE
 Fix network bug for case where exchanges on two PCs do not exactly match.
 MDC QSOP remove class T, fix summ sheet
 WPX 10 minute timer
 NAQP fix 10 minute time, and fix handling of digits in name
- 10.48 June, 2004
 Add 10 more message transmission buffers for SSB
 Look for full file names when transmitting SSB WAV files.
 Oregon QSO Party module update: Mults by mode, SN, no RST
 Fix Check Call Window display ignoring other modes on multi-mode contests
 MidAtlantic QSO Party, increate ML column width
 New England QSO Party, FSK mode added
 MI QP, accept s/n > 999
 NV QSO Party, entry classes changed and in cabrillo
 FL QSO Party, remove RTTY
 Internet Sprint--export Cabrillo
 Add Azimuth Sort to [packet spot](#) window.
 Add IC-7800 rig setting
[Fix frequency enter in CALL field](#) for bands above 10GHz
 Add separate TS-850 rig entry for split operation
 Kenwood driver improvements to reject bad command responses.
 WI QSO Party update to published WIQP Cabrillo format.
 Cabrillo format update for RAC contest.
- 10.47 April, 2004
 fix problem in File Web Update with space character in the file name.
 Packet remembers Telnet or Network settings on restart.
 Support for ARCI QRP contest.
 Support for CW and PSK on the KT4FY modem.
 Remove default assignments for NUMPAD1 and NUMPAD7.
 Updated VAQP module. Summary sheet mobile pts fix, etc.
 Support for UK DX Contest
 Support for CIS DX Contest (cw/ssb/rtty)
 Icom 703 support
- 10.46 February, 2004
 Help file is now Html Help.
 Support for TOEC contest.
 Multi-single timer for RTTY Round up per clock hour bug fixed.

BARTG RTTY and BARTG RTTY Sprint contest M/S timers updated to match latest rules.

Support for TIC rotator controller.

Support for IC-746Pro, IC-756Pro2.

Fix CTRL+UP/CTRL+DOWN move xmit focus broken in 10.45.

Add EntryKbdFocus and EntryXmit shortcut commands.

Radio Headphones Split/Toggle honors INI [entry] MoveHeadphonesWithFocus.

MNQP now allows a change in the ADIF file and a reimport of the log.

%W in programmed message does not stop Auto-CQ.

The default settings for AutoFillFromBandmap and AutoClearOnTuneMinHz is now OFF.

Add [File Web Update Data Files](#).

Add support for RSGB Commonwealth Contest.

Custom TNC handling (MMTTY) fix in RTTY to support auto-cq time as end-to-start interval

Support for Mid-Atlantic QSO Party

Support for Makrothen contest

RTTY screen highlights properly if "DE" appears at beginning of line.

pre-set exchange triggers multiplier check/display on newly entered fields if any field is a mult.

Click on a call on RTTY screen while pre-set exchange is in effect, the auto-filled entries prefer earlier entries in the logbook over the preset exchange.

Fixed incorrect enable of PTT for paddle sent keying on MK-1100 when QSK is set.

Fixed IOTA compare of IOTA numbers with leading zeros and not.

10.45 January, 2004

Show Multipliers window [remembers](#) its on-screen position—but not if iconized.

Support GetCurrentOperator and GetRates automation.

Don't prevent logging a QSO if CALL is REQUIRED.

Add menu entry to [lock docked windows](#).

Bring back [File Merge](#)

Add support for EUSP contest.

Automatically fill in Entry Window from BandMap when tuning. Clear Entry Window when tuning away from a frequency. Modify these features using the [\[ENTRY\]](#) section.

Add [menu entries to tune to next BandMap](#) entries up/down the band.

Update ARRL 160M Cabrillo to output ARRL section left justified.

On MK-1100 keyer, the headphones set to the rig with keyboard focus on a SHIFT+UP/DOWN.

Fix problem with Show Multiplier window saving and restoring off-screen positions.

[Return to 0.0KHz](#) (F12) Clears the entry window.

The [Check Call](#) window color codes by needed and worked, and the colors can be customized in the [\[CORREL\]](#) section. The "mult needed" message is spelled out.

Add %O (RIT clear), %L (log the QSO), and %W (wipe the Entry Window) commands to [CW/RTTY/SSB messages](#).

Starting a CQ on the second radio with [Auto Resume](#) turned on works and becomes alternating CQ's on two radios.

HOME key now returns the focus to the Entry Window along with its original function.

HOME no longer scrolls the log to the top when focused on the Log Window.

New installs now default to "Program Files" directory.

A [conversion program](#) is installed to switch use of WRITELOG.INI over to the registry.

[SHIFT+ENTER](#) logs a QSO regardless of any errors detected.

Add [Tools Keyboard Shortcuts](#)

2nd VFO support for FT-1000

EntryClear command moves keyboard focus to Entry Window

Support for Jock White Memorial Field Day

Added help buttons to some dialogs.

Setup Ports no longer has the stupid "Rig" column to confuse you.

[\[Netgab\]](#) FlashCount entry makes the netgab window flash longer.

[\[Netgab\]](#) AutoPopup nonzero forces the netgab window visible on receipt.

Add BandsBandUpRetainCall command for keyboard shortcut for VHF contest running the bands.

MNQP multiplier list update

10.44 December, 2003

Enable INI setting for RC2800 rotator command to send azimuth only.

Change Radio Mult/Run commands to *not* toggle.

Change Setup CW Decoder command to show the CW windows.

Add support for NJQP, TACS, HELV, LZDX contests.

Fix Cabrillo export for WAE to not switch "T" to "0"

Add Level meters to the Sound Board Mixer program.

Fix problem with selecting among multiple TrustedQSL certificates.

- Show Multipliers window [remembers](#) its on-screen position, and can have its band colors set from the INI file.
- 10.43 November, 2003
 Fix editor for transverter offsets.
 Make free form entry work for CA QSO party in state.
 Make IOTA Cabrillo output format match the published.
 Cabrillo output can be automatically emailed.
 Create [Trusted QSL](#) output for Logbook of the World. Special support for rovers is possible in the modules, but not all such modules are updated yet.
 N9OH modules are now part of WriteLog.
 Cabrillo output for JARTS
 Fix Sound board mixer control for boards that have separate level controls for “echo mic” from input into recording.
 The Pegasus radio type now supports the latest Pegasus control software on multiple COMM ports simultaneously.
 Make the RC2800 and DCU-1 rotator settings honor the documented 1 stop bit setting (was at two).
 Cabrillo output for CAQP.
 Support multiple sound boards on one computer where Windows has the wave input, wave output, and mixer’s scrambled.
- 10.42 August, 2003
 Fix ARRL Field Day to properly dupe the GOTA station at Network ID “N” (again).
 Fix Cabrillo export of 3.3GHz QSOs.
 The transverter offset feature using CommNOffset= in the [Configuration] section was essentially undocumented prior to this version. What was in this help file was incomplete and incorrect. This update fixes the documentation, and also changes the units of the offsets to MHz (instead of 100Hz), accepts fractional MHz entries, and works with offsets above 3GHz.
 Add TenTec Orion rig support.
 Setting CW PTT to QSK stopped the PTT assertion for all modes, not just CW in version 10.38. This update restores the documented behavior.
 Widen the zone and headquarters fields for IARU HF contest.
 Honor %X in messages when INSERT and + are typed.
 Change defaults for IOTA field in IOTA contest to better handle 5 character islands.
 VHF contests automatically switch the Great Circle beam headings display to use grid squares.
 Typing a grid square into the CALL field cases the Great Circle beam headings to use the grid square instead of country calculations.
- 10.41 June, 2003
 Fix bug with remove last QSO if there is only one QSO in the log.
 Add Elecraft K2 rig support, and make Kenwood and Elecraft rig drivers preserve CW normal/reverse settings for bands above/below 15m.
 In [PORTS] section of WriteLog.ini, for rig control, use Stop bits and Baud settings (only!) in COMn:=<baud>,<parity>,<data length>,<stop bits>
 Reformat most-recently-used file names that won’t fit in the startup dialog window.
 When an F key is pressed with the cursor in the CALL field, and if %C sends the call, and if you press another F key, the typing of the CALL field is terminated, the red box removed, and the second F key message sent.
 Update Field Day templates for GOTA and class F.
 Switch the “free form entry” from a vertical presentation to horizontal—uses less real estate.
- 10.40 February, 2003
 Add IC-910 support
 Add [Exchange L/R VFO](#) command.
[Great Circle Bearings](#) can read additional lat/lon databases created with [ReadCTY32.exe](#).
[ReadCTY32.exe](#) can read alternative CTY files and convert to bin for use in Great Circle Bearings.
 Add CW/PH QSO columns to band summary for Russian DX Contest.
 The Russian DX Context now calculates the oblast abbreviation from the callsign using a new rus_cty.dat file.
[Bandmap on second VFO](#) for supported radios.
 Add ability to [load an ADI file](#) for use a database of exchange information for this contest.
 CW-LSB support for FT-920.
 ARRL DX—update Band Change window support per latest Multi-Two rules.
 Upgrade version of the installer no longer contains country database, or namedmul.ini. Users are expected to download those separately.
 Support CQ WW VHF contest.

Support changed rules for JIDX.

RTTY Support for Sprint.

Support [free from entry](#) of exchange information.

Fixed a problem with the continental break down report created in 10.39.

10.39 January, 2003

Add a QsoWarningCount to [configuration] that adjusts when the “QSOs since last save” warning appears on the screen.

When opening a second copy of WriteLog, don't put its window in exactly the same position on the screen as the first.

Fix resize of tool bars(Band Summary, Entry Windows, others...) if they are floating (used to work correctly only if docked). also resized correctly when the contest module is changed and a new size is indicated.

Cabrillo output for following contests now converts what was logged to the standard abbreviation for the following additional contests: ARRL 160m, ARRL 10m, CQ 160m, Sprint, NAQP, RTTY Round Up, ARRL DX (DX).

namedmul.ini updated to use official ARRL section abbreviations for OR, QC, MAR, NWT.

The last thing after finishing all startup initialization is to turn off all PTT signals.

Add FT-897 rig support.

Add support for multiplier module to be able to change field attributes.

10.38 December, 2002

Keep red outline on CALL window longer for CW transmission, and add [LiveCwDelayMs](#) INI file entry.

Add Multiplier-is-Worth display to [Rate Window](#). Not all multiplier modules are updated, but these are: CQ WW, ARRL 160, CQ 160, ARRL 10m, Sprint.

When grabbing spots from Packet Spot Window, do not move the transmit focus. And check for new multiplier. And do the same when grabbing a sked.

Remember the current Operator for Change Operator when restarting.

Remember the Network Frequency Display name when restarting.

Remember last headphone latch/split settings when restarting.

Fix bug with Multi+ keyer, when [Setup CW PTT](#) CW PTT delay is set to zero it won't assert PTT on paddle input even if the keyer setup dialog says PTT on LPT. This version allows paddle PTT with zero delay setting.

Obey the [Setup CW PTT](#) for CW mode: don't set PTT on LPT unless the dialog setting says to.

_Notes.txt file (ALT+N) correctly records the serial number of the last-logged QSO with the note.

Fix the too-wide columns that happen on most of the columns, on some fonts, and on some windows.

10.37 November, 2002

Remove extra <CR> character when doing Telnet packet that was causing some packet cluster software to be unhappy.

Resize ALT+K CW window properly when Entry Window Font is changed.

[Lockout modes](#) work for CW/SSB in addition to RTTY, but with reduced functionality.

[ALT+SHIFT+F9/F10](#) change speeds on the second radio.

[Play sounds in response to keystrokes](#) Useful for blind operation.

Update to Oct, 2002 WL_CTY.DAT from AD1C

10.36 October, 2002

Fix bug introduced in 10.33 that caused inability to network logs with very wide columns.

Cabrillo support for SARTG

Score a rover log properly for Texas QSO party—mults don't start over on county changes.

10.35 crashed on editing the CALL column.

All BandMap entries are repeated over the network.

Right click on QSOs in the Log Window and there is now a Refresh Bandmap entry.

Choose it and any selected QSOs are refreshed in the bandmap.

For FT-1000MP, notice rig was in CW-R and preserve the reverse on setting frequency and mode.

Fix bug with width of Texas QSO party county 100th multiplier.

Fix similar bug with Floriday QSO party 100th multiplier.

Fix problem with order of multiplier assignments for all QSO parties.

Fix problem with cursor not going to “?” character when tabbing through Entry Window.

10.35 September, 2002

[Multi-single support](#) now requires the operator to specify whether the station is RUN or MULT. Cabrillo is generated appropriately.

Fix another problem with dupe checks on grid square and QSO party logging-some duplicate QSOs were not being marked as such.

Comply with the latest Cabrillo specification for VHF/UHF band designations.
 Numerous changes to [WAE](#) support. Turn DVK support on and off for SSB, fix Cabrillo generation. OK of the Send QTC dialog with no QTCs now does nothing. <Enter> does not finish the receive QTC dialog unless focus is on the OK button
 Add a [File QSL Labels to ADIF](#) menu entry.
 The [M/S 10 minute rule](#) window now has a right mouse button control to change its display mode.
 Support for 8 band changes/hour with CQWW multi-2
 Support %N for [cut numbers](#) in CW messages
 Keypad "*" clears RIT for most Yaesu rigs.

10.34 August, 2002

If you have turned on "Enter Sends QRZ/Exchange", and if you type ENTER while the cursor is in the CALL field, and if the CALL field is not empty, then, in addition to sending the exchange, also move the cursor to the same field you would have gotten had you typed SPACE.
 Don't automatically run FPORT16.EXE when Setup Ports is done.
 Update WAE module to 2002 rules—call area multipliers, Cabrillo output.
 Add support for KT4FY multimodem.
 RTTY support for Floriday QSO party.
 Canada Day contests write official province abbreviations into Cabrillo instead of as-entered.
 Various bugs in VHF contests: failure to show 6m QSOs in Check call, improper duping of rovers when some QSOs are unclaimed

10.33 June, 2002

Fix problem with display of COM port numbers in Setup Ports introduced in 10.32.
 Fix problem with extremely slow display of View-By-Radio with 25K+ QSOs.
 ClassD to ClassD qsos in Field Day are zero points.
 Made the networking protocol handle extremely high rates better. The new protocol does **not** interoperate with older versions—all local stations must run 10.33 or higher in order to network.

10.32 May, 2002

Don't dupe a QSO that has been marked with an 'X'.
 Support comm ports above COM9 using the CommSlot entry in WRITELOG.INI.
 Add [TUNE](#) command.
 Networking is much more tolerant of mismatched exchanges between stations on the network. It matches up exchanges by column names and field settings (numbers, lowercase, etc.)
 Band decoding switches 100KHz below the lower band boundary.
 Add "Auto Scroll" button to [packet spot window](#).
[Network status window](#) can now be closed, and there is an entry in the Tools menu to re-open it.

10.31 Band Summary window widens its column spacing for large scores if necessary.

March, 2002

Add GetAdifNameN(), GetFieldAttributesN, and FieldTitle to automation interface.
 (These is for the simulator's use.)
 In ADIF import, translate SSTV to AM.
 Eliminate RST from Cabrillo output for VHF contests.
 BARTG Cabrillo output includes SENT time.
 Added [logging simulator](#) that reads ADIF and uses that to drive WriteLog.
 Typing into an Entry window while a CQ is in progress aborts the message on all modes (including SSB).
 Incoming spots do not scroll the packet window.
 Tag spots with their time in Packet window.
 Changed the behavior of [IcomForceSplit](#). If you liked the old behavior then you need to change your setting of this option from (1) to (2).
 Added [INI entries](#) to override the Icom rig address for all Icom rigs.

10.30 January, 2002

Fix ARRL 10M (and others-NA Sprint, ARRL 160M) to not suggest KL7 as a country multiplier. (This was not always broken—changes in the CTY files brought out the problem).
 Add INI entry to control LPT pulse length for DVK control.
 Add INI entry to restore 10.28 behavior for CW LPT.
 Add Cabrillo support to Stew-Perry 160m contest.
 Fix GDI "DeleteObject while selected bug" introduced in 10.26—caused slowdown after a large number (>3000) of redraws.

10.29 December, 2001

Allow slash character in WL_CTY.DAT entries.
 Interpret "=" in WL_CTY.DAT as a full call.

Fix problem with leaving PTT on if you switch rigs during a CW transmission.
 If there is no current serial number and need to send a serial number, then send previously sent one.
 If WriteLog was setup up for CW on an LPT port using Windows 9X, and then was upgraded to Windows NT, 2000, or XP, WriteLog no longer crashes on startup.
 If an attached object gets corrupted, read the rest of the log anyway and report the problem (rather than failing to read any of the log.)
 Default settings of all SS fields changed to no-auto-tab.
 Handle WM_VSCROLL messages same as mouse wheel. Maybe this will make non-Microsoft mouse wheels tune the radio.
 Update the networking software to properly handle more than 64000 QSOs in the log.
 This mod means 10.29 will NOT network with earlier versions, nor will it network using old .WL files created by earlier versions.
 Make DXP-38 driver support "stacking" of F key messages.
 FT-817 rig driver.
 ARRL DX contest stateside no longer hints that W/VE are multipliers.
 Sprout a second CW Speed indicator if there are two radios.
 Make handling of LPT port pin 1 compatible with CT/NA/TR.
 Don't screw up the TenTec Omni VI NAR filters on setting frequency/mode.
 The 10 minute rule display now displays the correct timers iafter switching run and mult bands.

10.28 September, 2001

General DXCC Logger auto-fills Name column.
 IOTA contest accepts less than 3 digit numbers.
 IOTA contest exports ADIF with a dash.
 Support for Oceania DX contest.
 Supercheck sorts calls in the log first, then calls from the .dta file.
 Fix bug with %C in programmed message: would not send anything beyond the CALL if it was a dupe.
 Support VHF transverter with high-side mixer.
 Fix bug in assignment of sequence numbers on band change when doing by-band numbering.
 Make ADIF import preserve NETW station letter.
 Add Network Disconnect menu item.
 Fix incorrect "No Rig!" display when running CW but no rig on a COM port.
 WAE QTC TX dialog advances on down arrow.
[Multi-Single 10 minute rule go/no-go display](#)
 WAE QTC RX dialog has no ALT+A shortcut key anymore.
 Make CQ WW RTTY contest save and restore your zone in the .WL file.

10.27

July, 2001
 Numerous INI entries to control the on-screen colors.
 Add [MapCallOnSpace](#) INI entry.
 Fix intermittent failure to transmit the entire F key buffer on the RITTY TNC.
 Add rig driver for IC-737 radio.
 Remove calls to set/clear REC/PB lines on W5XD Multi+ keyer.
 A left click on the "note" icon for a QSO selects the QSO (rather than ignoring the click).
 Make CT mode never, ever bring up Help screen on F1.
 Closing the various print preview windows goes back to normal without having to click View Normal.
 An edited serial number gets repeated across the network.
 Support ICOM rigs in CW-R and RTTY-R modes.
[Sked support.](#)
 Support for ARSWIN rotator controller.
 Add [Tools Recover Window Layout](#) command.
 %P0 sends previously logged serial number.
 Support for plug-in TNC's in RttyRite.
 PTT and A/B outputs on LPT are on all of the CW, DVK, and antenna relay LPT's selected.
 Add [UpDownCyclesThroughLog](#) entry to INI file.

10.26

April, 2001
 If you change the output file name for the Cabrillo file, WriteLog uses it now rather than silently ignoring your input.
 Fix crash in Russian DX Contest.
 Add ability to [edit a serial number](#) after it is logged.
 Florida QSO party Cabrillo format.
 Fix Yaesu rotator control. Its been broken several releases.
 Make network reject incoming QSOs over the network if their network ID is not in range of A-Z.

Draw vertical dividing lines between columns in the Log Window.

- 10.25 March, 2001
Typing any key into Entry Window stops any Auto-CQ in progress.
Headphone Split/Normal menu options are now toggles—both of them.
Starting up a second copy of WriteLog no longer complains about not being able to access the sound board (cuz the first copy had it occupied).
Support third party rig driver and front panel implementations.
Support multiple Kachina directories.
COMnSlot supported up to COM15.
Generate Cabrillo format for multi-two stations that have more than two networked PCs
Fix Cabrillo name designator for CQ-160, NA-SPRINT, BARTG.
Make RC2800 rotator control **not** do “S9” command
Selecting RITTY modem in RTTY window automatically disconnects WriteLog from the sound card.
Display “No Rig!” in frequency display when rig communications stops for more than 2 seconds.
Various Cabrillo formatting updates per G0AZT.
Add GetSummaryObject to WriteLog automation.
^G goes to correct serial number.
Progress bars on file load/save.
Make wide band decode available in split window.
Make RTTY screen have [scroll bars](#).
Shorten tail at end of AFSK transmission.
If you send an F key while one is in progress, tack the new one onto the end properly for dumb TU, Sound board FSK/AFSK, and RITTY TNCs.
Make RTTY/CW/PSK tuning windows [always on top](#).
Change bold font in Entry window to normal.
Fix mouse wheel tuning for FT-920, FT-100, and FT-1000D/MP, FT-890, FT-990
- 10.24 February, 2001
Cabrillo file for BARTG RTTY Sprint
No more duplicate serial numbers (except when running networking)
ARRL Round up Cabrillo generation makes sure you fill in your QTH.
[RITTY](#) as a RTTY modem (Windows 95/98 *only*)
Support for Russian Dx Contest
Support Kachina DSP 505 running Kachina software version 3.24 or later.
Start the journal as soon as a file is opened.
- 10.23 January, 2001
Change journaling to use ADIF format instead of TQS. There is no more support for TQS files.
Packet spot window “Follow me” now follows the radio if the radio is under PC control.
Escape key no longer closes the RTTY, PSK, or CW tuning windows.
The right click menus on the band map apply to window they were clicked in.
Support for nonstandard telnet port numbers.
Update the help sections on the INI file.
Support for All Asia contest.
Fix bug in Cabrillo export that failed to show entry mode.
Bandmap supports sub-bands.
Sub bands can be [edited](#).
Packet spot display window marks and filters out-of-band spots.
Clicks in PSK control dialog returns keyboard focus to Entry Window.
RC2800 rotator support.
Support for a dot-length space character as “^” in programmed messages.
BARTG contest exports in Cabrillo.
Remove 64K QSO limit in networking software. There is no longer any limit to the number of QSOs in a log.
When running RTTY as “Stereo Sound Board FSK”, don’t receive own transmissions if transmit monitor is on.
Auto-Resume CQ mode now is supported for RTTY as well as SSB/CW.
Editing a QSO causes a prompt for save on exit.
- 10.22 December, 2000
Bandmap window stays put.
Still more serial number changes.
Let AudioReview playback on different sound board than used for DVK/RTTY/CW.
Send Parital call corrections on + key in CW mode only, and then only if INI entry says its OK.
Add “Restart Continuous Recording” option to startup dialog.
Speed up bandmap color updating.
Add Sartek rotator support.

- 10.21 Fix "by band" export/display bug introduced in previous version.
November, 2000
Widen the packet local net selection dialog to 20 characters from 10.
Move the keyboard shortcut for the "Windows" menu from W to N to avoid conflict with ALT+W.
%C in CW memory sends previous call if currently blank.
Add InsertOveridesCall entry to WRITELOG.INI.
When doing an automatically timed CQ on RTTY, do not send an abort command to the TNC immediately before starting the CQ.
Add SetAntennaAzimuth, GetAntennaAzimuth automation functions.
Put WriteLog's type library in its resources (only programmers care).
Fix Auto-Resume feature for "PC Generates" CW selection.
No longer necessary to select "Sound board" for DVK in order to record.
Add support for Yaesu rotator protocol.
Fixed bug: editing a call did not update the dupe check.
Remove "renumber QSOs" menu entry.
Make the up/down arrow keys *not* circulate into the edit window if SHIFT or CTRL is being held down.
Fix bug that would cause the program to be unable to open certain logs that were made while networked. The file was OK. This fixes the program.
Add GetEntry(Radio) OLE Automation call.
Add RotatorOffset to [Entry] section of INI file.
Bandmap updates its colors by dupe checking again about once per second.
Fix Icom 775 driver.
Fixed problems with networking on Windows 2000.
- 10.20 October, 2000
Click on a call in the RTTY window and all the other fields in the Entry window are cleared. Only the CALL is filled in.
INSERT key does not pick up a RTTY call if the CALL field is already filled in.
Add DCU1 antenna rotator support.
Fix intermittent crash when recovering journal.
Lock in serial number on any entry.
- 10.19 August, 2000
Fix ADIF import to be case-insensitive for tags, and to successfully import a QSO that has only a <band> tag and no <freq> tag.
[Handling of %C](#) switches to live transmission only if you have typed the call in from the keyboard - not if you clicked it in from the RTTY window.
When operating with 2 Entry Windows, if you have the keyboard focus on a different radio than the transmit focus (designated by the green background on the L or R), then if you type Alt+K, the transmit focus is unaffected—the transmission is on the radio with the current transmit focus. F keys do move the xmit focus, unless you put a leading %X in the buffer.
Add DisableCommPTT INI entry.
For two-radio operation, when two QSOs are in progress at once, assign the numbers N and N+1 to the two simultaneous QSOs.
Add %X processing-in F keys to retain XMIT focus.
Add [Auto-Resume CQ](#) function.
Add Keyboard shortcuts for editing old QSOs with the [Edit QSO Tool](#).
Add [View by Network PC](#) option.
Most existing "View" menu options are now in the "Window" menu.
Registration codes are now 13 characters long, have fewer troublesome characters in them, are rotating and can expire.
Ensure COM PTT is off at startup.
Fix crash that can happen if you edit the date of a QSO in the log.
Make dual-sound-board support work properly for RTTY/PSK transmit as well as the other sound board functions.
- 10.18 July, 2000
Add West Central Florida section.
Add support for [Antenna to this Azimuth](#).
Put PTT signal on RTS line if using "PC Generates" CW on COMM port.
Timed CQ will accept a decimal point and tenths of a second.
The "Headphone Latch" command now stays on until turned off, and activates the headphone latch on all transmissions.
File Import now reads ADIF files instead of TQF files.
The sending of the %C message while the cursor is in the CALL field stops waiting after the call is sent.
Fix ANARTS scoring.

- 10.17 Add support for IOTA contest.
May, 2000
When WL is an OLE link source, it now draws something readable.
File Save As Ascii would put an extra space in lines with date.
CQ WW RTTY now remembers previous zone/QTH.
Mouse wheel tunes the rig.
Rig driver handling modified to be must faster for most rigs.
TenTec Pegasus rig driver support (uses existing Pegasus windows)
Support Visual Basic GetObject(,"writelog.document") call
FT-100 rig driver
CQ WW CW/SSB/RTTY summary sheets include separate zone, DX multiplier totals.
Typing <Enter> with the keyboard focus on the RTTY/PSK/CW control dialog boxes no longer closes them.
Enable [summary sheets](#) to specify field widths so TXT versions can print pretty.
Fix bug in frequency/mode editing that caused band summary to be wrong after editing only the mode of a QSO.
FT-767 rig driver.
- 10.16 March, 2000
Super check, band map and packet spot windows all now force a dupe check if you use them to select a call for the Entry window.
Telnet packet upgrade to comply better with the telnet protocol for Linux servers.
CW Speed is set separately for L/R radios.
Rate display and graphs are now insensitive to mismatched clocks when running a multi-station network.
Report what is not liked about sound files when playing them back.
Unconditionally reset the sound board speaker mute button every message transmission for SSB transmission and sound board keyer.
Net Gab wraps text to window if it won't fit.
Rate display can be configured to show rate for last 10 QSOs/last 100 QSOs (as before) or can be set for last 10 minutes/last 60 minutes.
Give a more explanatory error message when networking can't be established.
- 10.15 March, 2000
Fixed bug that caused sound board voice transmissions to halt forever if you ever send a message with <filename.wav> in it where filename does not exist.
Add PTT support to IC-746 and IC-756PRO.
Change use of F2.WAV through F11.WAV to MSG2.WAV through MSG11.WAV to avoid conflict that screws up sounding out calls like "F2AA".
[Custom sound board mixer control](#). This is an updated version from what was distributed separately from WL.
Fixed problems with window focus between RTTY and main screen on Windows 2000.
Speed up super check.
Make ARRLDX remember power entry from previous QSO.
Make ARRLDX PWR column one character wider
Fixed problem with telnet packet connection when receiving large numbers of spots.
Make ARRLDX remember QTH entry from previous QSO
- 10.14 February, 2000
Bring back the RTTY scope display.
Fix bug in PSK and FSK that would cause it to fail to transmit after switching modes between PSK and FSK several times.
Fix failure to write serial number to Cabrillo file for ARRL 10m DX entries.
Return keyboard focus to Entry Window after switching to another application.
Multi+ keyer protocol changed. New firmware required.
Added separate [SSB send message](#) buffers.
Set reasonable defaults for the programmed messages.
Add FT-757GX driver.
Sound board tone generation buffers to 400msec to prevent stuttering.
Allow PTT_BEGIN_HOLD and PTT_END_HOLD to be zero.
Fix bug in Cabrillo file that shows 432MHz QSOs in wrong band.
PTT handling of pin 16 on the LPT port was following CW rather than latching for the transmission. This is fixed.
- 10.13 January, 2000
Ignore /QRP in country calculation.
Get rid of leading zero in zones 1 - 9 for quicker typing when zone calc is wrong.
CQ WW remembers received zone of previous QSO.
Fix KG4 processing.
Fix automation problem with FileOpen.
Add File Export menu.

Change "Electronic Submission" to "Cabrillo File"
 Add MRU_LENGTH option to writelog.ini
 Fix FileClear() automation function.
 If CTCOMPATIBLEACCEL=YES, then ALT+F4 grabs packet spot (rather than program exit).
 Don't start the Auto-CQ dialog on ALT+T, and stop the Auto-CQ timer on any F key, and when switching radios.
 Fix the double-auto-CQ problem
 Update AFSK tone generation to new algorithms.
 Allow transmitted CW speeds up to 99WPM.
 Widen the FSK filter for 45&50 baud just a little.
 Improve the error reporting for sound board functions.
 The gray trace on the RTTY frequency display is now a linear amplitude trace.
 Network install for Windows 95, 98, NT and Windows 2000 is automatic.
 AudioReview can change directories.
 Fix memory allocation bug that caused RTTY screen to quit working after some number of changes between RTTY/PSK/CW modes.
 Log the mode of the RTTY screen window if there is a column named "DGTL"
 Add "DGTL" column to Round Up to make it easy to look for plaque score.
 WriteLog would override "Regional Settings, Number Digits After Decimal" to be zero.
 Fixed.

Fixed bug that erroneously paused rig polling on rig #1 when switching transmission over to rig #2 in the middle of a CW transmission on #1.

10.12 December, 1999

Right click "Play Audio from this QSO" now works even if the QSO is in the file currently being recorded.
 W5XD keyer in 10.11 would not resume rig polling after sending CW. Fixed.
 Sending live CW from the CALL field accepts a backspace and attempts to not send the corresponding morse character.
 Add RAC Canada Day contests.
 Support for Japan International DX Contest (Inside and outside JA)
 Support for Hungarian DX Contest
 Alphabetize HQ stations for IARU HF.
 Fix intermittent crash on exit of Rttyrite9.exe
 Convert CTY to WL no longer treats full calls as if they were prefixes
 Default Comm PTT to "YES" instead of "SYNC" at install time
 Make "SYNC" setting tolerate RTTY.
 Add OK DX RTTY contest.
 Update Microsoft files to latest rev (MFC42.DLL and MSVCRT.DLL).
 AFC (RTTY) now switches off when the CALL field has something in it.
 Support speed control knob on Multi+ keyer.

10.11 November, 1999

/MM is never recorded as being in any country.
 Fixed double spacing problem in packet window.
 Fix phantom packet spot problem.
 Add "Sync" option for PTT over rig control.
 Fixed Tools Create Reports which would crash if logs had bad times (times going backwards) or bad frequencies (QSOs logged out-of-band).
 CW PTT control (introduced in previous version) now works for one radio as well as 2.
 Change registration key.

10.10 October, 1999

Auto CQ delay now is from end of message to beginning of next *if* WriteLog can see the end of the message. Some DVK's, CW keyers, and TNCs do not support this, but most do. WriteLog automatically senses the difference.
 Support for W5XD multi-function keyer.
 Send PTT signal for all modes including CW.
 If you switch between radio L/R while a CW or SSB message is in progress, the message is aborted.
 Add a FT-900 driver separate from the FT-890 to fix lengthy poll problem.
 Fix failure of super-check to properly code already-worked calls for certain contests including CQP and PAQP.
 Fix crash in Create Reports for certain contests including CQP and PAQP.
 Fix problem with some sections missing in Cabrillo format setup.

10.09 September, 1999

AutoSaveCount added to WriteLog.ini
 Update Cabrillo format settings
 Alt+F1/F2 band up/down go to last frequency the radio was tuned to on that band.
 Changed F12 to mean "Return to 0.0KHz". Used to mean "bring up typing window".

- Set "Return to 0.0KHz" menu item on two consecutive QSOs less than 500Hz apart.
- 10.08 August, 1999
Cosmetic changes to AudioReview
AFC is automatically turned OFF while there are letters in the CALL field.
Support for the newly emerging electronic log submission format. Its at [Contest Electronic Submission](#).
Compression of continuous WAV files is supported. Rearranged the sound board setup in the process.
- 10.07 August, 1999
Fix bug that made LPT/Rig control PTT mutually exclusive on SSB.
Add menu entry to WriteLog that brings up AudioReview for a QSO.
- 10.06 August, 1999
Widen the 45 baud RTTY filter.
Added AFC to PSK.
Added [Continuously record audio to file On/Off](#)
- 10.05 August, 1999
Save/Restore window docking in the WL file as well as in the INI file. Hold down CTRL while opening a file to **not** recover the screen.
Bandmap sets up the Entry Return to 0.0KHz menu entry.
Bandmap separately saves/restores positions for two windows.
Bandmap can hide its File menu—same commands are on right mouse button.
- Delete/backspace in Bandmap removes entry.
Use ISO standard date format YYYY-MM-DD.
Added %Mnn processing to CW/RTTY messages
Add ability to add a file to the RTTY type ahead buffer.
Tightened up the on-screen and print spacing and fixed some old horizontal scrolling and hit testing bugs—if you click in the log window to edit, the cursor should go very close to the character your click.
- 10.04 July, 1999
Trying a different CW magnitude/frequency display.
Add support for multiple sound boards using
[Configuration]
SoundBoardIndex=1
for second board, etc.
Update sound board RTTY functions to use [frequency display for tuning](#) and incorporate an automatic frequency control.
- 10.03 June, 1999
RTTY changes that appear to give 1.5 stop bits reliably when running FSK
[Multi-pitch CW decoding](#)
- 10.02 May, 1999
[Added ability to copy CW](#) in the RttyRite window.
Shut down LPT port pins used for CW keyer on exit.
- 10.01 April, 1999
Fix failure to turn PTT off on Escape when running PSK.
Added NET button to PSK dialog and made dialog smaller.
[Added ability to log which radio makes the QSO](#).
Duping problems with networked Novice station in Field day fixed.
- 9.23 March, 1999
WPX scoring update to accommodate rule changes.
Add PK-232 and KAM support for TncInit
[Support for PSK](#)
Fixed intermittent problem with network startup.
Make network retry one time when a connection drops out.
Add LineInIndexOverride INI entry to override WriteLog's choice of Line In for sound board mixers.
Moved Edit Sort Order to [Setup Sort order and serial numbers](#)
Fix failure to save summaries in TXT format in BARTG.
Fixed clipping of left edge of multiplier names in some Contest Show Multipliers screens.
Add LptABSense INI entry.
Add FT-757 rig driver.
Add FT-847 rig driver.
Support for Texas QSO party.
Update CTY files to match 1999-Feb-16
New TXT templates for CQ 160 and ARRLDX
Add an R to the Network frequency display if station is Run vs. S&P.
Support networking Novice/Tech station in field day.
- 9.22 February, 1999
Added TncInit INI entries for STS-PC II TNC.

Fixed: if you started a RTTY window from WriteLog and then closed it, ALT+K would not bring up a CW window anymore.

When typing in a split frequency, validate it against band edges and refuse to set the split out of band.

When setting a split calculated from a packet spot, validate it against band edges and don't use it if out of band.

If a contest has per-band multipliers that don't depend on the call sign, use previously logged QSOs with that call on other bands to flag multipliers.

Support for Minnesota QSO party.

The reports introduced in 9.21 only totaled CW QSOs for multi-mode contests. Fixed.

Fixed problem introduced in 9.21 that resulted in sometimes showing the serial number 65535.

Improved WinRTTY weak signal copying ability.

CQ 160m needs a 2 character column for points (10 point QSOs)

9.21 January, 1999

Edit time on/off would refuse to remove a calculated time off once entered in the log.

The flash of the net gab display advertised in the previous release was missing and is in this release.

Right click on the column title buttons in the Entry Window aborts any transmission in progress.

Add Abort Transmission to the menu popup you get with right click in RTTY window.

Add support for Florida QSO party.

Update CTY files to Oct 27, 1998

In the packet spot window, selecting a spot and typing the DELETE key removes it from the window.

Added INI entry for reversing the sense of the PTT output on an LPT port.

Compute spot message using only QSOs logged from this computer—ignore networked computers.

Updated the Frequency Correction dialog to allow editing split frequencies.

Add INI entry to make the "COUNTRY" and "C" fields NOT show up in the prompt by default.

Setting up a timed CQ does not automatically start a CQ.

Correctly honor a decimal point when setting split.

Added ability to adjust colors in super check partial.

Rate window has a right-mouse pop up to allow changing between all band and single band rates.

For Icom rigs, set the passband width back to whatever it last was read when setting a mode and frequency.

Added reports.

WinRTTY AFSK now transmits a short (~200msec) spacing signal at startup when running stereo on NT instead of nearly 2 seconds.

Added INI entry for Icom rig driver that forces the rig out of split mode when WriteLog did not set it to split.

Update time on/off handling for NAQ for all 3 modes.

Fixed bug on automatically showing a time on/off when entering a new QSO after editing one more than 30 minutes old.

9.20 December, 1998

If you edit the callsign of a QSO in the log, the country gets recalculated automatically.

Will not accept logging a callsign without a digit.

When changing modes, change the default RST without requiring the Entry Window to be cleared first.

Menu's completely rearranged.

WK1 export enhanced to support easy construction of [pivot tables](#) in Microsoft Excel.

Added support for [managing time on/off](#).

Added TIME-OFF to ARRL file output for SS, ARRL 10M, RTTY Round up.

RTTY lockout last-one-wins works with CW, too. Especially good for single-op multi-radio.

Flash the border of the net gab display when messages are added.

Fix on/off time display calculation when QSOs are logged out of time order.

Fix W9XT card support for voice and also enable recording from within WL.

Disable LPT support on NT (used to crash if you tried to use it).

Change the color of sent serial number in Entry Window to blue. But also show it as gray if it has not been locked in for the log.

In two-radio operation, if an Entry Window is set inactive for 60 seconds, its serial number is unlocked.

%B processing in a message automatically adds the call to the bandmap.

If you type a Backspace with the cursor in the left most position in the Entry Window, the serial number is unlocked.

Support full two-radio operation on new sound boards that have separate mute switches on each input to the digitizer instead of the one-of-n multiplexer that older models have had.

9.14 November, 1998

Add QSX to outgoing packet spots when rig is split.

When saving the "Entry Return to Freq" from the rig, keep the old frequency if the rig is still at the location set previously by grabbing a packet spot.

Changed "Shared Sound Board" to "Stereo Sound Board" to make it more obvious what's going on.

Alphabetize Pennsylvania counties.

Update CTY files to match latest CT files.

Improve font selection in Rttyrite.

Make packet, Rttyrite, and writelog rig control *never* use flow control.

Fix PAQP and CQP file export to put a space between points and section.

Add rig drivers for IC-746 and IC-736.

Fix IC-756 handling of splits.

Fix handling of splits for all Yaesu rigs.

Increase network transfer speed to about 500 QSOs/sec.

Make WAV file processing detect differing wave formats when building a call sign or number message and abort the message rather than generating scrambled audio.

If you started the network and changed operators for the first time in a certain order, the OPERATOR column would not get repeated across the network properly.

Icom rig drivers return split state if PC set split state until rig is retuned.

Some Yaesu rig drivers set PKT mode instead of RTTY mode if that's what the driver read the last time it polled the rig.

Set DVK PTT output to off on initialization.

Add time on/off calculator and display in Rates window.

9.13F October, 1998

Add very simple way to append to a NOTES file.

Reduce the font size by 10% when printing.

9.13E October, 1998

WAV file transmission for SSB: handle spelling out calls with SLASH in them. Handle spelling out calls with Fn in them. Allow spelling out messages with %P and %F in them.

9.13D October, 1998

Add OPERATOR indicator to status window.

Default timeout of spots in packet window now 20 minutes and settable from INI file.

9.13C October, 1998

Mostly bug fixes. Added "Follow me" as an option to the band selector in the packet view so the packet window shows whatever band you are operating on. Also changes a couple of details about how the keyboard focus moves around for gab and packet spots.

Do not accept logging a QSO with a ? in the CALL field

9.13B October, 1998

Support logging Operator changes/wave file locations for multi-op in the new menu item [Entry Change Operators](#).

Added a [Packet View](#) with lots of fast features.

9.13 October, 1998

Dumb TU was not working properly on Windows NT.

Multi-transmitter lockout was not working properly on 2 radio w/1 computer.

[Network frequency display](#). A new view allows each station to see the frequency of all the other radios on the network. Each station can also add a display string for its radio.

The Entry Window responds to right mouse click with a menu.

[Network gab](#).

Bandmap knows about stations working split.

Fix bug in both California QSO Party and Pennsylvania QSO party for out-of-state entries. If you do a File Save and then later File Open the file, it has forgotten what contest it was for.

9.12E, F, G, H

September, 1998

Diagnostics and bug fixes.

If you edit a QSO time while multiple QSOs are selected, offer to apply the time shift to all selected QSOs.

Also fix bug that sometimes caused a crash in WriteLog when running RTTY.

9.12D September 1998

More bugs. Fix %l handling in messages

Fix "creeping windows" problem: every time you exit and restart the windows were growing one pixel.

Save configuration had a selection box for starting a packet window on startup. That box was being ignored.

- Throttle the use of SuperCheck for slow computers.
- 9.12C September 1998
RTTY: fix crash that happens intermittently as RTTY exits.
RTTY: Speed up the use of the super check database for color highlighting.
- 9.12B September 1998
RTTY: If a call is not preceded by "DE", then highlight it only if it appears in the super check database.
Highlight and click properly on calls that get wrapped around the edge of the window.
- 9.12 September 1998
All resizable windows now resize both when they are docked and when they are floating.
Finally found the problem with rigs that won't work unless you do a Port Setup every time you start.
Ask the mode on "start a new log" and restrict the rig modes for: SS, NAS, NAQP, CQ160, ARRLDX.
Added Create Summary Sheet menu item for SARTG, JARTS, and VHF.
Added BARTG RTTY Sprint support.
Eliminated need to copy " DE " to detect call signs.
Updated the online help topics.
- 9.11 August 1998
Packet connect with Telnet
Packet QSX handling
Packet fix selecting CW spots in mixed mode contest.
- 9.10D August 1998
Still trying to get WAE just right. This one makes the receive QTC dialog box more tolerant of typing ENTER at the wrong time.
Restore behavior changed in 9.10C to previous behavior: Rtty window closes when the log window closes.
- 9.10C August 1998
Count multipliers right for PA-to-PA QSOs when one is on county line.
Default the county files for PAQP and CQP to overstrike.
For WAE QTC dialogs, make the ENTER key commit everything in the dialog.
Make TAB/SPACE in the entry window skip over any fields that you can't edit (like the QTC field in WAE)
- 9.10B July 1998
Pennsylvania QSO party added.
Improved support for multi-mode contests, including CQP.
Band up/down, Mode up/down now work better for multi-mode contests.
More effective startup dialog.
- 9.10 July 1998
Supercheck no longer updates when the callsign doesn't change.
Great Circle display shows blank when sunrise/sunset are unknown.
AFSK transmission on a sound board would crash because of a bug in some sound board drivers especially on Windows 98. This update works around the driver bug.
Update WL_CTY.DAT to divide IARU zones up in W/K, VE, UA0.
Support SCS TNC.
Fix ADIF export problem for IARU, CQWW, ARRL DX (dx).
Support WAE contest for phone/CW for inside/outside EU.
IARU multiplier display upgrade.
NAQP menu items fixed.
Check call formatting in columns
Guess modes for frequencies in VHF bands by band plans.
Fixed bug where STO/RCL would save the transmitted serial number. It shouldn't.
Fixed bug where RST would not be set to default if the RST field was set to be not visible in the Entry Window prompt.
Added right mouse click setup to search and pounce window.
Fixed merge running on a single machine.
- 9.09 June 1998
Display score using localized display settings (puts commas/periods in big scores).
Add sunrise/sunset to great circle bearing calculator. Also use left and right mouse buttons to customize bearing display.
Rearrange supercheck geometry—fit more calls. Make a bit faster.
Add FT-920 rig driver
When typing in a frequency, don't change the mode if can't figure it out.
Throttle timed CQ to the rate requested.

Forbid saving files to .WL extension unless its a file format WriteLog can read.

Add right mouse button processing to log view.

Fix WPX prefix calculation routine.

9.08

June 1998

Fix crash in CQ WW DX

Fix problem with duping a call after it is edited

Make editing window waste less space

Creating a new document automatically prompts for a contest type

Put the COM1:= port setup in WriteLog.ini because putting it in win.ini doesn't work for Windows NT.

Fix problems reading/writing comm ports for rig control, packet and RTTY on Windows NT.

Fix awkward way of entering new grids when running a VHF contest as a rover.