

GOLog

**Amateur Radio Contest Logging Software
For Palm OS® Handhelds**

**Version 1.6.1
User's Guide**

David Ek, NKØE

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Disclaimer

Use Golog at your own risk. The author makes no warranties, expressed or implied, regarding the suitability of this software for any purpose. Furthermore, the author assumes no liability for damages of any kind resulting from the use of this software. The user of the software assumes all risk resulting from the use of this software.

Introduction

Overview

GOLog is a free logging program for ham radio contests. GOLog should run on any handheld computer running Palm OS®. It was written for Palm™ handheld computers so that it could be used for contesting in locations where you can't lug a PC or a notebook computer. The author developed GOLog mostly for field contests like Field Day and a host of QRP contests so he could have the benefits of computer logging while playing radio in the woods or on the tops of mountains. He's that kind of guy.

GOLog performs the basic functions of a contest logger—logging and duping. With the addition of a Serial CW Sender (see the appendix for details), GOLog can even handle CW keying. GOLog includes conduit software so that you can transfer your logs in text format to your PC by performing a HotSync® operation.

GOLog does not perform advanced contest logging functions like partial call duping, checking exchanges for validity, keeping score, tracking multipliers, etc. It'll check for dupes, record exchanges, and save your log. GOLog was written with the intent of keeping it fast and simple.

System Requirements

- A handheld computer running Palm OS version 3.0 or greater with about 48 KB free RAM for the program and additional free RAM for logs (about 1KB per 8 QSOs)
- A PC running MS Windows and Palm Desktop® version 4.0 or greater.

Optional Accessories

- A PDA keyboard. GOLog has some built-in keyboard support. Note, however, that you cannot simultaneously use a PDA keyboard and the Serial CW Sender—not even the variety of keyboard that uses IR instead of the serial port. Sorry.
- A Serial CW Sender. This is a hardware interface that connects to your handheld's serial port and your rig, and allows GOLog to handle contest CW keying. The appendix contains information on how to construct this interface. To use the Serial CW Sender you need a serial HotSync cable for your handheld computer. The Serial CW Sender must be modified slightly to be used with HandSpring™ Visor® handhelds and some other brands of PDAs. See the appendix for details.

Unsupported Systems

GOLog does not work on handheld computers running the Microsoft Windows CE operating system. There are no plans to develop a version of GOLog for Windows CE. No, the author doesn't hate Microsoft—he just doesn't have the necessary hardware and software to be able to write a version for that platform.

Also, there is no conduit available for computers running Mac OS or Linux. Again, the author doesn't possess the hardware or software needed to develop support for these platforms. Interested GOLog users having the ability to develop support for these platforms are invited to contact the author.

Revision History

Version 1.0, 2 Sept 2001:

- initial release

Version 1.0.1, 4 Sept 2001:

- fixed fatal exception which occurred when deleting a log from the main form (when no log was open).

Version 1.0.2, 9 Sept 2001:

- fixed up the timing for the CW Sender, so that the CW speed list entries actually result in speeds which are close to accurate.

Version 1.0.9, 16 Jan 2002:

- fixed up an error with items on the Edit menu.
- changed to bigger fonts in the log entry and editing windows.
- added WARC bands to the list of bands in the log entry and editing windows.
- outgoing exchange is now visible and editable in the log entry window.
- log entry times can be converted from local to GMT.

Version 1.2.0, 5 Feb 2002:

- increased the available CW speeds up to 40 wpm.
- added an optional default received exchange.
- added a "confirm edits" option to allow automatic saving of log edits.
- added numerous features to the log editing window, including more navigation buttons, a Find capability, and the ability to delete log entries.
- enhanced keyboard navigation capability between text fields.
- added trap for gracefully preventing the opening of logs created with older versions.
- added a Dupe? button to the log entry window when serial sender is in use.
- changed the automatic dupe warning to show only for two seconds.
- added the ability to customize the QSOB4 message.
- added a '73' button to the log entry window.

Version 1.2.1, 16 Feb 2002:

- fixed a bug with automatic dupe checking.
- added an option for selecting 2x2 CQ calls instead of 1x1.

Version 1.2.2, 9 Mar 2002:

- fixed a conduit bug regarding illegal file name characters.
- moved the "dupe" and "not a dupe" popup windows so they pop up in different places on the screen.

Version 1.2.3, 21 Oct 2002:

- added support for using the Handspring Visor with a Serial CW Sender. The CW Sender must be modified to provide +5V through pin 8 of its DB9M connector. Use a 270-ohm resistor connected between the +5V supply and pin 8 of the DB9M to limit current to the Visor.

Version 1.2.4, 10 Nov 2002:

- in the log entry form, the callsign field is now cleared when a dupe detected.
- added provision for a serial number in the default exchange field. The # character is used to signal that a serial number (sequentially incremented for each QSO) should be inserted at that location. If leading zeroes in the serial number are desired, insert a string of # characters equal to the minimum length of the serial number. For example, if you want all numbers less than 100 padded with leading zeroes so that the serial number is always at least three characters, insert "###" in the exchange. In this case, number less than 100 will be padded with one or two leading zeroes, but numbers of 100 or greater will not.

Version 1.2.5, 1 May 2004:

- added the ability to have the Serial Sender auto-repeat the CQ at an interval specified on the CW Settings page.
- changed the format of the log text file created on the PC during the HotSync operation. Now the frequency is recorded instead of the band (e.g. "14" instead of "20m"), the year for the date is given as two digits instead of four, and the time is recorded as HHMM with no seconds and no colons. This was done because the original format required manual manipulation before it could be imported into the author's PC logger of choice (XMLLog, at www.xmllog.com).

Version 1.5.0, 5 April 2006:

- modified so that GOLog would work with the Serial Sender on Palm OS devices running PalmOS 5.0 and newer (as well as with older Palms).

Version 1.5.2, 2 Sept 2006:

- modified the log entry screen so that a keyboard user can hit the Log It! button by pressing Enter.
- Fixed a bug with Palm OS 5.x where the "All Caps" option for log entry didn't work.

Version 1.6.0, 4 Nov 2006:

- added a "TU" button to the log entry screen to send "TU" when using the Serial Sender.
- added the ability to allow dupes when logging.

Version 1.6.1, 1 July 2007:

- fixed a bug that caused log entries to be lost if the handheld got reset while GOLog was running.

About the Author

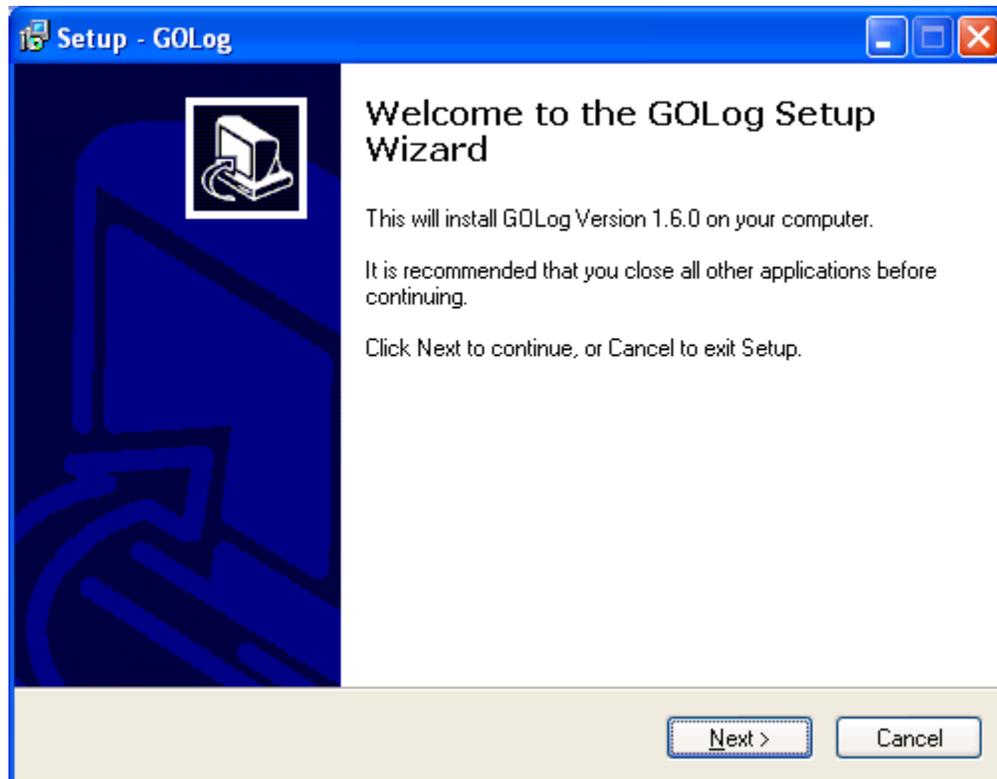
GOLog was written by David Ek, NK0E. Dave likes contesting (although he's not very good at it) and especially likes Field Day. Dave mostly practices QRP operating and likes to operate from remote locations during backpacking trips. It was Field Day from the top of Mt. Herman near Colorado Springs that inspired him to create GOLog and the Serial CW Sender. Dave made this software as freeware mainly because he's either too busy or too lazy to commit to providing the proper level of support you'd expect for a product you paid for. He'll try to help if you run into a problem, though. If you want to report a bug, make a suggestion, or sing his praises, you can contact Dave at dave@eksfiles.net.

Installation

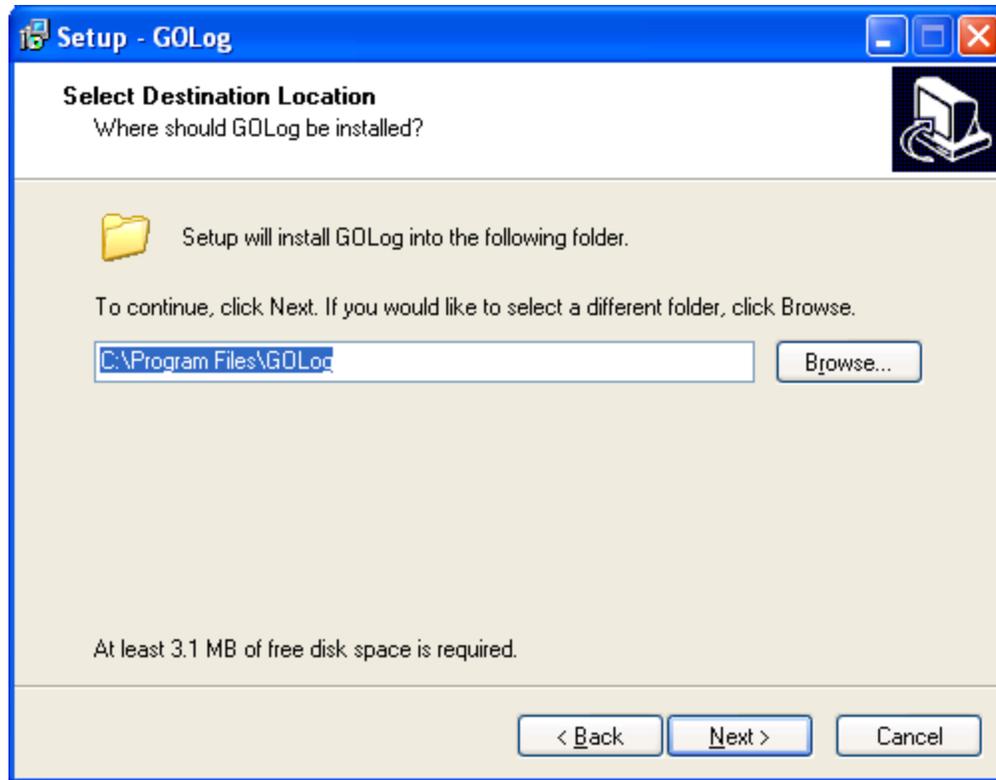
You can install Golog in either of two ways. You can run the Golog setup program on your Windows PC, which will install both the handheld software and the PC conduit software allowing you to extract your logs to your PC. Or, you can simply install the Golog handheld software from any computer running Palm Desktop, in which case you'll not be able to get your logs onto your computer in text form. If you have a Windows PC, use the first method. Otherwise you'll need to use the second. The Golog setup program will be described first.

Golog Setup Program

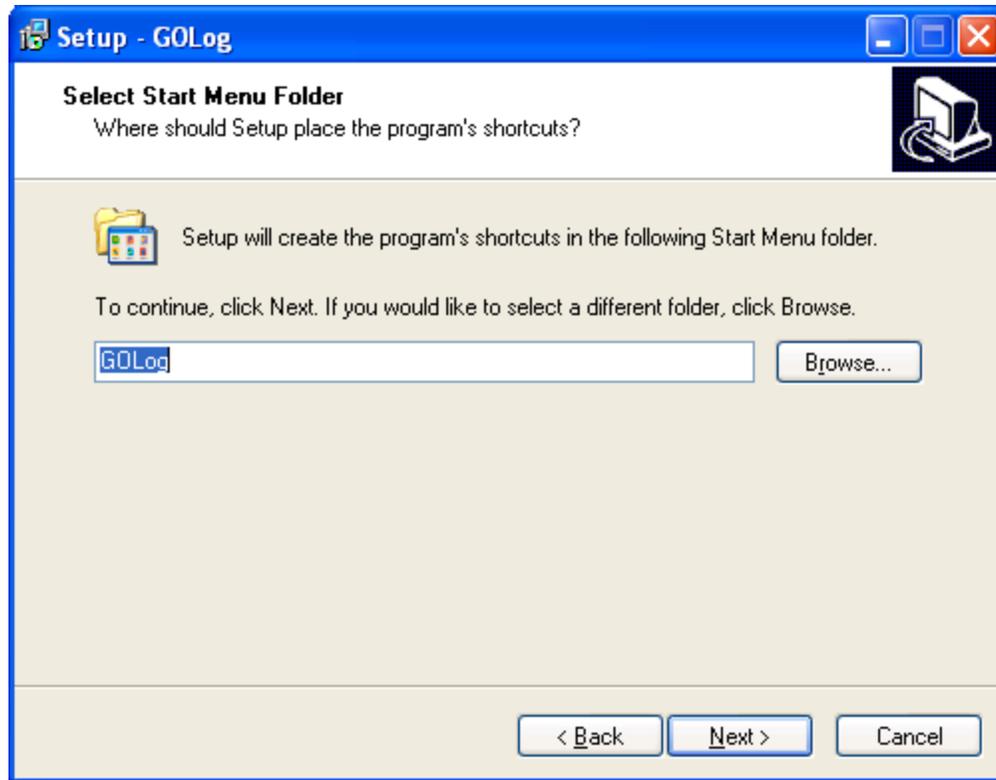
The Golog setup program only runs on Windows-based PCs. The Golog setup program installs two things: a conduit on your PC, and the actual Golog logger on your handheld. Before installing Golog on your PC, make sure you have the Palm Desktop software installed on your PC. This is *required* in order to run the Golog setup program.



The Golog setup program works like most other setup programs. Start the Golog setup program by double-clicking its icon from Windows Explorer. After seeing the usual welcome screen, license agreement, and readme text, you'll be asked to specify an installation directory for Golog.



It's probably best to just accept the default (which will install the conduit files in \Program Files\Golog), but change it if you must. After specifying the installation directory, you'll be asked to specify the Start Menu group where shortcuts will be installed. Icons for the readme file and for the user's guide will be placed in that group.



Next, the Golog setup program will copy the conduit files to the directory you just specified. After installing the files on the PC, the Golog setup program will register the conduit with the Palm Desktop software, and will queue up the actual handheld software for installation during the next HotSync operation. In order to do this properly, it will ask you to select your name from a list of names (the owners of the handhelds that use this PC to perform their HotSync operations).



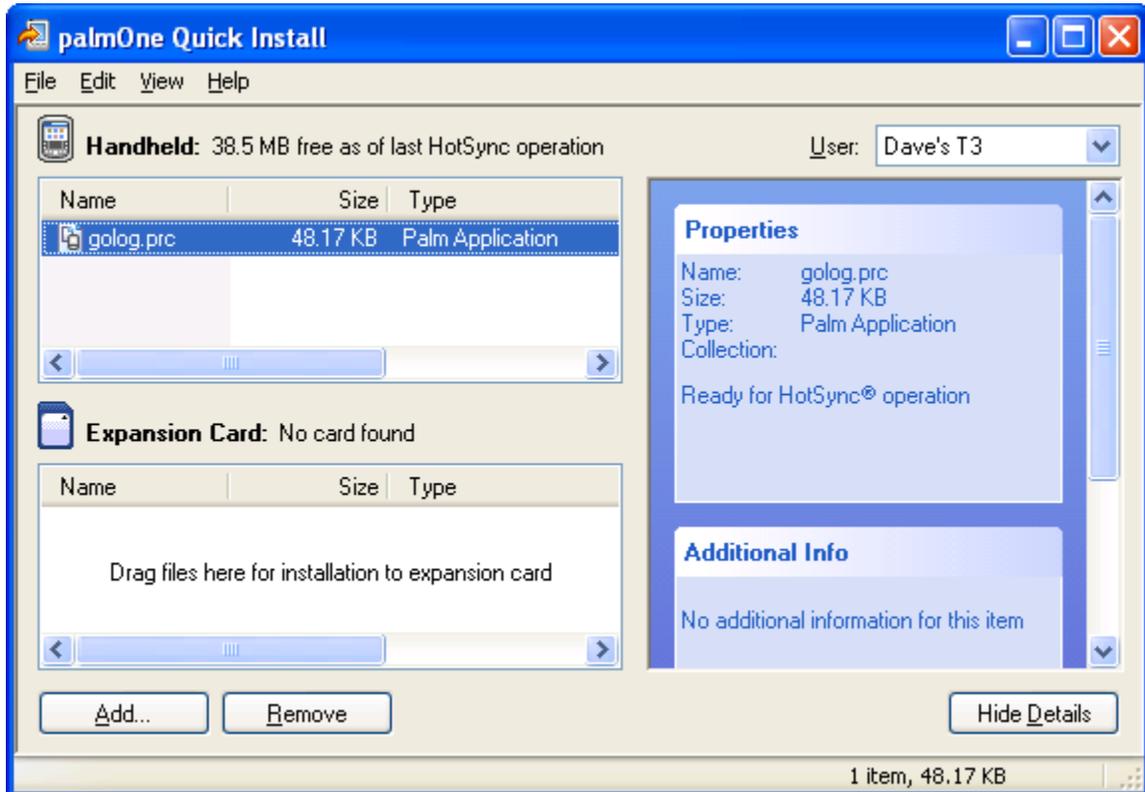
Once you select your name, the handheld software (golog.prc) will be designated for transfer the next time a HotSync operation is performed.



Once the Golog setup program finishes, connect your handheld to the PC and do a HotSync to transfer the software to your handheld. After that, you should be able to find the Golog icon in the “Unfiled” category in your handheld’s application launcher.

Installing Just the Golog Handheld Software

Those users who don't have a Windows-based PC can install just the handheld software, but you'll still need a computer of some sort to do it. Presumably, instead of downloading the entire Golog setup program, you just downloaded golog.prc from the Golog web page. All you need to do is use the Palm Quick Install Tool to select the golog.prc file for installation. Simply click the Add... button and use the File Open dialog box to select golog.prc. Then close the Quick Install application.



Next, perform a HotSync operation to cause the software to actually be transferred to your handheld. Once you've completed the HotSync operation, you should be able to find the Golog icon in the "Unfiled" category in your handheld's application launcher.

Uninstalling Golog From Your PC

If you used the Golog setup program to install Golog, and you decide you want to rid your PC of it, you can uninstall it like most programs by using "Add/Remove Programs" from the Control Panel. Simply select Settings | Control Panel from the Start menu. In the Control Panel, double-click on "Add/Remove Programs," and then Select Golog in the list of installed applications. Click the Add/Remove button, and Golog will be uninstalled. This means that you will no longer be able to transfer your logs from your handheld in a clean text format. This does not, however, cause the Golog software to be removed from your handheld.

Removing Golog From Your Handheld

Be warned: deleting Golog from your handheld will also cause all your logs to be deleted from your handheld. If you want to save the logs, perform a HotSync operation to transfer them to your PC prior to deleting Golog.

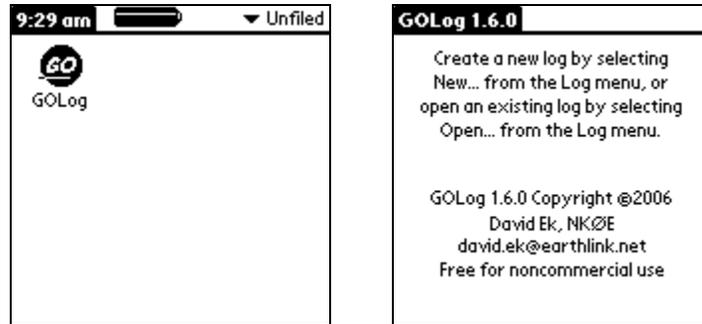


In the application launcher on your handheld, select Delete... from the main menu. The Delete window will appear. Find and select Golog in the list of applications and files, and then tap the Delete button. A dialog box will appear, asking you if you want to delete the Golog application and data. Tap the Yes button, and Golog and all your logs will be deleted.

Getting Started

Starting Golog

Starting Golog is easy--just tap the Golog icon in the application launcher on your handheld. When Golog starts up, you'll see its title bar and opening screen. There are some hints on the opening screen for creating and opening logs. Further details are given below.



Starting Golog: the Application Launcher icon and Golog's main form.

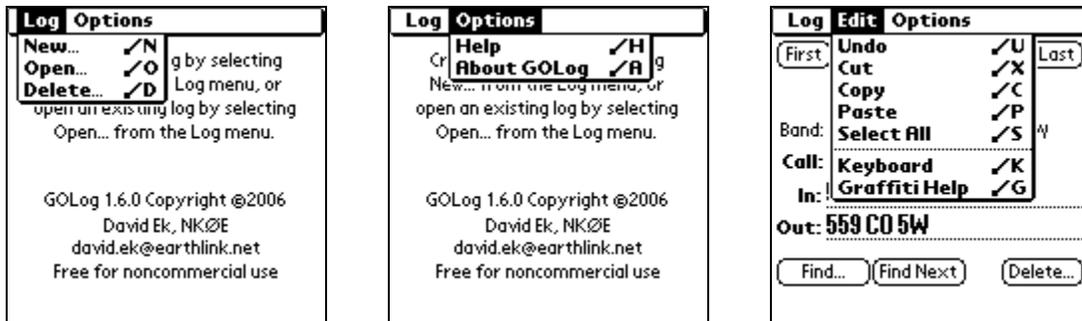
Fundamentals

Log files

First, it's important to know that Golog creates a separate database for each log you create, and you can have logs for several contests on your handheld at the same time. This is a bit different from some other Palm OS applications. For example, your handheld's Date Book and Address applications each use a single database for all your entries—you can't create separate address books for different purposes. Golog allows you to create a separate log for each contest.

So, the first thing you do after you start Golog is either create a new log or open an existing log. Golog also allows you to delete an existing log. You'll want to delete a log after the contest is finished *and* you've transferred it to your PC via a HotSync operation.

Menus



Golog's main menus: the Log, Options, and Edit menus.

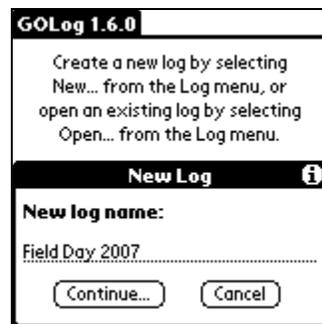
Log management functions are accessed from Golog's main menu. You can access Golog's main menu by tapping the menu icon on the screen next to the Graffiti area. On Golog's main menu you'll

see **Log** and **Options** menus. Select the **Log** menu if you want to create a new log, open an existing log, or delete an existing log. Selecting the **Options** menu will allow you to get help for the current screen or see the About box for Golog (showing the version number and whatnot). On forms other than the main form (like the log entry and log editing forms) there is an additional menu selection, **Edit**, for performing the standard cut, copy, and paste functions as well as accessing Graffiti help. These functions work in Golog identically to the way they work in other applications.

Help

Golog has help screens to remind you how things work. If you're working with the main form, the log entry form, or the log editing form, select **Help** from the **Options** menu to get help with the current form. If you're working in a dialog box (one of the Settings dialog boxes, for instance), tap the **i** icon in the top right corner of the screen to get help.

Creating a New Log



The New Log dialog box.

To create a new log, first select **New...** from the **Log** menu. You'll be presented with the **New Log** dialog box into which you need to enter a name for the log. You can use up to 31 characters to name your log. Stick to alphanumeric and punctuation characters (including spaces) when giving your log a name. Then tap the **Continue...** button. If you give your log a name that Golog can't handle, you'll be warned and then asked to specify a different name. Otherwise, if Golog likes your log name, it'll take you to the **Contest Settings** and **CW Settings** dialog boxes (see the next chapter, "Setting Up Golog For a Contest," for details on these dialogs). You can also cancel the new log creation by tapping the **Cancel** button in the **New Log** dialog box.

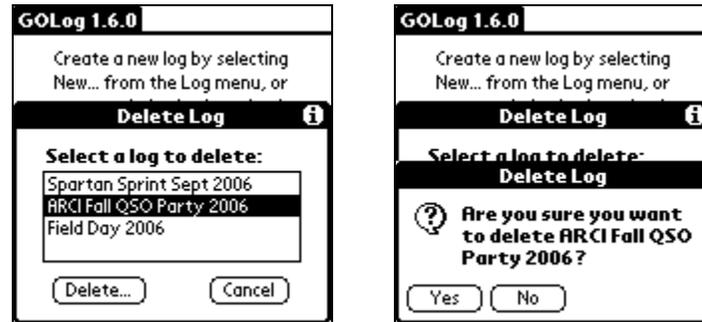
Opening an Existing Log



The Open Log dialog box.

Opening an existing log is easy. Just select **Open...** from the **Log** menu and pick the log you want to open from the list in the **Open Log** dialog box. Then tap the **OK** button to open the selected log. Tap the **Cancel** button if you change your mind. If you're in the **Log Entry** form when you do this, you'll be asked if you want to save your current log entry (if any). If you're in the **Edit Log** form when you open a new log, you'll also have the opportunity to save any pending edits.

Deleting a Log



The Delete Log dialog box and its behavior.

You can also delete an existing log at any time, by selecting **Delete...** from the **Log** menu. Then select the log you want to delete from the list in the ensuing dialog box, and tap the **Delete...** button, or tap the **Cancel** button if you decide not to delete any logs. If you tap **Delete...**, you'll then be asked if you *really* want to delete that log. Tap **Yes**, or **No** if you have a last minute change of heart. If the log you've chosen to delete is the currently-open log, you'll be warned of this and again asked if you *really* want to delete it. Again, tap **Yes** if you're sure, or **No** to cancel. If you delete the currently-open log you'll be returned to Golog's main form. Otherwise, you'll be returned to the form you were using previously.

Setting Up Golog for a Contest

Just like any contest logging program, Golog requires some configuration before it'll work the way you want it to for any given contest. Golog has two categories of settings: *contest settings* and *CW settings*. In general, contest settings deal with general contest-specific issues, while the CW settings only apply in cases where a Serial CW Sender is being used.

Although these settings can be modified at any time during a contest, Golog forces you to specify them when you first create a new log. In fact, as soon as you specify the name of your new log, Golog presents you first with the **Contest Settings** dialog box and then the **CW Settings** dialog box for making these settings. This section describes the settings in each dialog box and how Golog uses the settings during the contest.

The Contest Settings Dialog Box

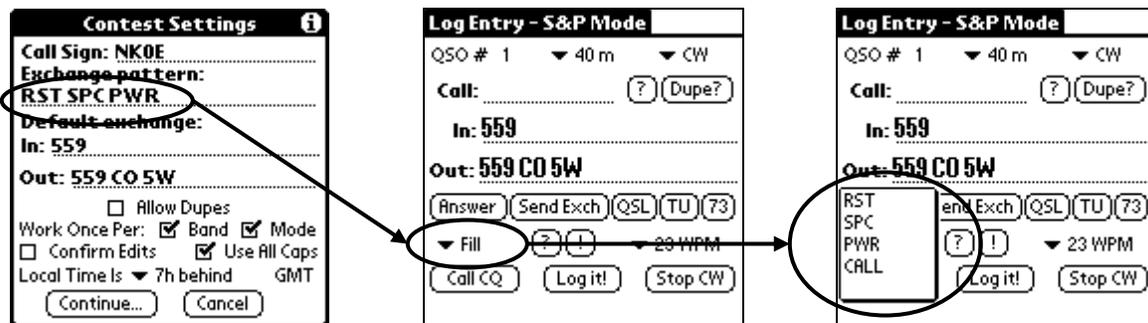


The Contest Settings dialog box.

The **Contest Settings** dialog box is where you specify how Golog will handle this contest.

Call Sign: enter your call sign in the Call Sign field. Golog doesn't actually use your call sign for anything unless you're using the Serial CW Sender for CW keying (more on that later).

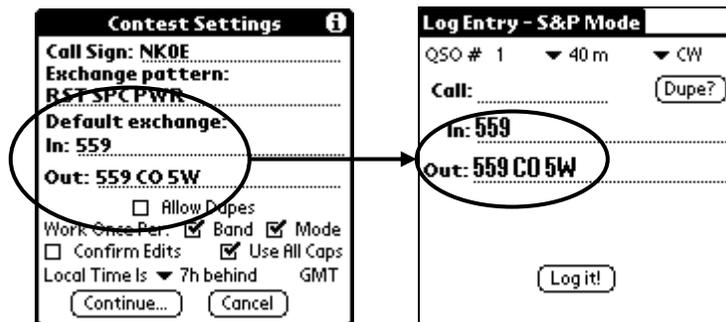
Exchange Pattern: the use of the Exchange Pattern is best illustrated by example. Let's say that you're working Field Day. The exchange for Field day is your category (or number) and state, like "1B CO." The correct Exchange Pattern to enter in this case would be "NR STATE." You could also enter "NUMBER STATE" or anything similar, but use one word or abbreviation for each part of the exchange. Another example is the monthly Spartan Sprint sponsored by the Adventure Radio Society, where the exchange is RST, state/province/country, and power. For the Spartan Sprint, you could use "RST SPC PWR" as the Exchange Pattern.



How the Exchange Pattern on the Contest Settings dialog box is used for log entry.

What is the Exchange Pattern used for? The Exchange Pattern is only used if you're using the Serial CW Sender for CW keying. When using the Serial CW Sender, you can request or provide exchange fills by selecting the needed part of the exchange from a drop-down box. The entries in the drop-down box are taken from the Exchange Pattern (more on this in the section describing the **Log Entry** form).

Default Exchange: these two fields hold the default incoming and outgoing exchanges, and may be left empty if desired. What you enter in the **In** field will be used to fill in the received exchange entry on the log entry form, and what you enter in the **Out** field will be used to fill in the sent exchange field on the log entry form.



How the Default exchanges on the Contest Settings Dialog box are used.

Contest exchanges are often predictable, and if the contest you're working has a predictable exchange you can use the default exchange fields to pre-fill the **Log Entry** form for each QSO. This will save you some work when you're logging each of the contest QSOs. If the exchanges are not so predictable, leave these fields blank. You can also enter only a part of the exchange (like 599) if that's useful. You'll probably find that setting the default sent exchange is more often useful than setting the default received exchange. Regardless of whether you use either of the default exchanges, you always have the ability to modify the sent and received exchange entries on the **Log Entry** form prior to logging the contact.

If the contest that you're setting up requires a serial number (a number that increases sequentially for each QSO, like what's used in the November Sweepstakes), you can have Golog include it by inserting one or more "#" characters in the default **Out** exchange. For example, if you were using Golog to work a contest where the exchange was RST and a serial number, you would set the default **Out** exchange to "599 #". Then, on the **Log Entry** form, the **Out** exchange will be filled in as "599 1" for the first QSO, "599 2" for the second, and so on. Each time you log a QSO, the serial number will increment. Deleting or editing logged QSOs will have no effect on the serial numbers used for successive QSOs. Note that you can use multiple "#" characters to indicate a minimum number of digits to send for the serial number (with leading zeroes, if necessary). For example, if you set your default **Out** exchange to be "599 ###" then serial numbers less than 100 will be padded with one or two leading zeroes, but serial numbers of 100 or greater will not.

Allow Dupes: If there is no restriction on working a station multiple times, check the Allow Dupes box to have Golog ignore dupe checking. If this box is checked, the Work Once Per Band and Work Once Per Mode checkboxes are disabled and their settings are ignored.

Work Once Per Band and Work Once Per Mode: these checkboxes set the rules for how Golog decides whether a station will be a dupe. If the contest allows you to work each station once on each band (like Field Day), check the **Band** checkbox. If you can only work a station once per contest regardless of band (like the ARRL November Sweepstakes), leave it unchecked. The same goes for the **Mode** checkbox. If contacting a station using more than one mode is allowed, check the **Mode** checkbox; otherwise, leave it unchecked.

Confirm Edits: this checkbox applies to the **Edit Log** form. It lets you decide whether you want Golog to nag you about whether to save any changes you make to each log entry. If you check this box, whenever you make a change to a log entry on the **Edit Log** form and then move to a different entry or to a different form, Golog will ask you if you want to save the changes. If you leave this box unchecked, Golog will always save the changes and won't bug you about it.

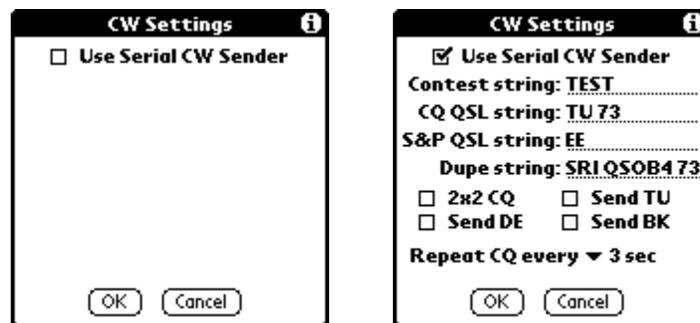
Use All Caps: this checkbox should be checked if you prefer logging in all capital letters. If the box is checked, all entries made on the **Log Entry** and **Edit Log** forms will be converted to upper case, regardless of the state of the Graffiti shift. If the box is not checked, text will be shown exactly as you enter it, and you can use the Graffiti shift to change between lower and upper case.

Local Time Is: this setting allows you to specify the relationship between local time (as your handheld sees it, anyway) and GMT. Simply choose the phrase from the drop-down list box that best completes the sentence, “Local Time Is _____ GMT.” For the author in Colorado Springs, Mountain Standard Time is observed and the correct answer is “7h behind.” Golog will use this information to record the date and time of each log entry in GMT.

Once you’ve made all the desired settings, tap the **Continue...** button to move on, or tap the **Cancel** button to forget about it. If you tap **Cancel** here during the process of creating a new log, the new log creation process is aborted, and your new log will not be created. Note that the **Continue...** button is only visible during the new log creation process. If you revisit these settings during the contest, it is replaced by an **OK** button.

You can change these contest settings at any time by selecting **Contest Settings...** from the **Log** menu from either the **Log Entry** or **Edit Log** form. Note that if you change the rules for duping, it won’t affect any QSOs already entered. In fact, no QSOs already in the log will be affected by *any* changes you make to the contest settings.

The CW Settings Dialog Box



The CW Settings dialog box.

The settings in the **CW Settings** dialog box are used exclusively by the Serial CW Sender. These settings determine the CW that Golog sends when you call CQ, answer a CQ, or send a contest exchange. When you’re using a Serial CW Sender, Golog behaves differently depending on whether you’re calling CQ (referred to as **CQ Mode**) or answering CQs (referred to as **S&P**, or search & pounce, **Mode**). You select which mode you’ll use from the **Mode** menu on the **Log Entry** form.

Note that in this section the author has used his call sign (NK0E) in the examples given, but the actual call sign used will be the one you entered in the **Contest Settings** dialog box.

Use Serial CW Sender: check this checkbox if you have a Serial CW Sender connected to your handheld. If this box is not checked, no other controls and settings are visible on the form. When the box is checked the other settings appear.

Contest String: this is the contest-specific identifier that will be sent as part of the CQ call when you’re in **CQ Mode** and you tap the **Call CQ** button on the **Log Entry** form. For example, for Field Day most stations send “CQ FD NK0E FD” and in this case “FD” is the Contest String. For a more generic CQ, use “TEST” for the Contest String.

CQ QSL String: this is the text to be sent when you’re in **CQ Mode** and acknowledging the other station’s exchange and getting ready to move on to the next QSO. Usually, a contest station will end a QSO with “TU” or “73” or “QSL” followed by “NK0E TEST.” Golog uses the CQ QSL String along with the Contest String to construct the code to send at the end of a QSO. So, if your Contest String is “FD” and your CQ QSL String is “TU” then when you tap the **QSL** button on the **Log Entry** form, Golog will send “TU NK0E FD.”

S&P QSL String: this is the text to be sent when you tap the **QSL** button on the **Log Entry** form when you're in **S&P Mode**. In major contests you generally don't need to send any QSL when you're in S&P Mode, but in smaller contests the CQ'ing station will sometimes send a "dit dit" and allow you to respond. Usually "EE" is a good S&P QSL String. It'll be sent exactly as you entered it.

Dupe String: this is the string you want sent when you're in **CQ Mode** and the station that answers you is a dupe. On the **Log Entry** form, when a station answers your CQ you enter their call sign in the **Call** field, and then tap the **Answer** button to answer them. If it's not a dupe, Golog will answer the station and send your exchange. On the other hand, if it's a dupe, Golog will instead send the Dupe string followed by your call sign and Contest String. For example, if you set your Dupe String to "SRI QSOB4" then Golog will send "SRI QSOB4 NK0E TEST."

Use 2x2 CQ: in big contests, CQs are usually short and in a 1x1 format (1 CQ and 1 call sign). Some stations prefer to send a 2x2 CQ, especially in smaller contests. If your 1x1 CQ would be "CQ TEST DE NK0E TEST," then if you check this box your CQ will become "CQ TEST CQ TEST DE NK0E NK0E TEST."

Send DE: this checkbox determines whether you want DE sent before your call sign when it gets sent. Check the box to have DE sent. Then your CQ will become "CQ TEST DE NK0E TEST."

Send TU: this checkbox, if checked, will cause "TU" to be sent to the other station prior to sending your exchange.

Send BK: this checkbox, if checked, will cause "BK" to be sent at the end of your exchange.

Repeat CQ every: you can have Golog automatically repeat your CQ call when you tap the **Call CQ** button on the **Log Entry** form. Use the drop-down list box to set the number of seconds to wait between CQ calls. Set this value to "never" to only send one CQ each time the **Call CQ** button is tapped.

Once you've made all the settings, tap the **OK** button to save your settings (or tap **Cancel** to forget the changes) and return to the previous form.

If you were modifying the CW settings as part of the process of creating a new log and you tap the **OK** button, you'll be taken to the **Log Entry** form, ready to start logging QSOs. If you tap **Cancel** here during the process of creating a new log, the entire log creation process will be canceled, and your new log won't be created.

When you tap the **OK** button to leave this form, and the **Use CW Sender** checkbox is checked, Golog will verify that the CW Sender is connected and turned on. It will warn you if it is not detected and give you the option of retrying (after you turn it on, for example) or canceling. If you cancel, the **Use CW Sender checkbox** will be unchecked and Golog won't attempt to use it.

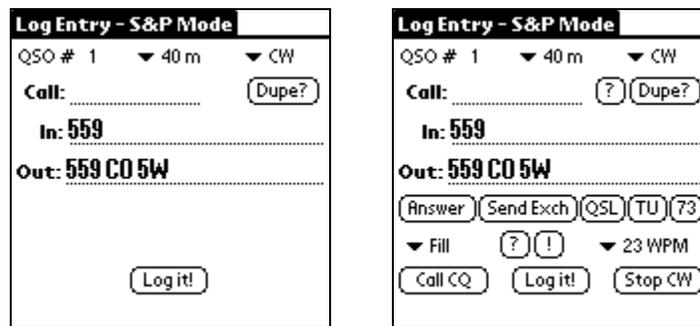
One final note: you can change the CW settings at any time by selecting **CW Settings...** from the **Log** menu from either the **Log Entry** or **Edit Log** form.

Logging QSOs

When using Golog, you'll be spending most of your time using the **Log Entry** form, which is where you enter QSOs during a contest. It's worthwhile to practice using this form before you start the contest (good advice when using any contest logging software, not just Golog).

The Log Entry Form

Whenever you open an existing log, Golog places you in the **Log Entry** form so you can begin logging new contest QSOs. Golog also takes you to the **Log Entry** form after completing the process of creating a new log (specifying the **Contest** and **CW Settings**). If you switch to the **Edit Log** form (discussed below) for some reason, you can get back to the **Log Entry** form by selecting **Enter QSOs...** from the **Log** menu.

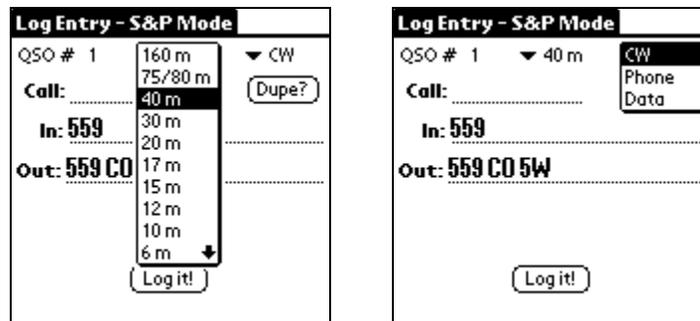


The two faces of the Log Entry form, first when the CW Sender is not being used, and then when it is in use. Note the extra controls when the CW Sender is being used.

Log entries are stored chronologically, in the order that you enter them. You might notice that there is no place on the **Log Entry** form for recording the date and time of the entry. These are recorded automatically when you save the entry, and can be viewed on the **Edit Log** form.

Before You Start Logging

It's easy to forget, but before you start to record QSOs you need to make sure that the **Band** and **Mode** are set correctly. There are two drop-down list boxes near the top of the **Log Entry** form for doing so, and they will always show the band and mode currently set.



The Band and Mode list boxes.

To change bands, simply tap on the current band to view the list of bands, and then tap on the desired new band. Changing modes is done the same way, by tapping on the current mode.

There is some potential confusion here, because the author has chosen to use the word “mode” both to describe CQ and S&P mode and to describe the modulation (CW, phone, or data). Here, we’re concerned with the type of transmission being sent, not whether we’re in CQ or S&P mode.

Once you change the Band and/or Mode, it will keep its new setting for all subsequent QSOs until you change it again. This means that you do not have to change it individually for each QSO (unless, of course, you’re really changing the Band or Mode between each QSO). If you forget to set the Band and Mode correctly, you can always change them for each logged QSO in the **Edit Log** form (although you’ll have to do it one QSO at a time).

The Mode menu: the **Log Entry** form has an additional menu titled **Mode**. This menu has two selections: **CQ Mode** and **S&P Mode**. Use these menu entries to switch between the two contesting modes. Note that the title bar for the **Log Entry** form always tells you whether you’re currently in CQ or S&P Mode.

Log Edit	Mode	Options
QSO # 1	CQ Mode ✓	Q
	S&P Mode ✓	L
Call:	Dupe?	
In: 559		
Out: 559 CQ 5W		
Log it!		

Selecting CQ or S&P Mode from the Mode menu.

Logging Without Using the Serial CW Sender

When not using the Serial CW Sender (either because you don’t have one connected, or because you’re using a mode other than CW), the **Log Entry** form is pretty simple. When you’re not using the Serial CW Sender, Golog doesn’t really care whether you’re logging in **CQ Mode** or **S&P Mode**. Here, you simply enter the other station’s call sign, record the received (**In**) exchange and the sent (**Out**) exchange, and tap the **Log It!** button to record the QSO.

Call: enter the call sign of the other station in this field. When you move the flashing cursor from this field to another, the call sign will be checked automatically to see if it’s a dupe. If so, a message will be shown for about two seconds to inform you. You can also manually check to see if it’s a dupe by entering a call sign and tapping the **Dupe?** button. Any time a dupe is detected, the form will be cleared to get it ready for another QSO.

Dupe?: tap this button to manually check to see if the call you entered is a dupe. Golog will show you a message for two seconds telling you either that it’s a dupe or that it’s not. If it’s a dupe, Golog will clear the form and get it ready for another QSO. If you chose to allow dupes on the Contest Settings form, the Dupe? button will not be visible on the Log Entry form.

In: enter the exchange sent to you by the other station in this field. If you specified a **Default In Exchange** in the **Contest Settings** dialog box when creating this log, it’ll be displayed here for each new QSO. You can edit the contents of the **In** field at any time prior to logging the QSO.

Out: enter the exchange you send to the other station in this field. If you specified a **Default Out Exchange** in the **Contest Settings** dialog box when creating this log, it’ll be displayed here for each new QSO. You can edit the contents of the **Out** field at any time prior to logging the QSO.

Log It!: tap this button to log the QSO. Golog will check to see if it’s a dupe. If so, it’ll tell you and refuse to log the contact. Golog will also warn you if any of the fields are empty. You can log a QSO with a missing **In** or **Out** exchange, but not if the **Call** field is empty. If you’re using a keyboard for entering QSOs, hitting the Enter key will simulate tapping the Log It! button.

Using the CW Sender

If the Serial CW Sender is being used, a number of additional controls appear on the **Log Entry** form:

? Button (next to the Dupe? button): use this button to request a fill on a partial call sign that you've entered in the Call field. When you tap this button, Golog will send whatever's in the Call field followed by a question mark. So, if you only get part of the call sign of a station calling you, enter what you got in the Call field and then tap the ? button.

Answer button: the behavior of the Answer button depends on whether you're in **CQ Mode** or **S&P Mode**. If you're in CQ Mode and you tap the Answer button, Golog will send the call sign in the **Call** field and then send the contents of the **Out** exchange field (or will send the dupe string if it's a dupe, and then clear the form for the next contact). If either of these fields is blank, Golog will not send anything and will show you a warning message to that effect. *Be sure to edit or enter your outgoing exchange in the Out field prior to tapping the Answer button when in CQ Mode.*

If you're in S&P Mode when you tap the Answer button, Golog will send your call sign as an answer to the other station's CQ call.

Send Exch button: tapping this button will cause Golog to send the contents of the **Out** exchange field. Golog will not send anything if the Out exchange field is empty, and will show you a warning message to that effect.

You'll want to tap the **Send Exch** button when in **S&P Mode** to send your exchange after you receive the other station's exchange. You can also tap the Send Exch button whenever you need to resend your entire exchange (in either CQ or S&P Mode).

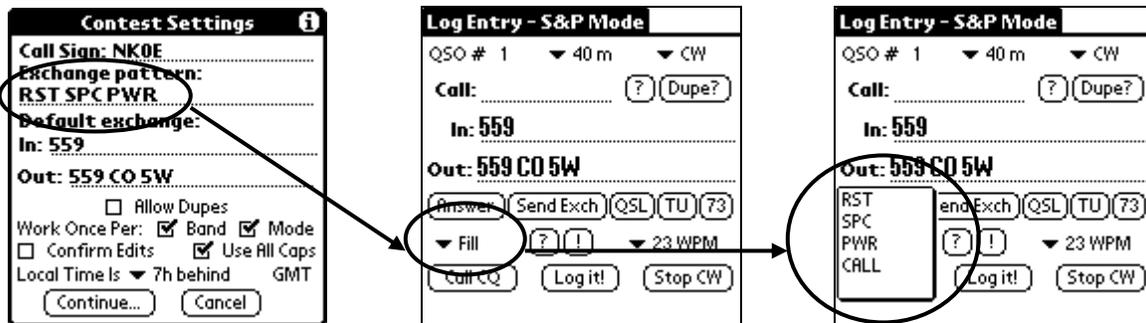
QSL button: when you're in **CQ Mode**, tap this button after successfully copying the other station's exchange to acknowledge the QSO and call for the next contact. Golog will send the contents of the **CQ QSL String** (set in the **CW Settings** dialog box) followed by your call sign and the **Contest String** (also set in the **CW Settings** dialog box).

If you're in **S&P Mode**, tapping the QSL button sends the contents of the **S&P QSL String** (set in the **CW Settings** dialog box), exactly as it was entered (no call sign added). In major contests you probably won't use this button much in S&P Mode.

73 button: tapping this button causes Golog to send "73."

TU button: tapping this button causes Golog to send "TU."

Fill: this is a drop-down list box that can be used to request or provide fills on a single part of the contest exchange. Tapping on Fill will cause the list box to appear. The contents of the list box are taken from the **Exchange Pattern** set in the **Contest Settings** dialog box:



The Fill drop-down list box.

When the list box appears, it lists each of the components of the exchange (and also the call). Tap the desired component to select it, and then hit the ? button next to it to ask the other station for that fill, or hit the ! button to send that part of your exchange to the other station. For example, if you select "RST" from the Fill list box, and then tap the ? button, Golog will send "RST?". If you tap the ! button instead, Golog will send "559."

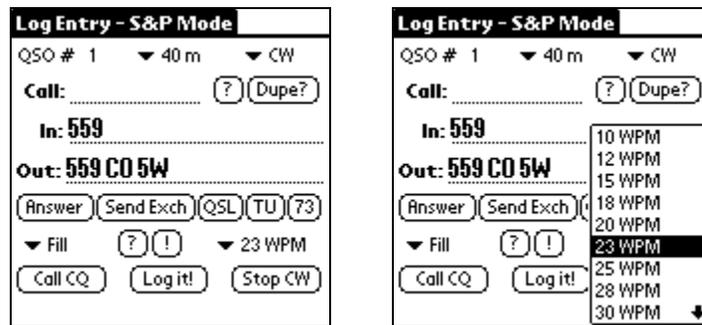
When sending fills, Golog examines the **Out** field and extracts the parts of the outgoing exchange in order based on the **Exchange Pattern**. So, if RST is listed first in the **Exchange Pattern**,

GOLog expects to find the RST first in the outgoing exchange. If the outgoing exchange contains fewer parts than does the Exchange Pattern, GOLog will not send anything and will instead show a warning message to that effect.

? button (the other one, next to the **Fill** list box): Hit this ? button (not the one next to the **Dupe?** button) to ask for a fill, after selecting the exchange item for which the fill is needed from the **Fill** drop-down list box. If no fill item is selected before tapping the ? button, GOLog won't send anything and instead will show you a warning message to that effect. Otherwise, it'll send the item followed by a question mark (i.e. "RST?").

! button: Hit this button to send a fill, after selecting the exchange item to be sent from the **Fill** drop-down list box. If no fill item is selected before tapping the ! button, GOLog won't send anything and instead will show you a warning message to that effect. Otherwise, it'll send the requested part of the exchange.

CW speed: the drop-down list box on the right side of the form, below the QSL button, shows the current CW speed for the Serial CW Sender, and tapping on it allows you to select a different speed from a list.



Setting the CW speed for the Serial CW Sender.

Call CQ: tapping the Call CQ button causes GOLog to send a CQ call (either a 1x1 or a 2x2, depending on the CW Settings). If you're in **S&P Mode** when you tap this button, you'll be switched automatically to **CQ Mode**. Note that the CQ call will be repeated automatically, according to the setting of the **Repeat CQ every** list box on the **CW Settings** dialog box. You can stop the CQ by hitting the **Stop CW** button. Also, if you enter any text into the **Call** field, that will cause GOLog to stop CQ'ing.

Stop CW: tapping this button will stop any CW sending currently being done. While the CW Sender is busy sending code, you must not tap any buttons that would normally cause code to be sent (or the speed to change). Rather, you must wait until the CW Sender finishes sending before you ask it to send other code. If you need to stop it (because you tapped the wrong button by mistake, perhaps), tap the Stop CW button. If you try to send more code while the CW Sender is busy, GOLog will refuse and instead will show you a warning message.

On the other hand, GOLog is not otherwise occupied while code is being sent, so you can fix up any logging mistakes or do other things with GOLog while you wait for the CW Sender to finish.

The Edit Log Form

The Edit Log form.

The **Edit Log** form is used to change a log entry after it was entered and saved in the **Log Entry** form. Generally, you only need to use this form if you made a mistake in logging the entry. You can also use this form to look up a specific log entry. You can access the **Edit Log** form from the **Log Entry** form by selecting **Edit Log...** from the **Log** menu. You must have logged at least one QSO in order to access the **Edit Log** form, so that there is something to edit. When the **Edit Log** form is opened, the most recent log entry is the one that is displayed. The entries are ordered chronologically; the first entry is the one that occurred at the earliest time. The **Edit Log** form shows the date and time of each entry (in GMT), but the date and time cannot be modified.

The various controls on the **Edit Log** form allow you to move through your log entries sequentially or jump to a specific log entry. Whenever you leave one entry for another (or for another form), Golog will save any changes you made to that entry. If you prefer to have Golog ask before saving the changes, make sure you check the **Confirm Edits** checkbox in the **Contest Settings** dialog box.

On the **Edit Log** form, Golog does not enforce any rules regarding dupe checking when you make changes to a log entry. Golog will allow you to modify a call sign in such a way that the resulting modified log entry is a duplicate (according to contest rules) of another log entry.

First button: tap this button to move to the earliest entry in this log. If you're already viewing the earliest entry, nothing will happen.

Prev button: tap this button to move to the previous entry in this log. If you're already viewing the earliest entry, nothing will happen.

Next button: tap this button to move to the next entry in this log. If you're already viewing the most recent entry, nothing will happen.

Last button: tap this button to move to the most recent entry in this log. If you're already viewing the most recent entry, nothing will happen.

Band: tap the band value for this log entry to change it. When you tap the band value (i.e. "40 m"), a drop-down list box appears from which you can select a different value. Note that Golog will not check the new value to see if it results in this log entry being a dupe.

Mode: tap the mode value for this log entry to change it. When you tap the band value (i.e. "CW"), a drop-down list box appears from which you can select a different value. Note that Golog will not check the new value to see if it results in this log entry being a dupe.

The Band and Mode drop-down list boxes on the Edit Log form.

Call: this field holds the call sign entered for this log entry. You can modify this field as needed, but changes will not be checked to see if they result in dupes. Contest rules for dupes are ignored on this form.

In: this field holds the received exchange for this log entry. You can modify this field as needed.

Out: this field holds the sent exchange for this log entry. You can modify this field as needed.

Find... button: tap this button to search the **Call**, **In**, and **Out** fields of all log entries for certain text. When you tap the Find... button, you'll be shown a dialog box into which you'll enter the text to find. Enter the text to search for, and tap the **Find** button to begin the search (or the **Cancel** button to cancel the search). The search starts with the log entry after the current log entry, and proceeds through later entries until a match is found or until the last entry is reached. If the last entry is reached, the search begins again with the first entry in the log and continues until a match is found or the current log entry is reached. The search is performed without regard for case, meaning that a search for "NK0E" will match "nk0e." If no match is found, Golog will inform you of that fact.



The Find dialog box from the Edit Log form.

Find Next button: tap the Find Next button to search for the next instance of the text you last searched for using the **Find...** button. If you have not yet entered text to search for using the Find... button, tapping the Find Next button will not return any matches. If there is only one matching entry in the log, tapping the Find Next button will find that same entry every time.

Delete... button: tapping the Delete... button will delete the current log entry from the log. Before the actual deletion, you'll be asked if you really want to delete the entry. Tap **Yes** to delete the entry, or **No** to cancel the deletion. *Once deleted, there is no way to recover the entry.*



Deleting a log entry.

You can switch back to the **Log Entry** form at any time, if desired, by selecting **Enter QSOs...** from the **Log** menu.

Saving Logs to your PC

Conduits and HotSync Operations

One of the most important features of Golog is the ability to transfer your contest logs from your handheld to your PC. You'll need to do this so that you can prepare and submit your log to the contest sponsors, and also so that you can add your contest QSOs to your PC logging software if desired.

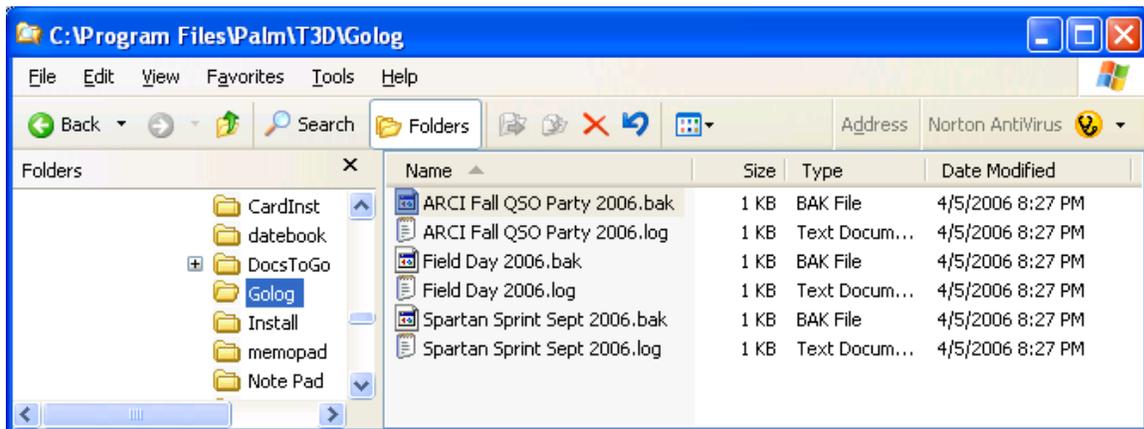
Golog accomplishes this through the use of its *conduit* software. Conduits are software modules that are executed whenever you execute a HotSync operation with your handheld on your PC. Golog's conduit software copies all your logs onto the PC and converts them into a text format so that they are easily readable and edited.

You're probably already familiar with how to perform a HotSync operation for your handheld, so that subject won't be covered here. Consult your handheld's documentation if you're not sure how to do this.

Golog's conduit is a *one-way* conduit. This means that it only transfers logs from your handheld to your PC. There is no provision for editing the log on the PC and then transferring it back over to your handheld. Since Golog is primarily a contest logger, there wasn't any reason why it would be necessary to be able to transfer logs back to the handheld from the PC. Furthermore, successive HotSync operations will cause older logs on the PC to be overwritten with newer versions, so be sure to back up your logs if this is an issue for you.

Finding Your Logs on Your PC

Once you've performed a HotSync operation, you'll find your logs in the directory in which you originally installed the Palm Desktop software. This is probably C:\Program Files\Palm (but could be different if you have a handheld from a company other than Palm). Under this directory is a directory named with your device name (in the example shown below, T3D), and inside that directory is a directory named Golog.



Where to find your logs on your PC after performing a HotSync operation.

The log files in this directory are named exactly as you named them on the handheld, with the addition of .log and .bak extensions. The .bak file is not a backup of the previous version, however. It's a copy of the .log file. (The author is aware of the fact that this is stupid, but he hasn't figured out how to fix it. So, live with it.) You should be able to open any of these files with a text editor (like Notepad) and view the contents.

Note that there are a few characters that are allowed in log names on the handheld but that are not allowed in file names on your PC. If your log name contains one of these characters, the Golog conduit will replace those characters with “#”.

Log File Format

You shouldn't have any trouble understanding the content of the log files once you've gotten them to your PC. Here's a sample from one:

7	CW	04/19/04	0252	N0TU	IN: 559	CO	OUT: 559	CO
7	CW	04/19/04	0252	N0HJ	IN: 559	UT	OUT: 559	CO
7	CW	04/19/04	0252	K0SU	IN: 559	TX	OUT: 559	CO
7	CW	04/19/04	0252	N7XJ	IN: 559	NV	OUT: 559	CO
7	CW	04/19/04	0252	N7LV	IN: 559	CA	OUT: 559	CO
14	CW	04/19/04	0255	AB0GO	IN: 559	MN	OUT: 559	CO
21	CW	04/19/04	0255	N0MHQ	IN: 559	OH	OUT: 559	CO
28	CW	04/19/04	0256	K7TQ	IN: 559	OR	OUT: 559	CO

You can see that the frequency, mode, date, time (GMT), and call sign come first, followed by the received and sent exchanges. For many contests, you'll need to manually edit the log file to change its format to that specified by the contest rules.

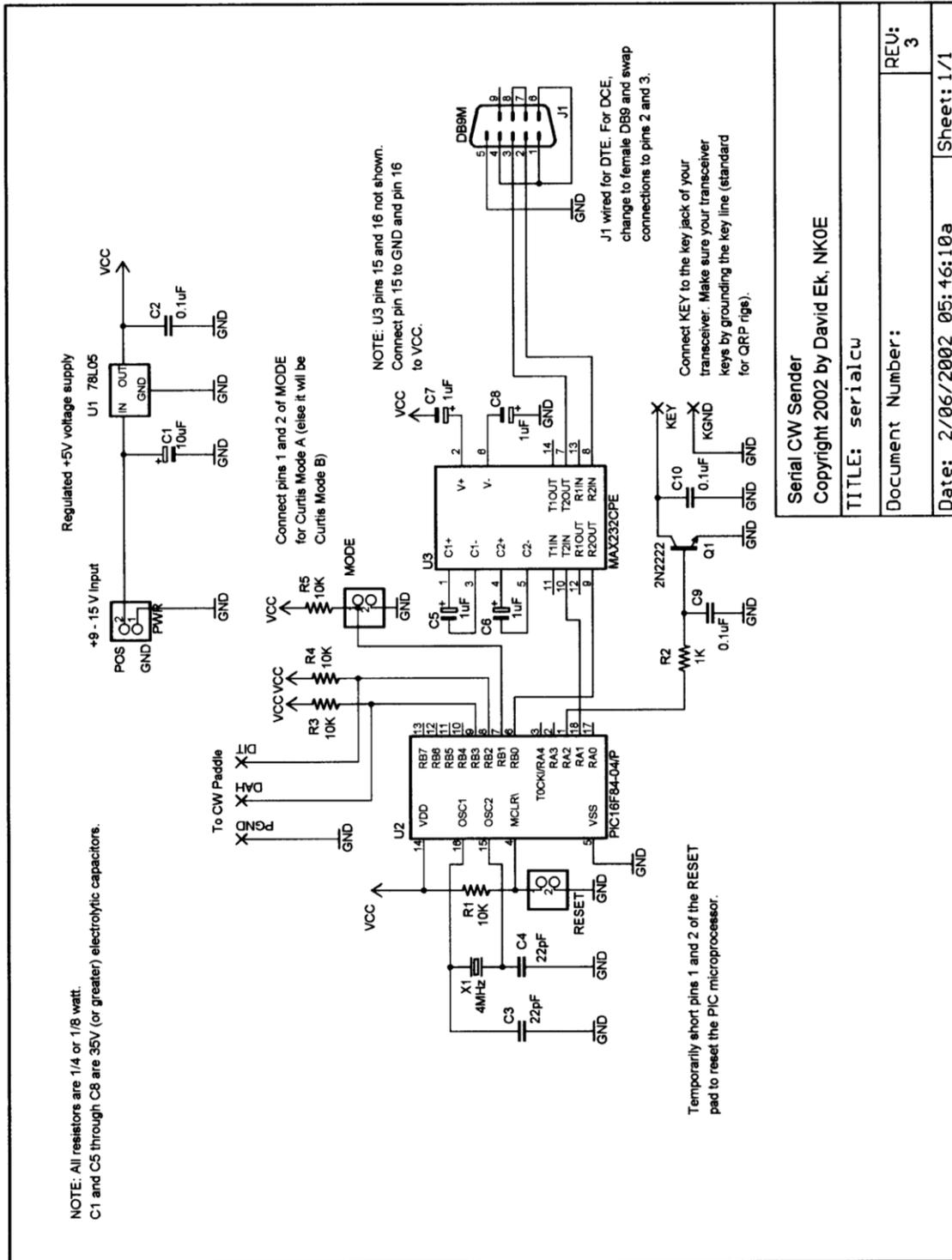
Appendix: The Serial CW Sender

Hardware

I wanted to design a device for handling the CW keying which would do all the work associated with converting text to CW and taking care of timing of dits and dahs. It needed to accept some text from the handheld and then perform its duties without further intervention, freeing the handheld for its own work. A PIC microcontroller is ideally suited for such an application. I used the PIC16F84 since I had already written some code for it to perform serial communication as part of another project (although some PIC chips have built-in serial capability, the PIC16F84 does not, so I emulated it in software). The only other major component required in the circuit was a MAX232 chip for converting TTL levels to RS-232 and vice versa. The rest of the circuit consists of voltage regulation, the crystal for clocking the PIC chip, and a 2N2222 transistor for keying the rig. I powered my prototype with a 9V transistor battery and found that battery life was at least several hours. Figure 1 shows the schematic diagram of the device. Table 1 gives the parts list.

Table 1: Parts List for Serial CW Sender

Part	Description
C1	10 uF 35V electrolytic capacitor
C2, C9, C10	0.1uF monolithic or ceramic disc capacitor
C3, C4	22 pF monolithic or ceramic disc capacitor
C5, C6, C7, C8	1 uF 50V electrolytic capacitor
J1	male DB9 connector
Q1	2N2222 transistor
R1, R3, R4, R5	10K ¼ watt resistor
R2	1K ¼ watt resistor
U1	78L05 voltage regulator
U2	Microchip PIC16F84-04/P microcontroller
U3	Maxim MAX232CPE level converter
X1	4 MHz crystal



Serial CW Sender
 Copyright 2002 by David Ek, NK0E
 TITLE: serialcw
 Document Number:
 Date: 2/06/2002 05:46:10a
 Sheet: 1/1

REV: 3

Figure 1: Schematic diagram of the Serial CW Sender

In the circuit, U1, C1, and C2 make up a regulated +5V supply for the rest of the circuit, and any voltage greater than about 8V may be supplied as input to the regulator. U2, the microcontroller chip, is clocked by crystal X1 (which *must* be 4.0 MHz; do not substitute another value) and requires C3 and C4 to

be present (the values of C3 and C4 need not be exactly 22 pF—any value around 30pF or so should work). The pins labeled RESET can be shorted temporarily to provide a soft reset for the microcontroller chip. If desired, you can connect a normally-open momentary SPST switch here to serve as a reset button.

Pins 6 and 18 of U2 serve as serial input and output, respectively. They are connected to U3, a MAX232 chip that converts the TTL voltage levels to the RS-232 levels (-12V and +12V) expected by the attached computer. Capacitors C5 through C8 are used by U3 to create the necessary RS-232 voltages given the +5V supply. J1 is a standard male DB9 connector and can plug directly into the HotSync cable from your handheld computer.

Pin 1 of U2 keys the CW on the attached transceiver. Q1 is used to close the circuit on the keyline just like would be done with a straight key. R1 limits the current flowing through the base of Q1. C9 and C10 help to filter out any RF generated by U2's 1 MHz internal clock.

Pins 8 and 9 of U2 accept inputs from an iambic paddle, so that you can manually key the rig using a paddle if necessary. Closing a paddle contact grounds the associated pin of U2 and triggers sending of dits and dahs. Pin 7 of U2 should be held high to have the circuit emulate Curtis mode B, or should be grounded if you prefer mode A.

The circuit as shown is wired as data communications equipment (DTE) such that it can be plugged directly into your handheld using its HotSync cable. DTE is designed to plug directly into DCE (Data Communications Equipment), like your handheld computer. Other examples of DCE are computer mice and external modems. Generally, DCE has a female DB9 connector, and DTE has a male DB9 connector. In addition, DCE sends data on DB9 pin 2 and receives data on DB9 pin 3, while for DTE pin 2 receives and pin 3 sends. Of course, this makes sense since you want DCE to receive whatever DTE sends, and vice versa. The upshot of this is that if you build the device according to the schematic, it'll plug right into your handheld without need for any adapters.

However, since the interface is DTE it won't plug directly into a PC. If this is important to you, you have two choices. Either you can use a null modem cable (where pin 2 of one end is connected to pin 3 of the other end) between the PC and the interface, or you can wire your interface to be DCE by swapping the connections to pins 2 and 3 in the schematic. In either case you'll also need to change the gender of the DB9 connector on the interface to female in order for it to plug into the PC.

Also, note that pins 1, 4, and 6 in the device's DB9 connector are tied together, as are pins 7 and 8. This is to fool your computer into thinking that it's getting handshaking signals (xon/xoff, etc.) from your interface if it requires them. In reality, it simply routes the signals sent by the computer right back to the computer.

Firmware

Of course, when discussing PIC-based circuits, much of the discussion concerns the firmware written for the PIC chip. I won't bore you with the details here, except to describe the commands that the device accepts and the responses it provides. Although I designed it to work with my Palm computer, I did all the testing of the device by connecting it to the serial port on my PC. It expects 9600 baud with 8 bits, 1 stop bit, no parity, and no flow control. Table 3 describes the commands that may be sent to the device by a computer.

Table 2: Serial CW Device Command Description

Command Character sent to the device	Data sent to the device after the command	Reply from the device	Description
< (ASCII 60)	up to 54 characters, followed by a carriage return (ASCII 13)	r (ASCII 114), after sending is complete	causes the device to key the characters as CW on the attached transceiver. The following characters are supported: A through Z (upper or lower case) 0 through 9 period (.)

Command Character sent to the device	Data sent to the device after the command	Reply from the device	Description
			comma (,) slash (/) BT prosign (=) AR prosign (+) question mark (?) SK prosign (*) KN prosign (:) AS prosign (-) Other characters will be ignored. Characters beyond the 54 currently supported will be ignored until the terminating carriage return is received.
> (ASCII 62)	two characters	r (ASCII 114), immediately after receiving the two characters	sets the inter-dot and inter-character spacing. To get the appropriate values, divide 1300 by the desired words per minute. The characters sent are those whose ASCII values yield the desired speeds. For example, "A" has an ASCII value of 65 and will give a speed of approximately 20 wpm (1300/65). The first character sets the speed at which the dits and dahs are sent for a single CW character. The second character sets the spacing between CW characters (like in Farnsworth spacing). Note that speeds are approximate and not precise.
^ (ASCII 94)	none	a string of characters terminated by a carriage return (ASCII 13)	returns a string describing the firmware version.
Any character	none	r (ASCII 114), after sending of the current CW character is complete	interrupts CW keying. The CW character currently being sent is finished, and the remaining characters are forgotten. If no sending is in progress, this command is ignored.

Note that the device does not echo commands or data back to the computer. If you're using a terminal program to test the device, you won't see the commands as you type them unless you turn on the "local echo" feature.

Construction and Testing

Don't forget to program the PIC microcontroller before you install it in the circuit! You can download the hex code for programming from <http://eksfiles.net/golog/>. I learned everything I needed to start programming PICs from the QST article¹ by John Hansen W2FS. That article also describes a simple programmer you can build, and tells about PC software to drive the programmer. There is also a lot of information on the web on how to program the PIC16F84.

¹ Hansen, John A., "Using PIC Microcontrollers in Amateur Radio Projects," *QST*, October 1998, pp. 34-40.

Wiring the circuit shouldn't be too hard. I built the prototype on a solderless breadboard, and whenever I use a solderless breadboard I like to build the permanent version on the Radio Shack generic PC board that matches the layout of a solderless breadboard. Component placement is not critical. I recommend using 0.1" header pins and connectors for making connections to the board—wires soldered directly to the board tend to break off easily.

The easiest way to test the circuit is to hook it up to a PC (using a null modem cable) and attempt to communicate with it using a terminal program. Set up the terminal program to communicate directly through the serial port to which you've connected the circuit (rather than through a modem), and set the communications parameters to 9600 baud, 8 bits, 1 stop bit, no parity, and no flow control. Make sure the circuit is powered up, and then type "^" (shift-6, or ASCII 94) in the terminal program. If everything is working correctly, you should see something like "Serial CW v1.20 (c) 2004 by NK0E" appear in the terminal window. If not, double-check your circuit construction, power connections, serial port connection, and terminal program settings.

If everything works so far, connect the keyline from the circuit to a transceiver's straight key jack, and connect the transceiver output to a dummy load. Power up the rig, and then type "<ok" in the terminal program followed by the Enter key. You should hear "ok" sent in CW on the rig. If so, everything works correctly. If not, go back and double-check your connection between the circuit and the rig, and try again.

Special Note About HotSync Cables

First things first: you must have a serial HotSync cable for your handheld in order to connect it to the Serial Sender. USB cables will not work. Nor will USB-to-serial adapters. There's just no way around this limitation. Making the Serial Sender work via USB would require adding a fair amount of circuitry and software to make it function as a USB host controller, and I don't know how to do that. Thankfully, serial hotsync cables can be purchased for most PalmOS-based handhelds.

Users of Handspring™ Visor™ handheld computers must take extra steps to use the interface with their handhelds. Handspring sells both USB and serial HotSync cradles for their handhelds. To use your Handspring Visor with the Serial CW Sender, you must make a slight modification to the Sender circuit. The Visor serial cable expects to be powered by the device it's connected to (in this case, the Serial CW Sender) via pin 8 of the serial connector. You can do this by connecting pin 8 of the DB9M connector to +5V using a 270-ohm resistor. Since the Serial CW Sender uses a voltage regulator to supply +5V to the chips in the circuit, it's easy to find a spot in the circuit from which to tap the +5V. Be sure to include the 270-ohm resistor to limit current flowing to the Visor serial cable. This modification should work for the Visor, Visor Deluxe, and Visor Platinum. If there are other Handspring models that can use the same serial cable as the Visor, they should also work with this modification. Note that you must use Golog version 1.2.3 or newer if you're using a Serial CW Sender with the Visor.