

# MorseKeyer6k

(Version 1.1.1 -- Revised: March 7, 2017)



# Users Guide

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## INTRODUCTION

**MorseKeyer6K** is a CW keyboard/memory keyer for use with FLEX-6000 series radios running **SmartSDR™** (version 1.4.11 or later). It can store a nearly unlimited number of pre-defined messages and also functions as a CW keyboard.

**MorseKeyer6K** communicates directly with the radio over the local network using the **FlexLib™** API and makes use of the CWX feature built into **SmartSDR**. It does not use CAT, and therefore no serial ports are required for communicating with the radio.

**MorseKeyer6k** allows you to set up as many different “profiles” or sets of pre-defined messages as you want. Each profile can have up to 12 different messages which are transmitted by clicking on a button on the program screen or by pressing one of the function keys on the keyboard. You can set up a different profile for general operation, for working DX, for net operations, for each contest you normally operate, etc. This way, you do not have to re-program the messages between different types of operating.

## SYSTEM REQUIREMENTS

**MorseKeyer6K** requires Windows Vista or later. It is a 32-bit application, and therefore will run on a computer with either a 32-bit or a 64-bit processor.

**Adobe Acrobat Reader®** or similar program capable of displaying .pdf files is required to view the program documentation.

**MorseKeyer6K** requires **SmartSDR v1.4.11** or later.

## INSTALLATION

Run the installation package file, **MorseKeyer6KSetup.exe**. This will install **MorseKeyer6K.exe** and all required supporting files on your computer. The installer will suggest a default location for the program file. You may change the location or leave it at the default, it does not matter.

The setup data and all of the profile data are stored in XML files which are located in the application data (**%APPDATA%**) directory tree.

The specific location of the files is:

C:\Users\<<your user name>\AppData\Roaming\RNA Software\MorseKeyer6k\

## PROGRAM OPERATION

When the program starts, the window shown in Figure 1 will be displayed. This window will contain a list of available FLEX-6000 series radios for you to choose between. Connect to the desired radio by clicking on it in the list and then click on the "Connect" button. If you click on the "Cancel" button, the program will



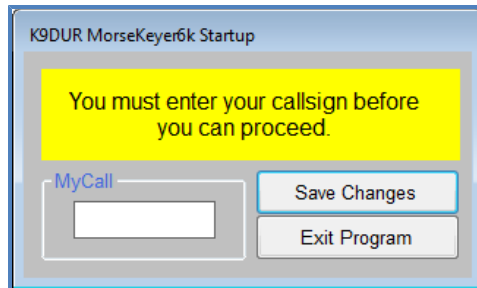
close.

**Figure 1 -- Radio Connection Window**

If you have selected "Autoconnect" in the program options, then **MorseKeyer6k** will automatically connect to the first radio it discovers. If no radios are found after 15 seconds, the program will close with an error message.

After you have connected to the radio, one of two things will happen.

- If this is the first time that you have run the program, the **Startup** window shown in Figure 2 will appear so that you can enter your call sign.



**Figure 2 -- Call Sign Entry Window**

Type in your call sign & click on the "Save Changes" button. Clicking on the "Exit Program" button will allow you to close the program without entering your call sign.

- Otherwise, the program will proceed directly to the main window.

## MAIN WINDOW

The main program is shown in Figure 3 and contains a toolbar, 3 text boxes, a Clear button, an Abort button, and 12 message buttons. The controls on the toolbar are described in a later section.

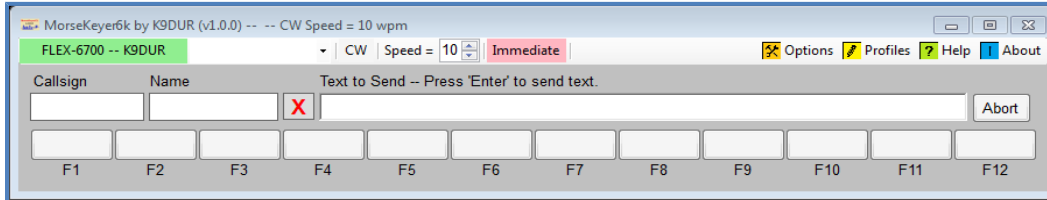


Figure 3 - Main Window

- **Call sign** -- Enter the call sign of the station you are working into this box. The **{CALL}** macro in a stored message will be replaced by whatever you place in this box.
- **Name** -- Enter the name of the operator of the station you are working into this box. The **{NAME}** macro in a stored message will be replaced by whatever you place in this box.
- **Clear** -- Clicking on the red **"X"** will clear any text in the call sign & name boxes.
- **Text to Send** -- What is typed into this box will be sent to the radio. If the **Immediate** mode is on, then each character is sent as soon as it is typed. If the **Immediate** mode is off, then the text will be sent when you press **Enter**.
- **Abort** -- Clicking on this button will clear the type-ahead buffer of **MorseKeyer6k**. Also, **SmartSDR** will immediately stop sending any characters in the CWX queue.
- **Msg #1 to Msg #12** -- These buttons allow you to send, repeat, or edit the messages stored in the currently active profile. Their use is described in detail below.

## HOW DO I...

### SEND A STORED MESSAGE

You can send a stored message by any of the following actions:

- Left-click on the button for the message you wish to transmit.
- Press one of the function keys (**F1-F12**). Pressing the **F1** key will send Message #1; pressing **F2** will send Message #2, etc.

### REPEAT A STORED MESSAGE

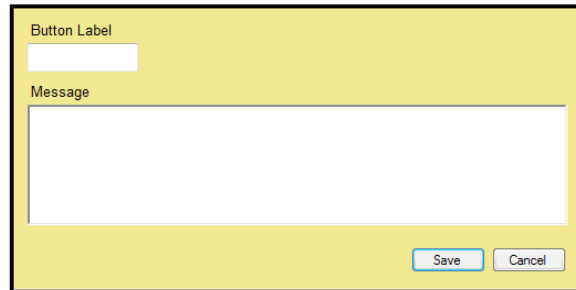
You can send a stored message repetitively by any of the following actions:

- Right-click on the button for the message you wish to transmit repeatedly.
- Hold down the **Alt** key and press one of the function keys (**F1-F12**). Pressing **Alt-F1** key will cause Message #1 to repeat; pressing **Alt-F2** will cause Message #2 to repeat, etc.

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### QUICK-EDIT A STORED MESSAGE

You can edit a single stored message without opening the Edit Profiles dialog by holding the **CTRL** key down & clicking on the button for the message you want to edit or by holding the **CTRL** key down & pressing the corresponding function key. This will display the window shown in Figure 4.



**Figure 4 -- Quick Edit Window**

Enter the desired button label and message text. The button label may be either fixed text or the **{CALL}**, **{NAME}**, or **{MYCALL}** macros. The message may contain any of the macros described in the "Macros" section below.

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### ABORT SENDING A MESSAGE

You can stop sending any message before it is finished by clicking on the message button again, by clicking on the **Abort** button, by pressing the appropriate function key, or by pressing the **Esc** key.

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### SEND PROSIGNS

**SmartSDR** maps certain characters to the more commonly used prosigns as shown in the table below:

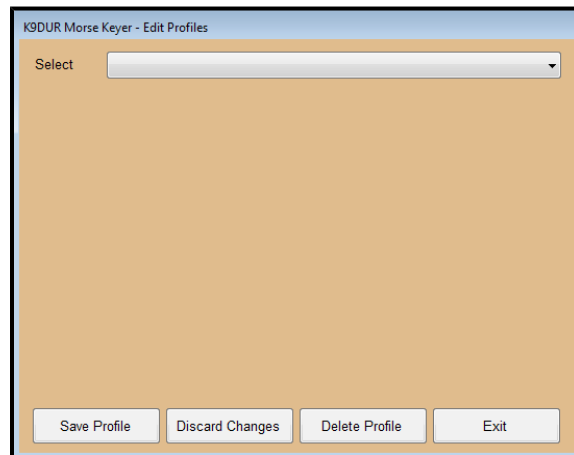
Character	Prosign
=	BT
+	AR
(	KN
&	BK
\$	SK

You can also send a prosign by using the back slash ("\") character followed by the 2-letter prosign. If you enter a backslash, either into a stored message or into the **Text to Send** textbox, the next two characters will be converted into the corresponding prosign. If the two characters following the back slash are not a recognized prosign, then the backslash will be ignored and the 2 characters sent as normal text. For example, you can send the prosign **AR** either by typing the plus sign ("+") or by typing "AR". Any prosigns entered using a backslash will be **highlighted** for easy recognition.

## CREATING/EDITING PROFILES

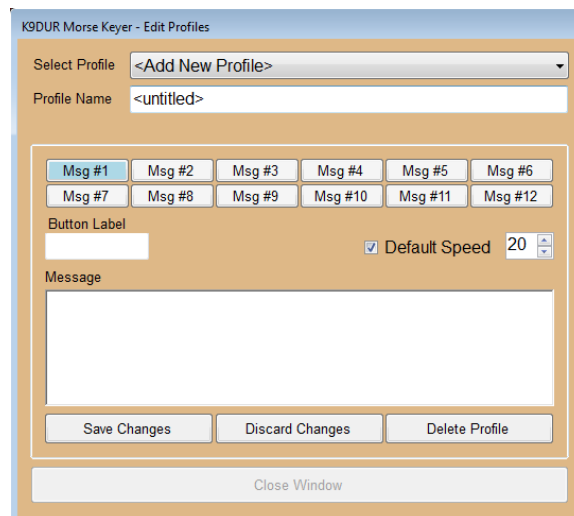
At startup, the program creates a "Default" profile with one stored message. You may create as many other profiles as you wish, each with its own set of 12 stored messages. You can also rename, edit, or delete the default profile.

Click on the **Edit Profiles** button in the tool bar to display the window shown in Figure 4.



**Figure 4 -- Edit Profiles Window**

First, use the drop-down list to select the profile you want to edit. If you are creating a new profile, select "<new profile>". The window will now look like what is shown in Figure 5.



**Figure 5 -- Edit Profiles Window**

Type a name for the profile in the **Profile** box. This can be anything you wish, such as "General Operation", "ARRL Sweepstakes", "Field Day", etc. This will be the name shown in the drop-down list on this window, on the list of profiles on the toolbar, and on the title bar of the main window.

You may also enable a default CW speed for each profile. Make certain that the **Default Speed** box is checked and then set the desired speed using the up/down scroll box. When the default speed is enabled, the CW speed will be set to the default value whenever this profile is selected.

Click on the button for the message you wish to edit and enter the information for that message.

The **Button Label** is a short description that will be used to label the button for that message on the main window. Keep the label short so it will fit properly on the button. For example, "My Call", "CQ", "QRZ", "3x3 CQ", "Exch", etc.

Enter the text to be sent into the large box labeled "Message". This text is displayed in a small pop-up box when you hover over a message button on the main window with the mouse.

The text may macros which will be replaced when the message is sent by pre-defined characters or WinKeyer commands. All of the allowable macros and their meanings are described in the next section.

When you are finished setting up all of the messages for the profile, be sure to click on **Save Changes** before selecting a different profile to edit.

You may discard any changes you have made to the profile you are currently editing by clicking on **Discard Changes**.

You may completely delete the profile you are currently editing by clicking on **Delete Profile**.

When you are finished adding, editing, or deleting profiles, click on **Exit** or press the **Enter** key to return to the main program.

## MACROS

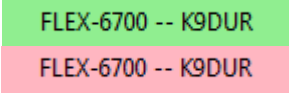

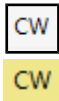
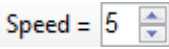
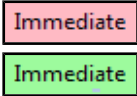
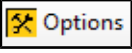



The text of a stored message may contain any of the following macros:

- **{CALL}** -- The call sign of the station you are working.
- **{NAME}** -- The name of the operator of the station you are working.
- **{MYCALL}** -- Your call sign.
- **{SPEED##}** -- Sets the CW speed to ## wpm. ## can be any 1 or 2 digit number in the range of 5 wpm to 99 wpm. If a value <5 wpm is entered, then the speed will be set to 5 wpm. If a value >99 wpm is entered, then the speed will be set to 99 wpm.
- **{SPEED+##}** -- Increases the CW speed by ## wpm. ## can be any 1 or 2 digit number such that the resulting speed (current speed + ##) is in the range of 5 wpm to 99 wpm. If the resulting speed would be >99 wpm, then the speed will be set to 99 wpm.
- **{SPEED-##}** -- Decreases the CW speed by ## wpm. ## can be any 1 or 2 digit number such that the resulting speed (current speed - ##) is in the range of 5 wpm to 99 wpm. If the resulting speed would be <5 wpm, then the speed will be set to 5 wpm.
- **{SPEEDOFF}** -- Cancels any currently active speed change macro and returns the CW speed to the previous setting.



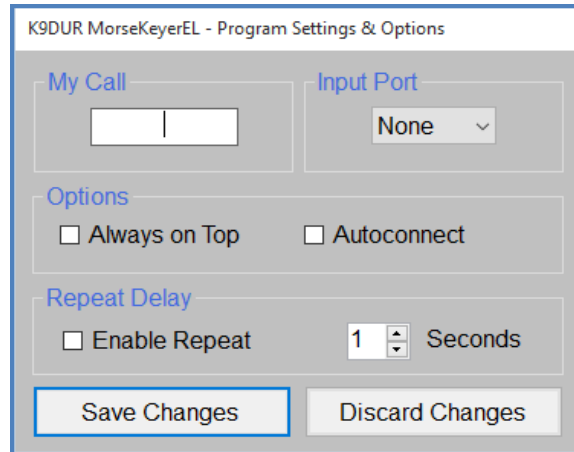
## TOOLBAR

The toolbar contains the following buttons & controls (left-to-right):

	This button indicates the status of the connection with the radio. Green = Connected Red = Not Connected If the connection is lost, clicking on the button will reconnect <b>MorseKeyer6k</b> to the radio.
	This drop-down list will allow you to select the set of messages (profile) that you want to use.
	This label indicates whether the radio is busy sending CW or not.
	This up-down control allows you to adjust the CW speed to any value between 5 wpm and 99 wpm.
	Clicking on this button will turn the <b>Send Immediately</b> mode on or off.
	Clicking on this button will open a window where you can change the program options.
	Clicking on this button will open a window where you can create, edit, or delete profiles.
	Clicking on this button will open a window to display this document.
	Clicking on this button will open a window that displays basic information about the program.

## PROGRAM OPTIONS

To set the programs options, click on the **Options** button on the toolbar. The window shown in Figure 6



will be displayed.

**Figure 6 -- Options Window**

The window contains the following controls:

**Input Port** -- This group of drop-down lists allows you to set up a serial port to receive data sent from another program. This data is passed on to the radio without modification, and all characters are echoed back to the other program. To disable this feature, select "None" from the list of serial ports.

**MyCall** -- Enter your station call sign in this text box. If you use the **{MYCALL}** macro in a stored message, It will be replaced by whatever you enter in this box when the message is sent.

**Repeat Delay** -- Check the check box to turn on the message repeat feature. The up/down scroll box allows you to set the time, in seconds, between transmissions when repeating a message.

**Always on Top** -- If this checkbox is checked, then the **MorseKeyer6k** main window will always be displayed on top of all other windows.

**Autoconnect** -- If this checkbox is checked, then **MorseKeyer6k** will automatically connect to the first radio it discovers on the network.

**Speed Pot Settings** -- These two up/down scroll boxes allow you to set the minimum speed of the speed pot in words per minute and the range of the speed pot in words per minute. The maximum speed of the speed pot will be the minimum speed plus the speed range.

**Save/Discard Changes** -- Click on these buttons to save or discard any changes you have made and return to the main window.

## ABOUT THE AUTHOR

**MorseKeyer6K** was written by Ray Andrews, K9DUR.

Ray holds an Amateur Extra class license and was first licensed in April 1960. He currently resides in West Terre Haute, IN, and is a retired electronic design engineer and software developer. He operates a small custom software consulting business just to keep him out of mischief between camping trips.

For more information, visit Ray's web page:

<http://k9dur.info>

## REVISION HISTORY

v1.1.1 – March 7, 2017 – Added code to prevent mouse action outside of the bounds of the main window from stopping message repeat.

v1.1.0 – October 31, 2015 – Added the ability to automatically connect to the first radio found.

v1.0.2 – August 26, 2015 -- Removed extra space added after prosign or macro expanded. Added time-out if "CharacterSent" event not received from radio.

v1.0.1 – June 23, 2015 -- Fixed bug causing spaces to be ignored. Fixed bug displaying User Guide. Corrected program icon.

v1.0.0 – June 23, 2015 -- Initial Release.