MorseKeyerEL

(Version 2.1.0 -- Revised January 24, 2014)

Introduction

MorseKeyerEL is a CW keyboard/memory keyer for use with the **K1EL WinKeyer**. It can store a nearly unlimited number of messages and also allows you to use the **WinKeyer** as a CW keyboard..

MorseKeyerEL 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. 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.

Installation

Run the installation package file, **MorseKeyerSetupEL.exe**. This will install **MorseKeyerEL.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. However, the **MorseKeyerEL.rtf** f file must be located in the same directory as the **MorseKeyerEL.exe** file.

You must create at least one profile as described below. The setup data and all of the profile data are stored in XML files which are located in the application data (%APPDATA%) directory.

Initial Setup

Before using the program you need to perform some initial setup.

- You must setup the serial port to be used to communicate with the **WinKeyer**.
- You must enter your call sign.
- You must create at least one profile containing one or more messages before you can use the memory features.

When you start the program for the first time, the **Startup** window, shown in Figure 1, will appear so that you can select the serial port used to communicate with the **WinKeyer** and enter your call sign. Both of these items must be entered before the main window will open.

Figure 1 -- Startup Window

After you have selected the serial port and entered your call sign, click on **Save Changes** or press the **Enter** key to continue to the main window.

Program Operation

The main program window is shown in Figure 2 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.
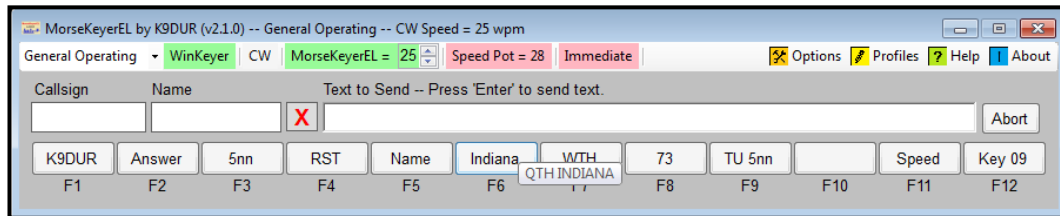
Figure 2 -- Main Program Window

- **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 **WinKeyer**. If the **Immediate** mode is on, then each character is sent to the **WinKeyer** as it is typed. If the **Immediate** mode is off, then the text will be sent to the **WinKeyer** when you press **Enter**.
- **Abort** -- Clicking on this button will clear both the type-ahead buffer of **MorseKeyerEL** and the input buffer of the **WinKeyer**. The **WinKeyer** will immediately stop sending any characters.
- **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.

Sending 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.

Repeating 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.

Quick-Editing 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 3.
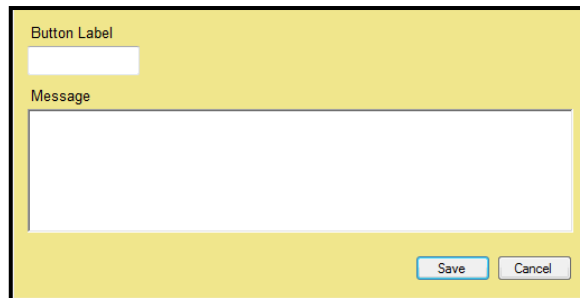
Figure 3 -- Quick_Edit Window

Morse Keyboard
You can send CW simply by typing into the **Text to Send** box.

Aborting 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.

Sending CW from Another Program
You can also set up *MorseKeyerEL* to allow another program to send data to the *WinKeyer* through a serial port connection. An example where this is useful is when you have a contest logging program which can send CW using the *WinKeyer*, such as *N1MM Logger*. You may want to be able use the macros in your logging program, but still want to be able to use the keyboard capabilities of *MorseKeyerEL*.

Prosigns

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

Character	Prosign		Character	Prosign
"	RR		/	DN
$	SX		:	KN
'	WG		;	AA
(	KN		<	AR
)	KK		=	BT
+	AR		>	SK
-	DU		@	AC

The *WinKeyer* also allows you to merge any 2 characters into a prosign. *MorseKeyerEL* allows you to invoke this function by use of the back slash ("\"). If you enter a backslash, either into a stored message or into the **Text to Send** textbox, the next 2 characters will be combined and sent as a single character. 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.
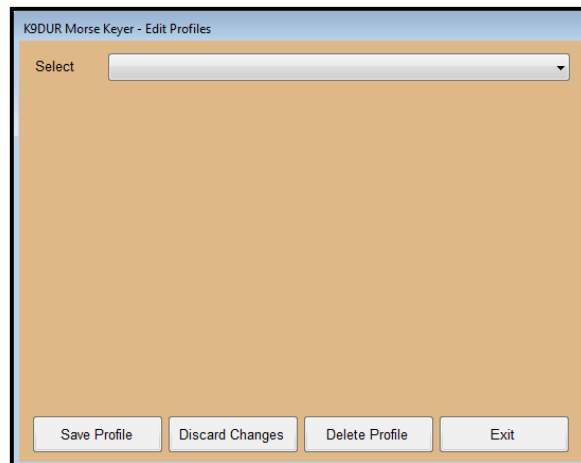
Figure 4 -- Edit Profiles Window

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.
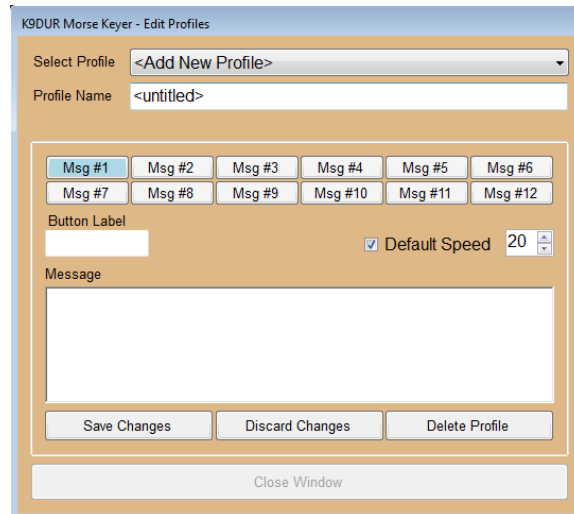
Figure 5 -- Edit Profiles Window

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** pr press the **Enter** key to return to the main program.
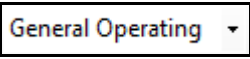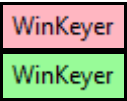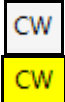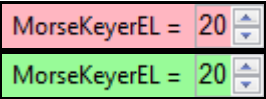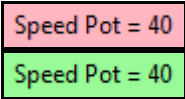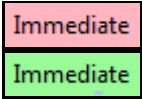
Macros

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

- **{CALL}** -- The call sign of the station you are working.
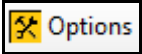- **{NAME}** -- The name of the operator of the station you are working.
- **{MYCALL}** -- Your call sign.
- **{PTTOFF}** -- Turns off the *WinKeyer* PTT output.
- **{PTTON}** -- Turns on the *WinKeyer* PTT output.
- **{KEY##}** -- Turns on the *WinKeyer* key output for ## seconds. ## can be any 1 or 2 digit number in the range of 0 to 99 seconds.
- **{WAIT##}** -- Causes the *WinKeyer* to pause for ## seconds. ## can be any 1 or 2 digit number in the range of 0 to 99 seconds.
- **{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):

General Operating ▾	This drop-down list will allow you to select the set of messages (profile) that you want to use.
WinKeyer WinKeyer	Clicking on this button will turn the *WinKeyer* host mode on or off. *MorseKeyerEL* will automatically turn on host mode when it first connects with the *WinKeyer* and will turn it off when it is closed..
CW CW	This label indicates whether the WinKeyer is busy sending CW or not.
MorseKeyerEL = 20 ▲▼ MorseKeyerEL = 20 ▲▼	Clicking on this button will cause the *MorseKeyerEL* program to control the CW speed. The up-down control allows you to adjust the CW speed to any value between 5 wpm and 99 wpm.
Speed Pot = 40 Speed Pot = 40	Clicking on this button will cause the *WinKeyer* Speed Pot to control the CW speed. **NOTE:** When you first select the Speed Pot to control the CW speed, you may need to physically move the speed pot slightly to allow the program to accurately sync to the speed pot position.
Immediate Immediate	Clicking on this button will turn the **Send Immediately** mode on or off.
✗ Options	Clicking on this button will open a window where you can change the program options.
✐ Profiles	Clicking on this button will open a window where you can create, edit, or delete profiles.
? Help	Clicking on this button will open a window to display this document.
I About	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.
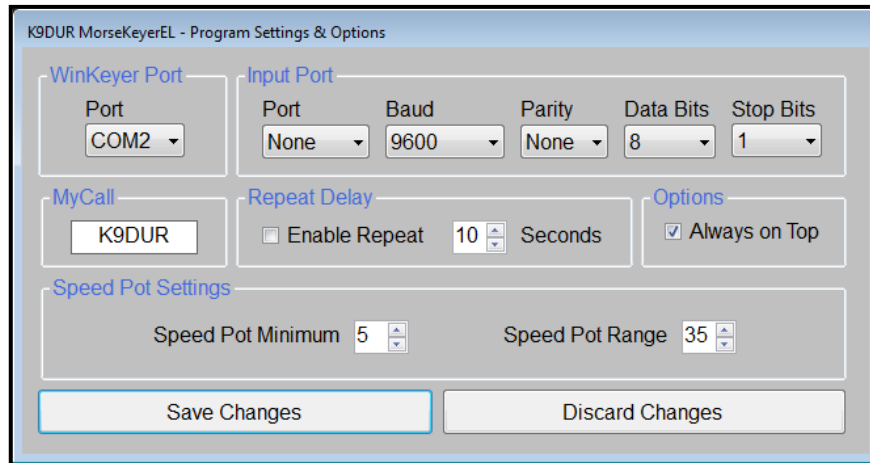
Figure 6 -- Options Window

The window contains the following controls:

WinKeyer Port -- This drop-down list shows all of the serial ports installed on your computer. Select the port you wish to use to communicate with the *WinKeyer*.

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 *WinKeyer* without modification, and any data from the *WinKeyer* is passed 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 MorseKeyerEL main window will always be displayed on top of all other windows.

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.

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About the Author

MorseKeyerEL 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 pages:

> http://k9dur.info
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Revision History

v1.0.0 – Jan 3, 2014 -- Initial Release.

v1.1.0 – Jan 4, 2014 -- Added startup window & default profile.

v1.1.1 – Jan 4, 2014 -- Added code to prevent Windows system sound when user presses Enter.

v1.2.0 – Jan 10, 2014 -- Added ability to accept serial input from another program. Added default CW speed for each profile.

v2.0.0 – Jan 19, 2014 -- Added ability to select whether program or WinKeyer speed pot controls CW speed. Expanded the number of macros that can be used in stored messages. Re-arranged toolbar.

v2.0.1 – Jan 19, 2014 -- Fixed bug where merge characters function was not working for stored messages.

v2.0.2 – Jan 20, 2014 -- Added code to detect when user enters an invalid parameter for a speed change macro.

v2.0.3 – Jan 21, 2014 -- Fixed bug where merge characters function was not working for stored messages that did not also contain a macro.

v2.1.0 – Jan 24, 2014 -- Added a button to clear the callsign & name text boxes.

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