Morse Code

This mode translates standard International Morse Code into text. Speeds up to 40 wpm are supported.

he tuning display (lower right part of the Signal Window), shows a real-time spectrum of the received signal. Tune your receiver so that the received signal is displayed in the center of the display, centered on the vertical dotted line. Adjust the audio level so that the volume bar graph shows a reasonable signal, without going into the red.

he demodulated audio from your radio is displayed in the Signal Window (shown above) in an amplitude vs. time basis. The audio is sampled in one half second chunks, which is evident in the update of this window. Four lines are also displayed - two horizontal and two vertical.

The two horizontal lines are the thresholds for detecting a signal. The ambient noise level should be below the bottom line, the code signal should be above the upper line. The more separation between the two, the better. Adjust your radio's volume and tuning accordingly. The program's audio filter is centered for 750 Hz. When receiving CW, your radio’s AGC should of course be turned off.

The two vertical lines move to show where new data is being placed, and where data is being read. There is a buffer in the area between the two lines. If the speed of the received code is too slow, so that dashes (or even dots) exceed the width of this buffer, you may have decoding problems.

hese buttons allow you to select the receive speed in wpm. The program defaults to 13 wpm.

he button with the question mark '?' allows you to have the program automatically select the correct speed, based on previous audio captured.

The button with the red X clears the speed buffer. This should be used when you've tuned in a new station, or the station has changed speed, or a lot of noise/static was received. Use this button if the program seems to select erroneous speeds.

The last button (Auto) sets the auto-speed mode, where MultiMode will periodically check the received speed, and make the necessary changes.

There is a text window where the decoded text is displayed. You will notice a slight delay between when each character is received, and when it is actually displayed. This is normal. Presently, a character isn't displayed until the next one is received, which means that the last character of a message may never get printed; this will be fixed.

Transmitting Morse Code:

It is now possible to use MultiMode to transmit Morse code. When the Signal Window is active (not the text display window), any keys you type will be converted to Morse code and sent. But how are they sent? Read on...

It is obviously necessary to interface your Mac to your transmitter. You need connect your Mac to where the key would normally go. In Preferences, you select a serial port to use for this purpose. The data transmit line of that port is turned on and off to simulate a key being pressed. In addition a small green LED is displayed in the Signal Window. (Due to timing constraints, the LED may not exactly blink correctly. Rest assured, the serial port output is correct)

Now, you need to condition this signal, of course. An opto-isolator should work fine. You would use the serial port output to turn the LED in the opto-isolator on and off (through an appropriate current limiting resistor, of course!). The opto output could then be connected to the key input of your transmitter. There are other possibilities as well.

Note, as this does involve connecting your Mac to your transmitter, you must be careful in what you are doing. We can in no way be held responsible for any damage that you cause to your radio or your Mac. Nor can we provide specific assistance in doing this. If you don’t know what you’re doing, seek assistance from a responsible person.