

NBEMS - FLDIGI - FLMSG Setup and Operating Instructions

WB2LUA, 10/18/13

NBEMS = Narrow Band Emergency Message System

MT-63 2000L (long interleave) Digital Mode VHF/UHF FM

MT-63 1000L (long interleave) Digital Mode VHF/UHF FM

MT-63 1000L (long interleave) Mode HF USB

Installation

Download FLDIGI and FLMSG from <http://www.w1hkj.com/download.html> for Windows, Linux, or MAC.

1. Install Fldigi and Flmsg software.
2. Open Fldigi.
3. Enter your personal information or as much as you want to. Then, next.
4. Under Devices, click port audio and select the sound card input and output. Then, next.
5. Under Hardware PTT select the com port for your computer. Then, finish.
6. Under Configure, Misc., NBEMS tab, check: enable, open message folder, open with FLMSG, open in browser, and press FLMSG button and select the executable file. Save. Close.
7. Under Configure, Modems, select the MT-63 tab, check: 8 bit extended character (UTF-8) and Long Receive Integration. Save. Close.
8. Open FLMSG
9. Configure, Date and time. Select the format you want to use. Close.
10. Configure, Personal Data. This should already be in the program. If not, enter it. Close.
11. Configure Files Formatting. Check open folder when exporting, Callsign, Data-time, and Serial #. Close.

Sound Card Calibration

- 1) Download and save CheckSR.exe. It provides the capability of analyzing your sound card offsets and gives you the corrections in parts per million (ppm): <http://www.pa-sitrep.com/checksr/CheckSR.exe>
- 2) Open FLDIGI, go to configure, sound card, audio devices tab and make sure you have the sound card you use for your interface properly selected from the capture and playback drop down choices.
- 3) Under the audio settings tab, you should see a sample rate drop down box for capture and playback. Under each drop down box, select the sample rate that has (native) listed after it and write down this figure. Click save config, then click save. Close FLDIGI.
- 4) Open CheckSR. From the drop down boxes for sound card settings, Input and Output, choose the sound card you are using. Next, select the sample rate from the drop down box in CheckSR for the sample rate that FLDIGI showed as "Native" then click start.
- 5) Let the application run for about 5 minutes. You will notice that the numbers will progressively stabilize. After about 5 minutes, click stop then write down the resulting figures on input and output for the measurements in Hz and PPM. Keep this record.
- 6) Open FLDIGI, go to configure, defaults, sound card and click on the audio settings tab. Enter the PPM figures for RX ppm (CheckSR ppm Input figure) and TX ppm (CheckSR ppm Output figure). If you had a figure that resulted in a minus from CheckSR, enter the PPM setting with the minus symbol followed directly by the figure with no space. Then click save config, then close.

Some sound card softwares have a programmable filter on the mic/line input that can characterize the digital signal as noise, and squash it after 2 seconds. Turned off this filter.

Although this procedure does not seem to be necessary for MT63 2k long on FM, it is advisable that anyone using FLDIGI, regardless of modes used, should perform this procedure immediately following setup. Once these calibrations are applied to the software, no changes should ever have to be made again, unless you change your software to radio interface sound card.

Operation (Getting started using the microphones and speakers)

A hard wired sound card interface can be used. Alternately placing the computer's microphone near the radio's speaker to receive and holding the radio's microphone next to the computer speaker while pressing the microphone's PTT switch and pressing PTT on the computer to transmit. VHF/UHF usually doesn't require a hard wired sound interface.

Below are some basic instructions. More advanced instructions can be obtained by watching the instructional videos.

1. Open FLDIGI.
2. Under, Op Mode, select the operating mode MT63-2000L or MT63-1000L (PSK can also be used for other applications)
3. Adjust your sound card master audio volume and sound recording volume to about 75%. You can change this later if necessary according to signal reports from others.
4. Click on the last digit and set it to zero. Then, press enter. Enter the frequency on the keyboard. Then, press enter or Select a frequency from the drop down box located after the words "Enter Xcvr Freq."
5. Place the computer's microphone near the radio's speaker.
6. Open the Squelch button on the bottom right corner of the screen (no color seen in box).
7. Set the volume of your radio until the black diamond that changes color to green. Adjust it again on an incoming signal.
8. When you see a solid line in the waterfall, point your cursor to it and click. Now, you will receive that message.
10. Click on the AFC button if you want to track drifting signals.
11. Place the radio's microphone near the computer's speaker. Press the PTT switch on the microphone, then click on the CQ button (green button). To transmit a message that has been typed in, press the PTT switch on the microphone, then click on the Tx button.

SENDING A FORMATTED MESSAGE

1. Open FLDIGI and setup all parameters in FLDIGI and the Radio.
2. Open FLMSG
3. Select the message format you want to use.
4. Enter the appropriate information into the message.
5. Test it the first time without a radio connected.
6. Place the radio's microphone near the computer's speaker. Press the PTT switch on the microphone, then click "Auto Send."

Macros

1. Open Flidigi
2. On the right, above the waterfall, next to the blue blank button is a #1. Left click this number until it changes to "3" or "4", whichever bank you want to use.
3. On the left side, there is a green blank macro button, right click a button and the macro editor will pop up.
4. Copy the line from below. Paste this line into "macro text" box.
DE <MYCALL> ALL STATIONS THIS IS A MESSAGE FROM, Northport, New York [MT63-2KL
1500Hz] DE <MYCALL> K <RX>
5. Enter a button name below into the "macro button label" box (such as TX-30s)
6. Click Apply and Close
7. Choose File, Macros, Save, and Save.

Test it the first time by left clicking it without a radio connected.

Instructional Videos

<http://www.youtube.com/watch?v=-1wZ7uIA-Qs>

<http://www.youtube.com/watch?v=SWZ2vKWSiIE&list=PLBF8CFBA57CC6C2CC>

<http://www.youtube.com/watch?v=psP489NOkg0>

<http://www.youtube.com/watch?v=9Pw9XWnwukc>

<http://www.nyc-arecs.org/narrow.html>