How to install and configure fldigi and flmsg: KC2WI NNY SEC rev. November 4, 2016

1. Download the latest version installers from https://sourceforge.net/projects/fldigi/files/?source=navbar

Note: If using Microsoft Edge or Internet Explorer SmartScreen Filter may tell you “This program is not commonly downloaded and may harm your computer.”

Manuals and other information is available at http://www.w1hkj.com/

2. Run the fldigi installation program.

Note: some antivirus programs will block the installer and/or delete it when you try to run it.

If you have 32 bit Windows the install path will look like C:\Program Files\Fldigi-3.23.15
If you have 64 bit Windows the install path will look like C:\Program Files (x86)\Fldigi-3.23.15

3. Run the flmsg installation program.

If you have 32 bit Windows the install path will look like C:\Program Files (x86)\flmsg-3.00.02
If you have 64 bit Windows the install path will look like C:\Program Files (x86)\flmsg-3.00.02

4. The first time you open fldigi, the configuration wizard will run and lead you through the basic setup.

Operator Information: Enter your Callsign, Name, QTH, Locator (grid square), Antenna.
…. Click Next
Audio Devices: Check Port Audio. Most likely your default capture and playback devices (microphone and speakers) will automatically be selected. If you are using a Signalink or other external sound card you will have to select it.
….Click Next
Transceiver control: Don't worry about these settings right now. You will start by using acoustic coupling which means you will manually press your microphone's PTT to transmit. Once you get the basic program working you can worry about connecting sound card to radio audio cables, USB/serial port PTT, and/or a CAT cable to control PTT and enable exchange of control information between the computer and radio, if your radio supports this.)
….. Click Next
Tabular Data Sources: Don't worry about anything here.
….Click Finish.

The main fldigi window will now open.

5. Click Configure, then select Misc. Select the NBEMS tab. Either type the location of the flmsg program as noted above, or click Locate flmsg and navigate to the appropriate location. This is required so that fldigi can automatically start flmsg and transfer data when it recognizes that a formatted message has been received.

Note: if you install a newer version of flmsg, you must go back in to fldigi and change the location accordingly.

6. Click Configure, then Save Config when you are done.

Note: You can go to Config - UI - General and choose whether fldigi prompts you to save configuration, macro, and log before exiting. I recommend you leave the prompts on.

7 Run flmsg.

8. Enter your call and any other info you want in the Personal screen.

9. Click on the Socket tab. Check “Sync modem to fldigi” and uncheck “Change modem with autosend.” This will allow fldigi to control what mode is being used and prevent flmsg from changing it when you send a formatted message.

This ends the basic software installation and configuration.

When you install the programs, they will create data folders named fldigi.files and NBEMS.files in your user folder. In Windows XP the path is C:\Documents and Settings\(your user name) In Vista and later it is C:\users\(your user name). Note in certain cases your Windows drive might be other than C:.

Fldigi.files stores fldigi configuration, macro, and log files. NBEMS.files stores flarq and flmsg configuration, and messages sent and received by flmsg. Messages are stored in the ICS subfolder.

It is helpful to know the location of these folders because you may want to back up configurations or retrieve a message file to send by email or other means.

It is also possible to start fldigi with different configurations (such as one for HF and one for VF) by using command line switches to point to different data folders*. example: C:\Program Files (x86)\Fldigi-3.23.09\fldigi.exe" --config-dir "C:\Users\Owner\fldigi.MARS.files" The details are beyond the scope of this document but it really is quite easy to do.

Introduction to the fldigi user interface:

The Frequency display and mode at the upper left is not significant because your radio and computer are not connected. (If you use the contact logging feature of fldigi then you will want to change it to match your operating frequency so the log entries are correct.)

The text fields to the right of the frequency display, with the possible exception of Call are also unimportant. Data entered in to these fields will be used for macros and logging.

At the upper right there are 3 buttons. Click RxID and TxID to turn on Reed-Solomon Identification (RSID). RxID allows fldigi to automatically switch mode in response to the TxID sent by another station. Clicking the TUNE button simply cause fldigi to send a continuous tone to adjust computer sound output level.

The center of the screen contains 2 windows. The upper (tan) window is where received data is displayed. The lower (blue) window is where you enter text to be transmitted. There may be a white box to the left of these windows. This is the Signal Browser, which displays multiple decoded PSK31 data streams. Since we probably won't be using PSK31 for NBEMS messages, you can put your pointer over the right border and pull to the left to close it.

Below the transmit window is a row of 4 green, 4 red, and 4 purple macro buttons. There are preset macros which can be easily customized. Clicking on the button runs the macro. Right clicking opens the macro for editing. You can figure out the macro programming pretty easily by inspecting the code.

The function of the four purple macro buttons on the right are the most important to understand initially.
T/R toggles between transmit and receive mode.
TX>> puts fldigi in transmit mode. If there is text in the transmit window before the cursor location it will be transmitted. If there no text, fldigi will still transmit but no actual data will be sent.
RX|| puts fldigi in receive mode.
TX>| puts fldigi in transmit mode similar to TX>>, but when all text has been transmitted, it transmits your call then goes to receive.

The 'waterfall display' below the macro buttons shows received audio level at all frequencies in the audio passband by using color. Blue for low, yellow for moderate, and red for high. Adjust radio volume and/or computer sound card 'record' levels to avoid too much red. The red lines show where fldigi is 'listening' for a signal to decode. The Op Mode determines the width. When the mouse pointer is in the waterfall display window you can move the lines. Generally we want the center frequency to be 1500 Hz but it really depends on the digital mode and other signals on the band. This is displayed below the waterfall. You can fine adjust by clicking the left and right arrows.

The currently selected mode is indicated at the bottom left. The mode selection is made by clicking Op Mode at the upper left of the fldigi window and using the drop down menu.

At the bottom right there is a display and control for transmit signal level. Default is -3dB. Next to that, the AFC button turns automatic frequency control on or off, and the SQU button turns squelch on or off. The squelch threshold is adjusted by a slider to the right of the waterfall window.

A discussion of the various digital modes is beyond the scope of this setup document. The w1hkj.com web site contains lots of useful information. The web site wb8nut.com/digital/ also has a good overview and description of digital modes. A presentation available at www.scares.arrl-nh.org/pdf_files/fldigi%20basics.pdf includes some helpful charts showing speed, bandwidth, noise immunity, and error correction capabilities of different modes.