

FLDIGI/FLMSG

November 11, 2013

Programs

fldigi - Main modem software

flarq - ARQ file transfer

flamp - Amateur Multicast Protocol

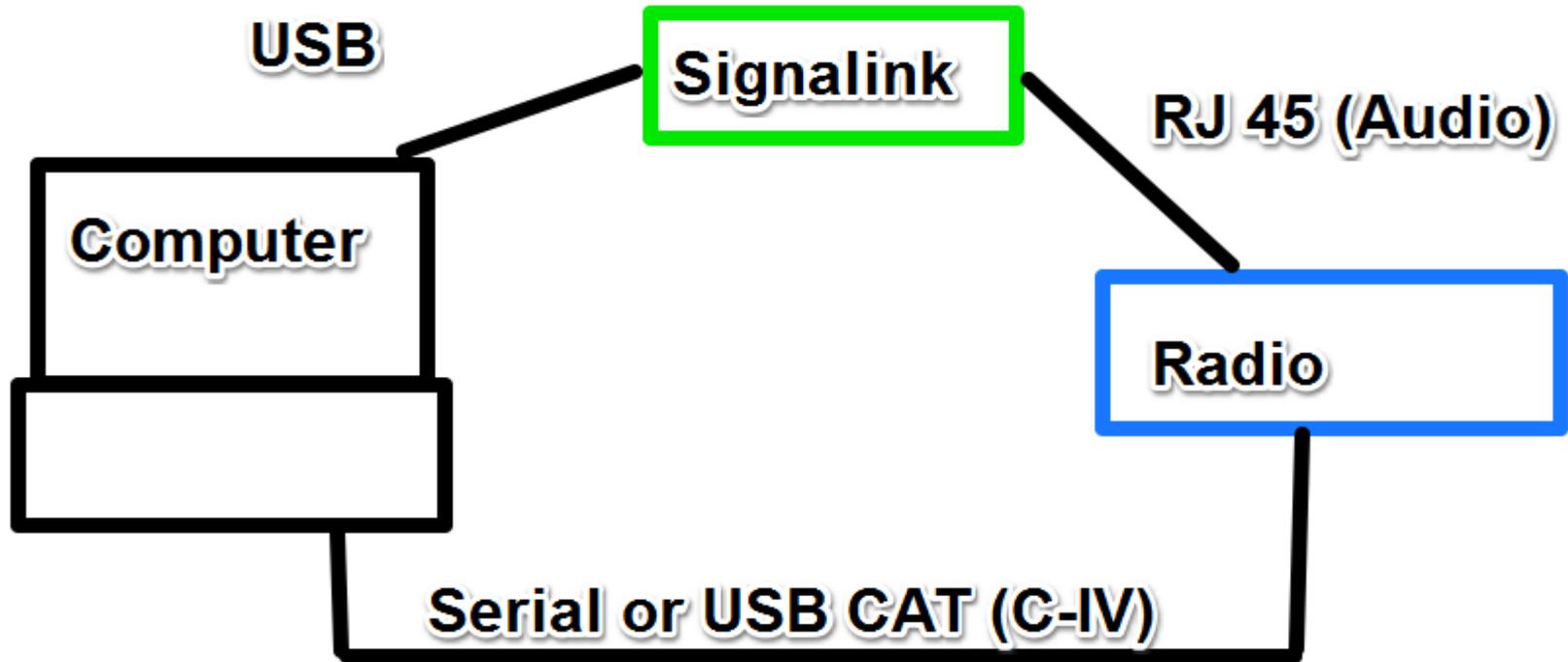
flwrap - File encapsulation/compression

flms - Form manager

flrig - Rig control (with CAT cable)

flog - Logbook server

Setup



Tuning your sound card

<http://www.w1hkj.com/FldigiHelp-3.21/TUNE.html>

- For Windows users
 - Set your sound card output level to the minimum on the Windows mixer
- For Linux users
 - Set your PCM level to about 80%
 - Set your Transmit Level control for minimum output level.
- Enable the "Tune" mode in fldigi ... you do have CAT or PTT set up ...right?
- Make sure your transceiver speech compression control is OFF
- Slowly bring up the Mixer audio out until your rig's ALC just starts to function (a light blinking or a meter showing this condition).
- Reduce the Mixer audio output until the ALC is disabled.
- You are now transmitting at maximum output power without distortion.

Fine Tuning

Transmit level attenuator

It is often difficult to adjust the audio drive for the point where ALC is just barely active. Mixer controls are OK, but not usually designed for very small changes. They are after all designed for adjusting listening levels. fldigi provides the ability to control the audio drive in increments of 0.1 dB over a 30 dB range. This control is located in the bottom right corner of the main dialog:



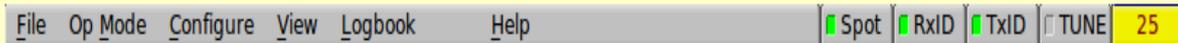
Set this control for -6 dB and then adjust the sound card mixer control for the best ALC level you can achieve. Then adjust the Tx-level control for best "just visible" ALC on the transceiver. That should give you a very clean PSK signal.

MT 63 S vs L

There are two interleaver options (short and long) which can be set on the MT63 configuration tab. The default calling mode is MT63-1000. If the short interleaver is used then one can expect some compromise in robustness. The long interleaver results in somewhat excessive latency (delay between overs) for keyboard chatting. MT63-1000 with the long interleaver has a latency of 12.8 seconds.

MT 63 Speeds

Mode	Symbol Rate	Typing Speed	Bandwidth
MT63-500	5.0 baud	5.0 cps (50 wpm)	500 Hz
MT63-1000	10.0 baud	10.0 cps (100 wpm)	1000 Hz
MT63-2000	20 baud	20.0 cps (200 wpm)	2000 Hz



Spot button - The "Spot" light button is visible if callsign spotting is enabled. Use this button to toggle the callsign spotting reporter on and off. It is automatically turned off when playback is selected in the Files menu. The main window text is not searched if the viewer is active, i.e., if it is displayed and the current modem is PSK. See [PskReporter](#) and [Notifier](#).

RxID button - toggles the detection of [Reed Solomon Identification](#) codes.

TxID button - toggles the transmission of the RSID signal.

Tune button - toggles the "Tune" mode which causes fldigi to insert a tone at the current waterfall frequency. The peak-to-peak amplitude of this tone is the standard by which you should [set your transmitter drive](#) or adjust your antenna matching network.

The right most button is normally not visible. This is the count-down timer button that is enabled when a macro button has been configured to repeat after a specified number of seconds. This button shows the count-down to the next transmission. Pressing the button disables the count and restores fldigi to normal keyboard operation.

fldigi - N7RYN

File Op Mode Configure View Logbook Help

Spot RxID TxID TUNE

Enter Xcvr Freq Freq 1002 On Off 2335 In Out

0.000 Call Op Az

USB Qth St Pr Loc

IJM

CQ ANS QSO KN SK Me/Qth Brag T/R Tx Rx TX 1

500 1000 1500 2000 2500

WF -20 70 x1 NORM 1002 QSY Store Lk Rv T/R

RTTY 45.45/170 s/n -36 dB -3.0 AFC SQL

The image shows the fldigi software interface. At the top, the window title is "fldigi - N7RYN". Below the title bar is a menu bar with "File", "Op Mode", "Configure", "View", "Logbook", and "Help". To the right of the menu bar are buttons for "Spot", "RxID", "TxID", and "TUNE". The main control area includes a frequency input field set to "1002", with "On" and "Off" buttons and a "2335" value. There are also "In" and "Out" buttons. Below this are fields for "Call", "Op", and "Az". A "USB" dropdown menu is on the left, and "Qth", "St", "Pr", and "Loc" fields are on the right. A large yellow text area contains the call sign "IJM". Below this is a large light blue area. At the bottom, there is a row of mode buttons: "CQ", "ANS", "QSO", "KN", "SK", "Me/Qth", "Brag", "T/R", "Tx", "Rx", "TX", and a "1" button. Below the buttons is a frequency scale from 500 to 2500 Hz. A waterfall display shows a signal at 1000 Hz. At the very bottom, there are various control buttons: "WF", "-20", "70", "x1", "NORM", "1002", "QSY", "Store", "Lk", "Rv", "T/R", "RTTY", "45.45/170", "s/n -36 dB", "-3.0", "AFC", and "SQL".

Rig Control (CAT
required)

Enter Xcvr Freq

0.000

USB

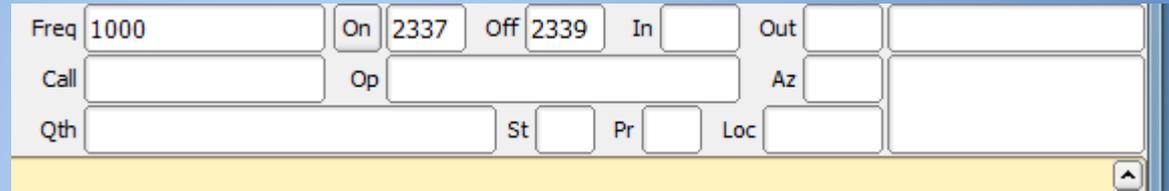
The image shows a software interface for rig control. At the top, it says "Enter Xcvr Freq". Below this is a digital display showing "0.000" in green. To the right of the display are two icons: a computer monitor and a globe. Below the display is a yellow bell icon. At the bottom left, there is a dropdown menu currently showing "USB". To its right are two more dropdown menus, both with downward-pointing triangles, and a blue icon of a hand pointing to a document.

Logging (flog)

Freq 1000 On 2337 Off 2339 In Out

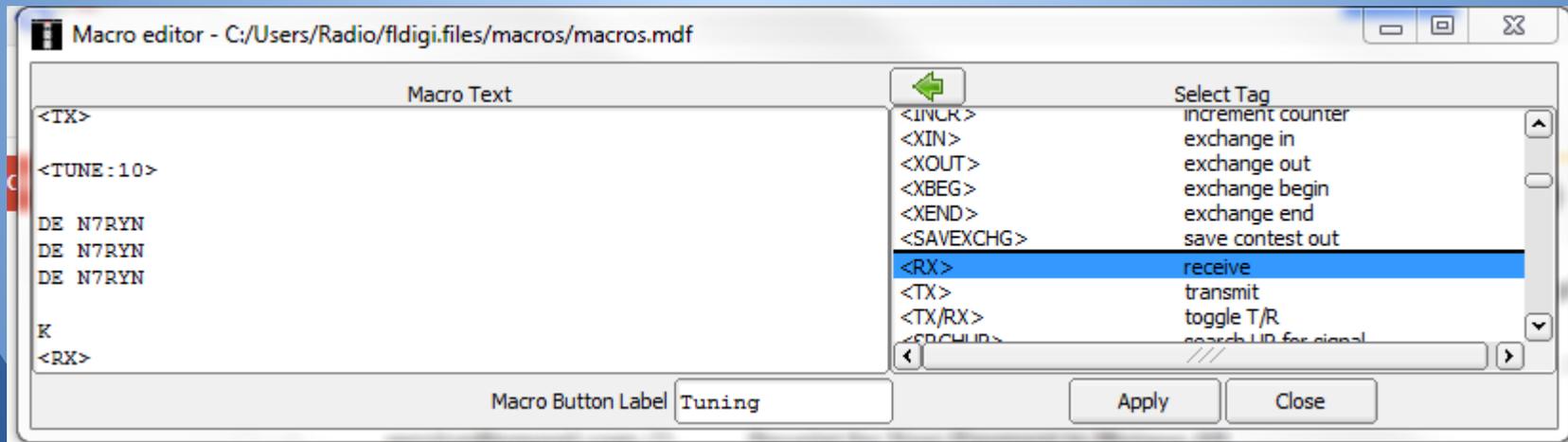
Call Op Az

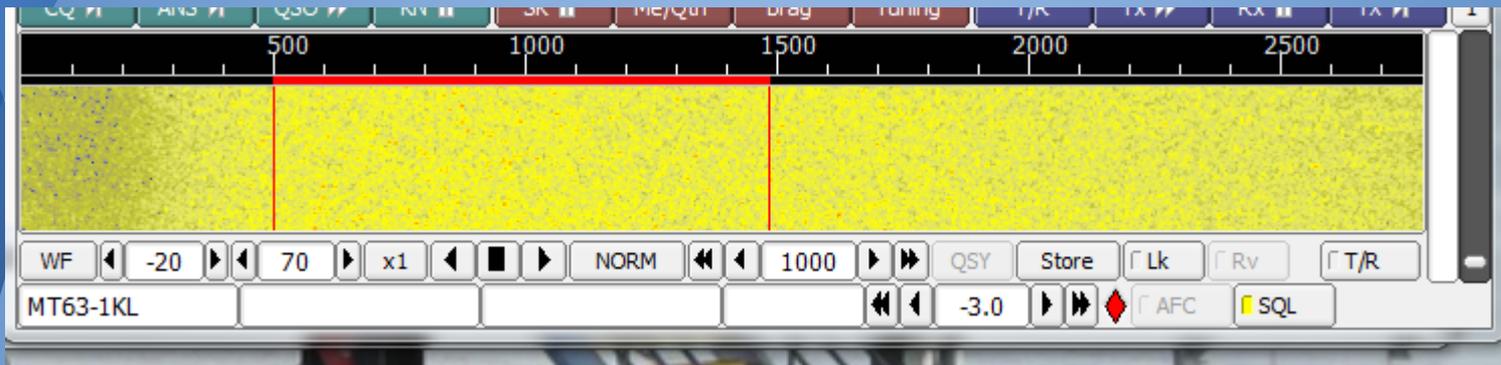
Qth St Pr Loc

The image shows a logging interface with several input fields. The first row contains "Freq" with the value "1000", followed by "On" with "2337", "Off" with "2339", "In" with an empty field, and "Out" with an empty field. The second row contains "Call" with an empty field, "Op" with an empty field, and "Az" with an empty field. The third row contains "Qth" with an empty field, "St" with an empty field, "Pr" with an empty field, and "Loc" with an empty field. There are also some larger empty rectangular areas on the right side of the interface. A small upward-pointing arrow icon is visible in the bottom right corner.



Macro Bar (F1 - F12)





The indicator just to the left of the AFC button is the overload indicator. It will be GREEN if your audio drive to sound card is satisfactory, YELLOW if the audio signal is marginally high and turn red when it is in overload. Back down the mixer control or the audio pad from the rig to computer. Fldigi will not perform well if the sound card is over driven. You will see ghost signals on the waterfall and the modem decoders will not work correctly.

Receive audio level should be adjusted so that the overload indicator does not illuminate red. When observing the received signals on the oscilloscope view you should expect that they do not exceed a peak-to-peak amplitude of 3/4 of the full display height.

Links

FLDIGI Help:

<http://www.w1hkj.com/FLdigiHelp-3.21/index.html>

FLMSG Help:

<http://www.w1hkj.com/flmsg-help/index.html>

FLWRAP Help:

<http://www.w1hkj.com/Flwrap/index.html>

Transmit Tuning:

<http://www.w1hkj.com/FLdigiHelp-3.21/TUNE.html>