



# Ventura County Area 2 ACS/ARES® Fldigi Setup and Operating Instructions

## Definitions

**NBEMS** - NBEMS (**N**arrow **B**and **E**mergency **M**essaging **S**ystem, pronounced “N-beams”) is an Open Source digital messaging system using fldigi or any other software.

**fldigi** - Fast Light **D**IGital modem program is software allows amateur radio operators to reliably send and receive data using nearly any computer (Windows, Mac, and Linux) and any analog transceiver.

The fldigi software can be downloaded [by clicking here](#). [View a pdf of the user’s manual here](#).

**flmsg** - (**F**ast **L**ight **M**essage) is a simple forms management editor for the amateur radio supported standard message formats.

**flwrap** - (**F**ast **L**ight **W**RAP) allows an operator to transmit a text message, image, or binary file to either single or multiple stations and allow each receiving station to verify that the transmission was received without error. Read more about flwrap: <http://www.w1hkj.com/Flwrap/>

The ARRL website offers two excellent tutorials about NBEMS: <http://www.arrl.org/nbems>

**Note:** *The intent of this document is to be a guide for configuring the NBEMS software for an ACS/ARES Area 2 Emergency Operation Center. For anyone interested in learning more about the NBEMS digital mode, many resources are available on the Internet by simply searching for “NBEMS” and “fldigi.”*

Fldigi is copyright © 2006 through 2013 Dave Freese, W1HKJ | 2007, 2008, 2009 Stelios Bounanos, M0GLD  
2007, 2008, 2009 Leigh Klotz Jr., WA5ZNU | 2007, 2008, 2009 Joe Veldhuis, N8FQ | 2008, 2009 Stephane Fillod, F8CFE  
2009 John Douyere, VK2ETA | 2013 Remi Chateauneu, F4ECW | 2013 Robert Stiles, KK5VD

## Ventura County Area 2 ACS/ARES® fldigi Setup and Operation Instructions

Open the software application by clicking on the three following icons on the laptop desktop:

**FLWRAP** – this sub-routine is used in messaging

**FLMESSAGE (FLMSG)** – this subroutine provides the forms that are used for both inbound and outbound messaging

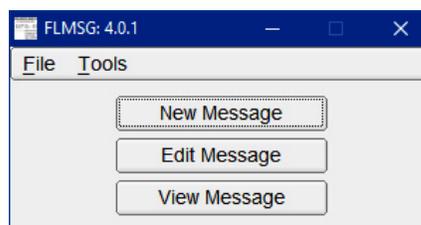
**FLDIGI** – This is the operating software

(FLDIGI has several sub-routines, the FLWRAP and FLMSG subroutines must be opened while FLDIGI is in use or full functionality will not be available.)

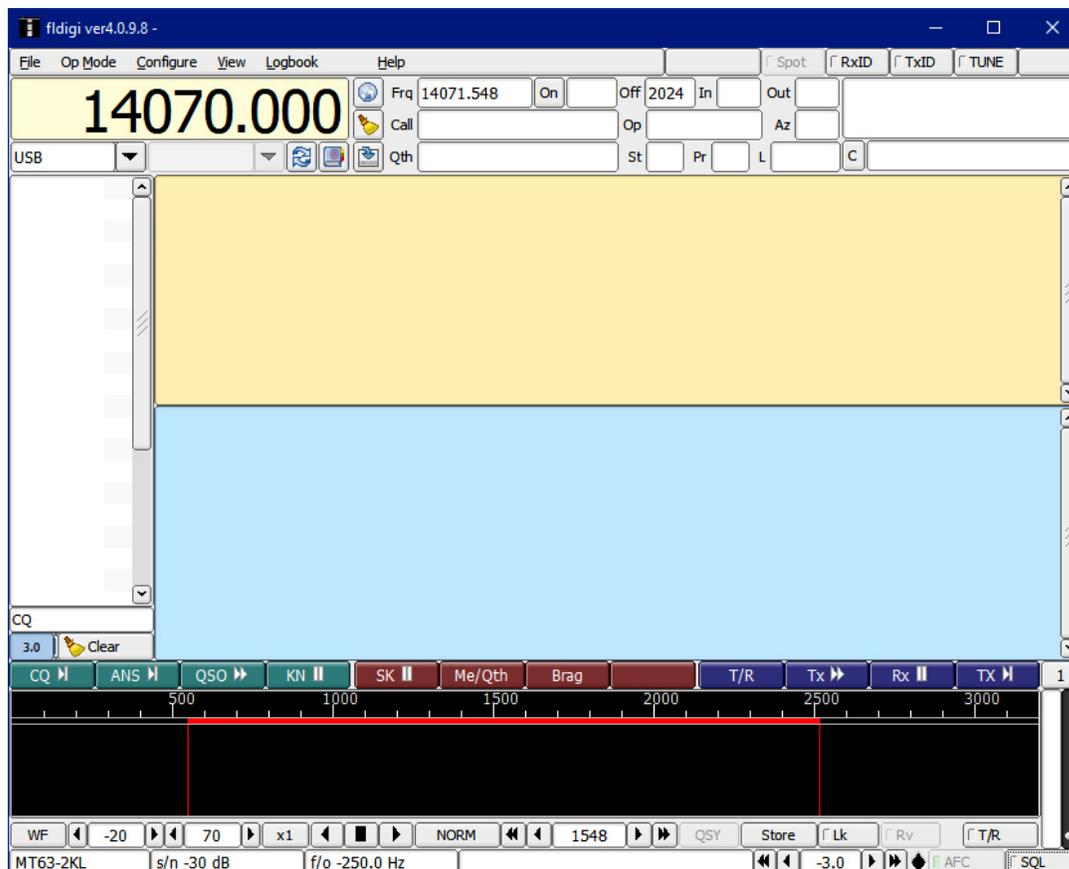
Flwrap Window



FLMSG Window



fldigi Main Window

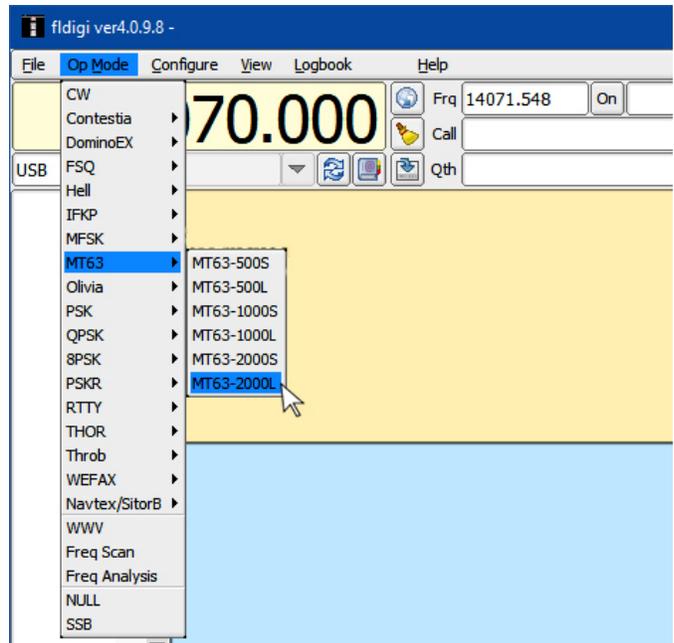


## Configuration of fldigi

### OpMode Tab

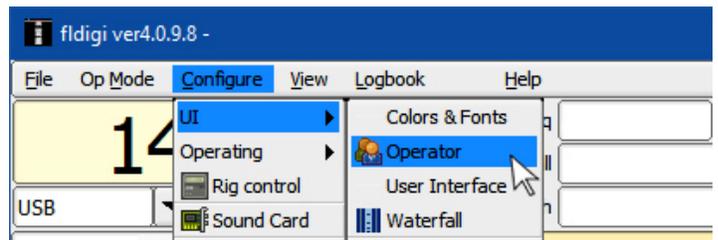
The “Op Mode” drop-down screen offers eighteen operational modes to select from, i.e. RTTY and CW.

Ventura County ACS uses “MT 63-2000L.”



### Configure Tab

Select “Operator” from the “Configure” drop-down menu. The Fldigi configuration dialog box, shown below right, opens.



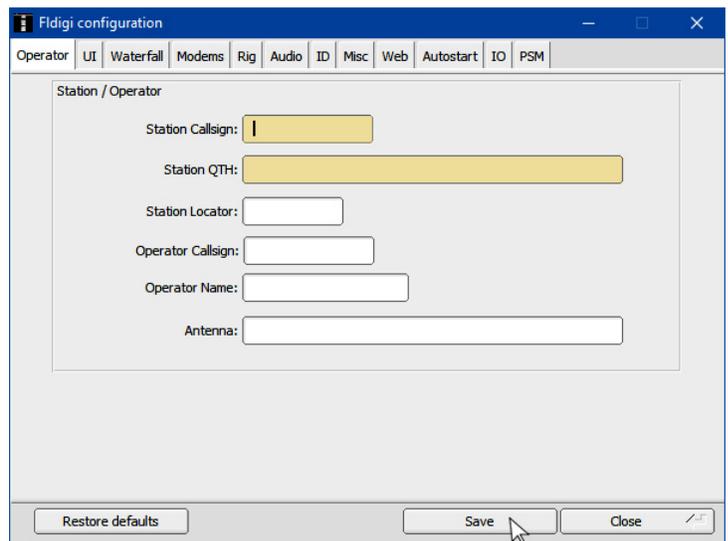
### Click on the “Operator” tab.

In the “Station Callsign:” box, enter your EOC’s packet call. (For instance, East County Sheriff’s Station’s call is KJ6ZQW-6. Los Robles Main Campus is KJ6ZQW-8.)

In the “Station QTH:” box, enter the city of your EOC.

(On some other versions of Fldigi, there may be more fields, but only Station Callsign and Station QTH need to be filled out.)

At the bottom of the window, click “Save.”

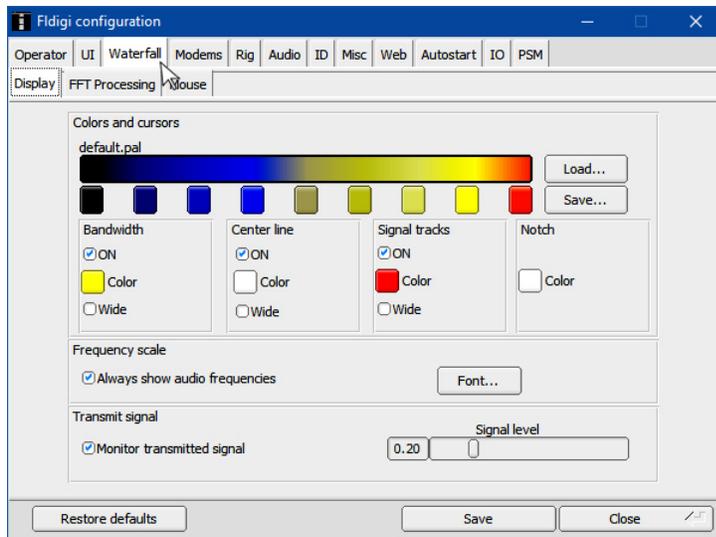


Click the **“Waterfall”** tab, then **“Display”** tab.

Under **“Frequency scale,”** check **“Always show audio frequencies.”**

Under **“Transmit signal,”** check **“Monitor transmitted signal.”**

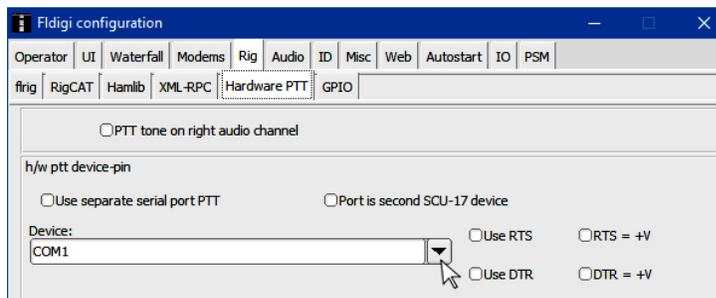
At the bottom of the window, click **“Save.”**



Click the **“Rig”** tab, then the **“Hardware PTT”** tab.

In the Device drop-down menu, click **“COM 1.”**

At the bottom of the window, click **“Save.”**



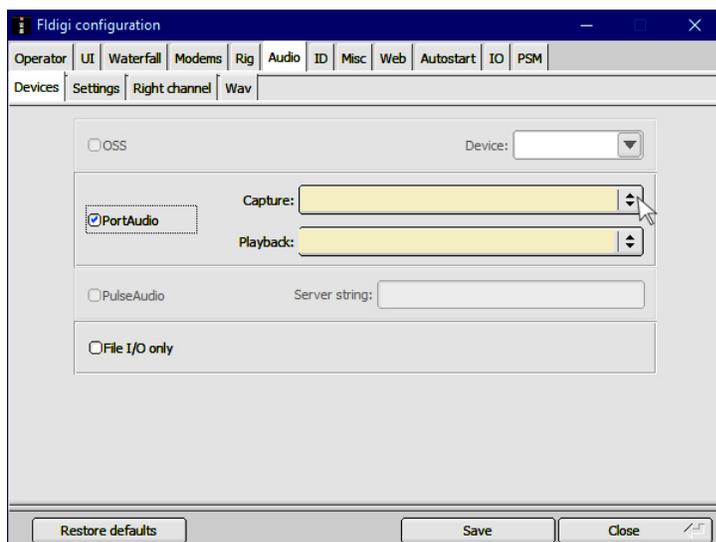
Click the **“Audio”** tab, then the **“Devices”** tab.

Click **“PortAudio.”**

In the **“Capture”** drop-down window, select CODEC or appropriate soundcard if installed. If not installed, use the internal microphone available in the drop-down window.

In the **“Playback”** drop-down window, select CODEC or appropriate soundcard if installed. If not installed, use the internal speaker available in the drop-down window.

At the bottom of the window, click **“Save.”**



Click the “Misc” tab, then the “NBEMS” tab.

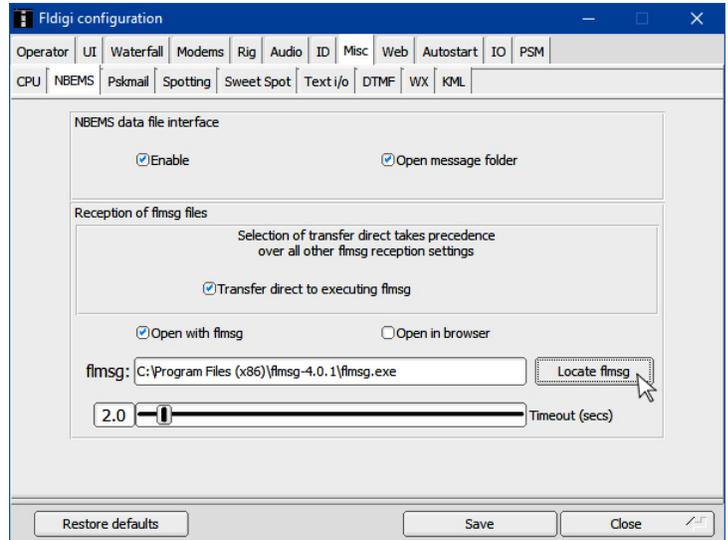
Under “NBEMS data file interface,” click “Enable” AND “Open message folder.”

Under “Reception of flmsg files,” click “Transfer direct to executing flmsg” AND “Open with flmsg.”

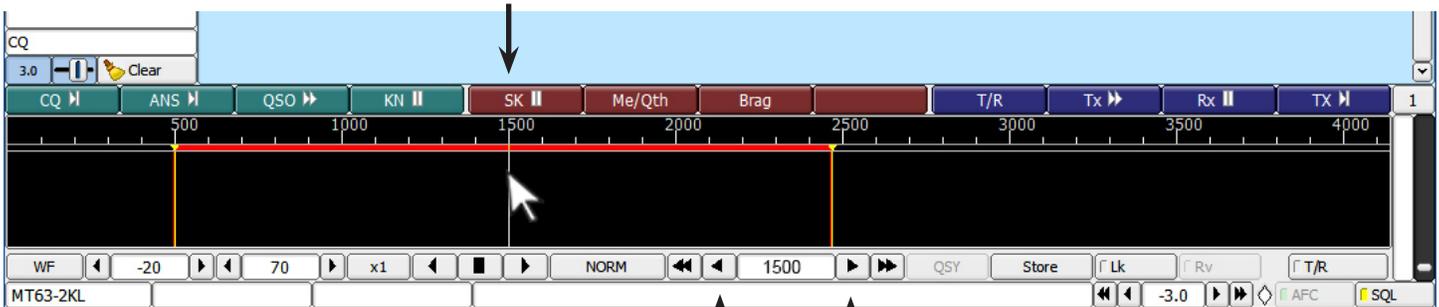
Click “Locate flmsg.” A window will open showing your computer’s program files. What you are looking for is a path to the flmsg.exe file, like the one shown on the right in the flmsg: field.

All of the remaining tabs under the Configuration Tab (UI, Modems, ID, Misc. and Web) can use their default settings and do not need custom configuration.

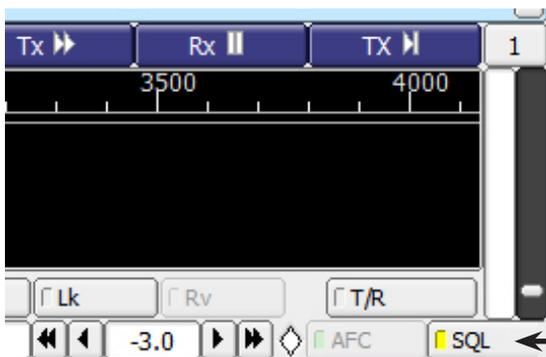
At the bottom of the window, click “Save” then “Close.”



For the MT63-2KL operation mode, use 1500 as your center frequency by using the mouse to center the middle line on 1500.



Use these forward or back arrows to fine-tune the frequency to 1500.



Squelch can be adjusted in the lower right hand corner of the FLDIGI screen by moving the slider bar up or down.

Turn on squelch by clicking here.

## Operating Instructions

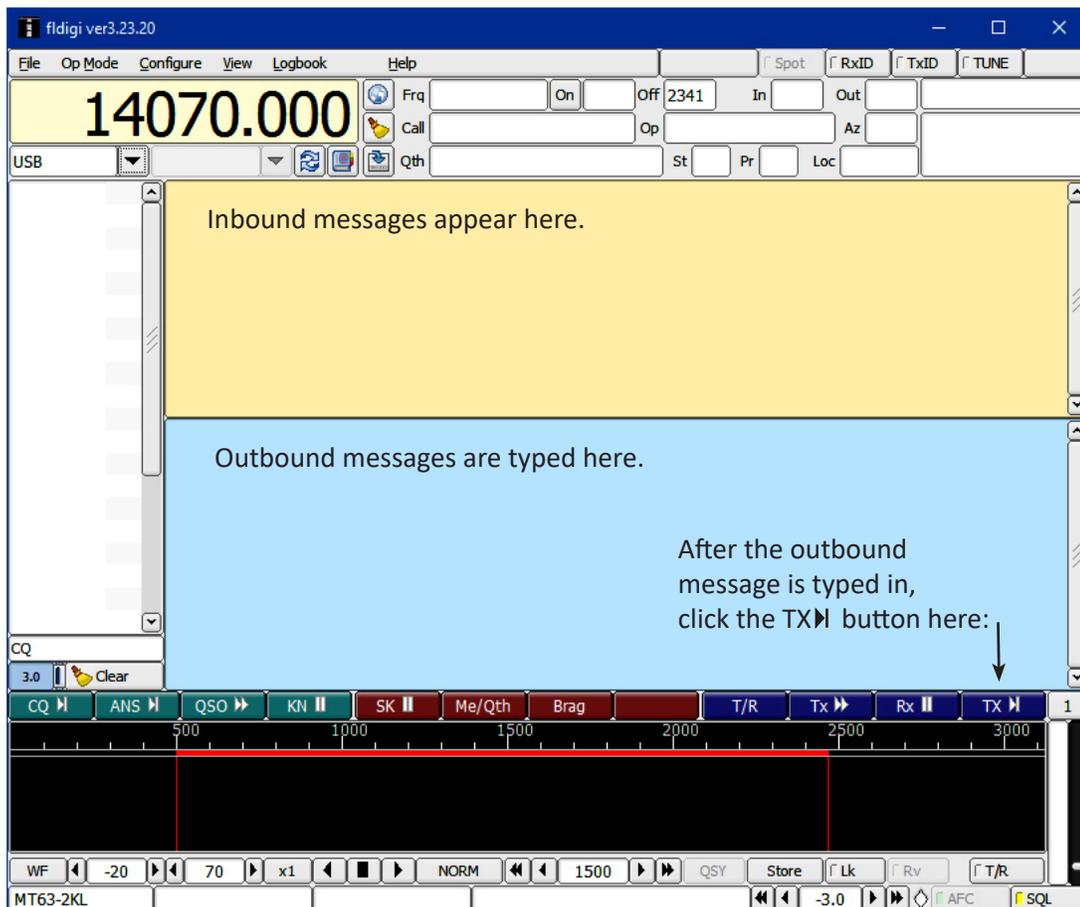
Fldigi messages can be sent either manually or by using a form.

Regardless, ALWAYS ANNOUNCE YOU ARE TRANSMITTING A DIGITAL SIGNAL BEFORE TRANSMITTING!

### Manual Messaging

The top section of the FLDIGI screen is for inbound messages.

The section below is where you type your outbound messages.



To transmit a manual message – on the purple bar 2/3 of the way down the screen click the TX button.

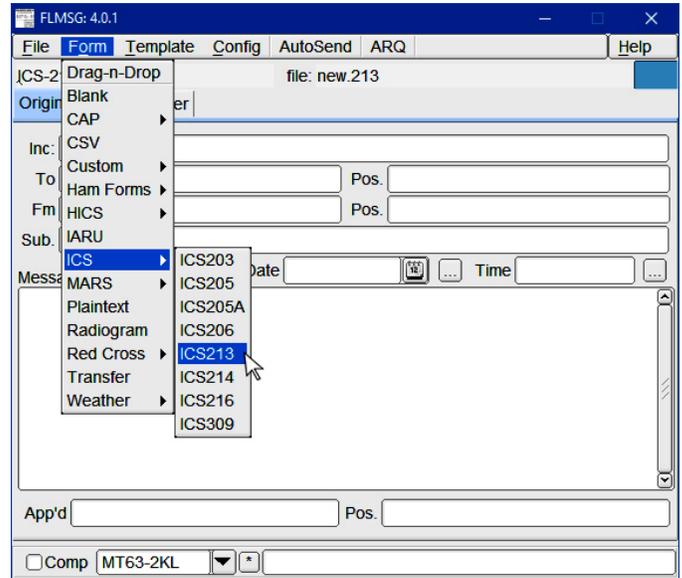
Any band and frequency can be used for operation. Area 2 uses simplex 2 meter for FLDIGI, which is ACS channel 12. The frequency is 146.445 with no offset and no PL tone.

If you're not using a Codec, hold the radio microphone near the PC's internal speaker. Hold the radio mic's PTT button down, and THEN click the fldigi TX button to send your message. The PC will send the message signal through the speaker.

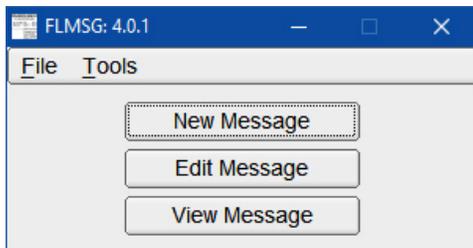
To receive a message if you're not using a Codec, make sure the PC is close to the radio's speaker. When the message is transmitted, the PC's internal microphone will "hear" the signal and display the inbound message in the FLDIGI window.

### Using Message Forms to Send Messages

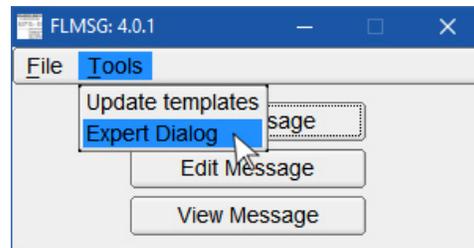
The message form used by ACS is "ICS213"; this form is selected from the "forms" drop down screen in the FLMSG dialog box.



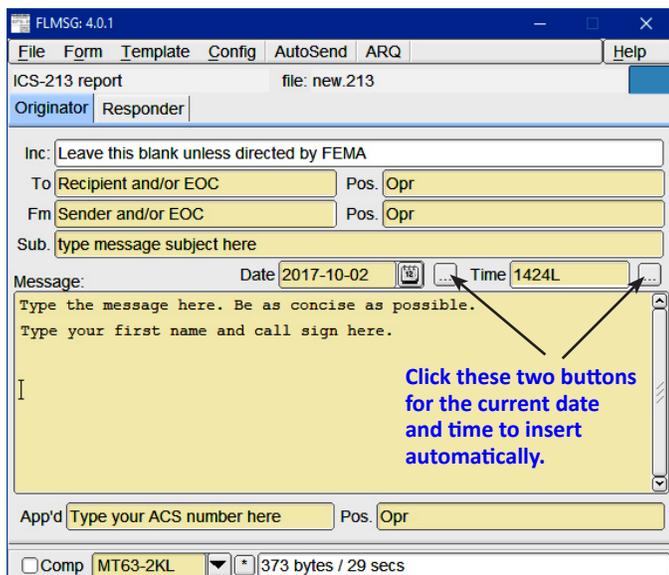
If your FLMSG dialog box looks like this...



... click on "Tools", then "Expert Dialog" to open the window above.



To send a message, complete the "Originator" form as shown below. Then click the "Auto Send Tab" and select "save." The message will send automatically. If you're not using a Codec, have your radio mic ready and key the mic as soon as you click "save."



To respond to a message, complete the "Responder" form as shown below. Then click the "Auto Send Tab" and select "save." The message will send automatically. If you're not using a Codec, have your radio mic ready and key the mic as soon as you click "save."

