



SalCo ARES Digital Data Messaging

Kenwood TM-281 set up and configuration

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Contents

Kenwood TM-281 set up and configuration	1
TM-281 Menu Settings.....	3
Signalink Configuration	3
Soundmodem Installation.....	4
Winlink Express Installation	7
Winlink Packet Message Composition	14
Packet P2P.....	15
FLDIGI/FLARQ Installation.....	16
FLMSG Installation	19

TM-281 Menu Settings

In your TM-281, there are no menu items to be configured, all settings are handled by the UZ7HO and Winlink Software.

Signalink Configuration



You can purchase a Signalink USB interface from many different sources for around \$129.00 (February 2019) including the appropriate cable to connect to your specific radio. (For Kenwood TM-V71A, uses an RJ45 to a 6 pin Mini DIN connector) The Signalink is powered by the USB port from your computer.

Ensure you look at the configuration of the jumper wires for your specific radio (Also available at many sources).

SIGNALINK JUMPER SETTINGS

RJ-45 Mic Connector (use SLUSB RJ4, SL1+RJ45, SL1-RJ45 or SLCABRJ4)

JP-1	Pin-out	Radio Models	Notes
<p>Diagram of JP-1 jumper settings. The diagram shows a vertical strip of 8 pins. The connections are as follows:</p> <ul style="list-style-type: none"> Pin 1: SPKR (orange) Pin 2: MIC (yellow) Pin 3: PTT (yellow) Pin 4: PWR (yellow) Pin 5: GND (black) Pin 6: GND (black) Pin 7: Speaker** (red) Pin 8: NC (no connection) 	<p>Pin 1 – NC Pin 2 – Speaker** Pin 3 – Mic Pin 4 – GND Pin 5 – PTT Pin 6 – GND Pin 7 – +8V** Pin 8 – NC</p>	<p>TM-251/255/261/271/281 TM-451/455/461/641/642 TM-732/733/741/742 TM-941/942 TM-D700/700A TM-D710/710A/E TM-G707 TM-V708 TM-V7A/V71A/V71E TS-480HX/SAT TK-90 TK-7102H TK-7108M/HM TK-7160E/M/HM TK-7162E TK-7180E TK-7189E TK-8108M/HM TK-8160E/M TK-8162E TK-8180E TK-8189</p>	<p>**Speaker audio and power are available on some models. Check your radio manual for availability of these features and add the appropriate jumpers.</p> <p>The Signalink USB is always powered by the computer and never needs external power.</p>

Ensure your radio is powered off. Connect the RJ45 Signalink cable connector to the MICROPHONE port on the radio. Connect that cable to the RJ45 port on the back of the Signalink. Connect the USB cable (USB A to USB B just like the cable to connect to a printer) to any USB port on your computer, then plug the USB connector into the USB B port on the back of the Signalink. (In Windows 7 and above, the computer already has the appropriate drivers and will install them automatically.)

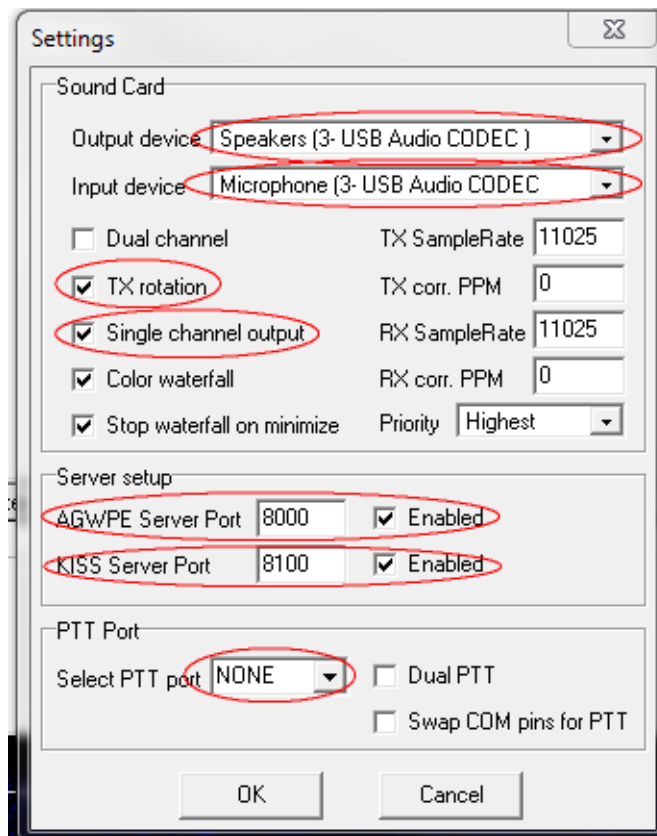
The TM-281 can only be used for AX.25 1200 baud packet transmission, however, this is a good thing since you can access the Winlink RMS Packet server via the Saline County ARES node AD5EO-10.

Soundmodem Installation

You will now need to download and install the following file from the UZ7HO website: <http://uz7.ho.ua/packetradio.htm> scroll down the page until you see the file named "soundmodem##.zip" (where the ## equals the highest number available). Save the file to your desktop, then move it to a convenient location (I use a self-made folder on my C: drive entitled install packages.)

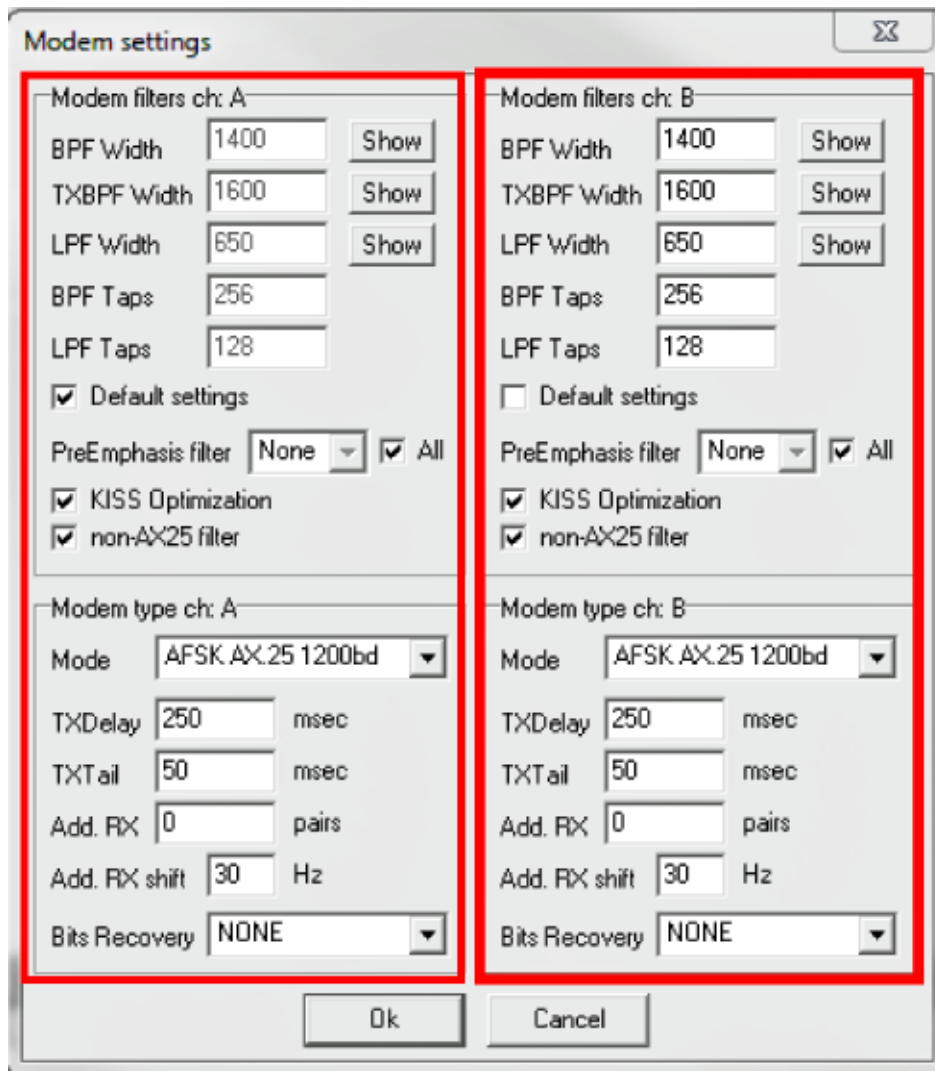
Unzip (extract) the files, then "click" on the soundmodem.exe file to initiate the program. (This program is required to enable the Winlink Express system to communicate via the AX.25 protocol.)

Click on "Settings -> Devices"



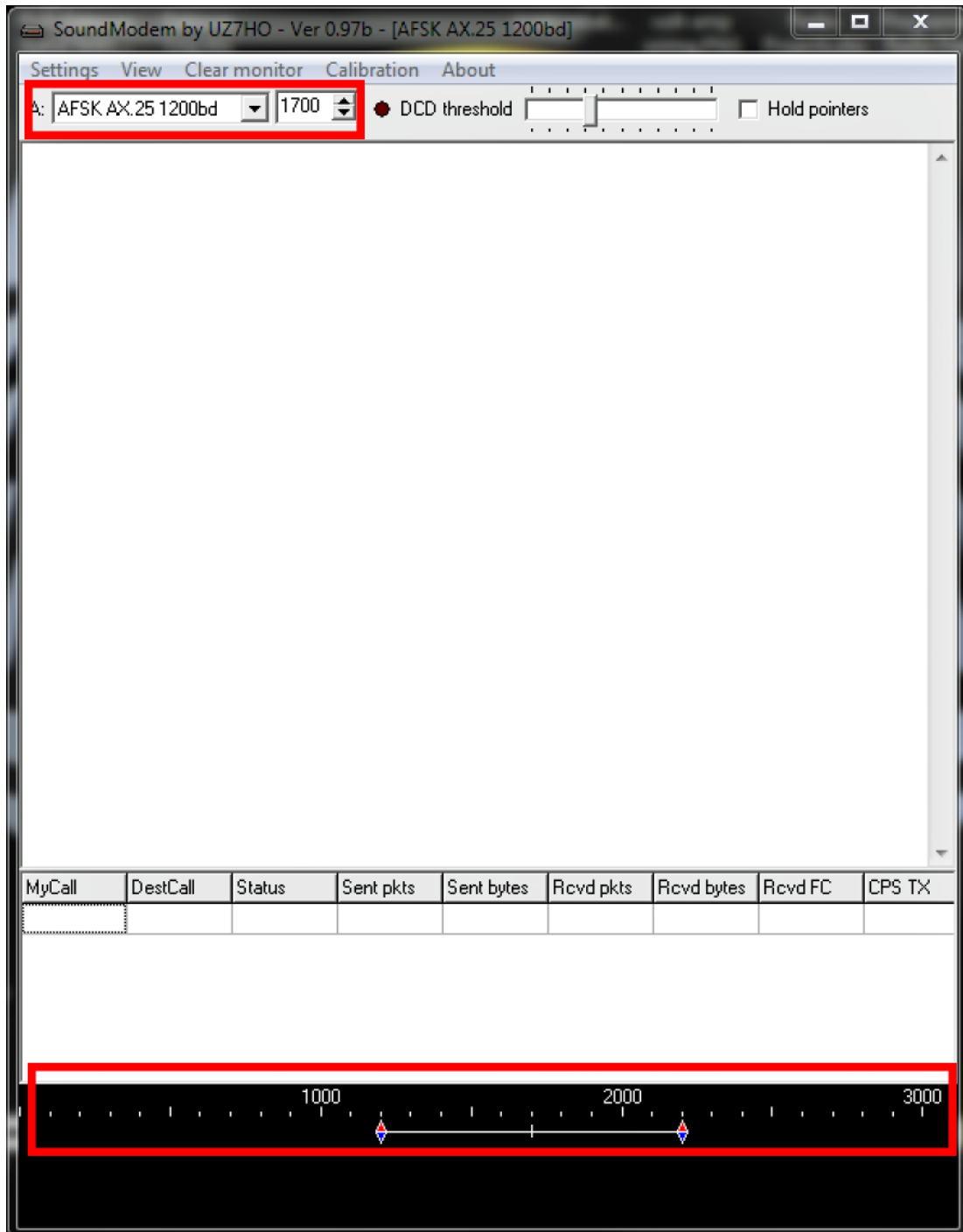
Once the settings are verified, click OK, then Cancel. (NOTE: the numbers associated with the USB Audio CODEC can and will change depending upon which USB port the cable is plugged into on your computer.)

Next click on "Settings -> Modems".



Once the indicated settings are verified, click on OK, then click Cancel.

The main Soundmodem Window should reflect these settings:



Once verified, leave soundmodem running.

Winlink Express Installation

Download Winlink Express software at <https://www.winlink.org/WinlinkExpress>

Install the RMS (Winlink) Express software using the default location for file storage and location. When you start Winlink Express for the first time, you will see: (fill in the items circled in red)

Winlink Express Properties

Call Signs

My Callsign: My Password: (Case sensitive)

Callsign suffix (optional): (Used for country code) Show password

Password recovery e-mail:
(Non-Winlink e-mail address where lost password will be sent when requested)

Auxiliary Callsigns and Tactical Addresses

My Grid Square:

Winlink Express registration key:

Path to propagation forecast program:

Service Codes

(Use PUBLIC for ham call signs. Separate multiple service codes by spaces.)
If you change service codes, you must update the list of channels.

Contact Information (Optional)

Name:

Street address 1:

Street address 2:

City:

State/Province:

Country:

Postal code:

Web Site URL (optional):

Phone number:

Non-Winlink e-mail:

Additional information (optional):

Recalculate HF path quality if SFI changes more than:

Keep logs for weeks. Keep deleted messages for days.

Display list of pending incoming messages prior to download

Warn about connections to stations holding messages

Allow diagnostic information to be sent to the Winlink Development Team

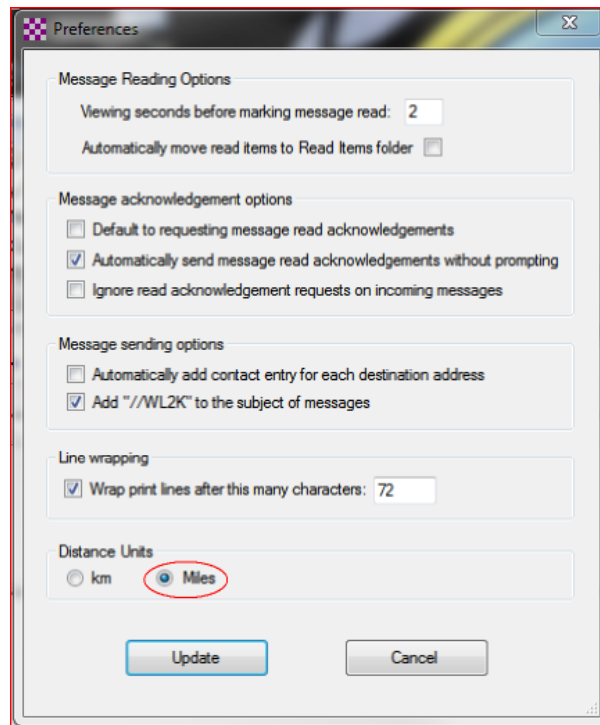
Automatically install field-test (beta) versions of Winlink Express

NOTE: a Winlink registration key is not required! (However if you decide to donate to further the research and development of Winlink, the registration fee is currently \$24.00)

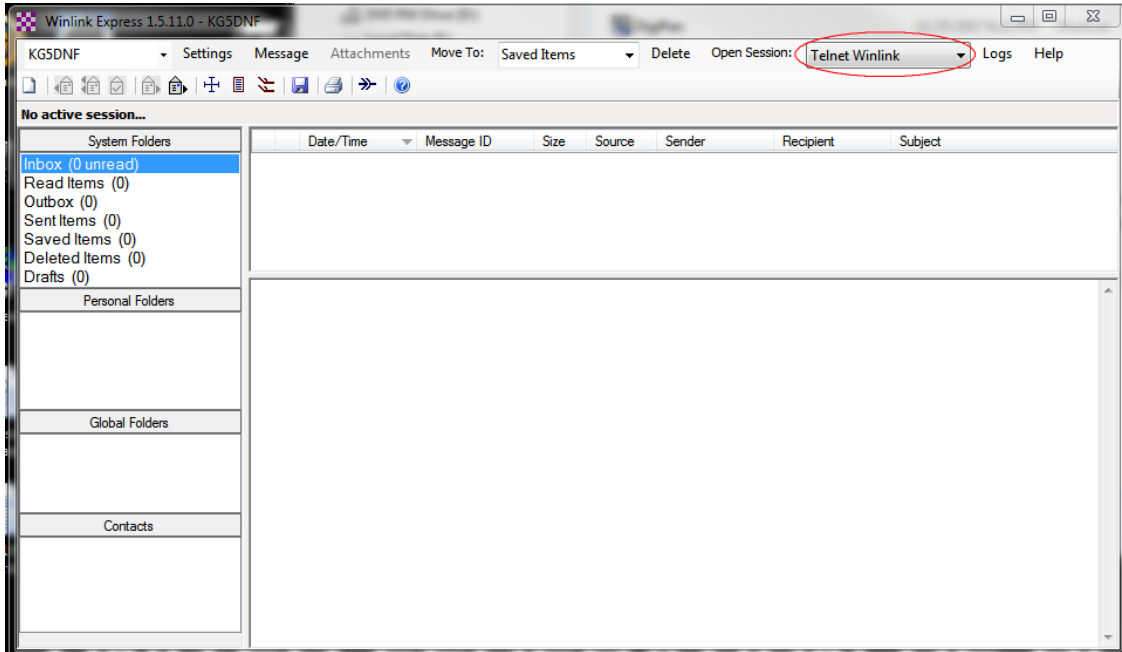
Finally, click "Update" to save the changes you made, then click "Close" to close this window.

If you prefer to have distances indicated in miles instead of kilometers, “click” on Settings > Preferences

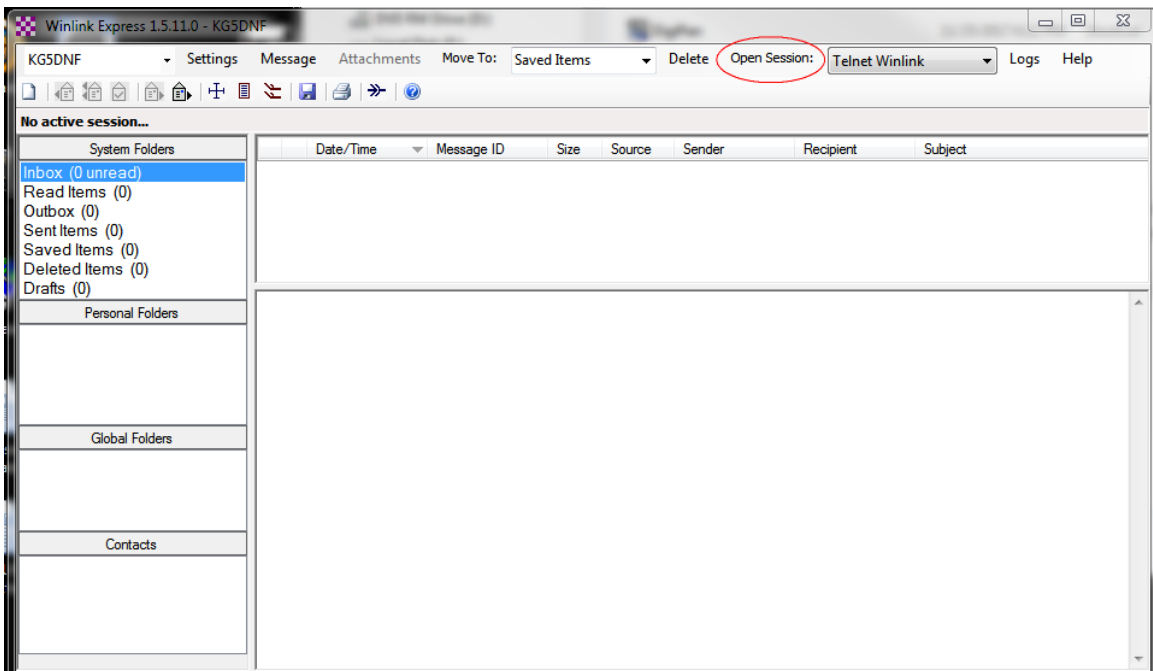
Near the bottom of the new window, you will see radio buttons for kilometers and miles. Click on the button next to miles, then click Update.



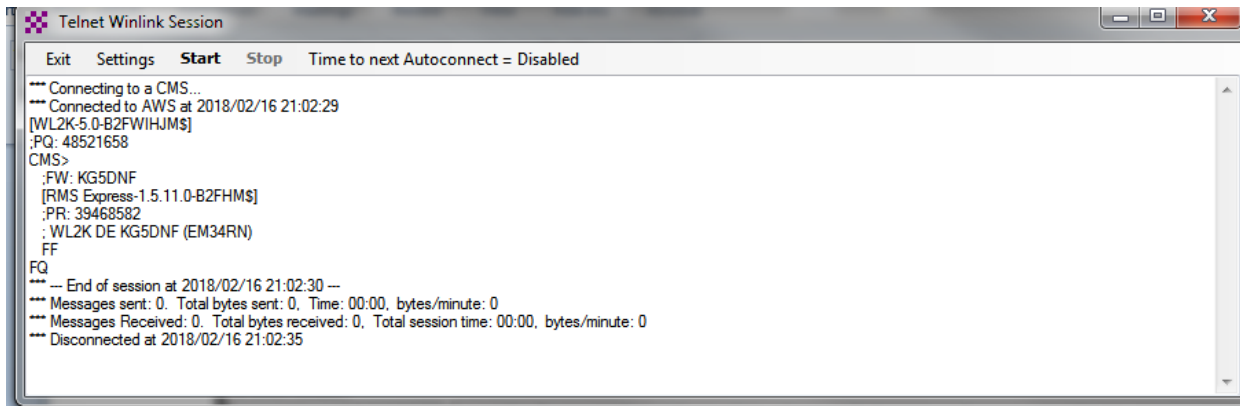
To verify the program was installed correctly (and to complete the installation),
On the pull-down menu near the top of the window, select “Telnet Winlink” from the options:
(This only needs to be done the very first time after installing Winlink Express).



Then “click” on the “Open Session” text (it actually is a button).



On the window that opens up, press [Start] to begin the session
You will then connect to one of the RMS (Radio Message Servers) via your internet connection.

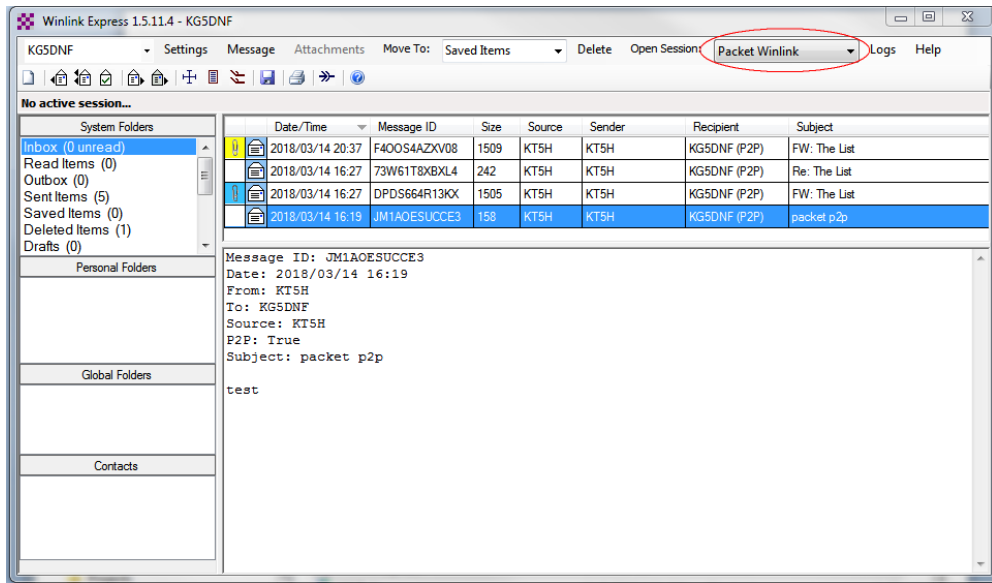


(NOTE: You may receive a pop-up notification that your password was changed)

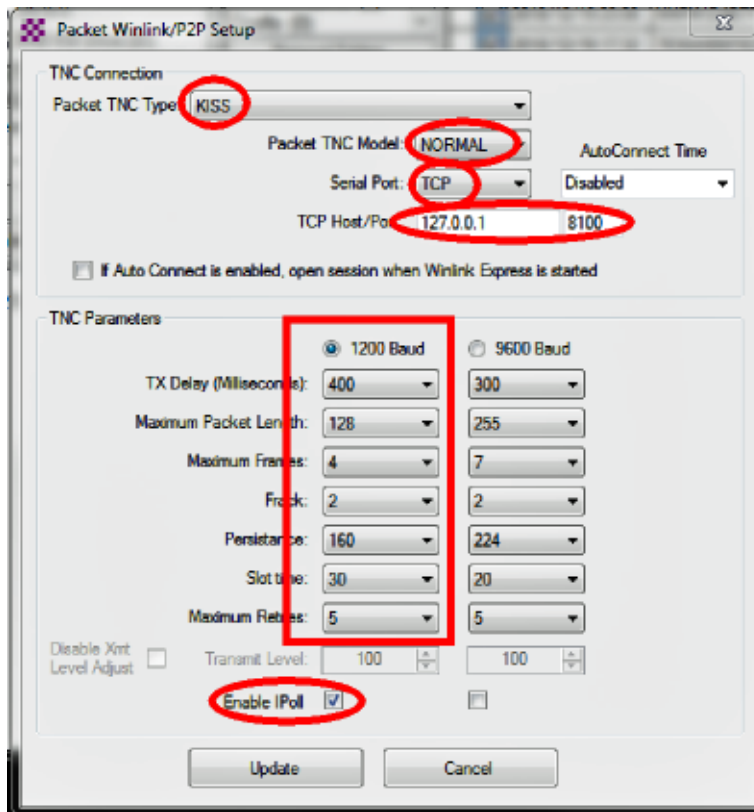
After Winlink completes its connection press either Exit or the Red "X" to exit the session. Your call sign (Winlink User Name) has now been registered!

Close this window (click the red "X").

Select "Packet Winlink" from the pull down mode menu, then click "Open Session"

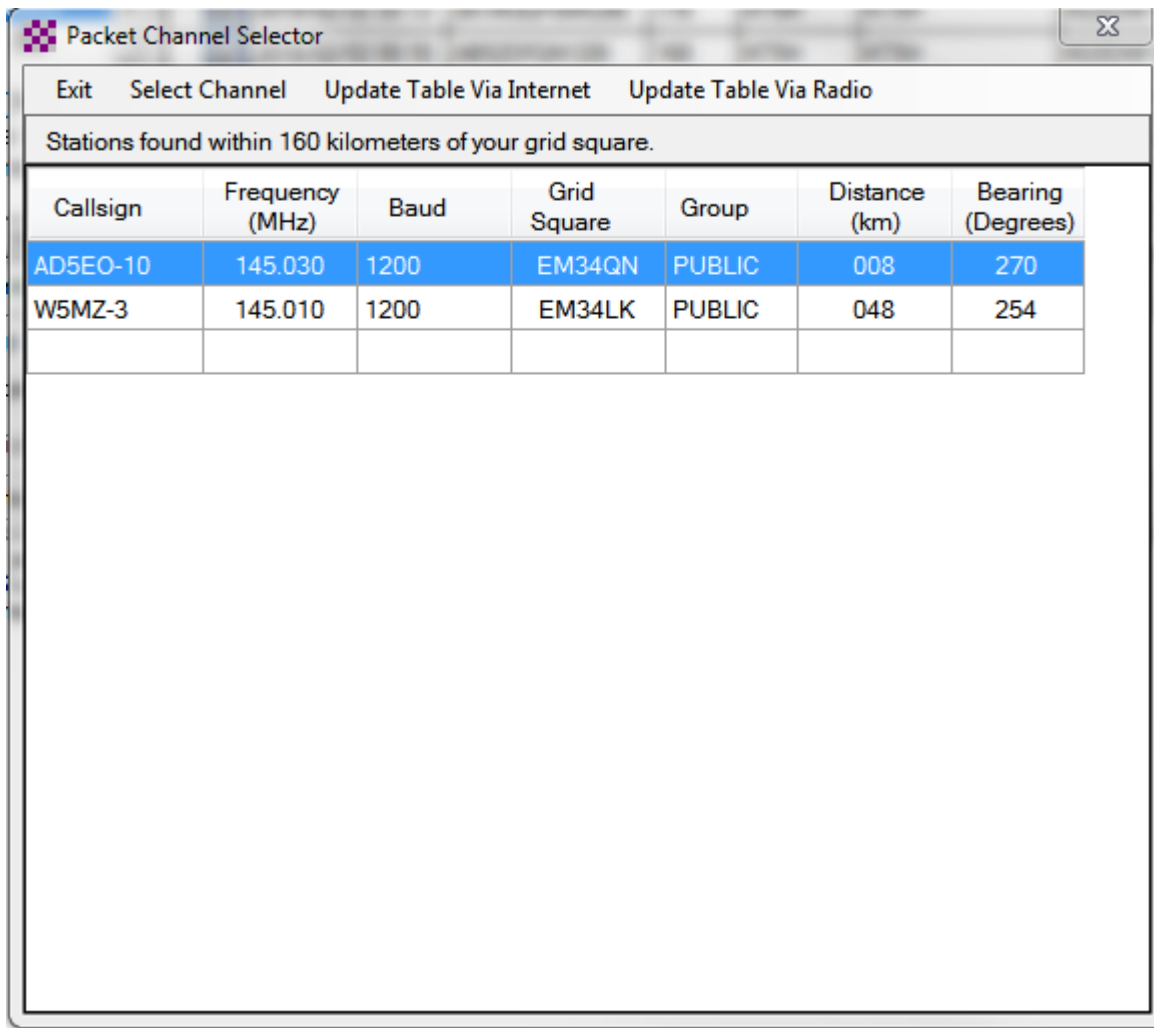


When the new window opens, click on "Settings". Adjust the settings to the following:



When finished, click "Update"

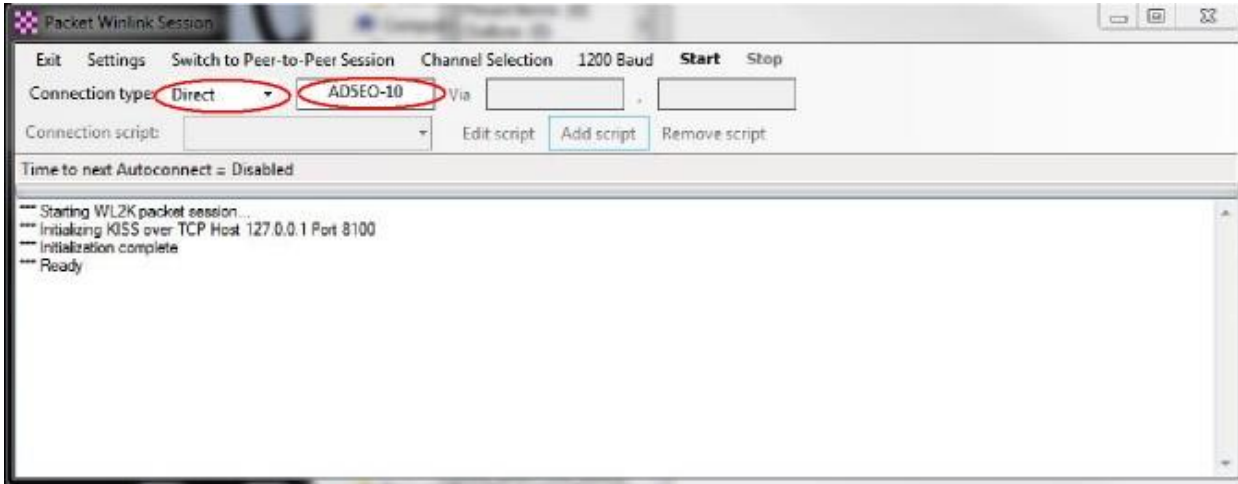
Select [Channel Selection].



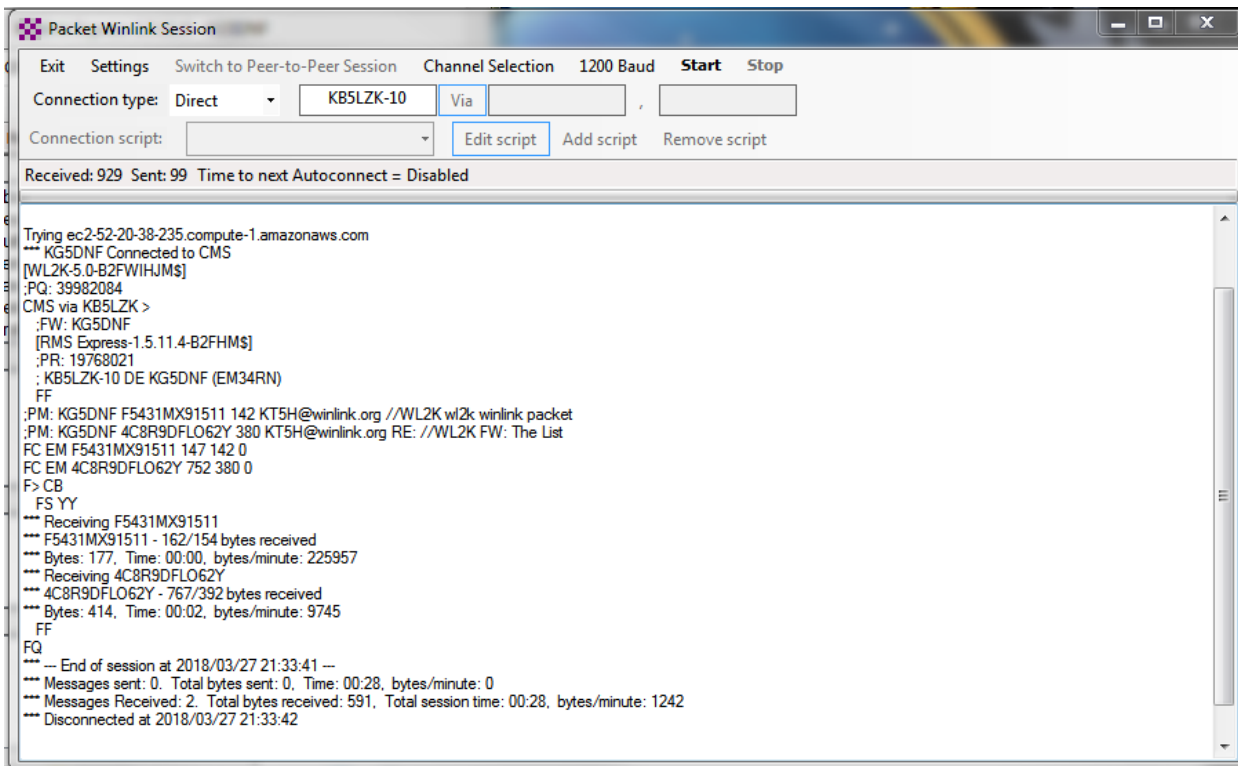
If this table is blank, select [Update Table via Internet]. Once the process is complete, this window should look similar to the one pictured.

Select [AD5EO-10] (double click) This is the RMS Packet Gateway located at the Saline County EOC in Benton, Arkansas.

Your screen should now look similar to this:



Ensure your TM-V71A “B” channel is set to 145.030 MHz, you’re ready to click on “Start” to begin the session.



Note that in this particular “session” I received 2 messages. If you followed these instructions and had a successful session, you connected through the Packet RMS server at the Saline County EOC.

When you close down the programs, please remember to close soundmodem as well, or it may keep residing in a background window causing issues the next time you ‘start’ it.

Winlink Packet Message Composition

To send a message (either to a registered user of Winlink (using their call sign), or to a “standard” email address), in the Winlink Express Main Window, click on [Message] [New Message] a new window will open:

The screenshot shows a window titled "Enter a new message" with a standard Windows-style title bar (minimize, maximize, close buttons). Below the title bar is a menu bar with the following items: "Close", "Select Template", "Attachments", "Post to Outbox", "Spell Check", and "Save in Drafts". The main area of the window contains several fields and controls:

- From:** A dropdown menu currently showing "KG5DNF".
- Send as:** A dropdown menu currently showing "Winlink Message".
- Request read receipt:** A checkbox that is currently unchecked.
- Set De:** A button partially visible on the right side.
- To:** An empty text input field.
- Cc:** An empty text input field.
- Subject:** An empty text input field.
- Attach:** An empty text input field.
- Message Body:** A large, empty text area with a vertical scrollbar on the right side, occupying the bottom half of the window.

The call sign (for registered Winlink express users) or an email address will be entered into the [TO] section. The rest of the message should be filled out similarly to any other email client software. When you are finished composing your message, click the [Post To Outbox] button.

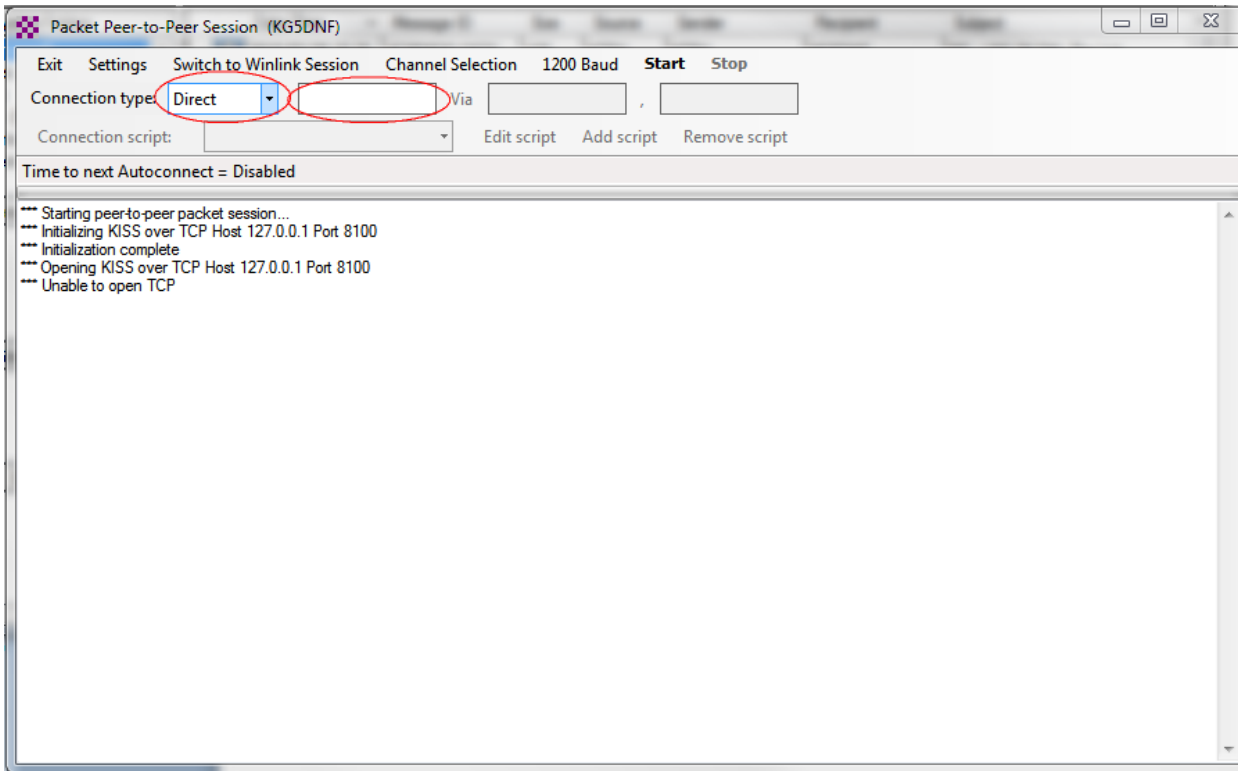
The next time you connect to an RMS Packet Gateway, your message will be sent.

Packet P2P

As previously mentioned, enter all the information for your outgoing message as required, select “Peer to Peer” as the message type, then post to outbox.

As with any packet operation, soundmodem must be running. If it is not, close all programs, start soundmodem, then restart Winlink Express.

Select “Packet P2P” in the session type, then click on the “Open Session” button.



Ensure “Direct” is selected as the connection type, then enter the call sign of the operator you wish to connect to.

Tune your radio to the agreed upon frequency, (and ensure the intended recipient is also on frequency with Winlink Packet P2P running) then click “Start”. The software will then take over and transmit your message to the other operator. When the comm is complete, close the window and check your inbox for any received messages.

FLDIGI/FLARQ Installation

Download fldigi files from: <https://sourceforge.net/projects/fldigi/files/> (fldigi-#### setup.exe). Save to your desktop, then move to a convenient location. While you are at sourceforge, also download FLMSG (save to your desktop, then move to a convenient location.)

Name	Modified	Size	Downloads / Week
flamp	2019-01-31		388
firig	2019-01-31		443
flmsg	2019-01-31		2,179
fldigi	2019-01-29		1,786
alpha tests	2019-01-19		

Double click on the FLDIGI setup file. Once the program opens, click on “Configure -> UI -> Operator”

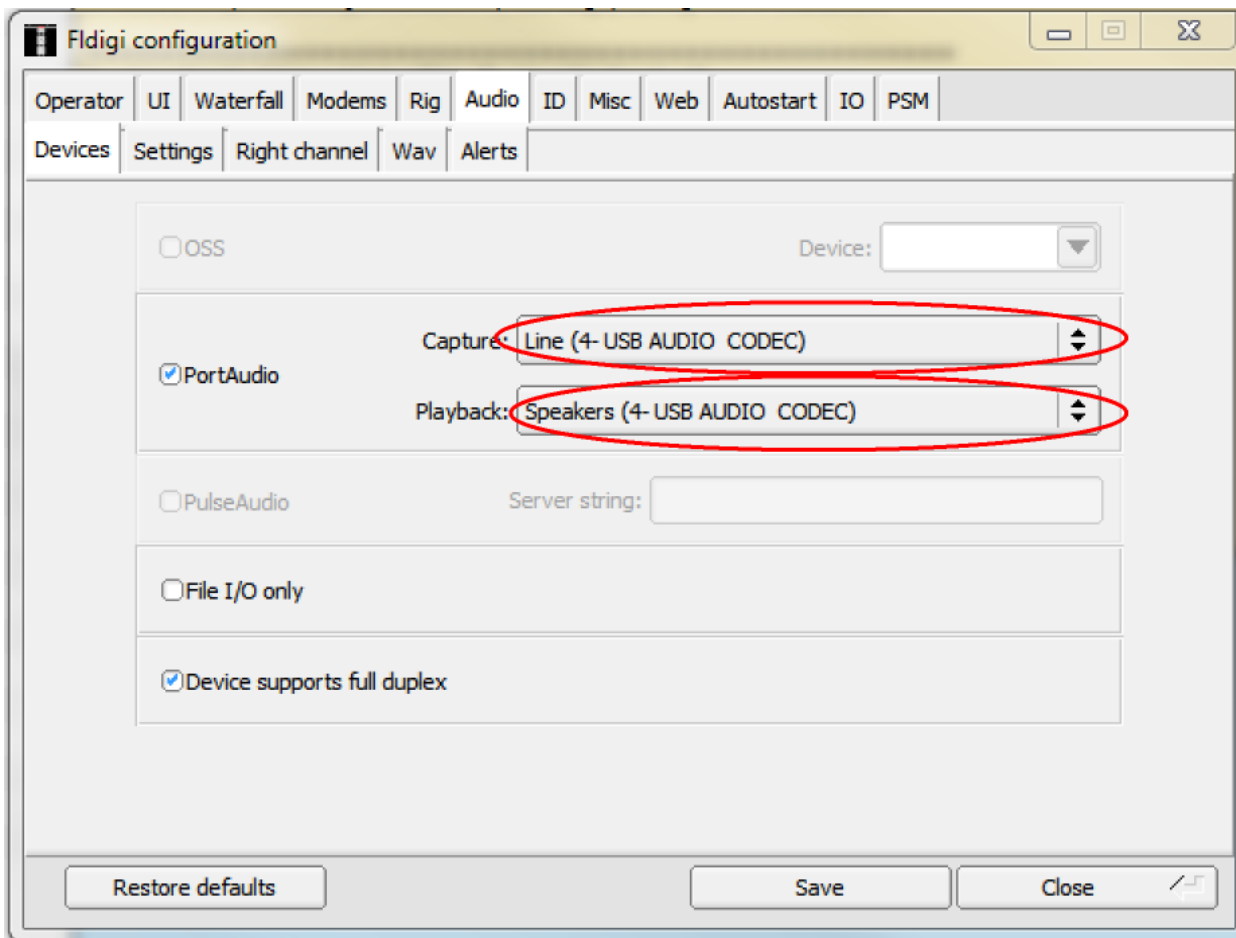
The screenshot shows the 'Fldigi configuration' window with the 'Operator' tab selected. The 'Station / Operator' section contains the following fields:

- Station Callsign: [Red circle]
- Station QTH: [Red circle]
- Station Locator: [Red circle]
- Operator Callsign: [Red circle]
- Operator Name: [Red circle]
- Antenna: [Empty field]

Buttons at the bottom: Restore defaults, Save, Close.

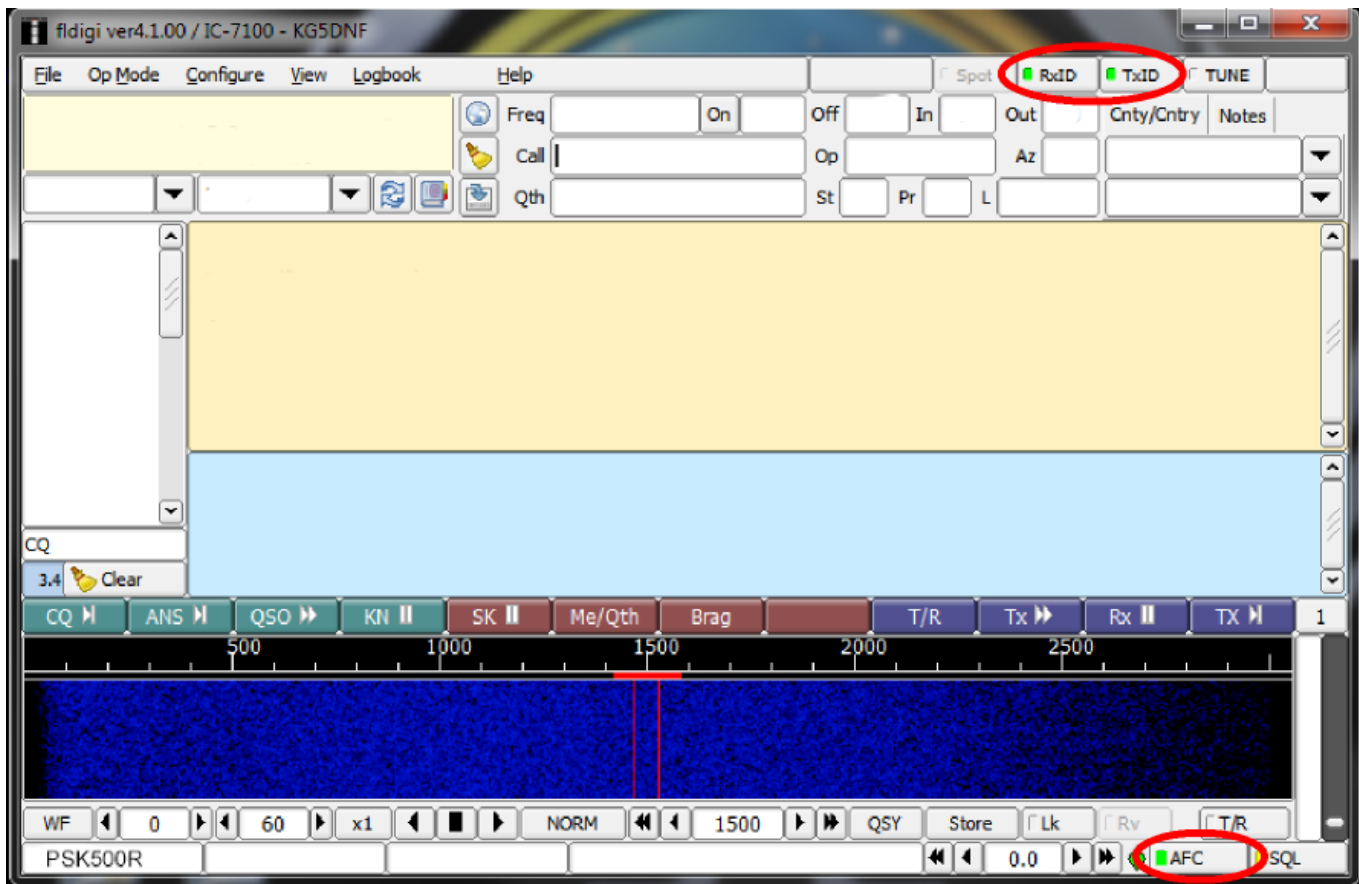
Fill in the indicated areas, Station QTH is the name of your city and State, Station Locator is your maidenhead grid location. Once completed, click “Save”

Next, click on the Audio Tab.



Select the appropriate entry associated with the USB Audio CODEC listed on your computer. (The number will probably be different on your computer.) Once completed, click “Save”, then click “Close”.

FLDIGI is now configured to work with your Kenwood radio through your Signalink USB soundcard to the TM-281!



Please ensure that both RxID and TxID are checked to allow for automatic mode switching.
If using HF or 6 meters, ONLY Upper Side Band is used (6 meter FM can also be used).

NOTE: you will see a red rectangle on your waterfall. This is the center frequency for the passband. It is easy to change by clicking with your mouse (or tapping with your finger), but changing this location will make the difference between being able to decode incoming transmissions/messages and not (conversely, transmitting with the center of the passband changed will make it difficult for other stations to decode your transmission.) The small Lock [Lk] button will lock your center frequency in place.

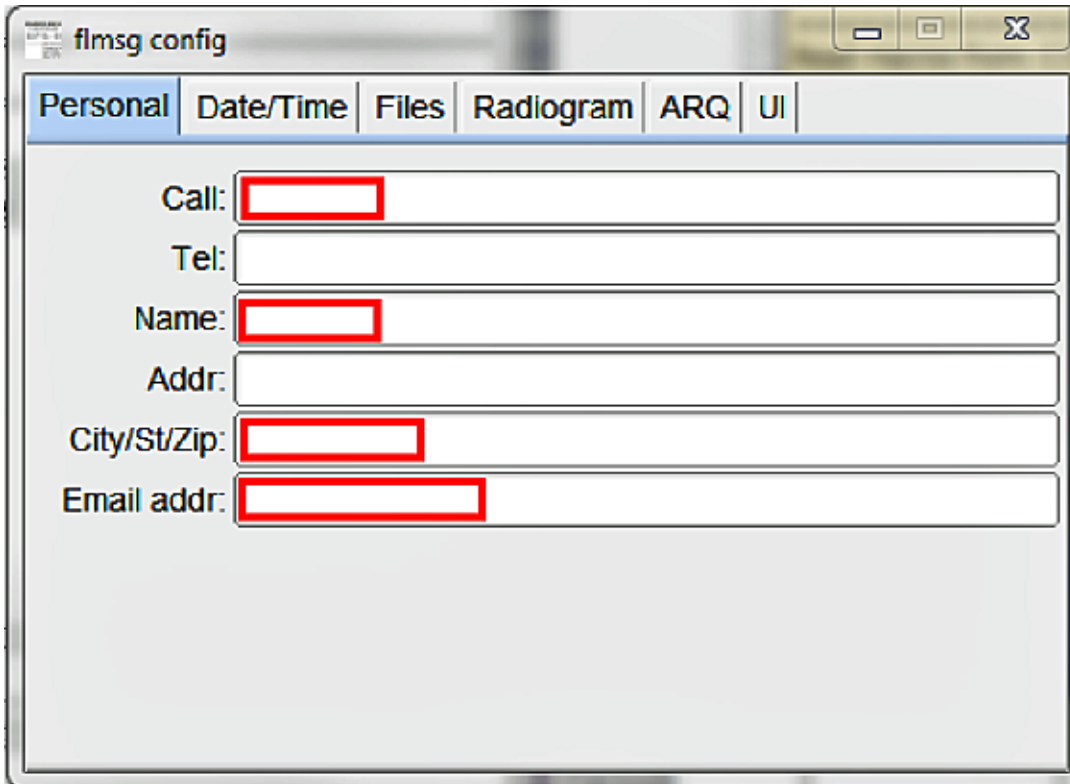
Once you have either typed a message or pasted text into the blue window for transmitting, then press the indicated transmit [Tx] button.

Receiving is simple – watch the yellow part of the screen.

FLMSG Installation

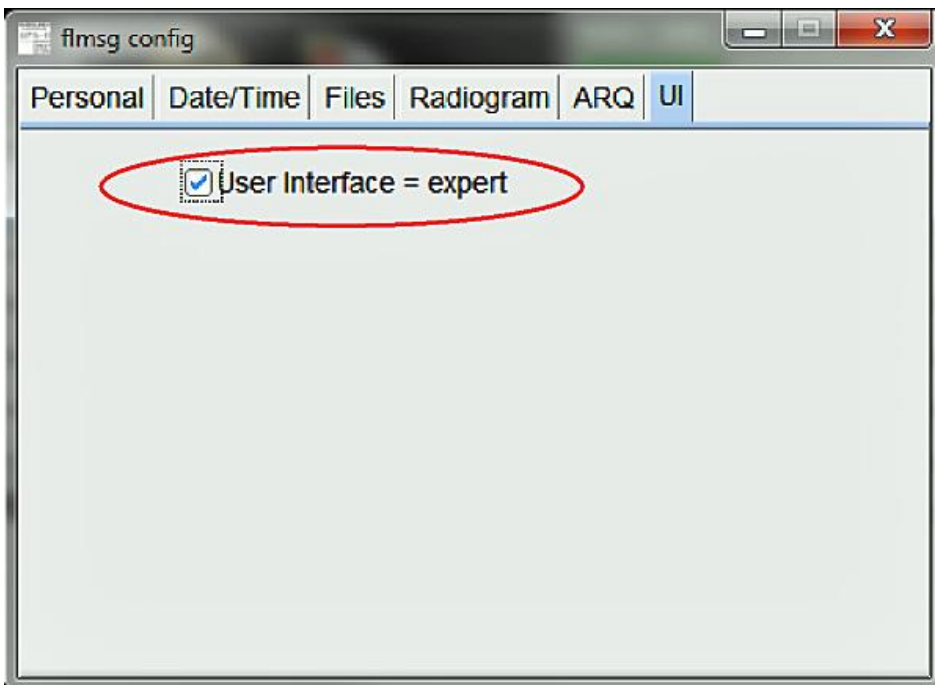
Maneuver your way to where you downloaded FLMSGsetup.exe and execute the set up file following the routine installation suggestions. This will place a FLMSG shortcut icon on your desktop.

When you open FLMSG very little configuring will need to be done,



The screenshot shows the 'flmsg config' window with the 'Personal' tab selected. The window has a title bar with standard Windows window controls. Below the title bar is a tabbed interface with tabs for 'Personal', 'Date/Time', 'Files', 'Radiogram', 'ARQ', and 'UI'. The 'Personal' tab is active and contains several text input fields: 'Call:', 'Tel:', 'Name:', 'Addr:', 'City/St/Zip:', and 'Email addr:'. The 'Call:', 'Name:', 'City/St/Zip:', and 'Email addr:' fields are highlighted with red rectangular boxes.

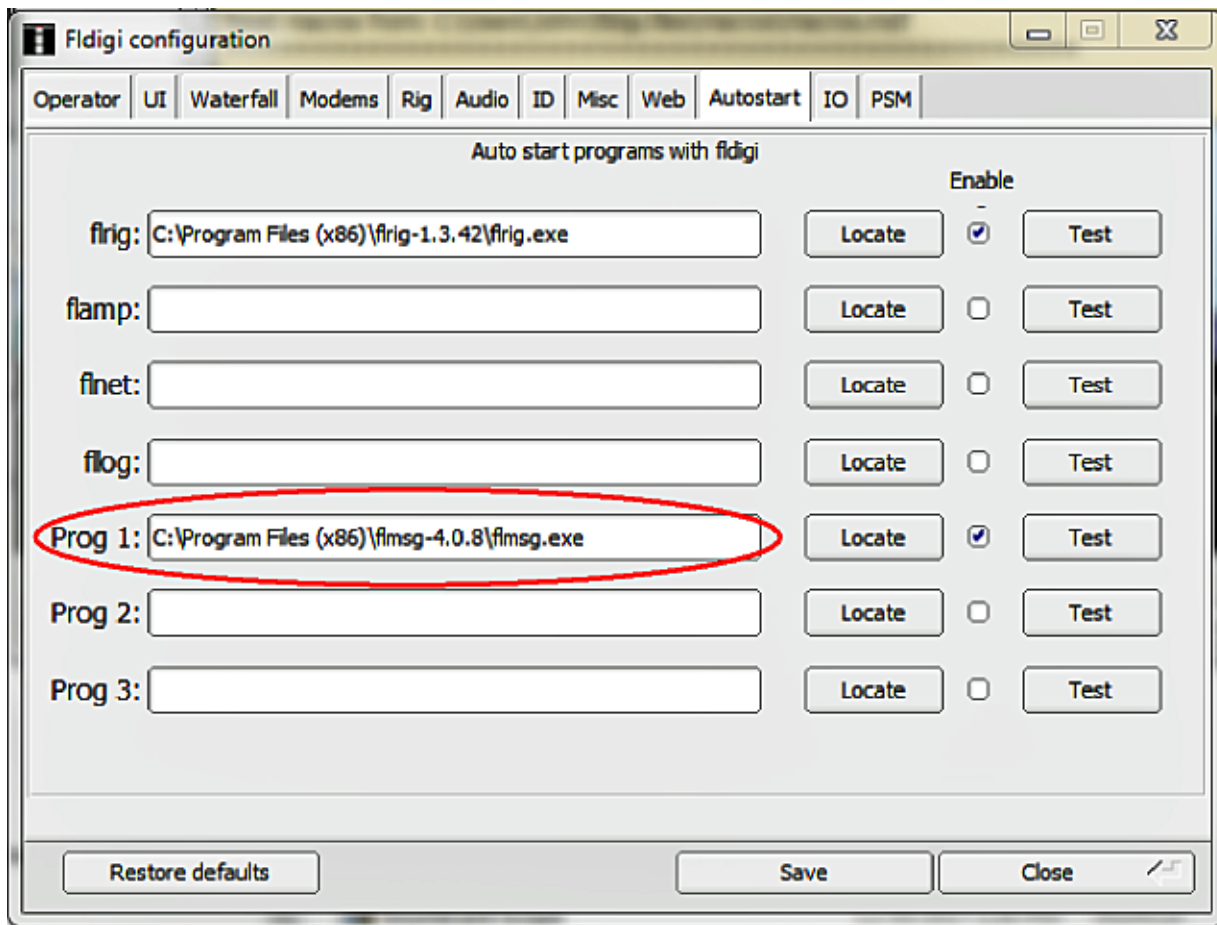
After you enter your information in the personal tab, click on the [UI] tab.



The screenshot shows the 'flmsg config' window with the 'UI' tab selected. The window has a title bar with standard Windows window controls. Below the title bar is a tabbed interface with tabs for 'Personal', 'Date/Time', 'Files', 'Radiogram', 'ARQ', and 'UI'. The 'UI' tab is active and contains a single checkbox labeled 'User Interface = expert'. The checkbox is checked, and the entire checkbox and label are circled with a red oval.

Ensure the box [User Interface = expert] is checked to ensure you have full capability with the forms function.

FLMSG can be included to auto-start when FLDIGI is opened. To do so, click on [Configure] [UI] [Operator] [Autostart].



In the "Prog 1:" section, click on the [Locate] button and browse your way to c:\Program Files (x86)\flmsg x.x.x (x.x.x is the most current version number)\flmsg.exe and click [Open]. The blank field next to Prog 1 should now contain the proper path to the location of the flmsg.exe file. Please remember to click the [enable] box so starting with the next time you open fldigi, all your associated programs will start automatically.