Using ICOM 7100's w/Winlink Packet

The Santa Rosa County ICOM 7100 go-kits can directly connect to a computer for use with Winlink. Winlink is utilized to send and receive digital messages. We utilize it to check in and out of our deployments, send shelter reports, resource requests, and formal traffic. The two options we have for RF relay stations in Santa Rosa County are Packet and VARA FM. Primarily we will use K4SRC-10 on packet as it is located at the EOC. In the event of an internet failure, the Winlink RMS (mail relay) at the EOC will be configured as a local post office to exchange local traffic.

This document assumes that you already have your ICOM 7100 connected, Winlink Express installed and configured, and using Windows 10. Left click means pressing the left button on your computer's mouse. Right click means pressing the right button on your computer's mouse.

1. Login to the go-kit computer using the password located on the label
2. Ensure the USB cable is connected from the main unit of the ICOM 7100 to one of the laptops USB ports
3. Turn on the ICOM 7100 by pressing and holding the center of the upper knob on the control unit labeled *PWR AF <> RF/SQL*
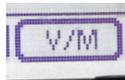

4. Ensure the ICOM 7100 is in memory channel mode. If you see a channel name displayed, it is in memory channel mode.

   a. If a channel name is not displayed, this indicates the ICOM 7100 is in VFO mode

   b. To get the ICOM 7100 into memory mode, touch the V/M button on the screen

5. For Winlink Packet, you need the display to read 145.090.00 Winlink VHF Pckt

   a. If the ICOM 7100 is on another channel, turn the center portion of the lower knob labeled *M-CH<>BANK* located on the control unit until the channel name reads correctly

6. Verify that the radio power is set to 100% by pressing the *MIC/RF PWR* button and then rotating the outer dial of the *M-CH <> BANK* knob clockwise
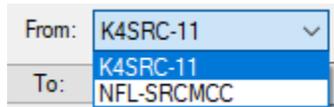

7. Press the *MIC/RF PWR* button again when done setting the power
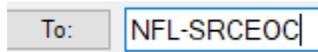8. On the Windows desktop, double left click *Winlink Express*

9. Sending of shelter reports, checking in and out, sending ICS 213 forms, Radiograms, and other templates is covered in our other documentation located on our website and in our shelter deployment books. If you need to send a new text message:
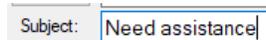
   a. Single left click the new message button

   b. In the F*rom* drop down box in the new message form, ensure you are sending from the tactical call sign from the location you are at. In this example, we would select NFL-SRCMCC. If it is displaying the wrong address, left click the box to display the drop down menu.
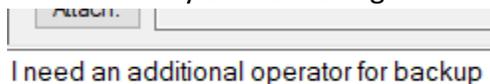

   c. In the *To* box, specify the call sign or tactical call sign you wish to send the message. In most cases this will be the EOC tactical call sign *NFL-SRCEOC*

      i. All traffic from shelters and other locations **must** go to the EOC first, especially resource requests.

   d. Fill in a subject of the message. If using one of the templates, this will be filled out for you
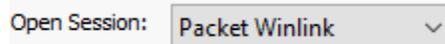

   e. Fill in the body of the message

   f. When finished with the message, in the message menu bar, single left click *Post to Outbox*

10. To initiate a Packet Winlink Session, in the main Winlink Express window, next to *Open Session* verify that it *Packet Winlink* is displayed. If not, single left click in the box to the right of *Open Session* and single left click *Packet Winlink*. Once *Packet Winlink* is displayed, single left click *Open Session.*
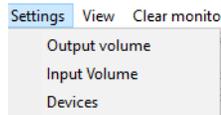
Open Session: Packet Winlink

11. Two new windows will open
    a. The first will be the Packet Winlink Session
    b. The second will be *SoundModem* which acts as our TNC to interface with the ICOM 7100*. If you have trouble getting either mode to work, reference the document linked on our website or found in our shelter books by Oliver K6OLI on setting up Winlink Packet and VaraFM with an ICOM 7100.*

📠 SoundModem by UZ7HO - Ver 1.13 - [AFSK AX.25 1200bd]

Settings View Clear monitor Calibration About

A: AFSK AX.25 1200bd ▾ 1700 ▴▾ ● DCD threshold

   i. These steps only need to be verified during initial setup of the go-kit and may be ignored after initial setup.
      1. In the *SoundModem* window, single left click *Settings* in the menu bar and then select *Devices*

Settings View Clear monito
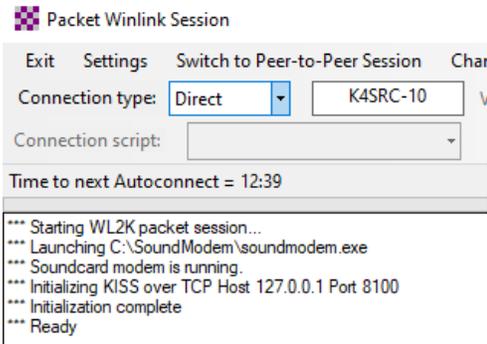   Output volume
   Input Volume
   Devices

      2. Verify the settings match what is listed in the below screenshot. Especially import is that the input and output device should both reference a *USB Audio CODEC*. This is typically the setting that gets changed accidentally.

Settings   ×

Sound Card
  Output device Speakers (2- USB Audio CODEC) ▾
  Input device   Microphone (2- USB Audio CODEC ▾

  ☐ Dual channel   TX SampleRate 11025
  ☑ TX rotation   TX corr. PPM 0
  ☑ Single channel output   RX SampleRate 11025
  ☑ Color waterfall   RX corr. PPM 0
  ☐ Stop waterfall on minimize Priority Highest ▾
  ☐ Minimized window on startup

Server setup
  AGWPE Server Port 8000   ☑ Enabled
  KISS Server Port 8100   ☑ Enabled

PTT Port
  Select PTT port CAT ▾   ☐ Dual PTT
     Advanced PTT settings   ☐ Swap COM pins for PTT

        OK   Cancel

12. In the Winlink Packet Session window, verify that the *Connection Type* is set to *Direct* and the box next to that displays *K4SRC-10. T*he session is ready to start if the text box reads *Ready* at the end.

13. Double check to verify your ICOM 7100 is on the appropriate channel and click *Start*

14. The *SoundModem* software will automatically control the transmitting of the ICOM 7100. You will hear several sounds like that of an old dial up modem. It may take several minutes to complete depending on the amount of messages being sent or received.

15. When the session is finished, the text in the Winlink Packet Session window should display *Disconnected at* and a time/date.

16. At this time, you may either close the session by single left clicking *Stop* and then the X in the upper right corner of the *Winlink Packet Session* window or you may leave it open if you need to receive additional messages.

   a. ***Be sure to close the Winlink Packet Session before changing the ICOM 7100 channel over to a voice repeater. Failure to do so may result in signals being transmitted over the repeater and interruption of emergency nets.***

17. A session should be initiated at least every 30 minutes to check for new messages.