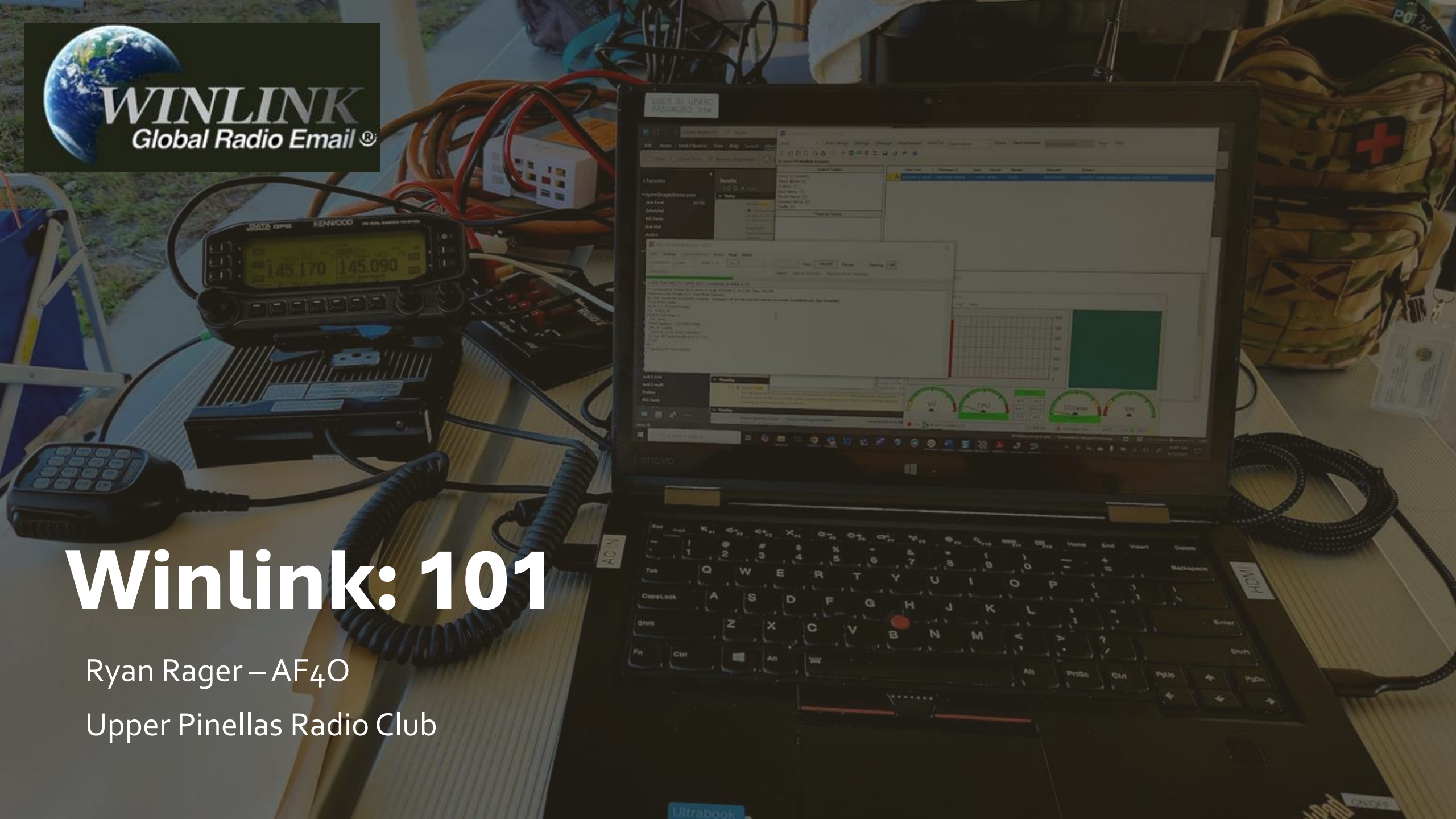




# Winlink: 101

Ryan Rager – AF4O

Upper Pinellas Radio Club



# Agenda

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What is this session going to be about, and not going to be about?

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What is Winlink and why should I care?

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What are the core components to the entire Winlink system?

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How do I get started with setting up for Winlink?

---

How do I do the initial setup of the Winlink Express app?

---

What are some additional resources I can look into about Winlink?


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## Scope of this presentation

This presentation will be about the basics to get you started working with Winlink.

We will not be going into any dedicated radio and gear configuration details



## What is Winlink & why should I care?

### **Most common use case:**

- Emergency communications
- The 'gold standard' for passing message traffic and forms during emergency incidents

### **Other functions of Winlink:**

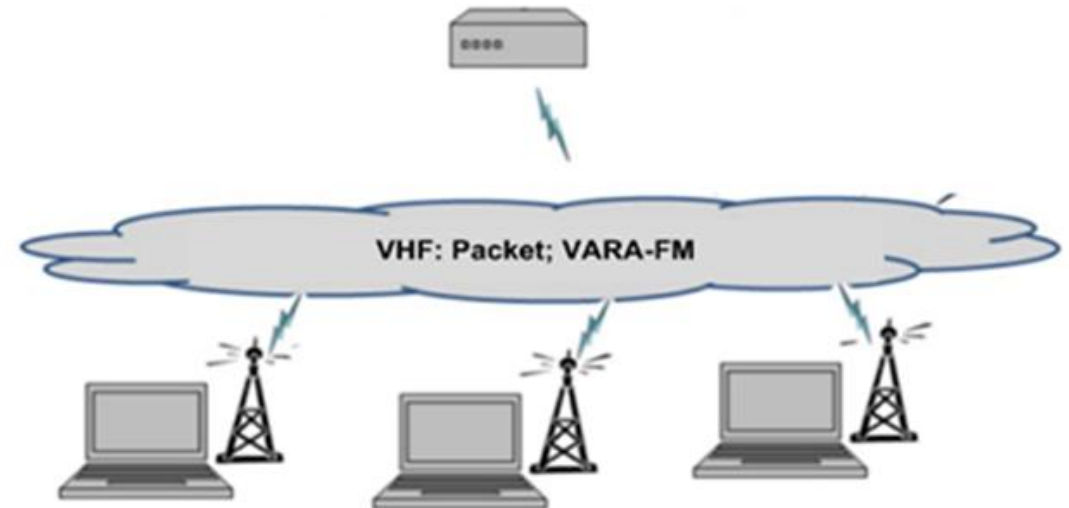
- Periodic position reports (SAR, etc.)
- POTA Spotting without cell coverage
- Sailors at sea use to get weather reports as GRIB files

# What are the core components to the entire Winlink system?

The “front end” systems

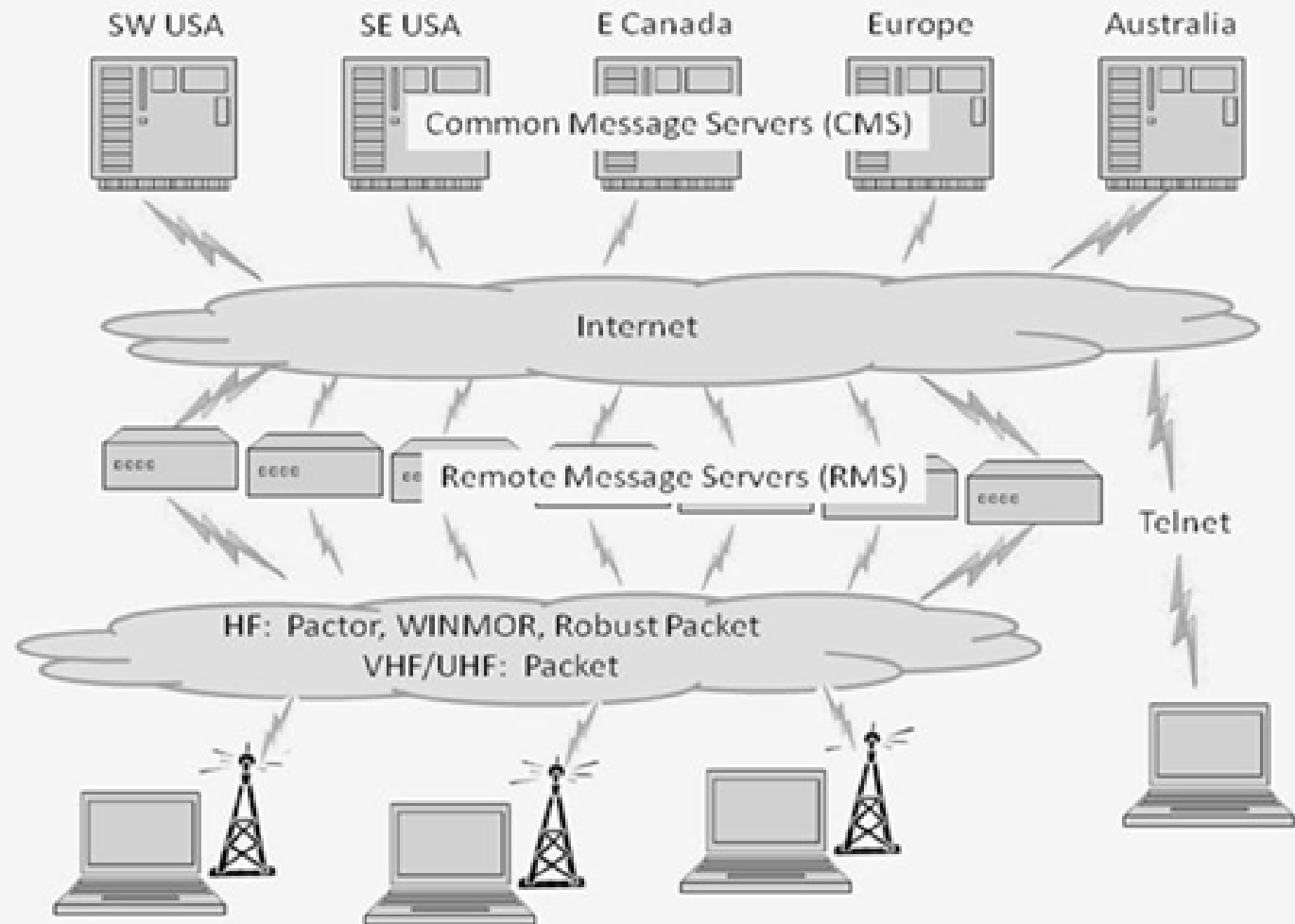
**RMS  
(Gateway)**

**Client (You)**



# What are the core components to the entire Winlink system?

The “back end” systems



# How do I get started using the Winlink system?

(1 of 2)

- **Hardware**

- Laptop/Desktop running Windows 10/11
- No current MacOS solution; community requests have been made for this
- Some one-off Linux based solutions, but almost no support for those

- **Software**

- Winlink Express app
- “modem” interface
  - VARA FM or VARA HF
  - Packet via TNC

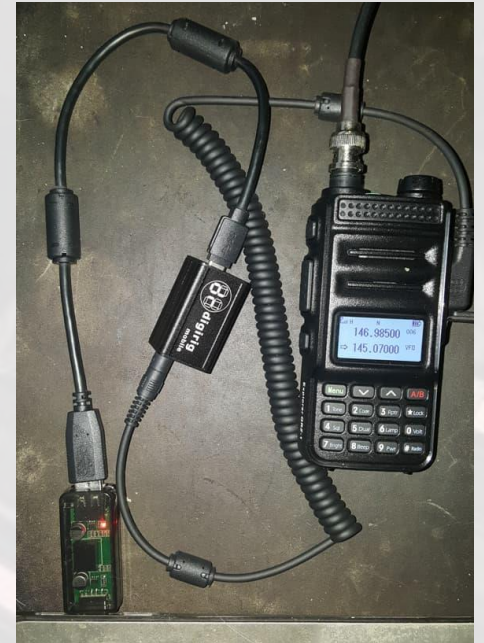
- **Winlink Account**

- Requires a technician license or higher

# How do I get started using the Winlink system?

(2 of 2)

- HF or VHF/UHF Radio with interface device
  - *Signalink device*
  - *RIGBlaster device*
  - *SoundModem by UZ7HO (app installs on PC and acts as the TNC)*
  - *Kantronics KPC 3+ TNC modem*
  - **Digi-Rig device ([digirig.net](http://digirig.net))**
  - **DRA device ([masterscommunications.com](http://masterscommunications.com))**



# Select Mode & Digital Interface device

- Select the mode you prefer to use
  - *Packet*
    - *via TNC (Kenwood)*
    - *via Soundmodem app*
    - *via hardware TNC (Kantronics)*
  - VARA Sound Modem
    - FM
    - HF

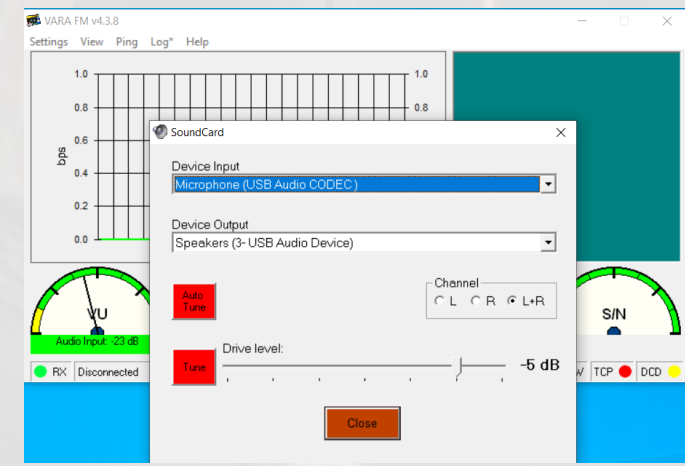
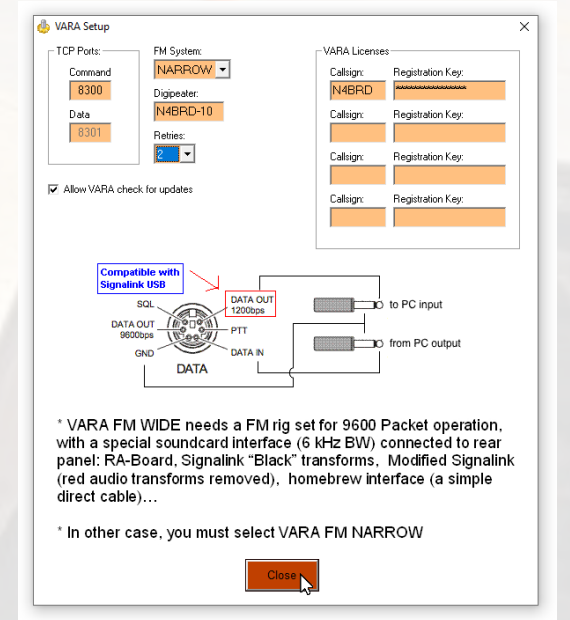


Method	Attachment size	Time to send	Transfer speed
Telnet Winlink	~24 KB	0 min 0 sec	4.2 MB/min
Packet Winlink	~24 KB	6 min 26 sec	3.63 KB/min
VARA FM	~24 KB	1 min 7 sec	20.813 KB/min



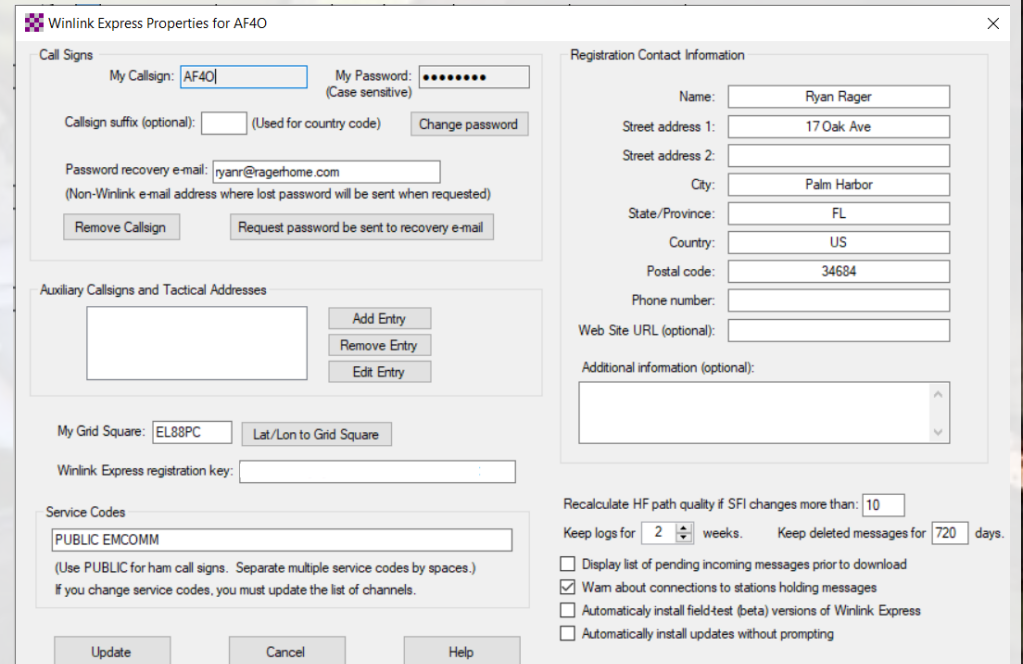
# Setup & Config of VARA FM application

- Download & Install VARA FM
  - *Registration of VARA license is optional, but recommended*
  - <https://downloads.winlink.org/>
- Leave setting on NARROW initially
  - *If you have a registration key AND have a radio capable of 9600 packet operation, then you can select WIDE*
- Open Settings menu
  - Select soundcard settings
  - Configure PTT setting



# Setup & Config of Winlink Express application

- Download & Install Winlink Express
  - *Registration is not required, but highly recommended*
  - <https://downloads.winlink.org/>
- Open Winlink Express & create a login account
  - *Accounts are purged after 400 days of inactivity*
- Complete initial setup



The image shows the 'Winlink Express Properties for AF4O' dialog box. It is divided into several sections: 'Call Signs' with fields for 'My Callsign' (AF4O), 'My Password' (masked), 'Callsign suffix (optional)', and 'Password recovery e-mail' (ryanr@ragerhome.com); 'Auxiliary Callsigns and Tactical Addresses' with an empty text box and 'Add Entry', 'Remove Entry', and 'Edit Entry' buttons; 'My Grid Square' (EL88PC) and 'Winlink Express registration key'; 'Service Codes' with a dropdown set to 'PUBLIC EMCOMM'; and 'Registration Contact Information' with fields for Name (Ryan Rager), Street address 1 (17 Oak Ave), Street address 2, City (Palm Harbor), State/Province (FL), Country (US), Postal code (34684), Phone number, and Web Site URL (optional). At the bottom, there are checkboxes for 'Recalculate HF path quality if SFI changes more than: 10', 'Keep logs for 2 weeks', 'Keep deleted messages for 720 days', and three other options: 'Display list of pending incoming messages prior to download' (unchecked), 'Warn about connections to stations holding messages' (checked), and 'Automatically install field-test (beta) versions of Winlink Express' (unchecked). The 'Update', 'Cancel', and 'Help' buttons are at the bottom right.

Winlink Express Properties for AF4O

Call Signs

My Callsign:  My Password:

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

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:

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.

Registration Contact Information

Name:

Street address 1:

Street address 2:

City:

State/Province:

Country:

Postal code:

Phone number:

Web Site URL (optional):

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

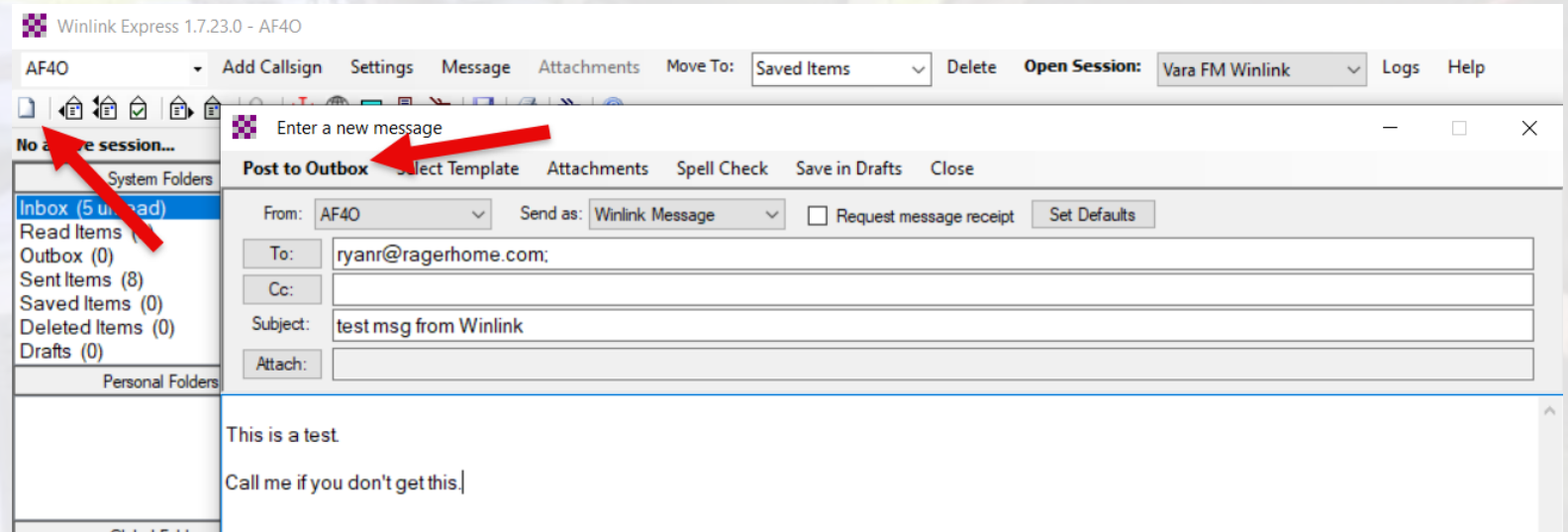
☒ Warn about connections to stations holding messages

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

☐ Automatically install updates without prompting

# Testing of Winlink Express installation

- Test your setup
  - Compose new message & save to outbox
  - Open appropriate session mode
    - Session window will open in Winlink Express and connect to your radio via the mode you have selected.



# Testing of Winlink Express installation

- Test your setup (*cont.*)
  - Open appropriate session mode & click on 'Channel Selection'
  - Double click station to contact and Session window shows station call and frequency
    - If table is empty, click 'Update via Internet'
  - Set radio to the stated frequency & click 'Start'
    - The session will then begin the transmission of the message and tell you your session is disconnected once transmission is complete.

The screenshot displays the VARA FM v4.3.8 software interface. The main window shows a session titled 'VARA FM Winlink Session - AF4O'. The 'Channel Selection' tab is active, showing a list of stations found within 300 kilometers. A red arrow points to the 'KJ4RUS-10' station in the list. The 'Start' button is highlighted. The status bar at the bottom indicates 'RX' and 'Disconnected'.

VARA FM v4.3.8 AF4O

Settings View Ping Log\* Help

VARA FM Winlink Session - AF4O

Exit Settings Channel Selection Start Stop Abort

Connection: Direct KJ4RUS-10 via Freq.: 145.070 Range: 25

Favorites: Select Add to favorites Remove from favorites

In: 0/0 Out: 0/0 BPM: 0/0 Disconnected Time to next Autoconnect = Disabled

\*\*\* Launching VARA FM TNC: C:\VARA FM\VaraFM.exe

\*\*\* Successfully connected to VARA FM TNC at 127.0.0.1 port 8300

\*\*\* Ready

\*\*\* This is a registered version of Vara TNC that can operate at full speed.

VARA FM Channel Selector

Select Channel Update Table Via Internet Update Table Via Radio Exit

Stations found within 300 kilometers of your grid square.

Callsign	Frequency (MHz)	Channel Width	Grid Square	Group	Distance (km)	Bearing (Degrees)
W4PEM-11	145.050	Wide	EL88PG	PUBLIC	019	000
W4ACS-10	145.090	Wide	EL87OV	EMCOMM	025	199
KJ4RUS-10	145.070	Wide	EL87OV	PUBLIC	025	199
KI4VAM-11	439.975	Narrow	EL87SV	PUBLIC	034	133
N4HCA-11	441.050	Wide	EL87TX	PUBLIC	036	113
KM4YGV-10	145.030	Wide	EL88UI	PUBLIC	049	056
K4KPR-11	441.050	Wide	EL87TQ	PUBLIC	057	145
KM4EC-10	441.000	Wide	EL87TN	PUBLIC	069	151
KX4LEO-10	145.770	Wide	EL88XO	PUBLIC	086	049
N4SER	446.775	Wide	EL87SI	PUBLIC	087	164
N4SER-11	434.000	Narrow	EL87SH	PUBLIC	091	164
KO4NCC-10	145.770	Wide	EL98AU	PUBLIC	111	041
W4IE	446.775	Wide	EL87TD	PUBLIC	111	163
AF4FL-10	145.030	Wide	EL89XC	EMCOMM	129	030
KQ4HQD-10	145.630	Wide	EL99BA	PUBLIC	130	038
KG4NXO-10	145.030	Wide	EL89VE	PUBLIC	130	022
N4BUT-10	441.050	Wide	EL98HO	PUBLIC	142	067

# Additional resources for more Winlink information

## YouTube

- Search for 'Winlink' videos

## Winlink website

- [https://winlink.org/content/user\\_support\\_and\\_help](https://winlink.org/content/user_support_and_help)

## Winlink Groups IO

- <https://groups.io/g/Winlink>

The background is a collage of images. The primary image is a group of five people (three women and two men) sitting around a table in a meeting, with a semi-transparent olive-green overlay. To the right, there is a vertical strip showing a man in a blue shirt working at a desk. The bottom of the image features a horizontal strip with various scenes, including a modern building with a glass facade and a view of a residential area with trees and houses.

# Thank you & 73!