

Winlink

MCARC 

<http://www.mcarc.org/>

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Why Winlink?

- Remote location
- Cell service down
- Internet down
- Emergency Communications
- Forms

Winlink

<https://winlink.org/>

Free, to sign up, asking \$24

Sign up for email, ham (your callsign)@winlink.org

VARA HF & FM



<https://rosmodem.wordpress.com/>

Free for speed limited
\$70 for full speed

Pactor 4 is about \$2000
Vara performs is at Pactor 3 level

Google Docs x My Drive - Google Drive x Winlink - Google Docs x Live System Information | Winlink x

winlink.org/RMSChannels

Apps MARS Google Ham Radio Security RV Voice Weather Health Util Financial Science MAC Reading list

Live System Information

RMS Map RMS List Cnx Map Prop Map CMS Status Traffic RMS Ver. User Ver. Local

Map

☐ Packet ☐ Pactor ☐ Robust Packet ☐ ARDOP ☒ VARA ☐ VARA FM Service Code(s) PUBLIC Refresh [Select]

The map displays a world view with numerous green pins indicating live system locations. The pins are most densely clustered in North America, particularly in the United States and Canada, and are also present across Europe, Africa, and South America. The map includes labels for major landmasses and oceans, as well as country names. A search bar and various map controls are visible at the top and bottom of the map area.

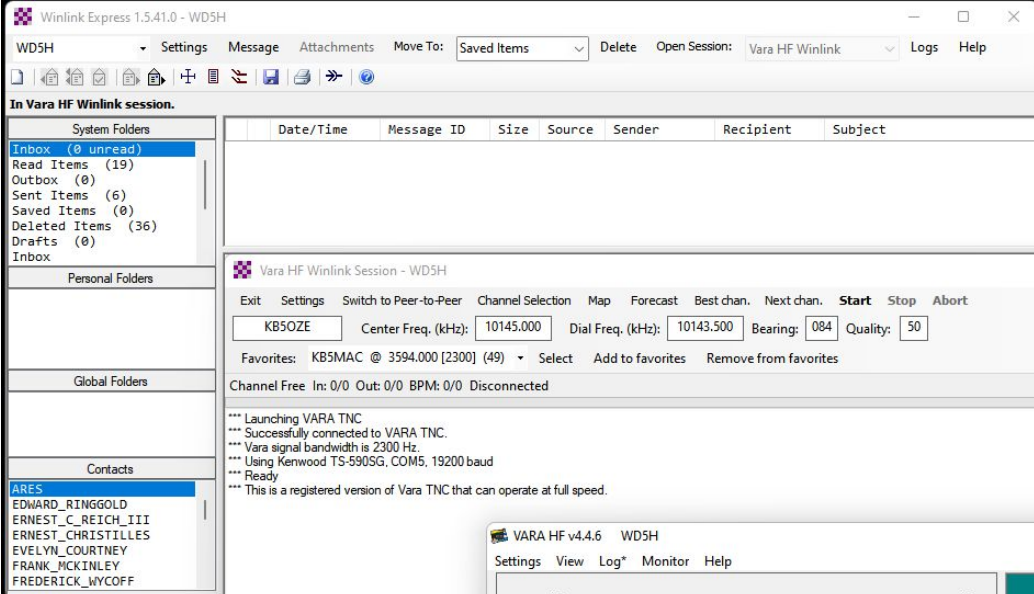
Copyright © 2006-2021, Amateur Radio Safety Foundation, Inc.
Google 48-22.81S / 133-30.94W -- [CE31FQ] -- [8F 609910 4640376]
Keyboard shortcuts Map data ©2021 1000 km Terms of Use

Four+ ways to send email

1. TELNET
 2. HF radio
 3. FM radio
 4. P2P radio
- Radio only

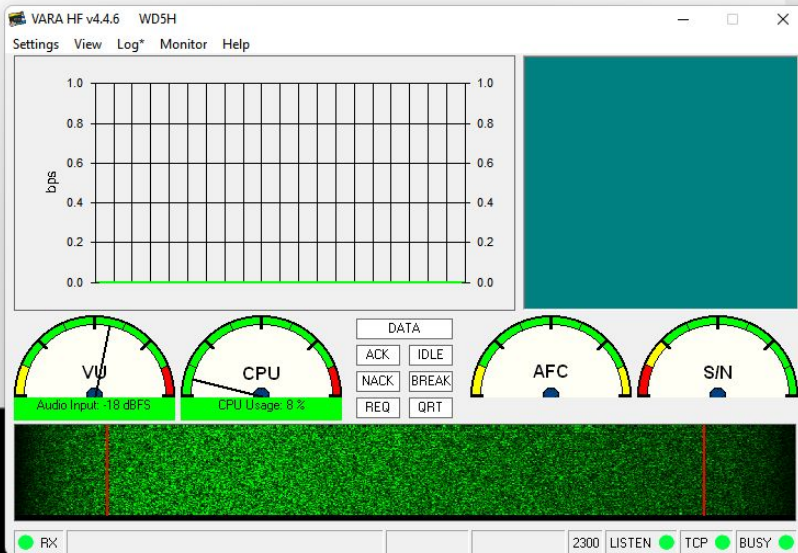
Reference you radio's manual to properly set up for digital operations.

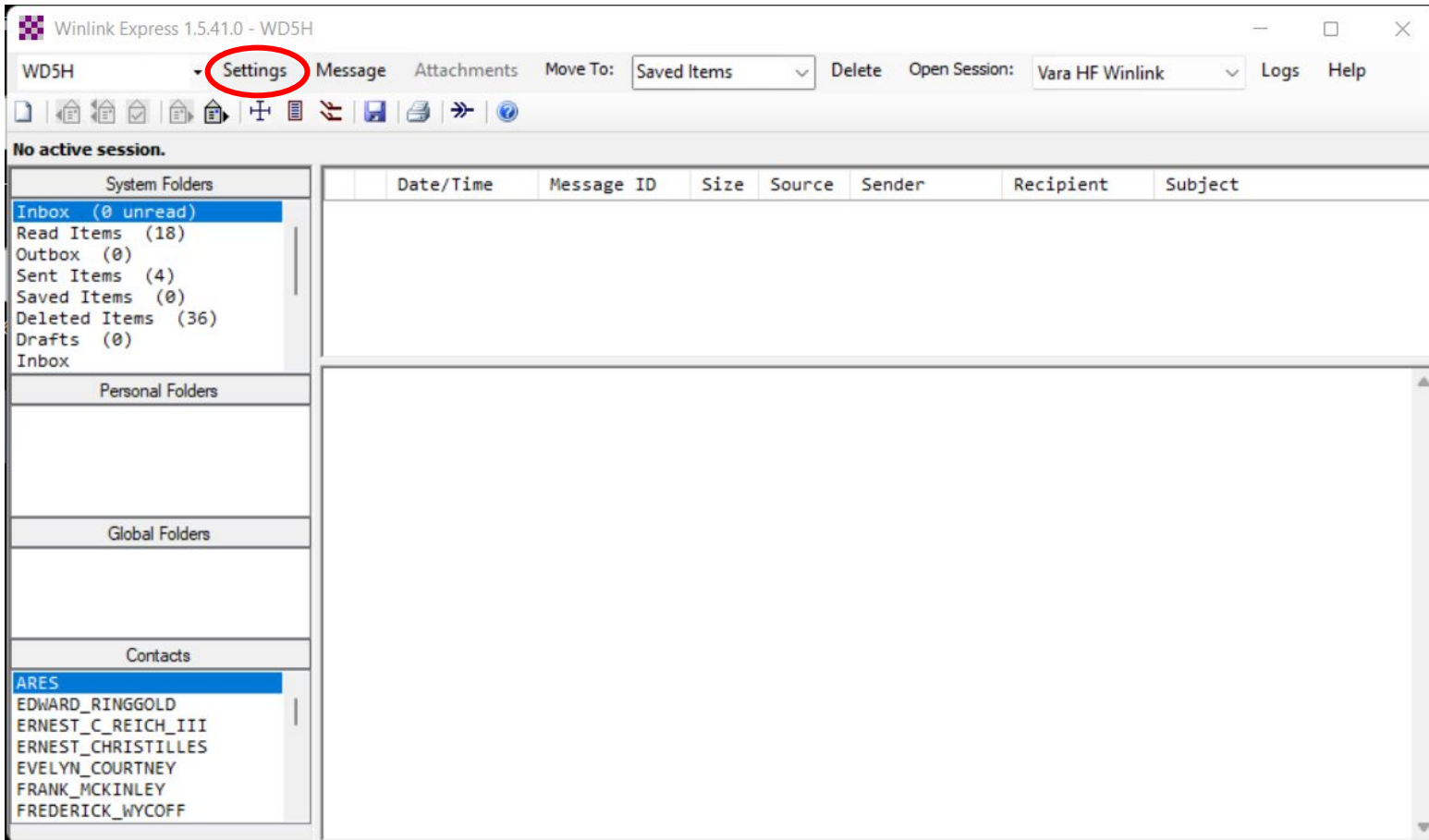
- Cable type, RS232, 7 pin, 9 pin, USB
- Com ports
- Baud rate
- ALC level
- All Winlink is Upper Side Band (USB)
- For ICOM, CI-V number
- Other radio control software: HRD, WSJT-X, FLDIGI, manufacturer



Three primary windows:
 Winlink Express version
 Vara HF Winlink Session
 VARA HF version

What you will see after
 initial setup.





Initial screen
when Winlink is
open
Select mode
from dropdown >
Open Session

Winlink Express Properties

Call Signs

My Callsign: My Password:
(Case sensitive)

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.

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.

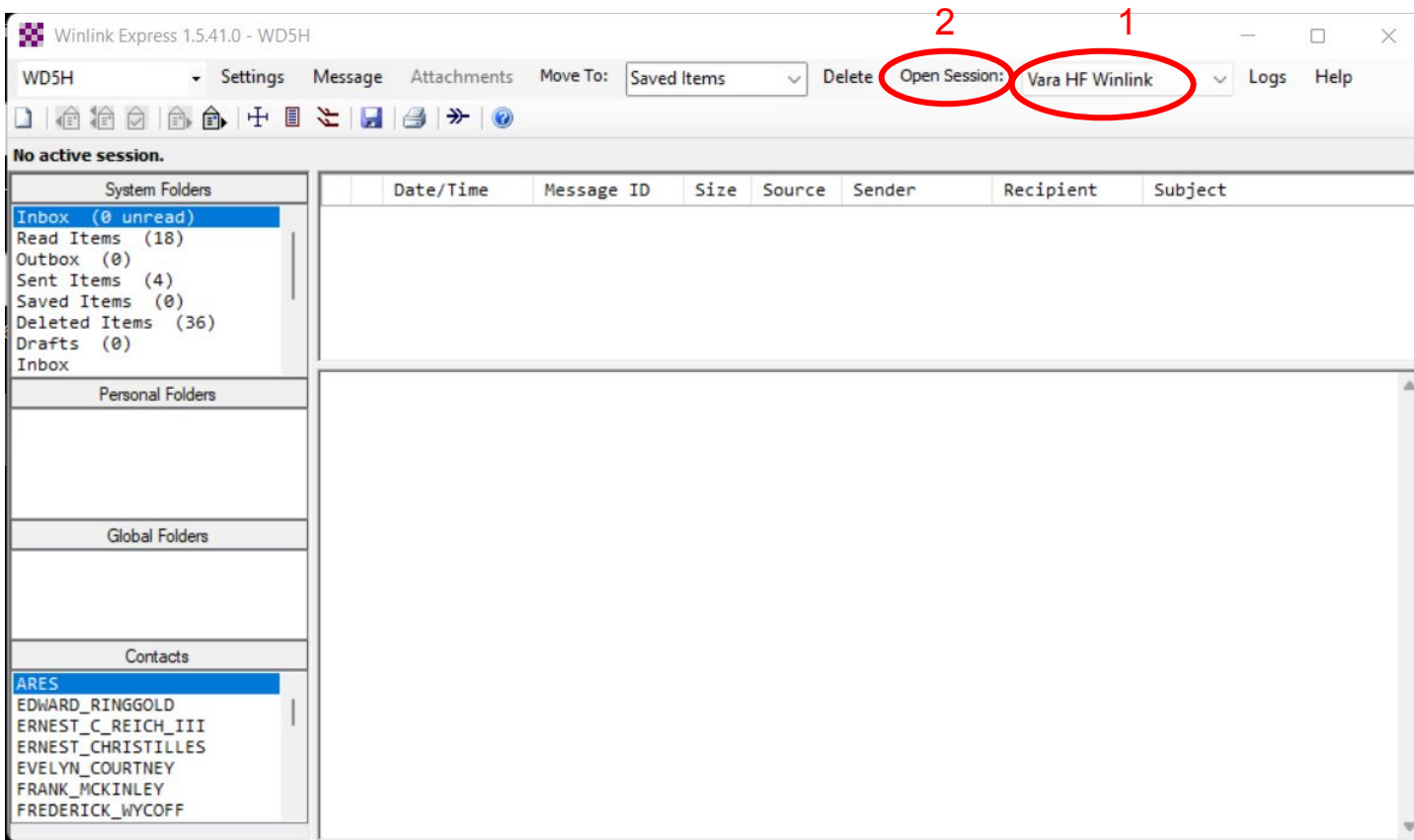
☐ Display list of pending incoming messages prior to download

☒ 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

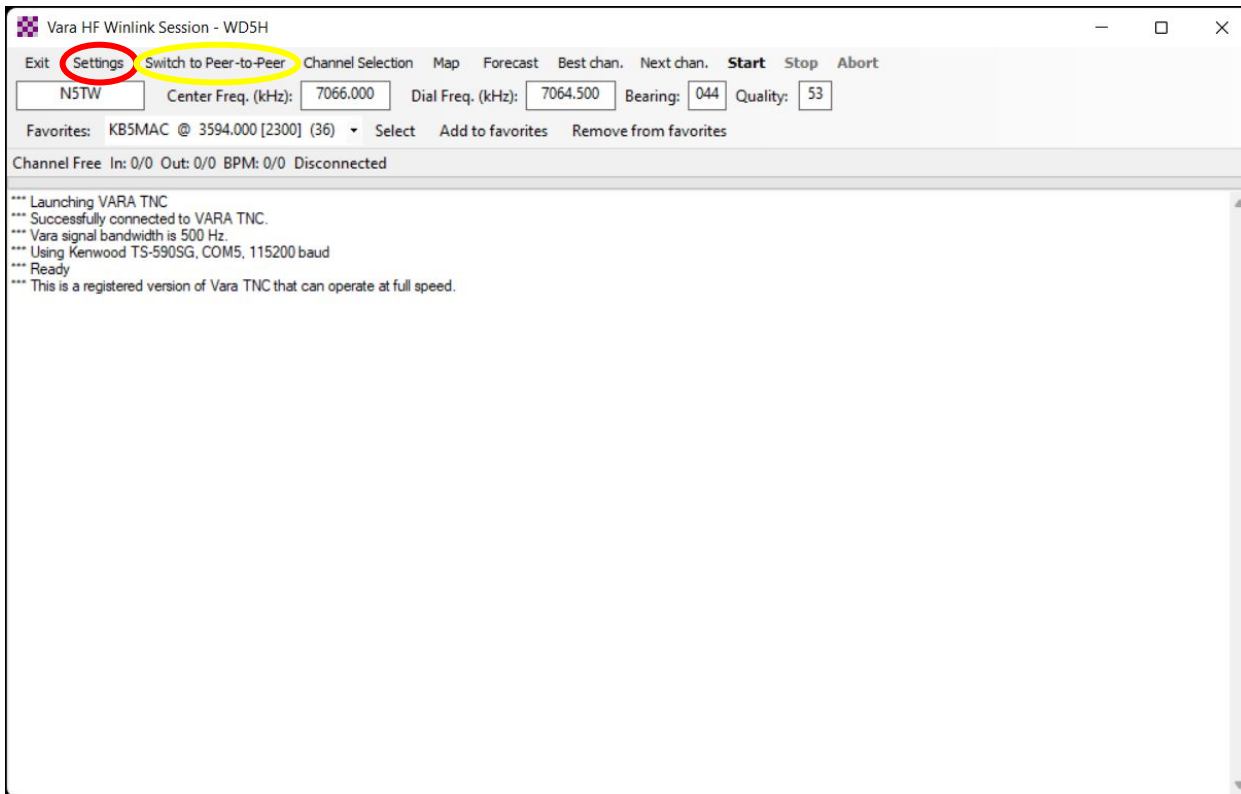
Settings >
Fill in "My Callsign", Password
and Password Recovery email
Contact Information
Registration key if you have one,
otherwise leave blank
Fill in My Grid Square
Service Codes "PUBLIC"
"Update"



1. Select mode of operation
2. Open Session


VARA HF Winlink window opens (follow slide)
After initial setup this is the first window of two that you will see.

Drop down: Telnet, Vara HF Winlink, Vara FM Winlink, Vara HF P2P and Vara FM P2P



Settings > Vará TNC Setup
After initial setup this is the first window of two that you will see. (Yellow highlight)

Note: “Switch to Peer-to-Peer” should be displayed...You are in Winlink mode!
“Switch to Winlink Session” will be displayed when you are in Peer-to-Peer!

 Vara Setup ✕

Virtual TNC host address/name:

Virtual TNC Command Port: Data Port:

Session Bandwidth:

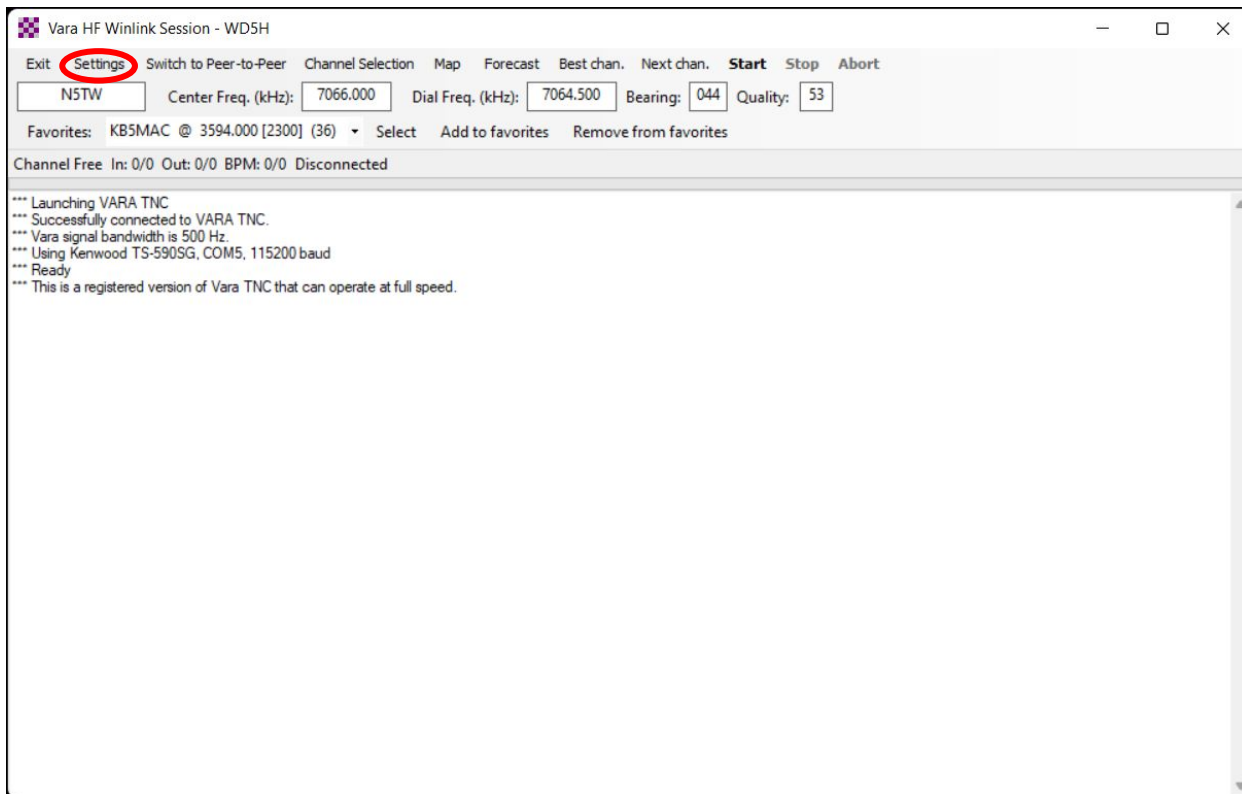
☐ Enable 2750 Hz channels
(Requires radio TX filter set for 100-2900 Hz and RX bandwidth of 3000)

VARA Modem location:

☒ Automatically launch Vara TNC when session is opened

☒ Identify with Morse code at end of session

This should be okay as is



Settings > Radio Setup

Vara HF Winlink Settings

Radio Selection

Select Radio Model **Kenwood TS-590SG** Antenna Selection Default

Icom Address 88 USB ☐ USB Digital ☒ FM ☐ Use Internal Tuner ☐

☐ Codan login and optional password:

Radio Control Port

Serial Port to Use COM5 Baud 115200 Enable RTS ☒ Enable DTR ☒ TTL ☐

PTT Port (Optional)

Serial Port to Use External Baud 9600 Enable RTS ☒ Enable DTR ☒

Update Close

Select your radio
USB or USB Digital
Select your com port
Select your baud rate
>Update
Return to VARA Winlink Session



Vara HF Winlink Settings



Radio Selection

Select Radio Model **Icom 7100** ▼

Antenna Selection **Default** ▼

Icom Address **88**

USB ☐

USB Digital ☒

FM ☐

Use Internal Tuner ☐

☐ Codan login and optional password:

Radio Control Port

Serial Port to Use **COM7** ▼

Baud **19200** ▼

Enable RTS ☒

Enable DTR ☒

TTL ☐

PTT Port (Optional)

Serial Port to Use **Icom 7100** ▼

Baud **9600** ▼

Enable RTS ☒

Enable DTR ☒

Update

Close

Select your radio
USB or USB Digital
Select your com port
Select your baud rate
>Update
For ICOM select your Address
(CI-V Address)
Set PPT Port
Return to VARA Winlink Session



Vara HF Winlink Session - WD5H



Exit Settings Switch to Peer-to-Peer **Channel Selection** Map Forecast Best chan. Next chan. **Start** Stop Abort

N5TW

Center Freq. (kHz):

7066.000

Dial Freq. (kHz):

7064.500

Bearing:

044

Quality:

53

Favorites: KB5MAC @ 3594.000 [2300] (36) Select Add to favorites Remove from favorites

Channel Free In: 0/0 Out: 0/0 BPM: 0/0 Disconnected

*** Launching VARA TNC
*** Successfully connected to VARA TNC.
*** Vara signal bandwidth is 500 Hz.
*** Using Kenwood TS-590SG, COM5, 115200 baud
*** Ready
*** This is a registered version of Vara TNC that can operate at full speed.

HF Channel Selector									
Exit Select Update Via Internet Update Via Radio Map Forecast SFI All RMS									
Callsign	Frequency (kHz)	Mode	Grid Square	Hours	Group	Distance (mi)	Bearing (Degrees)	Path Reliability Estimate	Path Quality Estimate
W5RMW	3596.000	V2300	EL09TK	00-23	PUBLIC	35	080	99	99
W5RMW	7103.000	V2300	EL09TK	00-23	PUBLIC	35	080	96	96
N5TW	7066.000	V500	EM10CJ	00-23	PUBLIC	101	044	89	51
N5TW	7102.000	V2300	EM10CJ	00-23	PUBLIC	101	044	89	51
N5TW	7091.500	V500	EM10CJ	00-23	PUBLIC	101	044	89	51
KD5REJ	7103.500	V2300	EL07GM	00-23	PUBLIC	130	194	88	50
KC5GOI	10122.900	V500	EM13KG	00-23	PUBLIC	291	021	86	51
WA5TED	10146.200	V2300	DM93AN	00-23	PUBLIC	340	329	86	50
WA5TED	10130.000	V500	DM93AN	00-23	PUBLIC	340	329	86	50
W5KAM	7103.500	V2300	EM20BE	00-23	PUBLIC	193	072	84	49
K5RAV	10146.500	V2300	EL16CE	00-23	PUBLIC	229	162	83	51
WB5KUO	10147.000	V2300	EM12IM	00-23	PUBLIC	240	024	83	51
W5RGV	10146.500	V2300	EL16CE	00-23	PUBLIC	229	162	83	51
KB5MAC	7103.300	V2300	EM20FA	00-23	PUBLIC	210	076	82	48
W0MAC	7101.600	V2300	EM20GA	00-23	PUBLIC	215	077	82	48
XE1VP	18098.500	V2300	EK09JI	00-23	PUBLIC	690	181	82	50
N5MDT	7102.500	V2300	EM20EJ	00-23	PUBLIC	212	069	82	48

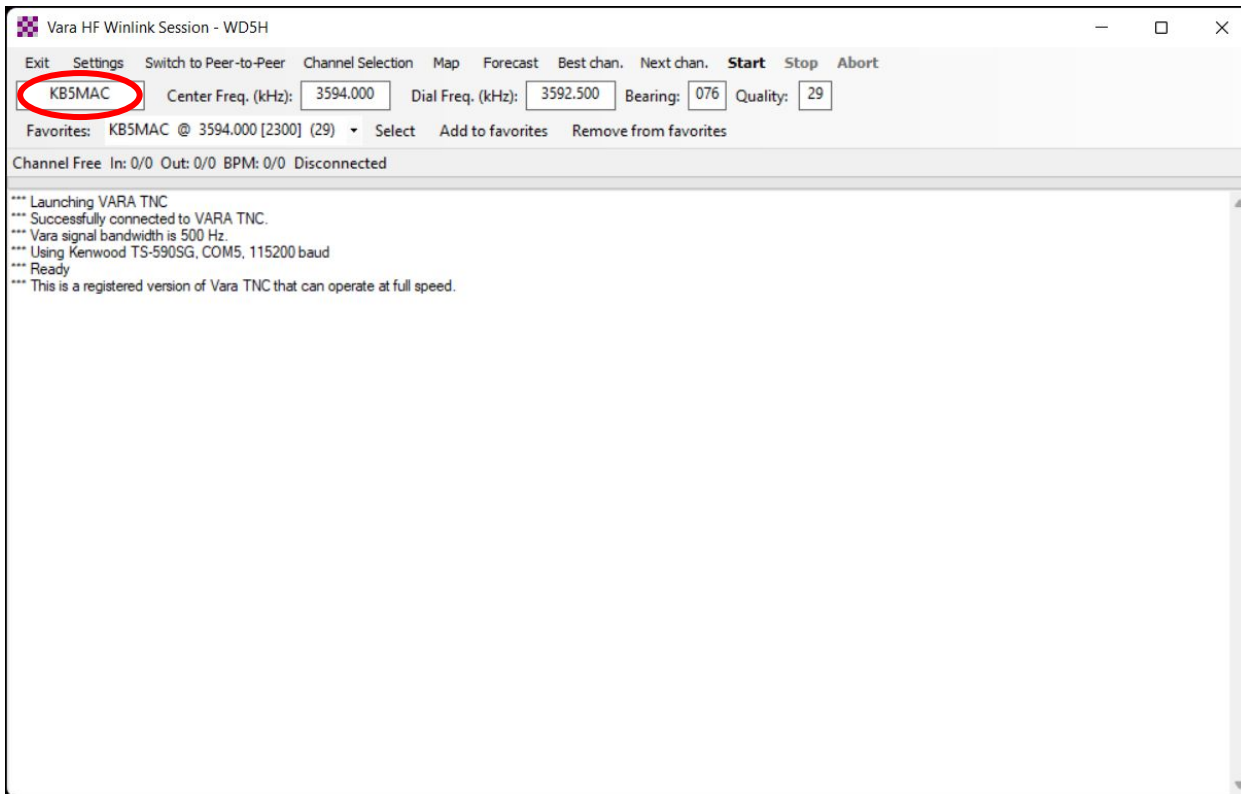
Select the best band for the time of day. You may need to step through several station to find what works for your location and conditions.

This menu should update when you first start Winlink and if you are connected to internet.

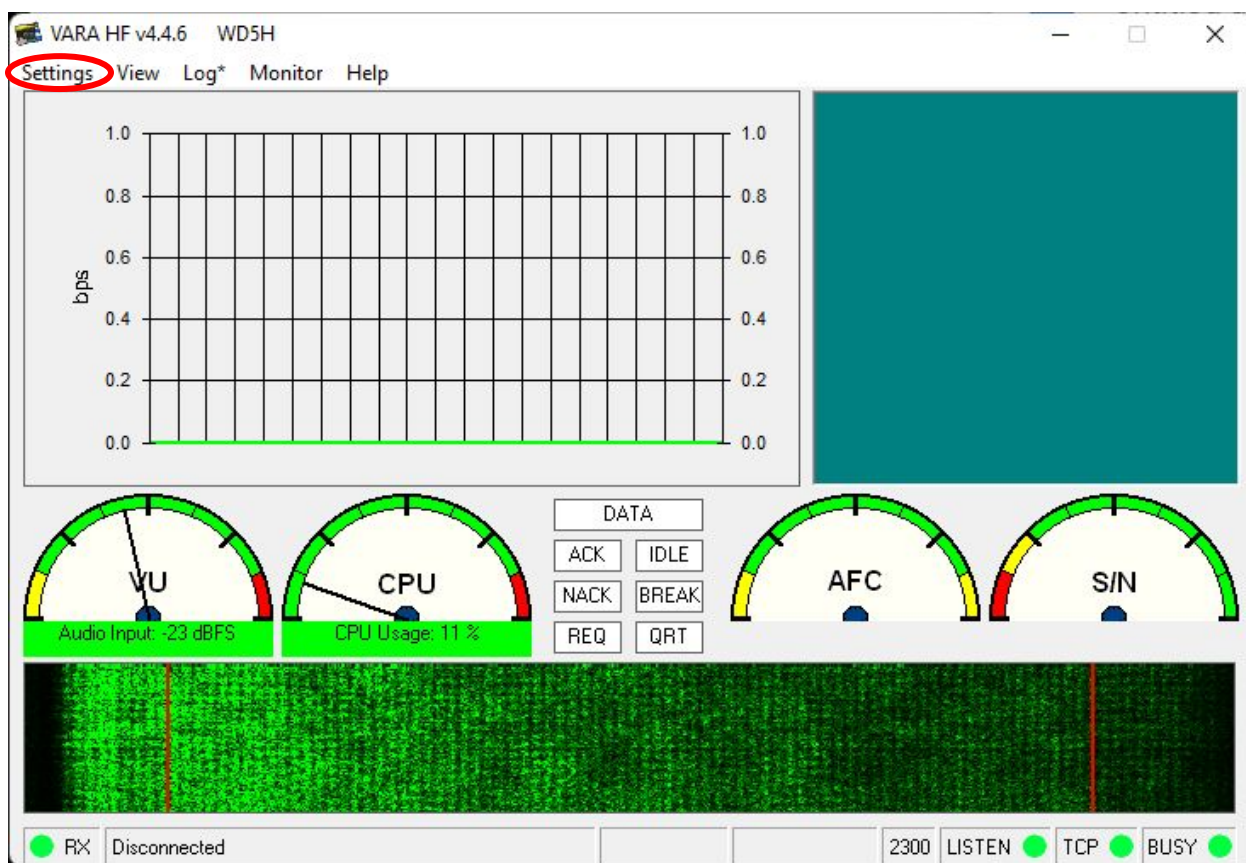
You may need to update, "Via Internet" if connected to internet.

If remote, or no internet you can "Update Via Radio" or update the SFI (Solar Flux Index)

Select the station you want to contact. Discuss Frequency (Center), Mode (bandwidth), Distance, Bearing, Path Reliability, etc.



Radio will set Callsign, Center Frequency and Dial Frequency



Vara display will run, look on tab bar to right of Winlink icon and click on it to open. Settings > VARA setup

VARA Setup

TCP Ports:

Command	Data
8300	8301

VARA Licenses

Callsign:	Registration Key:
WD5H	XXXXXXXXXXXXXXXXXXXX
Callsign:	Registration Key:
Callsign:	Registration Key:
Callsign:	Registration Key:

☒ Allow VARA check for updates via internet

☐ Accept 500 Hz connections

☐ Tuner enhancement

☐ CW ID

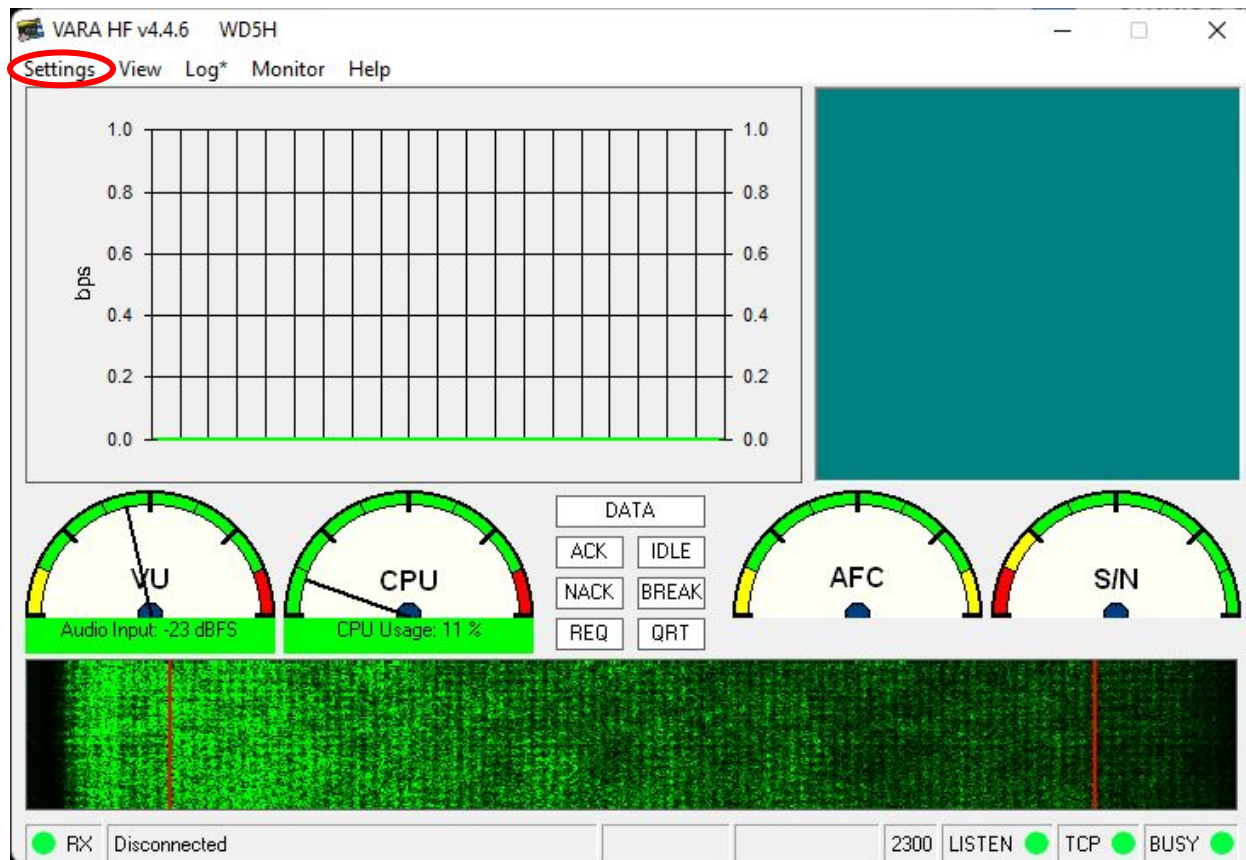
☐ RA-Board PTT

Retries:

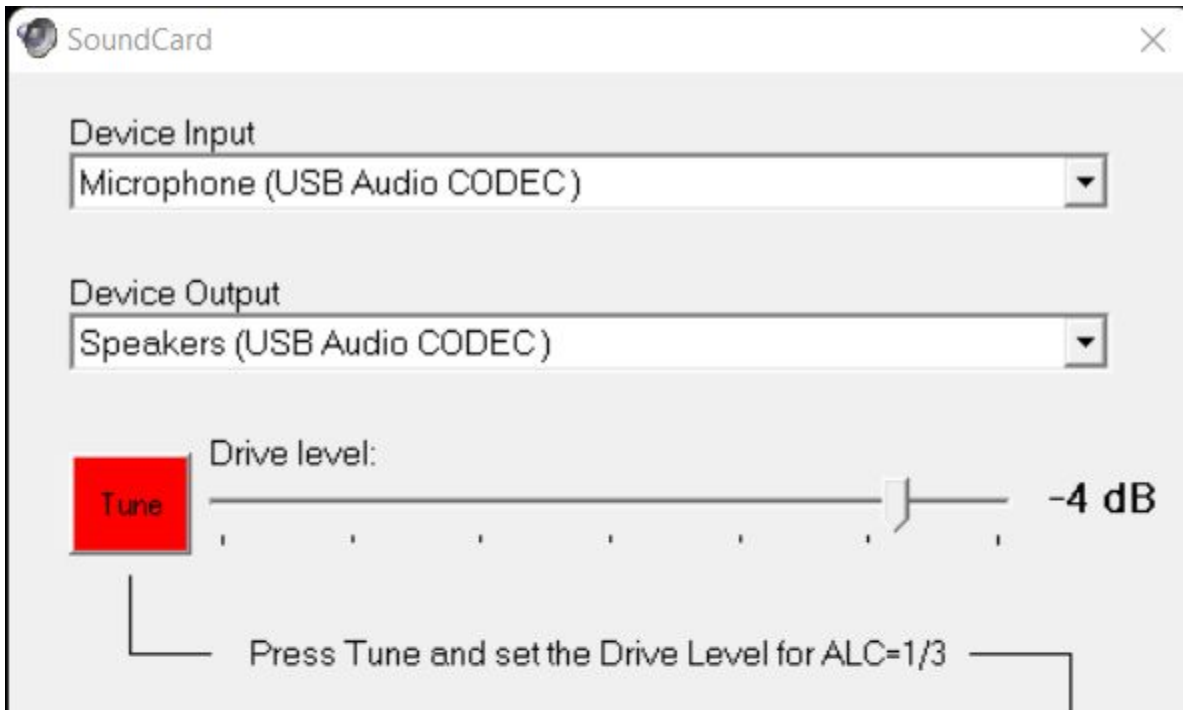
15

Close

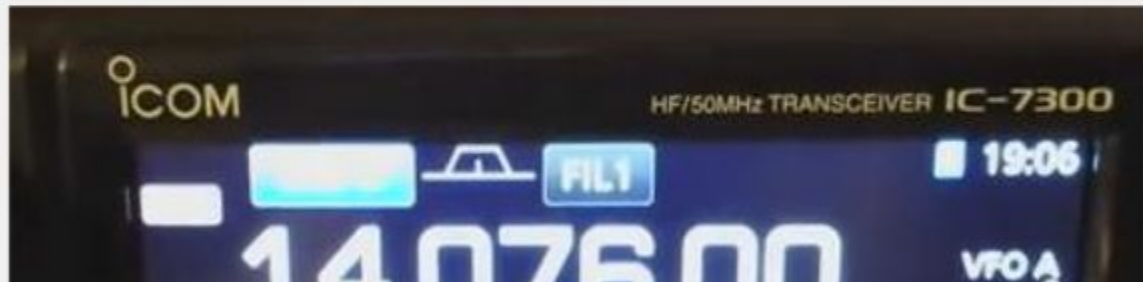
Enter Callsign and Registration
Key if you purchased.
Ports should be okay as is.



Vara display will run, look on tab bar to right of Winlink icon and click on it to open.
Settings > Sound Card















Most newer computer have high quality sound cards and perform well.
Select Microphone (USB Audio CODEC) and Speakers (USB Audio CODEC)
Adjust Radios ALC Drive Level as shown.



Winlink Express 1.5.41.0 - WD5H

WD5H Settings **Message** Attachments Move To: Saved Items Delete Open Session: Vara HF P2P Logs Help

In Vara HF P2P session.

	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject

System Folders

- Inbox (0 unread)
- Read Items (19)
- Outbox (0)
- Sent Items (6)
- Saved Items (0)
- Deleted Items (36)
- Drafts (0)
- Inbox

Personal Folders

Global Folders

Contacts

- ARES
- EDWARD_RINGGOLD
- ERNEST_C_REICH_III
- ERNEST_CHRISTILLES
- EVELYN_COURTNEY
- FRANK_MCKINLEY
- FREDERICK_WYCOFF

Click on Message or Message icon to compose a new message

Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: WD5H Send as: Winlink Message ☐ Request message receipt Set Defaults

To:

Cc:

Subject: Sending Message via VARA HF

Attach:

Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: WD5H Send as: Peer-to-Peer Message ☐ Request message receipt Set Defaults

To:

Cc:

Subject: Sending Message via VARA P2P

Attach:

Enter a new message

Close **Select Template** Attachments Post to Outbox Spell Check Save in Drafts

From: WD5H Send as: Peerto-Peer Message ☐ Request message receipt Set Defaults

To:

Cc:

Subject:

Attach:

This is why we need to use Winlink in
Emergency Communications...FORMS!

Template Manager

Close Add Remove Edit

Standard Templates (version 1.0.170.0)

- A - User Information
- ARC Forms
- CA STATE Forms
- CANADIAN Forms
- CIRM Medical Assistance
- FEMA Forms
- FMRE Forms
- GENERAL Forms
- GENERAL MEDICAL Forms
- HI STATE forms
- HICS Forms
- IARU Forms
- ICS USA Forms
 - ICS203 Org Assignment.txt
 - ICS204.txt
 - ICS205-10 Row.txt
 - ICS205-20 Row.txt
 - ICS205A.txt
 - ICS206.txt
 - ICS210.txt
 - ICS213.txt**
 - ICS213RRR.txt
 - ICS214.txt
 - ICS214A.txt
 - ICS217A.txt
 - ICS309.txt
- OR STATE Forms

Untitled document - Google Doc x Redacting sensitive data from im x ICS213 Initial x +

File | C:/RMS%20Express/WD5H/Temp/ICS213_Initial.html

Apps MARS Google Ham Radio Security RV Voice Weather Health Util Financial Science MAC » Reading list

Setup Click to add an agency or group name

General Message (ICS 213)

Load ICS213 INITIAL Data Form Instructions

1. Incident Name: Incident name is optional

2. To (Name/Position):

3. From (Name/Position):

4. Subject: 5. Date: 6. Time:

7. Message:

Be Brief and Concise

8. Approved by: Position / Title:

Save ICS213 INITIAL Data Submit Reset Form

Ver 41.11



Enter a new message



Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: WD5H



Send as: Winlink Message



☐ Request message receipt

Set Defaults

To:

Cc:

Subject: 213-Herd of Buffalo-Buffalo - 2021-11-02 12:19

Attach: RMS_Express_Form_ICs213_Initial_Viewer.xml;

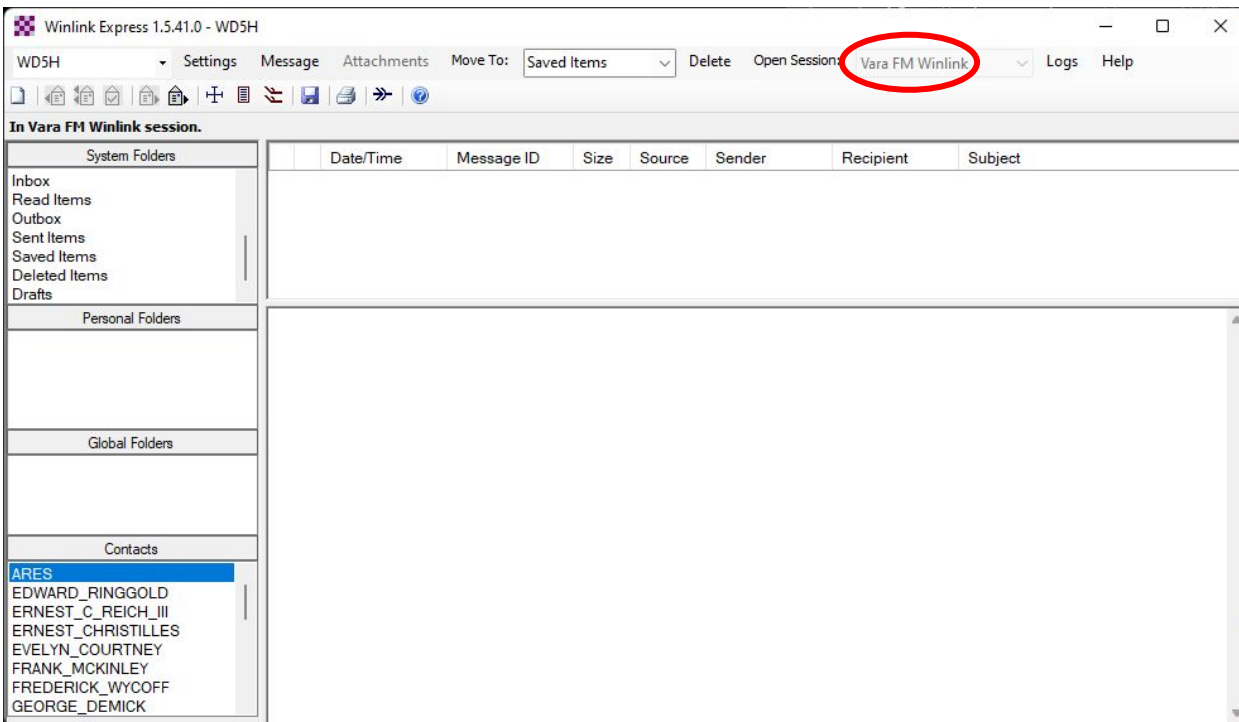
GENERAL MESSAGE (ICS 213)

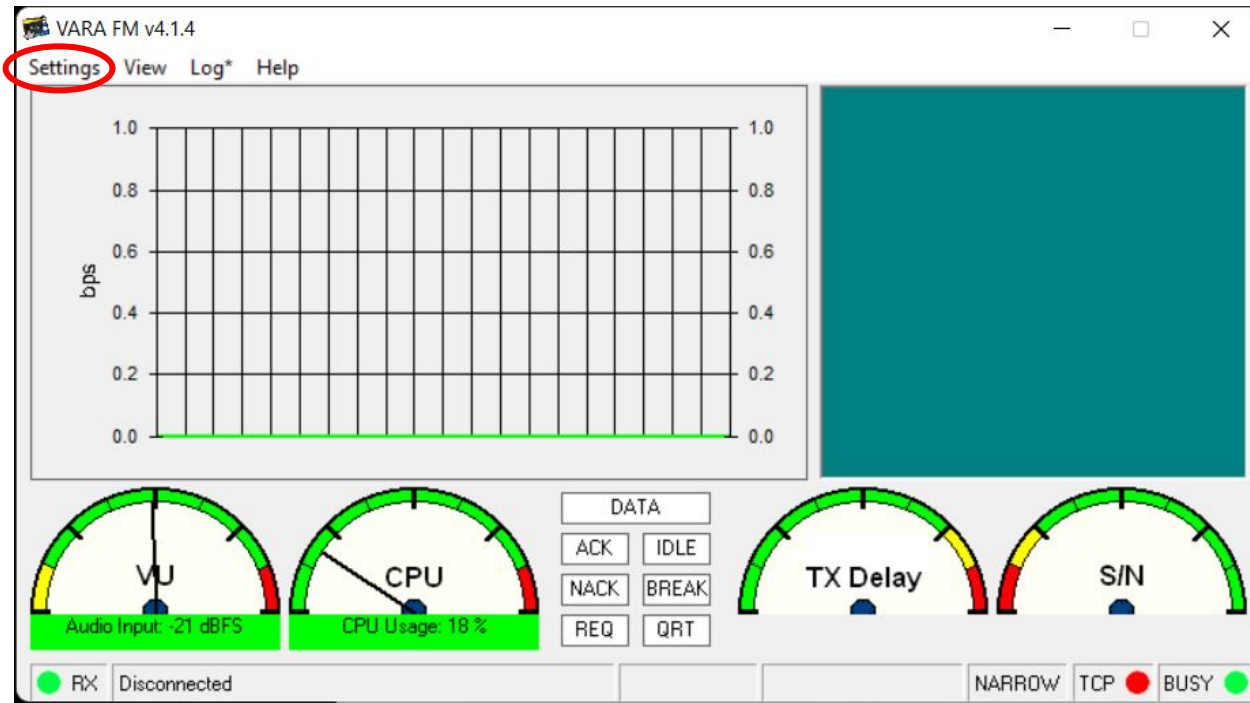
1. Incident Name: Herd of Buffalo
2. To (Name and Position): Ric
3. From (Name and Position): Sid
4. Subject: Buffalo
5. Date: 2021-11-02
6. Time: 12:19
7. Message:

All the Buffalo escaped and are eating my grass.

8. Approved by: WD5H
Position/Title: Presenter

Express Sending Station: WD5H





Switch to VARA FM
> Settings

VARA Setup

TCP Ports:

Command: 8300

Data: 8301

FM System: NARROW

Digipeater:

Retries: 3

☒ Allow VARA check for updates

VARA Licenses

Callsign:	Registration Key:
WD5H	XXXXXXXXXXXXXXXXXXXX

Compatible with
Signalink USB

SQL

DATA OUT 9600bps

GND

DATA

DATA OUT 1200bps

PTT

DATA IN

to PC input

from PC output

* VARA FM WIDE needs a FM rig set for 9600 Packet operation, with a special soundcard interface (6 kHz BW) connected to rear panel: RA-Board, Signalink "Black" transforms, Modified Signalink (red audio transforms removed), homebrew interface (a simple direct cable)...

* In other case, you must select VARA FM NARROW

Close

VARA FM Setup

PTT

PTT Via

☒ CAT ☐ COM ☐ RA-Board ☐ VOX

Brand: Icom Port: COM7

Model: IC-7000 Bauds: 19200

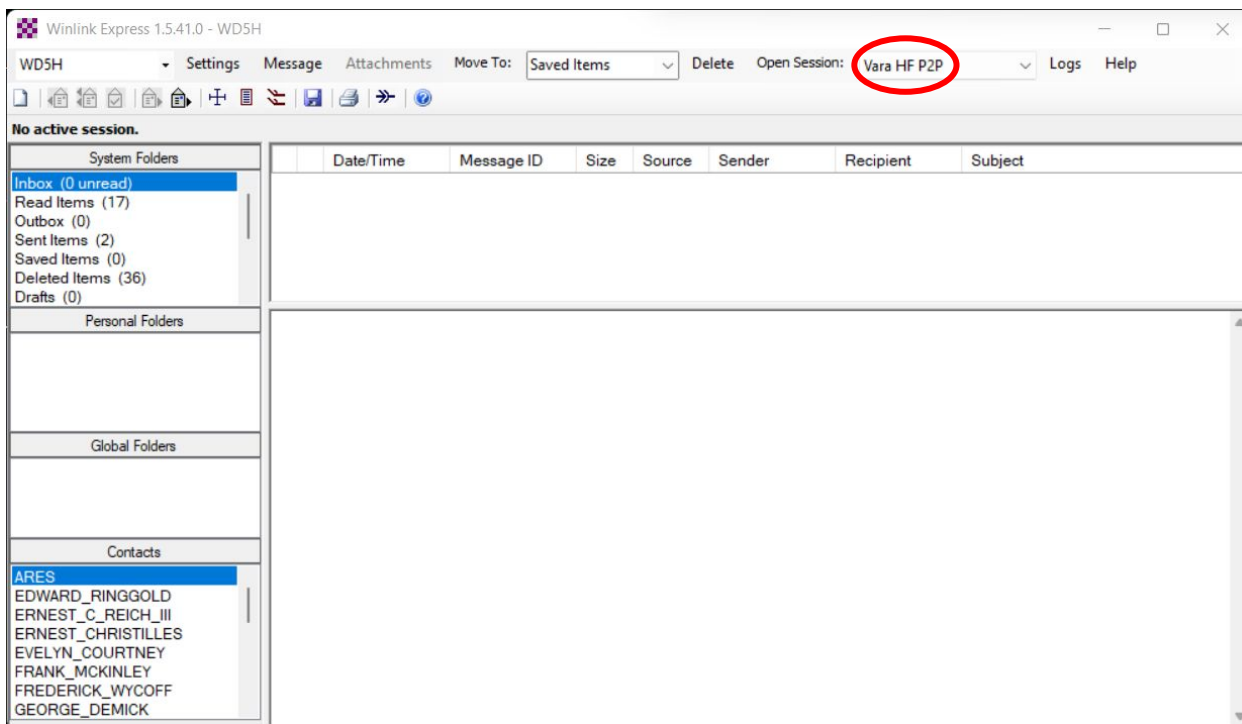
☐ RTS ☐ DTR

CI-V Address: 88

Close

VARA FM Setup

ICOM users need to set the CI-V address for their model.



Vara HF P2P

Vara HF Peer-to-Peer Session - WD5H

Exit Settings Switch to Winlink Session Channel Selection Map Forecast Best chan. Next chan. Start Stop Abort

N1EW Center Freq. (kHz): 7108.000 Dial Freq. (kHz): 7106.500 Bearing: Quality:

Favorites: RACES PRIM @ 7108.000 [2300] Select Add to favorites Remove from favorites

Channel Free In: 0/0 Out: 0/0 BPM: 0/0 Disconnected/Listening

*** Launching VARA TNC
*** Successfully connected to VARA TNC.
*** Vara signal bandwidth is 2300 Hz.
*** Using Kenwood TS-590SG, COM5, 115200 baud
*** Ready
*** This is a registered version of Vara TNC that can operate at full speed.

Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: WD5H Send as: Peer-to-Peer Message ☐ Request message receipt Set Defaults

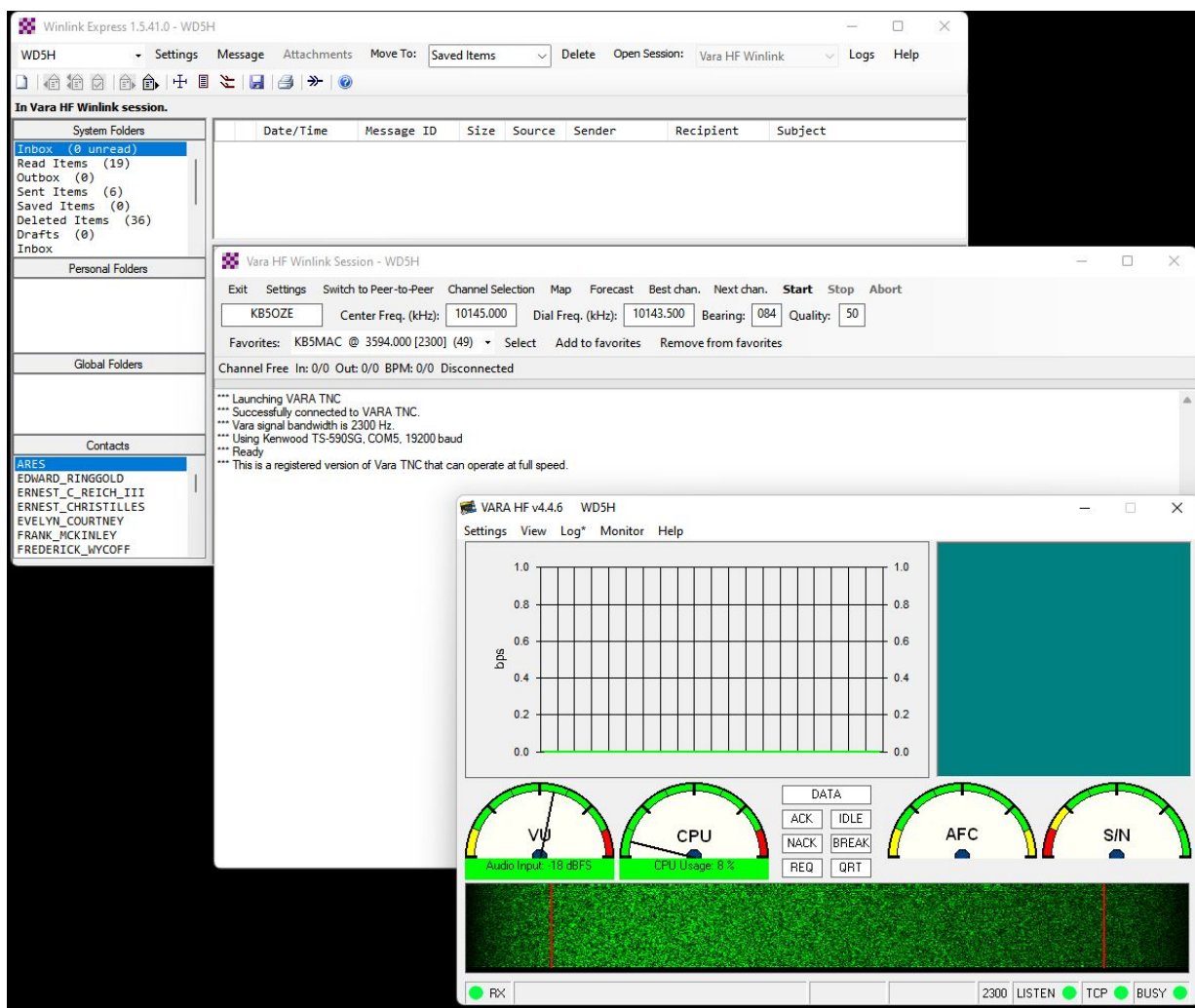
To:

Cc:

Subject: //WL2K R/

Attach:

Official communications should have a priority. After the last “/” you can add a description. Please read Winlink “Book of Knowledge”



After initial setup for your given radio/station you should only have to work with these three windows.

VARA run but not open, look for icon to right of Winlink icon in task bar

Winlink Discussion:

Start a MCARC (and area) net for Winlink training, exercise and P2P

Need day, time, frequencies and NCS's?

How to coordinate, (groups.io, discord, slack)?