

Cherokee Amateur Radio Society Winlink Basic- 101

Version 8/14/2021



Agenda

1. Overview
2. References
3. Install
4. Configure
5. Compose Message
 1. Send to another HAM Callsign
 2. Send to a 3rd Party Internet Email address (Example Gmail)
6. Send Message via Telnet (Internet)
7. Receive Message via Telnet (Internet)
8. Final Comments
9. September 11, 2021- Over Lunch, Winlink Workshop (RF Demonstration, Assistance in Setup)

Overview

Winlink (www.winlink.org) is a worldwide network for passing email traffic over radio. It does not depend on the internet but has connectivity to internet-based stations allowing you to send and receive to other winlink.org recipients AND to email account that are internet based.

Winlink is used by mariners, RV enthusiasts, MARS, ARES, and many other agencies who need to communicate when the internet is not available.

The Winlink system consists of a group of Common Message Servers (CMS) placed at various locations around the world. These connect via the internet to Radio Message Servers (RMS) in many geographic locations to form a star network configuration. The RMS are the VHF, UHF, or HF RF gateway into the Winlink system. The final component is your station running the software to send/receive messages via your radio.

Winlink messages, like regular email, are sent to specific addresses and may contain file attachments such as pictures, weather maps, spreadsheets, ICS forms, etc.

References

- Winlink Site: <http://Winlink.org>
- Download Winlink Express: <https://winlink.org/RMSExpress>
- Winlink FAQ: [Winlink FAQ - July 20, 2020 - Revised \(Frequently Asked Questions\) | Winlink Global Radio Email](#)
- Subject Line to Send to a Gmail Account: **//WL2K + custom subject** Example **//WL2K Test Email**
- **Referenced material in presentation:** [ConfigRMSWinlink.pdf \(mecklenburgares.org\)](#)

References

How To Get an Account

- Download, install and configure [Winlink Express](#). Study embedded help about installation and use.
- With you have an internet connection, fill out the form presented on the first startup page after installation.
 - See the help article "Basic Configuration" for guidance.
 - Be sure to include a password and password recovery address.
 - Click 'Update'. Winlink Express makes the process easy. Your account is created!

Screen Shots Coming- Hang on!

Future Training

Advance training (outside of todays class) will consist in sending messages via:

- Packet (VHF- RF to Message Center who uses Internet to deliver to final destination)
- VARA FM (RF to Message Center who uses Internet to deliver to final destination)
- VARA HF (RF to Message Center who uses Internet to deliver to final destination)
- Utilizing Winlink Forms
- Utilizing Address Book
- Etc.

September 11, 2021

- Jim K9APD Cherokee ARES Simulation Emergency Test (SET) Exercise Overview and Winlink P2P- October 2, 2021
- Over Lunch, Demonstration outside on Winlink RF including P2P, and Hands on Installation Assistance

Download

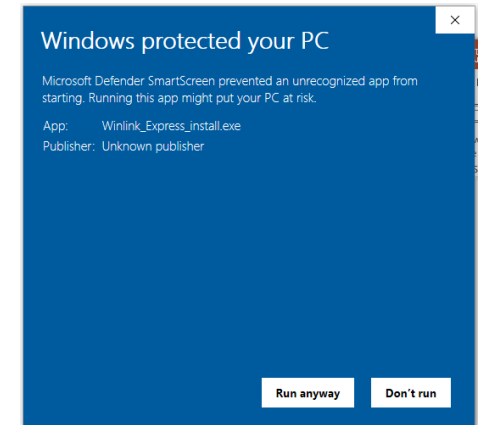
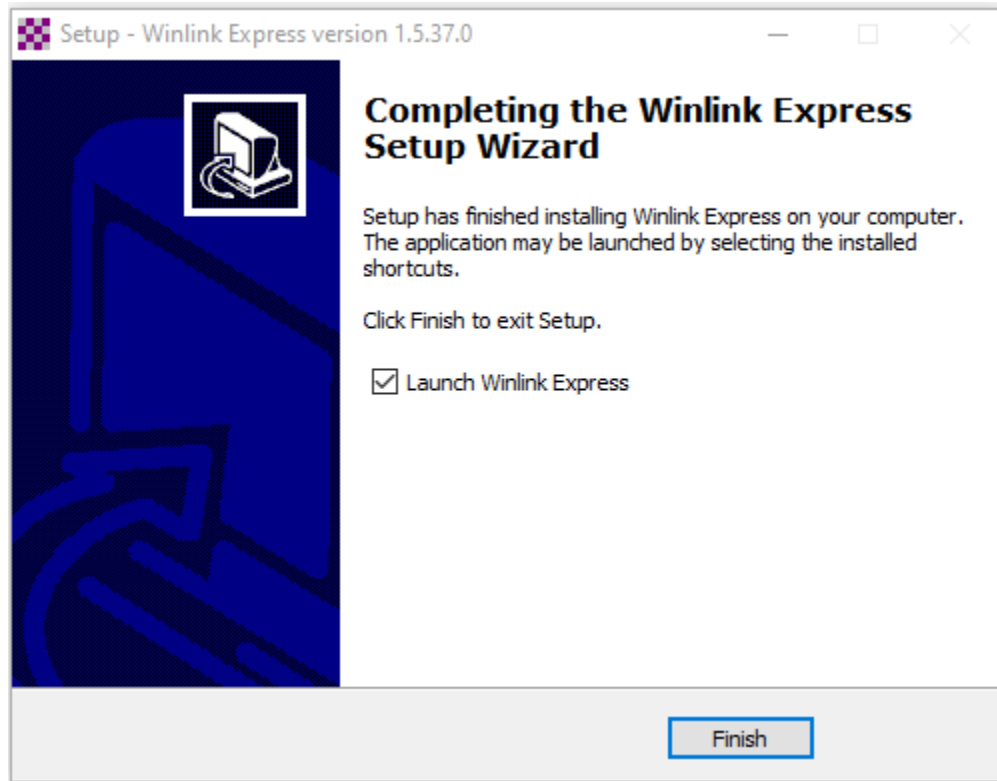
- Download Winlink Express to your PC as shown on References

https://downloads.winlink.org/User%20Programs/Winlink_Express_install_1-5-37-0.zip

Install

Run Winlink_Express_install_exe after downloading

1. If you received Windows Protected your PC, Click **Run anyway** to continue install.
2. Take all defaults to complete Installation.
3. Click finish to Launch Winlink Express and continue with Configuration steps.



Configure

When Winlink opens for first time, the configuration screen (Winlink Express Properties) will appear.

Please fill in:

- My Callsign
- My Password (This will assign password on initial setup)
- Password recovery e-mail
- My Grid Square
- Optional Fields Self Explanatory

Then Click **Update**

Comment:

- Find my Grid Square
 - https://www.levinecentral.com/ham/grid_square.php
 - Android: Grid Square Locator
 - IOS: Ham Square
- If Operating RF, consider checking “Display list of Pending Incoming message prior to Download” to avoid consuming time, power, and downloading message you may not be interested in at that time.
- If Operating Remote, update My Grid Square or Lat/Lon prior to deployment in order to obtain updated RF Propagation Data, discussed in Advance class.

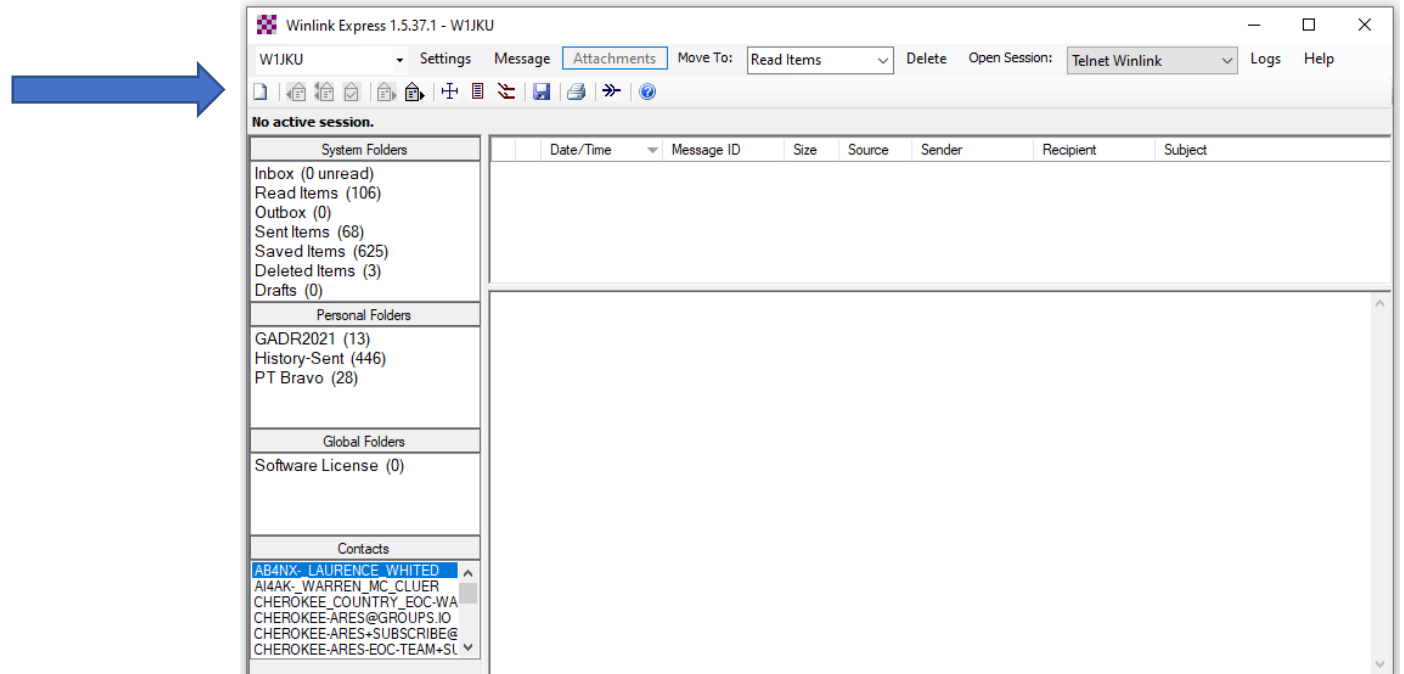
The screenshot shows the 'Winlink Express Properties' dialog box. It is divided into several sections:

- Call Signs:** Includes fields for 'My Callsign', 'My Password' (with a 'Show password' checkbox), 'Callsign suffix (optional)', and 'Password recovery e-mail'. There are buttons for 'Remove Callsign' and 'Request password be sent to recovery e-mail'.
- Auxiliary Callsigns and Tactical Addresses:** A list box with 'Add Entry', 'Remove Entry', and 'Edit Entry' buttons.
- My Grid Square:** A text field and a 'Lat/Lon to Grid Square' button.
- Winlink Express registration key:** A text field.
- Service Codes:** A text field containing 'PUBLIC' with a note: '(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):** Fields for Name, Street address 1, Street address 2, City, State/Province, Country, Postal code, Web Site URL (optional), Phone number, and Non-Winlink e-mail.
- Additional information (optional):** A scrollable text area.
- Recalculate HF path quality if SFI changes more than:** A spinner set to 30.
- Keep logs for:** A spinner set to 2 weeks.
- Keep deleted messages for:** A spinner set to 30 days.
- Checkboxes:** 'Display list of pending incoming messages prior to download' (unchecked), 'Warn about connections to stations holding messages' (checked), 'Allow diagnostic information to be sent to the Winlink Development Team' (checked), and 'Automatically install field-test (beta) versions of Winlink Express' (unchecked).

At the bottom are 'Update' and 'Cancel' buttons.

Compose Email

1. Click New Message Icon



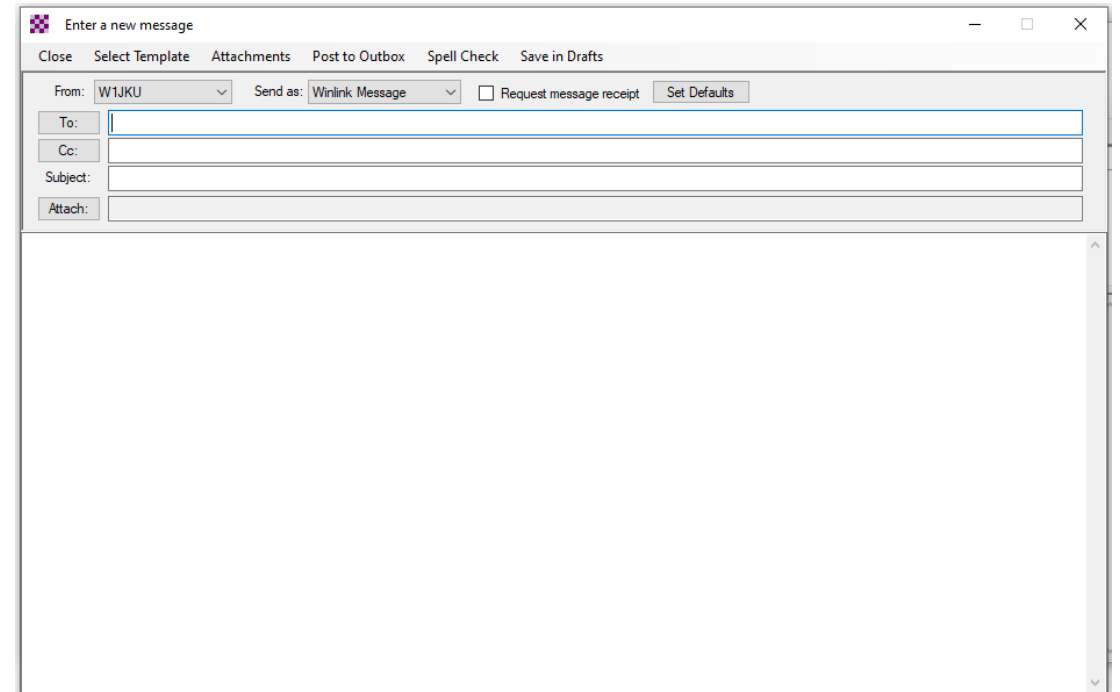
Compose Email

2. Compose Message

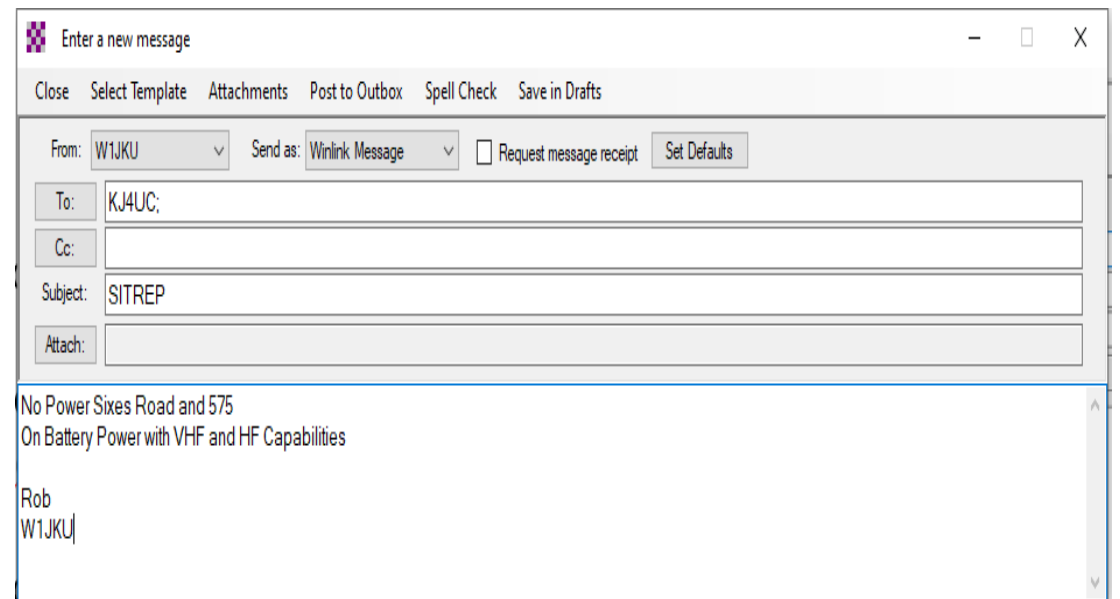
- **To:** Enter Callsign your sending Email to
- **Subject:** Enter Subject of Email
- **Body:** type the message
- Click **“Post to Outbox”** when your done editing the message to put email into Outbox folder, **required step before you may send the message...**

Advance Comment:

- To send Email to an Internet Email Address like Gmail, the Subject should be : **//WL2K + Custom Subject**
 - To send Email directly to another station via P2P, You must click **“Send as”** and chose **Peer to Peer Message**.
- *** P2P Message are not routed via Internet to designation We will discuss this during advance class.



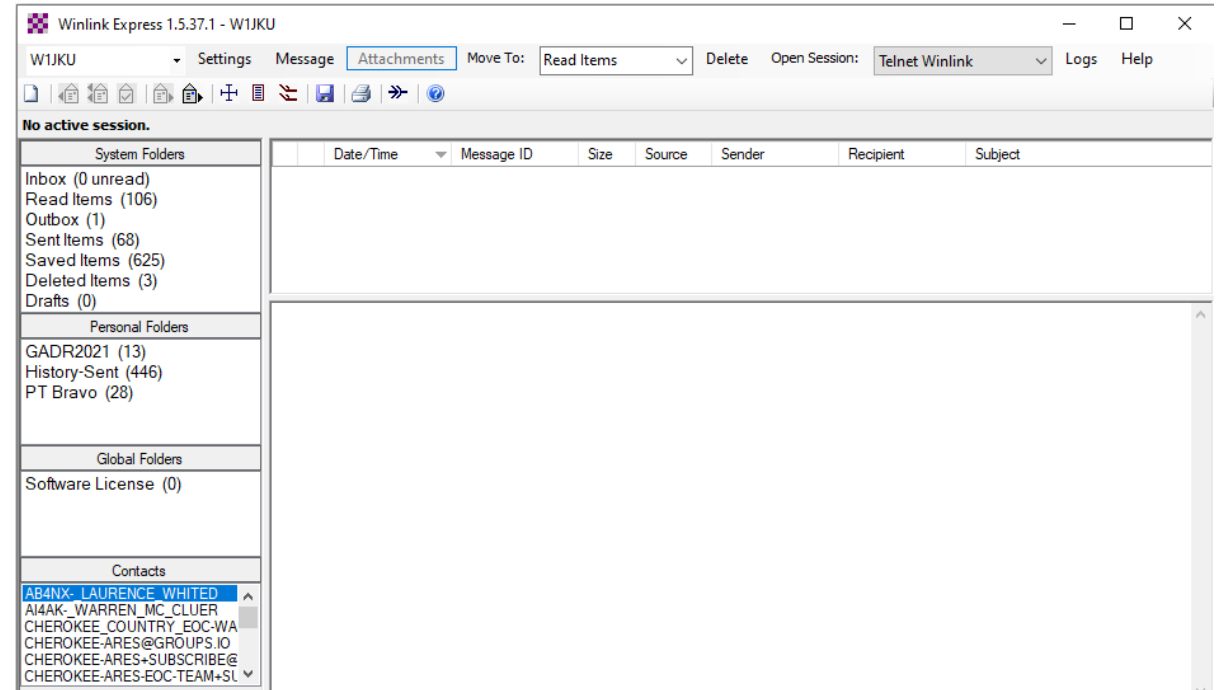
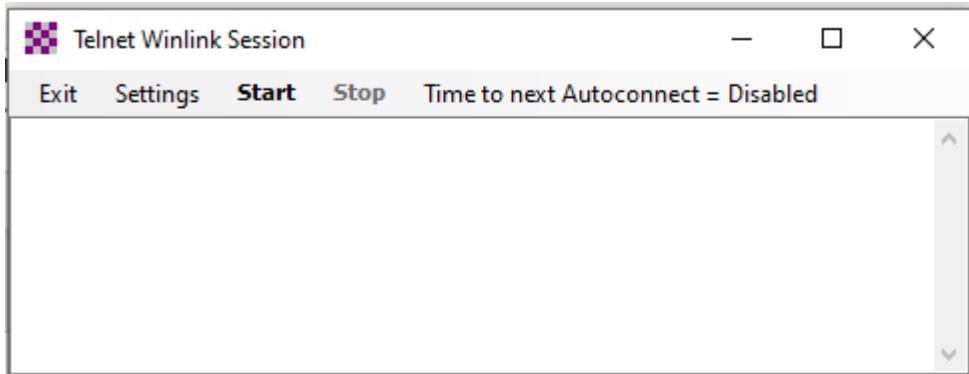
The screenshot shows the 'Enter a new message' window. The 'From' field is set to 'W1JKU' and 'Send as' is 'Winlink Message'. The 'To', 'Cc', 'Subject', and 'Attach' fields are empty. The 'Post to Outbox' button is visible in the menu bar.



The screenshot shows the 'Enter a new message' window with the following fields filled: 'To' is 'KJ4UC', 'Subject' is 'SITREP', and the body text is 'No Power Sixes Road and 575
On Battery Power with VHF and HF Capabilities
Rob
W1JKU|'. The 'Post to Outbox' button is visible in the menu bar.

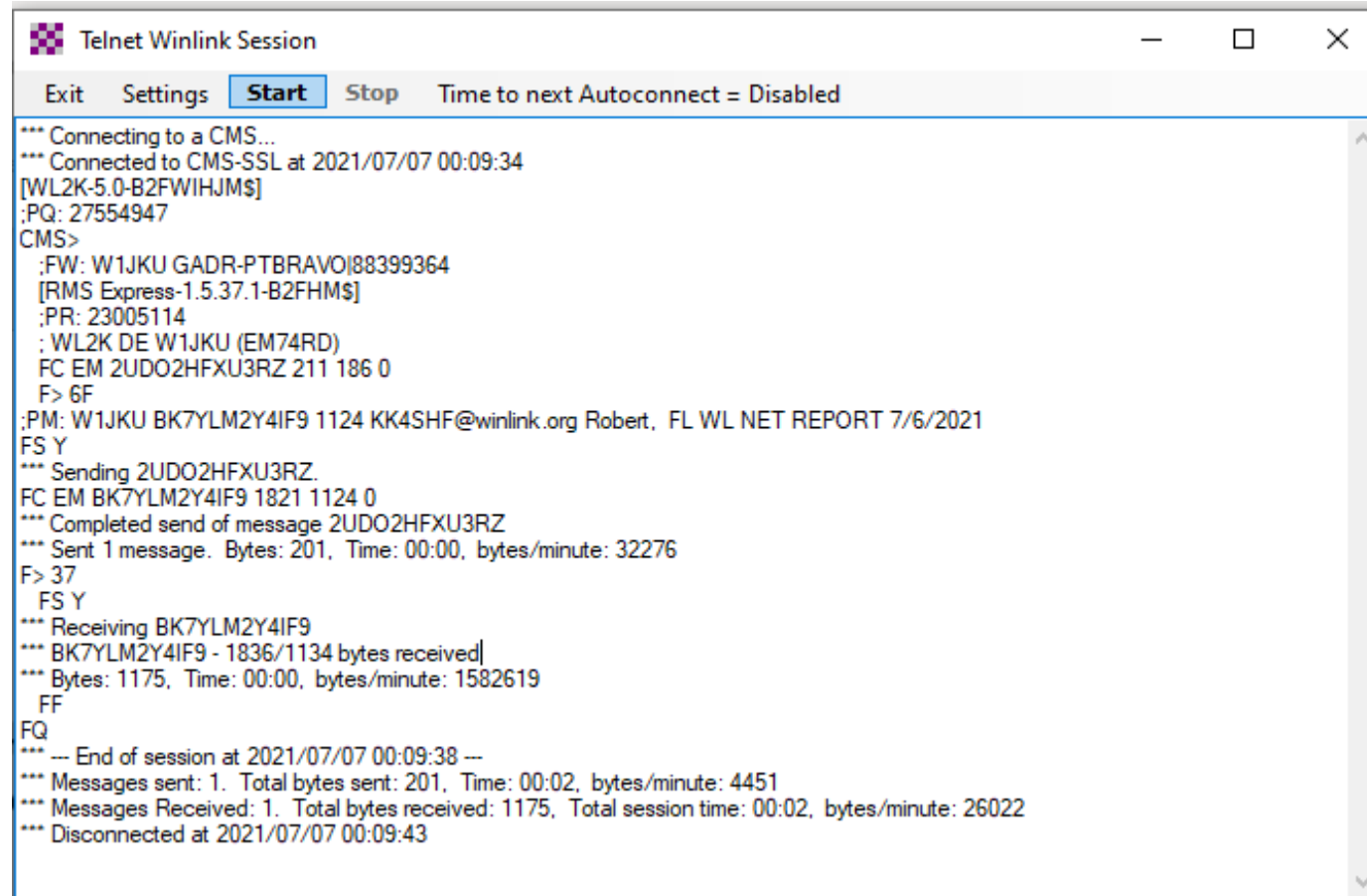
Send Email via Telnet-Internet

1. Click **Open Session** after selecting “**Telnet Winlink**”
2. Ensure your PC is connected to the Internet before moving to Step 3
3. Click **Start** to initiate Sending any emails in Outbox and Receive any emails waiting for your callsign.



Send Email via Telnet-Internet (Continued)

Example of Telnet Winlink Session Log after a Successful Send and Receive is performed:



```
Telnet Winlink Session
Exit Settings Start Stop Time to next Autoconnect = Disabled
*** Connecting to a CMS...
*** Connected to CMS-SSL at 2021/07/07 00:09:34
[WL2K-5.0-B2FWIHJM$]
:PQ: 27554947
CMS>
:FW: W1JKU GADR-PTBRAVO|88399364
[RMS Express-1.5.37.1-B2FHMs]
:PR: 23005114
:WL2K DE W1JKU (EM74RD)
FC EM 2UDO2HFXU3RZ 211 186 0
F> 6F
:PM: W1JKU BK7YLM2Y4IF9 1124 KK4SHF@winlink.org Robert, FL WL NET REPORT 7/6/2021
FS Y
*** Sending 2UDO2HFXU3RZ.
FC EM BK7YLM2Y4IF9 1821 1124 0
*** Completed send of message 2UDO2HFXU3RZ
*** Sent 1 message. Bytes: 201, Time: 00:00, bytes/minute: 32276
F> 37
FS Y
*** Receiving BK7YLM2Y4IF9
*** BK7YLM2Y4IF9 - 1836/1134 bytes received|
*** Bytes: 1175, Time: 00:00, bytes/minute: 1582619
FF
FQ
*** --- End of session at 2021/07/07 00:09:38 ---
*** Messages sent: 1. Total bytes sent: 201, Time: 00:02, bytes/minute: 4451
*** Messages Received: 1. Total bytes received: 1175, Total session time: 00:02, bytes/minute: 26022
*** Disconnected at 2021/07/07 00:09:43
```

Receive Email via Telnet-Internet

Any new Message will appear on your screen, and you may click on the message to open it up and see more details

The screenshot displays the Winlink Express 1.5.37.1 interface. The main window shows a list of folders on the left and a message list in the center. A message with ID BK7YLM2Y4IF9 is selected. A pop-up window titled 'BK7YLM2Y4IF9 - Robert, FL WL NET REPORT 7/6/2021' is open, showing the full details of the message, including headers, body text, and statistics.

Message List:

Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
2021/07/06 14:18	BK7YLM2Y4IF9	1185	KK4SHF	KK4SHF	W1JKU	Robert, FL WL NET REPORT 7/6/2021

Message Details:

Message ID: BK7YLM2Y4IF9
Date: 2021/07/06 14:18
From: KK4SHF
To: W1JKU
Source: KK4SHF
Downloaded-from: Telnet:cms.Winlink.org
Subject: Robert, FL WL NET REPORT 7/6/2021

Robert,
Thanks all! Best of luck on west coast of Florida with Hurricane.
CHALLENGE: SEND MESSAGE DURING STORM....

Net W4AKH, Rpt: 7/6/2021 10:04:12 AM

Go to W4AKH.net for ck-in details:
TOTAL Check-ins: 250
TOTAL Stations: 81

*** Welcome * New Callsigns Carl W7RCW; Don WX4BT2; ***

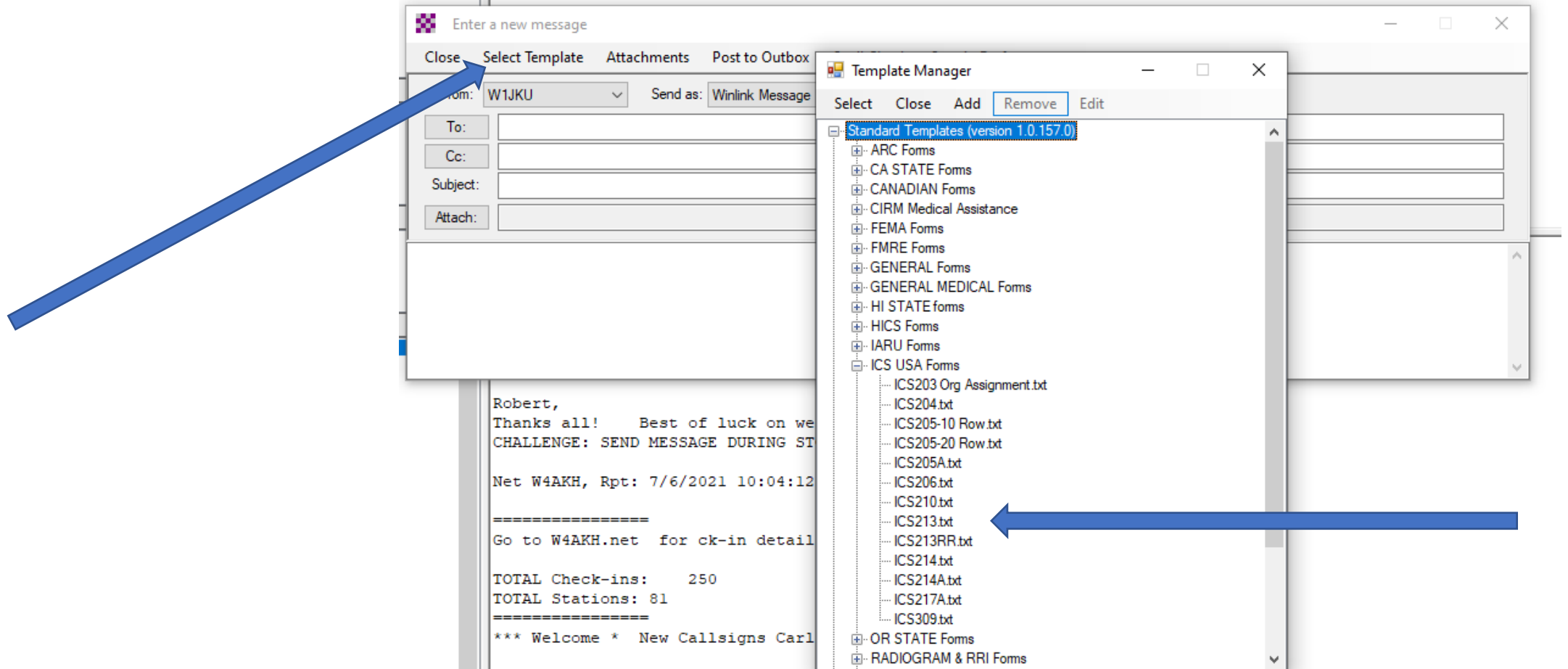
PACKET= 48
VARA= 107
VARA FM= 29
ARDOP= 16
FACTOR= 5
TELNET= 22
APRS= 9
MESH= 0
(VHF)= 1
OTHER= 13
Includes types:
E2P= 53
[Forms Attached]= 12

States:
FL...39
CA...2
DE...2
GA...2

Advanced Challenges

Advanced Challenge – Experiment with Templates

1. Attempt to use Templates and try composing an email using ICS-213 Template
Click “Select Template” when composing a new message, then chose ICS213.txt



Advanced Challenge – Send Message via RF: Vara HF, VARA FM or VHF Packet

- If you are able to perform digital modes using your Laptop and Radio like (FT8) you are so close to being able to execute this Challenge:

Key Item performing RF Winlink:

- Open Session: Select your mode, **VARA HF Winlink** for this example
- Click **Channel Selection**

Advance Comment:

- You want to perform Channel Selection before you deploy to the field and while you have internet to get current propagation forecast, to make it easier to find a remote station you are most likely going to be able to connect to.

The image shows two screenshots of the Winlink Express software interface. The top screenshot displays the main application window with a menu bar (W1JKU, Settings, Message, Attachments, Move To, Saved Items, Delete, Open Session: Vara HF Winlink) and a toolbar. Below the toolbar is a table titled "In Vara HF Winlink session." with columns for Date/Time, Message ID, Size, Source, Sender, Recipient, and Subject. The table contains several rows of message data. Below the table, the details of a selected message are shown, including Message ID, Date, From, To, Source, and Subject.

Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
2021/07/23 1...	W18XLVJ8FIBH	1231	W4AKH	W4AKH	W1JKU	Robert, FL WL Net Check in
2021/07/22 21:38	3RMQS4YQJ9EW	422	KT4LS	ETO-04	W1JKU	ACK: 213-WT Drill-WT July 22,202
2021/07/20 21:06	8FT7ZALAWZH0	1126	KK4SHF	KK4SHF	W1JKU	Robert, FL WL NET, REPORT FC
2021/07/20 15:13	A05RKX2HMAME	733	N4RFC	N4RFC	W1JKU	Re: 213-Fom TEST-IC-213 Fom T
2021/07/18 18:10	A1S4CLQ2U43B	1022	KX4MAT	KX4MAT	W1JKU	Re: Exress Check In INet1-W1JKU

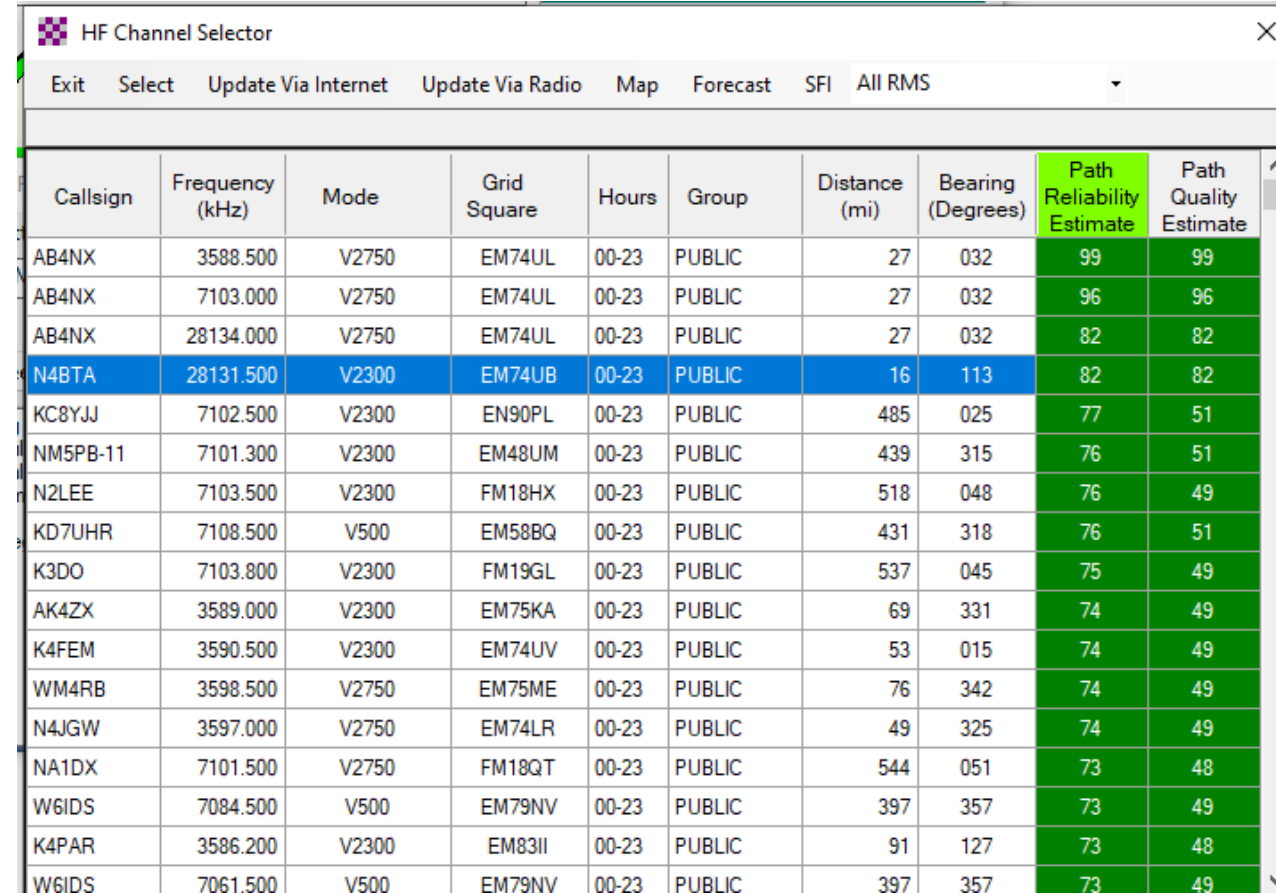
The bottom screenshot shows the "Vara HF Winlink Session - W1JKU" window. It features a menu bar (Exit, Settings, Switch to Peer-to-Peer, Channel Selection, Map, Forecast, Best chan., Next chan., Start, Stop, Abort) and a control panel with fields for K4FEM, Center Freq. (kHz): 3590.500, Dial Freq. (kHz): 3589.000, Bearing: 015, and Quality: 49. Below the control panel, there are buttons for Favorites, Channel Free, In: 0/0, Out: 0/0, BPM: 0/0, and Disconnected. The bottom part of the window shows a log of messages, including "Launching VARA TNC", "Successfully connected to VARA TNC.", "Vara signal bandwidth is 2300 Hz.", "Using Icom 7100, COM4, 19200 baud", "Ready", and "This is a registered version of Vara TNC that can operate at full speed."

Advanced Challenge – Send Message via RF: Vara HF, VARAFM or VHF Packet

- Click **Update via the Internet**
- Wait for the updates to complete.
- Select Callsign/Freq that has a high **Path Reliability Estimate**.
- **Experiment! Experiment! Experiment!**

Advance Comment:

- Sometimes your best connection is not the closest station, you might be better off with a station hundreds of miles away!!!!

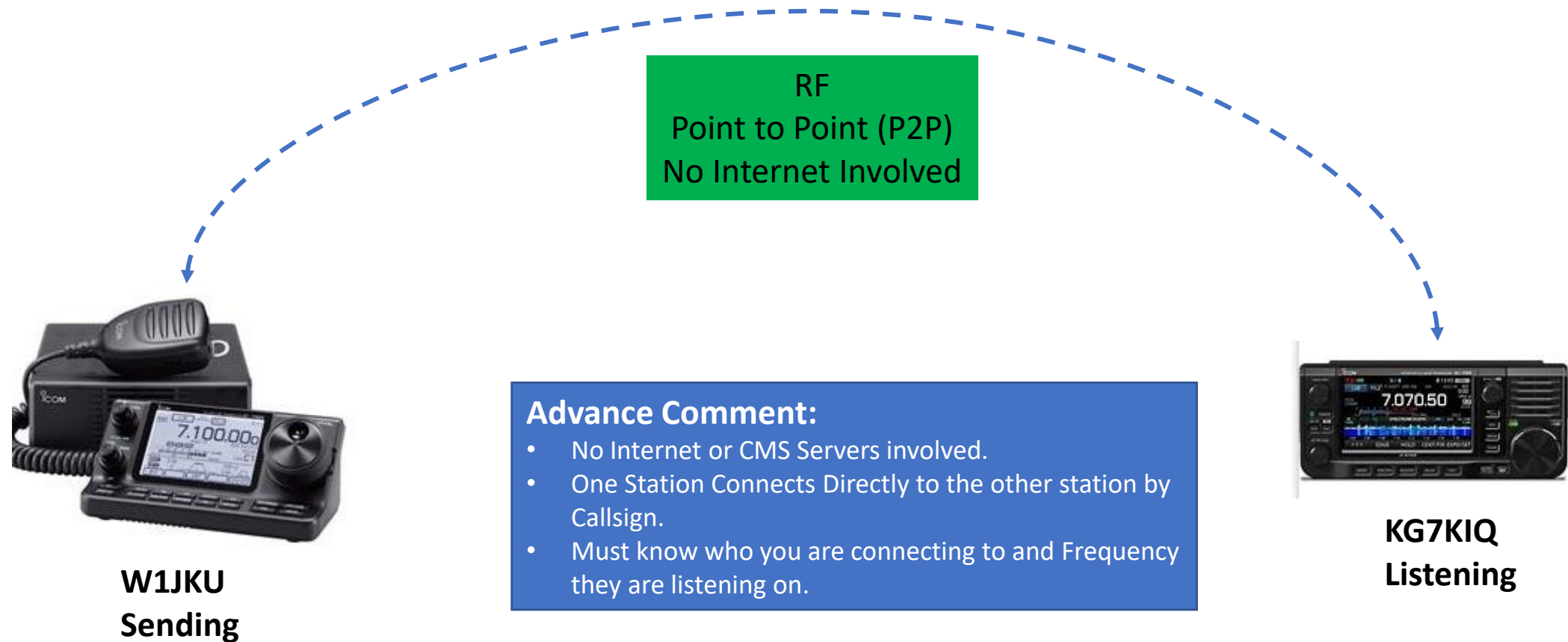


Callsign	Frequency (kHz)	Mode	Grid Square	Hours	Group	Distance (mi)	Bearing (Degrees)	Path Reliability Estimate	Path Quality Estimate
AB4NX	3588.500	V2750	EM74UL	00-23	PUBLIC	27	032	99	99
AB4NX	7103.000	V2750	EM74UL	00-23	PUBLIC	27	032	96	96
AB4NX	28134.000	V2750	EM74UL	00-23	PUBLIC	27	032	82	82
N4BTA	28131.500	V2300	EM74UB	00-23	PUBLIC	16	113	82	82
KC8YJJ	7102.500	V2300	EN90PL	00-23	PUBLIC	485	025	77	51
NM5PB-11	7101.300	V2300	EM48UM	00-23	PUBLIC	439	315	76	51
N2LEE	7103.500	V2300	FM18HX	00-23	PUBLIC	518	048	76	49
KD7UHR	7108.500	V500	EM58BQ	00-23	PUBLIC	431	318	76	51
K3DO	7103.800	V2300	FM19GL	00-23	PUBLIC	537	045	75	49
AK4ZX	3589.000	V2300	EM75KA	00-23	PUBLIC	69	331	74	49
K4FEM	3590.500	V2300	EM74UV	00-23	PUBLIC	53	015	74	49
WM4RB	3598.500	V2750	EM75ME	00-23	PUBLIC	76	342	74	49
N4JGW	3597.000	V2750	EM74LR	00-23	PUBLIC	49	325	74	49
NA1DX	7101.500	V2750	FM18QT	00-23	PUBLIC	544	051	73	48
W6IDS	7084.500	V500	EM79NV	00-23	PUBLIC	397	357	73	49
K4PAR	3586.200	V2300	EM83II	00-23	PUBLIC	91	127	73	48
W6IDS	7061.500	V500	EM79NV	00-23	PUBLIC	397	357	73	49

Advanced Challenge- Send Point to Point (P2P) Message

3. Send P2P Messages.

Weekly Florida P2P Winlink Net: [W4AKH Winlink Net](#) that KJ4UC-Don, KO4IFY-Mark, and W1JKU-Rob participate routinely in



Final Comments

1. If you do not have Winlink Installed, please do so. This is a great tool for all HAMS. You do not need to be a member of ARES, MARS, etc... to take advantage of Winlink
2. Do not send Work related information over Winlink (Same Amateur Radio Restrictions)
3. No Amateur Radio Emails are Secure/Encrypted via Winlink. **Do not send passwords or sensitive info via Winlink that you would not pass over the radio.**
4. Over Lunch in September, Bring our Laptop if you still need help, we will be around to help you install, configure and get Winlink Operational!

Q&A

THANK YOU