Bonner County Amateur Radio Club

November 9, 2022

VFW Post

1325 Pine Street, Sandpoint, ID 83864

18:00 hrs. – Informal Discussions & Eyeball QSO’s

18:30 hrs. - Meeting

Why Are We Here? Per the Bylaws BCARC

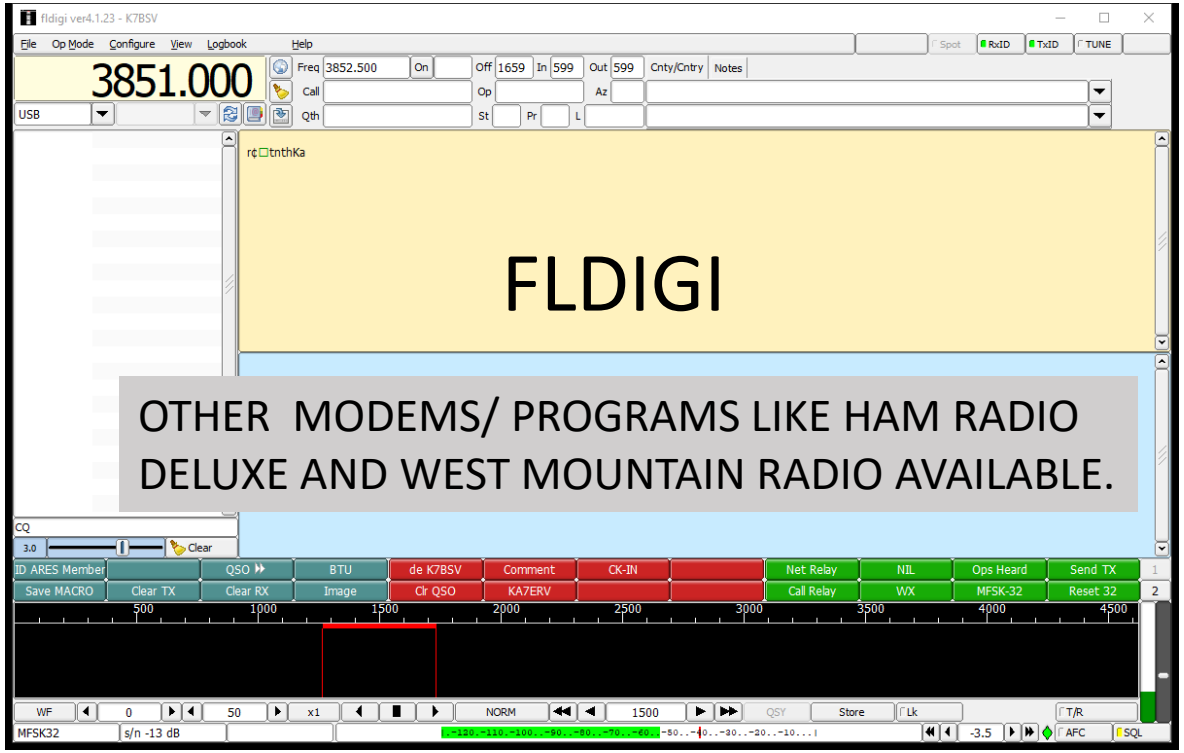
1. *Facilitate communication and fellowship among amateur radio operators*
2. *Increase the number of licensed amateur radio operators through training and community awareness and promote active use of the hobby, and provide assistance to new operators to help them get on the air*

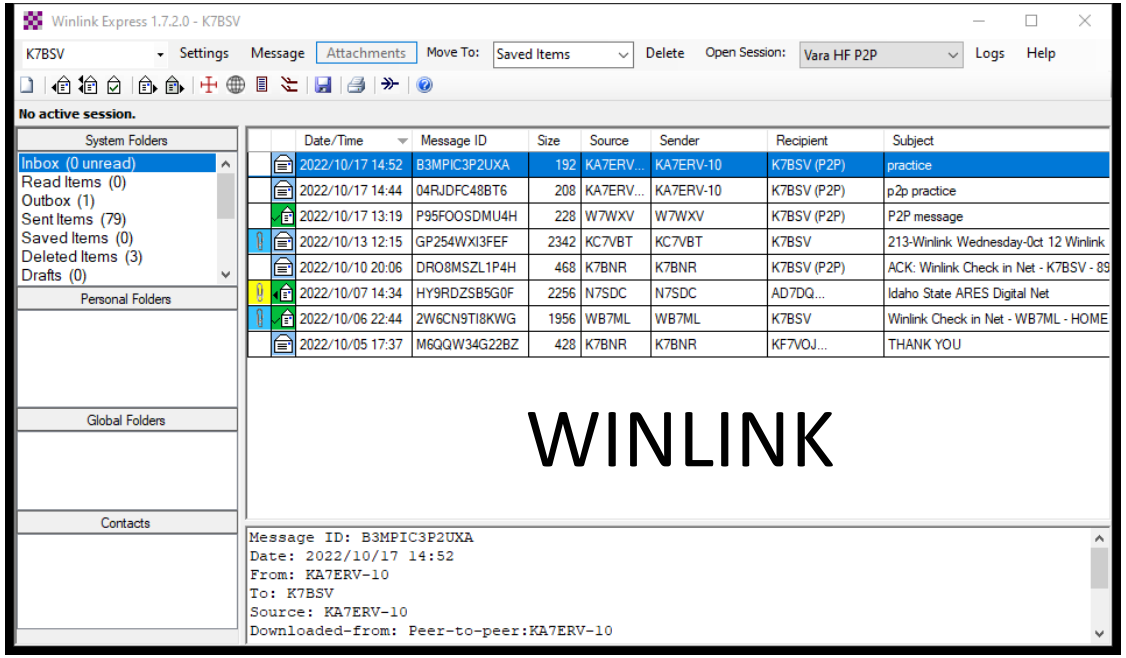
Introductions - Guests, New Members, Members

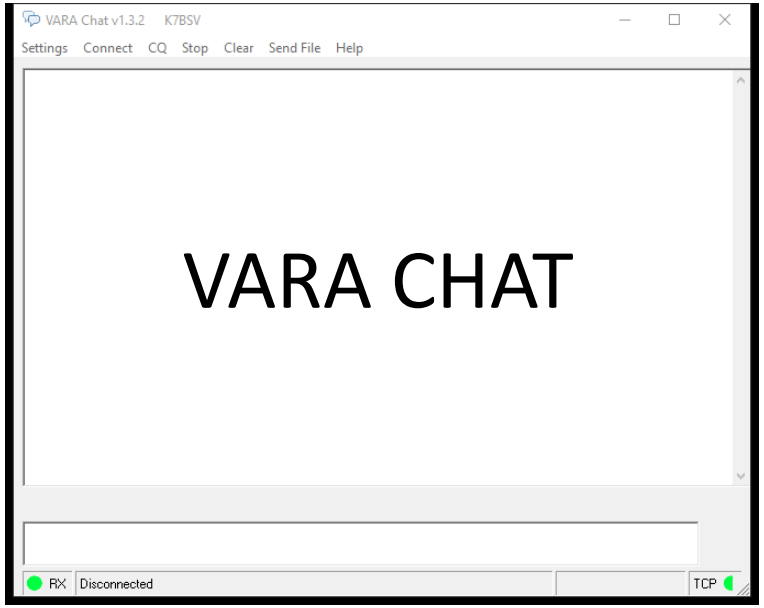
Current Membership
4th Quarter 2022

Total	**44**
Extra	11
General	20
Technician	12
No callsign – studying!	1

DIGITAL MODES for CONVERSATION & MESSAGING





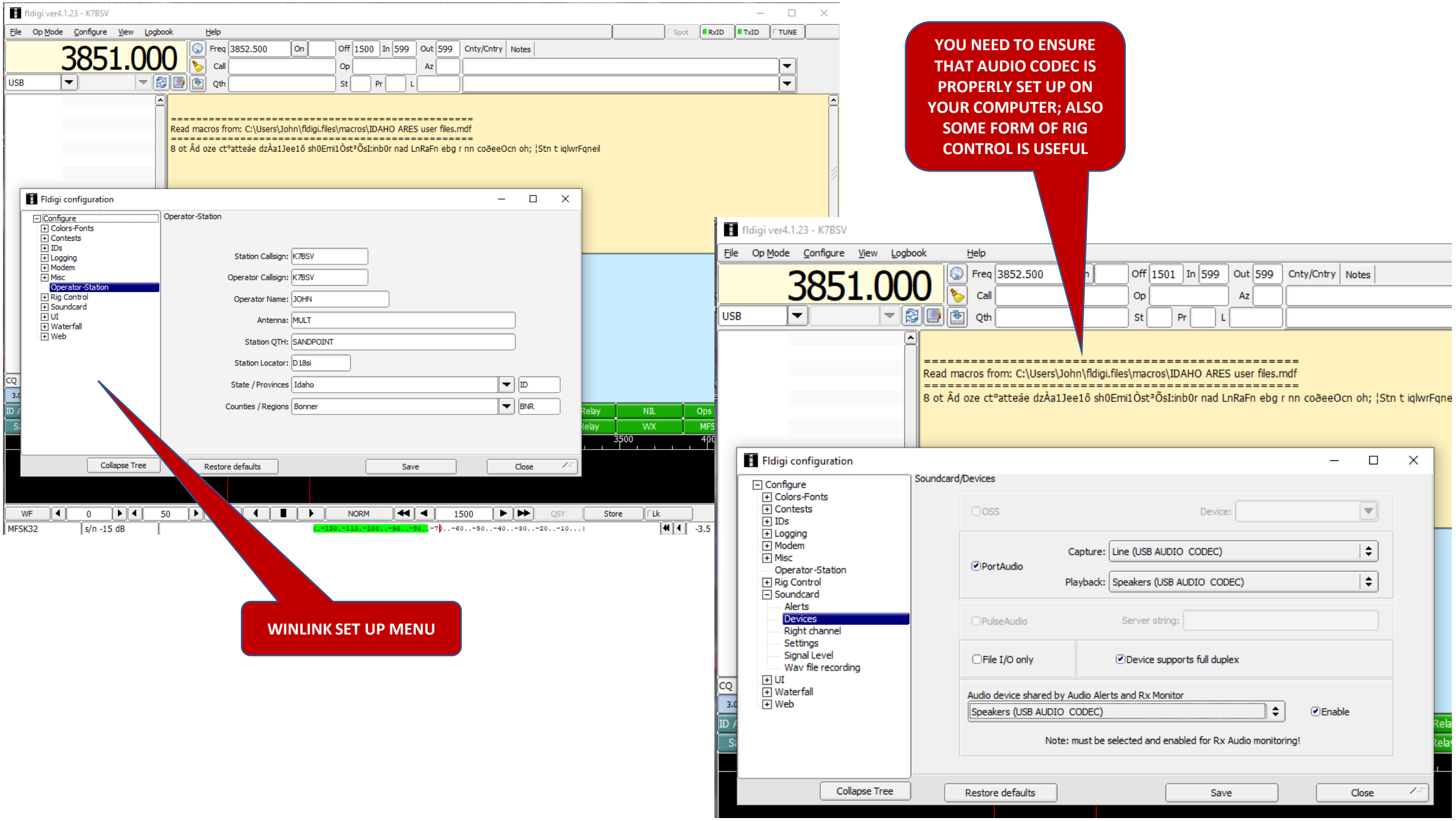


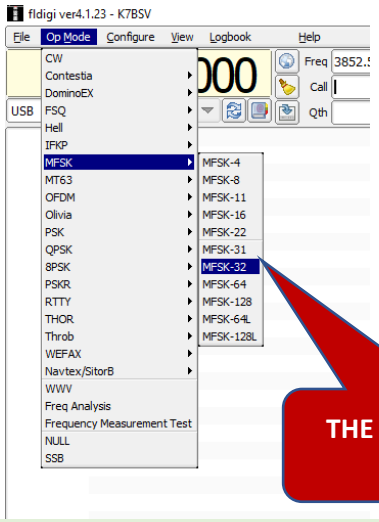
RADIO SETUP

- RADIO SETTINGS – UNIQUE TO EACH RADIO
- NEED A SOUNDCARD LIKE A SIGNALINK OR WEST MTN RADIO UNIT TO CONNECT BETWEEN THE RADIO AND COMPUTER USB PORT.
- SOME RADIOS (IC7200, 7300 AND OTHERS) HAVE A BUILT IN SOUND CARD AND JUST NEED THE USB CABLE
- NEED MODEM SOFTWARE LIKE FLDIGI, HAM RADIO DELUXE, WINLINK, VARA, ETC.

FLDIGI

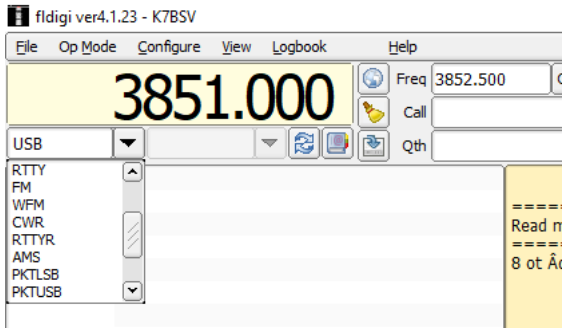
- FREE LIGHT DIGITAL MODEM.
- FREE DOWNLOAD. USED BY MANY HAMS.
- MANY DIGITAL MODES TO CHOOSE FROM (MFSK, FSK, OLIVIA, ETC.).
- ALSO HAS FLMSG (FOR MESSAGE FORMS), FLAMP, FLNET, FLARQ, FLRIG FOR OTHER FUNCTIONALITY – ALL FREE DOWNLOADS.
- USED COMMONLY FOR DIGITAL NETS.
- CAN BE USED WITH ARQ TO PRIMARILY COMMUNICATE WITH ONLY ONE STATION – NOT REAL FAST IN THAT MODE.
- FLAMP IN COMPRESSION MODE WORKS PRETTY WELL STATION TO STATION AND HAS GOOD ERROR CHECKING.


fldigi ver4.1.23 - K7BSV
File Op Mode Configure View Logbook Help
3851.000
Freq 3852.500 On Off 1500 In 599 Out 599 Cnty/Cntry Notes
Call Op Az
Qth St Pr L
USB
Read macros from: C:\Users\John\fldigi.files\macros\IDAHO ARES user files.mdf
8 ot Âd oze ct°atteáe dzÀa1Jee1ô sh0Emi1Òst³ÕsI:inb0r nad LnRaFn ebg r nn coðeeOcn oh; ¦Stn t iqlwrFqneil
Fldigi configuration
Configure
Colors-Fonts
Contests
IDs
Logging
Modem
Misc
Operator-Station
Rig Control
Soundcard
UI
Waterfall
Web
Operator-Station
Station Callsign: K7BSV
Operator Callsign: K7BSV
Operator Name: JOHN
Antenna: MULT
Station QTH: SANDPOINT
Station Locator: D18si
State / Provinces Idaho ID
Counties / Regions Bonner BNR
Collapse Tree
Restore defaults
Save
Close
WINLINK SET UP MENU
YOU NEED TO ENSURE THAT AUDIO CODEC IS PROPERLY SET UP ON YOUR COMPUTER; ALSO SOME FORM OF RIG CONTROL IS USEFUL
fldigi ver4.1.23 - K7BSV
3851.000
Freq 3852.500 Off 1501 In 599 Out 599 Cnty/Cntry Notes
Call Op Az
Qth St Pr L
USB
Read macros from: C:\Users\John\fldigi.files\macros\IDAHO ARES user files.mdf
8 ot Âd oze ct°atteáe dzÀa1Jee1ô sh0Emi1Òst³ÕsI:inb0r nad LnRaFn ebg r nn coðeeOcn oh; ¦Stn t iqlwrFqne
Fldigi configuration
Configure
Colors-Fonts
Contests
IDs
Logging
Modem
Misc
Operator-Station
Rig Control
Soundcard
Alerts
Devices
Right channel
Settings
Signal Level
Wav file recording
UI
Waterfall
Web
Soundcard/Devices
OSS
Device:
PortAudio
Capture: Line (USB AUDIO CODEC)
Playback: Speakers (USB AUDIO CODEC)
PulseAudio
Server string:
File I/O only
Device supports full duplex
Audio device shared by Audio Alerts and Rx Monitor
Speakers (USB AUDIO CODEC)
Enable
Note: must be selected and enabled for Rx Audio monitoring!
Collapse Tree
Restore defaults
Save
Close
WF NORM QSY Store Lk
MFSK32 s/n -15 dB

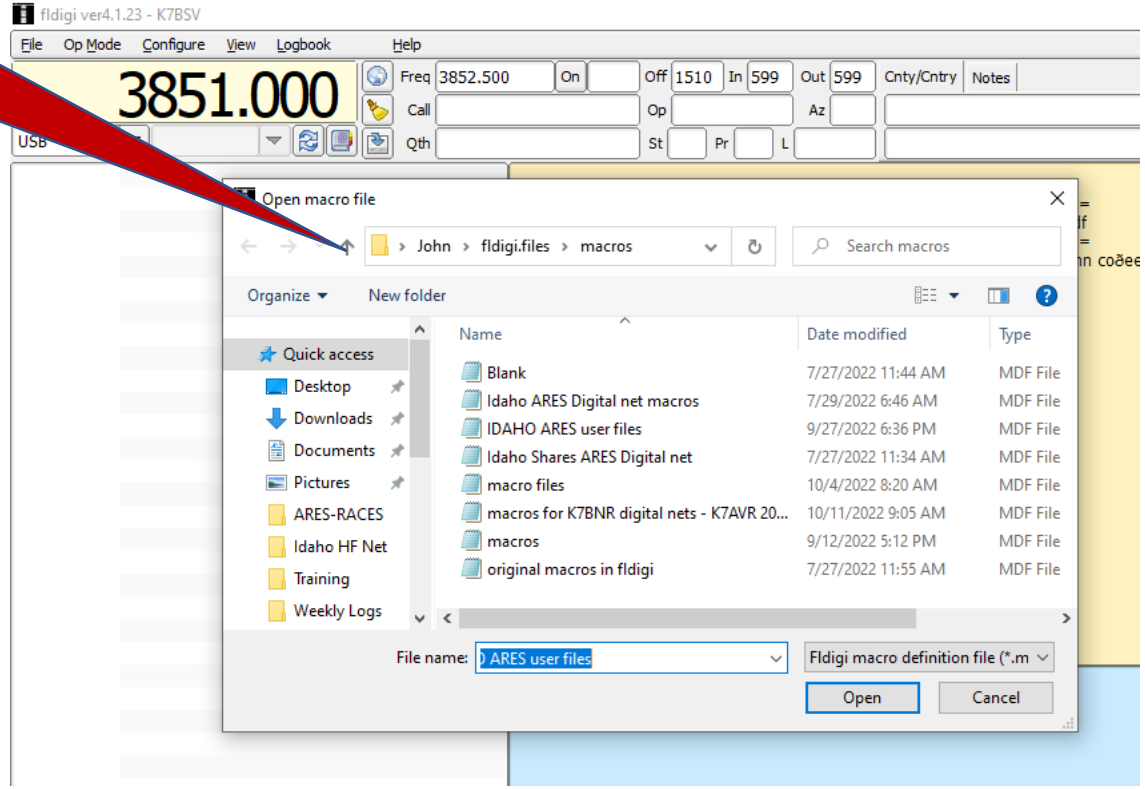


THE OPERATION MODE PULLDOWN

RADIO CONTROL SETTING INFO



MACRO FILES YOU CAN DOWNLOAD OR COPY AND SAVE ARE LOCATED UNDER C: USERS> USERFILE>FLDIGI FILES>MACROS

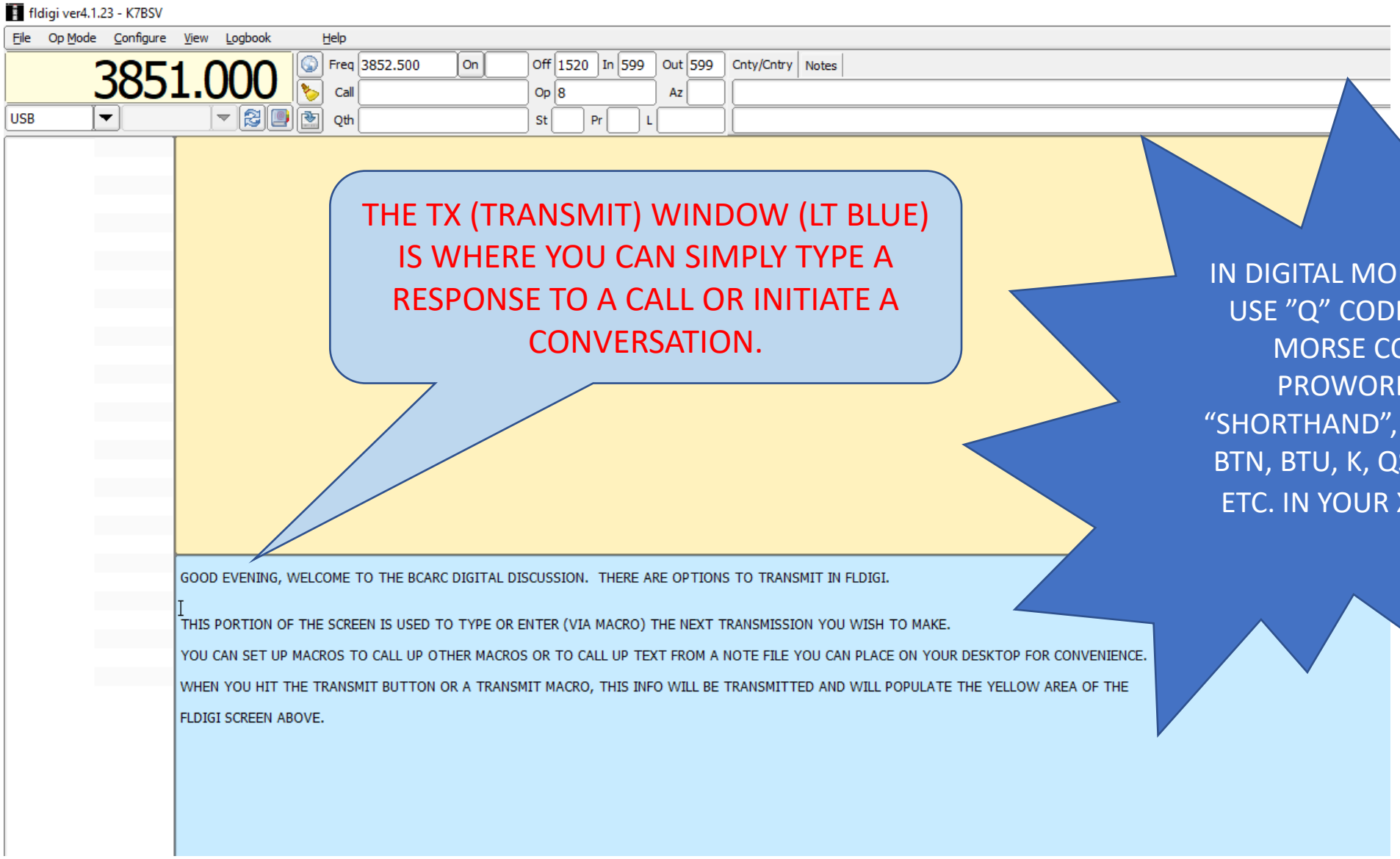


SETTING UP AND USING FLDIGI TAKES SOME EFFORT, BUT THERE IS HELP AVAIL AS WELL AS LOT OF INFO ON THE INTERNET ON HOWTO SET IT UP.

The best way to really get it working is to have a group Zoom or MS Teams session where you can get immediate answers and practice real time.

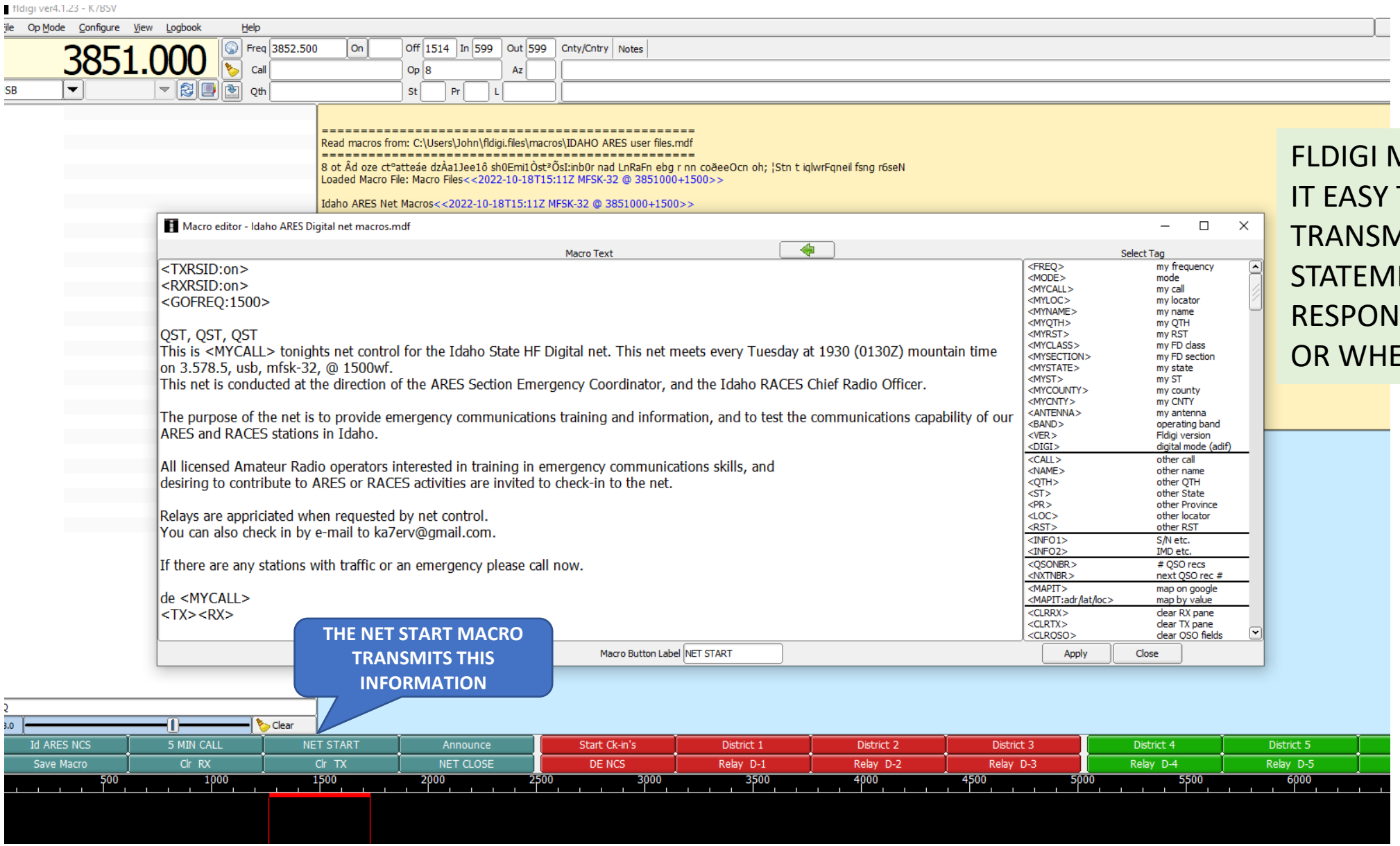
The KA7ERV GROUP meets every M-W-F at 0600 to practice and assist in learning FLDIGI and Winlink:
https://us02web.zoom.us/j/9337452882?pwd=VGE5dHpZVmM0QlJDcnVwVU91RTZhdz09

Meeting ID: 933 745 2882
Passcode: vzV9KE

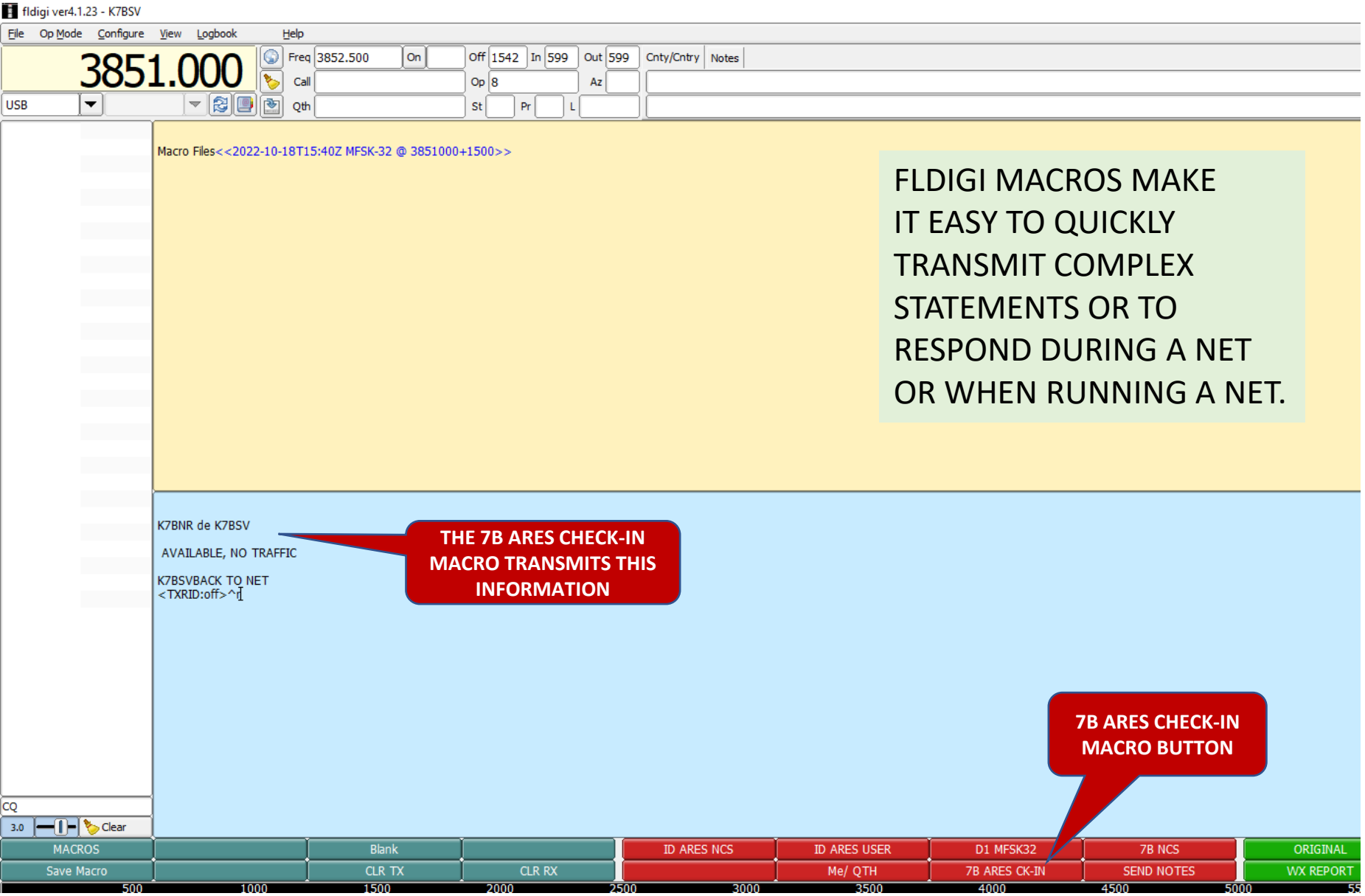


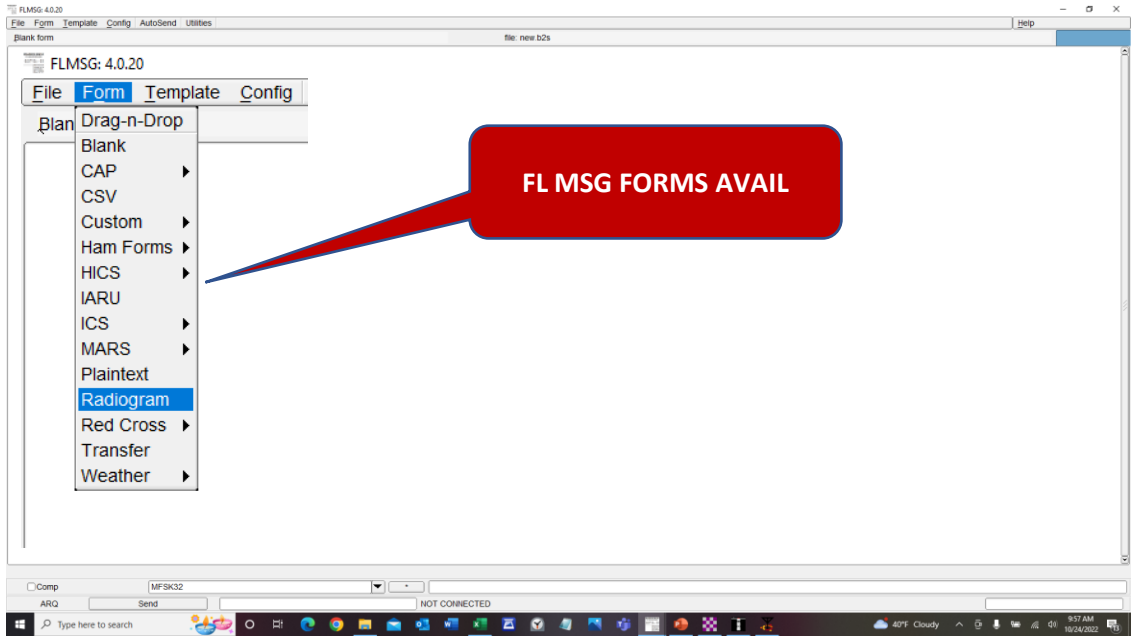
THE TX (TRANSMIT) WINDOW (LT BLUE) IS WHERE YOU CAN SIMPLY TYPE A RESPONSE TO A CALL OR INITIATE A CONVERSATION.

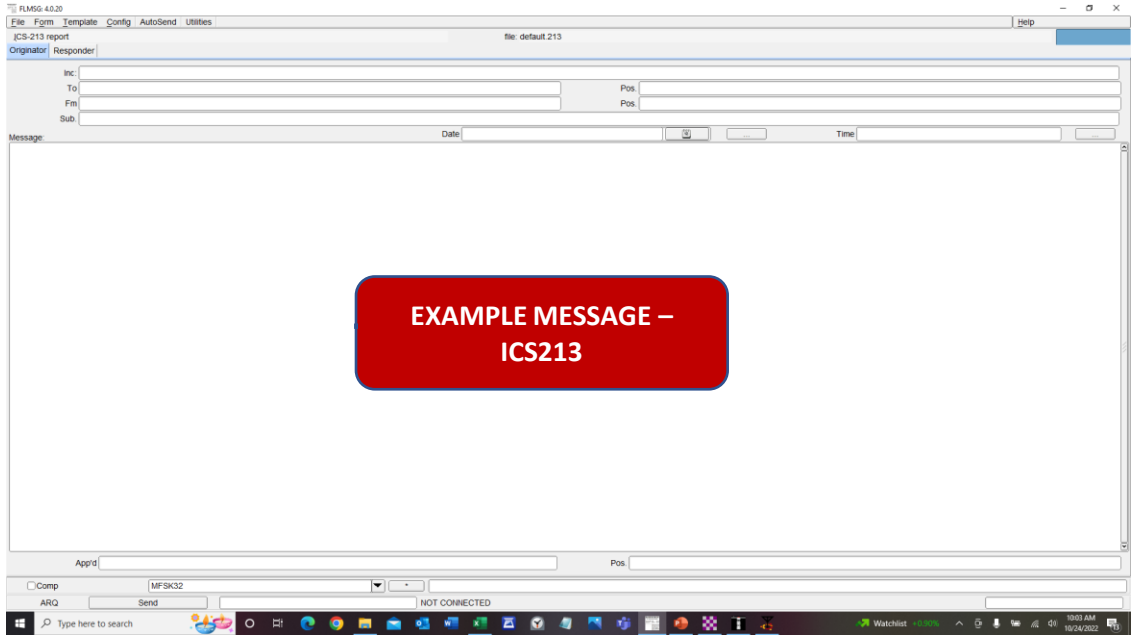
IN DIGITAL MODES YOU USE ”Q” CODES AND MORSE CODE PROWORDS/ “SHORTHAND”, E.G. (DE, BTN, BTU, K, QST, QRU, ETC. IN YOUR XMSNS.

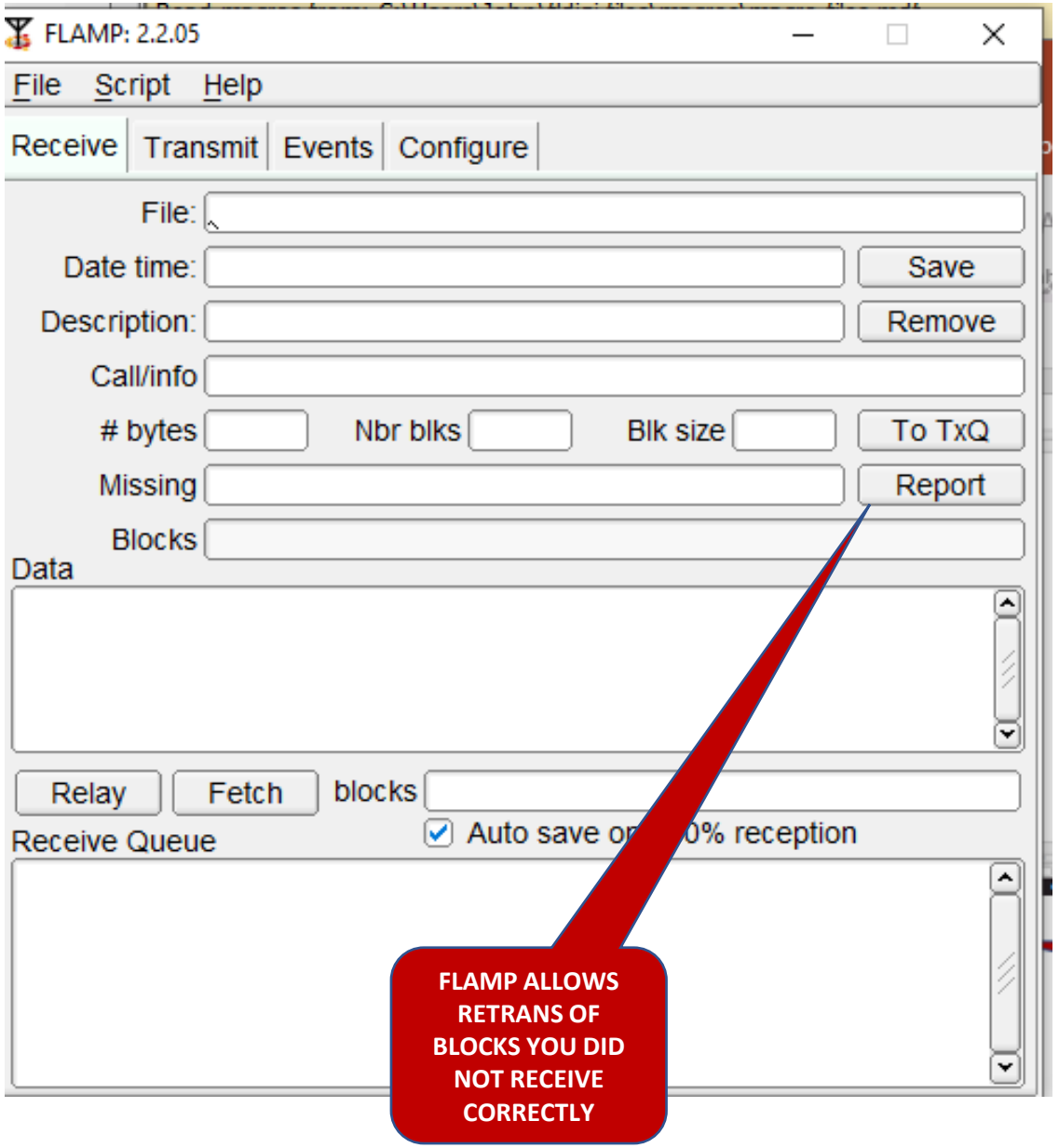


FLDIGI MACROS MAKE IT EASY TO QUICKLY TRANSMIT COMPLEX STATEMENTS OR TO RESPOND DURING A NET OR WHEN RUNNING A NET.


fldigi ver4.1.23 - K7BSV
File Op Mode Configure View Logbook Help
3851.000
Freq 3852.500 On Off 1542 In 599 Out 599 Cnty/Cntry Notes
Call Op 8 Az
USB Qth St Pr L
Macro Files<<2022-10-18T15:40Z MFSK-32 @ 3851000+1500>>
FLDIGI MACROS MAKE IT EASY TO QUICKLY TRANSMIT COMPLEX STATEMENTS OR TO RESPOND DURING A NET OR WHEN RUNNING A NET.
K7BNR de K7BSV
AVAILABLE, NO TRAFFIC
K7BSVBACK TO NET
<TXRID:off>^r
THE 7B ARES CHECK-IN MACRO TRANSMITS THIS INFORMATION
7B ARES CHECK-IN MACRO BUTTON
CQ
3.0 Clear
MACROS Blank ID ARES NCS ID ARES USER D1 MFSK32 7B NCS ORIGINAL
Save Macro CLR TX CLR RX Me/ QTH 7B ARES CK-IN SEND NOTES WX REPORT
500 1000 1500 2000 2500 3000 3500 4000 4500 5000


FLMSG: 4.0.20
File Form Template Config
Drag-n-Drop
Blank
CAP
CSV
Custom
Ham Forms
HICS
IARU
ICS
MARS
Plaintext
Radiogram
Red Cross
Transfer
Weather
FL MSG FORMS AVAIL


EXAMPLE MESSAGE – ICS213


FLAMP: 2.2.05
File Script Help
Receive Transmit Events Configure
File:
Date time:
Save
Description:
Remove
Call/info
bytes
Nbr blks
Blk size
To TxQ
Missing
Report
Blocks
Data
Relay
Fetch
blocks
Receive Queue
Auto save on
% reception
FLAMP ALLOWS RETRANS OF BLOCKS YOU DID NOT RECEIVE CORRECTLY

WINLINK

- WINLINK - FREE DOWNLOAD
- WORKS INTERNET ONLY, RADIO TO INTERNET GATEWAY OR IN VARIOUS RADIO ONLY MODES.
- WORKS WITH PACKET, ARDOP, PACTOR, VARA.
- WINLINK WEB SITE HAS TOOLS AND MAPS SHOWING LOCATIONS OF VARIOUS GATEWAYS WORLDWIDE.
- **NOTE: ALL MESSAGES SENT OVER THE RADIO VIA WINLINK ARE LOGGED ON THE WINLINK WEBSITE. THOSE MESSAGES ARE FULLY ACCESSIBLE TO ANYONE WITH A WINLINK ACCOUNT.**
- WINLINK VARA:

  -VARA BECOMING QUITE POPULAR. VERY FAST AND WORKS WELL WITH TOUGH BAND CONDITIONS.

  BASIC VARA RUNS AT 10% OF THE MAXIMUM SPEED. TO GET FULL SPEED CONNECTIONS, A ONE TIME $69 PAYMENT FOR A REGISTRATION KEY IS REQUIRED.
- PACKET (AX.25): STILL IN USE, BUT IS SLOWLY PHASING OUT – OLDER TECHNOLOGY
- ARDOP: REQUIRES ADDITIONAL SET UP – HAVEN'T TRIED IT YET.

  LINK: WinLink HF Ardop – An Illustrated Guide (ae8q.com)
- PACTOR REQUIRES AN EXPENSIVE MODEM TO USE.

Winlink Accounts...

...are created with a client program. ***You can not create one here.***

We require

- A valid amateur radio license, or
- a license from a participating government service or agency. ***Ship station, marine or general radiotelephone licenses DO NOT qualify.***

How To Get an Account

- Download, install and configure any client software. We suggest Winlink Express. Study its help about installation and use.
- **If using Winlink Express,** with an internet connection fill out the form presented on first startup 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!

If you use a different program than Winlink Express:

- Follow the program's help or instructions to configure it for your callsign and use. Connect with the system (sending a message via Telnet is okay) to create your account. *Do not use a password on your first*

My Account

Username (Callsign) *

Enter your Winlink Global Radio Email username.

Password *

Enter the password that accompanies your username.

Log in

Password Assignments & Recovery

Forgot your Winlink password?
We will send it to your account password recovery address, or your *@winlink.org* address if you have not supplied one.

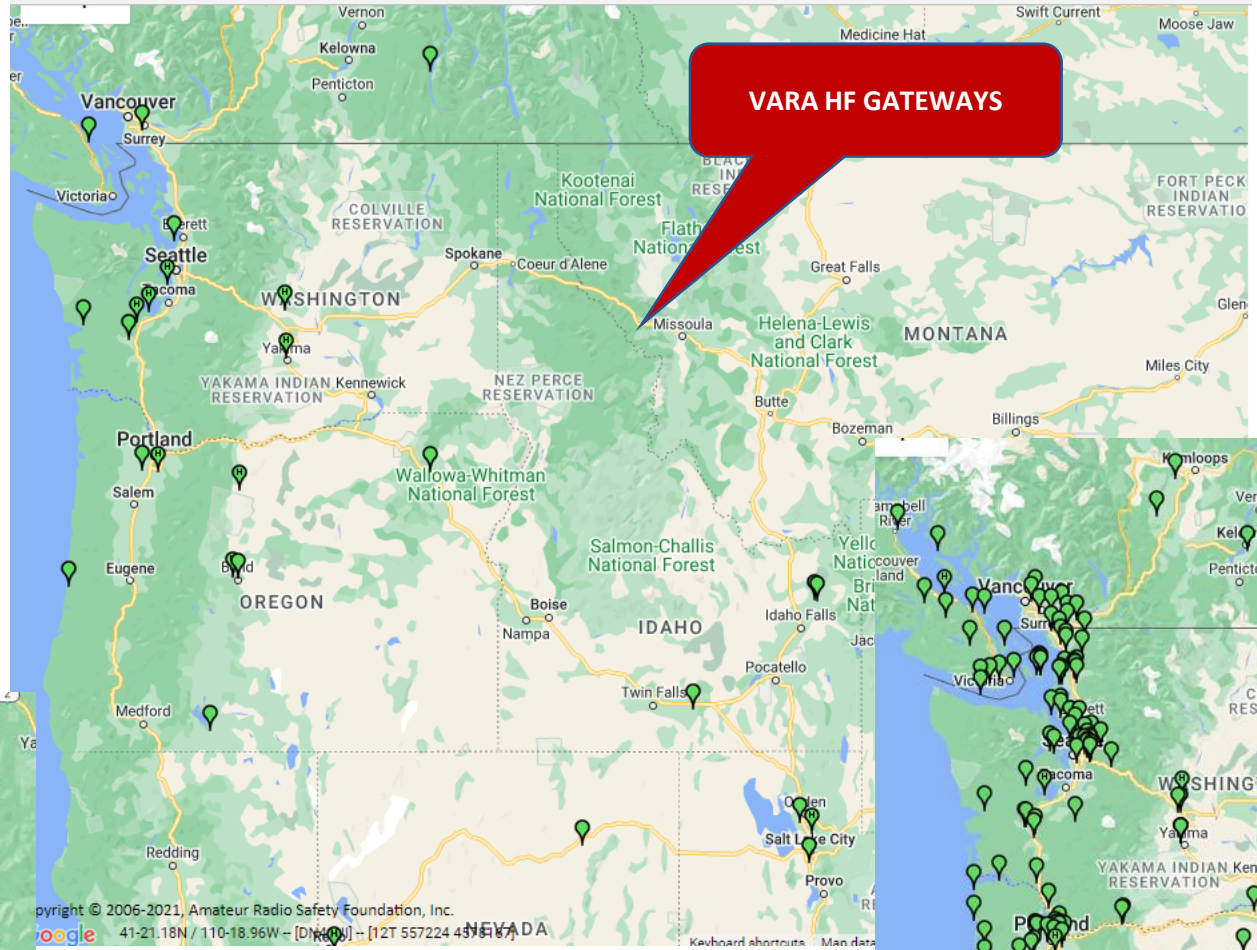
Callsign (Username) *

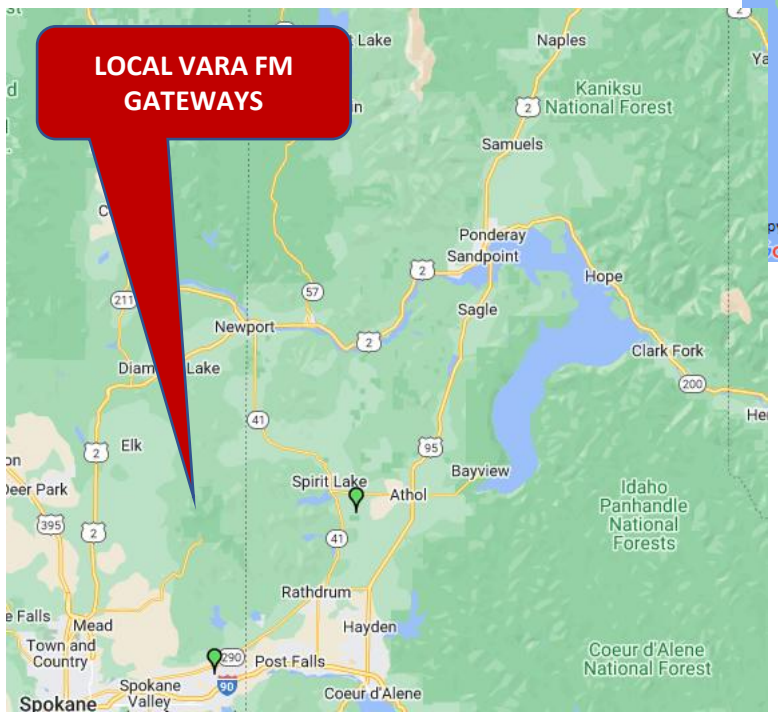
Send my password

Complete Password Reset

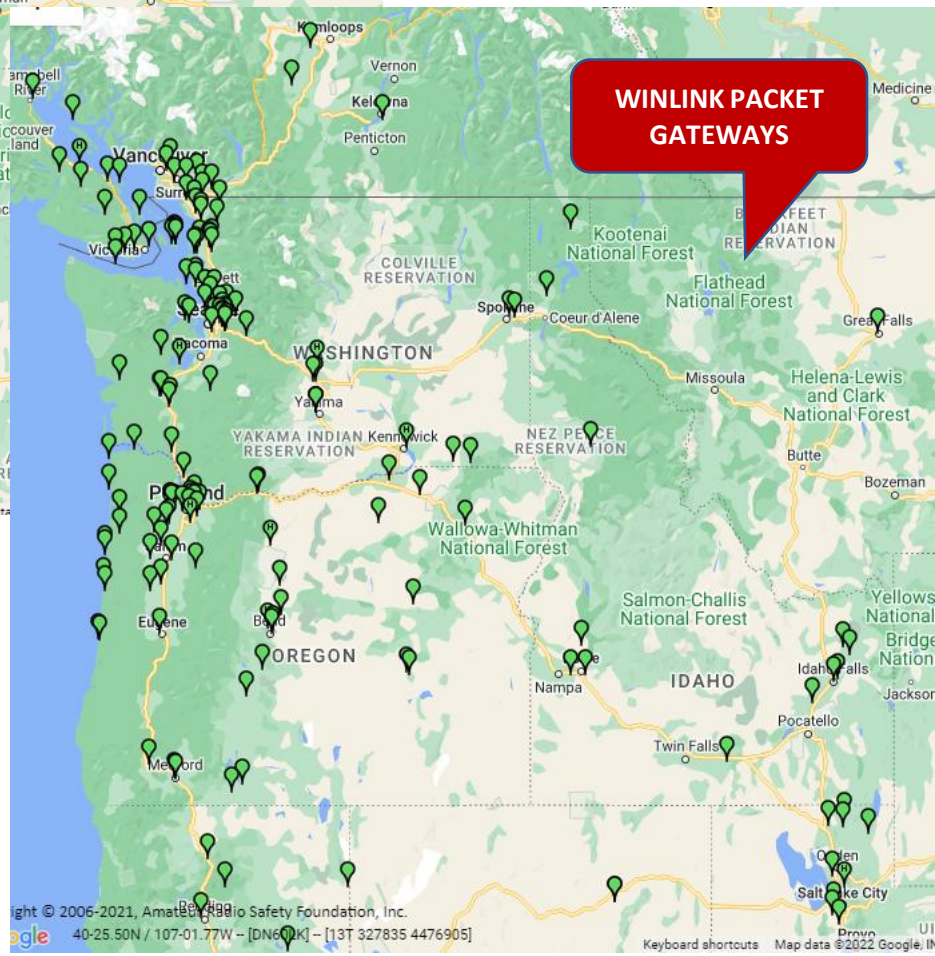
By using this website or by maintaining a radio email account, you agree that we may set cookies for purposes of customizing content and user convenience. You also agree to the Winlink Global Radio Email® Terms and Conditions of Use and Privacy Policy. I understand and agree.

In the Winlink “Tools” menu you can get maps showing various types of Winlink gateways: VARA, ARDOP, PACTOR, Packet

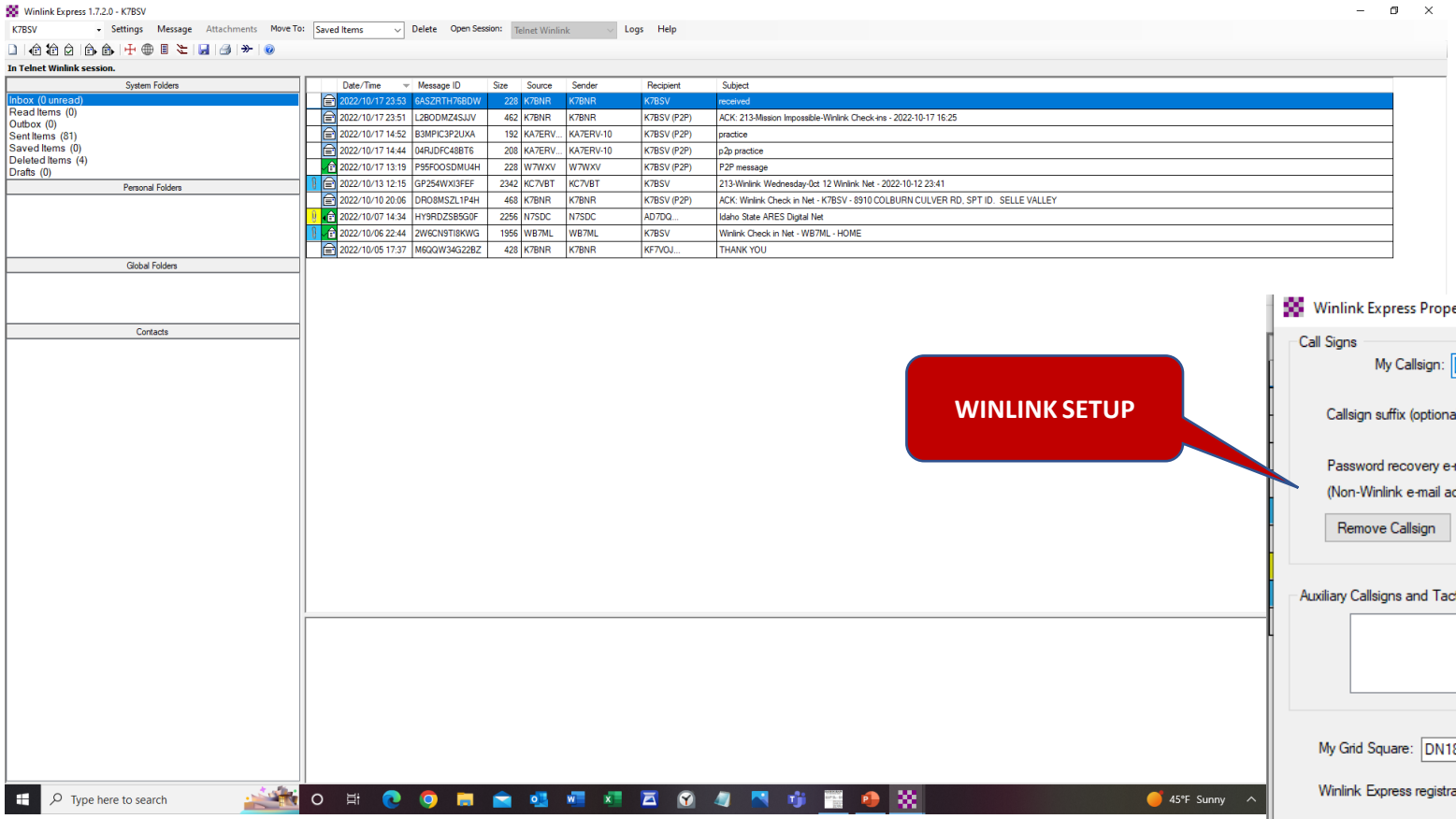




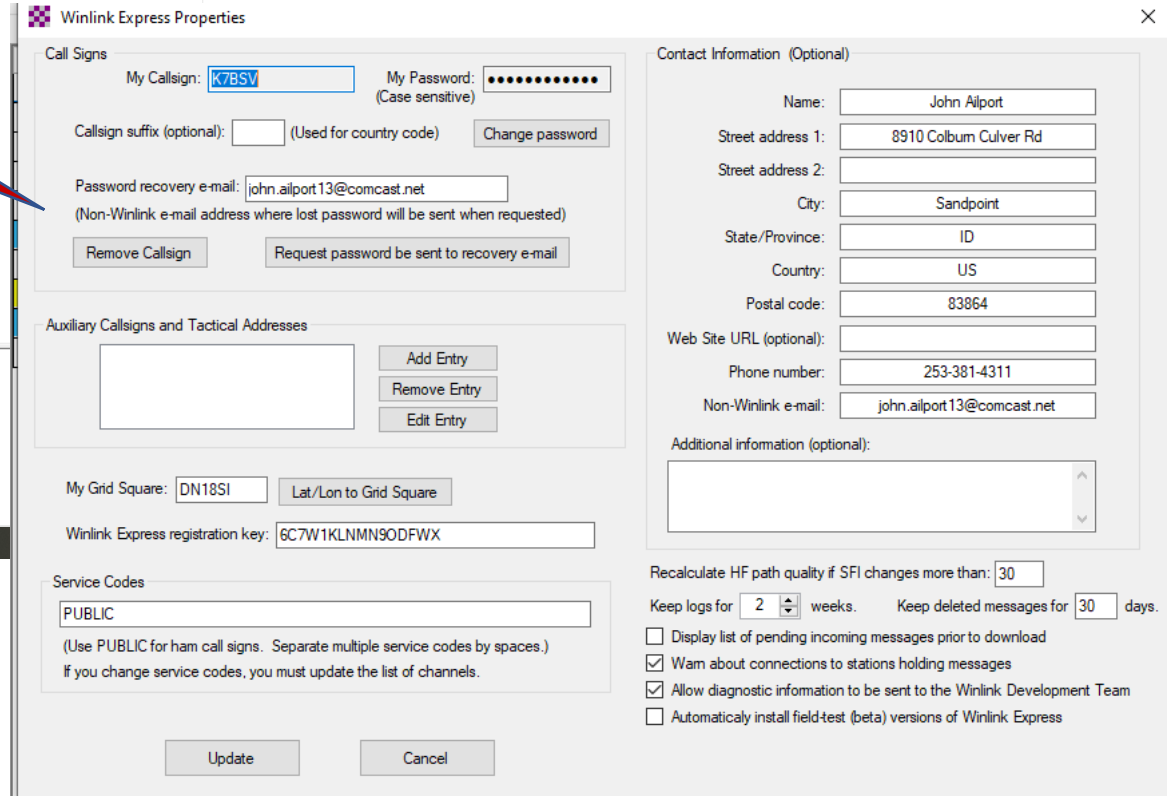
NOTE: There a a lot more packet gateways than VARA gateways because packet has been around 40 years..

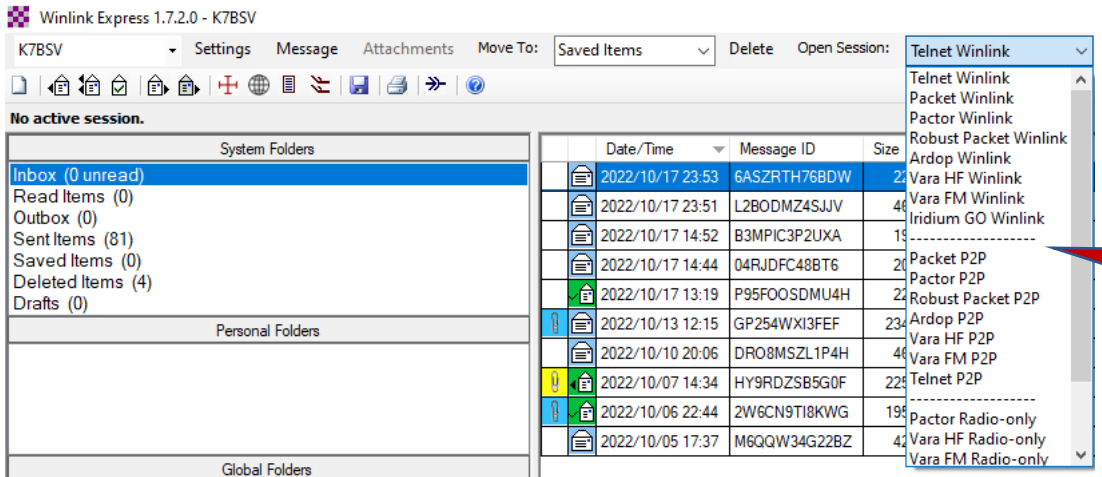


WINLINK EXPRESS IS COMMONLY USED; AND THE GENERALLY PREFERRED SW.

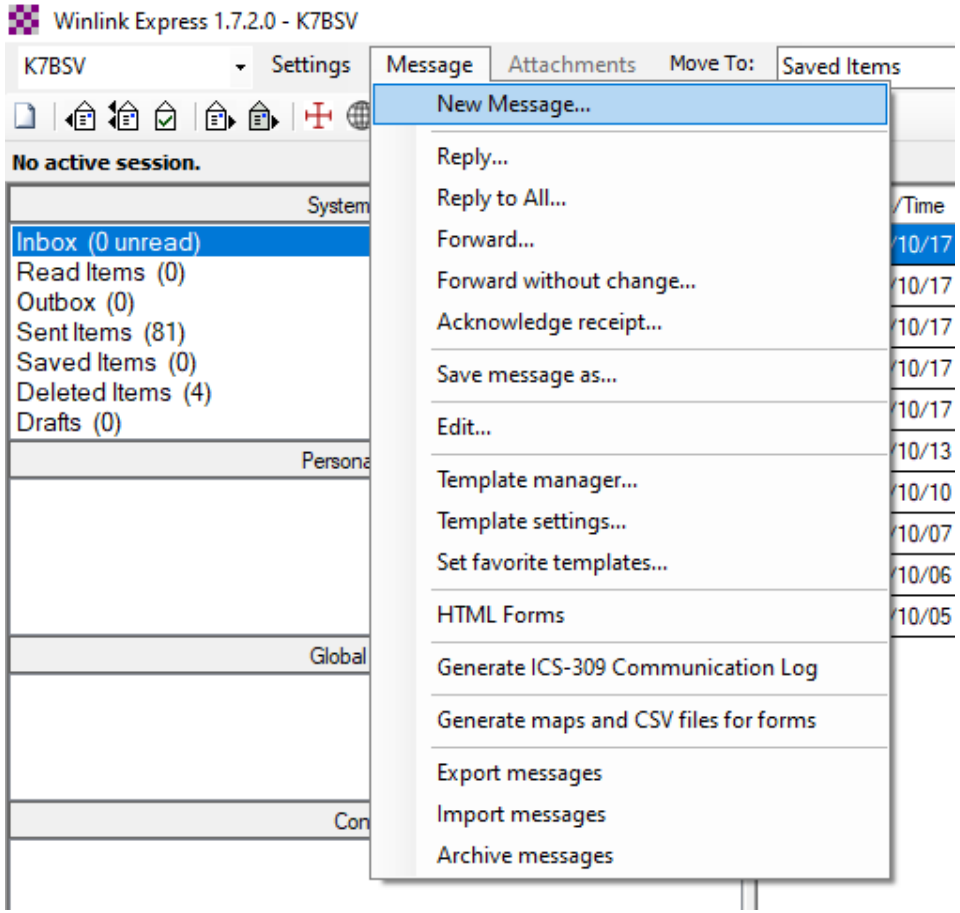


WINLINK SETUP

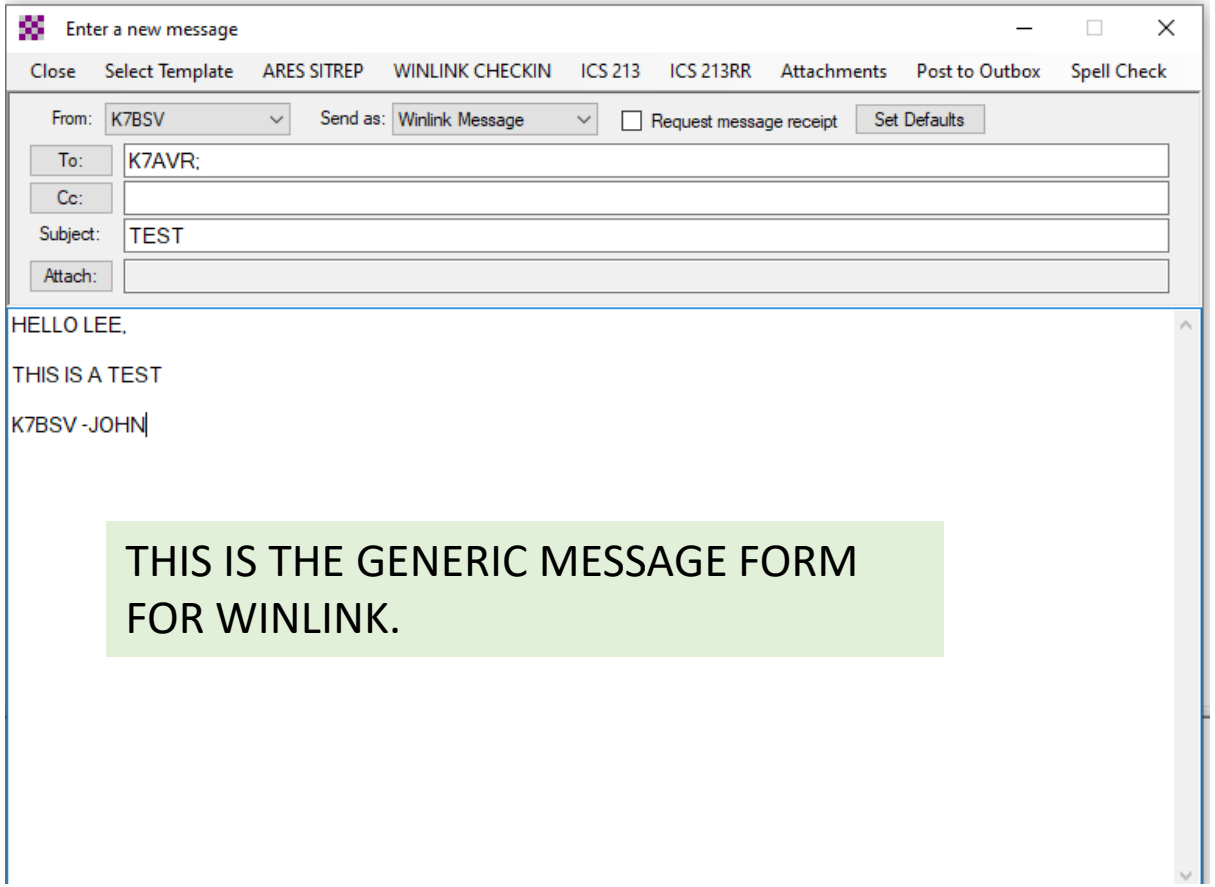




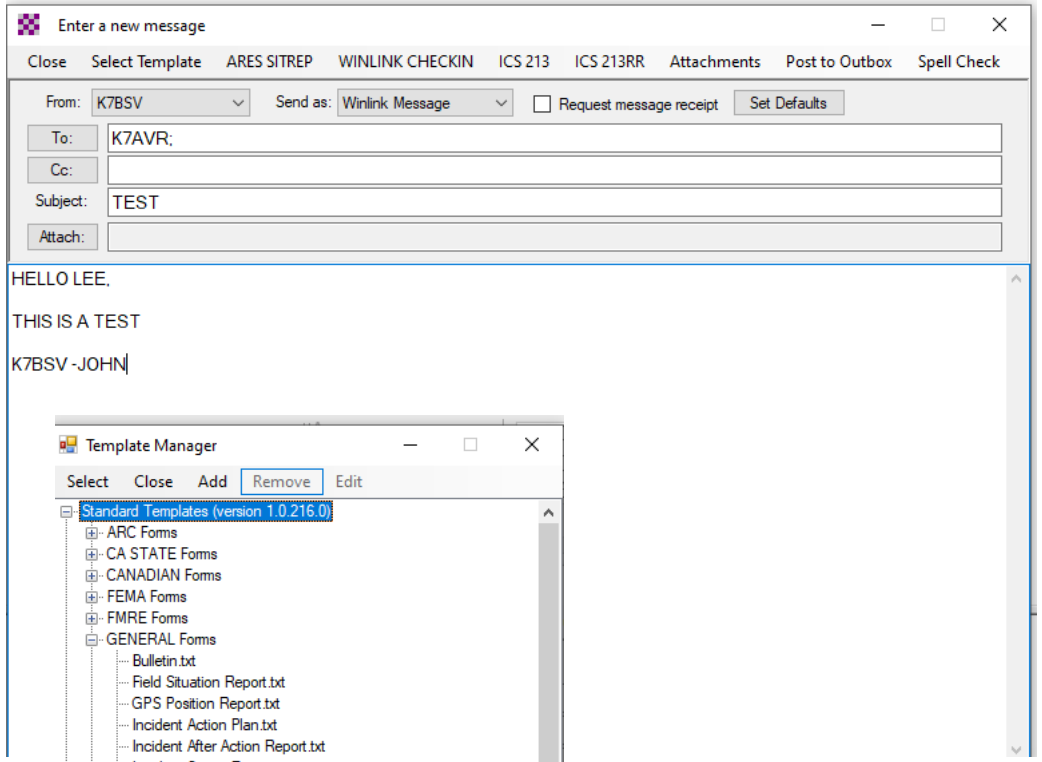
OPTIONS FOR OPENING A "SESSION" IN WINLINK – A SESSION USES ONE OF THESE MODEM TYPES

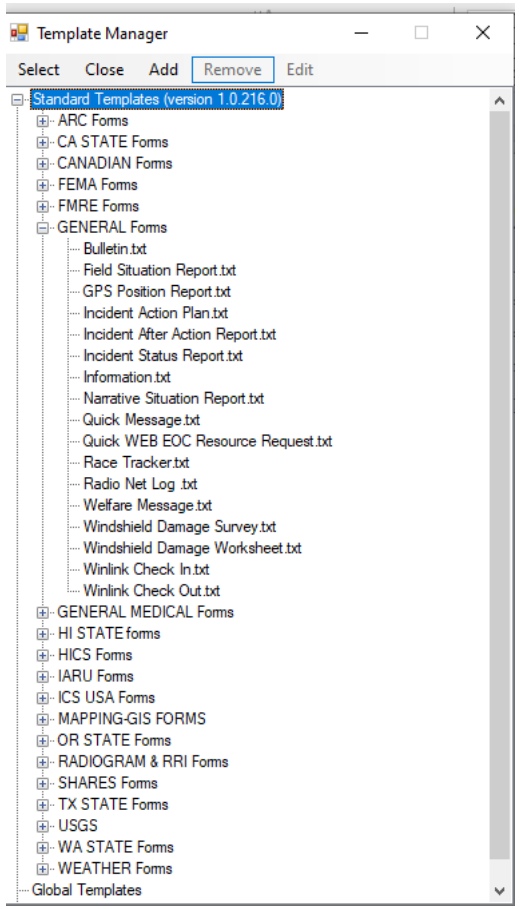


NEW MESSAGE SCREEN

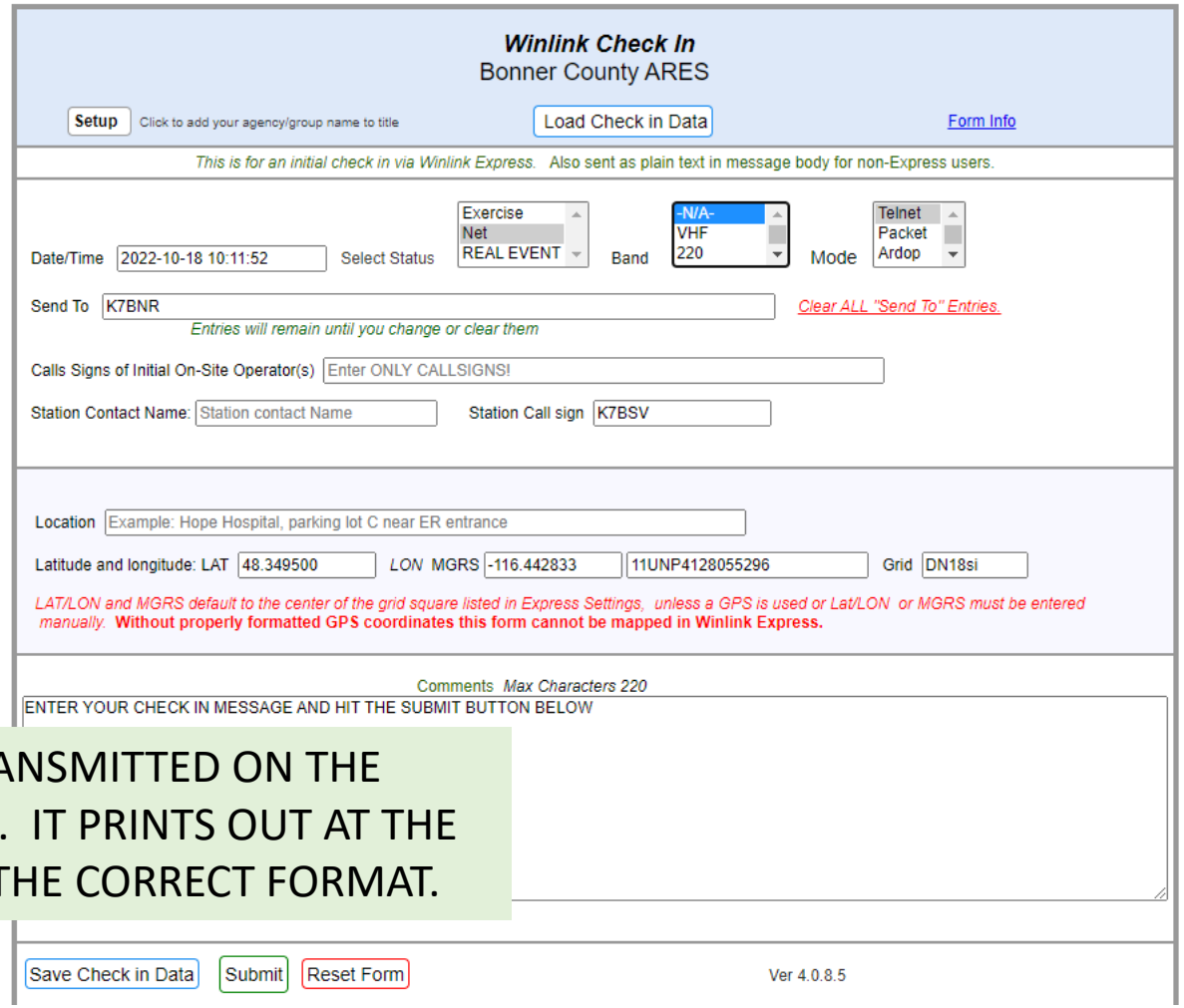


THIS IS THE GENERIC MESSAGE FORM FOR WINLINK.



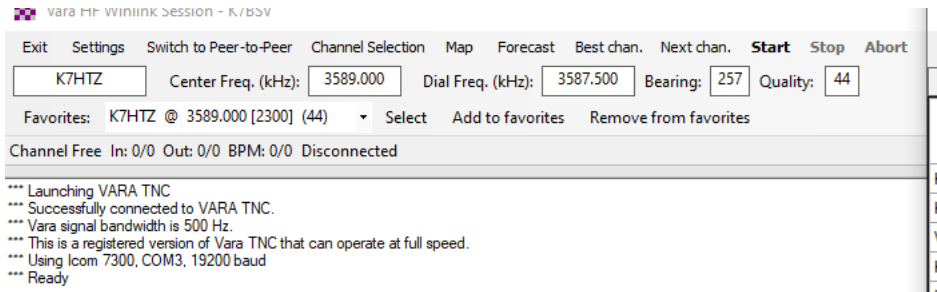


THE NEW MESSAGE MENU OPTION TAKES YOU TO THESE OPTIONS. THE WINLINK CHECK-IN IS JUST ONE OPTIONAL FORM.



THE DATA IS TRANSMITTED ON THE GENERIC FORM. IT PRINTS OUT AT THE OTHER END IN THE CORRECT FORMAT.

WINLINK TELNET SCREEN



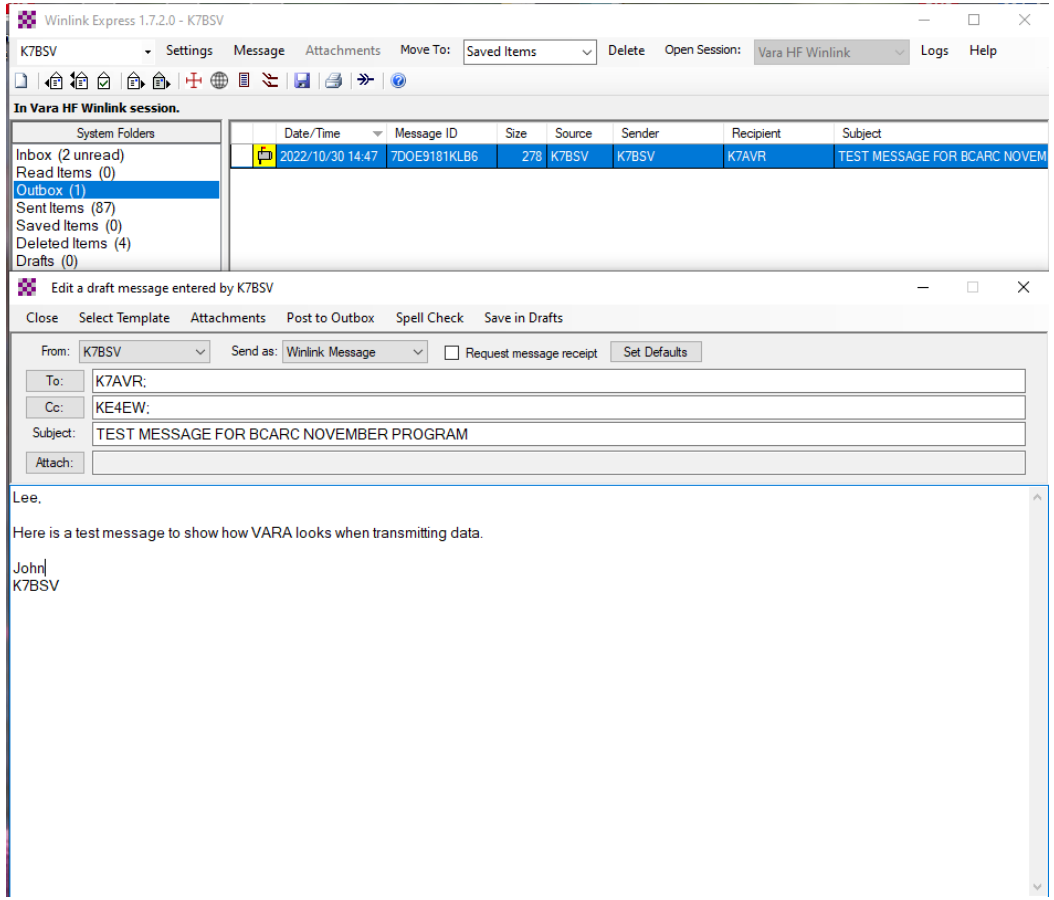
VARA HF CHANNEL SELECTION

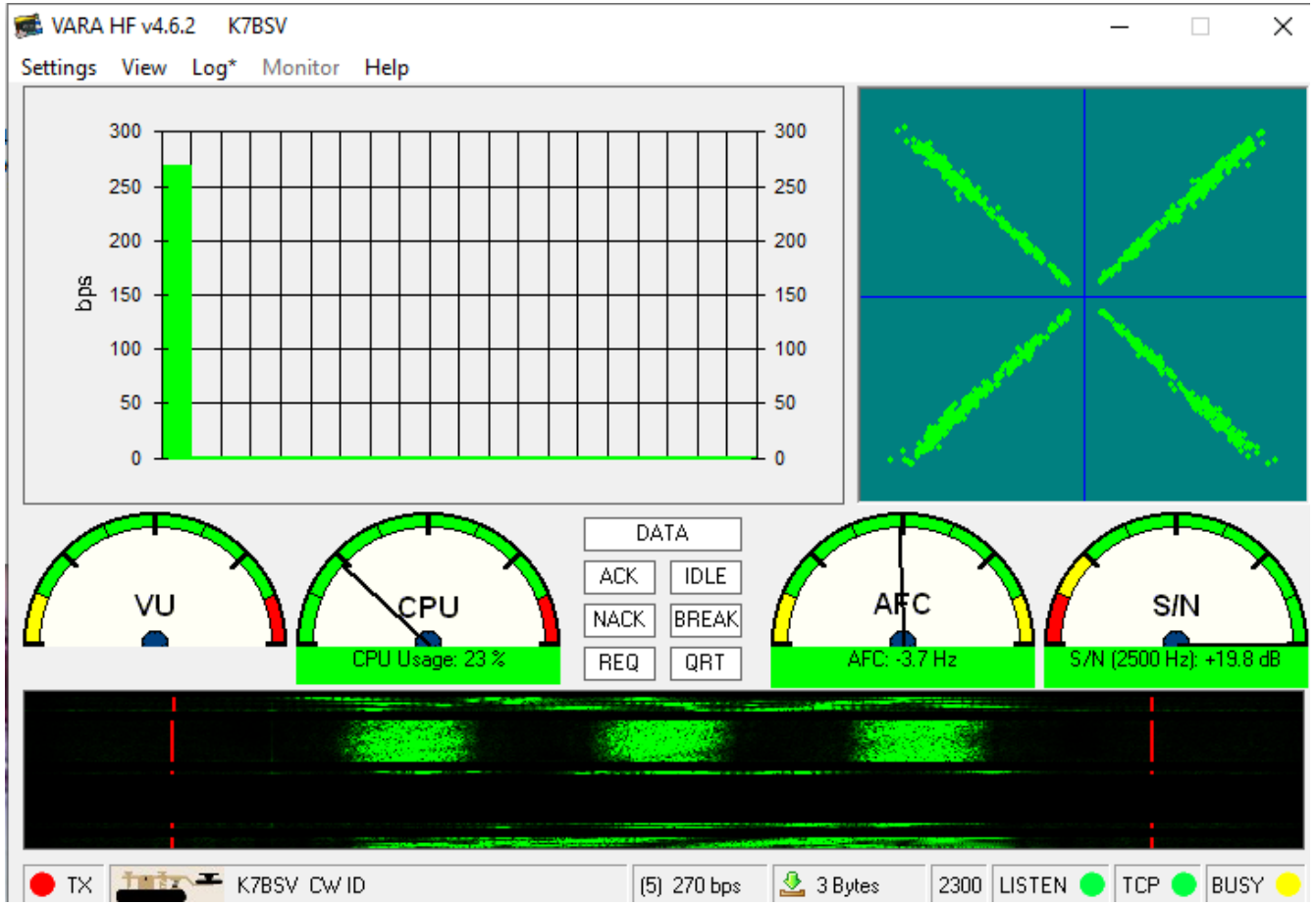
HF Channel Selector

Exit Select Update Via Internet Update Via Radio Map Forecast SFI All RMS

Callsign	Frequency (kHz)	Mode	Grid Square	Hours	Group	Distance (km)	Bearing (Degrees)	Path Reliability Estimate	Path Quality Estimate
K7UNI	7102.000	V2300	DN05WH	00-23	PUBLIC	361	201	79	55
K7RHT	7101.700	V2300	CN97RD	00-23	PUBLIC	333	248	78	55
VA7DEP	7088.500	V2300	CN89ND	00-23	PUBLIC	478	283	78	54
K7NHV	7103.700	V2300	CN87SK	00-23	PUBLIC	458	259	78	54
K7HTZ	7102.700	V2300	CN87OD	00-23	PUBLIC	491	257	78	53
W7PLC	7101.900	V2300	CN87MA	00-23	PUBLIC	508	256	77	52
N7LEW	7103.500	V2300	CN94HC	00-23	PUBLIC	605	220	77	48
KG7AV	7103.500	V2300	CN94IB	00-23	PUBLIC	604	220	77	48
VA7PF	7064.500	V2300	CN89CA	00-23	PUBLIC	543	281	77	52
KF7RFI	7101.800	V2300	CN95IC	00-23	PUBLIC	515	227	76	51
VE6HM	7064.500	V2300	DO33HM	00-23	PUBLIC	613	019	73	49
VA7EDG	3592.500	V2300	DN09WS	00-23	PUBLIC	199	323	73	50
KD7ZDO	7103.000	V2300	CN85QH	00-23	PUBLIC	578	237	72	48
K7RHT	3586.500	V2300	CN97RD	00-23	PUBLIC	333	248	72	50
N7TRY-2	7100.000	V2300	CN85NI	00-23	PUBLIC	590	238	71	48
AG7MM	7103.500	V2300	DN32CM	00-23	PUBLIC	680	161	69	45
N7YRC	3550.000	V500	CN96RO	00-23	PUBLIC	363	239	69	48
K7UNI	3595.000	V2300	DN05WH	00-23	PUBLIC	361	201	68	48
K7UNI	3584.000	V500	DN05WH	00-23	PUBLIC	361	201	68	48
KF7RSF	10146.500	V2300	CN73SC	00-23	PUBLIC	851	230	66	45
K7DAE	7106.000	V500	DN43CT	00-23	PUBLIC	619	143	65	45

VARA HF SCREEN





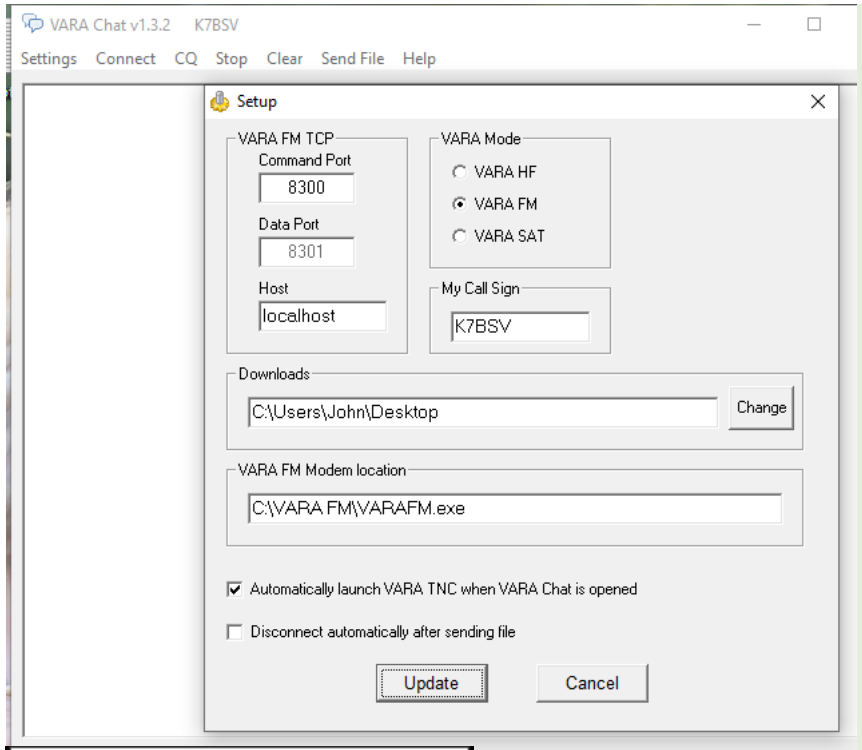
VARA CHAT IS FAIRLY NEW. IT FEATURES KEYBOARD TO KEYBOARD CHAT.

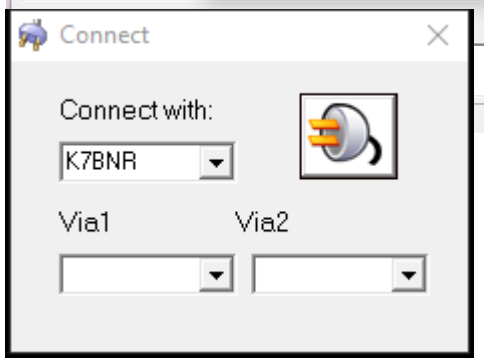
YOU CONNECT PEER TO PEER. OTHERS USING VARA CHAT CAN MONITOR WHAT YOU KEYBOARD, LIKE FLDIGI.

WHEN YOU ARE CONNECTED YOU CAN ALSO SEND A FILE. ONLY THE RECIPIENT GETS THE BODY OF THE FILE IN CLEAR TEXT, OTHERS JUST GET GIBBERISH. THEY DO SEE THE TO, FROM AND SUBJECT OF THE MSG IN THE CLEAR.

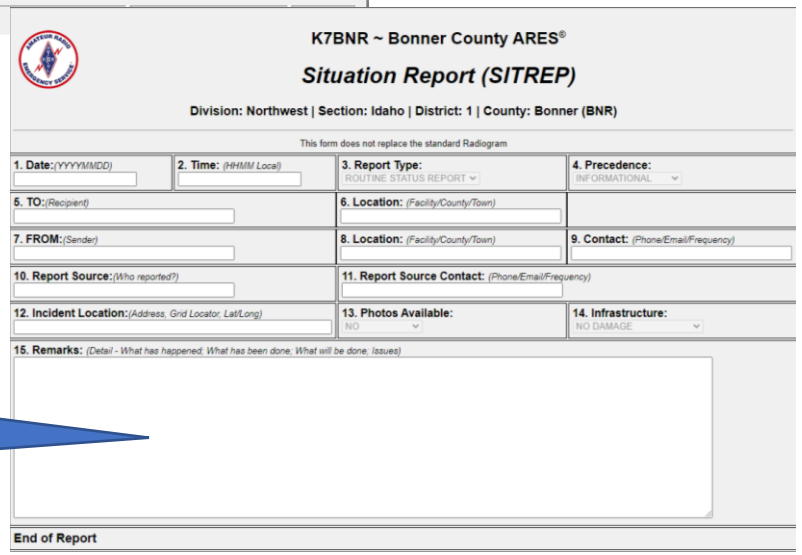
YOU CAN USE HF, FM OR SAT.

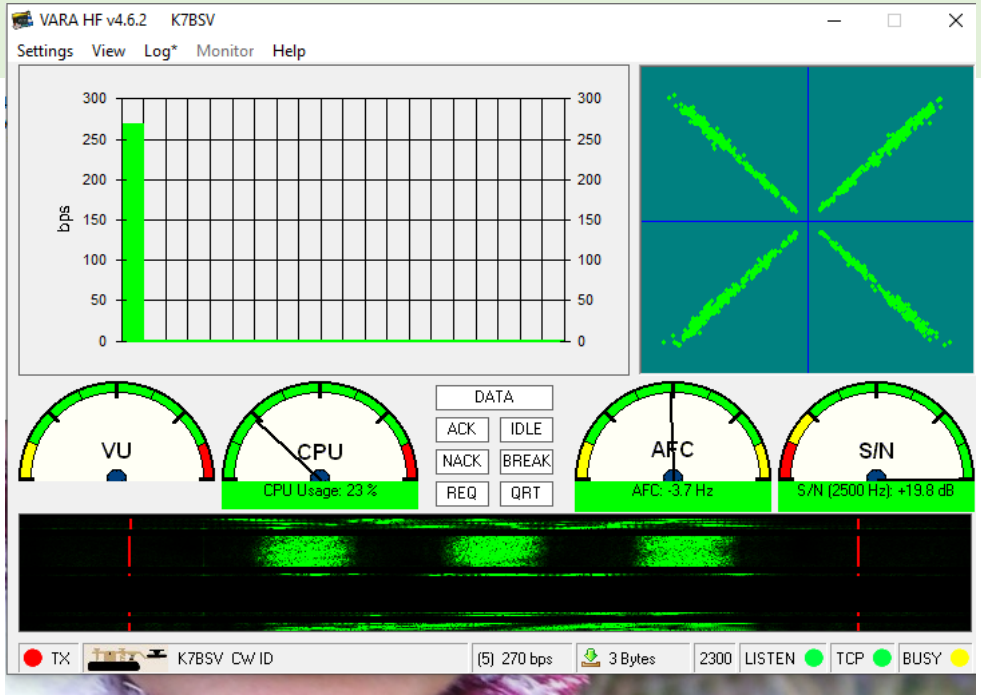
LIKE VARA P2P, EXCEPT THE MESSAGE DOES NOT SHOW UP ON THE WINLINK WEB SITE.





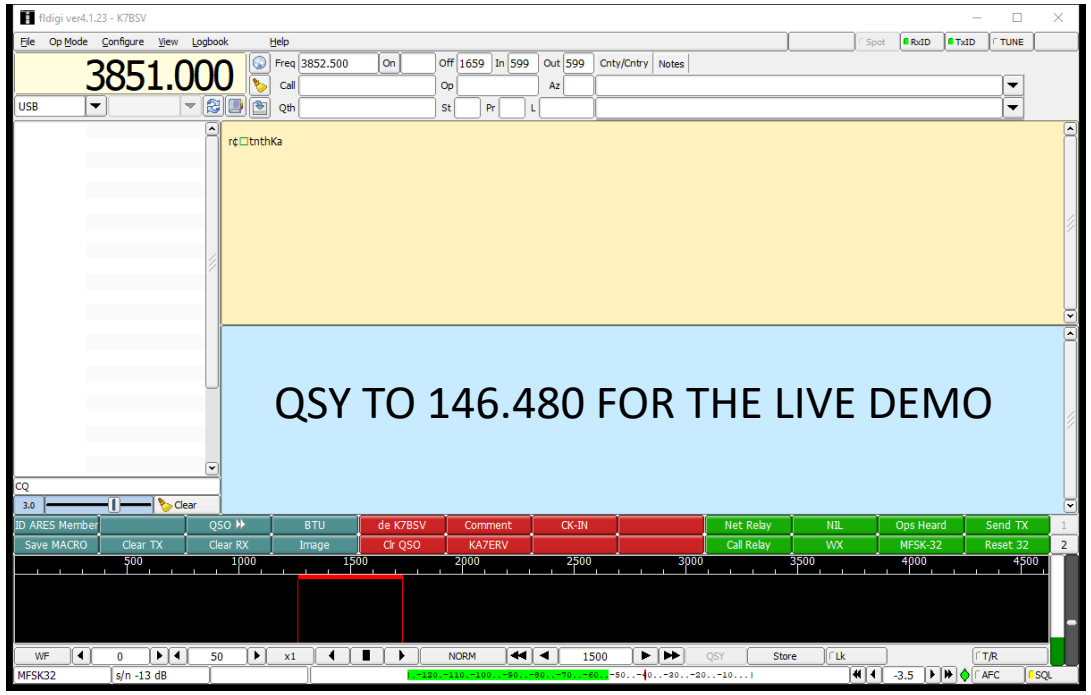
YOU CAN CREATE A MESSAGE IN FLMSG, LIKE YOU WOULD USING FLDIGI, AND SEND IT VIA VARA CHAT





DIGITAL COMMUNICATIONS – LIVE DEMO

- WHEN THE SLIDE SHOW CLOSES I WILL SHOW MY COMPUTER SCREEN SO YOU CAN SEE FLDIGI.
- PLS ALSO LOOK ON WITH THE OTHERS WHO ARE ON THE “CALL”.



Business Items to Report

- Call for nominations
  - Elect club officers during January Annual Meeting
  - Open position 2023 – Secretary
  - Duties can be found in the Bylaws https://www.k7jep.org/wp-content/uploads/simple-file-list/BCARC_ByLaws02222017.pdf
- Field Day Report
  - Formal format – maximize number of QSO's and number of bonus points
  - 2A SSB & FT8
  - Consider satellite station
  - Consider GOTA station
  - Consider VHF bonus station (6m or 2m but not both)
  - Location TBD

Annual Business Meeting at January Meeting

- Items of business
  - Election of Officers for calendar year 2023
    - Required by Idaho State law for corporations
  - Discussion and vote on proposed dues increase and changes
    - $25 individual annual dues
    - $35 annual family dues
    - Removal of the option for free first year of membership for new hams appears to require a bylaws amendment

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CW Bingo!

Breakfast at Hydra
November 19, 2022
09:00 hrs.
In the spirit of the holiday's please invite your significant others

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Next Meeting
December 14, 2022
VFW Post, Sandpoint, ID
18:00 hrs. Informal Discussions and Eyeball QSO's
18:30 hrs. Meeting
Topic: *HF Propagation*
John Ailport, K7BSV