

A decorative graphic on the left side of the slide consisting of white and light blue lines that resemble a circuit board or a stylized tree. The lines are vertical and horizontal, with small circles at the ends, creating a complex, branching pattern.

HF APRS ON VARA HF

SCARS MEETING 10/12/2024

HF APRS HAS BEEN AROUND SINCE THE 1990S

1. It works. Some of the time.
2. Conventional AX.25 over 300 baud packet modems has been “iffy”
3. Requires high signal to noise ratio, sometimes comparable to HF voice.
4. Technology dates back to the 1960s and 1970s.
5. Modem technology was designed for high reliability and low noise telephone circuits.
6. No Forward Error Correction (FEC). Small disruption destroys integrity of data packet.

VARA HF

1. Variable speed depending upon S/N ratios.
2. Lowest speeds get through a full 15 dB lower than voice.
3. High amount of FEC.
4. Has proven itself time and time again on Winlink.

VARA HF KISS PORT

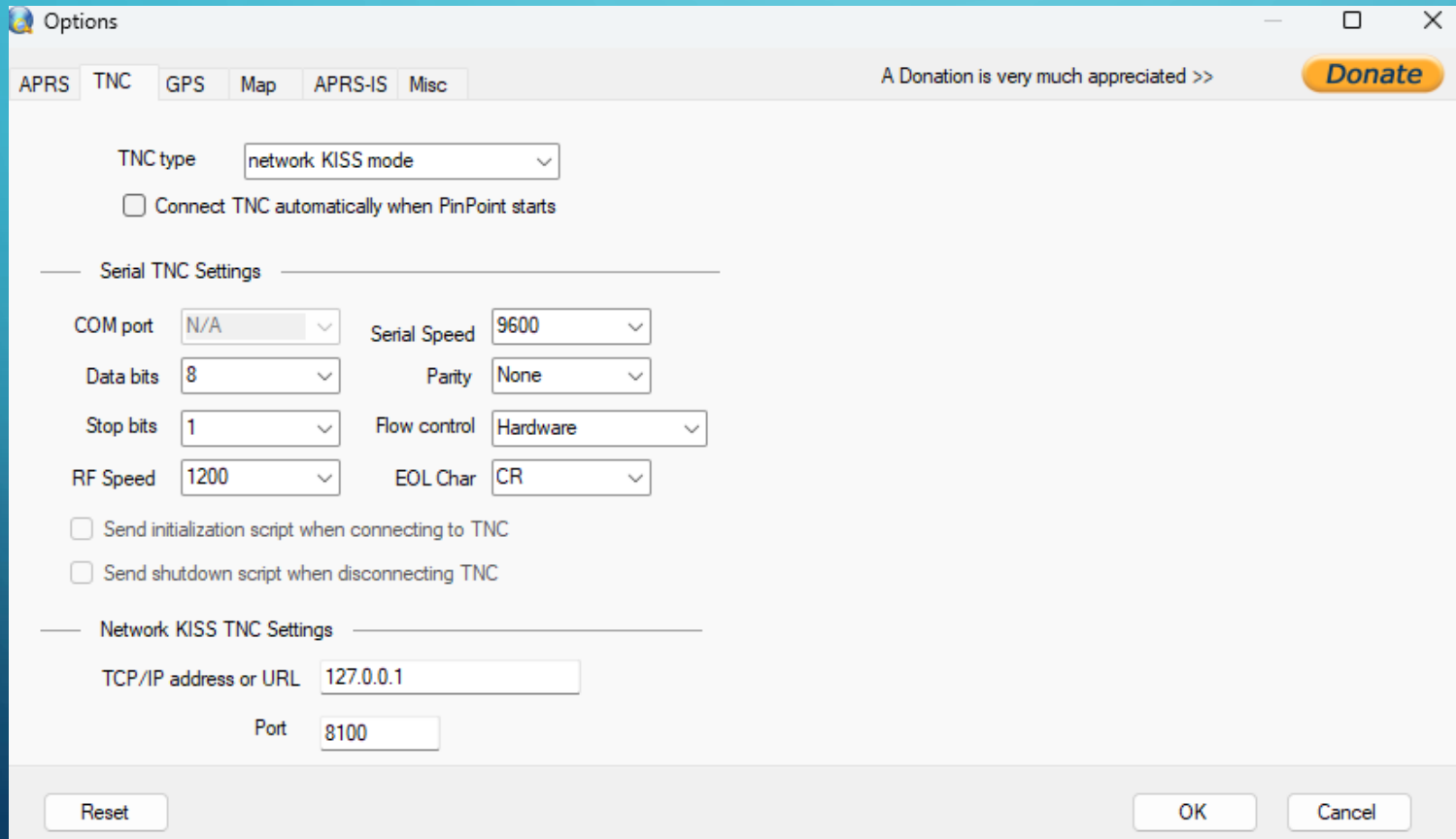
1. VARA Traditional used Winlink protocols for connection.
2. Author added “KISS” port to allow transmission of unconnected frames.
3. Existing APRS packages have support for KISS over IP.
4. Marry the two together and you have a robust HF APRS package.

VARA HF WITH APRS

1. To get started, download VARA HF at
<https://downloads.winlink.org/VARA%20Products/VARA%20HF%20v4.8.7%20setup.zip>.
2. I highly recommend PinPoint APRS for beginners, which can be downloaded at
https://www.pinpointaprs.com/Pinpoint_v2.1_build_240324.msi.

VARA HF WITH APRS

1. In Pinpoint, make sure you've filled out the options/TNC screen as follows:



The screenshot shows the 'Options' dialog box with the 'TNC' tab selected. The 'APRS' tab is also visible. The 'TNC type' is set to 'network KISS mode'. There is a checkbox for 'Connect TNC automatically when PinPoint starts' which is unchecked. The 'Serial TNC Settings' section includes fields for 'COM port' (N/A), 'Serial Speed' (9600), 'Data bits' (8), 'Parity' (None), 'Stop bits' (1), 'Flow control' (Hardware), 'RF Speed' (1200), and 'EOL Char' (CR). There are also checkboxes for 'Send initialization script when connecting to TNC' and 'Send shutdown script when disconnecting TNC', both of which are unchecked. The 'Network KISS TNC Settings' section includes a text field for 'TCP/IP address or URL' (127.0.0.1) and a text field for 'Port' (8100). At the bottom, there are buttons for 'Reset', 'OK', and 'Cancel'. A 'Donate' button is also present in the top right corner of the dialog box.

Options

APRS TNC GPS Map APRS-IS Misc

A Donation is very much appreciated >> [Donate](#)

TNC type: network KISS mode

☐ Connect TNC automatically when PinPoint starts

Serial TNC Settings

COM port: N/A Serial Speed: 9600

Data bits: 8 Parity: None

Stop bits: 1 Flow control: Hardware

RF Speed: 1200 EOL Char: CR

☐ Send initialization script when connecting to TNC

☐ Send shutdown script when disconnecting TNC

Network KISS TNC Settings

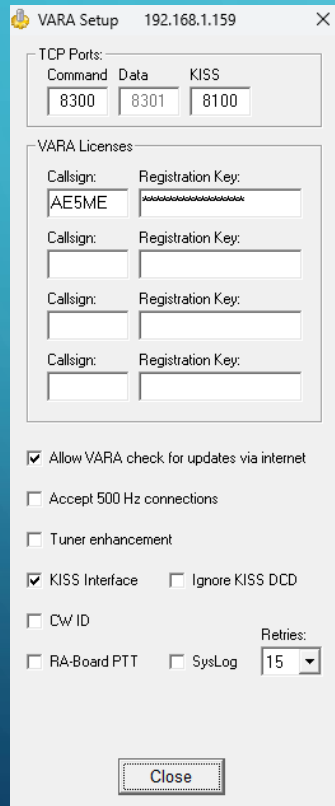
TCP/IP address or URL: 127.0.0.1

Port: 8100

Reset OK Cancel

VARA HF WITH APRS

1. In the VARA HF Setup screen, make sure you've checked the KISS Interface checkbox and that Port 8100 shows up in the upper right corner.



VARA Setup 192.168.1.159

TCP Ports:

Command	Data	KISS
8300	8301	8100

VARA Licenses:

Call sign: Registration Key:

AE5ME

Call sign: Registration Key:

Call sign: Registration Key:

Call sign: Registration Key:

☒ Allow VARA check for updates via internet

☐ Accept 500 Hz connections

☐ Tuner enhancement

☒ KISS Interface ☐ Ignore KISS DCD

☐ CW ID

☐ RA-Board PTT ☐ SysLog Retries: 15

Close

VARA HF WITH APRS

1. Popular hangouts for operators are 14083.5 and 7083.5 kHz, USB.
2. if you are looking for additional information regarding HF APRS using VARA, check out the Facebook group at <https://www.facebook.com/groups/355264387119488> -- (2) VARA APRS | Facebook).
3. Another great site that gives examples of real-life operation is at http://wa8lmf.net/APRS_VARA/ --Tests of HF APRS Over VARA Modem (wa8lmf.net).

SOUNDCARD INTERFACES

KEYING CIRCUIT / RADIO INTERFACE

1. Signalink <http://www.tigertronics.com/>
2. Rigblaster <http://www.westmountainradio.com/>
3. MFJ Interfaces <http://www.mfjenterprises.com/>
4. Repeater Builders <https://www.masterscommunications.com/products/radio-adapter/dra/dra-description.html>
5. Digirig <https://www.digirig.net>
6. Radio with built-in interface (FT991A, IC7300, etc.)
7. Build your own / other options on EBAY

AUDIO SETUP

1. Biggest issue is overdriving, which can cause harmful interference.
2. Set your radio to full power RF
3. Sound volume controls to a minimum on your soundcard and radio to begin
4. Turn on ALC meter on radio
5. Adjust drive so that ALC is just barely showing

RESOURCES

1. Email to AE5ME ae5me@yahoo.com
2. RCWA Facebook page <https://www.facebook.com/groups/1490274767852731/>
3. Tulsa Digital Radio Club <http://tulsadigitalradioclub.blogspot.com/>
4. OK ARRL <http://ok.arrl.org/nts/ntsok/>
5. Online discussions groups on io.net
6. Facebook discussion groups
7. If there is enough interest, Tulsa or Oklahoma HF APRS Nets????

RESOURCES

You are also welcome every Sunday evening at 8 PM for the RCWA C4FM net and every Monday evening at 7:15 PM for the Oklahoma VOIP net. They are available on the OklahomaLink as follows:

1. Wires-X room 28292
2. YSF Reflector US-OklahomaLink 19053
3. DMR-TGIF Talkgroup 31403
4. P25 Reflector 31403
5. NXDN Reflector 31403
6. D-star Oklahoma XLXOKL B
7. M17 M17-OKL A

RESOURCES

On Monday nights at 7:15 PM, analog users are also supported on the 147.090 (Claremore) repeater and:

Allstar 49562

Echolink N5XQK-R