VARA KISS INTERFACE

Rev, February 13th 2024

A KISS Interface is available in VARA HF, VARA FM and VARA SAT.

There are there different KISS Frames possibilities:

192 0 |…. AX25 Frame …| 192
192 1 |…. AX25 Frame 7 chrs Call Signs…| 192
192 2 |…. Generic Data …| 192

The second byte in the KISS Frame determine what kind of KISS Frame do you want to use:

Byte 0: Standard KISS with AX25 format. Used by the APRS clients, tipically.
Byte 1: The AX25 format is modified to use 7 chars length call signs. Used by VarAC.
Byte 2: KISS frame with generic data. Useful for IoT or future Apps.

VARA signals are incompatible with Packet Signals and will only work with other VARA RX stations or digipeaters. Under no circumstances should the VARA KISS interface be used on established WINLINK frequencies to avoid interferences.

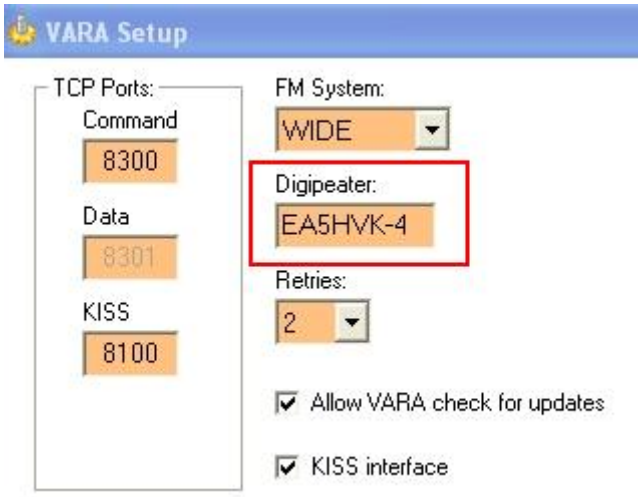
AX25 Unnumbered Information (UI) frames generated by other applications (APRS, typically) are encapsulated in a robust VARA Broadcast frame. This provides a new way to send solid DATA frames with a greater range than Packet 1200/300 using less power.

By default, the KISS port is the 8100. You will have to use the same port number that your application is using.

KISS Interface in VARA FM

The KISS Frame is encapsulated using the VARA FM Level 1 Narrow (566 bps). This is a broadcast protocol decoded by any VARA FM Narrow/Wide station.

KISS Frames also can be digipeated through VARA FM Digipeaters. To start your own Digipeater, simply write a call sign in the Digipeater call sign. It is not necessary enable the KISS Interface option, the Digipeater will digipeat the KISS frame equally..



KISS Interface in VARA HF

The KISS Frame is encapsulated using the VARA HF 500Hz Levels 1,2-4. This frame can be decoded by any VARA HF 500, 2300 or 2750 stations indistinctly if they are connected with a KISS application (PinPoint, APRSISCE/32, etc …)

The Speed Level is selected automatically by VARA HF according the size and frame type. Thus, APRS Position reports are especially coded to be transmitted in a maximum of 3 VARA packets. The rest of the frames, are coded to be transmitted in a maximum of 2 VARA packets.

This way you can have a solid APRS position beacon with VARA HF.

KISS Interface in VARA SAT

The KISS Frame is encapsulated using the VARA SAT Level 3 (175 bps).

DCD (Data Carrier Detect)

The VARA KISS frames are sent using a 0.3-Persistence protocol to minimize the collision probability in case two frames are sent at the same time.

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