






TYPICAL HARDWARE TNC SETUP

Capabilities: APRS, Packet/WinLink, 300/1200 baud (possibly 9600), KA-NODE, and Digipeating*.




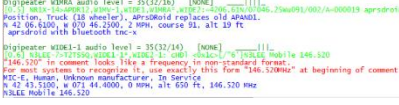

Drawbacks: You are locked-in to TNC's built-in protocols; Digipeating NOT possible while using WinLink; Pricey; 9600 baud modem very expensive.

TRANSCEIVER	HAM INTERFACE	HARDWARE TNC	COMPUTER INTERFACE	COMPUTER
				
<p>Has 6-pin mini-DIN "Data" jack. DISable any internal Packet TNC. Set Data Band and speed that matches the TNC.</p>	<p>Connects "Data" port to TNC "Radio" port.</p>	<p>9-pin Serial connector marked "Radio". 9-pin Serial connector marked "Computer".</p>	<p>USB to Serial (9-pin connector) cable connects TNC to computer. TNC will appear as a new COM Port in Windows.</p>	<p>Windows 8/10 Computer with WinLink Express installed. Has USB port used to "talk" to the TNC. WinLink Express can be setup to talk "Kantronics" and will do all the setup for you.</p>

SOFTWARE TNC SETUP: RA-40 and DIREWOLF

Capabilities: APRS, Packet/WinLink, 300/1200/2400/4800/9600 baud (maybe more), FX.25, Digipeating, VARA & VARA FM, and much more.




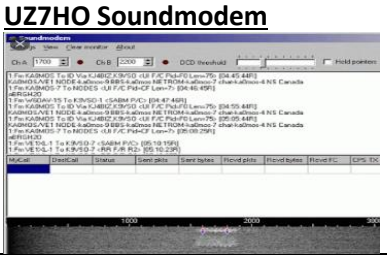
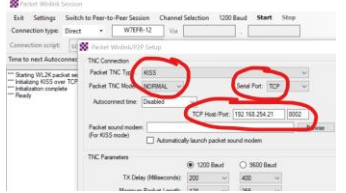
Drawbacks: Make/buy cable between Soundcard and Transceiver; Configuring DIREWOLF and WinLink Packet is slightly more difficult.

TRANSCEIVER	SOUNDCARD	COMPUTER	SOFTWARE TNC	WINLINK EXPRESS
				
<p>Transceiver: Has 6-pin mini-DIN “Data” jack. DISable any internal Packet TNC. Set Data Band in menu system. Set PKT Speed to 9600.</p>	<p>Interface: “RA 40” soundcard. Build or buy a cable 6-pin “Data” port on one end and 9-pin Serial plug on the other. Use a standard USB-B // USB-A patch cable to connect to computer’s USB port.</p>	<p>Windows 8/10 Computer with WinLink Express installed. RA40 appears as a “USB Audio Codec” in Windows.</p>	<p>Configure DIREWOLF to use “C-Media USB” for Speaker and Mic, and CM118 for PTT. Enable “KISS” protocol. FLDigi and other apps can directly use the RA40 USB Soundcard.</p>	<p>Configure Packet WinLink to use KISS, Normal mode, “TCP” Serial Port, the IP Address and TCP Port of the Software TNC, and keep the speed set to 1200 Baud.</p>

SOFTWARE TNC SETUP: Signalink USB and UZ7HO SoundModem

Capabilities: APRS, Packet/WinLink, 300/1200/2400/4800 baud (9600 very hard), Digipeating*, VARA & VARA FM, and much more.




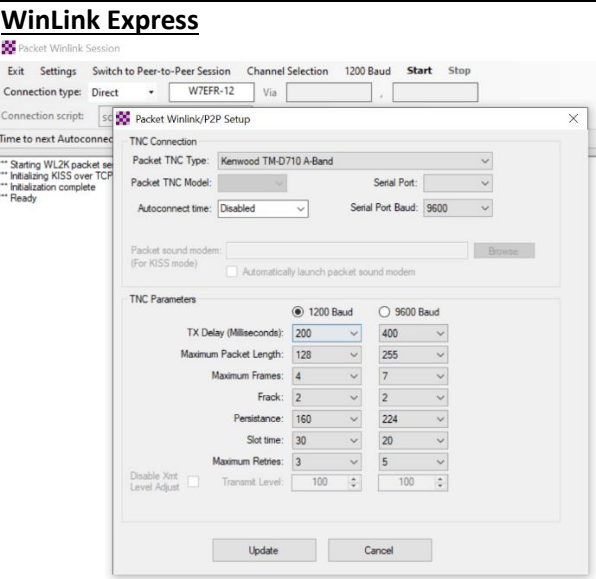
Drawbacks: Signalink USB will limit packet/APRS speeds; small wires (or \$\$ for a jumper) necessary to configure audio and PTT.

				
<p>Transceiver: Has 6-pin mini-DIN “Data” jack. DISable any internal Packet TNC. Set Data Band in menu system. Set PKT Speed to 1200.</p>	<p>Interface: Signalink USB. Build or buy a cable 6-pin “Data” port on one end and 8-pin Modular plug on the other. Use a standard USB-B // USB-A patch cable to connect to computer’s USB port.</p>	<p>Windows 8/10 Computer with WinLink Express installed. Signalink USB appears as a “USB Audio Codec” in Windows.</p>	<p>Configure UZ7HO SoundModem to use “USB Audio Codec” for Speaker and Mic. Enable “KISS” protocol. FLDigi and other apps can directly use the Signalink USB Soundcard.</p>	<p>Configure Packet WinLink to use KISS, Normal mode, and “TCP” Serial Port. Click Browse and find the UZ7HO SoundModem program so WinLink automatically launches it for you.</p>

BUILT-IN TNC SETUP

Capabilities: APRS (natively), Packet/WinLink, 1200/9600*, Digipeating*, Frequency Control*




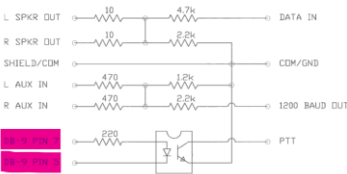

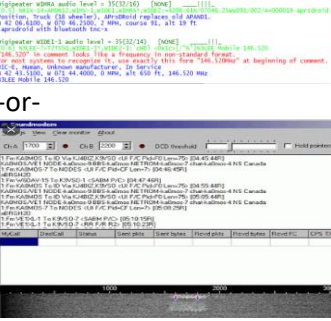
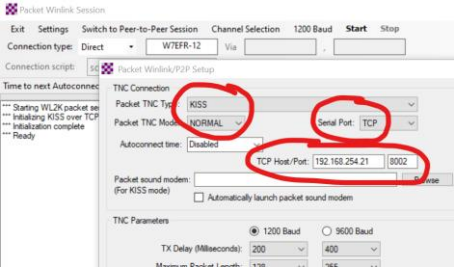
Drawbacks: Frequency Control not available while using WinLink Express; Must “tune” WinLink Express so it doesn’t cause the internal TNC to reset; cannot do other modes like VARA; Cannot use more complex programs like FLDigi.

			
<p>Transceiver: An 8-pin “COM” jack allows using the internal Packet TNC. Set Data Band. Set Packet Speed to 1200 or 9600 (based on purpose). Enable internal Packet TNC.</p>	<p>Interface: Programming Cables (Kenwood, Valley Enterprises, RT Systems, or homebrew). Plug the 8 pin accessory plug in the back of the head unit of the D710 labeled COM (NOT in the main body, that is the programming port). You plug the USB side into the PC. [Quoted from K6OLI].</p>	<p>Windows 8/10 Computer with WinLink Express installed.</p>	<p>Start a Winlink Packet or Packet P2P session. Pick the D710 from the dropdown menu. Pick the correct Serial Port for your USB cable. Change the Maximum frames to 2. Click OK. Pick a frequency and you are off to the races. [Quoted from K6OLI].</p>

Microphone and Speaker Interface Setup

Capabilities: APRS, Packet/WinLink, 300/1200 baud (9600 unlikely), Digipeating*, VARA/VARA FM.

Limitations: Must be interested in electronics and/or making cables to build home brew interface; Signalink will limit speeds to 1200 baud and has fiddly wire-jumpers/\$ jumper-block configuration; DIREWOLF slightly more complex to configure than UZ7HO SoundModem.

 	<p>-Or-</p>  			
<p>Transceiver: Microphone jack (6-pin Modular) and EXT SP Speaker jack (mono coaxial 1/8"). No Data, COM, or Serial ports to bypass speaker and microphone audio paths.</p>	<p>Signalink USB Interface: Purchase the necessary cable as recommended by TigerTronics and set the jumper pins as directed.</p> <p>Home-brew Interface: Build and test your circuitry. Use RJ-11 for the mic jack, a 1/8" mono for the speaker jack on the transceiver. Use a 9-pin serial port (and a USB Serial Adapter) to connect to your computer.</p>	<p>Windows 8/10 Computer with WinLink Express installed. Signalink USB appears as a "USB Audio Codec" in Windows.</p> <p>Windows 8/10 Computer with WinLink Express installed. Laptop built-in soundcard will be used.</p>	<p>Configure Software TNC (DIREWOLF or UZ7HO SoundModem): Audio: Audio CODEC. PTT: VOX Enable KISS.</p> <p>Configure Software TNC (DIREWOLF or UZ7HO SoundModem): Audio: Built-in soundcard PTT: Serial Port. Enable KISS.</p>	<p>Configure Packet WinLink to use KISS, Normal mode, "TCP" Serial Port, the IP Address and TCP Port of the Software TNC. Set speed to 1200 Baud.</p> <p>Feature: WinLink can "auto launch" UZ7HO, DIREWOLF, or VARA when opening a Packet Session! Click Browse and find the TNC App and select "Automatically launch..." in the WinLink configuration window.</p>