

## ***VXR-5000 Accessory Socket***

Repeater has a DB-25 Female Connector

- 1 - Ground (RLC Power Ground)
- 2 - +13.8 Volts output (RLC Power)
- 3 - Mike Audio Input (RLC Pin 4) (Older Version VXR-5000)
- 4 - N/C
- 5 - Mike Audio Input (RLC Pin 4) (Newer Version VXR-5000) \*\*\*
- 6 - Discriminator Audio Output (RLC Pin 5)
  - Must jumper the -6dB/Octave filter into circuit
- 7 - N/C
- 8 - N/C
- 9 - N/C
- 10 - N/C
- 11 - COR Output (RLC Pin 7)
- 12 - PTT Input (RLC Pin 3)
- 13 - GND (Puts VXR-5000 into Base Mode)
- 14 - Ground Reference (RLC Pin 9)
- 15 - N/C
- 16 - PL Output (RLC Pin 2)
- 17 - N/C
- 18 - N/C
- 19 - N/C
- 20 - N/C
- 21 - N/C (Can be connected to Output Line 1)
- 22 - N/C (Can be connected to Output Line 2)
- 23 - N/C (Can be connected to Output Line 3)
- 24 - N/C
- 25 - N/C

### ***\*\*\* Newer VXR-5000 Repeater Audio modifications***

There were changes between the older version and the newer version of the VXR-5000. A few of the changes include the PL encoder and PL decoder as an included feature, not an option board, and a change in the external audio injection point.

The newer version of the VXR-5000's audio input at pin 3 is designed for flat audio. Any audio that is applied at this point will directly drive the modulator of the transmitter. For controller applications however you need to feed the audio so it is pre-emphasized. In order to accomplish this you must make a modification inside the VXR-5000. The internal modification requires a jumper to be added from the 'EXT' side of switch S2005. This point is located at the junction of S2005 and R2091. The other side of the jumper is connected to the 'HI' side of the Line Sense Pot, VR2001.

This modification will allow normal controller audio to be fed to the repeater. If you want to play with flat audio then connect the pre-emphasized audio to pin 3 and you have a flat audio repeater.

## ***VXR-7000 Accessory Socket***

Repeater has a DB-25 Female Connector

- 1 - Ground (RLC Power Ground)
- 2 - +13.8 Volts output (RLC Power)
- 3 - Mike Audio Input (RLC Pin 4)
- 4 - N/C
- 5 - N/C
- 6 - Discriminator Audio Output (RLC Pin 5) 0 Hz ~ 3000 Hz Audio Output
  - Must jumper the -6dB/Octave filter into circuit
  - (See Pin 22 for de-emphasized, filtered audio output)
- 7 - N/C
- 8 - N/C
- 9 - N/C
- 10 - COR and PL Output Option (RLC Pin 2) \*\*\*
- 11 - COR Output (RLC Pin 7)
- 12 - PTT Input (RLC Pin 3)
- 13 - Ground Reference
- 14 - Ground Reference (RLC Pin 9)
- 15 - N/C
- 16 - N/C
- 17 - N/C
- 18 - N/C
- 19 - N/C
- 20 - N/C
- 21 - N/C
- 22 - Audio Output (RLC Pin 5) 300 Hz ~ 3000 Hz Audio Output
  - Must remove the -6dB/Octave jumper
  - (See Pin 6 for discriminator flat audio Output)
- 23 - N/C
- 24 - N/C
- 25 - N/C

### **\*\*\* COR and PL output option**

The VXR-7000 does not bring the PL detect line to the external accessory connector. This requires an internal wire to be added to the CNTL board. A wire must be added between the junction of Q4036 and R4187. The other end of the wire must be connected to pin 19 of J4001. On some units there is a pad marked JP40022. The end of this jumper closest to J4001 is pin 19. This pin is a COR and PL detection signal that is used to control the speaker audio and will do for a PL detection signal.

Notes:

- a) The VXR-5000 and VXR-7000 cable end uses a DB-25 Male connector.
- b) The RLC Controller cable end uses a DB-9 Male connector.
- c) The Controller provides a -6dB/Octave de-emphasis jumper for each port.  
See your specific controller manual for jumper definitions.

### ***VXR-5000 / VXR-7000 Set-up***

- Once the VXR-5000/VXR-7000 is programmed to your desired frequency and the +13.8 volt modification has been performed, the Link Communications Inc. controller can be set-up. (Refer to the VXR Service Manual for repeater set-up).

### ***Front Panel LED Display***

- If your repeater controller has an LED display, it can aid in verifying the VXR-5000/VXR-7000 interface.

### ***COR Indication***

- When the repeater is unscquelched, the front panel COR LED will light.

### ***PL Indication***

- When the repeater is unscquelched and the FTS-22 PL decoder option is present (Only on older VXR-5000 is this an option), and the correct PL tone is present on the repeater, the front panel PL LED will light.

### ***PTT Indication***

When the repeater is in PTT, the front panel PTT LED will light.

### ***DTMF Indication***

- When the repeater detects a valid DTMF digit, the front panel DTMF LED will light.

### ***Controller Settings***

- Refer to the controller manual section "Set-up and Interfacing" for information about adjustments. The controller provides a time-out timer to protect the VXR-5000/VXR-7000 transmitter from locked receivers.

### ***Autopatch Connections***

- If the controller has an autopatch, connection of the telephone line to the controller is all that is required. No special connections are needed between the controller and the VXR-5000/VXR-7000. The autopatch uses an RJ-11 one line phone jack where line 1 (Tip and Ring) are used. The controller injects DTMF digits for the phone line dialing. (For pulse dialing applications contact Link Communications.)

### ***Important VXR set-up Information***

When programming the VXR-5000/VXR-7000 repeaters the user must set-up the following modes correctly.

- 1) Duplex Mode ; Enables the receiver when the transmit is active

- 2) TOT disabled ; Disable the Vertex time-out timer
- 3) Beep disabled ; Disabled the Vertex courtesy beep
- 4) ID disabled ; Disabled the Vertex ID'er (some models)
- 5) Base mode enabled ; Enables the Base mode of operation (VXR-7000)  
; See the front panel controls (LED turned Off)

## ***Questions??***

Contact Link Communications Inc. by email at [info@link-comm.com](mailto:info@link-comm.com).