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Philips 814 digipeater Link equipment INTERFACE

The following changes are needed for interfacing the QDG Modems for digipeater operation.

SK2 on the transmitter to SK2 on the receiver is needed for power and audio facilities and is a standard Philips feature. The following links need to be changed:

(i)	LK8	out	46-45	T3 board
(ii)	LK9	out	45-61	T3 board
(iii)	LK11	IN	75-73	T3 board
(iv)	LK13	IN	79-78	T3 board
(v)	LK2	IN	30-29	Rx Audio Facilities
(vi)	LK4	IN	40-41	Rx Audio Facilities
(vii)	LK5	out	40-42	Rx Audio Facilities

In order to interface the modem, it will be necessary to make the following links and changes in the transmitter:

(a)	Jump	48(T3)	to	72(T3)
(b)	Jump	50(T3)	to	R118 (SK1,3 side)
(c)	Jump	51(T3)	to	17(Exciter)
(d)	Jump	52(T3)	to	62(T3)
(e)	jump	53(T3)	to	8(T3)
(f)	Add	R108 (1K)	to	Exciter board (beside R115).

Plug the modem cable into SK3 wired as follows:

SK3 PCB	Function	Patent Plug	Colour
1	48 Rx Audio		7 Green
2	49 Audio Gnd		11 Shield
3	50 P.T.T.	3	White
4	51 Tx Audio		9 Yellow
5	52 +VCC		1 Red
6	53 Ground	2	Black

Use shielded cable from SK3,1 (pin 48, T3) to the exciter board. Shield goes from 49 (T3) to 3 (Exciter board).

Audio level settings

To setup the transmitter Deviation you will need a deviation monitor (Not your ear). Three adjustments will be necessary. Initially set up as follows:

- (1) Mic Level (Front panel) to max
- (2) Whistle (3KHz) into mic adjust R81 for 5KHz Dev
- (3) Whistle (1KHz) into mic adjust R19 for 2KHz Dev

Repeat steps (2) and (3) as they interact with each other.

- (4) Send data, adjust R115 for 3.5KHz Deviation.
- (5) Set Mic Level (Front Panel) for 2.5KHz Dev with whistle into mic about arms length away. Check for 4.5KHz Deviation with whistle into mic piece.

That concludes the transmitter set up. The Receiver only requires one simple adjustment. Adjust line output (front panel) for 0dBm.

Nev (VK4TX)

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