

A TRANSVERTER INTERFACE FOR THE FLEX 3000

Ken Schofield – W1RIL / 2009

Pictured below is an interface enabling the Flex-3000 to be used on 2 meters or higher bands of your choosing.



This interface is basically a 50 ohm dummy load with a capacity coupled low level output. It presents a 1.0 : 1 VSWR match to the Flex 3K in the transmit mode. The coupling cap sets the output level to the transverter at typically 0 to +3 dBm. Adjust as necessary to meet your xvtr requirements. In the receive mode an internal TO-5 DPDT relay bypasses the transmit load resistors providing a direct path into the Flex 3K.

Enabled	Band Button	UCB Address	Button Text	LO Offset (MHz)	LO Error (kHz)	Begin Freq (MHz)	End Freq (MHz)	RX Gain (dB)	RX High Gain (dB)	RX Only	Power	IF Gain	PA Enable	RXQ
<input type="checkbox"/>	0	0		1.0	2.000	3.000000	4.000000	0.0	0.0	<input type="checkbox"/>	0		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	1	1		5.0	7.000	8.000000	9.000000	0.0	0.0	<input type="checkbox"/>	0		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	2	2	2M	116.0	2.400	143.900000	146.000000	0.0		<input type="checkbox"/>	2			
<input type="checkbox"/>	3	3	3	0.0	0.000	0.000000	0.000000	0.0		<input type="checkbox"/>	100			

To set up the F3K for transverter use click on the XVTR's tab and fill in the boxes in line 3. See XVTR Setup below. (This is seen using SDR Beta v2.0.8.)

To establish the "LO Error" box data tune in a known frequency beacon on 2 meters and input the +/- error until the correct frequency is shown on the PSDR frequency readout. Be sure to enter your power level and check the "Use XVTR Power for Tune" box at the bottom left of the form. Note that I have mine set at 2 watts although it can be

increased if desired depending on the 50 ohm load wattage in the interface and your transverter drive requirements. The dummy load does not have to be as large as that shown in the photo, in fact it can be as small as a 2 watt carbon resistor mounted in the Hammond box if desired.

See Figure 3 below for the internal layout which is not critical. The 12T (xmit) voltage to activate the TO-5 relay is sourced from the transverter when keyed. The transverter is keyed by the RCA PTT jack on the rear panel of the F3K.

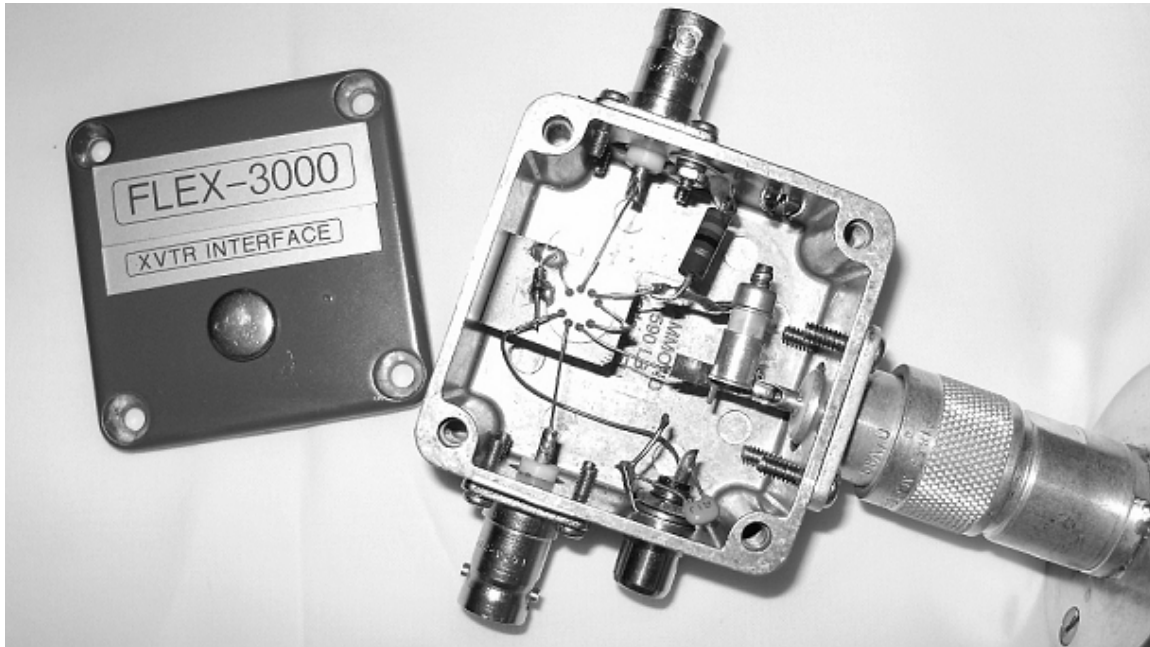
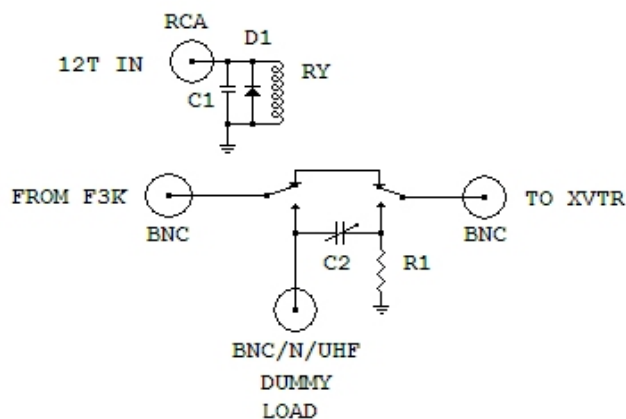


Figure 3



PARTS LIST

RY 12VDC DPDT TO-5 CASE
 C1 .001 Disc Cer
 C2 1-5 pf TUBULAR TRIMMER
 D1 1N4148
 R1 51 OHM 1/2 W
 DUMMY LOAD 50 OHM (see text)

Schematic and part list