

FITTING INSTRUCTION TA185-01 INTERFACE BOARD

1.1 RADIO MODIFICATIONS

Modifications to Radio take place on TCXO board only.

- a) Remove C916 and C917 from TCXO PCB to remove dual point modulation.
- b) Cut track between pin7 IC901 and pin8 of S6 on bottom side of TCXO PCB.
- c) Remove R926 on topside of TCXO PCB.
- d) Connect the flat cable from the POCSAG board as follows:
 - SK1-1 to IC901 pin7 on TCXO board
 - SK1-2 to S8-6 of TCXO board
 - SK1-3 to junction of C916/C917 (R926 end) on TCXO board
 - SK1-4 to GND on TCXO board

2.1 SET UP PROCEDURE

- a) Connect the antenna output of the radio to a frequency counter via 30dB pad.
- b) Set link1 1-2, set link2 1-2. The radio is now forced into SPEECH mode.
- c) Short pin3 of D-range to GND to make the radio transmit and tune RV4 on POCSAG PCB to frequency.
- d) Change link2 to 2-3 and tune RV1 to give a frequency offset of +2.3kHz.
- e) Connect pin2 of D-range to +13.8V and tune RV2 to give a frequency offset of -2.3kHz.
- f) Connect pin2 of D-range to a function generator and apply a square wave signal of 10Hz 5Vpp.
- g) Connect the Transmit output of the T2010 via an appropriate attenuator to a test receiver input. The test receiver must have a DC connection to its detector output. A standard modulation analyser like a Sayrosa or a HP8901 does not provide the DC coupling required and cannot be used.
A T2010 receiver is the ideal instrument to tune the POCSAG modulation correctly. Program the receiver of this radio to the transmit frequency of the POCSAG transmitter.
- h) Connect a DC Oscilloscope to the detector output of the test receiver. If a T2010 is used: pin9 of IC101. To suppress 455kHz use a RC filter like 27K/1nF.
- i) Activate the transmitter by shorting pin3 on the D-range to GND. Tune RV4 to read a perfect square wave on the oscilloscope.