

Equipment required: Modulation analyser, Frequency counter, Power Meter, AF frequency generator. Or Marconi 2948 Test Box.

Please note all AF levels are referenced to $0\text{dB(u)} = 0.775\text{mV}$
all RF levels are referenced to $0\text{dBm} = 1\text{mW } 50\text{ ohm}$

Initial Configuration.

Connect Power supply 9V to RF PCB. JP2,JP3
Connect RF feeder across R14 330 ohm
User channel select no 1.

(1) Frequency adjustment

Set test box to measure RF frequency and RF power. Select channel 1
= 616.775 MHz

Turn on 9V supply and adjust trimmer C48 so as the frequency measures output frequency.
Tolerance +/- 1.5KHz.

(2) RF Power Adjustment.

With Test box set to measure RF power (dBm) adjust preset pot R42 so the output at the device antenna terminals is 9.5dBm.

616.775 MHz - Tolerance +1dBm / -1.5dBm

(3) AF Deviation.

Connect AF signal to CONN1. Set level to -17dB(m) at 1KHz.
Adjust Dev preset to read 22KHz peak deviation on Testbox.
Tolerance +/- 1KHz

(4) Max Deviation

Check peak deviation does not exceed 48KHz Max 1.5% Distortion

(6) Reduce power supply voltage down to 6.9V . Check LED is Off

Reduce power supply voltage to 6.0V Check RF is disabled.

Increase power supply voltage to 7.15V Check LED is on

(7) Reset power supply to 9.0v Check current is less than 48mA (typ 44mA)

(8) End of PCB test and alignment.