

BBOPR190 Alignment Procedure

1. VCO and TX

Set unit: CH1 3.6V DC supply 50 Ohm Dummy

- 1) PLL VCO Align:** ~ Read DC voltage at VCO Test Point (C113) and align
1.0 ± -0.2V with L10 **[1.1V]**
~ Press PTT and check TX VCO voltage **[1.1V]**
~ Change Channel to CH14 and read VCO voltage **[1.4V]**
~ Press PTT and check TX VCO voltage **[1.4V]**
- 2) TX Freq. Align:** ~ Press PTT at CH1 and read Frequency with Frequency counter
~ Align 462.5625MHz ± 50Hz with CT300 10pF trimmer **[-100Hz]**
- 3) TX Mod. Align:** ~ Set CH1 100mV 1KHz Mic Input
~ Press PTT and align max modulation ± 2.0 ± 0.1 KHz with RV2
1k Ohm Semi **[2.01KHz]**
- 4) CTCSS/DCS Align:** ~ Set CH1 CTCSS 01
~ Press PTT and read CTCSS modulation level
~ Align ± 0.6 KHz with RV3 47K Ohm Semi
~ Change CTCSS 38 and read modulation level
~ Change DCS 01 and read modulation level
~ Change DCS 83 and read modulation level
- 5) Check TX Power Output:** ~ Set CH1 Power Low
~ Press PTT and read TX Power output **[408mW]**
~ Change to Power Mid and read the TX Power output
~ Change to Power High and read the TX Power output

2. RX

Set unit : CH1 3.6V DC supply 8 Ohm Load

- 1) RX Audio Distortion:** ~ Set CH1, SSG 1mV, Audio level 5 (about 650mV)
~ Read Distortion **[2.6%]**
- 2) RX Sensitivity:** ~ Reduce SSG level **[-123dBm]**
- 3) Squelch Align:** ~ Set to 10dB Sinad with SSG level align **[-128dBm]**
~ Align squelch with RV1 220K Semi