IC-A23/A5 Alignment Procedure

PLL lock voltage

- Connect multi-meter between CP1 and ground
- Apply the DC power to the radio, and turning radio on.
- Set the display to 136.975MHz
- Adjust L40 for 3.7V

Transmitter idling current

- Connect RF power meter to ANT connector
- Apply the DC power to the radio, and turning radio on.
- Transmit
- Adjust R16 for 600mA

Following step requires Cloning software, CS-A23

- Enable alignment mode on CS-A23
- Hold MR + CLR + SQL + PWR keys, and turning power on

PLL Reference crystal

- Connect 50 ohms dummy load to ANT connector
- Loosely couples probe on frequency counter
- Select FREQADJ
- Transmit
- Adjust up/down key for displayed frequency

Transmit output power

- Connect RF Power meter to ANT connector
- Select PWRADJ
- Transmit
- Adjust DIAL for 1.5W carrier

Transmit modulation

- Connect modulation analyzer to ANT connector
- Connect AF signal generator to mic terminal
- Select PWRADJ
- Apply 1KHz / 200mV signals to mic connector
- Transmit
- Adjust R554 on RF board for 85%
- Apply 1KHz / 10mV signals to mic connector
- Adjust R41 on LOGIC board for 30%

Receiver BPF

- Connect RF signal generator to ANT connector
- Connect AC voltmeter with 4 ohm load to speaker jack
- Select BF1ADJ
- Set RF signal generator to displayed frequency
- Apply 107dBm with no modulation signals to ANT connector
- Adjust DIAL for initiating automatic alignment
- Select BF2ADJ
- Set RF signal generator to displayed frequency
- Adjust DIAL for initiating automatic alignment
- Select BF3ADJ
- Set RF signal generator to displayed frequency
- Adjust DIAL for initiating automatic alignment
- Select BF4ADJ
- Set RF signal generator to displayed frequency
- Adjust DIAL for initiating automatic alignment

Receiver SQL

- Connect RF signal generator to ANT connector
- Select ASADJS for AM squelch threshold
- Set RF signal generator to lowest frequency of avionics band
- Apply 113dBm with no modulation signals to ANT connector
- Adjust DIAL for initiating automatic alignment
- Select ASADJT for AM tight squelch
- Set RF signal generator to highest frequency of avionics band
- Apply 93dBm with no modulation signals to ANT connector
- Adjust DIAL for initiating automatic alignment
- Select FSADJS for FM squelch threshold
- Set RF signal generator to 161.65MHz
- Apply 122dBm with no modulation signals to ANT connector
- Adjust DIAL for initiating automatic alignment
- Select FSADJT for FM squelch threshold
- Set RF signal generator to 161.65MHz
- Apply 102dBm with no modulation signals to ANT connector
- Adjust DIAL for initiating automatic alignment

VOR Bering

- Connect VOR signal generator to ANT connector
- Select VORADJ
- Set VOR signal generator to 113.00MHz
- Apply 60dBm with FROM 90 degrees to ANT connector
- Adjust DIAL for initiating automatic alignment

VOR Off

- Connect VOR signal generator to ANT connector
- Select OFFADJ
- Set VOR signal generator to 113.00MHz
- Apply 90dBm with FROM 90 degrees to ANT connector
- Adjust DIAL for initiating automatic alignment