

8. ALIGNMENT INSTRUCTIONS

MIDLAND 4001

Warning : Any repairs or adjustment should be made under the supervision of a qualified radio-telephone technician.

8.1.VCO locking voltage

- Set unit channel 40
- TX no mod
- Check voltage at TP1
- Adjust L501 until voltage at TP1 to be equal to 4 volt

8.2.TX frequency

- Set unit channel 20
- TX no mod
- Measure frequency
- Adjust CT201 until frequency to be equal to 27.205MHz
- If can not measure frequency skip to adjust TX power and return to this methode next time

8.3.TX power

- Set unit channel 20 mic gain maximum
- Adjust L502,L10,L11 and L6 downward for minimum
- Adjust L11 upward 1 round (360°)
- TX with mod 1.25KHz up 20 dB
- See signal at oscilloscope
- Adjust L10 upward for maximum
- Adjust L11 again for maximum
- TX no mod
- Adjust C607 for maximum power
- Adjust RV102 until TX power to be equal to 3.8 volt

8.4.TX AM modulation

- Set unit channel 20 mic gain maximum
- TX with mod 1KHz up 20 dB
- Measure % modulation
- Adjust RV 201 for modulation 90%
- TX with mod 1KHz down 20 dB
- Measure % modulation
- Adjust level at CR oscilator until % modulation to be equal to 30%
- TX with mod 1KHz up 20 dB
- If % modulation not equal with 90% back to adjust RV 201 again

8.5.TX s-meter

- Set unit channel 20
- TX no mod
- See s-meter
- Adjust RV 202 until s-meter to be equal to 4 watt

8.6.AWI

- Set unit channel 20 mic gain maximum
- TX with mod up 20 dB
- See D306 (LED AWI)
- Adjust RV 301 until D306 off
- Check AWI
- If AWI not operate back to adjust RV 301 again

8.7.RX sentivity

- Set SSG frequency 27.185 MHz AM 60% mod
- Set unit channel 19 RF gain maximum,squelch minimum,control volume 2 volt
- Measure sentivity
- Adjust L4 downward for minimum
- Adjust L1,L2,L3 for maximum sentivity

8.8.Squelch

- Set SSG frequency 27.185 MHz AM 60% mod level –57 dBm
- Set unit channel 19 RF gain maximum,squelch maximum,control volume 2 volt
- See signal at oscilloscope
- Adjust RV 101 until appear signal at oscilloscope

8.9.RX s-meter

- Set SSG frequency 27.185 MHz AM 60% mod level –67 dBm
- Set unit channel 19 RF gain maximum,squelch minimum
- See s-meter
- Adjust RV 103 until s-meter to be equal to s-9