

### **DL-3422 TUNE-UP PROCEDURE**

Ref: FCC Part 2 paragraph 2. 1033(c)(9)

1. Connect the transceiver to be aligned to a DC power source. A DC current meter capable of measuring at least 2.5 Amps should be connect in line with the DC source. Connect the output of the transceiver through a watt meter and into a 50 ohm dummy load.
2. Load the synthesizer with the center channel frequency.
3. Key the transmitter and make certain that the supply voltage at the RF board is 13.3 VDC. (Do not transmit for extended periods of time. )
4. Adjust R535 clockwise for 5.0 Watts of output power.
5. Check the power levels on the low and the high frequencies for 5.0 Watts +/- 1 Watt.

## **DL-3422 ACTIVE CIRCUITS DESCRIPTION**

Designator Function JEDEC or Vendor Type  
CR561 Antenna switch MMBV3401  
CR562 Antenna switch MMBV3401  
CR591 Directional coupler MMBD701LT  
CR592 Directional coupler MMBD701LT  
CR851 Pin shift diode MMBV3401  
CR852 Rectifier MMBV609  
CR853 Rectifier MMBV609  
CR861 Varactor BB535E7908  
CR862 Varactor BB535E7908  
CR901 Varactor BB535E7908  
CR902 Rectifier BAV99LT1  
Q101 Tx enable MUN5213T1  
Q102 Tx enable MUN2114T1  
Q121 Rx enable MUN5213T1  
Q122 Rx enable MUN5213T1  
Q123 Rx enable MUN2114T1  
Q124 Soft key up control PZT2222AT1  
Q131 5 volt shutdown MUN5213T1  
Q171 Pin shift MUN5213T1  
Q172 Pin shift MUN2114T1  
Q501 RF buffer MSA-2111  
Q511 RF driver NE85633  
Q531 Power control PZT2222AT1  
Q801 Constant voltage source MSD1819A-RT1  
Q841 Pin shift MUN5213T1  
Q842 Pin shift MUN2114T1  
Q871 VCO buffer NE85619-T1  
Q872 Oscillator NE85619-T1  
Q881 Bias regulator MSB1218A-AT1  
Q882 Amplifier NE85633  
Q901 Capacitance multiplier MSD1819A-RT1  
Q902 Amplifier MMBT918LT1  
U111A Soft key up control LMC660AMI  
U111B Soft key up control LMC660AMI  
U111C Power control LMC660AMI  
U111D Soft key up control LMC660AMI  
U131 Voltage regulator TK11900MTL  
U141 Voltage regulator TK11900MTL  
U531 RF power module M57732  
U581A V-fwd amp MC33172DT  
U581B V-rev amp MC33172DT  
U811 Synthesizer SA7025DK-T  
Y801 TCXO 14.85 / 17.5 MHz

## INTEGRA R 210-3315-XXX ACTIVE CIRCUITS DESCRIPTION

Designator function Type

D1 DIODE, HOT CARRIER, SOT-23 MMBD301LT1  
D2 DIODE, HOT CARRIER, SOT-23 MMBD301LT1  
D3 DIODE, SOT-23 BAV99LT1  
D4 DIODE, SOT-23 BAV99LT1  
D5 DIODE, SOT-23 BAV99LT1  
D6 DIODE,RECTF,1A/100V 1N4001  
DS1 LED,3MM,BICOLOR,RED/GREEN SMT 591-3001-102  
DS2 LED,3MM,BICOLOR,RED/GREEN SMT 591-3001-102  
DS3 LED,3MM,BICOLOR,RED/GREEN SMT 591-3001-102  
DS4 LED,3MM,BICOLOR,RED/GREEN SMT 591-3001-102  
Q1 TRANSISTOR, GENERAL PURPOSE,SOT-23 MMBT3904LT1  
Q2 TRANSISTOR, GENERAL PURPOSE,SOT-23 MMBT3904LT1  
Q3 TRANSISTOR, GENERAL PURPOSE,SOT-23 MMBT3904LT1  
Q4 TRANSISTOR, GENERAL PURPOSE,SOT-23 MMBT3904LT1  
U1 QUAD, OP-AMP , -40/+85 SO-14 TLC2274ID  
U2 HEX INVERTER CMOS 74HC04AD  
U3 QUAD OP-AMP LMC6484AIM  
U4 8 BIT A/D,-40/+85C SO-20W ADC0838CIWM  
U5 POTENTIOMETER 4 DIGITAL AD8403AR50  
U6 TEMPERATURE SENSOR,SOT-23 LM50CIM3  
U7 DUAL OP-AMP,-40/+85 S0-8 TLC2272ID  
U8 ANALOG MULTIPLEXERS/DEMULTIPLEXERS SOIC16 MC74HC4053D  
U9 QUAD, OP-AMP , -40/+85 SO-14 TLC2274ID  
U10 FILTER, LINEAR PHASE LOW PASS S0-8 LTC1069-7  
U11 REGULATOR,MICROPOWER VOLTAGE ,S0-8 LP2951CD  
U12 REGULATOR,LOW DROPOUT,Q PACKAGE LT1129IQ-5  
U13 DUAL MONOSTABLE, SOIC 74HC4538AD  
U14 QUAD NAND GATE 74HC00AD  
U15 CONVERTER RS-232 ADM223AR  
U16 ( TO BE PROGRAMMED) CPLD 64 MACROCELL PZ5064-I12A44  
U17 MICROPROCESSOR ,10MHz Z8401510FEC  
U18 RAM,CMOS,32K x 8, -40/=85, SOP-28 TC55257DFI-85L or TC55257DFL-85L (SCREENED  
-40 +85)  
U19 RESET CIRCUIT, -40+85 ,S0-8 MC33064D-5  
U20 HEX OR GATE,CMOS 74VHC32AD  
U21 MICROPROCESSOR ,10MHz Z84C1510FEC/Z8401510FEC  
U22 (TO BE PROGRAMMED) EPROM, FLASH 1 MEGABIT, -40/+85 PLCC AT29C010A-90J1  
X1 XTAL, FPX SERIES 19.6608 MHz FPX196-20PF