

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 SO-8 TLC2272ID

U8 ANALOG MULTIPLEXERS/DEMULTIPLEXERS SOIC16 MC74HC4053D

U9 QUAD, OP-AMP , -40/+85 SO-14 TLC2274ID

U10 FILTER, LINEAR PHASE LOW PASS SO-8 LTC1069-7

U11 REGULATOR,MICROPOWER VOLTAGE ,SO-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 ,SO-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