

DL-3412 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-3412 ACTIVE CIRCUITS DESCRIPTION

Designator	Function	JEDEC or Vendor Type
CR561	Antenna switch	MMBV3401
CR562	Antenna switch	MMBV3401
CR591	Directional coupler	MMBD701LT1
CR592	Directional coupler	MMBD701LT1
CR701	Rectifier	BAV99LT1
CR851	Varactor	BB535E7908
CR852	Varactor	BB515
CR853	Deviation level bias	BB515
CR854	Varactor	BB535E7908
CR855	Varactor	BB535E7908
CR856	Varactor	BB535E7908
CR901	Varactor	BB535E7908
Q101	Tx enable	MUN5213T1
Q102	Tx enable	MUN5114T1
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
Q701	Amplifier	MMBT918LT1
Q801	Constant voltage source	MDS1819A-RT1
Q841	Pin Shift	MUN5231T1
Q842	Pins shift	MUN5114T1
Q850	VCO	NE85619
Q851	Cascode amp	NE85619
Q852	Cascode amp	NE85619
Q853	Amplifier	NE85619
Q901	Capacitance multiplier	MDS1819A-RT1
U111A	Soft key up control	LMC660AIM
U111B	Soft key up control	LMC660AIM
U111C	Power control	LMC660AIM
U111D	Soft key up control	LMC660AIM
U131	Voltage regulator	TK11900MTL
U141	Voltage regulator	TK11900MTL
U581A	V-fwd amp	MC33172DT
U581B	V-rev amp	MC33172DT
U811	Synthesizer	SA7025DK-T
U521	RF power module	M57721M

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