

**4. 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

**5.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 SOIC 16	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

## 9. 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.