

TRANSMITTER TUNE UP PROCEDURE

RULE PART NUMBER: 2.983 (d)(9)

TRANSMITTER TUNE UP PROCEDURE

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 C525 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.

INSTRUCTION BOOK

RULE PART NUMBER: 2.983 (d)(8)

The attached Service Manual for the DL-3422 is an updated and released version.

TRANSISTOR, DIODE, AND IC FUNCTIONS

RULE PART NUMBER: 2.983 (d)6

DL-3422

<u>Designator</u>	<u>Part Number</u>	<u>Function</u>	<u>JEDEC or Vendor Type</u>
CR561	523-1504-001	Antenna switch	MMBV3401
CR562	523-1504-001	Antenna switch	MMBV3401
CR591	523-1504-016	Directional coupler	MMBD701LT
CR592	523-1504-016	Directional coupler	MMBD701LT
CR851	523-1504-001	Pin shift diode	MMBV3401
CR852	523-5005-023	Rectifier	MMBV609
CR853	523-5005-023	Rectifier	MMBV609
CR861	523-5005-022	Varactor	BB535E7908
CR862	523-5005-022	Varactor	BB535E7908
CR901	523-5005-022	Varactor	BB535E7908
CR902	523-1504-023	Rectifier	BAV99LT1
Q101	576-0013-046	Tx enable	MUN5213T1
Q102	576-0013-032	Tx enable	MUN2114T1
Q121	576-0013-046	Rx enable	MUN5213T1
Q122	576-0013-046	Rx enable	MUN5213T1
Q123	576-0013-032	Rx enable	MUN2114T1
Q124	576-0006-027	Soft key up control	PZT2222AT1
Q131	576-0013-046	5 volt shutdown	MUN5213T1
Q171	576-0013-046	Pin shift	MUN5213T1
Q172	576-0013-032	Pin shift	MUN2114T1
Q501	576-0003-640	RF buffer	MSA-2111
Q511	576-0003-636	RF driver	NE85633
Q531	576-0006-027	Power control	PZT2222AT1
Q801	576-0013-701	Constant voltage source	MSD1819A-RT1
Q841	576-0013-046	Pin shift	MUN5213T1
Q842	576-0013-032	Pin shift	MUN2114T1
Q871	576-0003-651	VCO buffer	NE85619-T1
Q872	576-0003-651	Oscillator	NE85619-T1
Q881	576-0013-700	Bias regulator	MSB1218A-AT1
Q882	576-0003-636	Amplifier	NE85633
Q901	576-0013-701	Capacitance multiplier	MSD1819A-RT1
Q902	576-0003-634	Amplifier	MMBT918LT1
U111A	544-2020-020	Soft key up control	LMC660AMI
U111B	544-2020-020	Soft key up control	LMC660AMI
U111C	544-2020-020	Power control	LMC660AMI
U111D	544-2020-020	Soft key up control	LMC660AMI
U131	544-2603-093	Voltage regulator	TK11900MTL
U141	544-2603-093	Voltage regulator	TK11900MTL
U531	544-4001-062	RF power module	M57732
U581A	544-2019-017	V-fwd amp	MC33172DT
U581B	544-2019-017	V-rev amp	MC33172DT
U811	544-3954-027	Synthesizer	SA7025DK-T

TRANSISTOR, DIODE, AND IC FUNCTIONS (continued)

RULE PART NUMBER: 2.983 (d)6)

DL-3286 MODEM

Reference Designator	Function	JDEC or Vendor Type
CR 200	ESD protection	MMBD6050
CR 300	Power Indicator LED	SSF-LX305GD-TR
CR 302	Carrier Detect LED	SSF-LX305YD-TR
CR 304	Transmit Indicator LED	SSF-LX305ID-TR
CR 420	Peak Detector of Symbol Sync	MBAV99
CR 600	Reverse Voltage protection	2591
CR 800	RF Enable	MMBD6050
CR 802	ESD protection	MBAV99
Q 200	LOW speed switch	2N5089
Q 202	LOW speed switch	2N5089
Q 300	RX enable switch	MMBT4403
Q 302	RX enable switch	MUN5213T1
Q 400	LOW speed switch	MUN5213T1
Q 402	LOW speed switch Symbol Sync	MUN6213T1
Q 500	LOW speed switch	MUN5213T1
Q 502	LOW speed switch on TX filter	MUN5213T1
Q 600	Receiver enable	MUN5213T1
Q 602	Receiver enable	MUN5213T1
Q 604	Receiver enable	MUN5114T1
Q 800	RF RX enable (-002 boards)	MUN5213T1
Q 802	RF RX enable (-002 boards)	MUN5213T1
Q 804	TX enable (-002 boards)	MUN5213T1
Q 806	RF TX enable ramp-up (-002 boards)	MIC94030
U 200	8 bit Microcontroller	MC68HC11F1CK3
U 202	CS bus RAM, LATCH, MODEM	MC74HC00D
U 204	512K PROGRAM FLASH	AT29C51215JI
U 206	STATIC RAM	TC55257DFI-07L
U 208	OUTPUT LATCH	MC74HC574DW
U 210	4 level FSK MODEM	MX919B
U 212	Address line for Program 512K FLASH	74HC157A
U 214	INPUT latch	74HC5730
U 216	RS232 converter	MAX3243EAI
U 300	Noninverting Buffer for TX enable	MC14050BD
U 400	LOW speed switch on RX,sym filter	MC140668O
U 400	LOW speed switch on Sym Sync	MC140668O
U 402-1	Filter on Symbol Synchronization	MC33174D
U 402-2	RSSI amp	MC33174D
U 402-3	RX filter	MC33174D
U 402-4	Symbol Synchronization Amp	MC33174D
U 500	LOW speed switch on RX filter	MC140668O
U 502	TX filter	LMC710

U 600	Current Sense, Temp Sense amplifier	MC33174D
U 602	Logic Voltage Regulator	2951
U 604	Audio Voltage Regulator	TK11900MTL
U 606	Temperature Sensor	LM50
U 800	8 Volt Regulator (-002 boards)	7808T
Y 210	9.83 MHz Crystal	HC-49S
Y 211	9.83 MHz Crystal	HC-49S