

INSTRUCTION BOOK

RULE PART NUMBER:

2.983 (d)(8)

The attached Service Manual for the DL-3492 Transceiver is an updated and released version.

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.

TRANSISTOR, DIODE, AND IC FUNCTIONS

RULE PART NUMBER: 2.983 (d)6)

DL-3492 TRANSCEIVER

Reference Designator	Function	JDEC or Vendor
CR101A	TCXO Varactor	BB639
CR200	Protection Diode	MMBD6050LT1
CR240	2nd LO Varactor	BB535
CR520	Power Control	MMBD701LT1
CR540	Antenna Switch	MMBV3401
CR541	Antenna Switch	MMBV3401
CR592	Power Control	MMBD701LT1
CR840	VCO Varactor	BB535
Q100	Receive Enable Switch	MUN5213T1
Q101A	TCXO Oscillator	MMBT3904
Q101	Receive Enable Switch	MUN5114T1
Q102A	TCXO Buffer	MMBT3904
Q110	RF Enable Switch	MUN5213T1
Q130	TX Enable Switch	MUN5213T1
Q131	TX Enable Switch	MUN5213T1
Q132	TX Enable Switch	MUN5114T1
Q133	TX Enable Switch	MUN5213T1
Q134	TX Enable Switch	MUN5114T1
Q135	TX Enable Switch	PZT2222AT1
Q200	RF Amplifier Bias	MSB1218-RT1
Q201	Low Noise RF Amplifier	NE85633
Q211	1st LO Mixer	NE25118
Q240	2nd LO Buffer	MMBT918
Q260	2nd LO Amplifier	NE85633
Q261	2nd LO Amplifier Bias	MSB1218-RT1
Q500	PA Driver	MSA2111
Q520	RF Power Amplifier	PZT2222AT1
Q800	TCXO Level Amplifier	MSD1819A-RT1
Q840	Synthesizer Enable	MUN5213T1
Q841	Tx Pin shift Positive	MUN5213T1
Q842	TxPin shift Negative	MUN5213T1
Q843	Lowband pin shift Positive	MUN5213T1
Q844	Lowband pin shift Negative	MUN5213T1
Q845	VCO	MSD1819A-RT1
Q911	Diagnostics Enable	MMBT3904
U110	5.5 Volts Regulated	TK11900M
U111	9.6 Volts Regulated	TK11900M
U130	Power Control	MC33174D
U230	2nd If/Demodulator/Limiter	SA676DK
U510	6W Pwr module, 900 MHz	BGY114E
U520	Power Control	MC33172D
U800	FRACTIONAL-N Synthesizer	SA7025
U840	Shift register 8-STG SOI	MC14094
U900	TLC5620ID quad 8 bit dac	TLC5620ID
U901	Shift register 8-STG SOI	MC14094
U902	3 2CH analog mux/de-mux	MC14053

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