

MASTR II[®] MAINTENANCE MANUAL

30-50 MHz DUAL FRONT END
OPTION 9201 (matching IF Freq.)
OPTION 9202 (non-matching IF Freq.)

Maintenance Manual LBI30021A
(DF1110, THIS SHEET ONLY)
(Supersedes LBI4707)

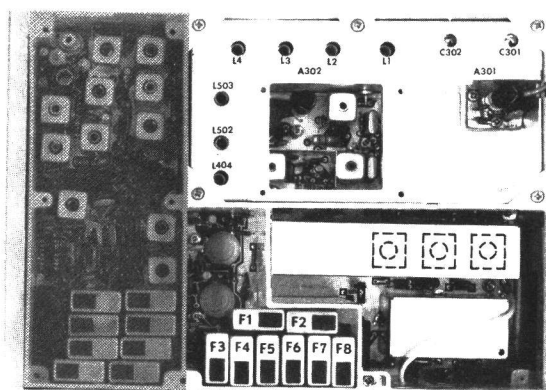


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DESCRIPTION AND MAINTENANCE	LBI30107 (DF1110)
RP MIXER ASSEMBLY AND MIXER IF BOARD	LBI4989 (DF1107)
OSCILLATOR/MULTIPLIER BOARD	LBI4993 (DF1106)
RF STEERING AND MIF SWITCH/2nd CONVERTER BOARDS ...	LBI30038 (DF1110)

30-50 MHz DUAL FRONT END

SPECIFICATIONS*

Frequency Range	30 - 50 MHz	
Sensitivity		
DFE		
12-dB SINAD (EIA Method)	0.275 μ V	
20-dB Quieting Method	0.385 μ V	
Receiver	Sensitivity degraded not more than 1 dB From STANDARD RECEIVER Specifications	
Selectivity		
EIA Two-Signal Method	-100 dB (adjacent channel, 20 kHz Channels)	
20-dB Quieting Method	-100 dB at ± 15 kHz	
Spurious Response	-100 dB	
Frequency Stability		
5C-ICOM with EC-ICOM	$\pm 0.0005\%$ (-40°C to $+70^{\circ}\text{C}$)	
5C-ICOM or EC-ICOM	$\pm 0.0002\%$ (0°C to $+55^{\circ}\text{C}$)	
20-ICOMS	$\pm 0.0002\%$ (-40°C to $+70^{\circ}\text{C}$)	
Modulation Acceptance	± 6.5 kHz (narrow-band)	
Maximum Frequency Separation (Multi-Frequency Units)	<u>Full Specifications</u>	<u>3 dB Degradation</u>
30-36 MHz	0.120 MHz	0.340 MHz
36-42 MHz	0.160 MHz	0.400 MHz
42-50 MHz	0.360 MHz	0.640 MHz
RF Input Impedance	50 ohms	
Intermodulation (EIA)	-80 dB	
Current Drain (Typical)	Non-Matching IF's - 90 mA Matching IF's - 65 mA	

*These specifications are intended primarily for use by the serviceman. Refer to the appropriate Specification Sheet for complete specifications.

COMBINATION NOMENCLATURE

1st Digit Frequency Capability	2nd Digit Options	3rd and 4th Digit Frequency Range	5th Digit Oscillator Stability
A 1 - Freq.	S Standard	13 30 - 36 MHz	A ± 5 PPM ($\pm 0.0005\%$)
D 2 - Freq.		23 36 - 42 MHz	B ± 2 PPM ($\pm 0.0002\%$)
E 3 - Freq.		33 42 - 50 MHz	
F 4 - Freq.			
G 5 - Freq.			
H 6 - Freq.			
J 7 - Freq.			

WARNING

Although the highest DC voltage in the MASTR II receiver is +12 Volts DC, high current may be drawn under short circuit conditions. These currents can possibly heat metal objects such as tools, rings, watchbands, etc., enough to cause burns. Be careful when working near energized circuits!

High-level RF energy in the transmitter Power Amplifier assembly can cause RF burns. KEEP AWAY FROM THESE CIRCUITS WHEN THE TRANSMITTER IS ENERGIZED!