

MASTR[®] II MAINTENANCE MANUAL

406-512 MHz DUAL FRONT END

OPTION 9201 (matching IF Freq.)

OPTION 9202 (non-matching IF Freq.)

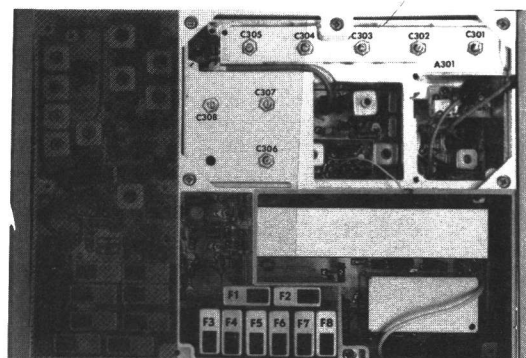


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| RF ASSEMBLY AND IF FILTER BOARD | LBI30032 (DF1107) |
| OSCILLATOR/MULTIPLIER | LBI30029 (DF1106) |
| RF STEERING AND MIXER IF SWITCH/CONVERTER | LBI30038 (DF1110) |

SPECIFICATIONS*

| | | | |
|-------------------------------------|-----------------------|---|-------------------------|
| SENSITIVITY | | With Pre-Ampl | Without Pre-Ampl |
| DFE | 12-dB SINAD | 0.22 μ V | 0.385 μ V |
| | 20-dB Quieting Method | 0.275 μ V | 0.550 μ V |
| Receiver | | Sensitivity degraded not more than 1 dB from standard receiver specifications | |
| SELECTIVITY | | | |
| EIA Two-Signal Method | | - 85 dB | - 90 dB |
| 20 dB Quieting Method | | -100 dB | -100 dB |
| SPURIOUS RESPONSE | | - 90 dB | -100 dB |
| INTERMODULATION | | - 75 dB | - 80 dB |
| CURRENT DRAIN (TYPICAL) | | Non-Matching IF's - 90 mA Matching IF's - 65 mA | |
| MAXIMUM FREQUENCY SEPARATION | | Full Specifications | 3 dB Degradation |
| 406-470 MHz | | 1.60 MHz | 2.0 MHz |
| 470-494 MHz | | 1.80 MHz | 2.30 MHz |
| 494-512 MHz | | 1.50 MHz | 2.0 MHz |
| 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 $+55^{\circ}\text{C}$) | |
| 2C-ICOMS | | $\pm 0.0002\%$ (-40°C to $+70^{\circ}\text{C}$) | |
| MODULATION ACCEPTANCE | | ± 7 kHz (narrow-band) | |
| RF INPUT IMPEDANCE | | 50 ohms | |

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

COMBINATION NOMENCLATURE

| 1st Digit | 2nd Digit | 3rd Digit | 4th Digit |
|----------------------|----------------------|--------------------------|---|
| Frequency Capability | Options | Frequency Range | Oscillator Stability |
| A 1-Freq. | S Standard | 77 406-420 MHz | A ± 5 PPM ($\pm 0.0005\%$) |
| D 2-Freq. | P VHS | 78 420-450 MHz | B ± 2 PPM ($\pm 0.0002\%$) |
| E 3-Freq. | | 88 450-470 MHz | |
| F 4-Freq. | | 89 470-494 MHz | |
| G 5-Freq. | | 91 494-512 MHz | |
| 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!