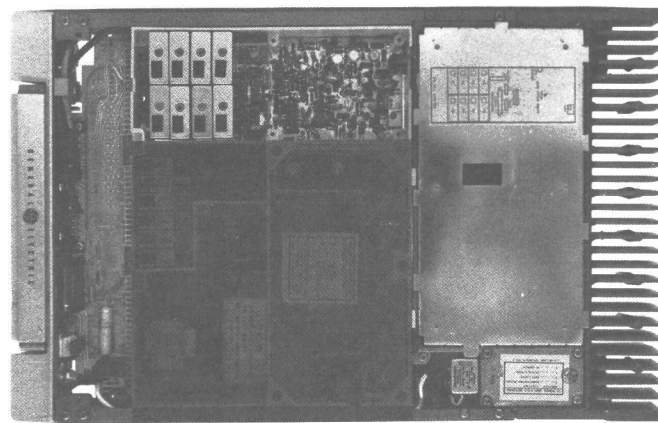


# MASTR<sup>®</sup> II MAINTENANCE MANUAL

138-174 MHz, 110-WATT TRANSMITTER - MOBILE AND STATION  
(with Phase Lock Loop Exciter)



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## SPECIFICATIONS\*

Power Output	110 Watts (Adjustable from 35 to 110 Watts)
Crystal Multiplication Factor	12
Frequency Stability	
5C-ICOM with EC-ICOM	$\pm 0.0005\%$ ( $-40^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ )
5C-ICOM or EC-ICOM	$\pm 0.0002\%$ ( $0^{\circ}\text{C}$ to $+55^{\circ}\text{C}$ )
2C-ICOMS	$\pm 0.0002\%$ ( $-40^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ )
Spurious and Harmonic Emission	At least 85 dB below full rated power output.
Modulation	Adjustable from 0 to $\pm 5$ kHz swing with instantaneous modulation limiting.
Modulation Sensitivity	75 to 120 Millivolts
Audio Frequency Characteristics	Within $\pm 1$ dB to $-3$ dB of a 6-dB/octave pre-emphasis from 300 to 3000 Hz per EIA standards. Post limiter filter per FCC and EIA.
Distortion	Less than 3%
Deviation Symmetry	0.5 kHz maximum
Maximum Frequency Spread:	
138-155 MHz	17 MHz
148-174 MHz	24 MHz
Duty Cycle	EIA 20% Intermittent (Mobile and Stations) Continuous (Stations)
RF Output Impedance	50 ohms

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

## WARNING

Although the highest DC voltage supplied to the MASTR II transmitter 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 upon contact. KEEP AWAY FROM THESE CIRCUITS WHEN THE TRANSMITTER IS ENERGIZED!