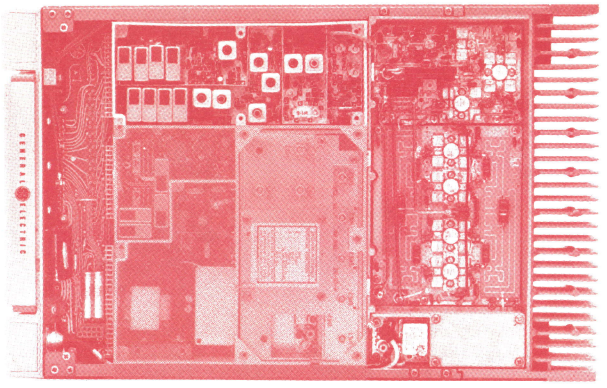
MOBILE RADIO

MASTR® II MAINTENANCE MANUAL

406 - 512 MHz, 100 - WATT TRANSMITTER - MOBILE AND STATION



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GENERAL ELECTRIC

Maintenance Manual LBI-31291A

406-512 MHz EXCITER 19D432679G1,2
100-WATT PA ASSEMBLY 19D424888G14-17,G31-34,G37 & G38
19D424895G14-17,G31-34,G38 & 39

SPECIFICATIONS*

Power Output	
406-420 MHz, 450-470 MHz	100 Watts (Adjustable from 30 to 100 Watts)
420-440 MHz, 470-512 MHz	90 Watts (Adjustable from 30 to 90 Watts)
440-450 MHz	80 Watts (Adjustable from 30 to 90 Watts)
Crystal Multiplication Factor	36
Frequency Stability	
5C-ICOM with EC-ICOM	±0.0005% (-40°C to +70°C)
5C-ICOM or EC-ICOM	±0.0002% (0°C to +55°C)
2C-ICOMS	±0.0002% (-40°C to +70°C)
Spurious and Harmonic Emission	At least 85 dB below full rated power output
Modulation	Adjustable from 0 to ±5 kHz swing with instantaneous modulation limiting
Modulation Sensitivity	75 to 120 Millivolts (Mobile) 10 to 120 Millivolts (Station)
Audio Frequency Characteristics	Within +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 2% @ 2000 Hz Less than 5% @ 300 Hz Less than 3% @ 3000 Hz
Deviation Symmetry	0.6 kHz maximum

Maximum Frequency Spread	Full Specifications	1 dB Degradation
406-470 MHz	5.50 MHz	9.00 MHz
470-494 MHz	5.80 MHz	9.50 MHz
494-512 MHz	6.00 MHz	9.75 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 in the radio is supplied by the vehicle battery, 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!

GENERAL ELECTRIC COMPANY • MOBILE COMMUNICATIONS DIVISION
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