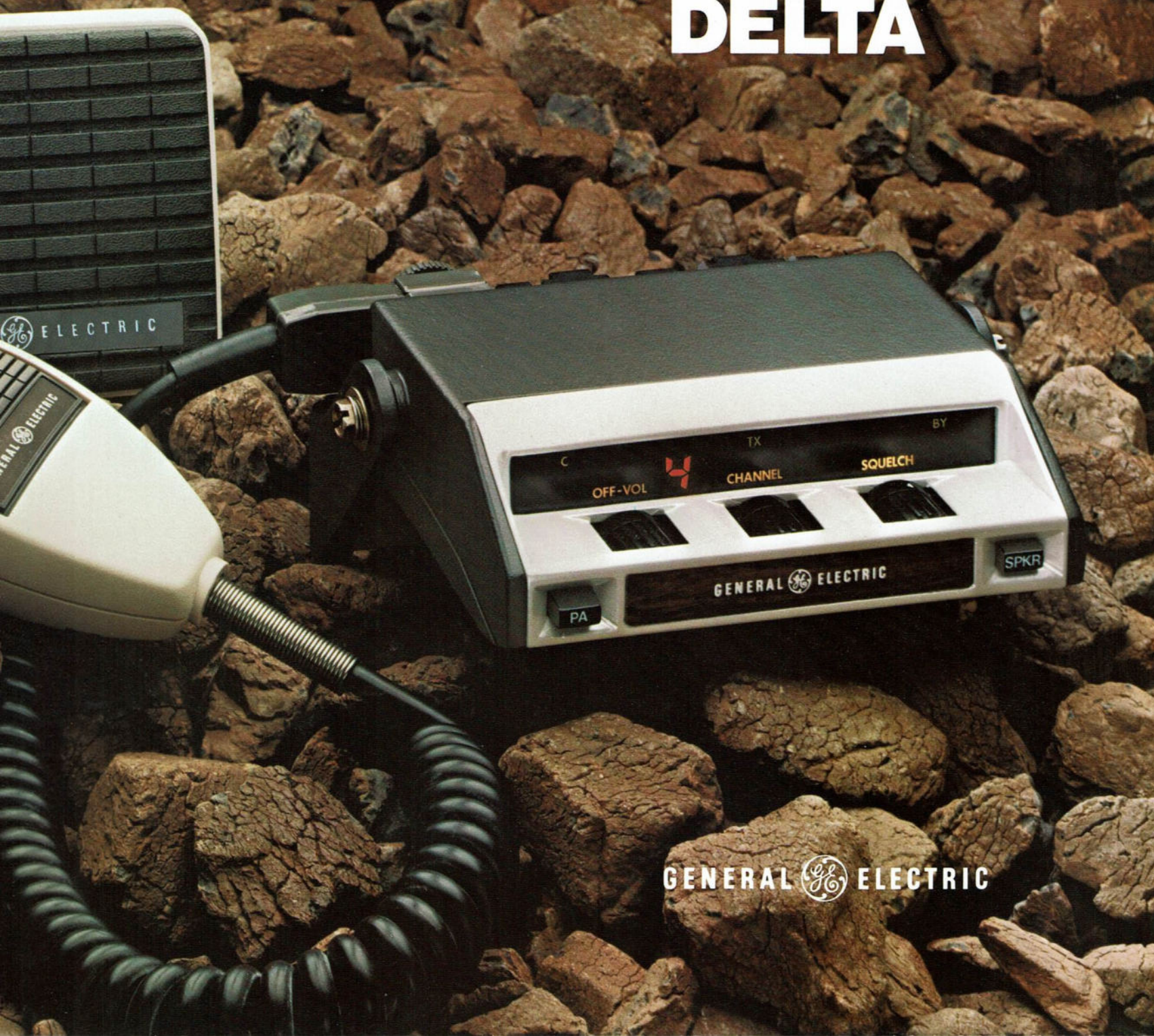


# GENERAL ELECTRIC MASTR® MOBILE RADIOS

## DELTA



GENERAL  ELECTRIC



# The high-performance mobile radio for value-conscious communicators

With a totally new and highly efficient design approach, General Electric's new MASTR® DELTA series of mobiles delivers quality performance at an attractive price for public service as well as business and industrial operations.

DELTA features include the highest receiver specifications in its class for intermodulation protection, plus high sensitivity when



## Standard Features

Weatherproof design conforms to MIL 810C specifications to withstand the most hostile mobile environment.

Smallest radio package in its class facilitates mounting high-power units in today's smaller vehicles.

Operation from either negative or positive ground meets a wide variety of mobile applications.



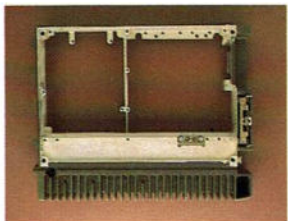
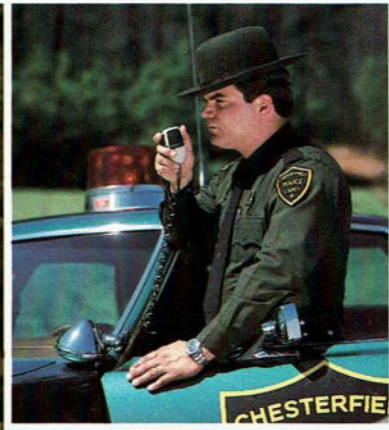
ATTRACTIVE COMPACT CONTROL UNIT is designed for easy mounting. Back-lit status window allows easy reading both day and night.



you need it. Up to 110 watts of RF power from a no-tune broad-band power amplifier. Compatibility with positive or negative ground electrical systems without using external convertors. Small size for underseat as well as trunk mounting. Weatherproof case and accessories which meet MIL 810C environmental standards. Wireless construction for optimum performance and reliability.

Some of the available options include field-programmable Channel Guard tones for quick and easy maintenance or system modification, DTMF encode and/or decode, public address, four-channel Priority Search Lock Monitor, and more. All designed to enhance system growth in an economical and orderly way as your needs change.

Add to that DELTA's compact size, its small and attractive standard control head and its low power consumption, and you have a radio truly designed to meet your changing needs. A radio that takes full advantage of the latest electronic technology to deliver high performance at a modest price in vehicle after vehicle.

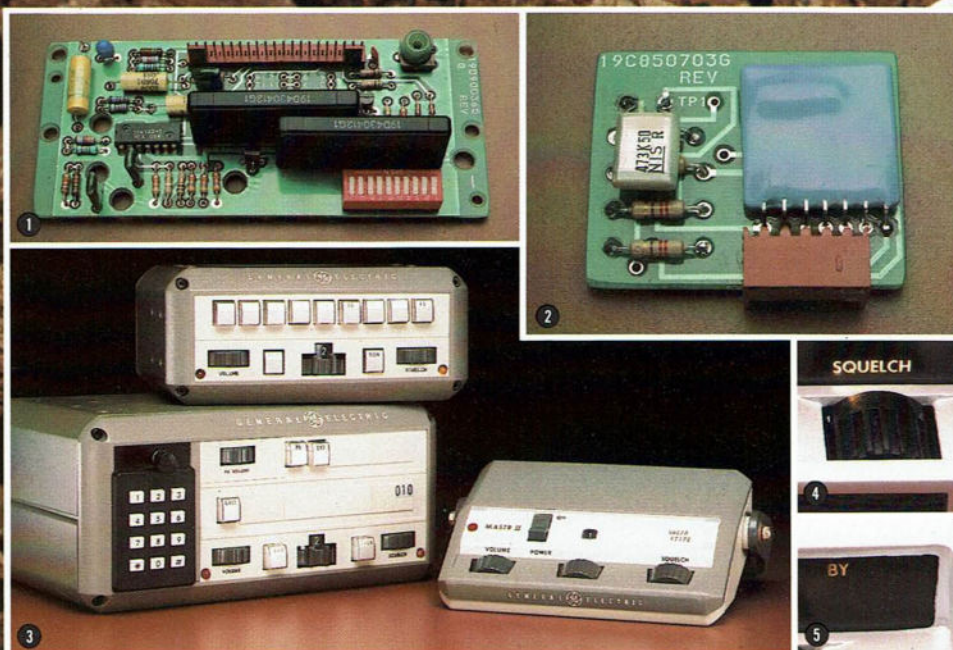


ONE-PIECE DIE-CAST FRAME construction provides the rugged strength needed in high shock and vibration situations.

Note: Some models are shown with optional equipment.



# The General Electric MASTR® DELTA line offers these most-wanted options



**1 PROGRAMMABLE CHANNEL GUARD** plug-in module permits quick and easy changes of CTCSS tones.

**2 CARRIER CONTROL TIMER** plug-in module limits conversation length and prevents system lock-up.

**3 MASTR II SYSTEM INTERFACE** allows using GE MASTR II C-500, C-800 and C-900 control units with all their applicable tone and system application options.

**4 VARIABLE SQUELCH** allows experienced operators to adjust

squelch opening in changing RF signal strength conditions.

**5 CHANNEL BUSY LIGHT** permits monitoring radio channel activity without disabling Channel Guard.

**IGNITION SWITCH STAND-BY** prevents radio transmissions unless vehicle ignition is switched on.

**RF PRE-AMPLIFIER** plug-in module increases the range capabilities of both VHF and UHF receivers.

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# MASTR® MOBILE RADIOS SPECIFICATIONS

## DELTA



### APPLICATION

MASTR DELTA mobile radios incorporate the latest circuit technology including long-life, precision chip components. Its leadership design is predicated on high quality, top performance and compact size for preeminent use in practically any mobile radio application. The radio's floating ground chassis permits ready transfer between positive and negative ground vehicles without modification or need of convertors.

**FREQUENCY RANGE:** 136 to 174 MHz

**RF POWER RATINGS:** 40 and 110 Watts

**CHANNEL CAPACITY:** 4

**FREQUENCY RANGE:** 450 to 470 MHz

**RF POWER RATINGS:** 40 and 100 Watts

**CHANNEL CAPACITY:** 4

### PRODUCT FEATURES

- Wireless Design
- Adjustable RF Power
- 12 Watts Audio Power
- Electret Microphone
- Designed to MIL-STD-810C

### MAJOR BENEFITS

Eliminates failures and frequent repair due to frayed, pinched or poorly connected wires.

Enables power to be tailored to system needs. Also avoids excess battery drain.

Assures intelligible messages in noisy areas.

Enhances audio quality, dependability and long life expectancy.

Radio and accessories have optimum protection against adverse mobile environments (water, dust, salt fog, shock and vibration).



# SPECIFICATIONS

# MASTR DELTA

## GENERAL

SYSTEM VOLTAGE:	11.7 to 15.2 VDC negative or positive ground	DUTY CYCLE:	Receiver, 100% - Transmitter, 20% (EIA)
TEMPERATURE RANGE:	-30°C to +60°C (-22°F to +140°F) (for full specified performance per EIA)	SHOCK:	EIA & MIL-STD-810C
ALTITUDE:	5 km (16,500 ft.)	VIBRATION:	EIA, IEC, USFS & MIL-STD-810C
HUMIDITY:	95% RH @ 50°C (122°F)	WEATHER PROTECTION:	MIL-STD-810C
DIMENSIONS (HxWxD)		MICROPHONE:	Electret
Mobile Unit		SPEAKER:	4 Ohms
40W model:	6.5x26x32.5 cm (2.5x10.2x12.8 ins)	ANTENNA:	Stainless steel 1/4 wave whip with 4.6 m (15 ft) of antenna cable
100/110W model:	6.5x29x32.5 cm (2.5x11.4x12.8 ins)	MOUNTING:	Hardware and cables supplied for trunk installation of radio and "up front" mounting of controls.
Control Head:	4.8x9.9x14.1 cm (1.9x3.9x5.6 ins)		
Speaker:	9.2x14.4x6.4 cm (3.6x5.7x2.5 ins)		
WEIGHT (Average)			
40W Radio only:	4.8 kg (10.5 lbs.)		
100/110W Radio only:	5.2 kg (11.5 lbs.)		

## RECEIVER (SINGLE CONVERSION)

FREQUENCY RANGE (MHz)	136 to 174	450 to 470
(RECEIVER TYPE)	(Basic) (UHS)	(Basic) (UHS)
RF INPUT IMPEDANCE:	50 ohms	50 ohms
CHANNEL SPACING:	25/30 kHz	25 kHz
SENSITIVITY		
EIA 12 dB SINAD:	0.35 $\mu$ v 0.2 $\mu$ v	0.35 $\mu$ v 0.2 $\mu$ v
20 dB Quieting:	0.5 $\mu$ v 0.25 $\mu$ v	0.5 $\mu$ v 0.25 $\mu$ v
Noise Squelch:	4 dB SINAD	4 dB SINAD
Channel Guard Squelch:	8 dB SINAD	8 dB SINAD
SELECTIVITY (EIA 2-Signal)		
@ 25 kHz:	-95 dB -90 dB	-90 dB
@ 30 kHz:	-100 dB -95 dB	-
FREQUENCY STABILITY:	$\pm 0.0005\%$	$\pm 0.0005\%$
MODULATION ACCEPTANCE:	$\pm 7$ kHz	$\pm 7$ kHz
INTERMODULATION		
@ 25 kHz:	-	-85 dB -80 dB
@ 30 kHz:	-85 dB -80 dB	-
SPURIOUS AND IMAGE REJECTION:	-100 dB	-100 dB
FREQUENCY SEPARATION (max. MHz)	136-153 150-174	
(Optional, 2 to 4 channels)		
Full Specifications:	1.5 MHz 2 MHz	2 MHz
1 dB degradation in sensitivity:	2 MHz 2.5 MHz	2.5 MHz
AUDIO RESPONSE:	Within +2 and -8 dB of 6 dB/octave de-emphasis, 300 to 3000 Hz per EIA.	
AUDIO OUTPUT:	12 watts with less than 3% distortion @ 1000 Hz.	

## TRANSMITTER (NO-TUNE PA)

FREQUENCY RANGE (MHz)	136 to 174	150.8 to 174	450 to 470
Rated RF Power:	40 W	110 W	40 W 100W
Adjustable to:	20 W	55 W	20 W 50 W
RF OUTPUT IMPEDANCE:	50 ohms		50 ohms
CONDUCTED SPURIOUS & HARMONIC EMISSION:	85 dB		-85 dB
FREQUENCY STABILITY:	$\pm 0.0005\%$		$\pm 0.0005\%$
MODULATION DEVIATION:	0 to $\pm 4.5$ kHz		0 to $\pm 4.5$ kHz
FM NOISE:	-70 dB		-70 dB
FREQUENCY SEPARATION (max.)			
(Optional, 2 to 4 channels)			
Full Specifications:	3 MHz		9 MHz
1 dB degradation in Power output:	4 MHz		-
AUDIO RESPONSE:	+1, -3 dB @ 300 Hz and +1, -4.5 dB @ 3000 Hz per EIA.		
AUDIO DISTORTION:	2% @ 1000 Hz.		

## FCC FILING DATA

FREQUENCY BAND (MHz)	RF POWER OUTPUT RANGE (Watts)	TYPE ACCEPTANCE NO.	APPLICABLE TO FCC RULES (Part Numbers)	RECEIVER MODEL NUMBER	MAX. BATTERY DRAIN (Amps)		
					Rx Standby	Unsquelled	Transmit
136 to 174	20 to 40	KT-215-A	22,81 & 90	ER-139-A	0.38 @ 13.8 VDC	2.0 @ 13.8 VDC	10 @ 13.6 VDC
	55 to 110	KT-217-A	22 & 90				26 @ 13.4 VDC
450 to 470	20 to 40	KT-218-A	22, 90 & 95A	ER-140-A	0.45 @ 13.8 VDC	2.0 @ 13.8 VDC	11 @ 13.6 VDC
	50 to 100	KT-220-A					26 @ 13.4 VDC

## OPTIONS & ACCESSORIES

- Programmable Channel Guard
- Carrier Control Timer
- UHS (Ultra High Sensitivity) Receiver
- Variable Squelch Control
- Handset
- C-500, C-800 or C-900 Control Units
- Tone Adapter Cable
- Full Length Ground (Power) Cable
- Vehicular Repeater Interface

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