



MASTR[®] MPX Personal Radios
Quality that speaks for itself

Down-to-earth value at the upper limits of technology



The General Electric MPX Personal radio. No other radio at its price level even begins to deliver its sophistication, its specifications or its capabilities. The MPX Personal is truly state-of-the-art in every way. And years-ahead design concepts help guard your investment against obsolescence in the future.

Even a quick check will show it has more features, more functions and more flexibility than almost any other hand-held radio in its price class.

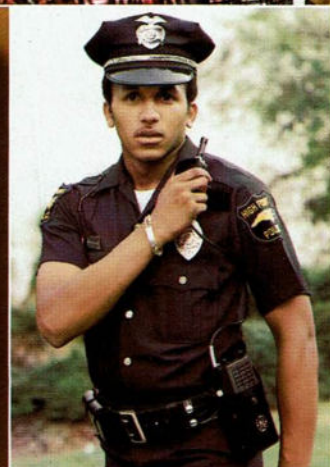
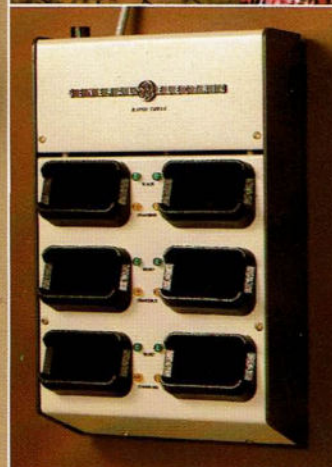
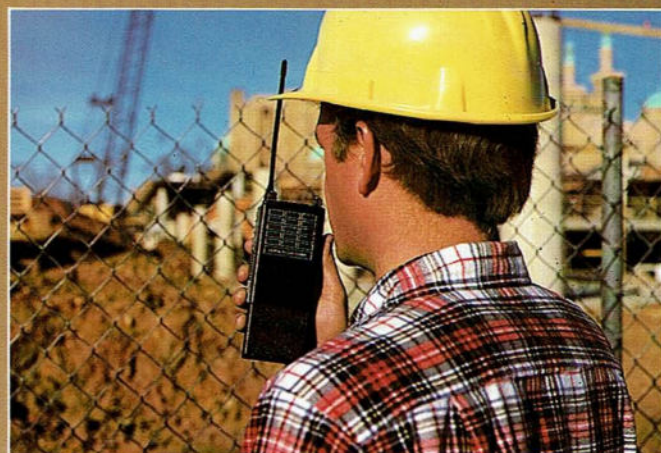
New, thick-film hybrid integrated circuitry with modular construction flexibility, and multi-layer circuit board pack maximum performance into a convenient, sensibly-sized package. Direct FM modulation, electret microphone, and separate high quality speaker deliver vastly superior audio quality. An electronics package that floats inside an Ensolute® foam, shock-protected casing. Field programmable

synthesized Channel Guard tones plus squelch tail elimination. Large side-mounted connector with self-cleaning contacts for highly reliable connections to options and accessories.

Additional options make the MPX Personal even more versatile. Options like up to 10-channel capability. Desk and multi-unit chargers, plus a vehicular charger capable of operating the transmitter even when the radio battery is discharged. A wide selection of antennas, batteries, carrying and audio accessories for unprecedented application versatility. Plus three case sizes to contain just the functions needed for your particular requirements.

General Electric's new MPX Personal radio. When your budget demands down-to-earth value and your system requires a personal radio with capabilities at the upper limits of technology.

Note: Some models are shown with optional equipment



Performance Characteristics

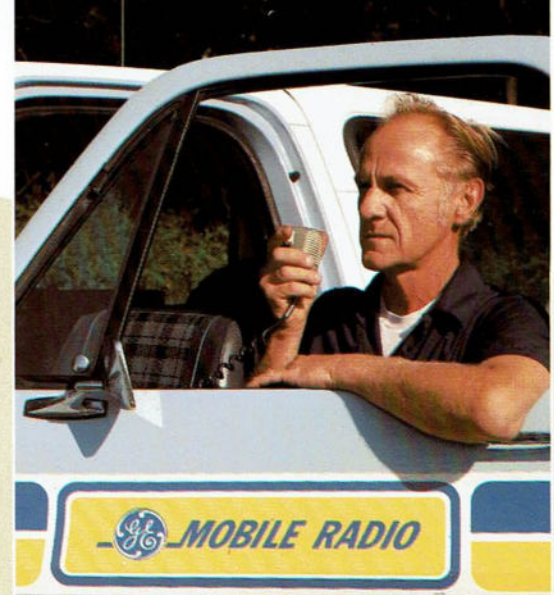
Output Powers—Up to 5w

Frequency Bands—VHF, UHF

Number of Channels—Up to 10

Models / Options—Great choice of options; three case sizes, two battery sizes.

Quality begins with people



People like our product design, inspection, test and manufacturing personnel, who help maintain the industry's most stringent quality-control standards.

People like our sales and service representatives. Permanent residents of the area they serve, they're uniquely prepared to provide responsive, professional, on-the-spot service and support. When you need it.

People, in short, who will stay with you and work for you. That's what makes the General Electric team part of your team.

General Electric Company • Mobile Communications Division
World Headquarters • Lynchburg, Virginia 24502 USA

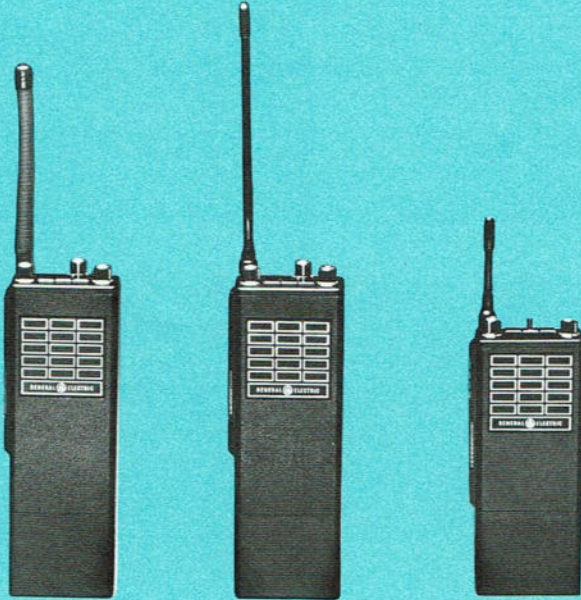
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MASTR® PERSONAL RADIOS

SPECIFICATIONS

MPX



APPLICATION

The MASTR MPX is a high performance personal radio with extensive operational and functional capability. It provides mobile-like specifications; employs direct FM modulation; uses plug-in oscillators; has a separate built-in microphone, speaker and on/off power switch; and allows wide frequency spacing on multi-frequency models. Complete circuit functions are contained within individual modules which are "float-mounted" on energy-absorbing material. Its GE-pioneered twist-off battery is quickly removeable and it may be either fast or standard-rate recharged.

FREQUENCY RANGES:	138 to 174 MHz	406 to 512 MHz	806 to 870 MHz
RF POWER OUTPUT:	1, 2 & 5 Watts	1.5 & 4 Watts	2 Watts
CHANNEL CAPACITY:	Up to 10	Up to 10	Up to 5

PRODUCT FEATURES

- Shock-Mounted Electronics
- Totally Weathertight
- Built-in Electret Microphone
- A Choice of Package Length, Battery Capacity, Power Rating, Options and Accessories

MAJOR BENEFITS

Resists damage to the radio due to dropping or rough handling.

Permits full-time, dependable operation in or outdoors.

Enhances audio quality, long life and trouble-free performance.

Facilitates the match of system requirement to just the right radio for the job.

GENERAL SPECIFICATIONS

INPUT VOLTAGE: 7.5 VDC (nominal)
VIBRATION: 5 G (per U.S. Forest Service)
SHOCK: 1 meter drop (per EIA)

AMBIENT TEMPERATURE RANGE: -30°C to +60°C
RELATIVE HUMIDITY: 95% @ 55°C
ALTITUDE operational: 5,000 meters
in transit: 12,000 meters

DIMENSIONS (Typical)

Radio	Size (Case only)		
"A" Case (H x W x D):	11.2 x 7.2 x 3.8 cm (4.4 x 2.8 x 1.5 ins)		
"B" Case (H x W x D):	14.8 x 7.2 x 3.8 cm (5.8 x 2.8 x 1.5 ins)		
"C" Case (H x W x D):	16.4 x 7.2 x 3.8 cm (6.5 x 2.8 x 1.5 ins)		
Battery	Size (excluding connector)		
750 mAh (H x W x D):	5.5 x 6.8 x 3.8 cm (2.2 x 2.7 x 1.5 ins)		
1200 mAh (H x W x D):	8.9 x 6.8 x 3.8 cm (3.5 x 2.7 x 1.5 ins)		
Antenna	HB	UHF	800 MHz
Lengths:	20 cm (7.9 ins)	17.1 cm (6.8 ins)	8.9 cm (3.5 ins)

NOTE: "C" case radios are offered only in frequency ranges 138 to 174 MHz and 406 to 512 MHz.

RECEIVER (SINGLE CONVERSION)

FREQUENCY RANGE (MHz):	138 to 174	406 to 512	851 to 870
RECEIVER TYPE:	Standard	UHS	Standard
SENSITIVITY			
EIA 12 dB SINAD (μv):	0.35	0.18	0.35
20 dB Quieting (μv):	0.50	0.25	0.5
Critical Squelch (μv):	0.25	0.13	0.25
SELECTIVITY EIA			
@ 30 kHz (dB):	-95	-90	N/A
@ 25 kHz (dB):	-85	-80	-75
@ 20 kHz (dB):	-60	-60	N/A
INTERMODULATION (dB):	-80	-75	-70
SPURIOUS AND IMAGE REJECTION (dB):	-75	-80	-70
CHANNEL SPACING:	25/30	20/25	25
FREQUENCY SPREAD			
Full Performance (MHz):	1.5	2	2
with Sensitivity Degradation of			
3 dB (MHz):	3	4	7
6 dB (MHz):	6	8	10
FREQUENCY STABILITY (ppm):	5	5	5
AUDIO RESPONSE:	Within +2 and -8 dB of 6 dB per octave, de-emphasis, 300 to 3000 Hz per EIA.		
AUDIO DISTORTION:	Less than 5% (2% @ 50 mW)		
AUDIO OUTPUT (max.):	500 mW		
MOD. ACCEPTANCE (kHz):	±7		

TRANSMITTER (NO-TUNE PA)

FREQUENCY RANGE (MHz):	138 to 174	406 to 512	806 to 825
RATED RF OUTPUT (W)	1	2	5
Adjustable to (for full performance per EIA) (W)	0.5	1	1
CONDUCTED SPURIOUS & HARMONIC EMISSION (EIA) (dB):	-43	-46	-50
FREQUENCY STABILITY (ppm):	5	5	5
MODULATION DEVIATION:	Adjustable to ±5 kHz		
FM NOISE:	-60 dB		
AUDIO RESPONSE:	Within +1 and -3 dB of 6 dB per octave, pre-emphasis, 300 to 3000 Hz per EIA.		
AUDIO DISTORTION:	Less than 3%		
RF LOAD IMPEDANCE:	50 ohms		
MAXIMUM FREQUENCY SPREAD			
Full Performance			
@ 138 to 174 MHz:			12 MHz
@ 406 to 512 MHz:			10 MHz
@ 806 to 825 MHz:			19 MHz
With 1 dB degradation in Power Output			
@ 138 to 155 MHz:			17 MHz
@ 150 to 174 MHz:			24 MHz

FCC FILING DATA

Frequency Range (MHz)	RF Power Output (Watts)	Type Acceptance Number	FCC Part Numbers	Receiver Model Number
150.8 to 174	0.5 to 1.0	KT-192.*	22 and 90	ER-121.*
	1.0 to 2.0	KT-190.*		
	1.0 to 5.0	KT-191.*		
470 to 512	1.0 to 1.5	KT-194.*	22, 90 & 95	ER-123.*
	1.0 to 4.0	KT-195.*		
806 to 825 (Tx) 851 to 870 (Rx)	1.0 to 2.0	KT-202.**	90	ER-124.**

* Insert "A" for A Case Radios, "B" for B Case Radios; "C" for C Case Radios
 ** Insert "A" for A Case Radios, "B" for B Case Radios

OPTIONS & ACCESSORIES

- Programmable CG
- HB Preamplifier
- Carrier Control Timer
- Multiple Tone CG
- Type 90 Tone
- DTMF Encoder
- Headsets, Earpiece, remote microphones, etc.
- 2nd UHF Offset
- Tx/Battery Status LED
- Cases and Straps
- Swivel Mounts
- POWR MASTR
- Desk, Wall & Vehicular Chargers
- Stub antenna

GENERAL ELECTRIC COMPANY • MOBILE COMMUNICATIONS DIVISION
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