

Remarkable performance,
remarkably low price



Dollar for dollar and feature for feature, the MASTR MVP Personals are an exceptional value. For people who need a basic, no-frills, high-quality radio that will stay on the job doing its job, these are the ones to consider.

Many of their mechanical and electrical components, for example, and many of their features and options are identical to those in GE's high-spec PE Personal radios.

Just look at some of the features. Up to 5 watts of RF power. A rugged interior and exterior design that can handle tough assignments with ease. High-capacity 700 mAh rechargeable battery, with a much-imitated twist-lock connector that makes battery changeovers a

snap. Weather-protected openings and impact-resistant Lexan®-and-steel cases. Outstanding audio.

There's also an impressive array of options that make the MVP Personals even more versatile, even more valuable. Up to 6-channel capability, for instance, and selective calling. Desk-top and multi-unit chargers. Channel Guard tone-coded squelch system and sequential-tone selective signalling, too. Plus a broad selection of antennas, batteries, carrying and audio accessories.

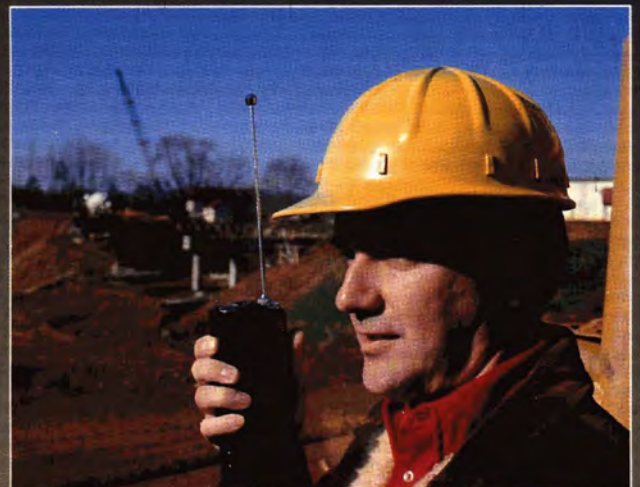
Anyway you look at it, the MASTR MVP Personals are a lot of radio for the money.

Note: Some models are shown with optional equipment



Performance Characteristics

Output Powers—Up to 5w
Frequency Bands—VHF, UHF
Number of Channels—Up to 6
Models/Options —Popular options;
one case size



MASTR[®] Personal Series



PE MODELS

138 — 174 MHz

MEDIUM POWER (2 - WATTS)



EXTENDED PACKAGE
("D", "K" or "T" Style)

BASIC PACKAGE
("R" Style)

HIGH POWER (5 - WATTS)



EXTENDED PACKAGE
("D", "K" or "T" Style)

BASIC PACKAGE
("R" Style)

- ★ UP TO 5 WATTS RF OUTPUT
- ★ 700 mAh BATTERY STANDARD
- ★ RAPID CHANGE POWER PACKS
- ★ RUGGED AND DEPENDABLE

- ★ UP TO EIGHT CHANNEL OPERATION
- ★ UP TO $\pm 0.0002\%$ FREQUENCY STABILITY
- ★ DUAL FRONT END CAPABILITY
- ★ SEARCH LOCK MONITOR AND MANY OTHER OPTIONAL FEATURES

GENERAL  ELECTRIC

MASTR[®] Personal Series PE MODELS

The MASTR[®] Personal Series "PE" Radios are extremely compact, high-performance two-way FM Radios with models to satisfy a wide variety of operating requirements. The radios are fully transistorized—utilizing both discrete components and Integrated Circuit Modules.

The "PE" unit consists of a totally enclosed radio section and a quickly detachable battery compartment. The operating controls, located on the top of the radio, include an ON-OFF/volume control and a multi-pin receptacle for the connection of external options. When a manually-selectable tone option is specified, a toggle switch will also be furnished.

RUGGED AND DEPENDABLE — Dependable portability is assured by its rugged interior and exterior construction. Components are rigidly mounted for minimum vibration on glass-reinforced epoxy printed circuit boards. The case is made of durable Lexan[®] and steel to provide maximum impact and mar resistance. All openings are sealed or weather-protected to keep out moisture, dust and other foreign matter.

MULTI-CHANNEL CAPABILITY — Whether your system calls for one or eight transmit and receive frequencies, there is a "PE" to meet the requirement. The "PE" is available in a "Basic Package" with 2-channel capacity ("R" Style Models) or an "Extended Package" with 8 channel capacity ("K" Style Models). In addition, "D" and "T" Styles with 5 channel capacity are offered in the "Extended Package". When a 5 or 8 channel radio is initially equipped for less than maximum channel capacity, it's easy to add channels later to meet system requirements.

All models are basically "local-controlled" units with built-in speaker/microphone and push-to-talk switch operation. However they may be operated remotely by adding optional external microphones, headsets, etc.

HIGH POWER OPERATION — 5 watts of RF transmitter output power provide outstanding transmitter range in the "HI POWER" version of the "PE" Portable. The Medium Power (2-watt) unit gives an additional choice of transmitter power ranges to serve varying customer requirements.

700 mAh RECHARGEABLE BATTERY — The bottom section of the "PE" unit is a molded plastic case containing a 700 milliampere/hour (mAh) rechargeable battery. This powerful battery will operate the "HI POWER" radio for 8 full hours between charges at a 5-5-90% duty cycle. An optional 500 mAh rechargeable battery is available for applications that do not require high battery capacity. Optional Mercury or Alkaline battery packs are also available for use

with Medium Power radios. Each battery type is equipped with the same positive-acting, one-fourth turn patented connector which enables the substitution to be made without the use of tools, coins or gaining access to the radio compartment. The rechargeable battery may be charged while attached to the radio or separately. Subsurface contact strips on each side of the case provide automatic connection to the optional battery Chargers.

HIGH PERFORMANCE RECEIVER — The advanced design receiver provides -75 dB Intermodulation protection and -85 dB Selectivity (150.8-174 MHz range). These specifications combine to give high receiver performance even in weak signal fringe areas or areas with high RF interference.

DUAL FRONT END (DFE) CAPABILITY — The "D" Style model is equipped with DFE which provides a second RF stage for the radio's receiver to enable the radio to be operated cross-band or in-band with wide-spaced frequencies. Up to 5 channels may be combined on the receiver and DFE.

OPTIONS

Search Lock Monitor — Searches 2 of up to 6 channels. The searched channels consist of one which has been pre-set at the factory, and a second channel which is determined by the position of the frequency selector switch.

Carrier Control Timer — This factory installed option prevents a Personal unit from tying up a receiver voting or repeater system. The timer automatically turns off the PE transmitter after it has been keyed for 70 seconds (± 10 seconds).

Other functional options are available for factory installation including High Sensitivity Receiver (150.8-174 MHz), Channel Guard, Type 90 Tone (Encode/Decode or 2-Tone Encode), Type 99 Tone (Selective Call) Decoder, GE-STAR Data Encoder, a belt clip and swivel mount. Automatic tone selection may also be specified when Tone options are included for "D", "K" or "T" styles.

Field or factory installable options include interchangeable or spare battery packs and batteries, Desk Charger, Multi-Chargers, Vehicular Chargers, Speaker/Microphone/Antenna, Mobile Microphone, Headsets, Lapel Speakers, Earpiece, Test Set, Test Adapter Cable, Carrying Straps and Carrying Cases (with or without swivel mount). Also, a screw-on Whip, Flexible Wire, Stub, or Telescoping Antenna Option is offered to replace the normally furnished Insulated Spring Antenna.



GENERAL DATA

FCC FILING INFORMATION

MODEL AND MODEL/OPTION REFERENCE	CHANNEL CAPACITY	RF POWER OUTPUT	FCC FILING NUMBER			APPLICABLE TO PART NUMBER (FCC Rules)*
			TRANSMITTER	RECEIVER		
				138-150.8 MHz	150.8-174 MHz†	
PE56R/4475	2	1.0	ET-96-B	ER-59-A	ER-59-C	21, 81, 83, 90
PE56R	2	2.0	ET-96-A	ER-59-A	ER-59-C	21, 81, 90
PE56D/4475 PE56T/4475	5	1.0	KT-20-A	ER-59-A	ER-59-C**	21, 81, 90
PE56D or T	5	2.0	KT-20-A	ER-59-A	ER-59-C**	21, 81, 90
PE56K/4475	8	1.0	KT-20-A	ER-59-B	ER-59-D	21, 81, 90
PE56K	8	2.0	KT-20-A	ER-59-B	ER-59-D	21, 81, 90
PE66R	2	5.0	KT-106-A	ER-59-A	ER-59-C	21, 90
PE66D or T	5	5.0	KT-107-A	ER-59-A	ER-59-C**	21, 81, 90
PE66K	8	5.0	KT-107-A	ER-59-B	ER-59-D	21, 81, 90

*To meet 3 watt input limitation on LPI channels, specify PE56 with Option 4476.

**FCC Filing No. changes for DFE applications as shown under DFE Specifications.

†Type No's for optional high sensitivity receivers in 150.8–174 MHz frequency range are the same as listed for 138–150.8 MHz receivers.

UNIT DIMENSIONS

DIMENSIONS (less Antenna & Controls)	WITH 500 mAh RECHARGEABLE BATTERY	WITH 700 mAh RECHARGEABLE BATTERY	WITH MERCURY OR ALKALINE BATTERY
BASIC PACKAGE			
H x W x D	6.59 x 2.62 x 1.58 in. 16.74 x 6.65 x 4.01 cm.	6.83 x 2.62 x 1.58 in. 17.35 x 6.65 x 4.01 cm.	6.69 x 2.62 x 1.58 in. 16.99 x 6.65 x 4.01 cm.
Volume (EIA)	27.3 cu. in. 447.37 cu. cm.	28.27 cu. in. 463.26 cu. cm.	28.0 cu. in. 458.84 cu. cm.
Weight (Med. Pwr.)	21.0 oz. 595 g	22.9 oz. 649 g	24.0 oz. 680 g
Weight (High Pwr.)	23.2 oz. 658 g	25.1 oz. 712 g	Not Applicable Not Applicable
EXTENDED PACKAGE			
H x W x D	7.91 x 2.62 x 1.58 in. 20.09 x 6.65 x 4.01 cm.	8.15 x 2.62 x 1.58 in. 20.70 x 6.65 x 4.01 cm.	8.01 x 2.62 x 1.58 in. 20.65 x 6.65 x 4.01 cm.
Volume (EIA)	32.75 cu. in. 536.67 cu. cm.	33.74 cu. in. 552.90 cu. cm.	33.4 cu. in. 547.33 cu. cm.
Weight (Med. Pwr.)	24.0 oz. 680 g	25.9 oz. 734 g	27.0 oz. 765 g
Weight (High Pwr.)	26.2 oz. 743 g	28.1 oz. 797 g	Not Applicable Not Applicable

BATTERY LIFE WITH 5-5-90% DUTY CYCLE

BATTERY TYPE	BATTERY LIFE @ 25°C (Hours)	
	MEDIUM POWER RADIO	HIGH POWER RADIO
500 mAh Rechargeable	10 (between charges)	5.3 (between charges)
700 mAh Rechargeable	14 (between charges)	8 (between charges)
Mercury	42	Not Recommended

MAXIMUM FREQUENCY SPREAD (MHz)

FREQUENCY RANGE	TRANSMITTER		RECEIVER	
	Full Performance	1 dB Degradation in Power Output	Full Performance	1 dB Degradation in Sensitivity
138-145 MHz	0.83 MHz	2.8 MHz	0.55 MHz	1.1 MHz
145-150.8 MHz	0.87 MHz	2.9 MHz	0.58 MHz	1.16 MHz
150.8-174 MHz	0.90 MHz	3.0 MHz	0.60 MHz	1.20 MHz



138 — 174 MHz

TRANSMITTER

MEDIUM POWER

RF Power Output (EIA):	1.0 to 2.0 watts
RF Load Impedance:	50 ohms
Conducted Spurious & Harmonic Emission:	-60 dB
Modulation Deviation:	0 to ±5 kHz (16F3)
Frequency Stability -30°C to +60°C 0°C to +55°C	±0.0005% ±0.0002%
FM Noise:	
Without compressor	-55 dB
With compressor	-35 dB
Audio Response: (without compressor)	Within +1 and -3 dB of 6 dB/octave pre-emphasis, 300 to 3000 Hz per EIA
Audio Distortion:	Less than 8%

HIGH POWER

RF Power Output (EIA):	5.0 watts
RF Load Impedance:	50 ohms
Conducted Spurious & Harmonic Emission:	-50 dB
Modulation Deviation:	0 to ±5 kHz (16F3)
Frequency Stability: -30°C to +60°C 0°C to +55°C	±0.0005% ±0.0002%
FM Noise:	-50 dB
Audio Response:	Within +1 and -3 dB of 6 dB/octave pre-emphasis, 300 to 3000 Hz per EIA
Audio Distortion:	Less than 8%

RECEIVER

	138-150.8 MHz	150.8-174 MHz*		138-150.8 MHz	150.8-174 MHz*
RF Input Impedance:		50 ohms	Modulation Acceptance:		±7.0 kHz
Channel Spacing:		25/30 kHz	Spurious Response:	-70 dB	-80 dB
Sensitivity:			Image Rejection:	-70 dB	-80 dB
EIA 12 dB SINAD	0.25 µv	0.35 µv	Intermodulation: @ 30 kHz	-60 dB	-75 dB
20 dB Quieting	0.35 µv	0.50 µv	@ 25 kHz	-60 dB	-75 dB
Noise Squelch	0.15 µv	0.25 µv	Audio Response:		Within +2 and -10 dB of 6 dB/octave de- emphasis 300 to 3000 Hz
Channel Guard Squelch		8 dB SINAD	Audio Output (EIA):		500 mw at less than 5% distortion
Selectivity:			Speaker Impedance:		8 ohms
EIA 2 Signal (@ 30 kHz)	-75 dB	-85 dB			
(@ 25 kHz)	-70 dB	-80 dB			
20 dB Quieting (@30 kHz)	-110 dB	-110 dB			
(@25 kHz)	-110 dB	-110 dB			
Frequency Stability					
-30°C to +60°C		±0.0005%			
0°C to +55°C		±0.0002%			

*Specifications for optional high sensitivity receivers in the 150.8-174 MHz range are the same as listed for receivers in the 138-150.8 MHz range.

RECEIVER WITH DUAL FRONT END (DFE)

	RECEIVER (SEE NOTE)		DFE RECEIVER (as may be supplied)			
	150.8-174 MHz	42-50 MHz	150.8-174 MHz	450-470 MHz	470-512 MHz	
Freq. Range of Receiver:	150.8-174 MHz	42-50 MHz	150.8-174 MHz	450-470 MHz	470-512 MHz	
Channel Spacing:	25/30 kHz	20 kHz	30 kHz	25 kHz	25 kHz	
Sensitivity						
EIA 12 dB SINAD:	0.35 µv (0.28 µv)	0.28 µv	0.35 µv (0.28 µv)	0.4 µv	0.4 µv	
20 dB Quieting:	0.50 µv (0.35 µv)	0.35 µv	0.50 µv (0.35 µv)	0.6 µv	0.6 µv	
Noise Squelch:	0.25 µv (0.15 µv)	0.15 µv	0.25 µv (0.15 µv)	0.2 µv	0.2 µv	
Selectivity, EIA SINAD						
@ 30 kHz	-85 dB (-75 dB)	-60 dB @ 20 kHz	-85 dB (-75 dB)	-75 dB	-75 dB	
@ 25 kHz	-80 dB (-70 dB)	-85 dB	-80 dB (-70 dB)	-70 dB	-70 dB	
Modulation Acceptance:	±7.0 kHz	±6.5 kHz	±7.0 kHz	±7.0 kHz	±7.0 kHz	
Intermodulation:						
@ 30 kHz	-75 dB (-60 dB)	-70 dB	-75 dB (-60 dB)	-65 dB	-70 dB	
@ 25 kHz	-75 dB (-60 dB)	-70 dB	-75 dB (-60 dB)	-65 dB	-70 dB	
Spurious Response:	-80 dB (-70 dB)	-70 dB	-80 dB (-70 dB)	-60 dB	-60 dB	
Image Rejection:	-80 dB (-70 dB)	-70 dB	-80 dB (-70 dB)	-60 dB	-55 dB	
FCC Filing No:			ER-83-A (ER-74-A)	ER-84-A (ER-77-A)	ER-85-A (ER-78-A)	ER-86-A (ER-79-A)

NOTE: Specifications within parenthesis are applicable to the optional high sensitivity receivers with dual front end.

MASTR[®] MVP *Personal*

150.8-174 MHz
MEDIUM POWER — 2 WATTS
HIGH POWER — 5 WATTS



(Medium Power, single frequency, Local Control Model)



(High Power, multifrequency, Local/Remote Control Model)

 **MOBILE RADIO**

- ★ HIGH PERFORMANCE AT LOW COST
- ★ MODELS WITH 2 OR 5 WATTS RF OUTPUT
- ★ MODELS WITH LOCAL OR LOCAL/REMOTE CONTROL
- ★ HIGH CAPACITY RECHARGEABLE BATTERY
- ★ UP TO SIX CHANNEL OPERATION
- ★ RUGGED AND DEPENDABLE

The MVP Personal two-way FM Radios are fully transistorized, compact, quality radios that give you maximum value for your communications investment. They are MASTR[®] Value and Performance radios.

RUGGED AND DEPENDABLE — Dependability is assured through the unit's rugged interior and exterior construction. Components are rigidly mounted on glass-reinforced epoxy printed circuit boards assuring minimum vibration. The case is made of durable Lexan[®] and steel to provide maximum shock and mar resistance. All openings are sealed to keep out dust, dirt and moisture.

HIGH POWER OPERATION — 5 watts of RF transmitter output power provide outstanding transmitter range in the "Hi Power" version. The Medium Power (2 watt) unit gives an additional choice of transmitter power ranges to serve varying customer requirements at lower costs.

HIGH CAPACITY RECHARGEABLE BATTERY — The bottom section of the MVP Personal is a molded plastic case containing a 700 milliampere/hour (mAh) rechargeable battery. This powerful battery will operate the "Hi Power" radio for 8 full hours between charges at a 5-5-90% duty cycle. An optional 500 mAh rechargeable battery is available for lower duty cycle requirements. Optional Mercury or Alkaline battery packs are also available for use with Medium Power radios.

Each battery type is equipped with the same positive-acting, one-fourth turn patented connector which enables the user to change battery packs without tools or opening the radio compartment. The rechargeable battery packs may be charged separately or while attached to the radio. Contacts on each side of the battery pack provide automatic connection to the various optional battery chargers.

MULTI-CHANNEL CAPABILITY — Up to six transmit and receive channels may be ordered. Radios with two or more channels have a rotary Channel Selector Switch. When a radio with the rotary switch is initially equipped for less than six channels, minor equipment modifications permit addition of channels later to meet expanded system requirements.

EASY TO OPERATE — Operating controls are conveniently located on the top of the radio. These include ON/OFF volume control, squelch control and a Channel Selector Switch for multi-frequency applications. When a manually selectable tone option is required, a toggle switch is furnished. All MVP Personal radios are designed for Local Control with a built-in speaker/microphone and push-to-talk operation. Models with the accessory jack may also be used for Remote Control when furnished with an optional "remote" microphone.

OPTIONS

Factory installed Options include Channel Guard, Type 99 sequential tone signalling, belt clip and swivel mount. Automatic tone selection may also be ordered with tone options.

Field or factory installable Options include interchangeable or spare battery packs and batteries, desk chargers, multi-chargers, carrying straps and carrying cases (with or without swivel mount). Also, a screw-on whip, flexible wire or telescoping antenna is available which replaces the standard insulated spring antenna.

Local/Remote models, in addition, may be used with hand-held microphone, speaker/microphone, speaker/microphone/antenna, lapel speaker, earpiece, headset, the Vehicular Charger or may be equipped with a Carrier Control Timer.

GENERAL  ELECTRIC



OPERATING SPECIFICATIONS

(PC16)

* MASTR MVP Personal

150.8—174 MHz

GENERAL

MODEL REF.	CHANNEL CAPACITY	RF POWER OUTPUT	FCC FILING NUMBER		APPLICABLE TO PART NUMBER (FCC Rules)*
			TRANSMITTER	RECEIVER	
PY56/4475	6	1.0 W	KT-20-A	ER-71-A	21, 81, 89, 91, 93
PY56	6	2.0 W	KT-20-A	ER-71-A	21, 81, 89, 91, 93
PY66	6	5.0 W	KT-107-A	ER-71-A	21, 81, 89, 91, 93

*To meet 3 watt input limitation on LPI channels, specify PY56Y with Option 4476.

DIMENSIONS (less antenna & controls)	WITH 700 mAh RECHARGEABLE BATTERY	WITH 500 mAh RECHARGEABLE BATTERY	WITH MERCURY OR ALKALINE BATTERY
H x W x D	8.15 x 2.62 x 1.58 in. 20.70 x 6.65 x 4.01 cm.	7.91 x 2.62 x 1.58 in. 20.09 x 6.65 x 4.01 cm.	8.01 x 2.62 x 1.58 in. 20.65 x 6.65 x 4.01 cm.
Volume (EIA)	33.74 cu. in. 552.90 cu. cm.	32.75 cu. in. 536.67 cu. cm.	33.4 cu. in. 547.33 cu. cm.
Weight (Med. Pwr.)	25.9 oz. 734 g	24.0 oz. 680 g	27.0 oz. 765 g
Weight (High Pwr.)	28.1 oz. 797 g	26.2 oz. 743 g	Not Applicable Not Applicable

BATTERY TYPE	BATTERY LIFE @ 5-5-90% DUTY CYCLE (Hours)	
	MEDIUM POWER RADIO	HIGH POWER RADIO
500 mAh Rechargeable	10 (between charges)	5.3 (between charges)
700 mAh Rechargeable (Std)	14 (between charges)	8 (between charges)
Mercury	42	Not Recommended

ANTENNA: Flexible Insulated Spring. Maximum length 7.5 ins. (19 cm).

RECEIVER

RF Input Impedance:	50 ohms
Channel Spacing:	25/30 kHz
Sensitivity:	
EIA 12 dB SINAD	0.25 μ v
20 dB Quieting	0.35 μ v
Noise Squelch	0.15 μ v
Channel Guard Squelch	6 dB SINAD
Selectivity:	
EIA 2 Signal (@ 30 kHz)	-75 dB
(@ 25 kHz)	-70 dB
20 dB Quieting (@ 30 kHz)	-110 dB
(@ 25 kHz)	-110 dB
Frequency Stability:	
-30°C to +60°C	\pm 0.002%
	\pm 0.0005% Optionally
Modulation Acceptance:	\pm 7.0 kHz
Spurious and Image Rejection:	-70 dB
Intermodulation:	
30 kHz	-60 dB
25 kHz	-60 dB
Audio Response:	Within +2 and -10 dB of 6 dB/octave de-emphasis 300 to 3000 Hz.
Audio Output (EIA):	500 mw at less than 5% distortion
Speaker Impedance:	8 ohms
Multi-Frequency Performance	
Frequency Separation:	0.60 MHz (Full performance) 1.20 MHz (1 dB degradation in sensitivity)

TRANSMITTER

	MEDIUM POWER	HIGH POWER
RF Power Output (EIA):	1.0 to 2.0 Watts	5.0 Watts
RF Load Impedance:	50 ohms	
Conducted Spurious and Harmonic Emission:	-60 dB	-50 dB
Modulation Deviation:	0 to \pm 5 kHz (16F3)	
Frequency Stability:		
-30°C to +60°C	\pm 0.0005%	
0°C to +55°C	\pm 0.0002%	
FM Noise:		
Without compressor	-55 dB	-50 dB
With compressor	-35 dB	(Not Applicable)
Audio Response: (without compressor)	Within +1 and -3 dB of 6 dB/octave pre-emphasis, 300 to 3000 Hz per EIA	
Audio Distortion:	Less than 8%	
Multi-Frequency Performance		
Frequency Separation:	0.90 MHz (Full Performance) 3.0 MHz (1 dB degradation in Power Output)	

MOBILE RADIO DEPARTMENT
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502

GENERAL ELECTRIC

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MASTR[®] Personal Series

"PE" AND "MVP"
PERSONAL RADIOS

DESK and CABINET CHARGERS
VEHICULAR CHARGERS
ANTENNA OPTIONS
and ACCESSORIES

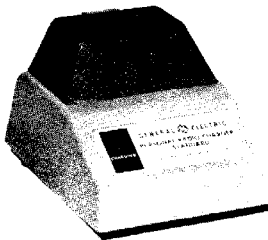
SINGLE UNIT DESK and MULTI UNIT CABINET CHARGERS

★ SAFELY CHARGES BATTERIES SEPARATELY
OR ATTACHED TO RADIO

★ RAPID CHARGE IN 3 HOURS

★ STANDARD CHARGE IN 16 HOURS

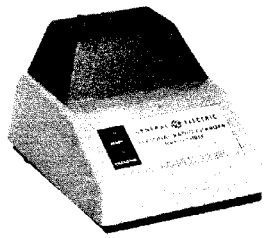
DESK CHARGERS



STANDARD

STANDARD DESK CHARGER
Charges 500 mAh or 700 mAh battery to 100% in 16 hours. Amber LED glows when charging.

RAPID THREE DESK CHARGER
Charges 700 mAh battery to 100% in 3 hours or less and 500 mAh battery to 100% in 16 hours or



RAPID THREE

less. An amber LED glows during charge. A green LED shows when the battery is ready for use. Optional DELUXE model for use with "PE" radios has mike, transmit LED and connector for external antenna. Also the DELUXE model will charge batteries of "MVP" Personal radios.

General Electric DESK CHARGERS charge a single rechargeable battery as normally supplied with a "PE" or "MVP" Personal radio. The battery may be charged while connected to the radio or independently, such as a spare.

These chargers are carefully designed to provide years of dependable service and proper maintenance of batteries without danger of overcharging. A fully charged battery may be left in a GE charger indefinitely.

A RAPID THREE (both Desk and Cabinet) Charger, is similar to a Standard Charger and has, in addition, a temperature-sensing logic circuit which prevents a charge to be given to a battery which is too cold or too hot for reliable and safe rapid charging.

The STANDARD Desk Charger line includes a "green label" model which may be used exclusively for Intrinsically Safe (energy limiting) batteries.

CABINET CHARGERS

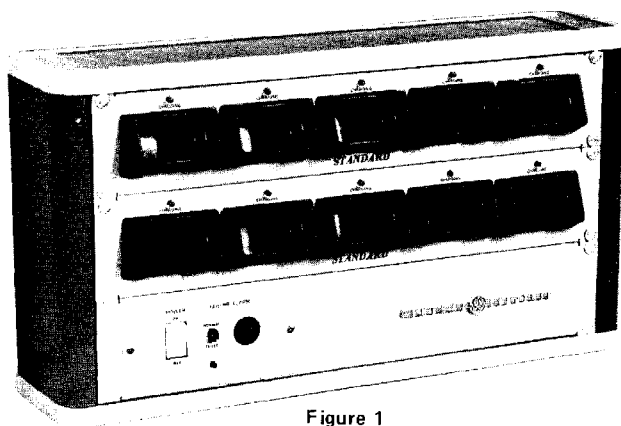


Figure 1



Figure 2

General Electric CABINET CHARGERS are offered in two cabinet sizes; a full sized cabinet with capacity for 6 charging panels and a short cabinet for 2 panels. The basic model in either cabinet size includes one 5-receptacle charging panel which may be specified for "standard" or "Rapid Three" charging. Additional charging panels up to the cabinet's full capacity are provided as options. "Rapid Three" panels may be added only to basic "Rapid Three" cabinets. "Standard" panels may be added to either basic cabinet. A typical cabinet charger with 2 "standard" panels is shown in Figure 1. Figure 2 shows an add-on "standard" charging panel. A "Rapid Three" panel looks similar, except it has two LEDs over each charging receptacle.

The same unique features, LED indications and characteristics as described for Standard and Rapid DESK CHARGERS also apply to the CABINET CHARGERS. In addition, Cabinet Chargers are normally furnished with a battery-powered alarm function which emits an audible alert on failure of the AC LED power indicators.

Installation is flexible, since the cabinet may be mounted on a wall or placed, free-standing, on a desk top.

Both the 2 and 6-panel Cabinet Chargers have a model with "16-hour" charging panels for multiple charging of Intrinsically Safe batteries.

GENERAL  ELECTRIC

VEHICULAR CHARGER with MOBILE ACCESSORIES



The VEHICULAR CHARGER is a combination package which provides rapid charging of a 700 mAh battery to 100% capacity plus the ability to operate "PE" low or high power radios or MVP Personals with Remote audio capability with all the benefits of a permanent mobile installation. (The "MVP" Personal w/o Remote Audio will not operate as a mobile in the Vehicular Charger but its 700 mAh battery can be charged).

The installation shown here is a standard package which consists of a "3-hour" charger with a 2.5 watt audio amplifier, a mobile antenna, cable, installation hardware, a MASTR II mobile speaker and microphone. The panel on the charger unit has a volume control and three LEDs (amber for "CHARGE", green for "READY" and red for "TRANSMIT"). It has a latching mechanism which will firmly hold a "PE" Personal in place until released by operation of a pushbutton. To inhibit unauthorized removal, a key lock prevents the latching mechanism from being released.

The Charger will accept and hold any "PE" Personal radio or MVP with Local/Remote Audio capability which is equipped with a regular (non-energy limiting type) 700 mAh rechargeable battery. When completely inserted into the charger's receptacle, automatic connections are made to the external microphone, speaker, antenna and the charging circuit.

The Vehicular Charger package may be specified with either a standard Low Band, Mid Band, High Band or UHF mobile antenna. Options include: a 15 watt amplifier, external horn speaker with INT/EXT Speaker Switch, public address capability and radio "Dead Battery" operation.

NOTE: Both the 2.5 and 15 watt Audio Amplifier are rated at no more than 10% distortion.

BATTERY CHARGER SPECIFICATIONS

INPUT VOLTAGE REQUIREMENTS

Desk & Cabinet Chargers:	109-133 VAC, 50/60 Hz (198-242 VAC optional)
Vehicular Charger:	+13.6 VDC (nominal) (positive ground operation optional) ±11 to 16 VDC (permissible range)

DIMENSIONS

Type of Charger	High x Wide x Deep	Weight (max.)	Current Drain (nominal)
Desk-Standard	4.5 x 5.5 x 7.3 ins.	2.5 lbs.	33 ma (121 VAC)
	11.5 x 14 x 18.6 cm.	1.1 kg.	18 ma (242 VAC)
Desk-Rapid	4.5 x 5.5 x 7.3 ins.	3.0 lbs.	100 ma (121 VAC)
	11.5 x 13.9 x 18.6 cm.	1.4 kg.	60 ma (242 VAC)
Cabinet-2 panel	12 x 21.6 x 5.5 ins.	25.2 lbs.†	.53 A (121 VAC)
	30.5 x 54.9 x 14 cm.	14.5 kg.	.29 A (242 VAC)
Cabinet-6 panel	26 x 21.6 x 5.5 ins.	53.6 lbs.†	1.6 A (121 VAC)
	66 x 54.9 x 14 cm.	24.1 kg.	.88 A (242 VAC)
Vehicular*	2.75 x 6.5 x 8.75 ins.	3.5 lbs.	750 ma (max.)
	7.0 x 16.5 x 22.2 cm.	1.6 kg.	100 ma (min.)

*Less brackets and with 2.5 W audio.

†Weight given for model with a single charging panel. Increase weight by 1.8 lbs. for each additional panel.

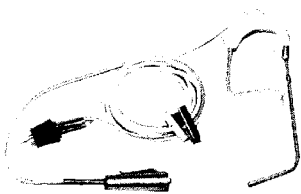
ALERT TONE (Cabinet models) (Sounds in case of Power or Power Supply failure)

Frequency:	500 to 2000 Hz @ 10 mW
Duration:	Up to 20 hours unless manually reset

COLORS

Desk Chargers:	Moonstone Brown and Black
Cabinet Chargers:	Moonstone Brown, Ash Beige and Black
Vehicular Chargers:	Moonstone Brown and Ash Beige

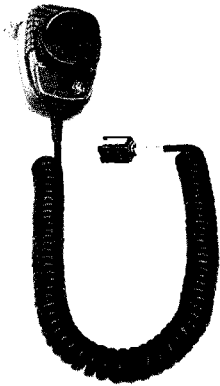
AUDIO ACCESSORIES



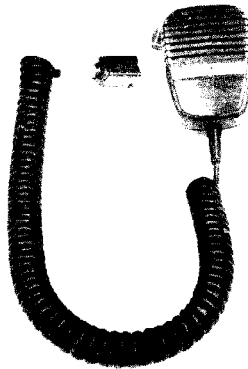
**OPTION 4317
EARMOUNT HEADSET.** Has adjustable speaker tube and is provided with several removable ear plugs to fit ears of varying sizes and shapes.



**OPTION 431
LIGHTWEIGHT**
Similar to Op. 4317, designed to be worn with glasses or attached to a hat. Several sizes and shapes are furnished.



**OPTION 4303
NOISE-CANCELLING
MICROPHONE,** with hang-up button



**OPTION 4301
REMOTE MICROPHONE,** with hang-up button



**OPTION 4315
EARPIECE**



**OPTION 4316
LAPEL SPEAKER**

NOTE

In addition to the audio accessories shown, Submit Audio Accessories are available to Law Enforcement Agencies and others as may be permitted by law.

ANTENNA OPTIONS

SOLID ANTENNAS



OPTION 4321 (VHF)



OPTION 4321 (UHF)

COLLAPSIBLE ANTENNAS



OPTION 4429 (L.B.)



OPTION 4295 (VHF)



OPTION 4299 (UHF)

FLEXIBLE ANTENNAS



OPTION 4326 (UHF)



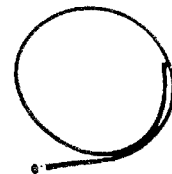
OPTION 4297 (UHF)



OPTION 4294 (VHF)

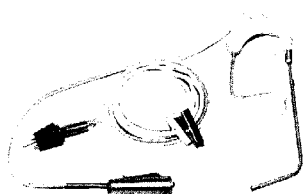


OPTION 4434 (L.B.)



**OPTION 4322 – Insulated Wire
Antenna (High Band & UHF).**

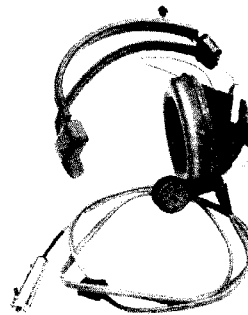
AUDIO ACCESSORIES ("PE" MODELS & REMOTE AUDIO MODEL M)



**OPTION 4317
EARMOUNT HEADSET.** Has adjustable speaker tube and is provided with several removable ear plugs to fit ears of varying sizes and shapes.



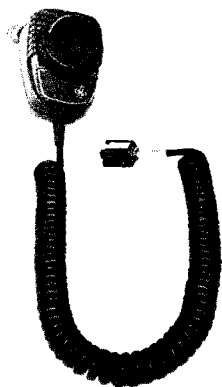
**OPTION 4314
LIGHTWEIGHT HEADSET.** Similar to Option 4317 except, designed to be clipped to wearers glasses or attached to head band furnished.



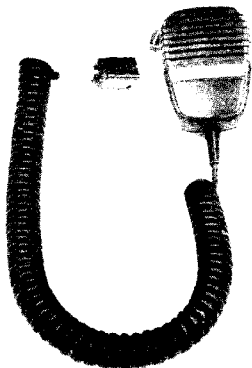
**OPTION 4318
STANDARD HEADSET.** A medium weight, single element set for general service.



**OPTION 4292 -
4312 except for
hat.**



**OPTION 4303
NOISE-CANCELLING
MICROPHONE,** with hang-up button



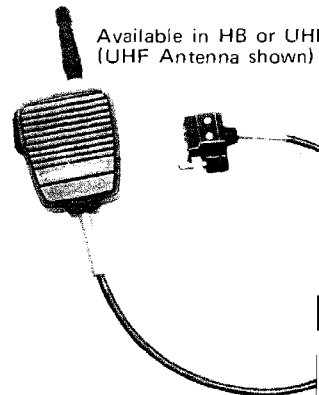
**OPTION 4301
REMOTE MICROPHONE,** with hang-up button



**OPTION 4264 - SPEAKER/
MICROPHONE** with high-low audio switch, earpiece jack and hang-up button.

OPTION 4265 - Same as Option 4264 except with Velcro® Mounting.

OPTION 4266 - Same as Option 4264 except with spring clip mount.

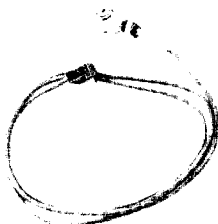


Available in HB or UHF (UHF Antenna shown)

OPTION 4267 - SPEAKER/MICROPHONE ANTENNA with high-low audio switch, earpiece jack, 22" non-armored cable and hang-up button.

OPTION 4268 - Same as Option 4267 with Velcro® mount.

OPTION 4269 - Same as Option 4267 with spring clip mount.



**OPTION 4315
EARPIECE**



**OPTION 4316
LAPEL SPEAKER**



**OPTION 4307 - MICROPHONE
BELT CLIP** for mounting microphone with hang-up button on belt.

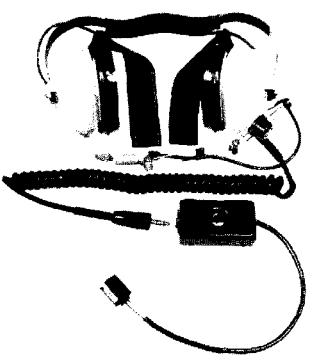
OPTION 4270 - SPEAKER/MICROPHONE ANTENNA with high-low audio switch, earpiece jack, 18" non-armored cable and hang-up button.

OPTION 4271 - Same as Option 4270 with Velcro® mount.

OPTION 4272 - Same as Option 4270 with spring clip mount.

NOTE

In addition to the audio accessories shown, Subminiature Audio Accessories are available to Law Enforcement Agencies and others as may be permitted by law.

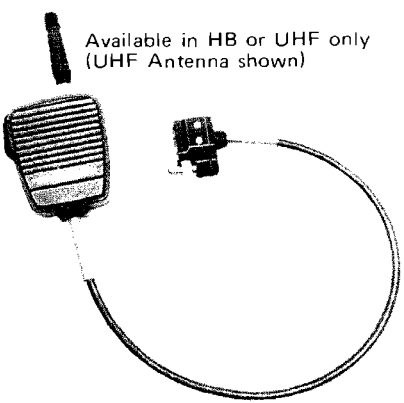


OPTION 4292 - Similar to Option 4312 except for use under a hard hat.

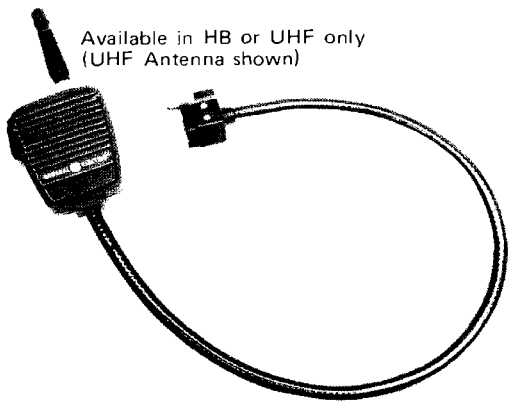


OPTION 4312
HIGH NOISE (120 dB) HEADSET.
Supplied with ear muffs and interface cable w/PTT switch.

ADSET. A single element device.



Available in HB or UHF only (UHF Antenna shown)



Available in HB or UHF only (UHF Antenna shown)

OPTION 4267 - SPEAKER/MICROPHONE/ANTENNA with high-low audio switch, ear-piece jack, 22" non-armored cable & hang-up button.

OPTION 4268 - Same as Option 4267 except with Velcro® mount.

OPTION 4269 - Same as Option 4267 except with spring clip mount.

OPTION 4276 - SPEAKER/MICROPHONE/ANTENNA with high-low audio switch, ear-piece jack, 22" armored cable & hang-up button.

OPTION 4277 - Same as Option 4276 except with Velcro® mount.

OPTION 4278 - Same as Option 4276 except with spring clip mount.

OPTION 4270 - SPEAKER/MICROPHONE/ANTENNA with high-low audio switch, ear-piece jack, 18" non-armored cable & hang-up button.

OPTION 4271 - Same as Option 4270 except with Velcro® mount.

OPTION 4272 - Same as Option 4270 except with spring clip mount.

OPTION 4279 - SPEAKER/MICROPHONE/ANTENNA with high-low audio switch, ear-piece jack, 18" armored cable & hang-up button.

OPTION 4280 - Same as Option 4279 except with Velcro® mount.

OPTION 4281 - Same as Option 4279 except with spring clip mount.



OPTION 4335 - PIN-ON VELCRO PATCH. Spare, for use with Velcro backed audio accessories. Has two safety pins for attaching patch to clothing.

ANTENNA OPTIONS

SOLID ANTENNAS

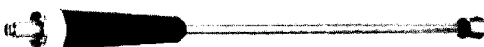


OPTION 4321 (VHF)



OPTION 4321 (UHF)

COLLAPSIBLE ANTENNAS



OPTION 4429 (L.B.)



OPTION 4295 (VHF)



OPTION 4299 (UHF)

FLEXIBLE ANTENNAS



OPTION 4326 (UHF)



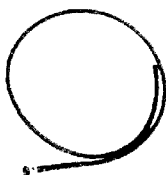
OPTION 4297 (UHF)



OPTION 4294 (VHF)



OPTION 4434 (L.B.)

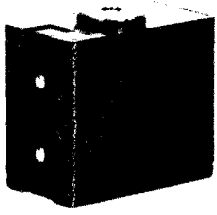


OPTION 4322 — Insulated Wire
Antenna (High Band & UHF).

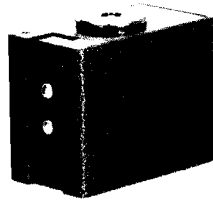
MASTR® Personal Series Options

(PC03-CHARGERS)
(PC71-PE OPTIONS)

BATTERIES



OPTION 4238 – Standard Duty Rechargeable Battery (spare) 700 milliampere-hour.



OPTION 4421 – Rechargeable Battery (spare) 500 milliampere-hour.



OPTION 4422 – Battery Case with Alkaline Batteries* or **OPTION 4424** – Battery Case with Mercury Batteries*

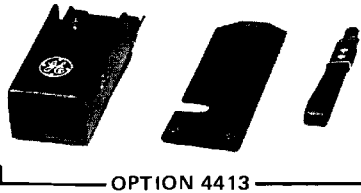
*Option 4422 or 4424 is supplied with 12 batteries (2 sets). The battery case can be replenished with six AA cell batteries of either type.

OPTION 4423 – Package of 12 Alkaline batteries. (AA)

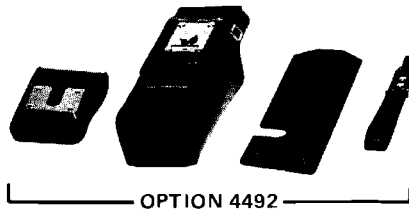
OPTION 4425 – Package of 12 Mercury batteries. (AA)

NOTE: Other Battery options also available for "Intrinsically Safe" units.

CARRYING OPTIONS



OPTION 4413



OPTION 4492



OPTION 4406



OPTION 4407



OPTION 4332



OPTION 4416

OPTION 4481

OPTION 4493

***OPTION 4493** – Belt loop, spare, for use with carrying case or radio with swivel mount.

PERSONAL PORTABLE CARRY CASE OPTION NUMBERS					
RADIO UNIT SIZE		Two Frequency PE Models		5&8 Frequency PE Models & All MVP Personal Models	
RADIO UNIT FEATURES	CARRY CASE MOUNTING STYLE	Standard NiCd Battery	Intrinsically Safe NiCd Battery	Standard NiCd Battery	Intrinsically Safe NiCd Battery
		NO EXTERNAL AUDIO OPTIONS	NON-SWIVEL MOUNT	OPTION 4412	OPTION 4629
	WITH SWIVEL MOUNT	4491	4627	* 4492	4626
WITH PLUG-IN EXTERNAL AUDIO OPTIONS	NON-SWIVEL MOUNT	4284	4290	4285	4291
	WITH SWIVEL MOUNT	4286	4288	4287	4289

***OPTION 4407** – Shoulder strap, may be attached directly to radio. Includes mike clip.

***OPTION 4332** – Shoulder strap for use with carrying case. Includes mike clip.

***OPTION 4406** – Hand strap, may be attached directly to radio.

Factory Installed Options:

OPTION 4414 – Built-in clip on back cover for carrying basic package PE on a belt.

***OPTION 4416** – Same as Option 4414 except for extended package PE.

OPTION 4480 – Swivel mount on back cover of basic package "PE". Used without carrying case. Includes Option 4493 Belt Loop.

***OPTION 4481** – Same as Option 4480 except for extended package "PE" or "MVP" Radios.

*NOTE: Options marked * are illustrated.*

OTHER OPTIONS

OPTION 4461 – Compression Amplifier (Low Band and High Band, Medium Power Only)

OPTION 4487 – Carrier Control Timer

OPTION 4466 – Test Adapter Cable. PE and Remote Audio MVP Only.

OPTION 4674 – Test Adapter Cable. MVP Personal without Remote Audio.

MOBILE RADIO DEPARTMENT
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502



SUBMINIATURE REMOTE CONTROL OPTIONS for MASTR[®] Personal Series Radios



The Subminiature Remote Control Options described in this publication can be worn inconspicuously or easily concealed. Their sale must be in compliance with Section 2512 of the Omnibus Crime Control and Safe Streets

Act of 1968 (Public Law 90-351). When they are sold to other than Public Agencies, the order must be accompanied by a completed copy of ECR-2408.

The audio accessories described in the following sections are optional items offered for use with any General Electric MASTR[®] Personal Radio capable of being operated remotely.

COMPLETE ACCESSORY PACKAGES

Options 6015-01 and 6015-03 (Figures 1 and 2) are complete accessory packages.

OPTION 6015-01 consists of the following:

- A subminiature microphone with clip fastener. A PTT switch is included which may be latched in the keyed mode. The microphone may be worn on the clothing, taped to a finger or hidden behind light garments.
- A cylindrical PTT switch. This switch is electrically connected in parallel with the microphone's PTT switch. Its purpose is to enable the user to key his Personal Unit without revealing the location of the microphone.
- An earpiece speaker with clip for holding the speaker firmly in the ear. It appears as an ordinary hearing aid device.
- An option plug where all components are properly interconnected. This plug mates with the accessory jack on the radio.

OPTION 6015-03 is the same as Option 6015-01 except it has a Tapeswitch[®] instead of a cylindrical PTT switch. The Tapeswitch is 10" long and it functions as a Push-To-Talk switch with a force of only 8 oz. anywhere along its length. It can be placed inside of a necktie or worn under a belt.

TRANSDUCTORS (Figures 3, 4 and 5)

These transducers function in conjunction with wireless induction receivers. They are equipped with cable and connector for direct use into radio earpiece jack or, when used with one of the above accessory packages, they connect in place of the earpiece.

OPTION 6015-04 is for clip-on mounting. Projects signal through 12" field.

OPTION 6015-05 is for belt, pocket or fixed location use. Projects signal through 24" field.

OPTION 6015-06 is for over shoulder/across chest use. Projects signal through 36" field.

WIRELESS INDUCTION RECEIVERS (Figures 6 and 7)

OPTION 6015-07 is a transistorized receiver with volume control. Designed for "behind the ear" mounting, it is furnished with battery, 3 ear tips and case.

OPTION 6015-11 is a transistorized receiver designed for "in ear" use. It is furnished with battery, 3 ear tips and case.

Spare batteries and eartips are available for wireless receivers.



FIGURE 1
(OPTION 6015-01)

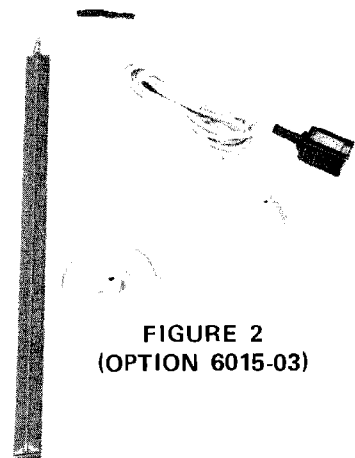


FIGURE 2
(OPTION 6015-03)



FIGURE 3
(OPTION 6015-04)

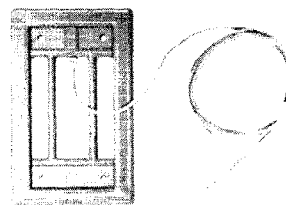


FIGURE 4
(OPTION 6015-05)



FIGURE 6
(OPTION 6015-07)



FIGURE 7
(OPTION 6015-11)



FIGURE 5
(OPTION 6015-06)



Specifications

SUBMINIATURE REMOTE CONTROL OPTIONS (Manufactured by UNEX Laboratories, Inc.)

The following specifications are for individual assemblies which make up the Subminiature Remote Control Options described on the front of this publication.

MICROPHONE (Options 6015-01 and 6015-03)

Case: High Impact Plastic
Size: 1" x .365" x .285" (less controls and cable)
Cable Length: 36"
Color: Beige
Cartridge: Magnetic
Impedance: 5000 ohms @ 1 kHz

PTT SWITCH (Cylindrical) (Option 6015-01)

Case: High Impact Plastic
Size: .560" Dia. x 2" (less switch button and cable)
Color: Beige
Cable Length: 46"

PTT SWITCH (Pressure) (Option 6015-03)

Size: .563" W x 10" L (less cable)
Color: Green
Active Length: 8.5"
Operating Pressure: 8 oz. (anywhere along active length)
Cable Length: 46"

EARPHONE (Options 6015-01 and -03)

Case: High Impact Plastic, Aluminum
Size: .812" Dia. x .375" (less ear hook)
Color: Beige
Transducer Type: Dynamic
Cable Length: 36"
Impedance: 1000 ohms

TRANSDUCTOR (Option 6015-04)

Case: High Impact Plastic
Color: Beige
Size: .812" x .375" Dia. (less cable)
Effective Range: Up to 12"
Cable Length: 36"

TRANSDUCTOR (Option 6015-05)

Case: High Impact Plastic
Color: Beige
Size: 5.25" x 3.25" x .440 (less cable)
Effective Range: Up to 24"
Cable Length: 36"

TRANSDUCTOR (Option 6015-06)

Size: 51" girth for comfortable over shoulder/across chest wear
Effective Range: Up to 36"
Cable Length: 36"

WIRELESS INDUCTION RECEIVER (Option 6015-07)

Case: High Impact Plastic
Size: 1.5" x .625" x .375"
Color: Beige
Receiver: Magnetic
Avg. Battery Life: 120 to 150 hours

WIRELESS INDUCTION RECEIVER (Option 6015-11)

Case: High Impact Plastic
Size: .750" x .281" x .25"
Color: Beige
Receiver: Magnetic
Avg. Battery Life: 30 to 40 hours

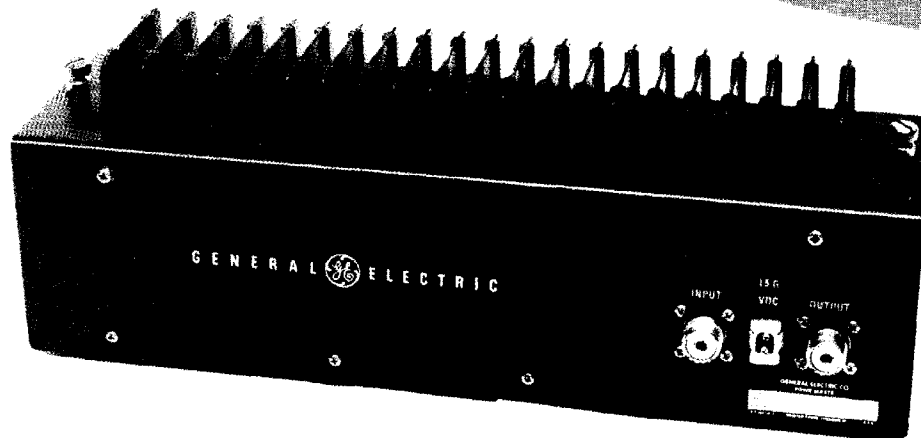
MOBILE RADIO DEPARTMENT
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502



POWR MASTR

**HIGH BAND-60 WATTS
UHF-40 WATTS**

**Add-On
Power Amplifier for
Personal Radio Systems**



- ★ Full Mobile Performance
- ★ One Cable Interconnect
- ★ Rugged Mount
- ★ Reliable

- Broadband (no-tune) Amplifier
- Operates with 1 to 6 Watts Input
- Adjustable Power Output to 1/3 Rated
- Overload, Mismatch & Reverse Polarity Protection

A POWR MASTR RF power amplifier, when used with a Personal radio and a Vehicular Charger, virtually will double the usefulness of the Personal. Plug it into the charger and the POWR MASTR system functions like a mobile with comparable power and performance. Slip it out and it's a flexible hand-carried personal again.

The POWR MASTR, without readjustment, will deliver the desired power output even when alternating between Personals of widely differing "drive power". Moreover, the desired power can be preset to any level within 3 to 1 of rated output.

The amplifier, as in other proven MASTR® radios, is broadband and never needs tuning. Also, it will operate without degradation when radios with standard-spaced, multiple frequencies are used.

POWR MASTR's conservative design, massive heat sink and

overload protective circuitry equate to long, trouble-free life. Also, the unit can not be damaged by inadvertent reverse polarity connection or by using a shorted or open antenna.

The two-piece case of POWR MASTR models is made from heavy gauge steel to help withstand the rigors of mobile applications. Its bottom section is a detachable base plate for bolting to any reasonably flat surface. The upper section with the complete electronics is easily separated for ease in servicing.

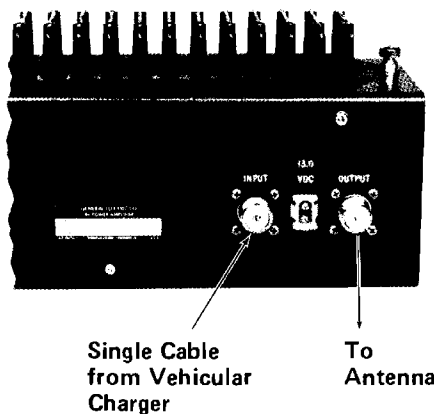
There is a POWR MASTR model for use with any High Band or UHF GE Personal Radio in the "PE, PY or MPR" Series. A related "PE or MPR" Vehicular Charger must also be included to provide the electrical interface, to charge the battery and to retain the personal when in the "Mobile" mode.



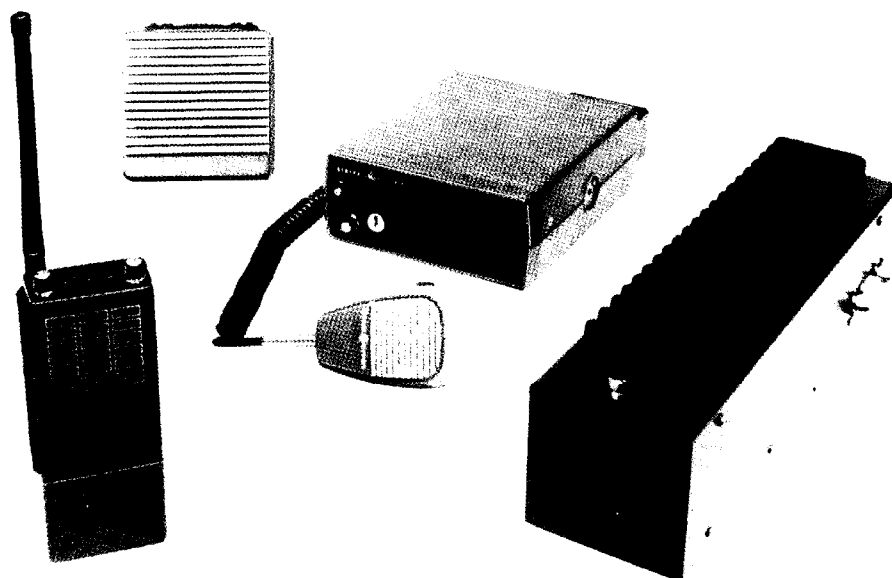
POWR MASTR

SUPPLY VOLTAGE:	+10.9 to 16.3 VDC (Negative Ground)	TEMPERATURE RANGE:	-30 to 60 C (-22 to 140 F)
DUTY CYCLE (EIA):	20% Tx, 100% Rx	WEIGHT:	3.63 kg. (8 lbs.)
DIMENSIONS (HxWxD):	13.2 x 36.8 x 10.1 cm. (5.2 x 14.5 x 4.0 ins.)	ANTENNA IMPEDANCE:	50 Ohms
MODEL NUMBERS:	<u>P3AK6AG</u>	<u>P3AN5AG</u>	<u>P3AR5AG</u>
FREQUENCY RANGE:	150.8 - 174	406 - 420	450 - 470 MHz
RF OUTPUT POWER:	60 Watts	40 Watts	40 Watts
INPUT POWER (Drive):	1 to 6 Watts	1 to 5 Watts	1 to 5 Watts
CURRENT DRAIN			
Transmit @ 13.6 VDC:	13.5 Amps	12 Amps	12 Amps
Standby:	40 ma	40 ma	40 ma
CONDUCTED and RADIATED SPURIOUS:	Exceeds FCC Requirements		
RECEIVER INSERTION LOSS:	0.75 dB	1.0 dB	1.0 dB
FCC TYPE ACCEPTANCE NO.:	KT-183-A	KT-184-A	KT-184-A

SIMPLE CONNECTIONS



Typical POWR MASTR System shown with a GE MPR Personal, Vehicular Charger, Speaker & Microphone.



GENERAL ELECTRIC COMPANY • MOBILE COMMUNICATIONS DIVISION
WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502 U.S.A.



MPR *Personal Radios*

High Band Models



"A" Case



"B" Case



"C" Case

- 2.5 or 6 Watts RF Output
- 138 to 150.8, 150.8 to 162 or 162 to 174 MHz Range
- 2, 6 or 10 Channel Capacity
- 700 or 1200 mAh Fast Charge Battery

★ FIELD PROGRAMMABLE CHANNEL GUARD TONES

- ★ No Tune Transmitter
- ★ True FM Modulated Transmitter
- ★ Single Conversion Receiver
- ★ Virtually Wireless Design
- ★ Plug-in Modular Construction
- ★ All Circuits Shock-mounted
- ★ Totally Weather & Dust Resistant
- ★ Contaminant-free External Contacts
- ★ Wide Multi-frequency Spacing
- ★ PLL-Controlled Transmitter
- ★ Built-in Electret Microphone
- ★ Separate Internal Speaker
- ★ On/Off Slide Switch
- ★ Twist-lock, Fused Battery
- ★ Battery Indicator/Tx LED
- ★ Wide Choice of Options



TYPICAL SPECIFICATIONS

138 to 174 MHz

MPR Personal Radios

GENERAL DATA

INPUT VOLTAGE RANGE: 7.5 VDC (nominal)
 VIBRATION: 5 G (per USFS)
 SHOCK: 1 meter drop (per EIA)
 DIMENSIONS (H x W x D)

AMBIENT TEMPERATURE RANGE: -30 to +60°C
 RELATIVE HUMIDITY: 95% @ 55°C
 ALTITUDE operational: 3,000 meters
 in transit: 12,000 meters

"A" CASE

"B" CASE

"C" CASE

with 700 mAh Battery: 6.6 x 2.8 x 1.5 in.
 16.7 x 7.2 x 3.8 cm.

8.0 x 2.8 x 1.5 in.
 20.2 x 7.2 x 3.8 cm.

8.6 x 2.8 x 1.5 in.
 21.9 x 7.2 x 3.8 cm.

with 1200 mAh Battery: 7.9 x 2.8 x 1.5 in.
 20.1 x 7.2 x 3.8 cm.

9.3 x 2.8 x 1.5 in.
 23.7 x 7.2 x 3.8 cm.

10.0 x 2.8 x 1.5 in.
 25.4 x 7.2 x 3.8 cm.

WEIGHT:

with 700 mAh Battery: 26 oz. (737 g.)
 with 1200 mAh Battery: 30 oz. (850 g.)

27 oz. (766 g.)
 31 oz. (879 g.)

28 oz. (795 g.)
 32 oz. (908 g.)

RECEIVER

RECEIVER TYPE (ER-109):	Standard	UHS
Sensitivity:		
EIA 12 dB SINAD:	0.35 uv	0.18 uv
20 dB Quieting:	0.50 uv	0.25 uv
Critical Squelch:	0.25 uv	0.13 uv
Selectivity EIA SINAD		
@ 30 kHz:	-95 dB	-90 dB
@ 25 kHz:	-85 dB	-80 dB
Intermodulation:	-80 dB	-75 dB
Spurious and Image Rejection:	-80 dB	-80 dB
Modulation Acceptance:	± 7 kHz	
Audio Response:	Within +2 and -8 dB of 6 dB/octave de-emphasis 300 to 3000 Hz per EIA.	
Audio Distortion:	Less than 5% (2% @ 50 MW)	
Audio Output (max.):	500 mW	
Frequency Stability:	± 0.0005%	
Channel Spacing:	25/30 kHz	
RF Input Impedance:	50 ohms	
Maximum Frequency Spread		
Full Performance:	2 MHz	
3 dB Degradation in Sensitivity:	4 MHz	

TRANSMITTER

FCC TYPE:	ET-167	ET-168
Rated RF Output:	2.5 Watts	6 Watts
Adjustable to (for full performance per EIA):	1 Watt	
Conducted Spurious and Harmonic Emission:	-70 dB	-74 dB
Modulation Deviation:	0.2 to 5.5 KHz	
Frequency Stability:	± 0.0005%	
FM Noise:		
Without compressor:	-60 dB	
With compressor:	-45 dB	
Audio Response: (without compressor)	Within +1 and -3 dB of 6 dB/octave pre-emphasis, 300 to 3000Hz per EIA	
Audio Distortion:	Less than 3%	
RF Load Impedance:	50 ohms	
Maximum Frequency Spread		
@ 138 to 155 MHz:	17 MHz	
@ 150 to 174 MHz:	24 MHz	

OPTIONAL CHANNEL GUARD

Frequency Range: 67 to 210.7 Hz
 Programming Steps: Every 0.25 Hz
 Maximum Error Frequency: ± 0.15%

OTHER OPTIONS INCLUDE:

- Carrier Control Timer
- Voice Operated Control
- High-Low Power Selection
- Transmitter Speech Compressor
- Programmed Tone and RF Frequencies
- Ultra High Sensitivity (UHS) Receiver

MOBILE RADIO DEPARTMENT
 WORLD HEADQUARTERS • LYNCHBURG, VIRGINIA 24502

GENERAL  ELECTRIC

Porta-Mobile II™

**TWO WAY PORTABLE RADIO
20 WATTS RF OUTPUT**

138-174 MHz



- ★ THE FINEST PORTABLE AVAILABLE TODAY
- ★ HIGHEST RF POWER IN A PORTABLE
- ★ 12-CHANNEL CAPABILITY
- ★ 10-WATTS AUDIO OUTPUT
- ★ PUBLIC ADDRESS "HAILER" AVAILABLE
- ★ WEATHERPROOF
- ★ MEETS HIGH SHOCK AND VIBRATION REQUIREMENTS
- ★ UNMATCHED ARRAY OF OPTIONS AND ACCESSORIES
- ★ VARIABLE POWER OUTPUT

PORTA-MOBILE II RADIOS are ruggedly constructed, fully solid-state portables extending the PORTA-MOBILE tradition of excellence in performance, quality, reliability and versatility. Conservatively rated silicon transistors, light emitting diodes for function indication, a high degree of integrated circuit modules, weatherproof and shock-resistance construction are just a few of the reasons why this radio is a top performer.

OUTSTANDING COMMUNICATIONS RANGE unmatched in a portable radio today . . . 20 watts of transmitter output power to provide needed power for extended "talk back" range and a high performance receiver to allow reception of weak audio signals. With 10-watts of audio power and a large 3" x 5" speaker, the message is sharper and clearer, even in areas with high ambient noise.

What's more, a Public Address "Hailer" Option connects the microphone to the 10-watt audio PA giving the operator public address capability without having to carry a separate "Bull Horn".

SAFETY DESIGNED - **PORTA-MOBILE II** has a new, wide handle, comfort formed on the underside for a firmer hold. Case covers are rounded and protrusions are at a minimum for maximum personal safety.

12-CHANNEL CAPABILITY - Whether your system calls for one or up to twelve transmit and receive frequencies there is a PORTA-MOBILE II to meet the requirement.

THE BASIC RADIO is made up of three major subassemblies to facilitate servicing. These include a rear casting (heat sink), center section of Lexan®, and front casting. The Lexan® carrying handle and antenna are separate assemblies that fasten to the center section.

THE PRIMARY POWER SOURCE is a rechargeable nickel-cadmium battery pack containing 8 "D" size cells. The battery pack securely fastens to the bottom of the radio using a unique wedge system and a single snap catch.

WIDE ARRAY OF OPTIONS AND ACCESSORIES - Multi-frequency - Dual Front End - Channel Guard (up to 10 tone capability) - Type 90 (single) and Type 99 (sequential) Tone Signalling - Automatic Tone Selection - Carrier Control Timer - Carrier Operated Relay - Battery Indicator - Busy Indicator - Call Indicator - Audio Compressor - Fixed Squelch - 1/2 watt Receiver Audio - Separate Tx-Rx Frequency Selection - Search Lock Monitor - Public Address Hailer - External/Internal Speaker Switch - Shoulder Strap - Carrying Bag - Chargers: 16-Hr., 120 VAC/60 Hz; 16 Hr., 234 VAC, 50/60 Hz; 16-Hr., 12 VDC Vehicular Types. And other miscellaneous options and accessories.



PORTA-MOBILE II PORTABLE

138-174 MHz

GENERAL

MODEL SERIES	FREQUENCY RANGE	RF POWER OUTPUT	FCC FILING NUMBER		APPLICABLE TO PART NUMBER (FCC RULES)
			Transmitter	Receiver*	
HN56	138-150.8 MHz	5 to 20 Watts	KT-132-A	ER-59-A	21, 89, 91, 93
HN56	150.8-174 MHz	5 to 20 Watts	KT-132-A	ER-59-C	21, 89, 91, 93

*FCC FILING NUMBERS CHANGE IN DUAL FRONT END APPLICATIONS AS FOLLOWS:

BASIC RECEIVER FREQUENCY	DFE FREQUENCY (FCC FILING NUMBER)
150.8-174 MHz	42-50 MHz (ER-83-A); 150.8-174 MHz (ER-84-A); 450-470 MHz (ER-85-A), 470-512 MHz (ER-86-A).

Dimensions [in. (cm.)]
 Radio Unit (less handle): Height 4.0 (10.2), Width 8.0 (20.3), Depth 4.5 (11.8)
 Radio Unit w/Battery: Height 7.9 (19.4), Width 8.0 (20.3), Depth 4.5 (11.8)

Volume [cu. in. (cu. cm.)]
 Radio Unit (less handle): 144 (2440)
 Radio Unit w/Battery: 283.5 (4760)

Weight [lbs. (kg)]
 Radio Unit (less Battery): 5.2 (2.33)
 Radio Unit w/Battery; mike, antenna: 9.6 (4.34)

Basic Color Combination: Moonstone Brown, Ash Beige, Charcoal Gray

Temperature Range: -30°C to +60°C (-22°F to +140°F)

Humidity: 90-95% RH @ 50°C

Power Supply: 4000 milliampere-hour 10 VDC Nickel-Cadmium battery pack

Battery Life (hours): 12 between charges @ 5-5-90% Duty Cycle

RECEIVER

	138-150.8 MHz	150.8-174 MHz
RF Input Impedance:	50 ohms	
Channel Spacing:	25 or 30 kHz	
Sensitivity		
EIA 12 dB SINAD:	0.25 μV	0.35 μV
20 dB Quieting:	0.35 μV	0.50 μV
Noise Squelch:	0.15 μV	0.25 μV
Channel Guard Squelch:	8 dB SINAD	
Selectivity:		
EIA 2 Signal (@ 30 kHz)	-75 dB	-85 dB
(@ 25 kHz)	-70 dB	-80 dB
20 dB Quieting (@30 kHz)	-110 dB	-110 dB
(@25 kHz)	-110 dB	-110 dB
Frequency Stability		
-30°C to +60°C:	±0.0005%	
0°C to +55°C:	±0.0002%	
Modulation Acceptance:	±7 kHz	
Spurious Response:	-70 dB	-80 dB
Image Rejection:	-70 dB	-80 dB
Intermodulation:		
@ 30 kHz	-60 dB	-75 dB
@ 25 kHz	-60 dB	-75 dB
Audio Response:	Within +2 and -10 dB of 6 dB/octave de-emphasis 300 to 3000 Hz	
Audio Output (EIA):	10 Watts at less than 10% distortion	
Speaker Impedance:	8 ohms	

TRANSMITTER

Rated RF Power Output: 20 Watts

RF Load Impedance: 50 ohms

Conducted Spurious and Harmonic Emission: -57 dB

Modulation Deviation: 0 to ±5 kHz (16F3)

Frequency Stability
 -30°C to +60°C: ±0.0005%
 0°C to +55°C: ±0.0002%

Audio Response: Within +1 and -3 dB of 6 dB/octave pre-emphasis 300 to 3000 Hz per EIA

Audio Distortion: Less than 8%

MAXIMUM FREQUENCY SPREAD (MHz)

FREQUENCY RANGE	RECEIVER		TRANSMITTER	
	Full Performance	1 dB Degradation in Sensitivity	Full Performance	1 dB Degradation in Power Output
138-145 MHz	0.55 MHz	1.1 MHz	0.83 MHz	2.8 MHz
145-150.8 MHz	0.58 MHz	1.16 MHz	0.87 MHz	2.9 MHz
150.8-174 MHz	0.60 MHz	1.20 MHz	0.90 MHz	3.0 MHz

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