

 **MOBILE RADIO**



# MASTR II

THE RADIO  
WITH THE  
BUILT-IN  
FUTURE

GENERAL  ELECTRIC



# MASTR II...the new standard of excellence in two-way radio



## Ever since its introduction,

the General Electric MASTR line of two-way radio equipment has been the acknowledged industry standard of excellence. In every kind of weather, under every conceivable condition of stress, it has proven to be unmatched in quality, performance and reliability—establishing the MASTR tradition.

## Now, General Electric is proud

to introduce its new MASTR II line . . . the radio with the built-in future . . . the radio designed to meet systems flexibility requirements and performance standards of the future as well as the present—in the MASTR tradition.

## Heat, vibration and voltage stress . . .

these are the enemies of reliability. MASTR II mobile radio is designed to conquer these enemies of reliability and flexibility and to provide quality, performance, serviceability and flexibility tailored to satisfy both the simplest and the most sophisticated communication systems of tomorrow—today—in the MASTR tradition.

## MASTR II will do

more things, in more systems, than any other two-way radio . . . with the greatest ease . . . in the smallest package . . . at a price far lower than you would expect to pay . . . continuing the MASTR tradition.



# MASTR II

*The radio with  
the built-in future*



## features:

for unmatched reliability

- All solid-state "wireless" construction
- -40°F to +158°F operation
- Maximized integrated circuitry
- 12 watts audio power
- Single-layer, modular construction
- Positive/negative ground with no converters
- Light Emitting Diode indicators —no lamps
- Adjustable power output
- Single conversion receiver
- Safety-designed accessories
- Transistorized microphone
- Squelch tail elimination

## options:

for unmatched flexibility

- Channel busy light
- Eight-frequency capability
- Fixed squelch
- Public address "Hailer"
- Carrier Control Timer
- Priority Search Lock Monitor
- Versatone Solid State Channel Guard
- Low and High Band Noise Blankers
- Ultra High Sensitivity receivers
- Choice of cable lengths for customized installation





# MASTR II

THE RADIO  
WITH THE  
BUILT-IN  
FUTURE

## features:

**MASTR II all solid-state design** incorporates more of the latest in monolithic and hybrid circuitry, ceramic capacitors, silicon transistors and monolithic crystal filters than any contemporary design. No inefficient power convertors, fewer heat generating components, plus a novel combination of chassis and fin heat sink contribute to longer life and greater reliability.

**The virtually wireless design** results in a minimum number of connections—drastically reducing a historic source of failure. A large number of active elements are utilized in the many integrated circuits employed; however, few discrete components are actually involved, resulting in expanded, improved performance but with increased dependability.

**Single-layer modular construction** with all system interfaces easily accessible at the front of the unit assures quick, easy serviceability. Expanded centralized metering makes testing a breeze.

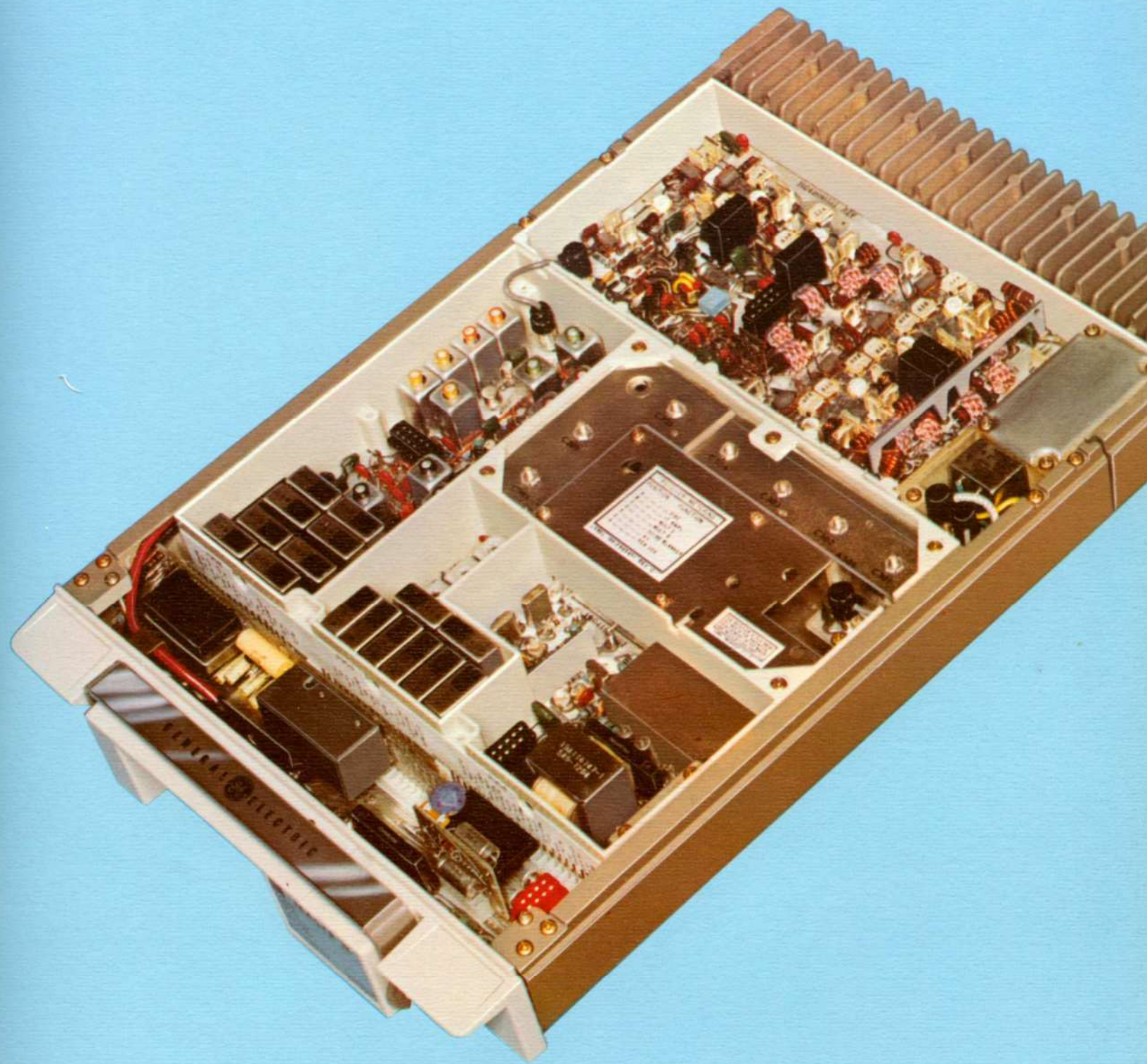
**The totally enclosed unit** locks into a separate mounting frame with concealed sliding-bolt action, providing greater security than swing-arm locking designs. Top and bottom drip-proof covers remain in place when the unit is removed from the frame, giving complete circuit protection during transit and servicing.

**The thin—2.5 inch—profile** of the MASTR II mobile radio permits new freedom for installation in narrow spaces, such as beneath or behind front seats. Rugged construction allows horizontal, vertical or inverted mounting without affecting performance or mechanical durability.

**MASTR II transmitters** employ broad band power amplifiers which require no tuning and whose power output is adjustable. These transmitters provide unmatched reliability and permit setting power at the precise level actually required for proper system operation, aiding in the reduction of spectrum pollution.

**MASTR II offers the industry's most powerful audio system.** It delivers 12 watts with less than 3% distortion, assuring crisp, clear messages under the most adverse conditions.

**Eight-channel transmit and receive capability** permits simple expansion to meet future system requirements. Versatone Channel Guard protection is available for all frequencies, in a variety of operating modes. Numerous additional plug-in options and readily interchangeable modules or boards make it easy to upgrade your system as future needs develop.





# MASTR II

...options  
offer  
systems  
flexibility





**CHANNEL GUARD** (tone squelch)—General Electric's solid state Channel Guard, with its new computer designed Versatone plug-in tone network, assures maximum precision and constant performance while minimizing the nuisance of co-channel interference. The tiny, completely sealed laser-trimmed module is quickly removable to facilitate change in tone frequencies.

**8-FREQUENCY TRANSMIT AND RECEIVE**—With MASTR II, up to eight-frequency operation is an off-the-shelf option, utilizing exclusive Integrated Circuit Oscillator Modules in either  $\pm 0.0002\%$  or  $\pm 0.0005\%$  frequency tolerances for maximum system flexibility.

**BUSY LIGHT**—For the first time ever in a United States private radio system, just a glance at the control head tells you when the selected channel is busy. No need to lift the mike, flip a switch or push a button to determine the channel is available to you.

**FIXED SQUELCH**—This option completely eliminates the bother of re-adjusting or mis-adjusting the squelch control as conditions vary. A pre-set circuit makes it unnecessary to adjust the squelch, enables the operator to concentrate on important duties with assurance that the squelch is properly set at all times. There is no way that the squelch can be "buttoned up," causing desensitization of the receiver.

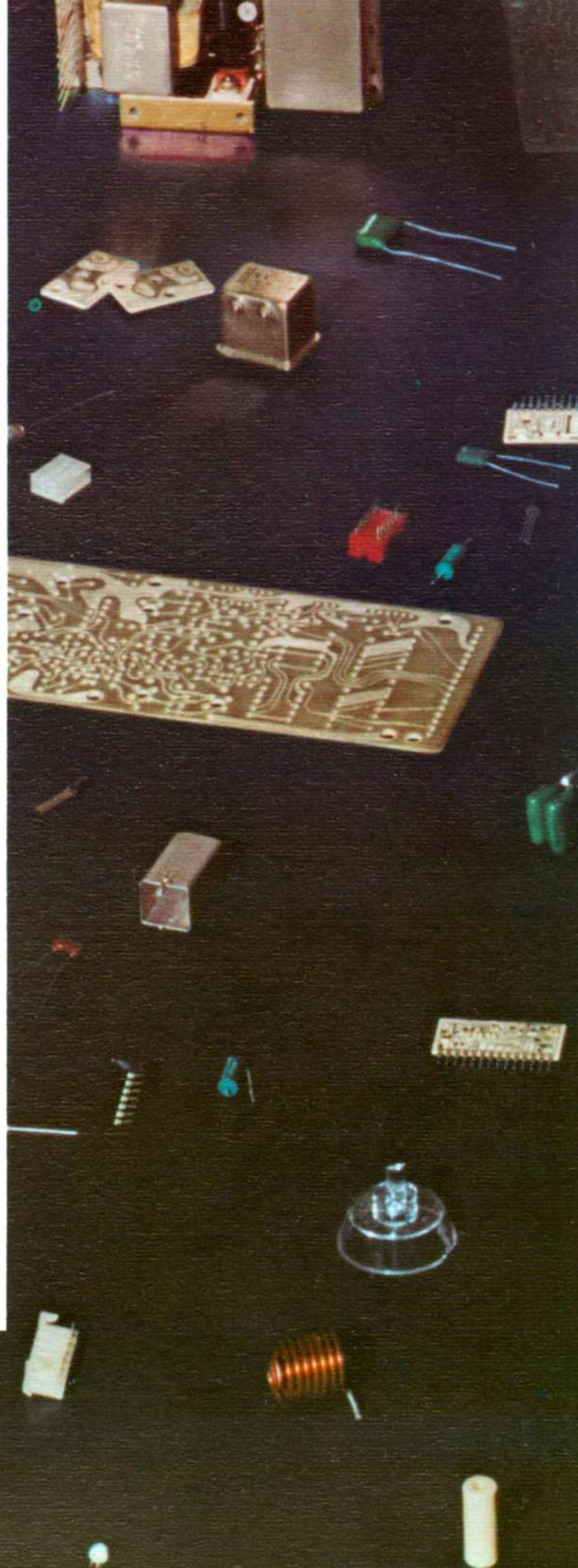
**ULTRA-HIGH SENSITIVITY**—Available in high band and UHF frequencies, Ultra-High Sensitivity receivers give improved range and signal clarity for remote or congested area operations.

**BUILT-IN PUBLIC ADDRESS "HAILER"**—A flick of a switch and the mobile becomes a 12-watt public address system which meets many standard "hailing" requirements. Incoming radio messages can also be broadcast on the external speaker for away-from-the-vehicle operations.

**PRIORITY SEARCH-LOCK MONITOR**—Monitoring more than one frequency with quality comparable to single-frequency reception is accomplished with an exclusive high-speed sampling procedure called Priority Search-Lock Monitoring. This unique circuit alternately samples each frequency in a multi-frequency system at a high repetition rate. When a signal is heard, the receiver locks on that frequency. However, if a signal appears on the priority channel designated in your system, the receiver will instantly revert to that channel and stay there until the priority message ends.

**NOISE BLANKER**—MASTR II Low and High Band units can be equipped with GE's Noise Blanker to overcome nuisance interference from auto ignition system impulse noise which restricts range and impairs signal clarity.

**CARRIER-CONTROL TIMER**—A long talker or an inadvertently jammed mike button can needlessly tie up an entire radio system. The Carrier-Control Timer eliminates this by turning the transmitter off after a pre-set time and notifying the driver with an audible alarm. Releasing the microphone button instantly resets the mobile unit to normal operation.



# **MASTR II**

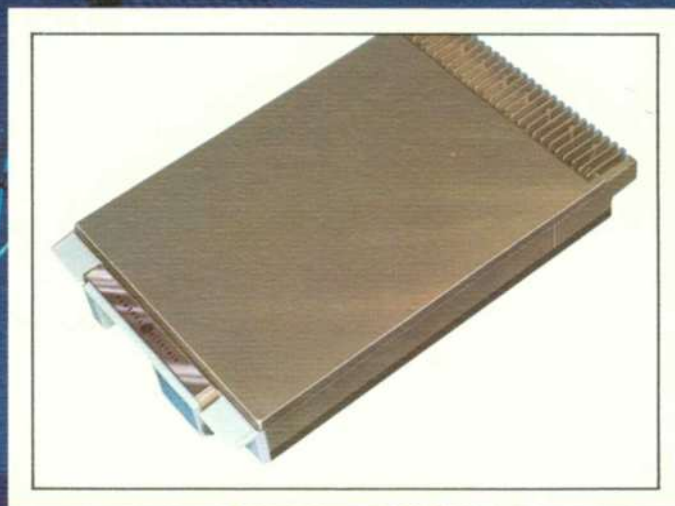
The ultimate in:

- Quality
- Reliability
- Performance
- Serviceability
- Flexibility
- Appearance

**Low Band—50 and 100 watts RF output**

**High Band—35, 65 and 110 watts RF output**

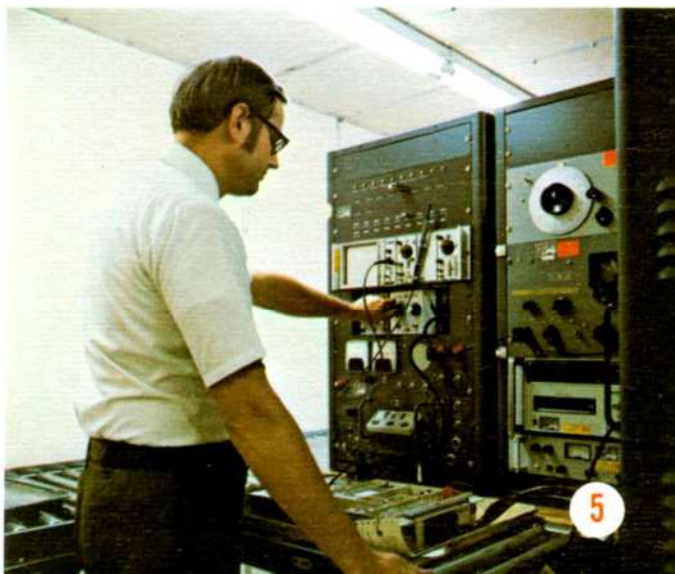
**UHF—40 watts RF output**





**MASTR II is the ultimate in quality and reliability through the use of the most technically sophisticated manufacturing and test equipment such as**

**(1)** the computerized Crystal Test System which virtually eliminates operator errors in crystal temperature testing; **(2)** the automated Oscillator Test System which automatically tests the frequency oscillators and selects the value of components for their temperature compensating networks; **(3)** the Laser Trimmer which, among other things, automatically trims the integrated circuits called for by the Oscillator Test System; **(4)** the Operator Assist Component Placement Machine which tells the assembler exactly which components to place in each position on a module board; and **(5)** the improved Receiver Test Station for faster and more complete testing of the final product.



**Look to General Electric for total one-step communication system engineering.**

GE and its Manufacturer's Representatives serve the nation with complete communication systems for large and small businesses, common carriers, private industry, utilities, educational institutions, information service industries, and all levels of government throughout the world.



MOBILE RADIO DEPARTMENT  
GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

GENERAL  ELECTRIC