



# LYNCHBURG GE NEWS

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## MRD's New Breadwinner

# MASTR II

## Introduced



FIRST MASTR II unit to be produced in the factory is shown here undergoing test by Leroy Renalds and Evelyn Whitney. MASTR II is believed by many to be the biggest "breadwinner" for MRD jobs in the years ahead since the introduction of MASTR Progress Line in June 1964. Its introduction, taking place around the country this month, is the culmination of efforts of literally hundreds of GE'ers in engineering, manufacturing and marketing. While it is impossible to tell the entire MASTR II story in one issue of the *News*, we're reprinting a portion of the material being distributed on Page 2. But, you can count on hearing a lot more about our new "breadwinner" in the months and years ahead!

General Electric Company has unveiled a new, compact solid-state FM two-way radio design described as being "able to do more things, in more systems than any other two-way radio in the world, with the greatest ease, and in the smallest package."

L. Keith Elrod, Manager of Marketing for the General Electric Mobile Radio Department, said the new equipment is the "best ever built" and its introduction represents an historic event in the evolution of GE's communications business.

### ADVANCED DESIGN

The line will be known as "MASTR II" but Elrod said it is an entirely new design, "not just a refinement of our previous equipment and not just a new version of the same thing. MASTR II is better than the MASTR line ever was. With MASTR II, we set a totally new standard of excellence. It is up to the minute State-of-the-Art in every possible way. There is nothing to match it."

He added: "MASTR II is being built with the kind of technically sophisticated production equipment and processes that just did not exist anywhere in the industry until now. It offers versatility that simply isn't available in competitive lines of equipment.

"This is the greatest radio in the business, barring none, and we believe it will be the pace-setter for the entire industry. It will play a vital role in General Electric's progress in the land mobile communications field."

*Unmatched flexibility... unmatched reliability:*

## New two-way unit tops the industry



The MASTR II incorporates more of the latest in monolithic and hybrid circuitry, ceramic capacitors, silicon transistors and monolithic crystal filters than any contemporary design. Engineered to serve the toughest communications assignments, it offers the user the highest dependability in the industry in every kind of weather, under every conceivable condition of stress. The design approach takes into consideration the real life environment in which some two-way radios are required to operate.

### FIGHTS HEAT

In parts of the United States and throughout the world, radio equipment often is used in trunks of vehicles traveling in sizzling summer heat. MASTR II will withstand high temperatures better than any Land Mobile radio equipment offered. This is particularly important because heat can shorten the life of a radio unit.

MASTR II reduces thermal stress on components, resulting in greater reliability. Extensive tests have been performed to search out the limits of MASTR II's capabilities. MASTR II has the best temperature range of any radio in the industry. It will operate (that means perform efficiently with good frequency stability, not just turn on) at 158 degrees Fahrenheit.

MASTR II also will provide de-

pendable operation at new extremes of cold temperatures. A search and rescue team could rely on MASTR equipment for communication during a winter mission in weather 40 (Fahrenheit) below zero!

Stated in Centigrade, the range is from minus 40 to plus 70. That's 10 degrees better at both ends of the scale than industry standards.

### LONG-TERM SAVINGS

The new line is flexibly tailored to satisfy both the simplest needs today and the most sophisticated systems requirements of tomorrow. Provisions for the future are built into the set now. A plug-in functional module approach is used.

MASTR II has more kinds of integrated circuits—and more of them—than any other radio on the market today. An integrated circuit is a microminiaturized solid state electronic circuit which combines functions of many discrete components such as transistors, diodes, resistors, capacitors, and interconnections into a single component.

There are three kinds of integrated circuits in MASTR II—monolithic,

thick film and hybrid. They have resulted in a reduction of component density on printed wire boards, fewer solder joints, fewer interconnections, and, therefore, a more reliable radio. With fewer components and less wiring and closer tolerances, the long term performance of the equipment is enhanced enormously.

### HIGHLY STYLED

MASTR II has a brand new appearance that is stylish, practical and functional. Warm colors of moonstone brown and ash beige are used. The microphone is transistorized. The control head, made of high impact GE Lexan, has smooth, rounded corners, is small and easy to mount. Both the control head and speaker have safety-release, breakaway mounting features.

An optional feature on the control head is a "channel busy light". A solid state long life, low drain light-emitting diode lights up, showing the channel is in use. The operator doesn't have to throw a switch, push a monitor button, or

THE FOLLOWING POSITION IS NOW OPEN IN THE EMPLOYMENT OFFICE. (1) LH-18 Set-Up/Assemble, 2nd shift, assembly experience required. LH-17, LH 16, and LH-15's are eligible.

Interested individuals should contact Carolyn Scott on Ext. 601 prior to close of business on October 17. Individuals not responding by closing date will be assumed not interested.

pick the mike up to know the channel is available.

With a flick of a switch, the control head turns the mobile radio into a 12-watt public address system. This is done with a "hailer" option for which space is built in. Incoming radio calls can be switched to an external speaker, giving the radio user more listening capability away from the vehicle.

To assure crisp, clean messages under the most adverse listening conditions, General Electric provides a 12-watt speaker as standard MASTR II equipment. This is a new high, offering the industry's most powerful audio system. The 12 watts are delivered at the speaker with less than 3% distortion. What is heard is sharp and clear.

### SMALL SIZE, HIGH POWER

MASTR II has 50 and 100 watts RF output in low band; 35, 65 and 110 watts in high band; 40 watts UHF.

The basic radio is only 2½ inches high, 11¼ inches wide, and 18¾ inches long. Single layer design is used. This not only helps the service technician to reach test points easier, it provides a thin profile which 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.

### EIGHT FREQUENCIES

The modular approach makes it easy and economical to upgrade the system as future needs develop. For example, a user may have a requirement today for one to four frequencies. With MASTR II, he can obtain a unit designed to handle eight frequencies. As his needs expand, he merely acquires additional ICOMS (Integrated Circuit Oscillator Modules) which can be plugged into the set for eight channel operation. Previously, when an upgrading from four to eight frequencies was desired, the user had to buy an extra radio.

Frequency expansion is only one of the many features contributing to MASTR II's designation as the "radio with the built-in future". Numerous additional plug-in options and readily interchangeable modules or boards make it the most flexible, most adaptable system ever offered.

TODAY IS THE LAST TIME TICKETS CAN BE PURCHASED FOR TOMORROW EVENING'S GEERA FALL DANCE. ABSOLUTELY NO TICKETS WILL BE SOLD AT THE DOOR.

REMINDER...Safety Shoe fittings Monday, 7 a.m.-4:30 p.m. in Private Dining Room "B" off MVR Main Cafeteria.