



GENERAL  ELECTRIC

# *Two-Way Mobile Radio*





# LEADING THE WAY IN 2-WAY COMMUNICATIONS

This is probably not the first time you have heard of 2-way communications. Mobile and portable radio have become a necessity to many businesses and sources that you come in contact with daily. You, like many others, may be considering its benefits. If you are contemplating the purchase of 2-way radio, General Electric would like to help you.

For years General Electric has been leading in the development of products for the home, industry, government, farm, and many other fields. In communications, General Electric's Progress Line mobile radio has stood for years as an industry standard. Then came the introduction of Transistorized Progress Line—the first mobile radio

which gave the industry the true benefits of transistorized design. Recently, another mobile product was introduced—General Electric Pacer—the new compact economy two-way radio for businessmen who want basic communications at an economy price.

You will find General Electric offers you a wider choice of two-way radio equipment than any other manufacturer in the industry and will continue to do so in the years to come.

The following pages will give you detailed information on General Electric two-way mobile radio, but first perhaps you may have some general questions, which we shall try to answer for you.

## GENERAL FACTS ABOUT 2-WAY COMMUNICATIONS

**Mobile Equipment:** This is two-way radio equipment that can be mounted in or on various types of vehicles—from the small forklift truck or car to the largest industrial vehicle. Mobile units are constructed small and compact enough to fit neatly under the dash of a car or in the trunk, if necessary. They can also be furnished for mounting outside the vehicles.

**Portable Equipment:** Two-way radio equipment is available in compact hand-carried units, should requirements call for radio communications where vehicular radios cannot be used. Portables are necessary in such fields as Fire, Forestry and Police. And they also are used in many types of industries and other services where the same requirements dictate.

**Base Stations:** Station equipment is the same size or larger than mobile equipment and is designed to conveniently fit into your place of business—coming in a variety of cabinet styles and sizes. Depending on your requirements, base stations are designed to sit on your desk, neatly beside it, or in vertical floor cabinets to provide extra rack space and house high-powered stations. Weatherproof cabinets allow you to place station equipment in outside locations too. Included also is equipment designed to convert an existing station to higher power.

**Control Access:** Mobile equipment, whether mounted under the dash or in the trunk, puts the mike, speaker and control head in easy reach of the user. Remote Control provides the same convenience for base stations.

**Repeaters:** Repeater operation provides an automatic relay station for systems located in poor receiving areas or where long-distance communication is required.

**Federal Regulations:** Recent Federal Regulations have opened the use of two-way radio to every business category. The use of two-way mobile communications is government controlled by the Federal Communications Commission (FCC). In order to operate "over the air" you must first obtain a license from the FCC. Your General Electric Communications Consultant will assist you in providing the technical information necessary to prepare your license application.

**Frequency:** The FCC has designated three bands of frequencies for mobile radio use—low band (25-54 Mc), high band (144-174 Mc), and UHF band (450-470 Mc). Frequencies in one or more of

these bands will adequately serve your needs. General Electric builds equipment for all three frequency bands.

**Power:** Increased power means greater coverage for communicating over greater distances. General Electric offers a wide choice of power ratings in its two way line of equipment.

Band	LOW	HIGH	UHF
Mobile Units	15, 30, 60, 100 watts	10, 15, 25, 30, 50, 60, 80 watts	15 watts
Base Stations	30, 60, 80, 100, 330 watts	25, 50, 330 watts	15, 250 watts

**Mobile Power Supplies:** Your vehicles may have electrical systems with either positive or negative grounds. General Electric's mobile radio is easily installed in any vehicle without changing the present electrical system.

**Wide Band or Narrow Band:** General Electric's Progress Line and Transistorized Progress Line two-way mobile radios are available in either wide or narrow band. Since FCC regulations require that all 2-way mobile radio must be "narrow band" by November 1963, all wide band equipment has been designed for easy field conversion when narrow band operation is required. The new General Electric Pacer line has been designed for narrow band operation only.

**Standard Equipment versus "Specials":** Every system is tailor-made since no two systems are exactly alike. General Electric with the widest choice of equipment in the industry can solve more problems with standard equipment. For the very unusual problem G-E's Special Engineering Section will develop unique designs for you.

**Your G-E Communications Consultant:** There is a General Electric Communication Consultant in your area, who will be glad to visit you and answer any of your questions. You can find him by looking in the "Yellow Pages" of your telephone directory under "Radio Communications Equipment." For information on General Electric's Communication Products Department facilities, please turn to the back cover.





**TRANSISTORIZED**  
**PROGRESS LINE**  
**Mobile Radio**



...First Really **NEW** Mobile in Years

**TRANSISTORIZED PROGRESS LINE**

Mobile Radio with the **TRUE** Benefits of Transistorized Design



First with small size... low battery drain... advanced design! General Electric's complete new Transistorized Progress Line—the greatest advance in the history of mobile radio—is available in 10, 30, and 80 watt ratings in high band and 30 and 100 watt ratings in low band.

Now, for the first time, all three mobile radio elements—transmitter, receiver and power supply—are truly transistorized to bring you the true benefits of transistorized design. Only four tubes are used in the high power transmitters. This gives you an “under-the-dash” mobile radio that leaves plenty

of leg room in the front seat... that draws so little current you never need to turn it off... that makes installation, inspection, and preventive maintenance a simple matter.

And General Electric's new TPL 2-way radio is ideally suited to every mobile communication need whether it be public safety, service, delivery, protection, emergency, or commercial.



**LEADING THE WAY IN 2-WAY COMMUNICATIONS**



# FIRST TO SOLVE THE SIZE AND BATTERY PROBLEM



True under dash mounting

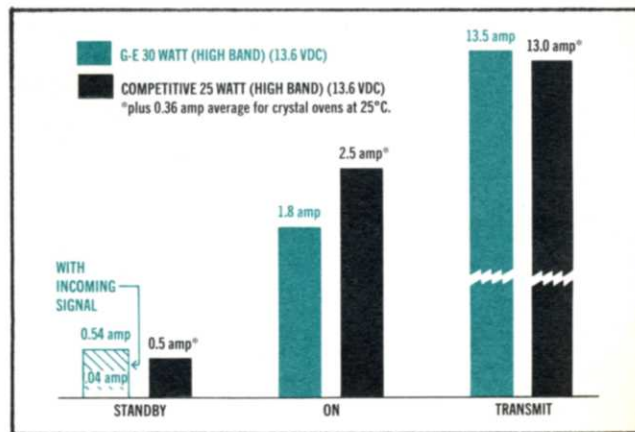
## SMALL SIZE

Here's the first true front-mount mobile radio. Unique design and small size permits front-mounting in any make or model of car or truck. Two section design gives the utmost in mounting flexibility—allows mounting almost anywhere—under the dash, on the firewall, behind the seat, or in the trunk.

## LOW BATTERY DRAIN

Battery drain so low—it's like the clock in your car—you never need to turn it off. Standby

drain only 0.04 amps (40 milliamperes) lets you forget it's on, but won't let you miss a call—the receiver is fully operative and active.



# FIRST WITH ADVANCED DESIGN AND MODERN STYLING



Single Unit—transmitter and receiver.

New Transistorized Progress Line. Furnished with military-type, controlled magnetic microphone, speaker, antenna, and all necessary cabling.

Receiver only—in very small case—operates directly from 12-volt car battery—no power supply used.



## TRULY MODERN STYLING

New Transistorized Progress Line styling and construction—enhances the beauty of your car with modern, clean-flowing lines. Withstands rigorous use with exclusive

triple-rigid construction, and rugged baked-on finish. And don't forget the microphone—it's lighter weight and more durable than any of our previous microphones.

## ADVANCED DESIGN

Modular design does for TPL what interchangeable chassis do for Progress Line—provides for easy inspection, testing and preventive maintenance. Shielded ventilation provides rapid heat dissipation while protecting all parts from dust and dirt. Advanced design throughout:



plated-through printed boards—heavy-duty circuit breaker—plug-in transistors, and many other advanced features.

## SPECIFICATIONS

<b>Frequency Range:</b>	25-49.5 Mc (wide or narrow band) 150-174 Mc (wide or narrow band)
<b>Input Voltage:</b>	13.8 volts d-c $\pm 10\%$ (positive or negative ground)
<b>Power Ratings:</b>	25-49.5 Mc; 30, and 100 watts 150-174 Mc; 10, 30, 80 watts
<b>Approx. Weight*:</b>	16.5-18.5 lbs.
<b>Dimensions (HWD):</b>	10 watt unit—4" x 8 $\frac{5}{8}$ " x 12" 30, 80, 100 watt units—4" x 8 $\frac{5}{8}$ " x 15 $\frac{1}{2}$ "

\*Weights vary depending on wattage rating of transmitter.



# EXTRA PERFORMANCE FEATURES OFFER GREATER VERSATILITY AND FLEXIBILITY OF OPERATION

General Electric RASER . . . the Range and Sensitivity Extending Resonator . . . Now featured in all new TPL high band mobile radios offers you:

**UNMATCHED SENSITIVITY AND SELECTIVITY  
CUTS THROUGH TOUGH INTERFERENCE WITH EASE  
PROVIDES UP TO 43% MORE AREA COVERAGE**

*... all at no extra cost!*

General Electric RASER equipped two-way radio gives you better than 0.5 microvolts sensitivity—provides an improvement of up to 6 db over conventional transistorized receivers, giving TPL radio greater ability to hear weak signals. Fringe area messages get through where previously they were unintelligible.

### **TRUNK MOUNT WITH NEW COMPACT CONTROL UNIT**

The new design control head—half the size of previous control units—literally disappears under the dash—adds more flexibility to G-E transistorized Progress Line two-way radio. And . . . you tuck the entire TPL radio unit into a corner of your car trunk.

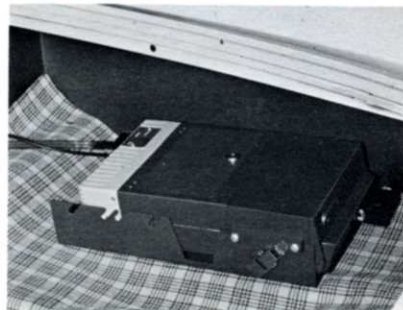
This means a TPL radio can be mounted wherever you like—under the dashboard, where its small size (9" x 15" x 4") allows ideal installation in most cars; or back in the trunk, where it takes little away from your cargo space.



**DUAL FRONT END RECEIVER  
ALLOWS YOU TO MONITOR  
TWO DIFFERENT FREQUENCIES  
SEPARATELY OR SIMULTANEOUSLY**



Small control head can be mounted closer to the driver than previously possible.



TPL radio unit mounts easily in trunk of car—takes up very little space.

The new Dual Front End is made for easy mounting on TPL front or trunk mount units. It is designed to meet a variety of applications, such as municipalities desiring to monitor their own high band system frequency, plus sheriff or state frequencies. Taxi operations can now have complete channel monitoring as well as multi-zone monitoring.

TPL Dual Front End is available for high-band and low-band units. Cross-band operation is also available.

### **TPL OPTIONS INCLUDE:**

Channel Guard—Dual Front End—  
Selective Calling—10-watt Speaker



# PROGRESS LINE Mobile Radio

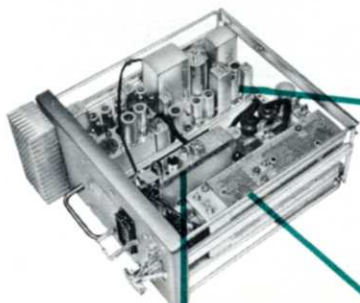


In the Next Few Pages You Will Be Taking a Look at

## GENERAL ELECTRIC Progress Line Mobile Radio

It Has Proven Product Superiority in the Communications Industry

### Here Is Just One of the Reasons—PROGRESS LINE INTERCHANGEABILITY



Mobile combination in a 14" case.



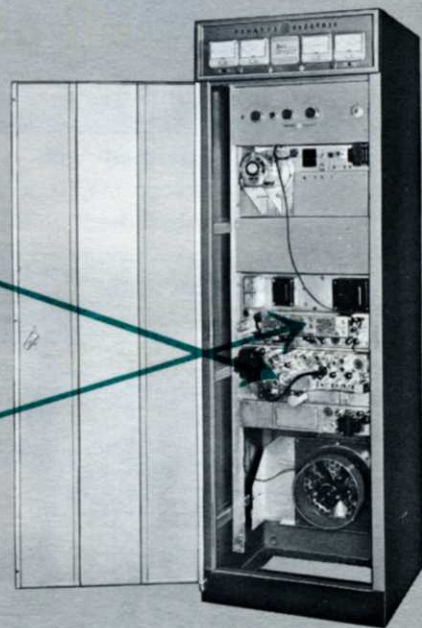
The "Building-Block" receiver chassis. Interchangeable between mobile and station combinations.



Mobile transistorized power supply. It is designed specifically for use in vehicles and is not interchangeable between mobile and station combinations.



The "Building-Block" transmitter chassis. Interchangeable between mobile and station combinations.



The a-c power supplies used in standard base stations are not interchangeable between station and mobile combinations.

With "Building-Block" design, transmitter and receiver units mount in the a-c power supply chassis which are rack-mounted in the enclosed metal cabinet shown here. Only General Electric Progress Line offers the mobile rack-mounted feature which permits easier servicing and rapid chassis changes—greatly decreasing maintenance costs. Notice how the interchangeable transmitter and receiver units have plug-in connections to the power supply—there's no soldering to do when changing chassis!

Capital investment in spares is held to a minimum—as much as 30%—because Progress Line transmitter and receiver chassis may be quickly changed between station and mobile combinations. Preventive maintenance can be performed without taking your system out of service.

The interchangeability feature lets you add frequencies, and change bands, power, type of reception (wide or narrow) with any unit at any time—and at a minimum cost.

This is true freedom from obsolescence.

LEADING THE WAY IN 2-WAY COMMUNICATIONS



# TRANSISTOR-POWERED MOBILES

## Provides Greater Range and Fewer Out-of-Service Hours

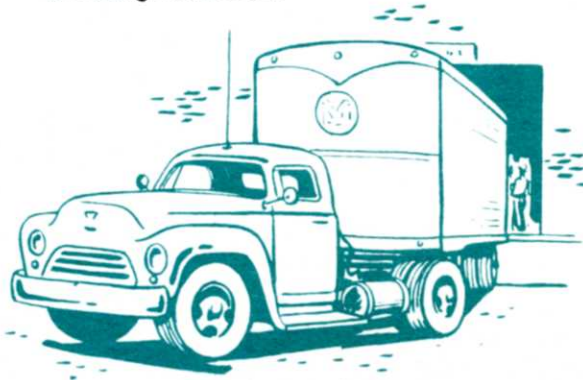


Front-Mount Mobile: Control unit and speaker attached. Furnished with military-style controlled magnetic microphone, antenna, and all necessary cables. Transistor heat sink is mounted on front of unit, ensuring adequate cooling of the power supply switching transistors.

Transistors in the power supply provide more trouble-free operation and less outage time in General Electric's Transistor-Powered Mobiles. These power supplies eliminate failure from rotating or vibrating parts—and furnish adequate power to the transmitter to provide up to 100 watts RF output.

Multi-frequency operation, weatherproof cases, battery saving feature, Channel Guard, Individual Call, and Group Call, as well as other options are available now or may be added later to expand your system capability.

## SPECIFICATIONS



**Frequency Range:** 25-54 Mc (wide or narrow band)  
144-174 Mc (wide or narrow band)  
450-470 Mc

**Supply Voltage:** 13.6 volts d-c,  $\pm 10\%$  (positive or negative ground)

**Power Ratings:** 30, 60, 100 watts; 25-54 Mc  
25, 50 watts; 144-174 Mc  
15 watts; 450-470 Mc

**Finish:** Blue Baked Vinyl

**Approx. Weight:\*** 48-60 lbs. Includes all accessories but no options

**Dimensions:** Front mount: 6 $\frac{3}{4}$ " x 14 $\frac{3}{8}$ " x 14 $\frac{7}{8}$ "  
(Add 2 $\frac{1}{2}$ " for control head)  
Trunk mount: 6 $\frac{3}{4}$ " x 14 $\frac{3}{8}$ " x 14 $\frac{7}{8}$ "  
(Exclusive of heat sink)



Trunk-Mount Unit: Control unit and speaker are separate for dash-mounting. Furnished with military-style controlled-magnetic microphone, antenna, and all necessary cables.

\*Weights shown vary from lightest (front mount, low power) to heaviest (trunk mount, high power) unit.



# PROVEN RELIABILITY WITH VIBRATOR-POWERED MOBILES



Trunk-Mount Mobile: Control Unit and speaker are separate for dash mounting. Furnished with military-style controlled-magnetic microphone, antenna, and all necessary cables.



Vibrator-Powered Mobile Unit

Vibrator-powered models are capable of delivering up to 60 watts RF power output in the 25-54 megacycle band and 50 watts RF power output in the 144-174 megacycle band. Performance tested and proven reliable, these mobiles are providing economical service to customers in these fields—appliance servicing, auto road service, real estate, veterinary, transit-mix concrete, and pick-up and delivery—just to mention a few.

Multi-frequency operation, weatherproof cases and boxes, Channel Guard, Individual Call, Group Call, battery saving feature and other options are available now or may be added later to expand your system capability.



## SPECIFICATIONS

### Vibrator-Powered Unit

<b>Frequency Range:</b>	25-54 Mc (wide or narrow band) 144-174 Mc (wide or narrow band) 450-470 Mc (15 watts only)
<b>Supply Voltage:</b>	6/12 volts and 24 volts d-c (positive or negative ground)
<b>Power Ratings:</b>	30, 60 watts Low Band 25, 50 watts High Band
<b>Approx. Weight:*</b>	48-67 lbs. (Includes all accessories. Options not included)
<b>Finish:</b>	Blue Baked Vinyl
<b>Dimensions (HWD):</b>	Front mount: 6 $\frac{3}{4}$ " x 14 $\frac{3}{8}$ " x 14 $\frac{7}{8}$ "  Trunk mount: 6 $\frac{3}{4}$ " x 14 $\frac{3}{8}$ " x 14 $\frac{7}{8}$ " (Exclusive of handle)

\*Weights given vary from lightest (front mount, low power) to heaviest (trunk mount, high power) unit.

Front-Mount Mobile Control Unit and speaker attached. Furnished with military-style controlled-magnetic microphone, antenna, and necessary cables.



# Greater Voice Power and Powerful Electronic Siren with the 3-IN-1 AMPLIFIER UNIT

This is the General Electric 25 watt Transistorized Audio Siren-Amplifier. It's a three-in-one package, completely transistorized, with a selection of functions to fit your requirements—and at a price you can afford.

First, it's an amplifier which gives you effective radio amplification up to three city blocks away from your vehicle.

Secondly, it's a public-address system for fire-fighting vehicles, police cars, industrial vehicles and disaster or civil defense applications.

Third, it's an electronic siren for intermittent duty service on police cruisers, fire trucks and ambulances. It is equipped with a Manual/Off/Automatic switch that starts and stops the siren instantly—or gives the familiar build-up and roll-off "wail" like electro-mechanical sirens. And, too, automatic warbling is provided.

This siren sounds just like an electro-mechanical siren with a sound intensity of 95 db at 100 feet. The current drain is remarkably low—only 5 amperes at 12 volts. Compare this with a figure of 30 to 100 amperes for electro-mechanical sirens.

## AVAILABLE WITHOUT SIREN

If a siren is not required for your application, the Model 4EA12A10 Audio Amplifier is available which will give you either voice or radio amplification without the siren feature.

## VERSATILE CONTROL

Built-in flexibility provides: (1) monitoring for your mobile receiver over the externally-mounted Speaker when switch is in RAD position; (2) In the OFF position, messages are heard over the regular mobile speaker inside the vehicle; (3) a public address system using the same external speaker when switch is in the MIC position; (4) a separate switch is provided for operating the siren—either manually or "automatic".



Weatherproof Re-entrant Speaker — gives wide sound dispersion. Designed for rugged service.



Model 4EA12B10, 25 Watt Audio Siren-Amplifier—it serves you as a PUBLIC ADDRESS SYSTEM, AND POWERFUL ELECTRONIC SIREN, or Amplified Radio.



Model 4EA12A10, 25 Watt Audio Amplifier. Serves as a public address system providing either voice or radio amplification.

## SPECIFICATIONS

<b>Supply Voltage:</b>	6 volts or 12 volts d-c
<b>Voice Input:</b>	Any high-impedance mobile microphone
<b>Audio Output:</b>	More than 25 watts with less than 10% distortion (12 volts) 10 watts with less than 10% distortion (6 volts)
<b>Siren Operation:</b>	Acoustical output with 4EZ6C1 speaker, 95 db at 100 ft.
<b>Output Impedance:</b>	16 ohms
<b>Used With:</b>	TPL or PL mobile units or all standard mobile equipment
<b>Dimensions (HWD):</b>	3¼" x 6⅝" x 6⅜" (excluding knobs; add ⅞" in height for mounting bracket)



# GENERAL ELECTRIC PACER



The Compact Economy Two-Way Radio

*Provides for the businessman efficient communications  
without frills—at an economy price!*

27-50 MC  
LOW BAND

150-174 MC  
HIGH BAND

STYLE EG (12V Front Mount)

## QUALITY PERFORMANCE AT A NEW LOW PRICE

Here's the perfect two-way radio for businessmen who want basic communications at an economy price. The new 15-watt General Electric Pacer is the biggest value in the field of two-way mobile communications. It leads the way in styling, compactness, economy, lightness in weight, low battery drain, and ease of installation.

Inspection, testing and preventive maintenance are greatly enhanced with the simplicity of the design of General Electric Pacer. The shielded case has been designed to permit rapid heat dissipation. Plug-in terminals on all cable connections speed installation.

## EASY TO INSTALL

General Electric Pacer is small enough for perfect mounting underneath the dash of most cars—without robbing you of passenger space.

The front of the drawer-type case houses the speaker along with the transistorized power supply, pilot lights, and controls. Other than mounting the unit



itself, all you need to install is the microphone, antenna, and fuse block. The fuse block is designed to remain permanently mounted on the vehicle itself so that the General Electric Pacer may be easily disconnected from the fuse block to place it temporarily in another vehicle.



The convenient new "U" shaped adjustable mounting brackets assure rapid under-dash or transmission-housing mounting. Elongated slots on the bracket enable you to easily adjust the unit before tightening the screws.

**LEADING THE WAY IN 2-WAY COMMUNICATIONS**



# QUALITY PERFORMANCE AND ECONOMY AT A LOW PRICE IS YOURS WITH GENERAL ELECTRIC PACER



## DESIGNED ESPECIALLY FOR BUSINESSMEN

The ideal businessman's companion, the General Electric Pacer fits in compact cars like Chevrolet's Corvair, as shown in this photograph, without robbing you of passenger space. With only one location—under the dash—you don't have to worry about a control cable, long power cable, external relay assemblies, or separate speaker assembly.

### LOW BATTERY DRAIN

With a standby battery drain of only 4.2 amperes, the General Electric Pacer has the lowest battery drain of any competitive tubed mobile radio.

### TRANSISTOR POWER SUPPLY

The General Electric Pacer offers another outstanding benefit—a reliable field-tested transistor power supply, adaptable to either negative or positive ground systems. Transistor power supplies provide MORE trouble-free operation and LESS out-of-service time . . . without the periodic replacement of worn-out vibrators or dynamotor brushes. Rectification is accomplished by four high-quality hermetically-sealed silicon rectifiers.

### OUTSTANDING VHF FM AUDIO QUALITY

General Electric Pacer achieves a new high in VHF FM audio quality—a definite advantage compared

to the inherently noisier AM radio, such as that used in 27 Mc Citizens' Band.

### CHANNEL GUARD AVAILABLE

Channel Guard can be added at the factory or in the field. No modifications to the transmitter and receiver are necessary. It just plugs in. The transistorized Channel Guard for the General Electric Pacer measures 3" x 3" x 5 $\frac{3}{4}$ " and utilizes two reeds and five transistors. Also, the microphone mounts conveniently on the Channel Guard case.

The only adjustment required is modulation level setting. High-pass filters can be added internally to units not equipped with Channel Guard, thus eliminating annoying hum from nearby systems using Channel Guard.

The two frequency transmit and receive option also is available with General Electric Pacer.

# QUALITY FEATURES ARE "BUILT-IN" FOR RELIABLE PERFORMANCE



## CHECK THESE TRANSMITTER FEATURES

- Ample reserve drive throughout.
- Simple top-tuning procedure.
- Final amplifier better than 50% efficient at 174 Mc.
- Crystal multiplication of only 12—for true narrow band performance with minimum spurious radiation.

## CHECK THESE RECEIVER FEATURES

- Outstanding new low-IF ceramic filter provides true narrow band selectivity and never requires re-tuning. Minimum "ringing" response means low susceptibility to ignition noise.
- Five tuned circuits ahead of first mixer.
- Topflight desensitization and intermodulation rejection equal to most expensive competitive receivers on the market.
- New bi-stable squelch circuit minimizes clipping in weak signal areas.

## IN ADDITION

- Only one relay in the entire unit.
- Plug-in connections to circuit boards, and plug-in 0-3 volt dc metering.
- Modern clean flowing lines to harmonize with modern car interiors.
- The baked-on finish of General Electric Pacer is tough and durable, assuring you of a continuing "new" appearance.

**GENERAL ELECTRIC PACER**  
**COMPLETE WITH**  
**ACCESSORIES**



## SPECIFICATIONS

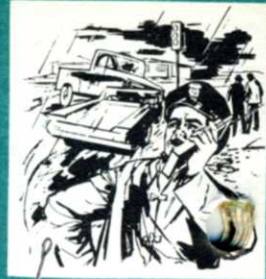
<b>Frequency Range:</b>	27-50 Mc	150-174 Mc
<b>Power Output:</b>	15 watts	15 watts
<b>Supply Voltage:</b>	13.8 volts d-c $\pm 10\%$ (Will operate over range of $\pm 20\%$ per EIA standards) Positive or Negative ground	
<b>Battery Drain:*</b>	Receiver "ON" plus transmitter filaments 4.2 amps @ 13.8 volts Transmitter "KEYED" 7.5 amps @ 13.6 v d-c	
<b>Power Supply:</b>	Fully transistorized—common to both transmitter and receiver	
<b>Dimensions (HWD):</b>	4¼" x 7¾" x 12½"	
<b>Weight:</b>	10 pounds	10 pounds
<b>Duty Cycle:</b>	Transmit 20%; (one minute transmit out of each five)	
<b>Operable Over Temperature Range Of:</b>	-30°C to +60°C	

\*Crystal ovens—used only in 150-174 Mc units; require 150 ma average additional for single-frequency and 300 ma average for dual-frequency operation.





# PERSONAL AND PORTABLE TWO WAY RADIOS



*Proven Performance Leader...  
the **PROGRESS LINE PORTABLE**  
2-WAY RADIO with completely  
Transistorized Receiver*

The General Electric Progress Line Portable with completely transistorized receiver and lower battery drain, is the most carefully designed and engineered portable on the market today. Why? Because performance, serviceability and dependability were primary considerations in its design from the very beginning.

Where maximum receiver performance is a "must," the Progress Line Portable will do the job best. Outstanding sensitivity and selectivity is achieved with RASER (Range and Sensitivity Extending Resonator), the exclusive new G-E design which extends the practical operating range of the receiver to an all time high—by far the best in the industry. RASER provides the Portable with receiver performance in every way comparable with the big set performance of transistorized mobile equipment.

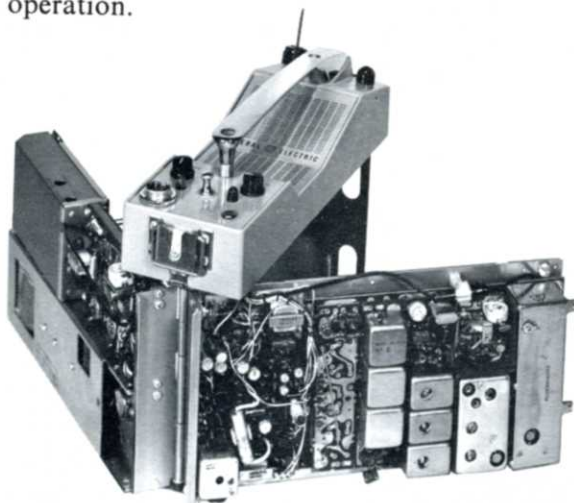
The big, 3½-inch speaker assures you of a loud, crisp signal. Top quality, long-life (Type 6397) tubes—the most important in the transmitter—are standard in both frequency bands, for more reliable operation.



You may incorporate the General Electric Portable into large radio systems with ease and it's available for two-frequency transmit and receive.

The Portable is furnished with a weather-proof carbon microphone and antenna.

Two-frequency transmit and receive, weather-proof carrying case, shoulder carrying strap, and back pack harness are available as optional accessories.



Notice how the unit opens up like a book, for the ultimate in servicing ease. All components are completely accessible—test points are easy to reach. Even transistors plug in for easy examination and testing by replacement.

## SPECIFICATIONS

<b>Frequency Range and Power:</b>	25-54 Mc: 1.25 watts 144-174 Mc: 1 watt
<b>Power Supplies Available:</b>	2-day dry-battery pack, 117 volts a-c supply. 7-day dry-battery pack, rechargeable nickel-cadmium battery pack.
<b>Weight:</b>	12½ lbs. to 14 lbs., 3 oz. (weight varies with power supply and antenna used)
<b>Dimensions (HWD):</b>	9½" x 14¾" x 4" (2-day pack or 117V a-c supply) 11⅝" x 14¾" x 4" (7-day pack and nickel-cadmium pack)

**LEADING THE WAY IN 2-WAY COMMUNICATIONS**

# THE VOICE DIRECTOR



Out of sight . . . but within reach . . . with  
General Electric's **VOICE DIRECTOR** . . . now  
available with **TONE SELECTIVE CALLING**

The smartly designed General Electric **VOICE DIRECTOR** offers you immediate contact with key employees located in the plant or in outside locations. With a frequency range of 132-174 Mc, the completely transistorized unit weighs only 12.2 ounces, measures a small  $6\frac{1}{8}$ " x  $2\frac{15}{16}$ " x 1", and provides a **LOUD** 50 milliwatts of audio output.

The **VOICE DIRECTOR** is ideal for a wide variety of applications. Policemen, firemen, hospital personnel, ambulance crews, manufacturing and executive personnel, and other individuals who need to be alerted in an emergency—can be contacted immediately and directly with the **VOICE DIRECTOR**.



## TONE SELECTIVE CALL OPTION AVAILABLE

Now you can instantly contact all your key personnel quietly and privately . . . within the plant or in outside city locations. The **VOICE DIRECTOR** with selective calling allows you to "pinpoint" your messages to selected individuals. Only the person paged will hear your message.

## ECONOMICAL TO OPERATE

The General Electric **VOICE DIRECTOR** requires less batteries to operate (one  $6\frac{1}{2}$  volt mercury cell) which reduces battery replacement costs. It provides low battery drain . . . up to 80 hours on a single battery.

## EASY TO USE—MORE FLEXIBILITY

With the **VOICE DIRECTOR** you receive messages directly—there is no push-to-listen button to operate before receiving your message. The unit fits in the shirt pocket or on the belt, keeping the wearer alert to any voice message. A tiny external earpiece can be used in noisy areas, or when you want messages to be private. For normal, Semi-Private requirements, a small easily worn lapel speaker "focuses" the sound near the ear.

## VIRTUALLY UNBREAKABLE CASING

The case itself is sturdy, high impact, virtually unbreakable plastic—adding extra protection to the components. The unit is sealed and tamper-proofed. The battery access is on the side for easy replacement without exposing the basic parts of the receiver.

## CONTINUOUSLY ADJUSTABLE VOLUME AND SQUELCH

Volume and squelch—which eliminates background noise—are easily and continuously adjustable with General Electric's pocket receiver. The controls are on top of the unit. The On-Off switch is part of the volume control. With Selective Call option, the squelch control is replaced by a Reset control.

## BUILT-IN ANTENNA

General Electric has successfully developed a ferrite loopstick for best possible performance for the **VOICE DIRECTOR**. Housed inside the receiver case, this antenna provides optimum results without the nuisance of external wires or rods.



Operator can easily and quickly reach key personnel for important phone calls and other daily emergencies.



External earpiece is available for use in high noise areas.



Lapel speaker can be easily clipped to your collar.





New Transistorized 2-Way Personal Portable Radio

# THE VOICE COMMANDER

*Easier to Maintain . . . Easier to Wear . . .*

*Easier to Operate . . . Easier to Communicate*

Another industry first—the new General Electric VOICE COMMANDER offers you one watt of power in the smallest, lightest, most compact VHF-FM portable 2-way radio ever built with the transmitter and receiver in a single case.

This full watt of power makes the VOICE COMMANDER's communications coverage up to 30% greater than lower powered pocket units currently provide.

With a frequency range of 132-174 Mc, the new transistorized VOICE COMMANDER weighs only 52 ounces. Easy to carry and use, the unit with leather carrying case may be worn over the shoulder, on the belt, or hand carried using convenient chrome handle.

Because of its small size, 9½" x 5⅜" x 1¾", the VOICE COMMANDER is ideal for applications where lightweight, man-carried equipment is needed such as in businesses, police and fire departments, utilities, forest ranger services, military operations, and others. It can be used in field work to converse with other VOICE COMMANDER units, with users of two-way radio sets in cars, or to direct the operations of individuals using pocket radio receivers.

The VOICE COMMANDER is precision engineered—combines advanced styling with outstanding performance—provides you with many built-in features to make your man-carried communications job easier.

For special applications, an optional external earpiece or lapel speaker is available. The unit also has provision for a tiny microphone for users who desire to keep the unit on their belts, without removing the VOICE COMMANDER from the leather carrying case. Equipped with easily replaceable batteries, rechargeable nickel-cadmium batteries are also available to eliminate the need of changing batteries.





# MOBILE TELEPHONE SERVICE



*"Listen while you talk"*

## GENERAL ELECTRIC'S NEW . . .

### *Full Simultaneous Duplex Mobile Telephone*

Offers The Most Versatile, Top Performing Mobile Telephone In The Industry Today!



Now—from your car—you can place or receive calls from any place in the world with General Electric's Simultaneous Duplex Mobile Telephone.

Another General Electric first—the new "Simultaneous Duplex" Mobile Telephone—allows you to LISTEN WHILE YOU TALK, permitting free-flowing conversation identical to conventional telephone service.

General Electric's new Mobile Telephone is engineered so the vehicle's receiver is no longer inoperative when the car transmits. The new design permits the receiver to remain on and ready to receive a message, picking up the conversation immediately when the other party begins to talk.

The new design uses the engineering concepts of General Electric's Progress Line 2-Way Mobile Communication equipment and employs Progress Line components. However, the transmitter, receiver and power supply have been designed specifically for the telephone market.

#### **FIVE CHANNEL MULTI-ACCESS SELECTION**

The unit offers five-channel operation with push-button selection as a solution to the "line is busy" problem sometimes encountered by cars attempting to place a call. Regardless of the channel used, an "automatic reverting" arrangement switches the system back to the originally-assigned call channel when a conversation is completed.

#### **LOW BATTERY DRAIN**

Offers the lowest battery drain in the industry for telephone-type units—2.9 amperes on standby and 5.6 amperes when transmitter filaments are on.

#### **EASY INSTALLATION**

Two compact units, the telephone control unit and radio unit, connected with only one cable, for either dial or manual operation.

#### **AVAILABLE IN COLOR**

You may choose from several colors available to blend with the richly styled interiors of your car.

#### **USES AVAILABLE FREQUENCIES**

The equipment is designed for operation in cars receiving telephone company mobile telephone service and in vehicles served by Miscellaneous Common Carrier answering service where interconnection with Common Carrier telephone exists. It uses radio frequencies already assigned by the Federal Communications Commission.

Your local telephone company will be glad to advise you on the facilities they have available for providing you with mobile telephone equipment.



Smartly styled dial unit lights when you lift the receiver.

Manual unit may be easily converted when the telephone company elects to convert to dial operation.

#### **GENERAL ELECTRIC ALSO SUPPLIES THE FOLLOWING EQUIPMENT FOR YOUR TELEPHONE COMPANY:**

- Dial Exchange Mobile Telephone and Terminal Equipment.
- Terminal Equipment adaptable to Automatic Billing.
- Manual Mobile Telephone and Terminal Equipment.

**LEADING THE WAY IN 2-WAY COMMUNICATIONS**



# MOBILE RADIO

## Station Equipment



*Finest Office Companion with up to 100 Watts*

### THE DESK MATE



The attractive Desk Mate cabinet gives you a station—up to 100 watts—in a compact, streamlined cabinet that blends into any office decor. It is designed to sit beside your desk—not to take up room on top of it—and provides additional desk-top working space. Its modern design, with removable side panels, allows placement at either end of your desk, yet you still have complete accessibility for servicing and maintenance. The station is furnished with a desk-style, controlled-magnetic microphone and all necessary cabling.

There are 8 $\frac{3}{4}$  inches of extra rack space available for mounting options. Two-frequency transmit and receive, Channel Guard, Group Call, or additional receivers are available now, or may be added later to expand your system capability.

### SPECIFICATIONS

**Power and Frequency Range:\***

- 75, 100 watts (25-54 Mc)
- 50 watts (72-76 Mc)
- 50 watts (144-174 Mc)
- 15 watts (450-470 Mc)

**Dimensions (HWD):** 30 $\frac{3}{8}$ " x 14" x 25 $\frac{1}{2}$ "

**Approx. Weight:** (without options) 130 lbs.

**Finish:** Blue Baked Vinyl

\*The power of a station can be increased to 330 watts in the 25-54 Mc and 144-174 Mc frequency ranges and 250 watts in the 450-470 Mc range by adding the General Electric Power Mate (see page 17)

**LEADING THE WAY IN 2-WAY COMMUNICATIONS**

# TABLE MODEL STATIONS



*For the Desk Top... It's Low in Cost and up to 60 Watts*



If your budget is limited or your office space cramped, these desk top stations offer a practical answer to your immediate communication problems. These low-cost stations are housed in a mobile type case, saving space wherever you mount them. Install on your desk... on a shelf... or on a table—in any position except upside down. All Table Model stations are furnished with desk-type, controlled-magnetic microphones and all necessary cabling. Covers are perforated ensuring ample ventilation.

Remote Control, Channel Guard, Group Call, Individual Call, and two-frequency transmit and receive are available now as options or may be added later to expand your system capability.

## INTERCHANGEABILITY

The "TI" Table Model Station, being of basic Progress Line concept incorporates the interchangeability feature—which so greatly increases the versatility of your system. The transmitter and receiver units in the "TI" station are identical to those used in your mobile units and consequently could be replaced with the transmitter and receiver

from one of your mobile units in case of failure. Also, preventive maintenance is greatly enhanced without taking a whole system out of service. The interchangeable transmitters and receivers have plug-in connections to their respective power supplies—there's no soldering to be done when switching units. The interchangeability feature greatly reduces capital investment in spares—in fact as much as 30 per cent!



For local Control Operation: Style TI (117 Volts a-c) Control Head and speaker unit are directly attached to cabinet.

## SPECIFICATIONS

<b>Power and Frequency Range:*</b>	30, 60 watts (25-54 Mc) 50 watts (72-76 Mc) 25, 50 watts (144-174 Mc) 15 watts (450-470 Mc)
<b>Supply Voltage:</b>	117 volts a-c
<b>Dimensions (HWD):</b>	6¾" x 14" x 14⅞"
<b>Approx. Weight:</b>	45-63 lbs.
<b>Finish:</b>	Blue Baked Vinyl

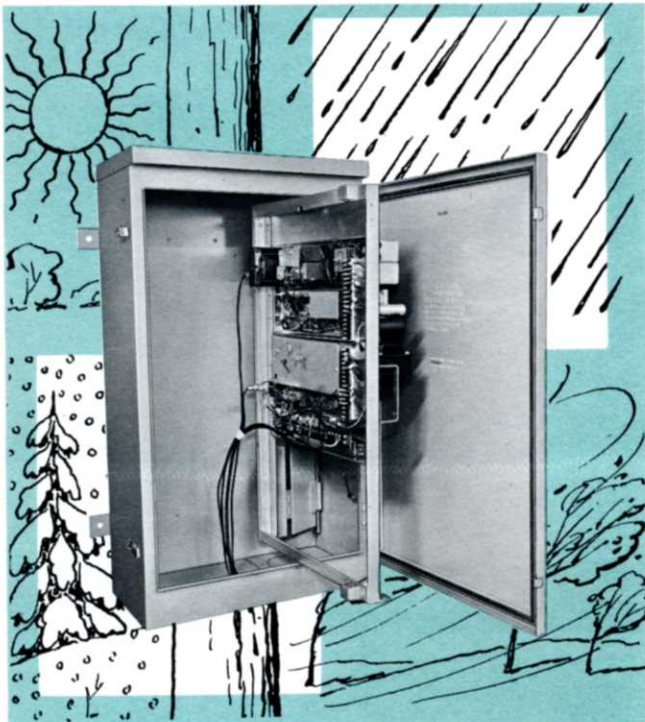
\*The power of a station can be increased to 250/330 watts (depending upon frequency range) by adding the new G-E Power Mate. For details, see Page 17.



# POLE MOUNT STATIONS

## Completely Weatherproof for Outside Installation up to 100 watts

Complete mastery of weather and climate is yours with the G-E weatherproof Pole Mount cabinet. With it you can mount your station transmitter **OUTDOORS IN REMOTE LOCATIONS**, regardless of rain, snow, heat or cold. Or, when floor space is at a premium, you can mount your base station on a wall, inside. The Pole Mount cabinet effectively prevents "sweating." It's ventilated to



beat the hottest weather. An optional heater allows the station to take prolonged sub-zero temperatures.

Unique swing-out mounting frame makes the Pole Mount a natural for inside use in restricted space. Chassis swings right out in the open for easy

servicing and maintenance. Mounting straps on the rear of the cabinet make installation possible on either a pole (outside) or a wall (inside or out). Tamperproof latches can be padlocked to prevent unauthorized entry—primarily for outdoor installations.

The Pole Mount is frequently used for repeater operation. There are 14 inches of extra rack space available for mounting optional equipment.

Heater and other options are available to help meet your particular requirements.

### SPECIFICATIONS

<b>Power and Frequency Range:</b>	75, 100 watts (25-54 Mc) 50 watts (72-76 Mc) 50 watts (144-174 Mc) 15 watts (450-470 Mc)
<b>Supply Voltage:</b>	117 volts a-c
<b>Dimensions (HWD):</b>	42" x 23 1/8" x 12"
<b>Finish:</b>	Gray Baked Enamel
<b>Approximate Weight (without options):</b>	170 lbs.

# DELUXE FLOOR-MOUNTED STATIONS



For Greater Flexibility and Extra High Power...up to 250 or 330 watts



## SPECIFICATIONS

### Power and Frequency Range:

15 and 250 watts (450-470 Mc)  
75, 100 and 330 watts (25-54 Mc)  
50 and 330 watts (144-174 Mc)  
50 watts (72-76 Mc)

### Dimensions (HWD):

69" x 14" x 25½"

### Weight (without options):

250 and 330 watts: 406 lbs.  
Under 100 watts: 280 lbs.

If your communication system requirements call for a higher power station—up to 330 watts—or extra rack space, your equipment can be housed in this trim, vertical floor cabinet.

The 4-meter cabinet houses the 250 watt and 330 watt stations while the cabinet with 2 meters is used for stations up to 100 watts.

These deluxe station cabinets provide 15¾ inches of extra rack space for mounting additional equipment in the 250 watt and 330 watt stations.

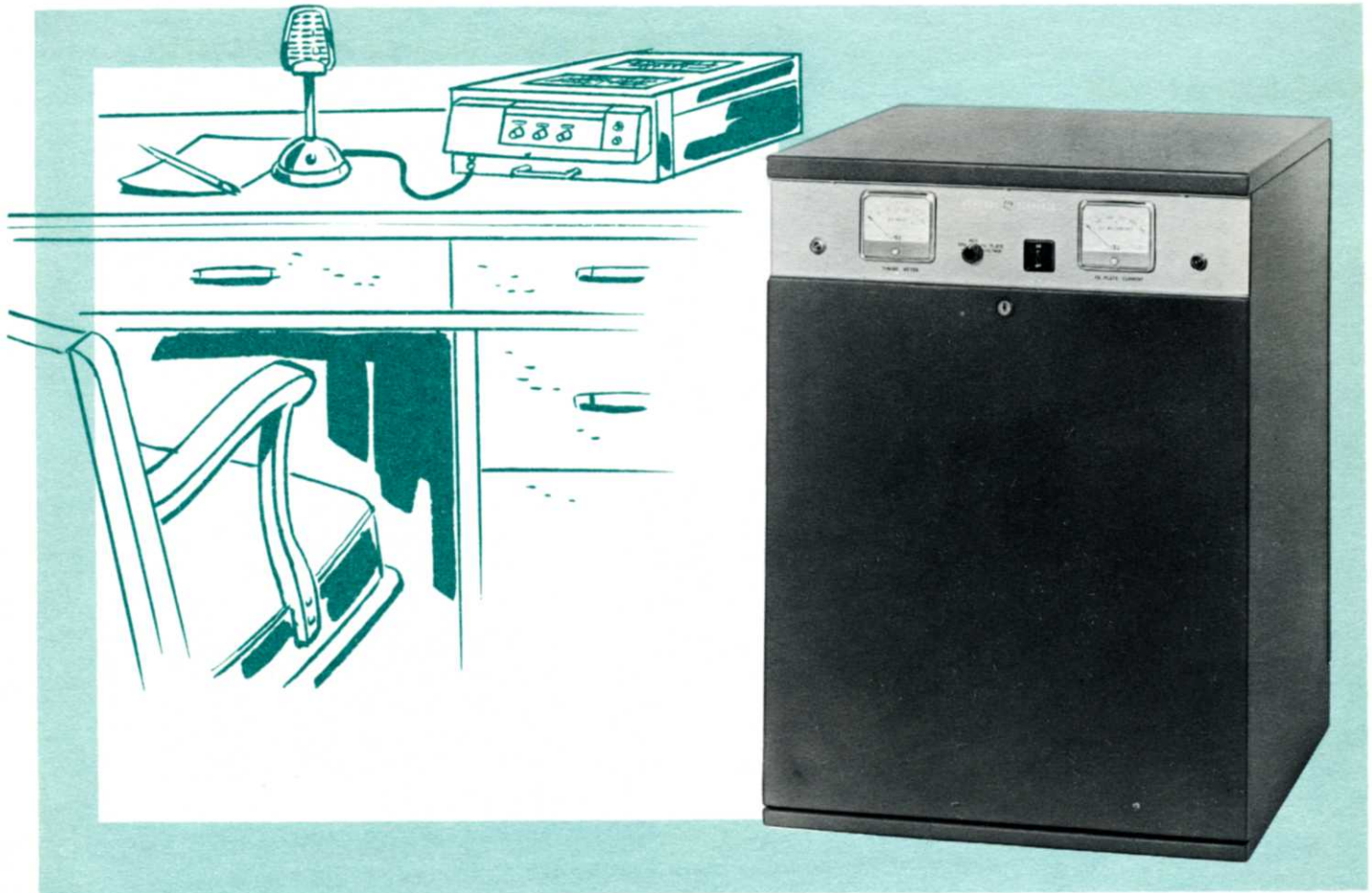
In the 2-meter cabinets (15 to 100 watt stations), there are 35 inches of additional rack space for options. Your General Electric Communication Representative can best advise you on which of these will best fit your needs.

These stations are furnished with controlled-magnetic microphones. Two frequency transmit and receive, and multiple receivers are available now or may be added later to expand your system capability.



# THE POWER MATE

Boost Station Power Up to 330 Watts



Here is a new and completely different concept in two-way radio design! The Power Mate is an add-on power unit that can be used with any "low" power station to increase its power to 250 or 330 watts.

The Power Mate is a complete high-power amplifier and associated power supply in a compact cabinet. With it, you get 330 watts in low or high bands and 250 watts in the UHF band, using your present station as the driver stage.\*

No complicated wiring . . . no installation problems. Control of the Power Mate is accomplished by RF keying. Connections between it and your present station consist of only two RF cables.

If you already have 2-way radio—General Electric or any other make—but do not have the power to obtain the range you want, your range can be increased by adding the G-E Power Mate to your system.

## SPECIFICATIONS

### Power Output and Frequency Ranges:\*

330 watts  $\pm 10\%$ ; 25-54 and 144-174 Mc  
250 watts  $\pm 10\%$ ; 450-470 Mc

**Rated Duty Cycle:** Continuous

**Input Voltage:** 117 volts a-c  $\pm 10\%$

**Dimensions (HWD):** 30 $\frac{3}{8}$ " x 22" x 23"

**Approx. Weight:** 130 lbs.

**Finish:** Blue Baked Vinyl

\*Minimum Driver Requirements: 15 watts (450-470 Mc) 10 watts (25-54 Mc and 144-174 Mc)



# OPTIONS

## Station and Mobile Equipment



### SELECTIVE CALL TONE DISPATCHER

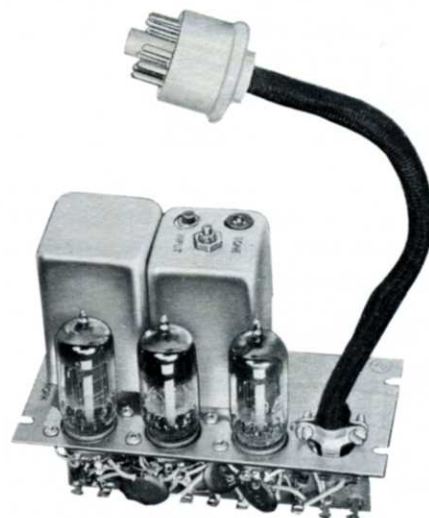
The General Electric Tone Dispatcher is used when tone signaling and calling features are needed in your two-way radio system. This compact unit works with Group Call or Individual Call systems to select any one of up to 100 mobile units. This Tone Dispatcher houses all generator circuits required and uses only three tubes. It's tailored to your present needs, yet designed to allow expansion of your system when desired. Just press the button (or buttons) on the compact modern Tone Dispatcher console and you're in immediate touch with any mobile unit, or units you may desire to communicate with.



Type EC-30A Tone Dispatcher.

### ALERT THE DRIVER TO ANSWER YOUR CALL

If your mobile operator works within visual or hearing distance of his radio-equipped vehicle, an optional, externally mounted beacon can be turned on, or an optional relay will sound the vehicle horn to notify the driver of an incoming call.



Selective tone for either 14 or 17-inch Progress Line Case.

### INDIVIDUAL CALL FOR SELECTIVE SIGNALING AND CALLING OF INDIVIDUALS IN A MOBILE FLEET

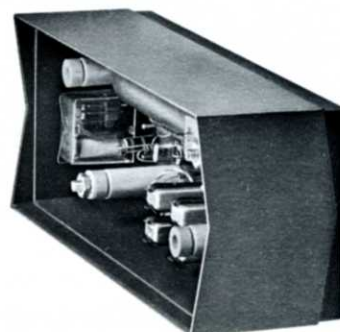
You hear only your own call with Individual Call equipment. It reduces nuisance chatter to a minimum because radio volume can be turned down until a light and buzzer indicate an incoming call. Drivers no longer need to sort out their calls from all of the others on the channel. They can concentrate on their primary responsibility—driving.

### ELIMINATES REPEAT CALLS

Incoming calls trigger a light and buzzer on the vehicle which will remain "on" until the call is answered. This relieves the dispatcher of making repeated calls as well as conserving air time.

Greater privacy is possible with this option included in your Individual Call system because only the individual concerned knows a call is being received.

Individual Call equipment is mounted inside standard mobile cases and cabinets. Your General Electric representative can give you complete information on its application to your particular system.



Selective tone sandwich for Transistorized Progress Line.



# GROUP CALL AND CHANNEL GUARD OFFER VERSATILE SELECTIVITY TO YOUR MOBILE RADIO SYSTEM

## SELECTIVE CALL

*Group Call Specially Designed for Organizations Whose Work Load Can Be Broken Down by Function*

Does your organization frequently assign one group of men and radio-equipped vehicles to a certain area or particular job, with other groups assigned to other areas or jobs? With Group Call you may communicate instantly with any group you select and no other group is affected. You may sub-divide your radio equipped fleet into as many as ten different groups—by function . . . by type of vehicle, or by locations. Group Call gives you these important advantages:

## REDUCES ERRORS, MISUNDERSTANDINGS

Drivers no longer need to sort out their calls from the constant chatter of others sharing the channel. They stay more alert, relaxed and concentrate completely on their job—which means less chance for errors.

## LESS CONFUSION

Group Call greatly reduces the number of repeat calls necessary because drivers hear only those calls meant for them or their group. Group Calling equipment is mounted inside of Progress Line cases and cabinets. Your General Electric representative can give you complete information on its application to your particular system.



**Tone Unit**—mounted on option chassis in 14-inch Transistor-Powered Progress Line Mobile.

## *Channel Guard Eliminates Nuisance Calls and Reduces Skip Signal Interference from Your Two-Way Radio System*

Only General Electric Channel Guard

Offers All These Features:

### TWO-WAY PROTECTION

With Channel Guard, you will relieve both your dispatcher and your drivers from the annoyance of unwanted calls.

### AUTOMATIC MONITORING BEFORE TRANSMISSION

Channel Guard eliminates the risk of violating FCC regulations which prohibit transmitting a message while another transmission is taking place within another system on your shared frequency. Lifting the microphone on a Channel Guarded unit allows the operator to hear any transmission being made on your frequency. If the channel is clear, he then is free to transmit his message.



Channel Guard for Transistorized Progress Line



Channel Guard for Progress Line



Channel Guard for General Electric Pacer

### INTRA-SYSTEM COMPATIBILITY

You can install Channel Guard in your base station and key mobile units now and add it to your other mobiles as your budget permits. This provides complete protection against unwanted calls and chatter for key people in your organization.

### HOW MUCH DOES IT COST?

The cost will vary depending upon the specific installation. However, the cost for an average installation is approximately 16% or less of the cost for an entire two-way radio system. Considering the convenience . . . the savings . . . the increased efficiency—you can't afford to be without Channel Guard. Channel Guard is mounted inside of Progress Line cases and cabinets. It is also available with Transistorized Progress Line and General Electric Pacer Line. This option may be installed in the factory with your original equipment order, or you may order it for field installation later. Your General Electric representative can give you complete information on its application to your specific system.



# 30-WATT TPL DC to DC CONVERTERS and RC-4 REMOTE CONTROL CONSOLE



## 30 Watt TPL DC to DC Converters — 6 to 12 Volts...24 to 12 Volts



The General Electric 6 to 12 volt and the 24 to 12 volt DC to DC Converters enable you to operate Transistorized Progress Line mobile units having a 30-watt rating in 6 volt or 24 volt vehicles.

Active Elements: 2 Transistors—4 Diodes

Dimensions (HWD): 3" x 9<sup>13</sup>/<sub>16</sub>" x 7<sup>7</sup>/<sub>8</sub>"

Weight: 7 pounds, 8 ounces

### COMPLETELY TRANSISTORIZED

The 6 to 12 volt and the 24 to 12 volt DC Converters are completely transistorized—no tubes to

burn out or vibrators to replace. With a 6 to 12 volt Converter, your 30 watt TPL units can be readily changed between 6 or 12 volt vehicles. Likewise, a 24 to 12 volt DC Converter enables TPL to be interchanged between 24 and 12 volt vehicles. General Electric's Transistorized Progress Line with DC to DC Converters retain the outstanding benefit of low battery drain.

### EASY TO INSTALL

The 6 to 12 volt and the 24 to 12 volt DC Converters can be quickly installed. Inserted between the mobile unit and the vehicle battery, the Converters require the connection of only five leads on the enclosed barrier strip. These are the two battery leads and the 3-conductor plug-in power cable furnished with TPL. A 9-foot control cable connects the Converter to the "CONTROL" receptacle on the TPL unit.

### COMPACT AND LONG-LASTING

These Converters are compactly enclosed in a heavy cast aluminum heat sink—extremely durable under the rigorous requirements of two-way radio operation. The 9-foot control cable assures convenient mounting flexibility.

## INCREASED FLEXIBILITY WITH THE REMOTE CONTROL CONSOLE

In making the installation of your mobile system base station, you may find it desirable or even necessary to locate your transmitter on the top of a tall building or on a mountain top to obtain the desired

coverage. If so, the attractive Progress Line RC-4 Remote Control Console placed in your office or headquarters area will permit you to operate your station with equal dispatch. This smartly styled unit will give you complete control of your base station, permitting virtually any function to be performed by remote control over a single-pair telephone line between your office and the transmitter.



RC-4 Remote Control Console with EM 9-B Controlled Magnetic Microphone

A number of options are available with the RC-4 Remote Control Console such as, a compression amplifier, 12-hour cyclometer clock, electronic signalling and calling equipment, VU meter (which replaces the flashing lamp line level indicator), tone alert oscillator, transmit disable/supervisory control switch, in addition to other options that will greatly increase the versatility and capability of your system. The dimensions of the RC-4 Console are 9<sup>1</sup>/<sub>4</sub>" high x 18" wide x 9<sup>7</sup>/<sub>8</sub>" deep, consequently requiring only a small amount of space on your desk.



# SIMULTANEOUS MONITORING and WEATHERPROOF CASES and BOXES for SPECIAL MOBILE APPLICATIONS

## SIMULTANEOUS MONITORING

This feature enables you to monitor two of your assigned frequencies with your mobile unit at the same time. When a signal is received on either frequency, simply turning the selector switch to the wanted signal completely eliminates the other signal. There is no interference nor interruption of any kind to the desired signal. When reception of the message has been completed, the selector switch is again returned to its normal position for 2-frequency monitoring.

This option permits two-frequency reception—and



monitoring—at much less cost and current drain as compared to using two separate receivers to accomplish the same purpose.

## WEATHERPROOF CASES AND BOXES FOR EXTERNAL MOUNTING

WEATHERPROOF CASES are available for all Progress Line mobiles, permitting you to install mobile gear in exposed locations. These weather-resistant, rubber-sealed cases allow you to install your mobile units outside of vehicles if your system requires it. Heavy rubber gaskets at all points of closure, and the hooded cable entryway protect your gear against the weather.

For protection against very severe weather conditions and physical damage, the G-E WEATHERPROOF BOX is available for mobile units that cannot be mounted conveniently inside certain types of commercial vehicles. The heavy-gage steel boxes

are provided with two catches and hasps which permit locking with a padlock to prevent unauthorized tampering with the equipment.

When you order a Progress Line mobile unit with a Weatherproof Box, your equipment will arrive as pictured below. Notice that the standard mobile case is replaced by the Weatherproof Box.

Mobile units ordered in Weatherproof Cases or Boxes will be furnished with all accessories—as if for trunk-mount operation—including microphone, dash-mounted control unit, antenna and all necessary cables

### SIZE AND FINISH

#### WEATHERPROOF CASE

Dimensions (HWD): 6 $\frac{3}{4}$ " x 14 $\frac{7}{8}$ " x 17 $\frac{3}{8}$ "  
Finish: Blue Baked Vinyl

#### WEATHERPROOF BOX

Dimensions (HWD): 7" x 16 $\frac{3}{4}$ " x 18"  
Finish: Gray Baked Enamel

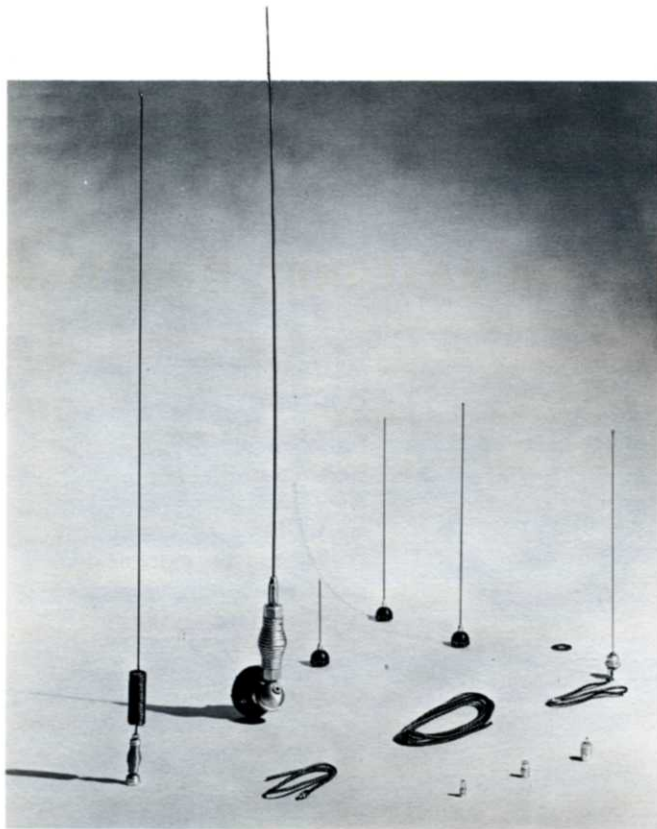


# ANTENNAS



## MOBILE ANTENNAS

Mobile antennas, designed to give optimum performance under normal operating conditions are supplied with all mobile radio units. Consult your Communications Consultant for information on optional mobile antennas designed for special applications.



### EXAMPLES:

**LOW BAND** (25-54 Mc) ANTENNA — Rear deck-mounted, approximately 6 feet high.

**HIGH BAND** (144-174 Mc) ANTENNA — Roof-mounted; approximately 18 inches high.

**UHF** (450-470 Mc) ANTENNA — Roof-mounted; approximately 6 inches high.

## STATION ANTENNAS:

Station antennas can be classified into four basic types. Namely, the omni-directional having unity gain or less, the omni-directional having greater than unity gain, the unidirectional and the bi-directional.

The omni-directional types of antennas (either gain or less than unity gain) are used for most mobile installations, since it is generally desired to radiate the energy equally in all directions from the base station.

In a few special installations it may be required that the radiated energy be concentrated unidirectionally in essentially a horizontal plane, to attain the desired area coverage, such as a city extending back from a shore-line or bi-directionally to concentrate the energy equally in two opposite directions such as along a pipe-line or railroad right-of-way. Your General Electric Communications Representative is well qualified to advise you on the selection of the best type of antenna for your particular installation.

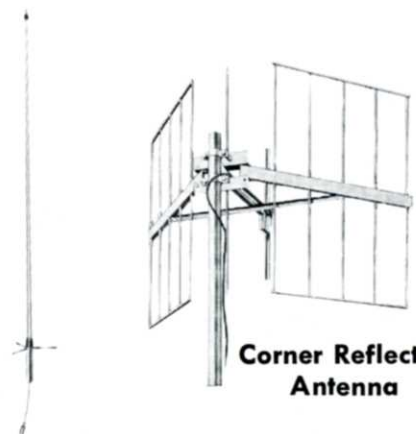


Coaxial Antenna



Monopole Bi-Directional Antenna

Collinear (gain) Antenna



Corner Reflector Antenna

*Your General Electric communication representative is best qualified to advise you on the station antennas which will deliver the highest performance for your system.*



# MICROPHONES

## OPTIONAL MODELS



### HANDSET TYPE: EM-12-A CONTROLLED-MAGNETIC

Handset for Progress Line equipment is cradled in rubber cup hanger which can be attached to the wall, dashboard, or station cabinet.



### HANDSET TYPE: EM-19-A

Handset similar to EM-12-A for Transistorized Progress Line.



### CARBON NOISE-CANCELLING MILITARY TYPE:

MKA-2-B for Progress Line. Specially designed for use in extremely noisy locations such as construction areas and factory floors.



### DESK TYPE: EM-8-B CONTROLLED-MAGNETIC

For Base Station. Preferred by some users for ease in dispatching operations. Furnished with a 4-pin termination plug and 7 feet of shielded cable. Height: 9½". Base: 5" x 7".



### DYNAMIC MICROPHONE TYPE: EM-13-A

For Base Station. Unidirectional mike is mounted on a "floating arm" adjustable to a 24-inch reach with the microphone element spring-suspended. The microphone has a cardioid polar response to reduce background noise.

General Electric was the first manufacturer of two-way radio to furnish controlled-magnetic microphones as standard equipment. These microphones give you the finest quality reproduction available in the mobile field and are built to take the rough use of mobile applications. A variety of microphone styles including carbon mikes are available to meet individual requirements. These may be ordered in place of those furnished as standard equipment.

## STANDARD MODELS



### MILITARY TYPE: EM-10-A CONTROLLED-MAGNETIC

Furnished with G-E Progress Line mobile combinations. Fits easily into the palm of the hand for simple push-to-talk operation.



### MILITARY TYPE: EM-18-A CONTROLLED-MAGNETIC

Furnished with G-E Transistorized Progress Line mobiles. New lightweight material makes it easy to hold and use. Unaffected by extreme temperatures.



### DESK TYPE: EM-9-B, EM-9-C CONTROLLED-MAGNETIC

EM-9-B furnished as standard on locally controlled Progress Line station combinations. EM-9-C (with three position switch) furnished with stations equipped with ChannelGuard. Height: 10½". Base: 5" x 7".



### MILITARY TYPE: EM-16-A CARBON

Furnished as standard with all Progress Line Portables.

# SPEAKERS



A variety of speakers are available for use with General Electric two-way mobile equipment. These speakers are designed to provide top

performance and are built to withstand the rough use of mobile applications.



**TPL SPEAKER**  
TYPE 4EZ10A10

- Furnished with TPL Mobiles
- Lightweight Small Size
- 2-Watt Audio Output
- Furnished with 4 Foot Cable
- 9 Foot Cable Available for Special Applications



**PROGRESS LINE SPEAKER**  
TYPE 4EZ1A4

- Furnished with Progress Line Mobiles
- Permanent Magnet Speaker
- Mounted in hinged case for under dash or firewall mounting
- Equipped with 4 foot, 2-conductor cable
- Lightweight, Small Size



**TPL TRANSISTORIZED SPEAKER**  
TYPE 4EZ11A10

- 10-Watt Audio Output
- Convenient Bracket for Car Window Mounting
- Less than 1/2 the standby battery drain of a competitive 5-watt speaker
- Permits you to hear when away from your vehicle
- Equipped with 4-conductor coiled cord and TPL plug



**PROGRESS LINE TRANSISTORIZED SPEAKER**  
TYPE 4EZ7A1

- 15-watt audio output with 12-volt power supply
- 5-watt audio output with 6-volt power supply
- Convenient bracket for "dash-to-door" mounting
- Permits you to hear when away from your vehicle



**PROGRESS LINE TABLE MODEL SPEAKER**  
TYPE 4EZ1B1

- Permanent magnet speaker
- Weighted base for placing on table or desk
- Volume control on side of hinged case
- Equipped with 25-foot cable



**WEATHERPROOF RE-ENTRANT SPEAKER**  
TYPE 4EZ6C1

- 50-watt rating
- Used with Types 4EA12A10 amplifier and 4EA12B10 siren-amplifier, and other public address applications
- Wide sound dispersion
- Built for continuous operation
- 16-ohm voice coil
- Equipped with 25-foot rubber covered cord and phone plug

Contact your General Electric Communications Consultant for all your communications needs. You'll find him listed in the yellow pages of your telephone directory under Radio Communication Equipment.



# GENERAL ELECTRIC MOBILE RADIO EQUIPMENT HAS SERVICEABILITY BUILT IN

When TPL, Progress Line, and General Electric Pacer were designed, maintenance and servicing were given prime consideration. No matter how perfectly electronic equipment is made, it is always subject to the ravages of age, careless handling, overloading, etc., and must therefore be designed to permit quick, easy servicing.

## LOWER MAINTENANCE WITH 6600 SERIES TUBES

Tube failures can be expensive—that's why G-E's mobile radio equipment uses 6600 series tubes. They're designed specifically for rigorous mobile applications . . . time tested to eliminate early failures . . . to better withstand shock and vibration.

Because they're pre-tested prior to installation and use, they stand up with the wide variations in supply voltages encountered in automotive electrical systems, and hold up under extensive on-off cycling. These tubes can take voltage variations up to  $\pm 20\%$ ! You can't find a better tube at the price.

## PLUG-IN DESIGN FOR FASTER SERVICING

Whether it be the plug-in terminals and transistors of Transistorized Progress Line or the plug-in chassis for Progress Line, you can be assured that complete ease of servicing has been built into every piece of mobile radio equipment manufactured by General Electric. Modules and chassis are easily removed and replaced without disrupting other electronic units in the immediate area.

## SAFETY FACTORS BUILT IN

General Electric transmitters are built with maximum safety in mind. The low voltage metering is a good example of built-in safety—you never handle a meter with over three volts above chassis ground—eliminating the danger of shock. Any standard 20,000 ohm/volt meter can be used. No special meter is required, cutting out any unnecessary expense.

Every General Electric transmitter is tuned entirely from the top of the chassis without exposing dangerous voltages. Here again, there is no need to use special and costly insulated tools. Standard, easy-to-acquire equipment is all that's needed.

Fuses are completely enclosed to prevent the danger of shorts caused by open holders, eliminating the nuisance of frequent fuse replacements.

## BUT HANDLE WITH CARE

Electronic equipment is not the kind of equipment you can handle or work on carelessly. You wouldn't stand in a bathtub of water and switch a light on or off, neither should you examine or test your radio in a hazardous fashion.

## BUILT TO FACILITATE TESTING

Metering can be done with any standard 20,000 ohms per volt volt-ohmmeter—there's no need to buy special equipment to do the job! All test jacks are conveniently located.



## OUTPUT TUNING INDICATOR

You can tell at a glance whether any RF power is going to the antenna, because all Progress Line transmitters are equipped with an RF output tuning indicator. Low band and high band have neon indicators while 450 Mc units use a diode output indicator.



This permits easy observation by service personnel in tuning and aligning the transmitter.

# You get MUCH MORE than equipment from General Electric



## Before Installation

Naturally, General Electric's interest in the successful operation of your communication system does not end with the sale of communication equipment. Although quite simple in operation, radio communication is still technical in nature. To assure you of the best performance of your radio system, General Electric Communication Engineers are stationed in every major city in the United States.

As a part of our service to you, G-E Communication Engineers are available to perform preliminary work such as assisting in selecting the base station transmitter site, determining the proper antenna height and advising the type of transmission line. They are also available to assist you in determining whether any additional functions or options are necessary to meet your system requirements.

A nationwide system of General Electric Service Stations is available to install your system. Or, if you choose, you may install it yourself. A G-E Communication Engineer is available for consultation on all equipment installations.

As a final service to you, your General Electric Communication Engineer can help establish a preventive maintenance schedule.

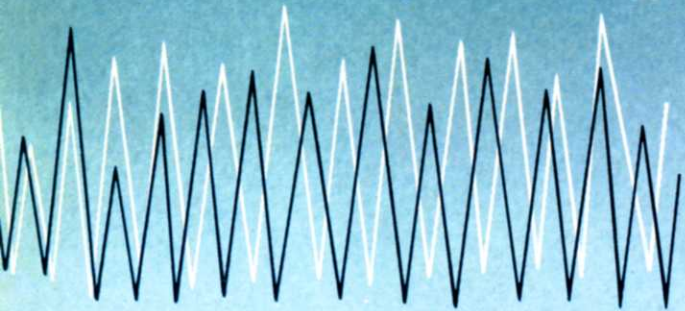
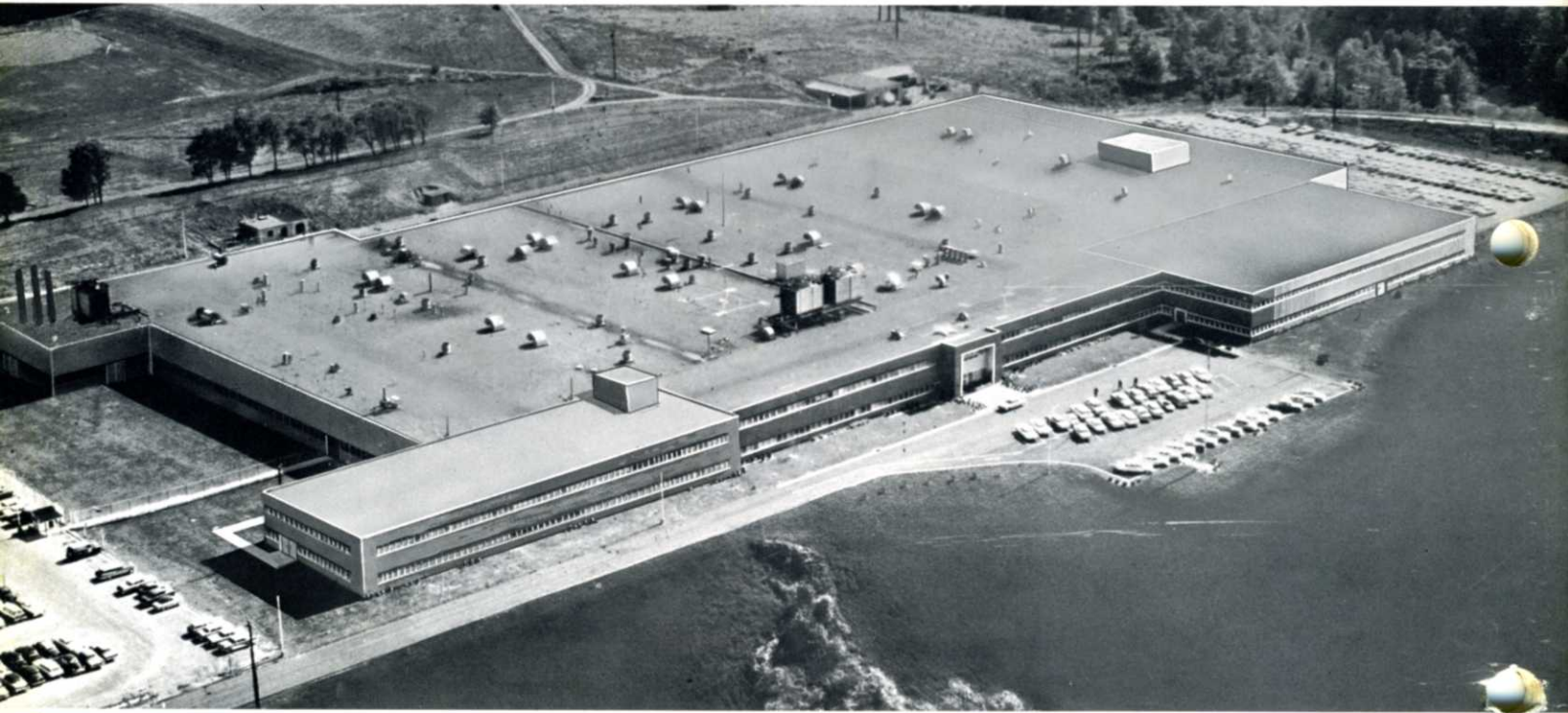


## After Installation

General Electric does more than merely sell and lease Two-Way Radio . . . it provides over 900 independent G-E Authorized Service Stations located throughout the U.S., including Hawaii and Alaska . . . ready to offer factory-trained service when you need it.

This independent, authorized General Electric service station organization is factory-trained to serve a single purpose . . . the complete maintenance of radio communication equipment. General Electric service franchises are given on the basis of integrity, community relationships, ability to give prompt service, use of standard practices with proper test equipment and adequate spare parts stock. Every independent, authorized General Electric service station is staffed by FCC licensed service men. Look for the General Electric Service Station nearest you under "Radio Communications Equipment" in the yellow pages of your telephone directory.

# WHERE PROGRESS IS MADE . . .



This is the home of General Electric's Communication Products Department. Here, at the Mountain View Road Plant in Lynchburg, Virginia, over 2500 employees build the renowned Transistorized Progress Line, Progress Line, and General Electric Pacer mobile radios.

Equipped with the finest research facilities available the engineers of Communication Products Department lead the industry in the development of communications equipment. Unexcelled manufacturing facilities are available, too, in this 436,000 sq. ft. plant.

The Communication Products Department provides you with the finest mobile radio, microwave and carrier current products available today !

*Progress Is Our Most Important Product*

**GENERAL**  **ELECTRIC**