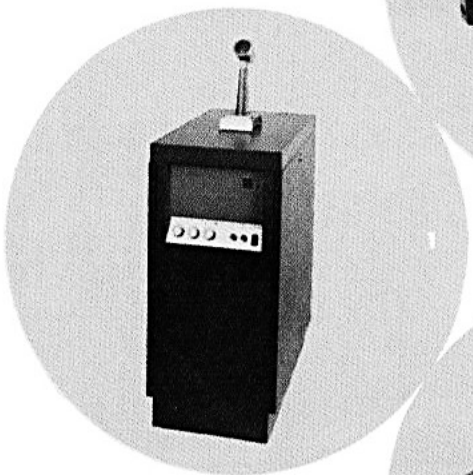
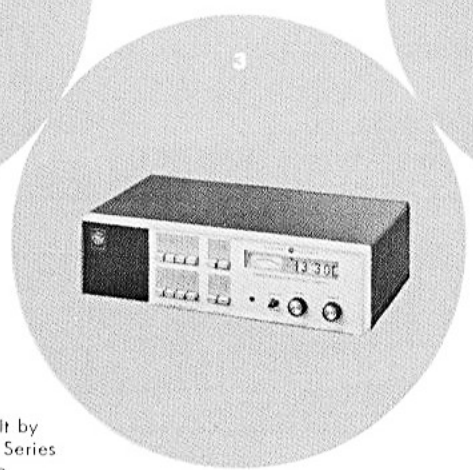
LYNCHBURG

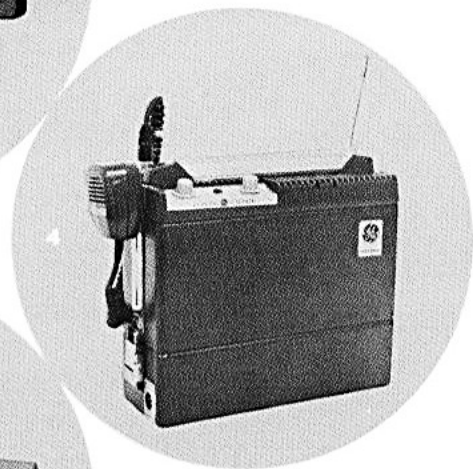
1956 1966

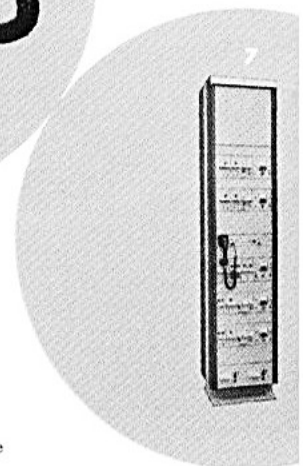
VIRGINIA

10 Years of Progress in Lynchburg









1. The "heart" of any two-way radio system is the Base Station. CPD builds them in five basic physical configurations from the small, convenient Desk Top model to the huge, deluxe Floor Mount. Shown here is the Desk Mate—it sits beside your desk and provides more working area.

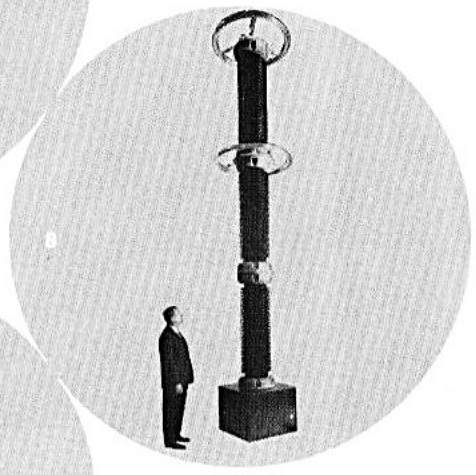
2. Of the many different mobile units built by CPD, the MASTR Progress Line Executive Series is the newest. Simplicity and economy are achieved with no compromise of performance or reliability. The look of wood-grain paneling in the front-mount version gives it rich, decorator styling.

3. The Transistorized Control Console is designed to give the customer remote station control. Like all G-E mobiles and stations, silicon transistors (the finest) are used to achieve the highest degree of reliability.

4. With its many snap-on power supplies, options and accessories, the Porta-Mobil is indeed a totally new concept in two-way radio. A mobile, a portable and a base station in one.

5. "One-step-beyond radio" is the car telephone built here at CPD. The latest and finest equipment offers free-flowing conversation identical to conventional telephone service anywhere telephone service exists.

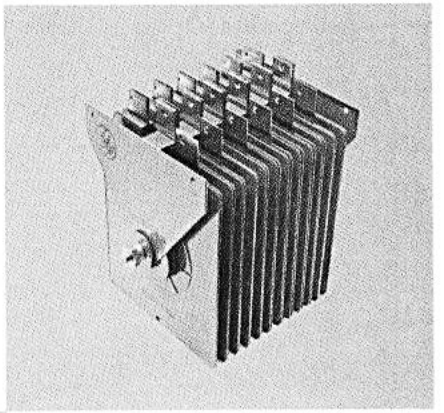
6. This combination, Message Mate pocket-size receiver and Type 99 Tone Encoder, is only one of several paging systems built at CPD and serving industry and public service organizations throughout the world.



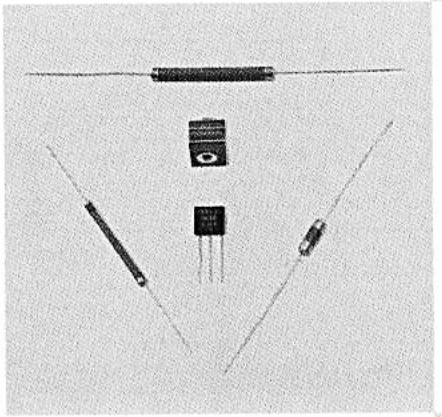
7. Another member of the CPD family of two-way radio products is Telecommunications—a long-haul, multi-channel, point-to-point communications system to carry data, TV signals and voice messages over microwave paths.

8. Still another member of the family is Power Line Carrier—communication products to permit our electric utilities to transmit many types of control signals and communications over the lines and cables carrying electricity throughout our nation.

In Lynchburg, Virginia, the Communication Products Department of General Electric produces virtually every product necessary to satisfy the demands of two-way FM radio communication systems of just about every kind of customer need in the world. More than one half million square feet of floor space is devoted to engineering, designing, manufacturing and selling business radio products and rectifier components. Ten years have gone by since it all began—1956.

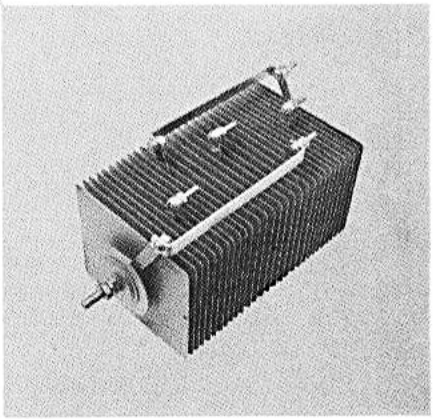


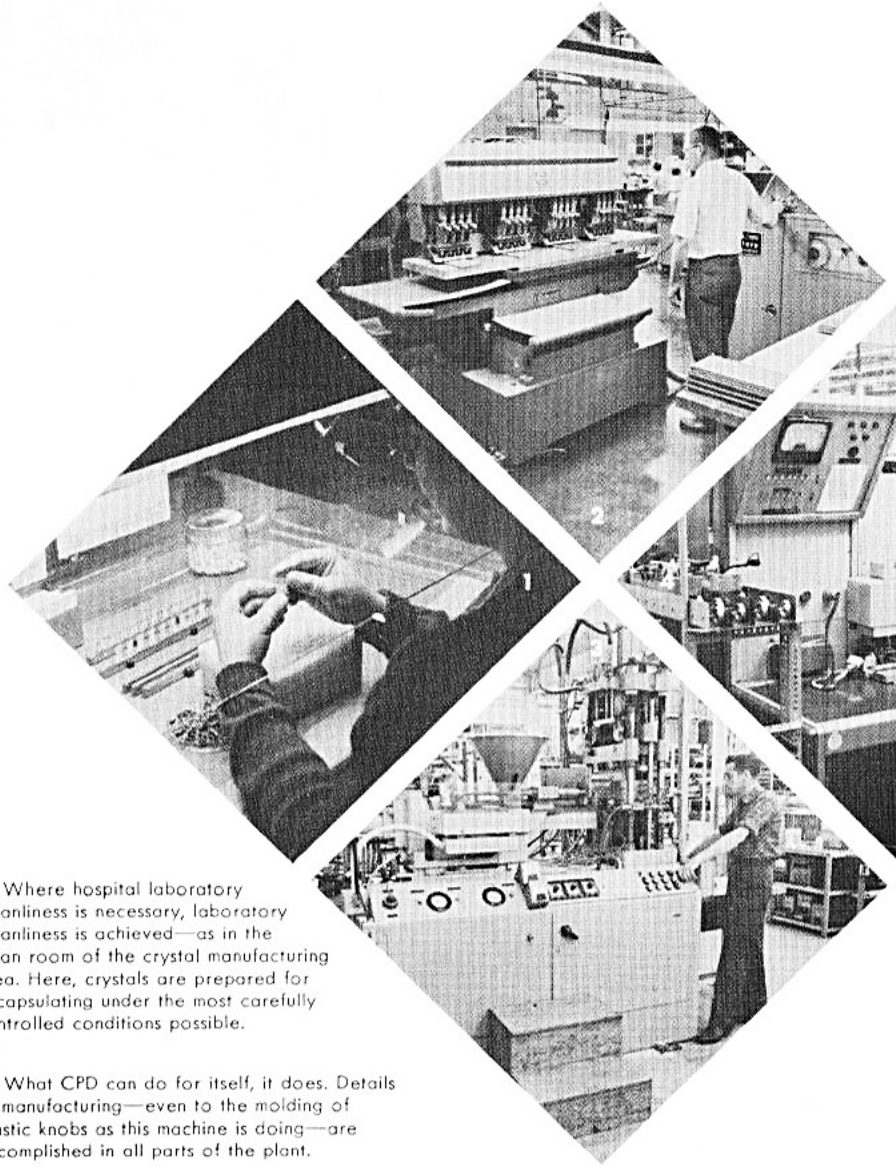
9. Selenium rectifiers, manufactured by the Semiconductor Products Department here in Lynchburg, vary in size from those no larger than a pencil point to some larger than a "bread-box". Typical of the larger "stacks", as they are called, is the one pictured here. This one is used in power supplies for passenger and freight elevators.

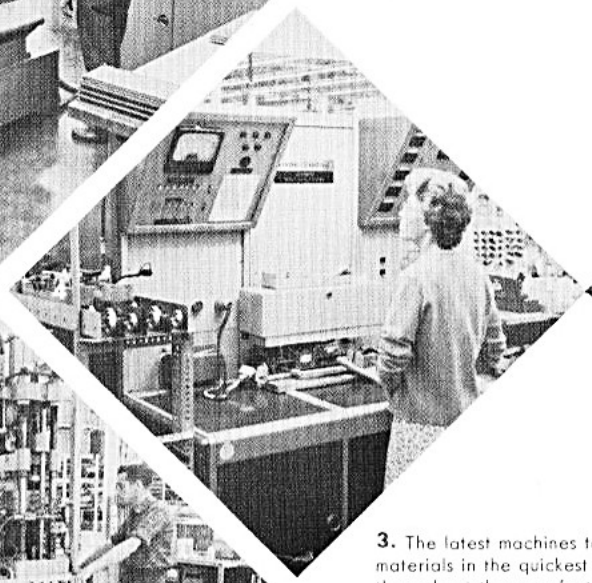


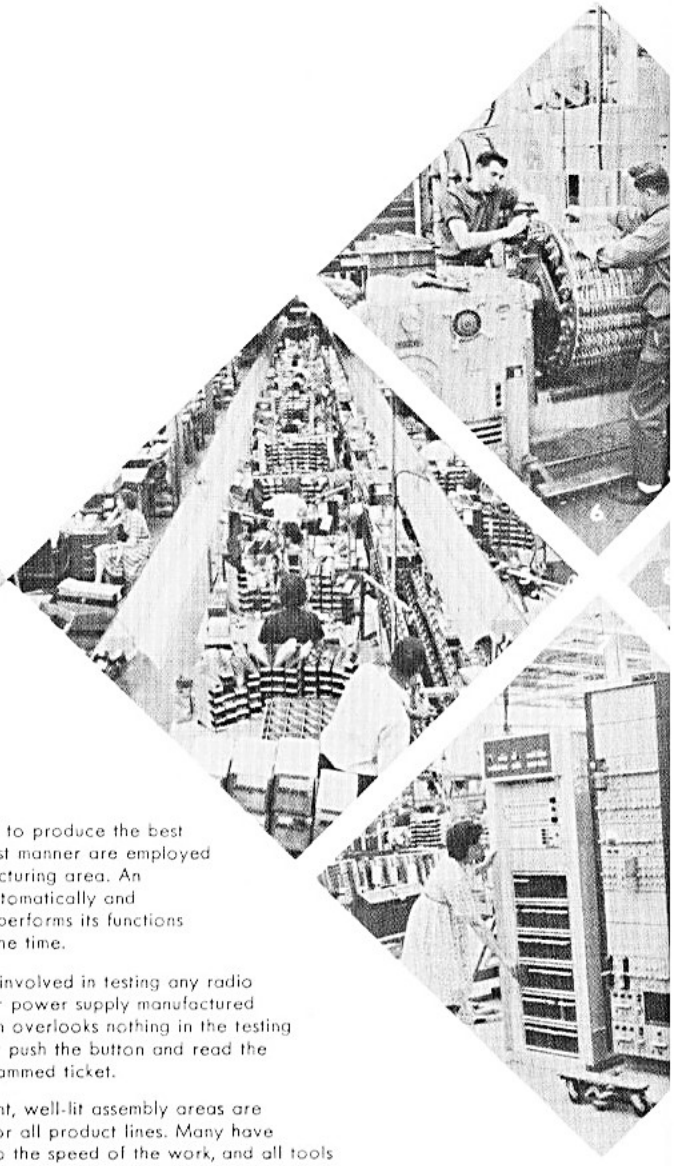
10. One of the fastest growing lines in the SPD business today is the production of solid-state components for television sets. The majority of all TV sets in operation today contain from one to five electronic components which were designed and built right here in Lynchburg.

11. Another of SPD's modern products is an outgrowth of the "jet-age". The long life and high reliability of General Electric Selenium rectifiers have made them ideal for use in both commercial and military jet aircraft.









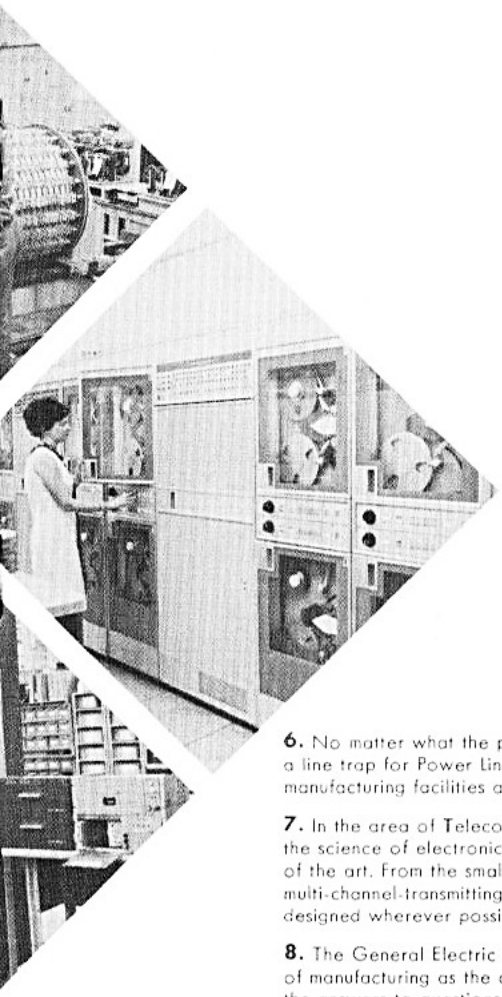
1. Where hospital laboratory cleanliness is necessary, laboratory cleanliness is achieved—as in the clean room of the crystal manufacturing area. Here, crystals are prepared for encapsulating under the most carefully controlled conditions possible.

2. What CPD can do for itself, it does. Details of manufacturing—even to the molding of plastic knobs as this machine is doing—are accomplished in all parts of the plant.

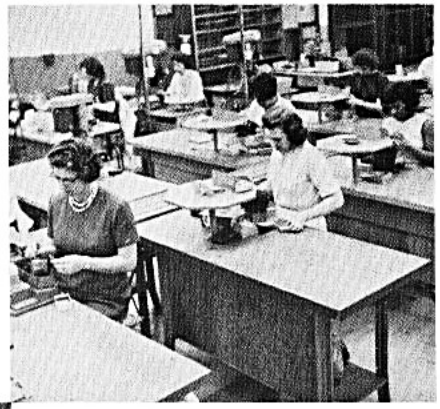
3. The latest machines to produce the best materials in the quickest manner are employed throughout the manufacturing area. An Edlund drill, running automatically and programmed by tape, performs its functions on sixteen pieces at one time.

4. No human error is involved in testing any radio transmitter, receiver or power supply manufactured here. A taped program overlooks nothing in the testing of all components. Just push the button and read the results on a pre-programmed ticket.

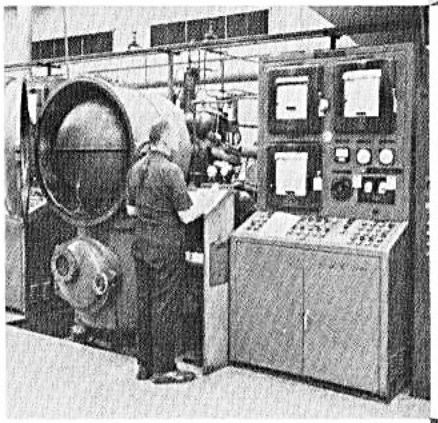
5. Throughout the plant, well-lit assembly areas are meticulously planned for all product lines. Many have moving tables paced to the speed of the work, and all tools and supplies are only inches away from the operator's hands.



The planning of the working area is as important as the planning of the products by our engineers. Every consideration is given to increasing the effectiveness of manufacturing processes, and every consideration is given the worker's comfort, safety and general well-being. In every phase of the work, the most advanced technology—automation, computerization and miniaturization—has been introduced to the benefit of General Electric people and General Electric customers.



9. In the SPD Miniature Assembly area the motto is "accuracy". Here, tiny sub-components are intricately assembled into devices which become electronic circuits in themselves. The "dual diodes" shown being assembled here are destined for both black-and-white and color TV sets.



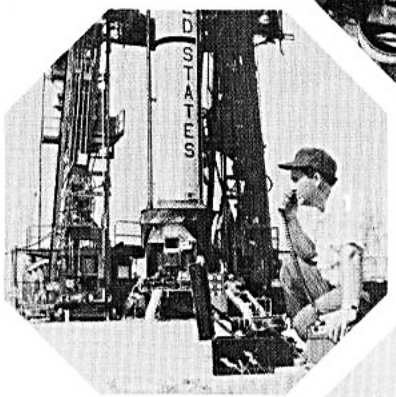
6. No matter what the product, big or little—in this case a line trap for Power Line Carrier—the assembly or manufacturing facilities are planned as efficiently as possible.

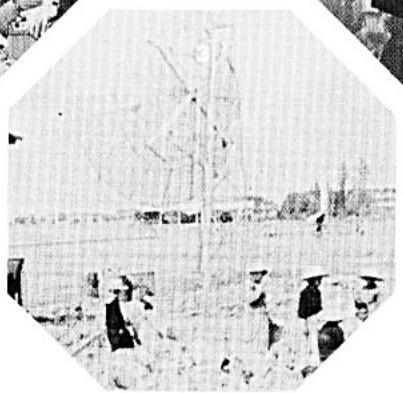
7. In the area of Telecommunications, as well as Mobile, the science of electronics is brought to the highest state of the art. From the smallest amplifier to the huge, complex multi-channel-transmitting devices, plug-in assemblies are designed wherever possible for improved reliability.

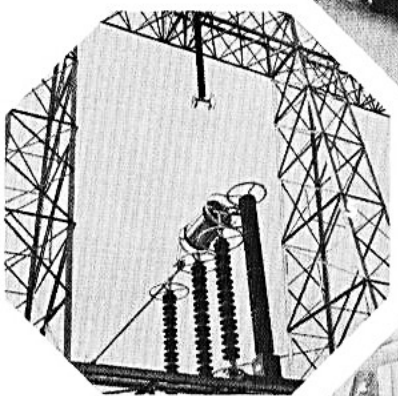
8. The General Electric 225 Computer is as much a part of manufacturing as the assembly line. Such functions as the answers to questions on inventory control, as well as marketing statistics, engineering data and accounting procedures can be had in minutes. Since this and much more information is pre-programmed on the computer, hundreds of man hours are saved in each day's operation of CPD.

10. The "heart" of a Selenium rectifier is the rectifying element itself, called the "cell". Shown here is a portion of General Electric's own Vac-U-Sel® processing equipment in which these valuable cells are made. This facility is located at the Mountain View Road plant, whereas all SPD assembly operations are performed at the Carroll Avenue location.

11. The intermediate-size rectifiers of SPD are assembled into literally thousands of different shapes and sizes depending on their intended applications. In spite of these varying designs, various mechanical aids and a high degree of standardization have been developed to make assembly operations easier.







1. With the coming of the Space Age, came a greater demand for communications—quantity and quality. The requirements today are 50 times greater than when the first astronaut was launched and have grown in sophistication beyond all dreams. CPD is keeping pace with this demand in all phases of data, telemetry, video transmission and all other communication functions.

2. Citizens can rest a little easier when public protectors are equipped with new, fast, reliable communication systems. The G-E Motorcycle Radio is the first of its kind on the market. It, and the custom-built system consoles our engineers design, have increased Police Department efficiency in many of our Nation's municipalities.

3. Throughout the world, if there is a communications need, CPD is there. Neither the deserts of Arabia nor the rice paddies of the Orient are strangers to CPD engineers and equipment.

4. When your very life depends on communications, physicians, nurses and life-saving crews can be alerted instantly through General Electric mobile radio networks. Integrated control keeps staff and vehicles always in touch no matter where they may be.

5. A common sight on the American landscape are the great high-tension wires stretching and humming across our land. Indeed, they do more than hum. They talk, transmit data, tone codes and other intelligence thanks to carrier current equipment built here in Lynchburg. In communications, this is getting pretty close to using everything in the pig including the squeal.

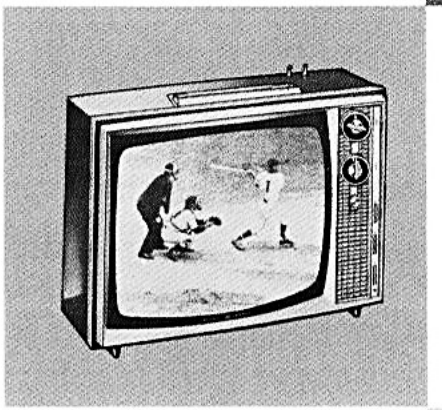
6. There isn't any upper or lower limit to the size of a business that doesn't find two-way mobile radio a modern efficiency factor. Taxi companies, appliance servicing and freight forwarders are obvious users; but so are dry cleaners, drug stores, florist delivery trucks and any number of local, one-truck businesses—wherever there's a need, CPD has the way.

For ten years, two names—General Electric and Lynchburg—have become better and better known throughout the free world. In all human endeavors—from the lone contractor who uses mobile radio to help build your home to far-flung microwave systems and rectified power supplies—some form of Lynchburg-built communication products is an integral part of the operation. General Electric's Lynchburg products and people are helping business and industry, public service, armed services and individuals on every meridian of the globe—and let's not forget outer space.

7. Large industrial complexes need and use just about every product we build, in one way or another—paging of sales, engineering and maintenance personnel in-plant and out; control of inventory in warehouses or stockpiling, or contact between plants or remote locations. Whether the distance ranges from the factory floor to an overhead crane or from Maine to California, CPD can provide the means of communications.

8. One of the keys to CPD's dynamic leadership in the area of communications is its Research and Development program. Engineers working in fifteen laboratories in the Mountain View Road plant are devoted to creating new and improved products. Even outside Lynchburg, projects sponsored by the Federal Government and CPD are carried out in such advanced fields as LASER Communications research.

9. Wherever there is a need for "direct current", some form of a rectifier must be employed, since electrical energy is transmitted from power plants in an alternating-current form. A typical application of selenium rectifiers is in the power supply for elevators and escalators, which operate on direct current. The high reliability of these Lynchburg-made rectifiers is exemplified by years of trouble-free operation in elevators throughout the world.

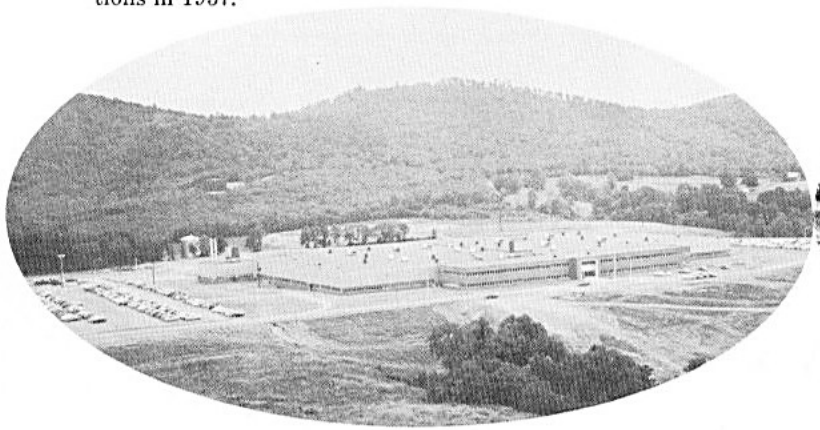


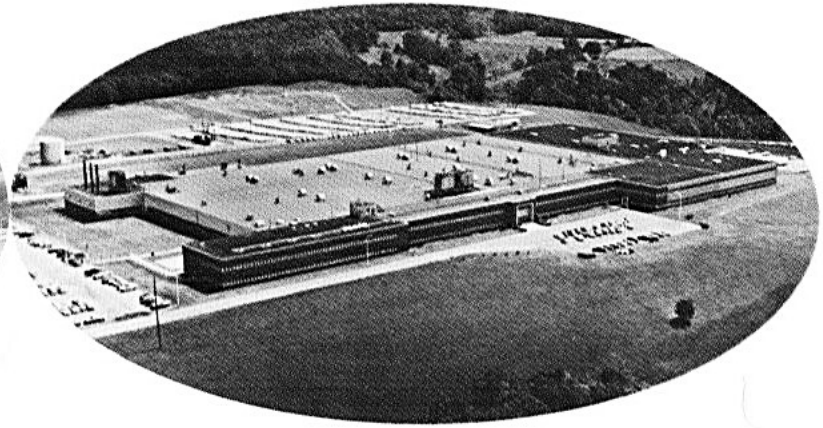
10. The rapid growth of the Television Industry has had its impact on the Lynchburg Business Section of SPD, where five components of the sets are made for most of the major TV set manufacturers. The chances are your set back home or the next one you buy will have at least one of these Lynchburg-made electronic components.

11. The products made by SPD are not confined to civilian use. Many jet-powered aircraft, both commercial airliners and military fighters, employ selenium rectifiers for the various DC power requirements on board. Lynchburg-made "stacks" are also used in jet-engine starting apparatus on the ground and at sea.

FROM CORNFIELD . . . TO COMMUNICATIONS

THEN . . . Ten short years ago, corn grew and tasselled on the site of General Electric's first plant in Lynchburg. Here is the original building, which first housed rectifier operations in 1957.





NOW . . . Successfully growing a business on G-E's 122 acres has replaced the contour plowing on the former Senator Carter Glass farm. To prove the point, General Electric's Mountain View Road plant—headquarters for the Company's communication business—has had several major expansions in its office, factory and laboratory space. Lynchburg's leading employer has also expanded to the largest workforce to locate in Virginia since World War II. Earning orders from throughout the world to keep this modern, air-conditioned factory humming requires the support of many people . . . not the least of them good employees, community neighbors and government. For your part in this success story, we salute you!

GENERAL ELECTRIC

Communication Products Department
Lynchburg, Virginia

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