Lynchburg, Virginia

. . . Where Progress in Communications is Made

When Lynchburg, a pleasant Central Virginia city that sprawls over more than 25 square miles of Blue Ridge Mountain foothills, was founded in 1786, communication was a prime —and very limiting—factor in its location.

Actually the land a few miles to the south was flatter, more ideal for construction and living, than were the steep slopes up from the James River where John Lynch actually established the community.

To Flatter Land

But the river was necessary for transportation and communication purposes in those days . . . so Lynchburg rose on the side of a steep hill.

As techniques in these arts of transportation and communication improved, however, the city grew. Eventually it began moving southward to this flatter, more ideal land.

Now today, a good five miles from the banks of the James, the General Electric Company operates its worldwide communication business in a modern, spacious plant that stands on some of that flatter land.

A Scenic View

Some of those Blue Ridge foothills are in its back yard, with a commanding view of the beautiful mountains themselves from the front. Appropriately, General Electric's address in Lynchburg is "Mountain View Road."

The operation is somewhat typical of the character of industrial makeup of this Central Virginia community itself. That dominating characteristic is diversity.

As Lynchburg's major industrial categories range from paper to foundry to shoes to cosmetics to transformers to textiles to atomic reactors, so does General Electric produce a broad range of communication equipment.

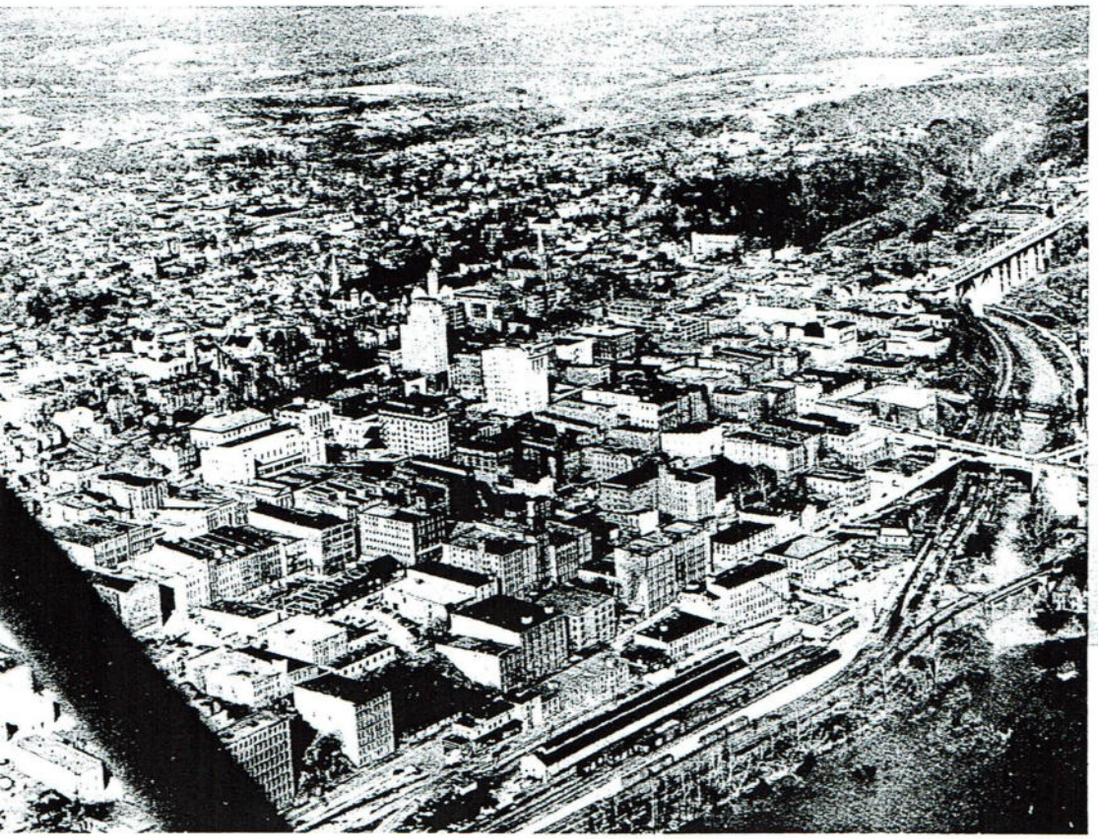
One part of the plant puts together a tiny pocket radio receiver — called a Message Mate — that will provide the user with personal communications in a building or a relatively confined outdoor area. Meanwhile nearby, transmitters are being assembled for thin route tropospheric scatter systems that will bounce voice, teletype, data, canned messages, telemetry and facsimile over hundreds of miles.

In still another section, mobile radio units headed for a business man's small three-vehicle fleet or a huge state police system are undergoing test.

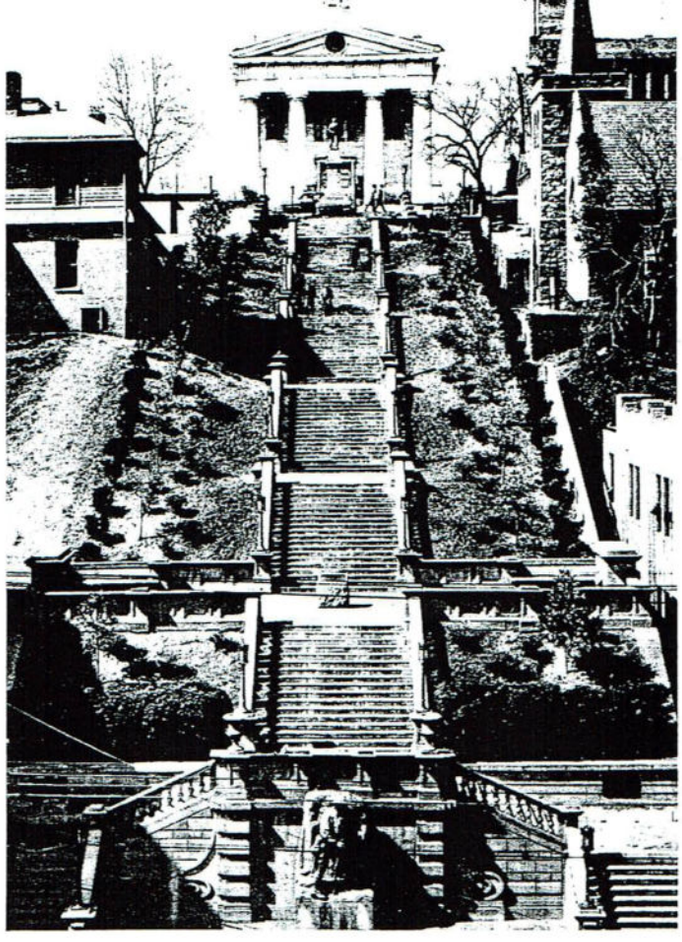
Carrier Systems

Standing in another area are tall, neat racks of fully transistorized carrier systems for microwave relay, tropospheric scatter or cable, called TCS-600 with a military nomenclature of AN/FCC-18 (v).

Meanwhile, work continues on high-speed data transmission terminals for computers; microwave RF



Aerial view of Lynchburg, Virginia, looking southward from James River.



Historic downtown Lynchburg landmark, Monument Terrace, with Old Courthouse at top.

transmitter-receivers to operate carrier multiplex systems, and power-line carrier current tone channels, transmitter-receivers, coupling capacitors and aluminum line traps.

Elsewhere on the floor of this sprawling, diversified industrial operation, assemblers build Voice Commander personal portable two-way radio units that you can hold in your hand and 330-watt mobile base stations — the industry's highest powered — that stand almost seven feet.

Terrain Utilized

The Lynchburg location has proved an ideal one for this growing, progress-minded communication business. Besides its healthy economy, cultural emphasis and pleasant living areas, the city's hills and surrounding mountains provide a nature-built test laboratory for General Electric engineers who must wrestle with communication coverage problems such as transmitting from one low spot over a hill to another low area.

Taking advantage of this terrain, the Communication Products Department has been able to solve many of these difficulties almost literally in its own back yard.

Business Grows

Propagation problems were particularly challenging in the Titan II communication system for which the Department was prime contractor. It was in the scenic and hilly Lynchburg area that solutions were worked out.

A pioneer in the communications business and in the field of electronics, General Electric has witnessed dramatic growth in communications through its Department in Lynchburg.

Over the past five years, personnel have occupied the new Mountain View Road plant — and later, three huge additions to it — as well as many square feet of space in a former textile plant nearby.

Historic Area

It has drawn much of its labor force from the city and surrounding counties, among them, Appomattox, site of the Civil War surrender grounds, and Bedford where Poplar Forest, home designed and built by Thomas Jefferson as a retreat, is located.

Demands of its business have brought many professional people — engineers and others — into the community, enhancing an already wide reputation for active cultural and educational endeavors.

Lynchburg is something of an educational hub, two colleges—Lynchburg and Randolph-Macon Woman's —lying within its corporate limits, another—Sweet Briar—just 12 miles away and over a half-dozen more inside a 60-mile radius.

Total Concept

In Communication Products' vast engineering facilities, the "total concept" in communications has helped develop the diversified, complete range of products and systems offered today.

The Department's Engineering Section maintains a continuing, planned program of advanced study aimed at keeping General Electric in its position of technical leadership in the communications industry.

It is from its tremendous investment in engineering in Lynchburg, with support of the Company-wide research-oriented program, that its progress in communications today is made.

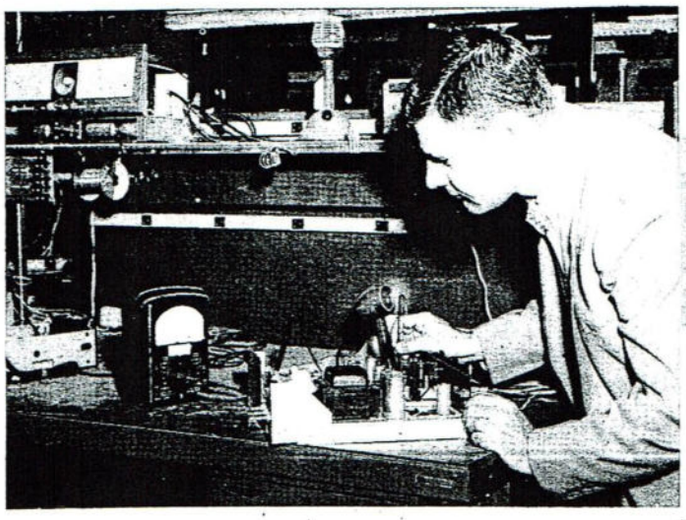
Manufacturing facilities in the Lynchburg plant incorporate latest

Plant Houses All Functions of Communication Business

methods and highest quality performance standards for production of the equipment the Department engineers.

Production areas combine job shop and production line techniques with facilities for plating, painting, welding, soldering, assembly and test.

One example of modern methods is automatic parts indexing by which a rotating machine carries parts in separate bins, in proper sequence, and feeds them to assembly operators.



An engineer at work on mobile equipment.

Accent on Service

Testing is another area that is emphasized heavily. Under direction of the Department's Quality Control group, extensive product and systems testing procedures are maintained. Products must pass gruelling temperature, vibration and other tests, while entire systems are test-operated in the factory by simulating actual conditions after installation.

The Department also manufactures many of its own component parts to guarantee maximum precision and quality. And it maintains a trained professional purchasing staff to assure similarly high standards in other components.

Staffed with the administrative forces to guide orders through the manufacturing process, the Department also places heavy emphasis on proper installation and maintenance.

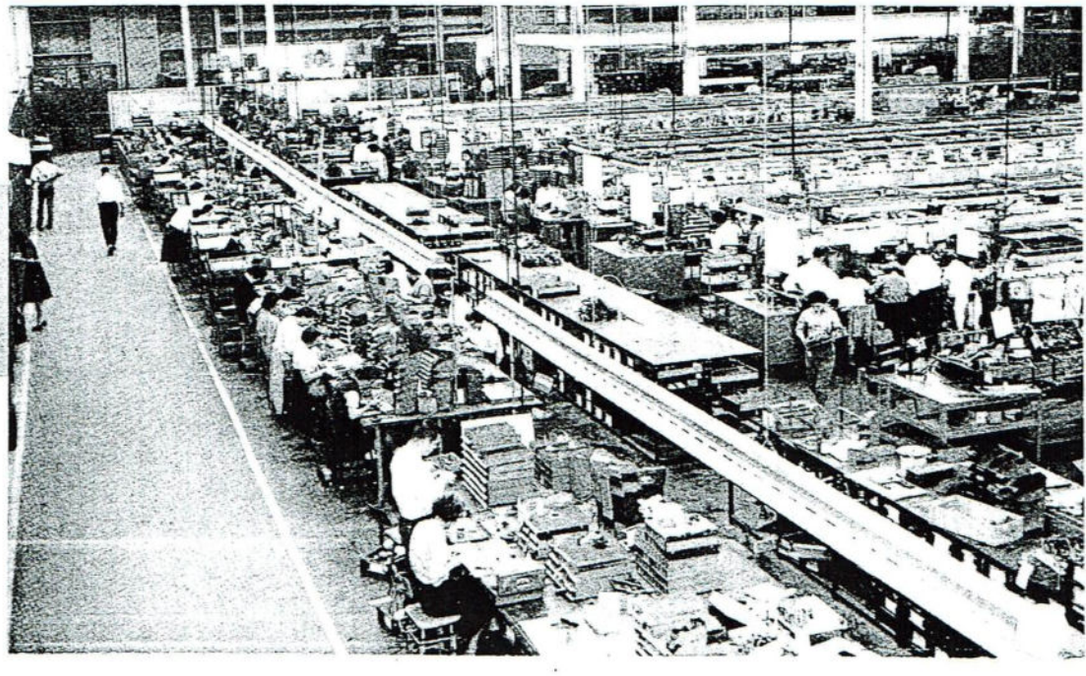
Tough Testing

Factory-trained personnel are located throughout the nation, and the Department maintains a large staff of communication engineers, strategically spotted around the country.

In addition, much of the Department's mobile radio equipment is serviced by authorized General Electric service stations — more than 800 of them.

Other communication systems are installed and maintained by a force of field engineers who travel all over the world to reach the Department's many types of systems.

. . . Lynchburg, Virginia . . . a community which can look forward within a few years to a celebration of 200 years of progress . . . is where Progress in Communications is being made every day.



Part of huge assembly area in Lynchburg communications plant.

GENERAL ELECTRIC

COMMUNICATION PRODUCTS DEPARTMENT
LYNCHBURG, VIRGINIA