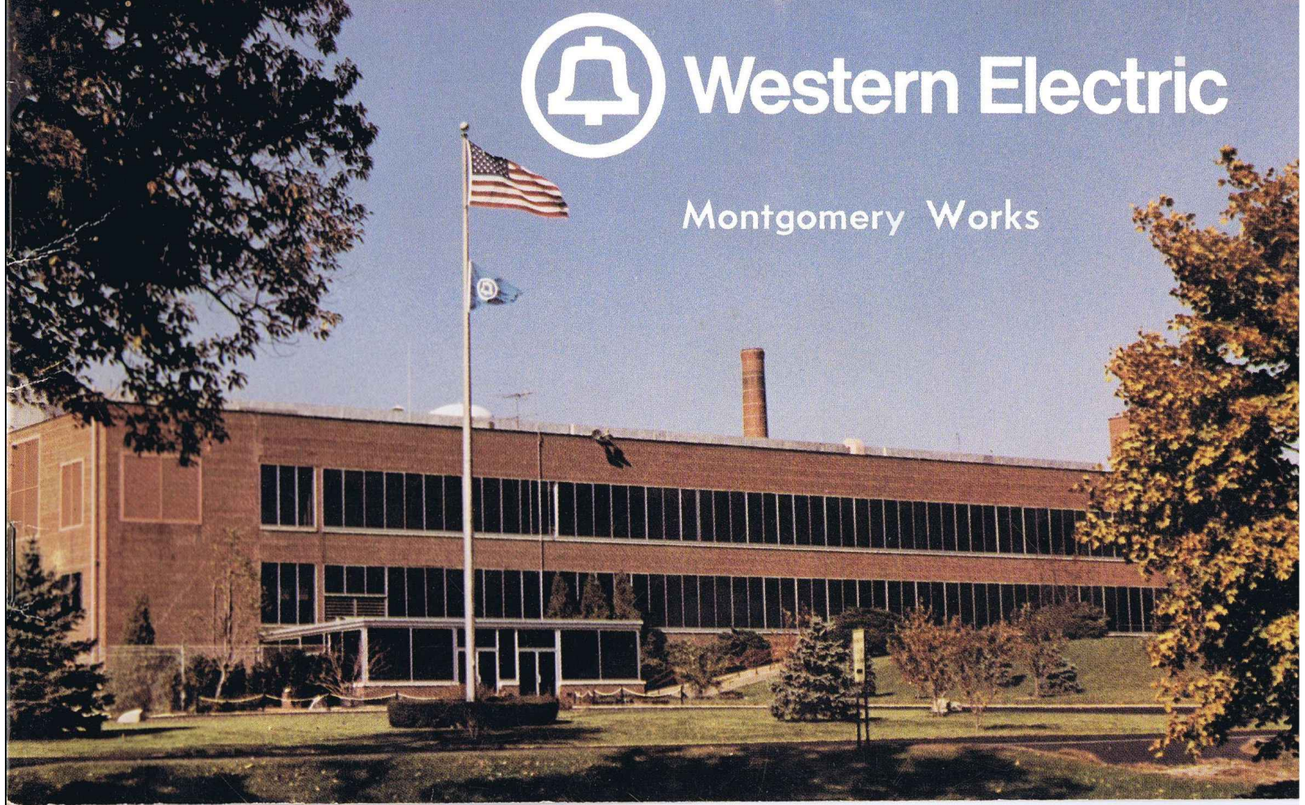



# TO OUR VISITORS:

Welcome to the Western Electric company's Montgomery works in the heart of the progressive and growing Fox river valley. We hope that you will enjoy and profit from your visit. We appreciate having the opportunity to show you the role we play in supporting the most modern and comprehensive communications system in the world.

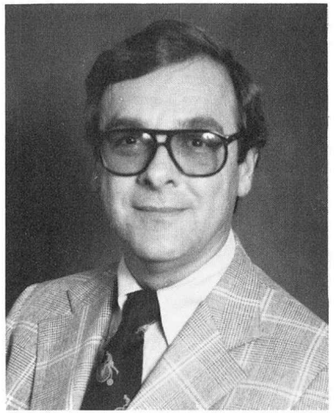
Please accept this booklet with my warmest personal wishes for a pleasant stay.

During this visit, you will learn how computers "talk" to each other over telephone lines by way of the Dataphone® data set, the major product of this manufacturing location. The data set is one of the more sophisticated pieces of communications equipment now available; and we feel confident that you will agree with this appraisal of our product as you watch its assembly during your tour of the Montgomery works.

It is our pleasure to have you visit with us. We trust that the occasion will be both memorable and enjoyable for you.

William J. Warwick

General Manager



William J. Warwick

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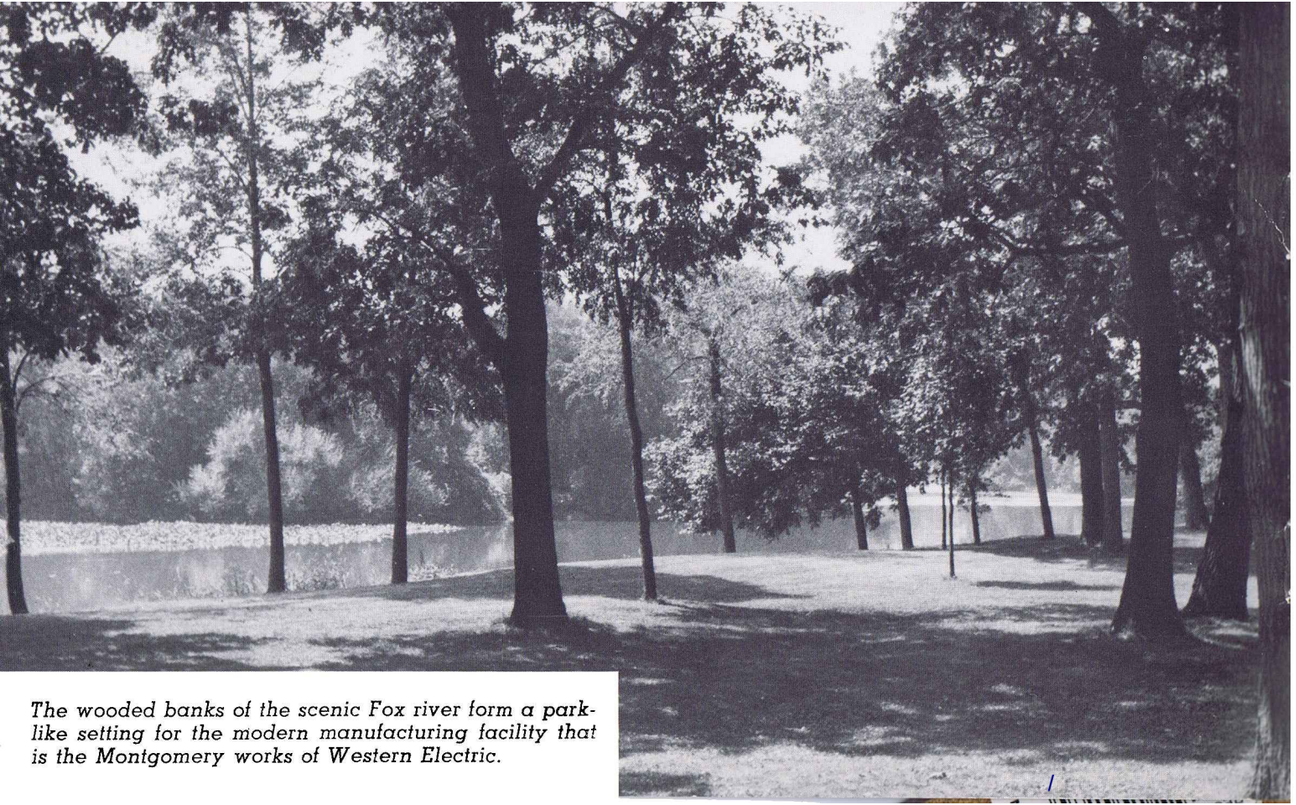

*The wooded banks of the scenic Fox river form a park-like setting for the modern manufacturing facility that is the Montgomery works of Western Electric.*

*A Guide to*

**the Montgomery Works of**

# the WESTERN ELECTRIC CO.

*Montgomery, Illinois*

**"The Data Set Capital of the Bell System"**

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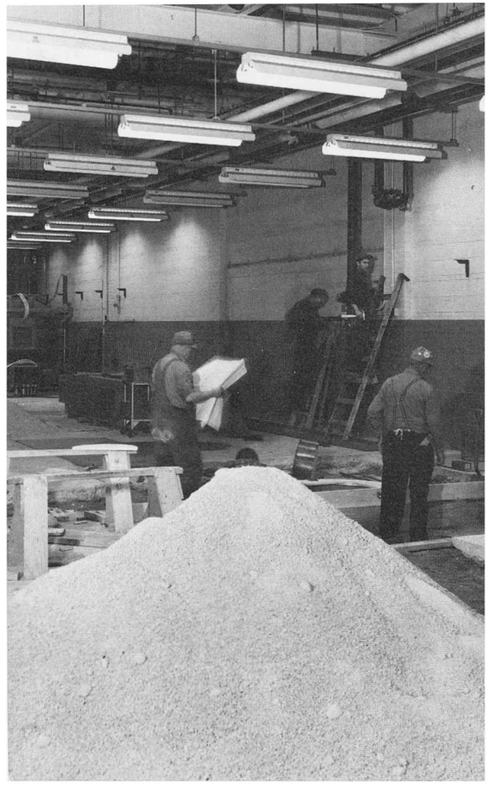


# A PAGE OF HISTORY

THE WESTERN ELECTRIC COMPANY dates back to 1869, when it began life as an electrical repair shop, seven years before the patenting of the telephone. Since 1882, Western Electric has been part of the Bell Telephone system, where it effectively performs the important job of manufacturing and supplying the equipment used by the Bell Telephone companies to provide telephonic and other communications service. Today, the company has 21 major manufacturing locations in 18 states, plus service centers and installation bases from coast to coast.

We have occupied the manufacturing site at Montgomery, Ill., since the summer of 1955, when we purchased and completely remodeled this 465,000-square-foot building. We are situated on a 46-acre wooded tract on the west bank of the Fox river, adjacent to the village of Montgomery, and only a short distance south of the city of Aurora.

In addition to revamping the building's interior, the company has added such major improvements as a cafeteria with a capacity of 420 persons, two black-topped parking lots accommodating 1,900 cars and a modern waste-water treatment plant which, since 1958, has been safely dissipating industrial wastes without contamination of the environment.

*Left, interior of the Montgomery building in 1955, when foundations were being installed for heavy machinery and other manufacturing facilities.*

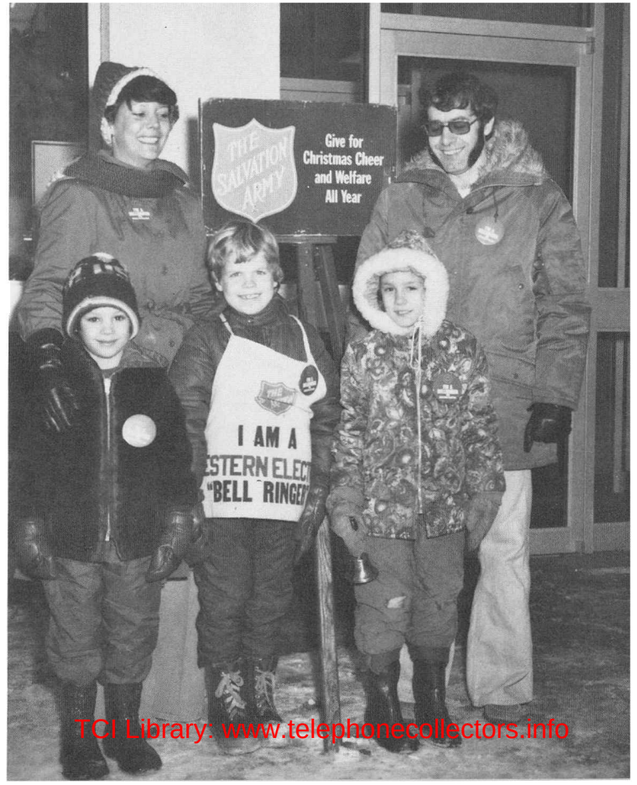
# GOOD NEIGHBORS

Western Electric likes being a part of the Fox river valley. During our quarter-century here, our neighbors have been good to us. We try to return the favor by being a good industrial citizen. We take pride in our property and buildings, and endeavor to make them a credit to the area. The natural beauty of the site encourages us to keep it attractive. We dispose of wastes in a scientific manner which is both harmless and inoffensive. Cooperating with clean air programs, we keep industrial smoke to a minimum.

We also support community projects and activities, such as the United Way, Junior Achievement and Salvation Army fund drives. We encourage our employes to participate in civic affairs, such as professional, educational, religious and governmental programs.

Yes, we like it here—and we hope our appreciation shows!

*W.E. encourages its employes to participate in Salvation Army Christmas fund drives. At right, some employes even bring family members to help.*

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# WHAT WE MAKE

**DATA TRANSMISSION** equipment: In these days of modern electronics, even computers talk by telephone. This "machine talk" is transmitted over the same communications facilities that carry everyday telephone conversations. Western Electric data sets, made here at the Montgomery works, help make it possible, through the use of Dataphone® service. They convert machine language—from punched cards, paper tape or magnetic tape—into the language of audible tones, for transmission over telephone lines on both the nationwide switching network and on private lines.

Because Western Electric data sets feature the newest in electronic circuitry, the Montgomery works makes important use of such technologically advanced components as integrated circuits.

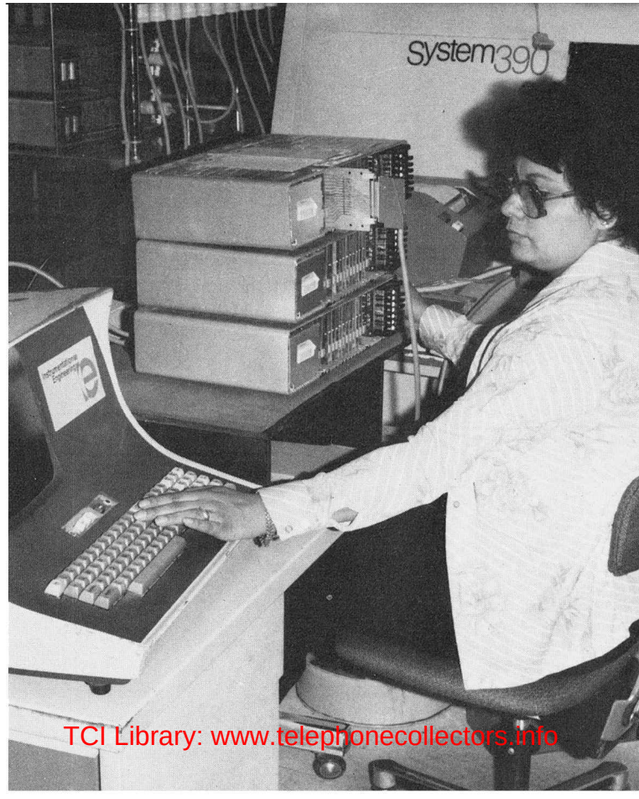
*Assembly of data sets (left) is work for nimble fingers. A variety of skills, including wiring, soldering, machine operation and others, goes into the making of this electronic equipment.*

# AT MONTGOMERY

**SHOP MANUFACTURE** of data transmission equipment requires a great number of trained people—wiremen, solderers, assemblers, inspectors, detail makers, testers, machine operators and specialists in a multiplicity of bench operations, to name only a few. Western Electric's Montgomery works has them all. The modern electronic products turned out here result from the experience and skill embodied in our shop employes.

While many of the occupational skills required here are learned on the job, the Montgomery works also has a fully-staffed training section to give beginners a good start and to give "old hands" added manufacturing techniques.

*Automatic testing of data sets (right) is accomplished on this computer test set. Operator reads screen at left to decide if set passes rigid W.E. standards.*

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# MONTGOMERY

ELECTRONIC COMPONENTS: More recent designs in telephone equipment use many varieties of components for the ultra-fast electronic switching systems, for Touch-Tone® calling and for data transmission. Montgomery each week supplies many thousands of the various transformers, inductors, filters, equalizers and networks necessary to make the new equipment function. Some of these coil-wound components are as small as a peanut, others as big as a cigar box. Intricate and highly precise coil-winding machinery and test sets are used in their manufacture.

*Dials, meters and flashing lights make this coil-winding machinery into "showpiece" equipment. The operator keeps a watchful eye on the computer mechanism as it turns out wire coils for electronic components.*

# PRODUCTS

PRINTED WIRING BOARDS: A major advantage of the miniature electronic components made at the Montgomery plant is the space-saving feature of attaching many components to a rigid board of epoxy glass, on which is printed a circuit of micro-thin copper. Hand wiring is virtually eliminated, and the entire circuit board can be replaced easily when necessary.

A high degree of precision is required in the many fascinating steps which create this modern wiring system.

Our printed wiring boards, being produced at a rate in excess of 13,000,000 a year, are used in our own data sets and in a wide variety of other communications equipment.

*Wiring board printed on this machine is a complete electrical circuit, ready for insertion of resistors, networks, capacitors and other electronic components.*

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*These small plastic parts, purchased from an outside supplier, are carefully checked to be sure they meet Western Electric's high quality standards.*

# WE BUY . . . .

ANY MAJOR manufacturing effort must have help from a capable purchasing organization. Montgomery has such a purchasing arm; and each year, millions of dollars worth of materials, from complex and costly machines to office stationery and pencils, are purchased for local use.

In order to meet production schedules for our data communications equipment, for example, we have become one of the world's major purchasers of integrated circuits, the sub-miniature components, including micro-processors, which are essential for electronic development.

The purchasing people are busy each day in a continuing search for the materials necessary to keep the Montgomery works functioning with high efficiency. Among the duties of the purchasing organization are the location of necessary materials and supplies, making sure they meet our company's specifications, and arranging for purchase and delivery at the best possible price.

# . . . . WE SELL

MERCHANDISING service to our customers, the operating Bell telephone companies, is of prime concern at Montgomery, as it is in all Western Electric locations.

At Montgomery, we desire to explain the data communications concept to possible customers in the most dramatic way. To that end, we have developed a data set display room at the works, where our customers may learn about the many potentials of data communications equipment. Slide presentations, verbal descriptions and actual, hands-on demonstrations all are combined in the display room to provide full, graphic, in-depth explanations of data set uses.

Allied with the informational effort provided in the data set display room is the merchandising operation at the Montgomery works. An entire organization devotes itself completely to meeting customer demands. Members of this organization schedule shipments, provide necessary packing and then ship completed products to customer locations nationwide.

*Potential customers for Montgomery-made data sets attend visual and oral demonstrations in this comfortable showroom.*

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# SUPPORT

**TO SUCCESSFULLY SUPPORT** any production effort, an industrial organization needs the services of many backup groups. Such organizations as payroll, accounting, training, production control, quality assurance, industrial relations, shipping and receiving, data processing, drafting and transportation all must pull together to provide the force needed to keep the production effort moving. Montgomery works employes in these areas take pride in the roles they play to keep the plant functioning at peak efficiency.

*Above, left, part of Montgomery accounting department, a typical office area here. Right, merchandise packer uses modern materials and techniques to prepare product for shipment.*

# ENGINEERING

**FROM THE BEGINNING,** Western Electric has been an engineering-oriented company. Here at the Montgomery works, as at all Western Electric locations, our engineers play a major role in the development and support of the manufacturing process. They constantly search for new and more efficient ways to build the product, and to reduce cost while improving quality, in addition to providing for the improvement and maintenance of the buildings, the machinery and other facilities.

*Engineers examine a data set to eliminate potential problems in manufacture and operation of the electronic device that allows business machines to "talk" to each other.*

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# OUR PEOPLE

THE WORTH of a manufacturing operation can be calculated mathematically. Add up the value of the buildings, the machinery, the raw materials and the finished products on hand, plus other measurable assets; deduct the outstanding bills and other indebtedness, and a reasonable estimate is obtained.

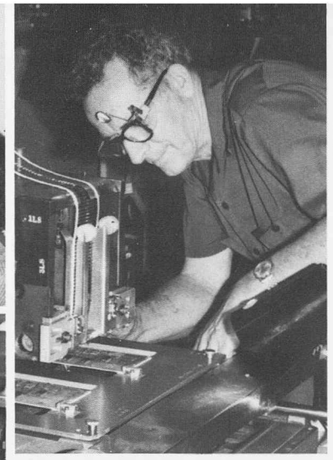
The worth of a company's employes, however, is not so easily computed. Their skills, their work experience, their innate ability to learn new techniques—all are of inestimable value. Their desires, dreams and ambitions, blended with their individual personalities, combine into an intangible sum that can never be scored on a computer.

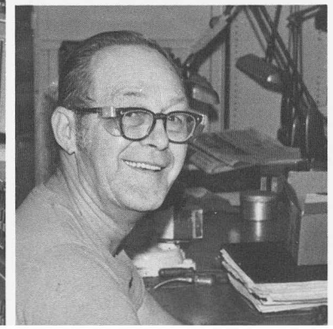
Even the activities of employes off the job—participation in civic affairs, political offices, youth organizations, church work, fraternal groups and service clubs—reflect credit not only on the employes themselves but also on the company for which they work.

Western Electric's Montgomery works has such a corps of people. Over the 25 years of our existence in the Fox river valley, our people have become increasingly important to us. They are part of us, just as Western Electric is part of them. We're proud to have them on the W.E. team.

It is worth noting that Western Electric is pledged to avoid discrimination in matters of race, color, national origin, age, sex and religion. The company makes a special effort to further equal employment and career opportunities for each individual worker.

Pulling together, Western Electric and its people have made this company what it is—a good place to work.





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# dataphone II

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Western Electric