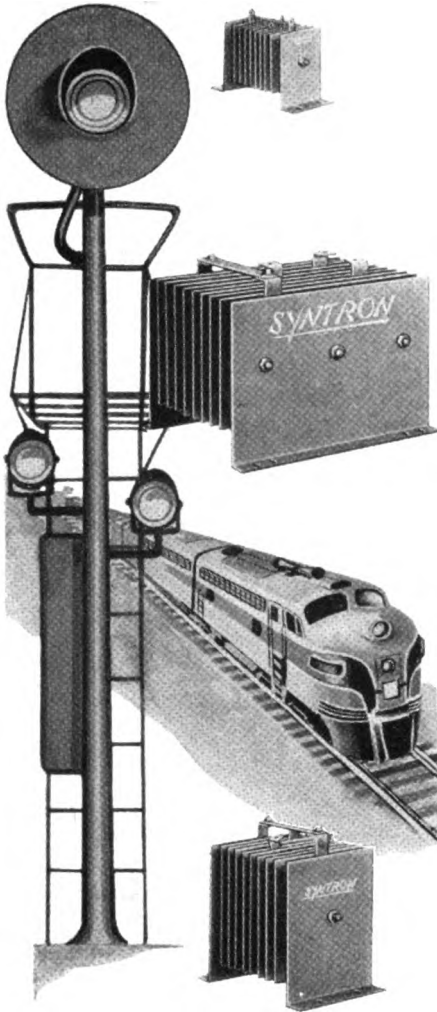


# DEPENDABILITY



## SYNTRON SELENIUM RECTIFIER STACKS

\* \* \* because of their long record of proven dependability SYNTRON Rectifiers have been chosen by major railway signal and communication manufacturers

*SYNTRON Rectifier Engineers are ready to assist you with your rectification problems.*

*Write for informative literature*

### SYNTRON COMPANY RECTIFIER DIVISION

1469 Lexington Ave.      Homer City, Pa.  
Sales Engineers—New York, Cleveland, Chicago  
Los Angeles, and Canada

## WHAT'S THE ANSWER?

*(Continued from page 38)*

not changed. However, on future retransposing jobs, pin spacing will be narrowed, this because of using higher frequencies on these transposed pairs.

On our retransposing jobs a two-mile section of each circuit to be retransposed is cut out in twisted pair or army field cable, this cable being handled on pay-out and take-up reels on large racks handled on push cars.

### Standard Spacing Retained

A. E. DE MATTEI, Superintendent of Communications, Southern Pacific, San Francisco, Calif.

On the Southern Pacific communications wires are carried on pole lines belonging to the Western Union Telegraph Co. and we are guided by their transposition specifications. Measuring and laying out of transposition points is performed by the telegraph company in accordance with their specifications.

We have used two types of brackets. Originally we used Hubbard type 9272 and 9273 and have recently adopted the Case type SE-1648 and SE-1780. The principal reason for changing the type of bracket was because the Case bracket is lighter and appears to be stronger.

Standard pin spacing was not changed except on corner poles, where one pin was set over in order to permit wires being tied on the outside of the insulators and still maintain uniform spacing.

## Message Paper

*What use are you making of colored papers in printing telegraph service to distinguish messages, routing, etc? Please explain.*

### Now Use Only One Color

ALLEN H. FOX, Engineer Communications, Great Northern, St. Paul, Minn.

At one time we had three types of message blanks, a different color for each for fast message, day message and night message. For economy reasons this was dropped in favor of a blank which, in the upper left-hand corner, has a blocked space in which the sender can check the type of service the transmission will require. After initial installation the plan has worked very well in savings as well as speeding operation on the receiving end, where the operator has to contend with but one type of blank.

RAILWAY SIGNALING AND COMMUNICATIONS

## News Briefs

1959 INDEX FOR RS&C may be obtained by writing R. C. Van Ness, Director of circulation, Railway Signaling and Communications, 30 Church St., New York 7, N.Y.

A CREWLESS ROAD-SWITCHER located in the middle of a train, controlled electrically and with radio from the lead engine, is being tested by a western railroad and two railway suppliers. Preliminary tests several weeks ago confirmed the feasibility of operation. First tests are being conducted on the West Coast. The crewless engine can be any place in the train.

MISSOURI PACIFIC will build an electronically controlled hump yard at North Little Rock, Ark., at a cost of more than \$6 million. Initially, the classification yard will have 40 tracks with space for 1,600 cars. Provision will be made for expansion to 56 tracks and a 2,240 car capacity. General Railway Signal Co. has been awarded a contract amounting to \$1,500,000 for equipment in the new yard.

ATLANTIC COAST LINE ordered CTC wayside equipment from Union Switch & Signal—Division of WAB Co., for installation on 27 miles between Vitis and Lakeland, Fla. Control will be from an existing machine at Ocala.

CANADIAN NATIONAL ordered CTC equipment from Union Switch & Signal—Division of WAB Co., to be installed between Nakina and Armstrong, Ont., 112 miles. Control of this territory will be from an existing Traffic Control Center at Hornepayne, Ont., by adding three more track diagram modules.

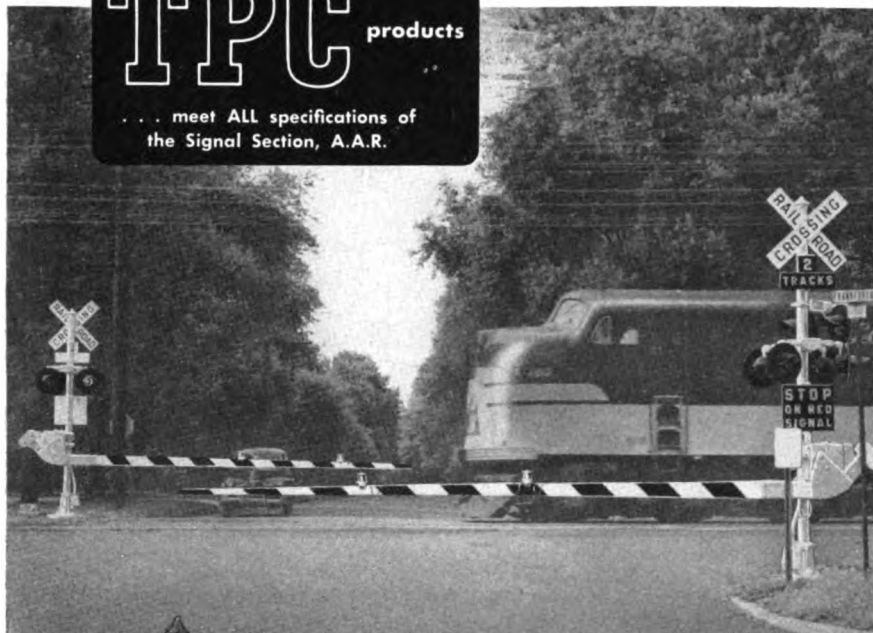
SOUTHERN has received ICC approval for the extension of existing CTC on two main tracks, to provide operation in either direction on each track, for a distance of 48 miles between Bristol and Montpelier, Va. Control will be from Alexandria, Va. This will replace automatic block signaling for current of traffic operation only.

BALTIMORE & OHIO has received ICC approval for the installation of CTC on one main track between 58th St., Philadelphia, and Rossville, Md., 84.5 miles, to replace existing automatic block signaling for one direction operation on each of two main tracks. Ap-

*(Continued on page 42)*

# TPC products

... meet ALL specifications of  
the Signal Section, A.A.R.



Pictured above is a TPC gate installation that has been in constant service for over 10 years. Simplicity of design, and easy accessibility has helped TPC pace the industry in signal equipment since 1930.

### TPC RAILBOND GRINDER MODEL 300 AY



TPC Railbond Grinders assure better bonds, preparing the rail joint with a smooth, even, clean surface for welding.

## TRANSPORT PRODUCTS CORPORATION

3008 MAGAZINE ST.

LOUISVILLE, KY.

### NEWS BRIEFS

(Continued from page 40)

proval has also been granted for the installation of CTC on two main tracks for operation in both directions on each track, on an additional 2.5 miles. This will replace automatic block signaling for one direction operation on each of the tracks. Control machine for both systems will be in Camden Station, Baltimore. The B&O will not be required to electrically lock 44 hand-operated main track switches leading to industrial tracks in this territory, because trains will not clear the main track at these locations.

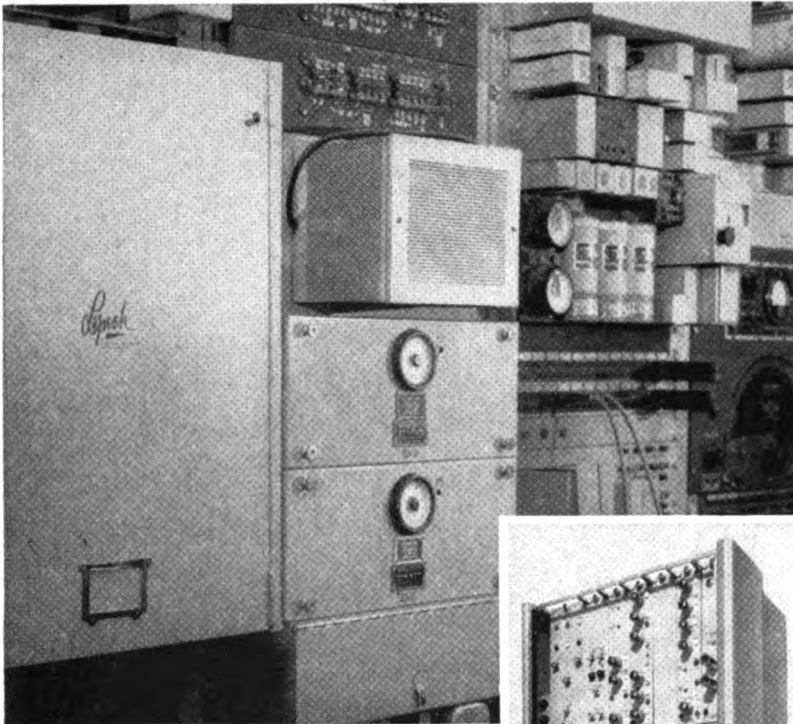
MANUFACTURERS RAILWAY of St. Louis has ordered a two-way radio system from Motorola, consisting of two base stations and 64-volt "Stan Pac" radios in nine diesel engines.

DELAWARE & HUDSON has begun work on the installation of CTC on an additional 90 miles of main line track between Afton and Schenectady, N.Y. The work is expected to be completed in 18 months at a cost of about \$1.5 million. The D&H will then have 60% of its main line track equipped and is planning an additional installation between Carbondale and Wilkes-Barre, Pa.

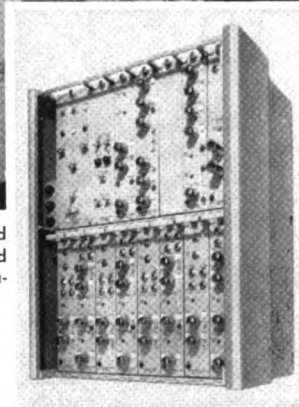
GREAT NORTHERN ordered equipment from General Railway Signal Co. for the installation of 99 miles of CTC between Brookston and Gunn and Brookston and Kelly Lake, Minn. From the double-stacked control panel at Superior, Wis., a 62-mile carrier link will transmit the codes to a converter location at Brookston. The GN has also ordered equipment from GRS for the installation of 76 miles of CTC between Dodson and Pacific Jct., Mont. A double-decked control machine will be located at Havre, Mont.

SIGNAL SECTION, AAR, has announced the election of the following officers for 1960: Chairman, V. O. Smeltzer, superintendent signals, system, Santa Fe; first vice-chairman, R. C. Steele, engineer of signals, Canadian Pacific; second vice-chairman, H. B. Garrett, signal engineer, Southern Pacific. L. B. Yarbrough, superintendent signals and communications of the Wabash, and A. J. Hendry, signal engineer of the Northern Pacific, have been elected territorial representatives on the Committee of Direction to serve through 1963. The complete personnel of the committee, in addition to the above, includes V. P. Shepardson, engineer signals and communications, Richmond, Fredericksburg & Potomac; F. Youngwerth, general superintendent communications

(Continued on page 44)



This Lynch B-500 Carrier System, a rush shipment arranged by Graybar, gave the Missouri Pacific urgently needed extra voice circuits over a distance of 345 miles. Installation and checkout time: 1 week.



**How the Missouri Pacific  
cut in extra voice circuits  
between St. Louis and Little Rock — FAST . . .**

## with a **LYNCH B-500,** **“O”-TYPE CARRIER SYSTEM**

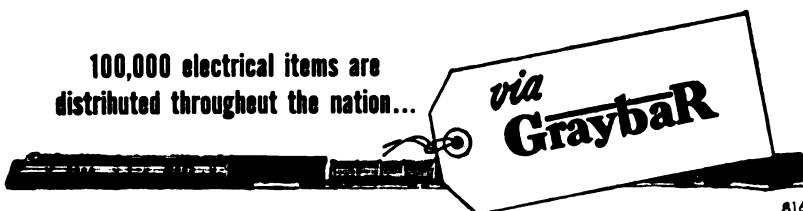
After a major extension of their lines recently, the Missouri Pacific Railroad needed—urgently—additional voice circuits between St. Louis and Little Rock. Graybar arranged a rush shipment of a Lynch B-500 4-Channel Carrier System, including three repeaters.

“High grade,” said Mr. R. A. Hendrie, Missouri Pacific’s General Superintendent of Communications. “Compact. Tie two wires to it and you are in business.”

Lynch B-500 Systems—available from Graybar—can provide up to 16 *additional* channels. Simple to install and maintain, the Lynch B-500 provides wide band voice frequency circuits, and requires a minimum of rack space. With it, speech plus duplex telegraph circuits can be applied over any voice channel.

For experienced help on communication needs of all types, and on-schedule deliveries of anything electrical, call your nearest Graybar office. *Graybar Electric Company, Inc., 420 Lexington Avenue, New York 17, N. Y.*

100,000 electrical items are  
distributed throughout the nation...



GRAYBAR ELECTRIC COMPANY, 420 LEXINGTON AVENUE, NEW YORK 17, N. Y.  
OFFICES AND WAREHOUSES IN OVER 130 PRINCIPAL CITIES

### NEWS BRIEFS

(Continued from page 42)

and signals, Erie; H. C. Stratton, general signal engineer, Union Pacific; R. E. Testerman, superintendent signals, St. Louis-San Francisco; E. B. Walkup, signal engineer, New Haven; W. W. Beard, assistant signal engineer, Baltimore & Ohio; and J. R. DePriest, superintendent communications and signals, Seaboard Air Line.

COMMUNICATIONS SECTION. AAR, has announced that the following have been elected members of the Committee of Direction, their terms expiring December 1963: P. A. Flanagan, superintendent of communications, Chesapeake & Ohio; J. A. Parkinson, general superintendent of communications and signals, Santa Fe; G. H. Pescud, general manager, communication department, Canadian Pacific; member at large, A. E. DeMattei, superintendent of communications, Southern Pacific. Other members of the committee include H. W. Burwell (chairman), communications engineer, Louisville & Nashville; G. R. Van Eaton (vice-chairman), superintendent communications, Union Pacific; J. L. Niesse, general superintendent of communications, New York Central System; C. O. Ellis, general superintendent communications and signals, Rock Island; J. R. White, general manager, communications department, Canadian National; S. W. Miller, superintendent communications, Nickel Plate; P. B. Burley, superintendent communications and electrical engineer, Illinois Central, J. H. Wallis, superintendent of communications, Baltimore & Ohio; and R. A. Hendrie, general superintendent communications, Missouri Pacific.

### Current Publications

A CABLE FAULT LOCATOR that is a completely self-contained unit weighs 13 lb. Operating on the bridge principle, it contains a transistorized 100-cycle tone source and a high gain tune amplifier for null detection. The null, or balance point, is attained by means of a single dial and is indicated by an easy-to-read meter. Step-by-step procedures are outlined in an operating manual, with detailed drawings showing connection points for each type of fault. *Whitney Blake Co., Dept. RSC, New Haven 14, Conn.*

NEW TRANSISTORIZED Progress Line two-way radio equipment is available from General Electric and is described in Bulletin ECR 666. The publication describes how its small size (8½ in. wide, 12 in. long and 4 in. high) makes possible a wide variety of positions in which the equipment can be

(Continued on page 46)

(Continued from page 44)

mounted in cars and trucks. Charts are included showing how the car's battery can be saved due to the low power required by the new unit, which uses only 0.04 amp on standby. The radio is available in 10, 30 and 75-watt ratings, 150-174 mc. *General Electric Communications Products Dept., RSC, Lynchburg, Va.*

ELECTRIC PLANT folder E-34 (12 pages) illustrates the complete line of standard Kohler electric plants, for stand-by or sole supply, in sizes ranging from 500 watts to 100,000 watts. *Kohler Co., Dept. RSC, Kohler, Wis.*

TECHNICAL DATA, helpful in selecting and using specific models of Exide constant-voltage, silicon-rectifier UR chargers for stationary-type batteries, is available in a series of data sheets. Including curves and statistics on charger performance at various electrical loads, they also contain diagrams and instructions for installing associated alarms and ground detection systems. *Exide Industrial Division, Electric Storage Battery Co., Rising Sun and Adams Aves., Philadelphia 20, Pa.*

RECENT EDUCATIONAL publications in the Rider Electronic Technology series include: A-C Circuit Analysis, No. 166-19; Magnetism and Electromagnetism, No. 166-20; Vacuum Tube Characteristics, No. 166-22; Gas Tubes, No. 166-24; Video Amplifiers, No. 166-28; R-F Amplifiers, No. 166-27; Low Frequency Amplifiers, No. 166-30; Low Frequency Amplifier Systems, No. 166-31; Phototubes, No. 166-33. Other recent Rider books are: Basic Electronics, Vol. 6, No. 170-6; Basic Audio, Vols. 1 and 2, Nos. 201-1, -2; Metallic Rectifiers and Crystal Diodes, No. 213; Basic Pulses, No. 216; R-L-C Components Handbook, No. 227; Shortwave Propagation, No. 231; and Principles of Transistor Circuits, No. 241. All of these books make extensive use of illustrations and would be suitable for use in training courses. *John F. Rider Publisher, Inc., 116 West 14th St., New York 11, N.Y.*

### Railroad Personnel

FRANK A. SCOTT, inspector of signal construction of the Maine Central, has been appointed signal supervisor at Portland, Me., succeeding the late Lewis M. Lentz.

FRED R. LACEY, foreman, telegraph and signals of the Long Island, has been named assistant engineer of signal-construction.

(Continued on page 48)

RAILWAY SIGNALING and COMMUNICATIONS

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## DATA TRANSMISSION and TELEGRAPH TERMINALS

**RFL TERMINAL EQUIPMENT**  
is being used with satisfaction by **Railroads, Pipe Lines, Telephone Companies, Toll Highways, and Public Utilities throughout the world.**

Radio Frequency Laboratories offers a complete line of models which are available with various features included to insure lowest possible cost to the customer for a given installation and application. Therefore, he is never penalized cost-wise for equipment features not desired or required.

The equipments are extremely versatile and, therefore, may be utilized in practically all data transmission and telegraph applications. A number of accessory equipments are available such as electronic and relay repeaters, party line keys, DC hybrids, etc., to insure system compatibility.

### MODEL 995



*Low cost frequency shift telegraph terminal including all essential controls, power supplies and utilizes printed circuit modules.*

The Model 995 is an all electronic terminal designed for data transmission and telegraph applications at speeds up to 100 wpm. The equipment comes complete with all necessary filters, equipment and loop power supplies and is available packaged as either a single or dual unit. Fourteen 100 wpm channels are available from 765/2975 cps.

### MODEL 1601C



*Data Transmission and Telegraph Terminal featuring plug-in frequency determining components, jack fields, and high speed circuitry.*

The Model 1601C retains all the features of the Model 995 and offers the additional advantages of a carrier and loop jack field accessible through the front cover and plug-in frequency determining components. Channel arrangements are available to permit operation of either eighteen 100 wpm, twenty-five 75 wpm, or six 200 wpm channels between 400 and 3300 cps.

### MODEL 1220



*Completely transistorized Terminal temperature stabilized for long life, reliable service at reduced power requirements.*

The Model 1220 retains the essential features of the Model 1601 but is a completely transistorized unit which may be operated directly from batteries with very low current drain or normal AC power facilities. The equipment is completely modular in design and accessory jack fields, power supplies, and front panels are available as required.



SEND FOR TECH. DATA

For additional information, including application data, write or phone DE 4-3100. Demonstrations available by local representatives.

WE CAN HELP YOU — Our Applications Department is ready to assist you in your control, telemetering or communications problem.



**Radio Frequency LABORATORIES, INC.**  
Boonton, New Jersey, U. S. A.

## NEWS BRIEFS

(Continued from page 46)

**SAMUEL ROSS**, signal supervisor of the Boston & Maine at Concord, N.H., has been appointed signal construction supervisor there.

**SILVAIN COLPAERT** has been appointed assistant signal engineer of the Duluth, Missabe & Iron Range; **CLARENCE E. SWANSON**, signal supervisor; and **LLOYD C. JOHNSON**, assistant signal supervisor.

**JOHN L. NIESSE**, general superintendent of communications, New York Central System, will retire January 31. Mr. Niesse is a native of Madison, Ind., and a graduate of Purdue University with a degree in electrical engineering. He began his career in 1916 with the Western Union Telegraph Co. In 1918, after serving in World War I, he entered the employ of the Cleveland, Cincinnati, Chicago & St. Louis (now New York Central) as a telegraph and telephone engineer, being promoted to superintendent telegraph of that road in 1926. In 1931 he was made assistant superintendent telegraph of the NYC; in 1945, assistant general superintendent telegraph and telephone, NYC System, and since 1947 has been general superintendent communications. Mr. Niesse is a past-chairman of the Communications Section, AAR. During 1945 he was on leave of absence for six months to serve as communications engineer for the Section.



John L. Niesse



D. E. Peterson

**D. E. PETERSON**, office engineer of the Northern Pacific, was appointed assistant signal engineer, lines east of Mandan, N.D., on December 1, 1959, succeeding the late Ernest O. Anderberg. Mr. Peterson holds a bachelor of arts degree in business administration from the College of Puget Sound at Tacoma, Wash. Prior to becoming office engineer he held the positions of general signal inspector, system planning engineer and general signal supervisor of the NP.

**SOUTHERN** has announced the following appointments in the communications department: **JOHN B. WRIGHT**, communications engineer at Washing-



James L. Robb



John J. Douglas



Karl M. Heimbach



Ernest O. Anderberg

ton, D.C., and **TESLA F. JOHNSON**, assistant computer engineer at Atlanta, Ga.

**COTTON BELT** communications department was placed under the jurisdiction of the chief engineer on January 1.

### Supply Trade News

**JAMES L. ROBB** has been elected president of Superior Cable Corp., succeeding **R. WALKER GEITNER**, who has become chairman of the board. Mr. Robb, an electrical engineer and graduate of George Washington University, has been with Superior Cable Corp. since its inception. He served successively as assistant to the president, chief engineer, vice-president and executive vice-president prior to assuming his new post.

**RICHARD W. GEANEY** has been appointed sales manager, Railroad Products Division, Servo Corp. of America, succeeding **W. P. MORRISON**, who has been advanced to division general manager. Mr. Geaney was previously railroad sales manager for General Cable Corp. He is a graduate of the U.S. Naval Academy and also studied at Columbia University.

**JOHN J. DOUGLAS** is the new president of Lenkurt Electric Co., which was recently purchased by General Telephone & Electronics Corp. Mr. Douglas was formerly vice-president and treasurer of Automatic Electric Co. and of other telephone equipment manufacturing and sales subsidiaries of General Telephone & Electronics.

**KARL N. HEIMBACH**, assistant export manager of General Railway Signal Co., has been appointed manager of export sales. Mr. Heimbach was born September 10, 1927, in Wilkensburg, Pa. He is a graduate of the University of Michigan with a B.S. degree in electrical engineering. His railroad experience included signal construction work for the Milwaukee and Chicago & North Western. In 1951 he joined the General Railway Signal Co., becoming resident engineer in Mexico for GRS on the Valle de Mexico project of the National Railways. In 1955 Mr. Heimbach was appointed sales engineer in New York

and in 1957 assistant export manager with office in Sao Paulo, Brazil. He returned to the main offices in Rochester N.Y., in July 1959, serving as assistant export manager until his recent appointment.

**EDWARD C. BRASS** has been named manager of the Cleveland office of The Okonite Co., succeeding **FRED J. DAHLEIDEN**, retired. **WALTER G. HUBER** has been appointed manager of the Detroit office, succeeding **MILTON A. BERGDAHL**, also retired.

**KENNETH H. ROBINSON, JR.** has joined the Andrew Corp. sales engineering staff, with headquarters in the eastern regional offices at Ridgewood, N.J.

### Obituary

**ERNEST O. ANDERBERG**, assistant signal engineer of the Northern Pacific, in charge of signal work on line east of Mandan, N.D., died November 24 after a brief illness. He was born in Staples, Minn., December 26, 1905. After graduation from high school in 1924 he entered the service of the Northern Pacific as a clerk, being transferred to the signal department in 1926. He was promoted to signal inspector in 1950, signal supervisor in 1952, general signal supervisor in 1955, and assistant signal engineer in June 1958.

**LEWIS M. LENTZ**, signal supervisor of the Maine Central, died at his home in Portland, Me., October 24.

### RAILROAD COMMUNICATIONS SALES ENGINEER

Excellent opportunity for mature, personable man with good background in railroad communications.

Large Eastern electronics firm is enlarging sales force to offer new, quality product line to American railroads. Can make very attractive offer to qualified man.

Sales experience preferred but not essential.

All inquiries handled in strictest confidence.

Send resume to Box #120, RAILWAY SIGNALING AND COMMUNICATIONS, 30 Church St., New York 7, N.Y.