

• ACI system developed by Sylvania Electronic Systems has been successfully field tested on the Boston & Maine. Over 4,000 Budd RDC cars and 34,000 hopper cars have been identified. The automatic railroad car identification system employs a device that vertically scans a Scotchlite label on the side of the car. The system meets the Railroad Action Group requirements of car labeling to cost no more than \$5 and a scanner complete with equipment to generate a Teletype code which will cost no more than \$5,000 in the estimated normal installation (RSC Feb. 1962, p. 15).

• SOUTH AFRICAN RAILWAYS will test the use of electronic track circuits in electrified territory (3,000 volts DC). SAR plans to apply 8 volts DC to the track, using different frequencies from 250 cps to 3,000 cps. Track circuit lengths are expected to be operative from 328 ft to 6,560 ft.

• SECTIONAL MEETINGS of the Communication & Signal Section, AAR, will be held May 16, 1963 at the Washington Hotel in Washington, D.C., and on April 24, 1963 at the Statler-Hilton Hotel in St. Louis, Mo. Chairman for the St. Louis meeting will be R. M. Laurenson, superintendent communications, St. Louis-San Francisco, and the sponsor will be L. B. Yarbrough, engineer signals and communications, Wabash. H. A. Hudson, assistant to vice-president-signal and electrical, Southern, will be chairman of the Washington meeting whose sponsor will be J. R. DePriest, superintendent communications and signals Seaboard Air Line.

• RAILROAD CONFERENCE to be held at the Atlanta Biltmore Hotel, Atlanta, Ga., April 25-26, will emphasize mass transportation in the space age. Sponsored by the Institute of Electrical and Electronics Engineers and the American Society of Mechanical Engineers, the following papers should be of interest to signal and communications men:

"A Family of Mass Transit Systems," by Paul S. Jones, Stanford Research Institute (IEEE paper, CPA 63-5000).



"Criteria for Automated Rail Tra it," by J. E. Wallace, General Elec (IEEE paper, CPA 63-5004).

"A Progress Report on Automation Railroad and Rapid Transit Vehicle by C. M. Hines and J. R. Pier, We inghouse Air Brake Co. (IEEE page CPA 63-5005).

• ILLINOIS CENTRAL replaces 6 wpm teletypewriter transmission train consist data with paper tapemagnetic tape sending equipment of erating at 1,500 wpm. About 3 train consist messages are sent da from 24 strategically located infor tion centers around the road's 6,5 mile system. These messages with code designation EDPC (electronic da processing center) are received at t road's general telegraph office at Co tral Station in Chicago.

Whenever one of the bank of Te type receivers gets the EDPC co signal on a message, it automatica routes the message to a receiving a perforator which punches a paper ta When approximately 35 consist me sages have been received, the pap tape reel is full. An attendant place this reel in the paper tape transm sion terminal of the Digitronics Cor Dial-o-verter equipment which tran mits the consist messages to the Ele tronic Data Processing Center at the accounting department's 63rd street office in Chicago. Messages are sent blocks of 800 to 1,000 characters. Aft each block, the equipment checks f accuracy of transmission. On the m ceiving end, the train consist message are received on magnetic tape, read for computer usage.

• LOUISVILLE & NASHVILLE wi install 89.5 miles of CTC at an approx mate cost of \$1.998,000 between Win chester and Corbin, Ky. Control will b from Latonia, Ky., 91 miles north of Winchester. A microwave system wit three repeater stations will handle controls and indications between the control machine at Latonia and Winchester About 49 miles of double track now in use will be removed as a result of CTC being installed on 58.9 miles of single track and 30.6 miles of double track The remaining line will have alternative sections of single and double track.

• CARGILL INC. has ordered portable remote control equipment from Union Switch & Signal for operating at unmanned locomotive at their grain handling facility at Port Allen, La.

• BELT RAILWAY OF CHICAGO has ordered model 32 car retarder conversion equipment from Union Switch & Signal for converting two existing 36-cylinder electro-pneumatic master

RAILWAY SIGNALING and COMMUNICATIONS

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rders at Clearing yard to model

ILLINOIS POWER CO. has ored inductive carrier equipment from ion Switch & Signal for the remote trol of a diesel-electric locomotive its Wood River, Ill. power station. : wayside transmitting equipment | be controlled from a lightweight table control unit carried by the optor.

NORFOLK & WESTERN ordered retarder conversion materials from ion Switch & Signal to convert an sting 24-cylinder electro-pneumatic retarder at Portsmouth, Ohio yard a model 32.

LONG ISLAND has ordered a Traf-Control Center and field signal upment from Union Switch & Signal consolidate the control of the Port ferson and Divide Area interlockings. e control machine will be at Hicksle, L.I., N.Y.

CANADIAN NATIONAL ordered e basic hotbox detector system from rvo Corp. of America which will we a recording tape unit.

GULF, MOBILE & OHIO ordered e basic hotbox detector system with recording tape unit from Servo Corp. America.

ATLANTIC COAST LINE has reived ICC approval to install a traffic ntrol system, modify an existing CTC stem and interlockings with changes the automatic train stop system bereen Meads and Lane, S.C., 45 miles. so involved will be removal of porms of second main track.

BALTIMORE & OHIO has received C approval to install a traffic control stem between St. Joe and Pine Jct., d., 135 miles in connection with reoval of portions of second main track d conversion of other portions to sidgs. Control will be from a machine Akron, Ohio.

NEW YORK CENTRAL has reived ICC approval to install a traffic ntrol system between Kalamazoo, ich., and Michigan City, Ind., 85 iles, in connection with removal of rtions of second main track and conrsion of other portions to sidings.

FCC has proposed to amend its les governing Railroad Radio Service <sup>2</sup>art 16, subpart H, Section 16.357) to rovide that the railroads may handle legrams for Western Union by radio those instances where, were it not m the presence of railroad radio facilities, telegraph service could not be provided. (RSC Jan., 1963, p.37; Mar., 1963, p.36)

## **Current Publications**

• ELECTRONICS DICTIONARY. This publication has definitions in the areas of DC and AC electricity, electrostatics, magnetism, motors, and covers the vacuum tube and transistor fields, including computers. Catalog No. 307, price \$3.50. John F. Rider Publishers, Inc. (CP-15)

• RELAYS. A 16-page catalog gives physical, electrical and operating characteristics of five major series of mercury-wetted-contact relays. Catalog 1998-A describes standard and special features, coil variations, and wiring options available for each series. Single or multiple-capsule versions are included for SPDT, 2PDT, 3PDT, and 4PDT operation. A polarized series is available for single-side-stable, bi-stable, or chopper use. Equations are provided for calculating resistor and capacity values in contact-protection networks. An easy-to-use resistance and capacitance nomograph is included. Automatic Electric Co. (CP-16)

ABC's of Radiotelephony covers basic principles; carrier signal generation; carrier modulation; carrier radiation; carrier reception and demodulation; and radiotelephone systems. Catalog No. ABT-1, price \$1.95. Howard W. Sams & Co., Inc. (CP-17)

• RADIO-CONTROL SYSTEMS. Fundamentals of Radio Control provides a complete analysis of industrial radio-control systems, including principles of transmission paths, basic control circuits, modulation and demodulation, and input and output devices. This new volume explains basic systems supplying analog and digital signals to solid-wire lines, AC and DC remote-control wired circuits, and closed-loop and servo systems. In addition, it includes discussion on both analog and digital modulation and demodulation equipment. Catalog No. FRC-1, price \$3.95. Howard W. Sams & Co., Inc. (CP-18)

• TRANSISTOR MANUAL. The SC-10 manual contains detailed technical data for 373 RCA semiconductor devices including transistors, silicon rectifiers, and tunnel diodes. The text section of the manual covers basic transistor theory, installation, and ap-(Please turn to page 41)

• RADIO COMMUNICATIONS.





### **VS BRIEFS**

inued from page 39)

tions. Separate chapters present ar information for silicon rectifiers semiconductor diodes. The seleccharts classify RCA semiconductor es by function and performance Price \$1.50. Radio Corp. of Amer-CP-19)

## **Railroad** Personnel

NTA FE. Dan M. Gaddis, assistengineer- signal department at ka, Kan., has been appointed cened traffic control engineer, with quarters at Los Angeles, Calif.

ILWAUKEE ROAD. Robert N. nick has been appointed assistant nunications engineer with headters at Chicago. An electrical engiing graduate of the University of innati and a registered Professional meer, Mr. Hettrick has done graduwork at Purdue University.

CANADIAN NATIONAL TELE-MMUNICATIONS. W. A. Osborne s been appointed lines and standards gineer, outside plant, at Toronto, nt.

BESSEMER & LAKE ERIE. M. L. annion, signal engineer, has been apinted chief industrial engineer suceding W. D. McNeilly, who has been pointed superintendent car departent. W. J. Young, supervisor signals, appointed engineer signals and commications succeeding Mr. Mannion SC Feb., 1961, p.34).





M. L. Mannion

S. J. Colcombe

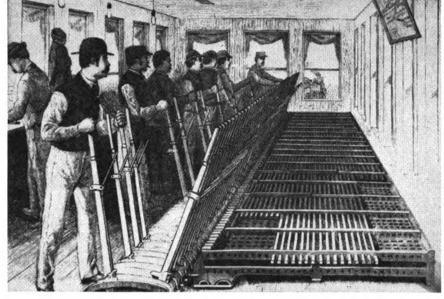
## **Supply Trade News**

UNION SWITCH & SIGNAL. S. J. plcombe has been appointed maner-transportation marketing, and arren T. O'Brien has been appointed ce-president, manufacturing.

A native of Pittsburgh, Pa., Mr. Dicombe joined US&S in the engiering department in 1946, following ree years in the U.S. Air Force. In

(Please turn to page 42)

Grand Central Station switching system, 1890 (Bettmann Archive)



TIME'S BEEN WORKING ON THE RAILROAD



Union Traffic Control Center (Westinghouse Air Brake Co.)

Microwave radio, high-speed facsimile, automatic retarder classification, automatic hotbox detection, electronic data processing, electronic yards, train automation. This is railroading today, compared to the 1890 switching scene shown above. Modern railroad pioneering is more brains than brawn, and electronics is the nerve center of much current progess.

In this challenging age of technology, there is a critical need for fast, dependable delivery of a vast variety of electronic components. To meet this need, there is an outstandingly reliable source: MILO, double decade pioneer of industrial electronic distribution.

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## **NEWS BRIEFS**

## (Continued from page 41)

1949, he was appointed project engineer, and 5 years later made lead project engineer. In 1958 he was appointed supervising engineer. Mr. Colcombe was appointed manager, custom engineering in February 1962 and later that year made assistant manager, transportation sales, the position he held at the time of his recent appointment.

• COPPERWELD STEEL CO. John F. Price appointed district manager at Memphis, Tenn., and W. R. Hightower has been appointed to replace Mr. Price in the southern sales territory with headquarters at Charlotte, N.C.

Mr. Price, a graduate of the University of North Carolina, joined Copperweld in 1959. He will manage a sales district that includes Arkansas, Louisiana, a portion of Mississippi, and Memphis.

Mr. Hightower, a graduate of Georgia Institute of Technology, will be responsible for sales in North and South Carolina, parts of Virginia and West Virginia, and portions of Kentucky and Tennessee.

• GENERAL ELECTRIC CO. for the communication products de-Richard P. Gifford appointed general partment, the position he held at the



John F. Price

W. R. Hightower

manager communication products department at Lynchburg, Va. Born in New York City, Mr. Gifford graduated from Harvard University in 1943. Following service in the U.S. Navy, spe-cializing in radar, he joined GE's transmitter department at Electronics Park, Syracuse, N.Y., after World War II. In 1947, he transferred to radio communications engineering design and development work, and 5 years later was appointed supervisor of systems engineering for mobile communications. Following an appointment as manager of mobile equipment, Mr. Cifford was promoted to manager of advance engineering for all communication equipment, including microwave. In 1958, he was named manager engineering

# This Was News 50 and 25 Years Ago

The Signal Engineer, April 1913. Southern installs AC upper quadrant automatic block signals on 92 miles of double track and 8 miles of single track between Denim and Charlotte, N.C. Two-mile blocks were decided upon as permitting a large increase in the capacity of the present trackage at a reasonable cost. This block length permits the installation of intermediate signals at any time in the future, when growth of traffic demands shorter blocks, without disturbing existing signals.-Western Maryland will install telephone train dispatching equipment on 80 miles of line between Hagerstown and Cumberland, Md. WE type 102 selector set containing type 50 selector will be installed and 23 waystations will be equipped with selective signaling and telephone apparatus.-Chesapeake & Ohio has ordered WE telephone train dispatching apparatus for installation on its Big Sandy division between Ashland and Elkhorn City, Ky., 135 miles.

Railway Signaling, April 1938. Baltimore & Ohio Chicago Terminal installs a new UR interlocking in which switches and signals in a route are lined up by operating two pushbuttons, signal indications are shown in the face of the buttons, and switch indications and track occupancy indications are shown in the track diagram. In periods of normal traffic, as many as 1,200 moves are made over the plant daily which consists of 6 crossovers, 4 single switches and 33 signals.-Analysis of the costs of stopping and starting trains, a study of proper train speeds at automatic interlocking plants, requisites for automatic highway-grade crossing gates, and studies of track circuit operation were outstanding features of the 44th annual convention of the Signal Section, AAR. Important discussion also covered the new signal inspection act that was approved Aug. 26, 1937. By this enactment, Section 26 of the Interstate Commerce Act, which previously referred principally to automatic train stop and train control devices, was amended to include the block signal system, interlocking, automatic train stop, train control and cab signal devices, and other similar appliances, methods and systems intended to promote the safety of railroad operation. RSC



Walter E. Noller

**Richard P. Gifford** 

time of his recent appointment.

 WALTER E. NOLLER, who form Noller Control Systems, Inc., in 196 is now active in the railway signali and communications field with the solid state interlocking control and i dication systems in service on the Pitt burgh & Lake Erie (RSC Mar., 196 p. 18). Mr. Noller is a graduate of t University of California with an M degree in electrical engineering. Pri to forming his own company, he has been associated with Bell Telephor Laboratories, Pacific Telephone & Tel graph Co., and had spent several year with Lynch Communications System Inc., serving in various engineering an product development positions.

• FANSTEEL METALLURGICA CORP. Warren B. Hayes, electe president. Mr. Hayes was formed vice-president of Thompson-Rame Woolridge, Inc.

• JAMES G. BIDDLE CO. Philip B Sellers, former vice-president in charg of sales, is elected president. The firm new address is Township Line an Jolly Roads, Plymouth Meeting, Pa.

• GENERAL SIGNAL CORP. Wi liam F. Woodbury is appointed comporate representative at 613 15th St. N.W., Washington, D.C.

• MOORE ASSOCIATES INC. William E. Chainey has been appointed chief applications engineer.

• SINCLAIR RADIO LABORATO RIES, INC. has moved to new expanded headquarters at 523 Fillmon avenue, Tonawanda, N.Y.

• LENKURT ELECTRIC CO., INC. Herbert E. Mundy has been appointed a sales engineer in the firm's western district.

• LYNCH COMMUNICATION SYSTEMS INC. W. Don Odell has been appointed an application engineer and will work on microwave, multiplex and control systems.

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