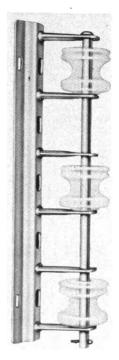
455-kc intermediate-frequency amplifier applications in transistorized portable radios. The 2N409 and 2N410 feature a power gain of 31.2 db at 455 kc in a common-emitter type of fixed circuit that sacrifices gain to provide stability and inter-changeability. The neutralizing network of this circuit is fixed. The amount of gain sacrificed is mini-mized by the close manufacturing controls on the transistor parameters, particularly the parameters responsible for feedback. These transistors are hermetically sealed, utilize a metal case, and are small in size. The 2N409 has a maximum diameter of 0.260 in. and a maximum seated length of 0.495 in.: while the 2N410 has a maximum diameter of 0.240 in. and a maximum length, excluding flexible leads, of 0.405 in. Write Dept. RSC, Semiconductor Division, Radio Corp. of America, Somerville, N.J.

## **Secondary Racks**

New electro-forged secondary racks, being offered by Line Material Industries, are two, three or four-wire types. They are available in either extended or non-extended back styles. L-M electro-forged racks are lightweight, yet sturdy



for supporting high dead-end and cantilever loads. Their oval-shaped legs provide broad non-abrasive surfaces for safe wire stringing. They are hot-dipped galvanized to resist corrosion. Write Dept. RSC, Line Material Industries, Milwaukee 1, Wis.

# **News Briefs**

B. W. MOLIS, superintendent signals & communications, Denver & Rio Grande Western, has been elected chairman of the Signal Section, AAR. First vice-chairman is V. P. SHEPARDSON, engineer signals & communications, Richmond, Fredericksburg & Potomac; and second vice-chairman is V. O. SMELT-ZER, superintendent signals, Atchison, Topeka & Santa Fe. Other members of the Committee of Direction include: A. L. ESSMAN, chief signal engineer, Chicago, Burlington & Quincy (past chairman); R. E. TESTERMAN, superintendent signals, St. Louis-San Francisco; E. P. STEPHENSON, system signal engineer, Canadian National; W. W. BEARD, assistant signal engineer, Baltimore & Ohio; J. R. DE PRIEST, superintendent communications & signals, Seaboard Air Line; G. B. BLATT, chief signal, electrical & communications engineer, Reading; C. T. MARAK, signal engineer, Missouri Pacific; H. A. SCOTT, chief signal engineer, system, New York Central; H. JENSEN, signal engineer, Chicago, Rock Island & Pacific.

CLINCHFIELD COAL COMPANY has placed an order with Union Switch & Signal-Division of Westinghouse Air Brake Company covering the installation of electro-pneumatic car retarders and direct acting switch layouts in its Moss No. 3 preparation plant near Corbo, Va. The installation will facilitate and control the movement of coal cars, by gravity, from a dumper where raw coal is unloaded, through load pockets where

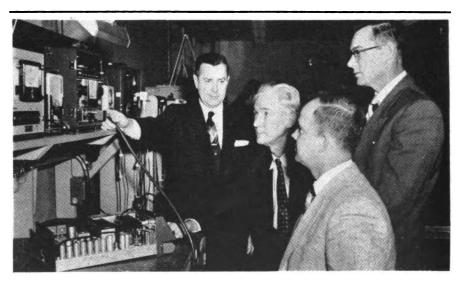
cleaned coal is loaded and into the shipping storage yard. Provision for handling excess empty cars on a by-pass track is included.

DL&W has also received ICC permission to install a traffic control system on single track between Lake Hopatcong, N.J. and Delaware Water Gap, Pa., 30 miles, in lieu of automatic block signaling on double track. Main track to be removed totals 24 miles, the remainder to be left in place for side tracks.

WABASH has applied to the ICC for permission to install a traffic control system between Delphi and Logansport, Ind., 19 miles, and to modify an existing 5-mile stretch of CTC through Delphi. A mechanical interlocking at a crossing with the Monon at Delphi is to be discontinued, and the entire 24 miles is to be controlled from a CTC machine at Peru.

ATCHISON, TOPEKA & SANTA FE has begun installation of a 60-mile microwave system between Argentine (Kansas City), Kan. and Toepka. The equipment, furnished by Motorola, Inc., consists of six channels of multiplex to provide two channels for telegraph and printer, and four channels for voice circuits. Two straight-through repeaters will be used, each having its own 100-ft. tower.

SOUTHERN PACIFIC will install radio equipment as follows: on 38 locomotives operating between Watsonville,



MOTOROLA, 1NC., has concluded a week-long service school designed strictly for railroad two-way radio technicians at their service training center in Chicago. Floyd McCall, vice-president of railroad sales, emphasized that extensive use of radio equipment and new developments in the railroad industry have intensified the need for skilled technicians. Motorola's purpose in holding this school, he

pointed out, was to help fill this need and also bring the latest servicing techniques and information to the technicians who maintain this railroad radio. Motorola's new developments in its 64-volt transistorized equipment, as well as its Main-Line communication system and standard two-way radio equipment, were features of the service school.

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Jct., and Los Angeles, Cal.; on 27 locomotives operating between Los Angeles, El Paso and Tucumcari; on 11 diesels used in San Francisco-San Jose commuter service; on 8 locomotives running between Roseville, Cal. and Eugene, Ore.; and on 8 locomotives operating between Oakland, Roseville and Schellville. Cabooses to be equipped are as follows: 73 running betaween Lordsburg, N.M. and Yuma, Ariz.; 33 operating between Yuma and Los Angeles; 17 running between El Paso and Lordsburg; 3 on the Oakland-Roseville-Schellville run; and one on the San Francisco-Los Angeles run. Car repairmen at Roseville are to have 18 walkie-talkies for use in their work, as are car inspectors at Ashland (3 walkietalkies). One walkie-talkie is to be used on a Fairmont Hy-Rail motor car.

CANADIAN PACIFIC proposes to install two-way radio on freight trains operating west of Calgary and Fort MacLeod, Alberta with a 30-watt set in locomotives and walkie-talkies on locomotives and cabooses. Estimated cost is \$408,000. A condition, however, is that the CPR will install the radio equipment provided it received permission to eliminate firemen on freight and yard diesels.

LEHIGH & HUDSON RIVER is installing Bendix two-way radio on 13 locomotives, 8 cabooses (walkie-talkies) and 5 wayside stations. The dispatcher will control the wayside stations via remote control over telephone wires enabling him to make radio calls directly to trains, and engine crews will be able to call him. The wayside stations are to be located along the 72-mile railroad so as to provide solid radio coverage for trains and engines.

DELAWARE, LACKAWANNA & WESTERN has received ICC approval to install a traffic control system between Paterson, N.J. and Lincoln Park, 7 miles, and modify existing traffic control system between Lincoln Park and Boonton, 5 miles. Automatic block signaling previously in service in this 12 miles on one main track is to be discontinued as this track is to be removed as a result of the CTC installation, and modification.

ST. LOUIS SOUTHWESTERN has placed an order with Union Switch & Signal-Division of Westinghouse Air Brake Company for the installation of car retarders and signaling equipment in its major classification terminal at Pine Bluff, Ark. The equipment will be installed on 28 tracks with provisions for ultimate control of a 40-track classification yard. Featured in the completely automatic yard will be Union Switch & Signal's VELAC automatic classification yard system. This includes automatic switching, electronic speed control and electronic computers which receive information in the form of weight, tangent and curved track rolling resistance and track fullness measurements. Also included in the order are hump, trimmer and repeater signals, direct acting switch

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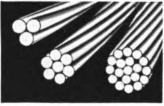


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PAGE has successfully combined two time-tested metals into a revolutionary new wire—ACCO ALUMINIZED—that has a ductile, protective coating of aluminum bonded to iron and steel wire by a hot-dip method. This product is covered by and is manufactured under processes covered by U.S. and foreign patents.

Now page offers acco aluminized Steel Strand for guy wire, ground wire and messenger wire applications. Can be used with Preformed Guy-Grip dead-ends made of acco aluminized Wire, or with galvanized pole hardware. Here is evidence of acco aluminized Steel Strand's superiority: salt spray tests conducted in strict accord-

ance with ASTM procedures show that, for equal thickness of coating, aluminized outlasts galvanized by more than 2 to 1.



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# Page Steel and Wire Division AMERICAN CHAIN & CABLE

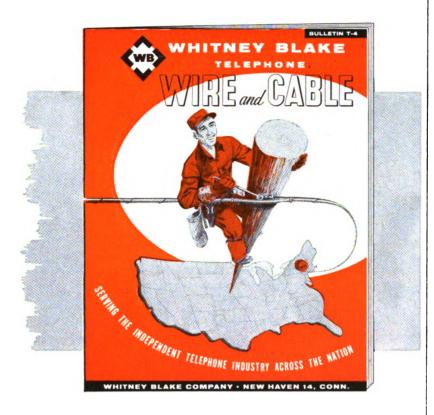
Monessen, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Bridgeport, Conn.



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layouts, shove indicators, yard track indicators, dragging equipment indicators, aroute switching machine and a retardescentrol machine.

CLINCHFIELD has received permission from the ICC to install 25 signals to the left of the track instead of over to the right of the track governed in traffic control system territory.

NEW YORK CENTRAL has applied to the ICC for permission to install a traffic control system on single track in lieu of automatic block signaling on double track between Jackson, Mich. and Porter, Ind., 165 miles. One main track is to be removed except for portions that are to be retained as signaled sidings. The control machine is to be at Jackson. Modifications are to be made to existing interlockings and to the automatic train stop system in this territory.

CHICAGO & NORTH WESTERN has applied to the ICC for permission to install a traffic control system on single track between Wyeville, Wis. and St. Paul, Minn., 173 miles, with the control machine at St. Paul. This is to replace automatic block signaling on double track, portions of one main track to be retained as signaled sidings.

#### PERSONAL: SUPPLY TRADE

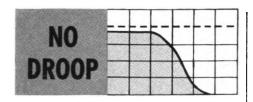
ROBERT C. BICKEL, regional manager mid-Atlantic states territory, Andrew Corp., has been appointed sales manager

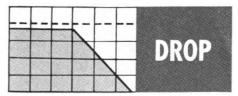


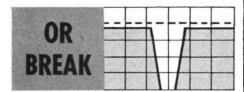
with headquarters in Chicago. A graduate of Illinois Institute of Technology, Mr. Bickel has been with Andrew for over 10 years serving in various engineering, field sales and administrative positions.

CHARLES R. WEBER has been appointed sales representative for Paper Manufacturers Co., Philadelphia, Pa., manufacturers of PERFECTION flat gummed paper and PERFECTION small roll paper products. Mr. Weber's territory comprises metropolitan New York, Massachusetts, Rhode Island and Connecticut. He has been associated with the paper industry since 1941, with time out from 1942 to 1945 to serve with the Merchant Marine. He joined a paper export firm

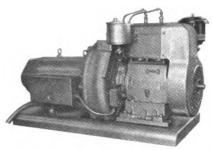
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and traveled for them extensively throughout the world. In 1951, Mr. Weber accepted a position with a mill in Florida as vice-president, where he



gained a well-rounded knowledge of the domestic paper market and a good insight into paper manufacture and converting. In April, 1956 he joined Paper Manufacturers Co., with the idea of eventually joining the sales force.

GENERAL ELECTRIC COMPANY has announced an expansion of its insulated wire and cable factory facilities at its Oakland, Calif. plant.

#### TRADE PUBLICATIONS

SOLDERLESS WIRING DEVICES, terminals and connectors are described in a newly revised catalog of Electrix Terminals & Connectors, Inc. Data and sizes of various devices are included to facilitate selection for every wiring job requirement. Free representative samples of ETC terminals and connectors are included with each catalog. Write Dept. RSC, Electrix Terminals & Connectors, Inc., 990 East 67th St., Cleveland 3, Ohio.

COPPER FOIL and its commercial applications are described in an 8-page illustrated booklet of American Brass Co. The publication describes the properties of Anaconda "Electro-Sheet" copper foil, including such electrical uses as electrostatic shielding and printed circuitry. Write for bulletin D-8-R, Dept. RSC, American Brass Co., Copper Foil Dept., Waterbury, Conn.

BATTERY-OPERATED TV was recently demonstrated to Swiss railway officials. The portable equipment operated off two 12-volt car batteries in series to show rail alignment to engineers watching a receiver inside a moving train. The equipment was developed by Pye Ltd., of Great Britain.

SIDE MOUNT GAIN ANTENNA in the 25-50 mc range is described in a new bulletin of Andrew Corp. This type 262 antenna can be mounted directly to structural members of the tower, allowing the

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top to be used for another antenna. The basic unit of this antenna is a center-fed, half-wave folded di-pole. Two of these units spaced one wavelength apart comprise the type 262 antenna, which has an average gain of 2.5 db over a dipole and a coverage pattern that is omnidirectional on conventional communications towers. Write for bulletin 17186, Dept. RSC, Andrew Corp., 363 East 75th St., Chicago 19, Ill.

TRANSPOSITION BRACKETS are the subject of a new brochure of Transandean Associates, Inc. Complete information on Case aluminum transposition brackets for carrier-circuit construction. plus their specially designed glass and rubber insulators are presented. Full instructions and diagrams on the recommended method of installing the Case span brackets, assembly and installation of cross-arm type bracket and a typical installation (straight line construction) are given. Write Dept. RSC, Transandean Associates Inc., 301 Main St. Orange N.J.

#### **PERSONAL**

ERNEST W. ANDERSON, signal and telephone engineer, Nashville, Chattanooga & St. Louis, at Nashville, has been appointed signal engineer, Louisville & Nashville with headquarters at Louisville,

as a result of the merger of the two railroads. A native of Sweden, Mr. Anderson graduated from KTS University and came to this country, beginning on the NC&STL as a signal draftsman in June, 1918.

L. RALPH THOMAS, electronics engineer, Atchison, Topeka & Santa Fe, has been appointed superintendent of com-



munications. Mr. Thomas first entered Santa Fe service as an apprentice operator at Needles, Cal. in 1928, later becoming operator and wire chief there. In 1939 he was appointed equipment supervisor at Topeka and two years later was promoted to telegraph engineer of system at Chicago. Since 1944 he has been electronics engineer.

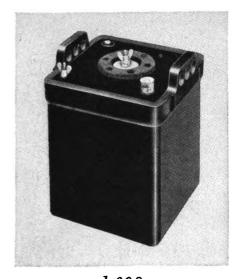
WALTER P. QUINTIN, JR., has been appointed manager of foreign trade operations for Union Switch & Signal—Division of Westinghouse Air Brake Company. Mr. Quintin was employed as an engineer in the train control section of Union Switch & Signal in 1948. In 1952 he was transferred to the centralized traf-



fic control section. Mr. Quintin was appointed to the position of sales engineer in January 1955 and was assigned to the New York district office, where he served in that capacity until his recent promotion. A native of West Chester, Pa., Mr. Quintin received his secondary education in Maryland, and was graduated from Ohio State University in 1948 with a



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sales representatives throughout the world



degree in electrical engineering. As an engineer with Union Switch & Signal, he participated in service engineering activities on several foreign and domestic signal installations.

A. H. BRUNING CO. of Chicago has been named as representative for Alpha Wire Corp., manufacturer of electronic wire, cable and insulation. The firm will represent Alpha in Illinois and eastern Wisconsin with AL BRUNING, BOB HEYDENBURG and MIKE BERMANN handling sales.

REGINALD W. HEARD has been promoted to acting assistant signal supervisor, Western Pacific, at Elko, Nev. to replace ROBERT B. RUSSELL who is transferred to Salt Lake City, Utah as assistant signal supervisor.

NICKEL PLATE ROAD announces the following appointments in the signal department: ERROL Q. HILL to signal shop foreman at Bellevue, Ohio; B. B. ALLEE to signal maintenance foreman at Frankfort, Ind.; and SAMUEL J. BENNETT to signal maintainer at Brewster, Ohio.

CECIL E. SPELL has been appointed signal and electrical supervisor, Southern, at Macon, Ga. Mr Spell, a native of Jessup, Ga., began his service with the Southern as a signalman in May, 1926, and advanced to signal foreman on the

CNO&TP in August of that year. He next served in the capacities of signal maintainer, signal foreman, assistant signal supervisor and assistant supervisor of construction at Atlanta, Ga., becoming supervisor of construction at Birmingham, Ala., in October, 1943. He was made assistant signal supervisor on the GS&F in October 1944, and advanced to S&E supervisor at Rome, Ga. in September 1949. He has been assistant S&E supervisor at Valdosta, Ga., since November 1949.

EDGAR C. LOGAN has been made assistant signal and electrical supervisor, Southern, at Inman Yard, Atlanta, Ga. Mr. Logan was born at Greens Springs, Ala. Employed by the railway as a signal helper in April 1942, he later served as assistant signalman, signalman, assistant signal maintainer, leading signalman, signal foreman and construction supervisor. Since April 1956, he has been assistant S&E supervisor at Princeton, Ind.

ERNEST E. STEPHENS has been promoted to assistant signal and electrical supervisor, Southern, at Valdosta, Ga. Born at Stearns, Ky., Mr. Stephens entered the service of the Southern as signal helper in October, 1942, and served successively as assistant signalman, signalman, leading signalman, signal foreman and as assistant draftsman. Since April 1956, he has been construction supervisor (S&E) at Cincinnati, Ohio.

HARRY D. ABERNATHY, who retired from the position of assistant signal engineer of the New York Central at Cleveland, in 1952, died in Cleveland December 15.

CHARLES EMERSON HANERT, office engineer-system, signal department, New York Central, with headquarters in Cleveland, died December 15 in Ann Arbor, Mich. Mr. Hanert entered the services of the Michigan Central (now



NYC) in June 1925 as a signal helper, and worked his way up to positions of chief draftsman, circuit engineer and chief signal inspector at Detroit. On June 1, 1957, he was transferred to Cleveland, as office engineer-system.



CLOSED CIRCUIT TELEVISION has been installed to remotely "grab" car initials and numbers at the entrances to the Southern Railway yard in Atlanta, Ga. Four TV cameras, including two standbys, are located at the west entrance to scan two inbound tracks. Four cameras at the east entrance, provide short, medium and long range focus on three inbound tracks. Two cameras at the north entrance, scan one incoming track.

Each camera scans a 15- to 20-ft. area of each passing car. They have automatic iris controls and automatic adapters which electronically adjust to compensate for changing light levels. The Radio Corporation of America, which furnished this TV equipment, states that these adapters assure TV pictures of constant brightness and contrast.

All 10 cameras are linked by closed-circuit to a master TV console, in the

yard office which is as much as four miles away. This console has four standard TV monitors and a custom-built master monitor unit. A control panel enables the clerk to connect any of the TV sets to circuits going to any of the cameras, and also to control the floodlights at the cameras for night time operation. About 1 min, before an inbound train reaches a camera location, it enters a track circuit which lights an indication lamp on the clerks panel.

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