

because **TEL-E-LECT**equipment reaches under...



and reaches down.



reaches up...



In less than five minutes you'll see your crew dig a hole and set a pole when they use Tel-E-Lect's work matched winchderrick-digger team. Your pole line crews really move down the right of way when they work with versatile Tel-E-Lect equipped line trucks! Mounted on a rugged 4-wheel drive chassis, Tel-E-Lect pole line construction and maintenance equipment can work almost anywhere extending its pole hole digger under low wires, up on hills, across ditches, or down in them—amazing "reachability"!

Tel-E-Lect products are designed and built to solve the problems your pole line crew meets on the job every day or "once in a lifetime"! Tel-E-Lect engineers are constantly solving "special" problems for customers by designing new units or modifying existing products for new applications.

Industry-tested and industry-accepted Tel-E-Lect products include truck bodies, standard and hydraulic derricks, pole hole diggers, winches, PTO's, transmissions, drive units and other specialized products to make line work a minimum effort—minimum cost operation.

With Tel-E-Lect your original investment and installation costs are lower and installation time is cut way down too! It's easy to mount any Tel-E-Lect product on a truck chassis because they're designed and delivered in a complete package that includes *all* the required parts. In addition, many of these products are designed in a series of kits to fit all popular make trucks commonly used for pole line work. Because they're individually designed, Tel-E-Lect kits can be installed quickly, by your local mechanic and expensive truck modifications are kept to a minimum!

Investigate Tel-E-Lect's complete team of pole line erection and maintenance equipment—there's a unit designed exactly for your job!



the computed capacity of the cable. For V-1 repeaters, the network will be 630 ohms plus 2.33 MF. The B.O. condensers the same as with 22A-1.

Then, monitoring on the repeater, observe various conversation and set the gain at the point low enough where there is no squeal with any station pushing his talking button, and the transmission sounds satisfactory.

Radio Test Set

Do you mount radio test equipment on the wall or in racks in your radio shops, rather than have the equipment sit on the shelves or the bench?

Special Work Bench

By P. A. FLANAGAN

Superintendent of Communications Chesapeake & Ohio Richmond, Va.

We have designed a work bench specifically for electronic and radio repair work. A section comprised of five compartments is mounted on the back of the work bench for radio test set mock-up panels. The radio test equipment, such as deviation and frequency monitor, radio frequency generator and audio-oscillator, is mounted in line on top of this section of compartments, the compartments being similar to a shelf extension the entire length of the bench.

This system allows the location of test equipment in the immediate vicinity of the test mock-up and the radio equipment being tested. Also with this arrangement, the working area of the bench is kept clear of all test equipment, allowing more freedom of movement of the unit under test.

Main-Track Leaving Signal

Where cost is a factor, do you use a dwarf for the main-track leaving signal at the end of a siding rather than throw the siding over to provide clearance for a high signal?

Use High Signals

By A. L. HERBERT

Signal Engineer Western Pacific San Francisco, Cal.

Our practice is to install a high signal for main track leaving signals at the end of sidings. High signals are used exclusively on high speed track for all absolute "stop and stay" signals in order that they may be as prominently displayed as possible in view of their importance in the operation of the traffic control system. We use the high, 7 ft. 6 in., dwarf signal for all absolute siding leaving signals, except those between tracks.

We encounter the usual difficul-ties with dwarf signals caused by restricted visibility due to obstructions, such as drifted snow, standing trains, vehicles and pedestrians at road crossings in populated areas, as well as restrictions due to curvature and grade. Then, too, the dwarf signals are more susceptible to damage due to objects falling from pass-

ing trains, brake riggings down and malicious damage by passers-by in populated areas. The aspect displayed by the dwarf signals are no more restrictive than those displayed by high signals on this railroad. However, we prefer not to use them on high speed track.

Signaling Exhibitors

The manufacturers named below are exhibiting their products at an exhibition held in conjunction with the annual meeting of the Signal Section, A.A.R., September 20, 21 and 22, at the Conrad Hilton Hotel.

THROUGHOUT THE WORLD

1.0 amp, continuous

exchange batteries, etc.

2.5 amp. max. intermittent

in Chicago. This exhibition is under the auspices of the Signal Appli-ances Association of which E. F. Galvin, manager of railroad sales, Simplex Wire & Cable Company, is chairman,



E. F. Galvin

- American Fabricators, Inc., Kittanning, Pa.
- Anaconda Wire & Cable Co., N. Y. Biddle, Jas. G. Co., Philadelphia, Pa.
- Buckeye Telephone & Supply Co., Columbus, Ohio
- Corning Glass. Works, Corning, N. Y.
- Erico Products, Inc., Cleveland, Ohio
- Exide Div., Electric Storage Battery Co., Philadelphia, Pa.
- Federal Telephone & Radio Co., Clifton, N. J.
- General Electric Co., Schenectady, N. Y.
- Line Materials Co., Milwaukee, Wis.
- Motorola Communications & Equipment, Inc., Chicago, Ill.
- National Carbon Co., N. Y.
- National Electric Products Co., Pittsburgh, Pa.
- National Telephone Supply Co., Cleveland, Ohio
- Nife, Inc., Copiague, L. I., N. Y.
- Pocketlist of Railroad Officials, N. Y.
- Permacrete Products Corp., Columbus, Ohio
- Rail Joint Co., New York, N.Y.
- The Rails Co., Hoboken, N. J.
- Ramapo-Ajax Div., American Brake Shoe Co., Chicago, Ill.
- Rust-Oleum Corp., Evanston, Ill.
- Spaulding Fibre Co., Chicago, Ill.
- Transport Products Corp., Louis-ville, Ky. United States Steel Co. (American
- Steel & Wire), Pittsburgh, Pa.
- Western Railroad Supply Co., Chicago, Ill.



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Argentina-LE CARBONE LORRAINE, Erezcano 3051/53 Buenos Aires, Argentina Belgium-LE CARBONE S.A.B., 124 Bd. du Jubilee, Brussels, Belgium Brazil—CARBONO LORENA S.A.—Rua Barao, Itapetininga 273 Sao Paulo, Brazil Canada-CIPEL (CANADA) LIMITED-Valleyfield, Quebec, Canada England-LE CARBONE (GREAT BRITAIN) LTD.-Portslade, England France-CIPEL, Argenteuil (S&O) France Germany-CARBONE A.G., Bonames, Frankfurt/Main, Germany Italy-SOCIETA "PILE CARBONIO," via Rasori 20, Milan, Italy Spain-CIPEL, Juan Bravo, Madrid, Spain

Sweden-SVENSKA A.B. LE CARBONE, Sundbyberg, Sweden U.S.A.-THE CARBONE CORPORATION, Boonton, N. J.

sales representatives throughout the world



RAILWAY SIGNALING and COMMUNICATIONS