

Cantilever bridge

Nickel Plate Installs 169 Miles of Color-light Automatics

*A-C. floating system with primary cells for track at cut-sections
—Unique polarized A. P. B. control*

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THE New York, Chicago & St. Louis has completed the installation of automatic signals between Conneaut, Ohio, and Arcadia, a distance of 169 miles, of which 117 miles is double track and 52 miles is single track. A total of 272 Union Switch & Signal Company Style R-2 color-light signals are included in the installation.

At several points where semaphore signals had been previously installed and at one interlocking plant, the semaphores were replaced with color-lights. Color-light signals were in service at five plants and at three plants where the semaphores were comparatively new, they were continued in service. In addition to adapting the automatic circuits to nine interlocking plants, provision had to be made also at 56 highways for automatic protection, 47 flasher lights, 6 wig-wag and 3 bells being used.

A-c. Floating System for Power

Line wires are placed on the bottom arm of the existing Western Union line, the wire stringing work being done by Western Union forces. Power is trans-

mitted at 440-volt, 60-cycle, single-phase on two No. 6 w.p. copper wires, attached to porcelain insulators on the two field pins. Control circuits are No. 10 w.p. copper attached to Western Union standard glass insulators. All wires are terminated on Ohio Brass Company dead-end strain insulators. Power is purchased from commercial power companies, the average distance between supply points being about 12 miles. At each point of supply a recording voltmeter is installed which provides a continuous record of the voltage. The voltage is stepped down from 440 to 110 through a Type-M transformer located on the crossarm so that no voltage higher than 110 is taken into the instrument case. Fused porcelain plug cut-outs are installed on the crossarm at each transformer.

The rails, which are all 90-lb. R. A. or 110-lb. R. E., are bonded partly with Armco wires and partly with Duplex Copperweld bonds. Continuous insulated joints are used throughout the installation. Kerite steel taped cable is used for all wire runs except shunt wires from rail to switch boxes where No. 9 Kerite

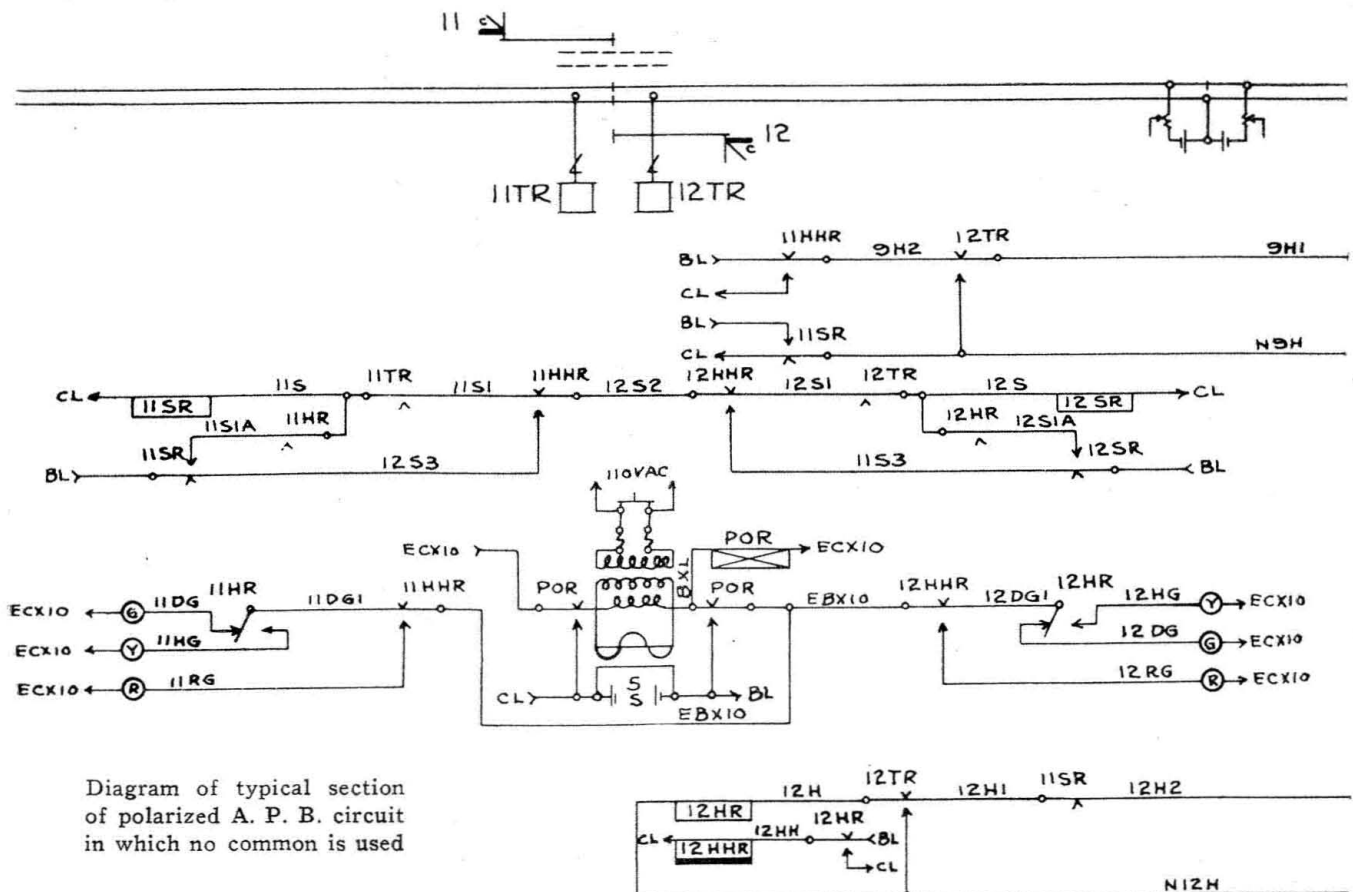


Diagram of typical section of polarized A. P. B. circuit in which no common is used

