



What's the Answer?

An open forum for the discussion of maintenance and construction problems encountered in the signaling field. *Railway Signaling* solicits the co-operation of its readers both in submitting and answering any questions of interest.

TO BE ANSWERED IN A SUBSEQUENT ISSUE

- (1) Do you use color-light signals for train order purposes? If so, how is the signal controlled and what check is made to determine whether the proper indication is being displayed?
- (2) What are the relative merits of the plain spark gap arrester, and the valve type arrester as applied to 440 and 550-volt signaling power lines?
- (3) Would it be advisable to equip all signal relays with shock absorbing springs? Do you believe such cushion springs necessary where back contacts of relays are used?

lieve such cushion springs necessary where back contacts of relays are used?

(4) In the a-c. relay circuit shown below, a reader desires to know what the instantaneous polarities would be at the transformers and relays and along the common wire?

(5) What are the relative merits of a three-phase and single-phase 440 or 550-volt signal power line?

Further Data—Question 4

In the first circuit diagram below, Fig. 1, there is a relay and transformer at each end of the three-wire circuit. In the lower diagram, Fig. 2, two transformers are connected in series at one end and two a-c. relays in series at the other end. This latter circuit is similar to an ordinary three-wire, single-phase distribution line.

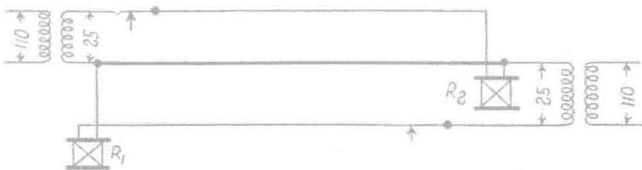


Fig. 1—Relay circuit in which it is desired to know the instantaneous polarities at the transformers and relays

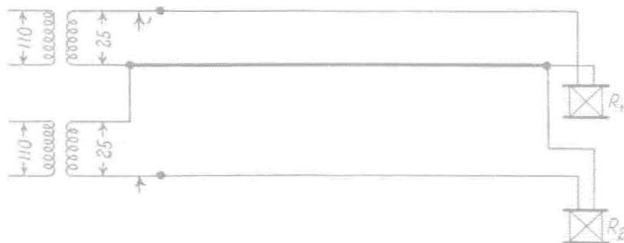


Fig. 2—Three-wire a-c. relay circuit in which it is desired to know the instantaneous polarities at each end of the circuit and in the common wire

Emergency Release Circuits

“Do you provide an emergency release on approach or stick locking of signal levers? If so, what means do you use to introduce a time element?”

Prefers Clock-Work Releases for Most Circuits Because of Length of Time Required Before Locking May Be Released

By C. A. DUNHAM

Superintendent of Signals, Great Northern, St. Paul, Minn.

WE have always used and will continue to use an approach and route locking circuit under our heaviest traffic. Such a circuit operates by the presence of a train on the approach sections; that is, a train approaching an interlocking plant with distant signals indicating the position of the home signal will automatically lock the home signal lever at any time it is reversed after the train comes in sight of the distant signal. The “emergency” release for such a circuit is preferably a hand-operated screw release with an adjustable time element. This instrument will only release the locking circuit if the home signal is in the stop position and the distant signal in the caution position. At interlocking plants where the traffic is not so heavy we have always used the stick relay circuit for approach locking and provide the same type of “emergency” release.

As stated above, we prefer the hand-operated release because it serves the purpose for which the time release

