

What's the Answer?

Can You Answer These Questions?

- How often do you check or change out tubes used in amplifiers in service 24 hours a day (such as used on dispatcher's and monitor's positions)?
- On duplex circuits, who does the balancing—operator, wire chief or maintainer? Why?
- How is the maintenance of hot box detectors and associated equipment handled on your railroad?
- Have you had any experience with an electric switch machine creeping away from its full throw position? In the event that an electric switch machine should creep **after** a signal over it had been cleared, what provision is made for restoring it to the full throw position?

Please send us your answers to these questions. We pay for all answers when they are published. Answers will be published anonymously if requested. Write Editor, Railway Signaling and Communications, 30 Church St., New York 7, N. Y. Also please send us questions for this department.

Warning Devices

Do you use any type of supplemental warning device, visible or audible, in the approach to movable bridges? What is your philosophy concerning the use of such a device?

Crew Might Depend on Device

H. W. DUNN, Signal and Electrical Engineer, Chicago & Western Indiana, Chicago, Ill.

We do not use any supplemental warning devices in conjunction with our signal system for movable bridges or other extra hazardous locations. Of course, I might ask what is meant by "extra hazardous" locations. To me, one interlocking plant is either as hazardous or safe as another, and a movable bridge is not any more hazardous than an interlocking.

If a train crew chooses to ignore and run by a home signal in an interlocking plant, just as many lives could be lost and just as much damage could be done, if not more, than if they run by a signal into an open bridge.

In my opinion, a supplemental warning device would only tend to make the crew more dependent on the supplemental device and less attention would be given the

primary governing device, the signal.

Editor's Note: *The phrase "extra-hazardous" was perhaps not the best term, but it was meant to denote locations where sections of track were physically removed. The thought is that running past a stop signal MAY not cause an accident, but if a section of track is removed, a derailment is guaranteed. Similarly, many roads have removed derails at interlockings for the reason that they caused more derailments than they prevented accidents.*

No Need For Supplements

E. B. WALKUP, Signal Engineer, New York, New Haven & Hartford, New Haven, Conn.

There are no supplemental warning devices, visible or audible, in the approach to movable bridges on the New Haven, except in the state of Massachusetts, where we have mechanical gates that must be lowered before bridges can be opened.

As to my opinion concerning such devices: I am not in favor of adding supplemental devices. I think the standard signal systems, derails, and locking devices provided for bridges are sufficient for maximum safety. If rules and regulations are adhered to by train crews and operators controlling the signals and bridges, no difficulty would be encountered.

Snow Shields

Is snow adherence to signal roundels a problem on your railroad? If so, how do you overcome it? If you use snow shields, do you leave them on the year around?

Use Heated Lens

E. A. THOMPSON, Assistant to Signal Engineer, Western Pacific, San Francisco, Calif.

Generally each winter we experience some difficulty with snow adhering to signal roundels which on occasion obscures the view of the signals to such an extent as to delay trains. A few years back we installed special heated lenses at three test points in extremely heavy snow territory. The lenses have proved satisfactory, but due to the number of signals involved and the limited amount of power available through the remote desert areas of northern Nevada and Utah, we have not considered it feasible to install the heated lenses out of face.

We have not attempted to use snow shields since in most cases the prevailing

winds drift the snow in such a manner that the shield would be ineffective.

Island Track Circuit

What has been, or can be done to overcome the problem of failures of a center-track ("island") circuit subject to salt and similar crossing ballast conditions at an automatic highway crossing protection installation?

Repeated Checking

A. L. ESSMAN, Chief Signal Engineer, Burlington Lines, Chicago, Ill.

Simply stated, the answer to the problem would be to determine the minimum ballast resistance during the worst condition and adjust the track circuit accordingly.

The ballast resistance of a track circuit is constantly changing and it must be understood that after repeated salting of the island section year after year, that the track section is liable to get worse, especially if more salt is applied during one season than another. This necessitates watching to determine that proper adjustments are maintained. This, however, is no different from other track circuits in which there are some construction projects involving grading wherein the ballast will become dirty. It is a problem of repeated checking so as to know that the resistance applied to the circuit will permit a current flow sufficient to operate the relay over and above that which is lost through ballast leakage.

Automatic OS

Do you have any type of automatic OS device in use in non-CTC territory? What is it, how does it work?

Have Three Types

R. M. LAURENSEN, Superintendent Communications, St. Louis-San Francisco, Springfield, Mo.

The Frisco has installed OS devices at a number of places, all of which have been put together by our own forces and are relatively simple.

One type is used in connection with a dispatcher's telephone line, and installed at highway crossing locations. A small buzzer is connected in series with one winding of a No. 29 induction coil, and in series with a contact on the track relay, and on the flasher relay. The secondary of the No. 29 coil bridges across the tele-