

er so that the maintainer will not break into a circuit after a line-up has been established.

With careful planning of the work to be taken care of each day, it will not be necessary to break into a line-up except under rare circumstances. By securing authority from the dispatcher to work on a given switch or OS circuit for a given length of time, the possibility that the dispatcher will receive confusing OS signals is eliminated. Of course, it should be understood that in this type of C.T.C. no signals are transmitted to the control machine unless a line-up has been established and the machine levers are in position to receive same.

The normal amount of testing within each OS circuit should not exceed 10 minutes daily. This includes the adjusting and testing of switch machines and the routine track-voltage and current tests. It does not include oiling or cleaning of switches and machines, nor the routine work on other circuits, batteries, lamps, etc., located at or near the OS track. Ordinary tests, however, may be made on track or other circuits, without in any way affecting the line-up or the signals received by the dispatcher, excepting that care must be taken when making voltage tests in "Z" and "Z.C.L." or control wires, while a train is passing through the OS circuit, as the voltmeter will serve to close the circuit and transmit an improper indication to the machine.

If care is observed to avoid opening the circuit in advance of a train movement, if close co-operation between dispatcher and maintainer is practiced, and if the maintainer is careful about observing the position of the Z or control relay while working in signal cases there will be no likelihood of improper indications being transmitted to the dispatcher.

R. D. Moore, signal engineer, Southern Pacific, replies as follows: "We do not provide any special equipment; however, we do require the maintainer to get in telephone communication with the dispatcher before he tests O.S. track circuits or works on switches."

Approach-Lighting

"What are the advantages of approach-lighting automatic signals from headblock to headblock, as compared with approach-lighting from opposing signal to opposing signal?"

Avoid Unnecessary Lighting

J. H. Oppelt

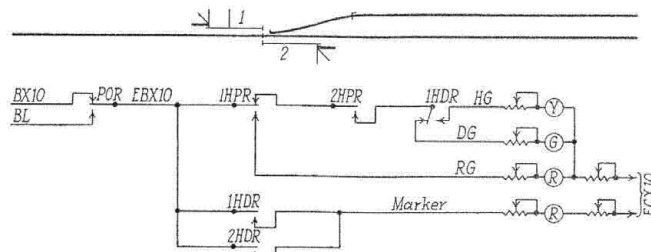
Signal Engineer, New York, Chicago & St. Louis, Cleveland, Ohio

There is no advantage to be gained by approach lighting all signals from headblock to headblock unless the indications on the intermediate signals are desired for the benefit of roadway forces.

There is some advantage in having the opposing headblock signal lighted from the time a train passes the headblock signal in the direction of traffic. Frequently there is a telegraph office nearby from which the operator can see the headblock signal and furnish advance information to the dispatcher. It is also good information to a train waiting on the passing siding.

We have approach lighting so arranged that it is effective from signal to signal in the usual manner and in addition the opposing headblock signal is lighted from the time the train passes the headblock in the direction

of traffic. With this scheme there is no unnecessary lighting of intermediate signals. The accompanying



Sketch showing approach lighting of absolute signals at ends of passing sidings

sketch shows the circuit scheme used for lighting the opposing headblock signal.

A Controversial Subject

C. J. Kelloway

Superintendent of Signals, Atlantic Coast Line, Wilmington, N. C.

The question is a rather broad one, as there are various practices in approach-lighting. Two of these practices are: (1) To approach-light the signals in A.P.B. territory from head-block to head-block, lighting all opposing signals as the train passes them. (2) To approach-light each signal as the train approaches it, at the same time lighting the opposing signal as the train passes it.

Either of these methods is much more expensive from an operating standpoint than the practice on this road, which is to approach-light only the signal governing the movement of the train. Using this method as the basis for a reply to the inquiry, it is my opinion that the interest and depreciation on the cost of the additional line wires, attachments, cable, relays, etc., would probably offset the small saving in battery.

Field Mice

"What is the best method to use in order to keep field mice out of relay cases and instrument housings?"

Kills Them With Rat Poison

Everett B. Luse

Signal Maintainer, Great Northern, Wilson Creek, Wash.

When I first notice that field mice are getting into relay cases I close all the places through which a mouse could enter, with asphaltum petroleum, a black tarry material. Then I poison some wheat with strychnine or rat poison and place a portion of this inside of the relay case in such a place that it will not be in the way or in sight. I leave this poisoned wheat in the case and at times I look at the container, and if there happens to be very much gone I fill it up again. I have had only one case where a mouse died inside the relay case, and after the first year of feeding them with the poisoned wheat, I have had no more trouble with mice.

Uses Plaster of Paris

Harold W. Link

Signal Maintainer, Pere Marquette, Plymouth, Mich.

After having considerable trouble with field mice getting into relay cases, etc., I have found a good way to