What's the Answer?

Track Circuits

At automatic highway crossing protection installations involving several slow speed tracks with island track circuits only, do you connect these tracks in series so that only one track feed and relay need be used? What are the arguments for or against this practice?

Series Circuits More Economical

P. A. BRADY, Circuit Engineer, Erie, Cleveland, Ohio

On the Erie, at an installation of this type where there are side tracks involved, or a branch line, and only slow speed starts are required, we would connect up to three separate tracks in series so only one track feed and relay would be used. If more than three tracks were involved, additional circuits would be handled in the same manner.

This method of installing island track circuits has been satisfactory and the series track circuit can be adjusted for proper operation over dirty or rusty rail which might be encountered at locations of this type, and is also more economical than using a separate track feed and relay for each track.

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 Lens Heaters

A. C. JACOBSEN, Assistant Signal Engineer, Southern Pacific, San Francisco, Calif.

We have obtained excellent results by installing lens heaters in signals exposed to wet driven snow. The heater is installed on the inside circumference of the inclined cover glass in such a manner as to obtain maximum contact with the glass and keep the element near the outer circumference, to avoid interfering with the signal aspect. Heating element must be of relatively low wattage and well below the range of incandescence.

A number of such heating elements have been built with a rating of approximately 20 watts. These have been in service in searchlight signals for over two winters and we have had no report of snow adhering to these lenses.

Heaters are constructed by using 80 in. of No. 38 alloy, 45 AWG wire wrapped over a braided fiber glass core with a resistance of 120 ohms per ft. The heating element is inserted in a reinforced silicone rubber sleeve, type S-8, Class H, dark gray in color, size No. 10 with an 0.015-in. wall thickness. Suitable leads are spliced to the element and the element clipped in place, and given four turns around the outer circumference of the lens. The element is held in place by four bronze clips made from 0.01-in. bronze. These clips are inserted between the glass and the rubber gasket with one end bent around the heating element loops. A power consumption of approximately 20 watts is obtained at 110 volts ac. No portion of the element reaches a temperature so high that one cannot hold his hand on the loops. These heaters are connected to the power

ervice during the winter months only nd disconnected for the rest of the ear when not needed.

Phantom Circuit

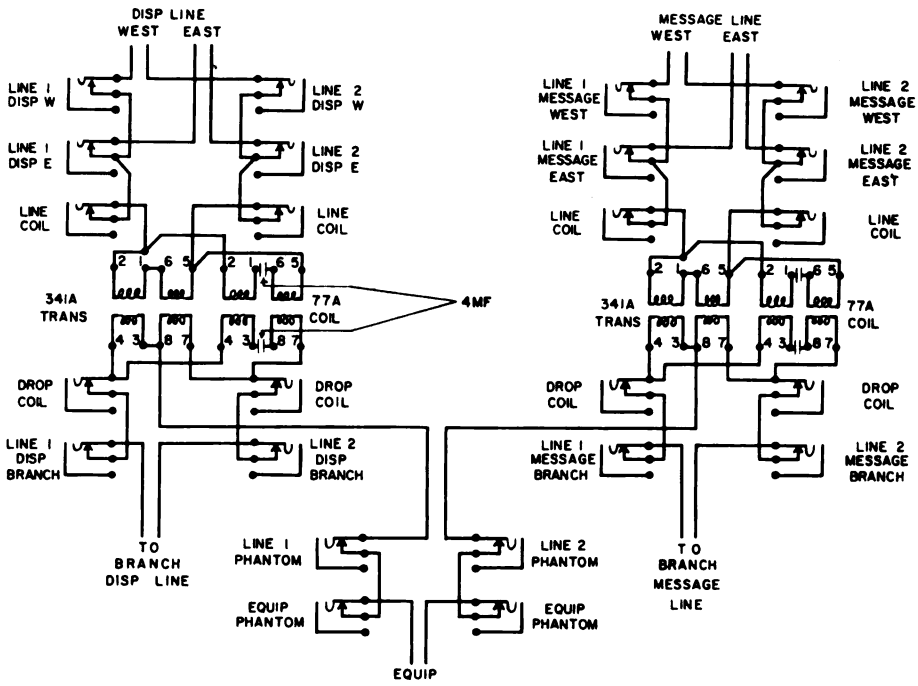
A branch line message and dispatch ircuit is to be connected at approxiately the mid-point of a 100-mile ong mainline message and dispatch ircuit. Selector ringing (3½ cycle) is o be used on main and branch lines of oth circuits. The branch line circuits ave a phantom circuit, but the mainine message and dispatch circuits do ot. How would you connect the coil, ransformer and condenser at the junction point?

Circuit Good for Many Selectors

ANONYMOUS

The sketch shows a method of connecting these circuits. The 341A transformer is used to take advantage of the step-up ratio for 3½-cycle signaling and the 77A coil is used as a voice bypass around the 341, which is not satisfactory for voice transmission.

There are a number of ways this circuit could be set up and work satisfactorily, but this arrangement should do a good job, particularly if the circuits are loaded with a number of selectors and the 3½-cycle signaling is at all marginal.



Our anonymous correspondent suggests this arrangement for branching a phantom circuit.

Teletype Cleaning

What is your procedure for cleaning teletypewriter equipment?

Cleaned at Central Depot

J. R. WHITE, General Manager, Canadian National Telegraphs, Toronto, Ont.

In Canadian National Telegraphs, central maintenance depots have been