SIGNALING AND COMMUNICATIONS

What's the Answer?

Telephone Boxes

Do you find it desirable to padlock telephone pole boxes—in terminal areas—along the right of way? Why or why not?

Lock on Road, Not in Yards

J. M. HESSER, Assistant Superintendent Signals and Communications, Norfolk & Western, Roanoke, Va.

On the Norfolk & Western we generally do not padlock outdoor telephone boxes in yard areas where the telephones are used frequently and where they are not readily accessible to the public. Our reasoning is that at frequently used telephones there is an appreciable time saving when employees do not have to use keys. This is particularly true in cold weather when gloves and heavy clothing are worn.

Telephones along the line of road, and telephones in yard or terminal areas that are used infrequently or are reasonably accessible to the public, are kept locked. This prevents theft and vandalism and keeps unauthorized persons from attempting to use the phones. We find also that this practice decreases damage from weather and insects, inasmuch as doors are less likely to be left open when padlocks are provided.

Route Signaling

Do you provide a signal indication to tell the engineer where he is going as well as, or instead of, how fast to go, either in traffic control territory or interlockings? What is the philosophy behind your answer?

Two Special Indications

W. E. PRINCE, JR., Engineer, Signals and Communications, Clinchfield, Erwin, Tenn.

On the Clinchfield we have two such indications. The first is at an interchange point not at a controlled location. The interchange is made over a hand throw switch into a single-end spur. The switch is just north of a short tunnel and southbound engine crews cannot see the positions of the switch or a hand signal when set-off is ready to back in. We have provided a style HC-9 indicator on the engineer's side at the south end of the tunnel, which is lighted when the switch is in the

(*Continued on page 40*)

WHAT'S THE ANSWER?

(*Continued from page 38*)

reverse position. The indication received is a white "R" on a black background.

At the other point there is a power switch at the entrance to a terminal yard. Since there are no signals beyond the entering signals, we allow a permissive signal (Rule 290) on the main line as well as the passing track. To give the engineer information as to which track he will enter, we provide an indicator above the regular aspect which is a white "R" on a black background, which lights when the switch is in the reverse position and locked.

Modified Speed Signaling

H. B. GARRETT, Signal Engineer, Southern Pacific, San Francisco, Calif.

Practice on the Southern Pacific is to provide a signal indication to inform the engineer where he is going, i.e., route signal is displayed when taking a diverging route. How fast this diverging route can be taken is designated by timetable instructions concerning the maximum speed permitted through turnouts. Generally speaking, this system is used both in traffic control and interlocking territories.

Historically, the signaling on Southern Pacific has been "route signaling" instead of "speed signaling." However, due to recent developments in traffic control and the need for conveying information by signal indications, we have recently employed what might be termed modified speed control signaling. We feel there are decided advantages to be gained in displaying signal indication that keeps the engineer currently informed as to the route to be taken, rather than depending entirely upon signal indications to advise him the maximum speed permitted.

Radio Conversion

What procedure are you following in converting your radio receivers to split channel operation? Are you doing it by division, as receivers need repair, or how?

Four Year Plan

ALLEN H. FOX, Engineer Communications, Great Northern, St. Paul, Minn.

We have set up a plan to cover conversion of present sets over a four-year period. This means working them over as they come into the shop for repairs or FCC check. Getting six to eight each week over the system will enable us to keep the program up to date.

Convert and Change Frequency

G. D. McDONALD, Superintendent of Communications, Gulf, Mobile & Ohio, Mobile, Ala.

The Gulf, Mobile & Ohio had to change frequency as well as convert to narrow band. Since the frequency conversion would have to be completed by 1963, we decided to make the frequency change at the same time we converted to split channel operation, due to the obvious economy in making it one operation rather than two.

The procedure used to accomplish this conversion was to convert 60 radio transmitters and 60 radio receivers to split channel and new frequency before making any changes in the mobile units or base stations. These 60 units were an accumulation of all the spares over the system and a number of radio units removed from locomotives and cabooses at large terminals where several of each lay over for a day, or at least several hours. A communication employee was on hand to swap radio units from incoming locomotives and cabooses to those ready to leave so that only those idle were not equipped during this period.

These 60 radio units were sent to a radio shop where we had four men convert the sets on an assembly line basis, and by properly apportioning the work, they were able to convert to split channel, change frequency, align and routine these 60 radio units in approximately five days.

Since the GM&O is divided into two regions between which there is no exchange of locomotives or cabooses, we were able to use this natural dividing point to consider only part of the system at a time. However, because we had only 60 radio units converted and ready on the new frequency, we further subdivided the system on a basis of the number of trains operating between certain cities, where 60 units would permit us to change all mobile units and base stations at once within this area, so that all radio equipped units would be on the converted sets.

The area to be converted was also influenced by the location of regularly employed communication personnel, and in our case averaged about 400 miles of railroad. Locomotives or cabooses moving from this area into another part of the railroad would have the radio units swapped out with units on the old frequency. This was done by a communication employee at this point and the sets thus removed were used to replace the units on locomotives and cabooses moving into the converted area. By starting the section to be converted at a terminal of the railroad the swapping in and out of converted and unconverted sets was necessary at only one point at a time.

As the 60 converted units were being

(*Continued on page 43*)