What's the Answer?

Business Cars

What communications facilities are provided on your railroad's business car(s)? Are plug connectors provided at the most visited location? Please describe any special communications equipment on the cars.

PBX and Message Circuits

ANONYMOUS

On our railroad the business cars of general officers are equipped for PBX service at any of the numerous points on the railroad which have PBX's, with Anderson jacks at each end of the car and a line extending through the car to common battery PBX phones located in the lounge section, office section, and master bedroom. At all points where PBX's are in service several PBX extensions are brought out to Anderson jacks for connection to the business cars, and cords are available to make the connections at each point. The same number is assigned to these PBX lines at all points on the system in order that these cars can be dialed directly on our system-wide toll dial network.

For our local division officials who frequently set their cars out at points where no PBX is available, in addition to the PBX arrangement we have installed in the car a 94E coil in connection with a 6017J key and selector set. They can plug into the dispatcher's or message circuits by throwing a key to manual line and plugging the cord into the line, jacks being provided at all points where they normally set out. The 94E coil, with condenser in the center taps toward the line, blocks the 3½-cycle from getting into the common battery telephone equipment. Generator and selector set are bridged across the line side of the coil to permit ringing in or out. The 2-mfd condenser in the center tap of the line side of the coil blocks the 3½-cycle signaling, as well as 20-cycle, so coil does not present a short to the line on 3½-cycle ringing. No condenser is used in the drop side of the coil and the 32-volt battery on the car is fed through a retard coil to the center taps of the drop side of the 94E coil. This battery is used to provide talking battery to the common battery instruments. When connected to message phone circuits which utilize 20-cycle ringing to call the PBX, the 94E coil blocks the 20-cycle from ringing the bells in the common battery phones.

When these cars are connected to PBX the 6017J key is thrown to PBX position and phones are used as straight common battery dial sets.

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?

Avoid Interpretation

E. A. BURGIN, Signal Engineer, Chesapeake & Ohio, Richmond, Va.

The Chesapeake & Ohio employs a system of "speed" signaling as opposed to "route" signaling. Our experience indicates that many train accidents are caused by enginemen interpreting signal indications, that is, proceeding according to what they deduce conditions ahead to be rather than strictly in accordance with signal indication. Speed signaling indications require no interpretation. They authorize trains to proceed at either restricted, slow, medium or maximum authorized speed and, generally speaking, it is not necessary for the engineman to have more than general information concerning the track and signal layout.

There are, however, several types of track layouts where speed signaling is at a disadvantage. Where (1) the end of double track consists of an equilateral turnout and all tracks are signaled for movements in both directions; or (2) where there are three or more signaled tracks with crossovers leading both to the right and to the left. A speed restriction effective on only one of two or more parallel tracks will force all trains approaching such points to do so, expecting to be routed to the track on which the restriction is effective. This may cause unnecessary delays.

Wood Joint

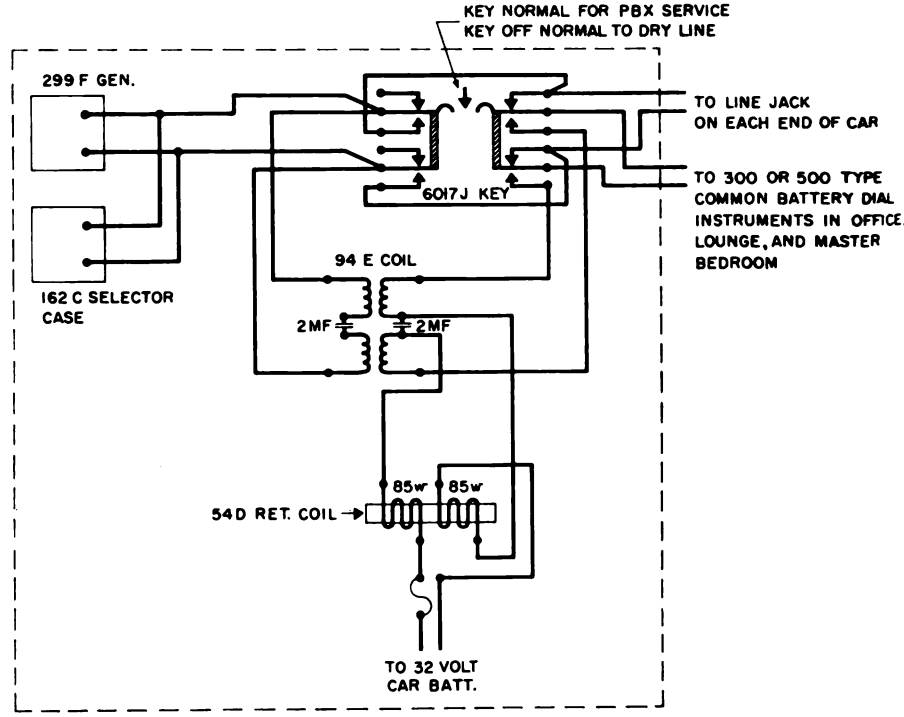
What use are you making of the wood laminate insulated joint? Has their installation and service been satisfactory? To what extent are you planning to make use of them in the future?

Joints Have Given Good Service

H. D. HAHN, Assistant to Chief Engineer, Chicago & Illinois Midland, Springfield, Ill.

We installed several wood laminate insulated joints on a test basis in March 1959 and to date they have given good service. This installation was made in 131-lb mainline track at a location where our traffic is the heaviest, and where we have experienced heavier than normal fibre renewals in the past. These joints have been well maintained and only a moderate amount of pumping is evident at the joint locations.

Periodic inspections revealed the formation of several hairline cracks in the vertical plane of all bars after six months of service. Recent inspections show very



Business Car PBX and Message Circuit Key.