

WHAT'S THE ANSWER?

Signal Lighting

Q. In recent years several railroads have changed from approach lighting to continuous lighting of signals in automatic block and CTC territories. What is the practice on your railroad? Why?

A. Recent CTC installations on the Atlantic Coast Line use approach or full block lighting for home and intermediate signals because:

(1) Our instructions provide for replacement of continuously lighted signal lamps every 9½ months, whereas approach lighted lamps are replaced after not more than 24 months or when observation by maintenance forces indicates a possible shorter lamp life. Approach lighting holds replacement lamp cost to a minimum.

(2) A normal reduction in power results, in addition to which longer operating periods, on standby battery, can be anticipated when power is interrupted due to storms.

R. M. Rosensteel, Signal Engineer, Atlantic Coast Line, Jacksonville, Fla.

Signal Power

Q. Where signal departments transmit power on a joint pole line, what measures are taken to prevent inductive interference with the communications circuits?

A. On joint power and communication pole line we take the following measures to prevent interference with the communications circuits:

(1) We transmit power at 4800 volts, 60 cycles, three phase, ungrounded.

(2) Although most of the load taps are single-phase, the taps are staggered so that loads on the three phases will be reasonably well balanced.

(3) We try to keep the high tension line clear of faults. A leaking insulator or an arcing high tension switch contact will almost always put noise on communication circuits even though in many instances such

faults would have no adverse effects on power distribution.

(4) All of our transmission lines have capacitors and we attempt to keep power factors close to 100%. The resulting minimum current causes a minimum of inductive interference. Although not related to interference, two valuable by-products of high power factor are good voltage regulation and reduction in power costs.

(5) All except local communication circuits are transposed for 30 kc or better. These transpositions provide good balance to power exposures even on pairs handling nothing

higher than voice frequency.

We consider the joint operation to be entirely satisfactory. We are more vulnerable to power line faults but this is not altogether a disadvantage for it enables us to quickly discover and correct faults that might otherwise go unreported for some time.

J. M. Hesser, Assistant Manager Signals & Communications, Norfolk & Western, Roanoke, Va.

R F Interference

Q. How do you reduce interference due to radiation from a radio transmitter during frequency checks and testing?

A. To-date we have not had a serious radiation problem while making frequency checks and testing at our various radio shops. In some of the older radio units the local oscillator in the receiver required a special harmonic suppression kit to keep from operating the squelch of a Fire Department installation, but this was not related to transmitter radiation.

As more assignments are made in given areas we may be required to incorporate either single or double screen room arrangements, but have not given consideration to them at this time.

F. B. Childs, Radio Engineer Northern Pacific, St. Paul, Minn.

Questions

● How often do you make speed measurements in automatic retarder classification yards? Please describe your practices, involving where such measurements are taken—in relation to master and group retarders for example. Do your measurements include determination of coupling speeds on the class tracks?

● What test procedures have you set up for checking the operation of microwave equipment? Please describe, including types of test gear and how often tests are made?

● What factors, other than accessibility of highways, determine the choice of providing trucks instead of track motor cars for signal maintainers and communications linemen? Do you provide your men with both types of vehicles? Please describe your practices, including reasons for them.

● If you use rail lubricators in retarder yards, where do you locate them—ahead of the master retarder; between the master and group retarders; or below the group retarders? Please give reasons for the locations selected. Have you found car rollability to be satisfactory without the use of rail lubricators?

Send answers to these questions to the WA editor, Railway Signaling and Communications, 22 West Madison St., Chicago, Ill. 60602. Payment is made for all answers printed. Answers will be printed without names or railroad identification if desired, but all letters with answers must be signed.



"This is fun Charlie. Now you stand here, and I'll run the engine."