

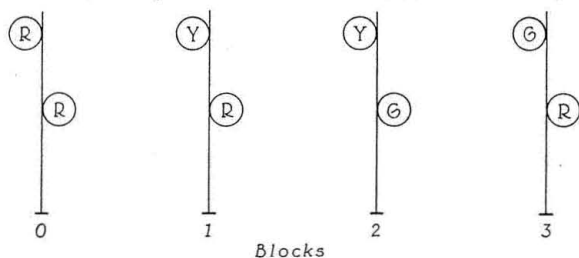
WHAT'S THE ANSWER?



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Signal Aspects for A Four-Block System

"In the A.R.A. code, the color-light signal indications for four-block systems are: Red-over-red for stop; yellow-over-red for one-block clear; yellow-over-green



for two blocks clear; and green-over-red for three or more blocks clear. What improvement of this arrangement can you suggest to secure better light-out protection and to eliminate the use of red for the higher-speed indications?"

Outlines System of Color-Light Aspects for Both Three-Block and Four-Block Signaling

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WHAT I am suggesting might be termed an improvement with respect to the elimination of the use of red for the higher-speed indications, but it at the same time provides adequate light-out protection. I suggest the use of two greens for "Proceed," as with the lower quadrant signals (with home and distant blade), a large number of which are still in use. The set-up as given in the question has heretofore been referred to as a three-block system:

- Red-over-red indicating stop.
- Yellow-over-red indicating stop at next signal and an immediate reduction to medium speed.
- Yellow-over-green indicating pass next signal at not exceeding medium speed, and
- Green-over-red indicating proceed.

Without the radical change in the typical aspects as they appear in the Standard Code, and perfectly consistent therewith, as the Code specifically states that the aspects shown are typical and that each road should show the aspects it uses; the following, with some slight modification at interlockings, can be used:

- Red-over-red = Stop
- Yellow-over-red = Stop at next signal
- Green-over-red = Prepare to pass next signal at not exceeding medium speed
- Green-over-green = Proceed

By such an arrangement it will be noted that the

Questions To Be Answered

(1) At drawbridges do you provide interlocking protection between the bridge mechanism (wedge-driving apparatus and turning mechanism) and the interlocking machine? If so, what kind of checks are used and how is a conflict in the operation of the bridge mechanism and interlocking machine prevented?

(2) What advantages accrue from the elimination of indication locking on switch control levers? Are there any serious disadvantages?

(3) What practical applications of graphic recording instruments have you made to keep a performance check on certain signaling facilities?

(4) What are some of the best ways to ferret out troubles from grounds at an electric interlocking plant and on automatic signal circuits?

(5) In preparing rules for the operation of trains by signal indication, using the centralized-dispatcher controlled system, is it desirable to leave the time table in effect, or should the signal indications supersede all other rights?

lower light in each case repeats the upper light of the signal ahead. By adding yellow-over-yellow, a four-block system can be provided, the lower light still repeating the upper light ahead, the arrangement being:

- Red-over-red = Stop
- Yellow-over-red = Stop at next signal
- Yellow-over-yellow = Stop at second signal
- Green-over-yellow = Prepare to pass next signal at not exceeding medium speed
- Green-over-green = Proceed

By this arrangement, light-out protection is provided as the proceed indication is always given by two green lights, a single green being regarded as an imperfectly displayed signal, Rule 27 of the Standard Code always governing.

It should be noted that red in combination with yellow is displayed only in advance of a signal indicating stop.

At interlockings at which three light units are in use, there must be some modification. It is possible that three greens may be used for proceed, or perhaps two greens over red; then again, it may be advisable to put out the bottom light of a three-unit signal, when the top and middle unit display green. There must also be some modification with respect to the display of the middle and slow-speed indications. This requires careful study and no one should jump at conclusions. Another scheme which perhaps

