Are Switch Lamps Needed?

"Are switch lamps essential in automatic block signal territory?"

A. C. L. Eliminated Switch Lamps in 1914

C. J. Kelloway
Superintendent of Signals, Atlantic Coast Line, Wilmington, N. C.

Switch lights are of no value in automatic signal territory, and in some cases they even constitute a hazard. Our reasons for this opinion are: (1) Switches in main track are so connected that the automatic signals governing movements over them will assume the most restrictive indication when the switches are not set for safe movement of trains. (2) A switch could, for various reasons, be unsafe, and still the switch light could indicate that the switch is properly set. (3) A switch light could be mistaken for a clear signal, when the automatic signal light is out. (4) Switch lights serve no practical purpose in switching movements, as the engineman is governed by the signals of the train crew.

The elimination of switch lamps in automatic block signal territory on the Atlantic Coast Line was approved and accomplished in November, 1914, and an interesting fact is that there has not been a complaint or criticism from a trainman or an operating officer, nor has there been a request for reinstallment of a switch lamp since they were removed. At the present time, there are approximately 1,000 switches in automatic block signal territory on this railroad, and we estimate a saving of $20,000 a year on these by reason of the absence of the switch lamps.

Not Used, Except When There Is Considerable Switching at Night

W. J. Eck
Assistant to Vice-President, Southern, Washington, D. C.

Our experience and belief is that switch lights are not necessary in automatic block signal territory on any trailing-point switches, nor on facing-point switches that are located within 500 ft. in advance of the signal, unless there is considerable switching at night over the switch. On main-line movements the indication of the signal is a much better indication of the position of the switch points, than is the switch light. The Southern has not used switch lights in automatic block territory for about 20 years, except where desirable to facilitate switching, and the practice has been found entirely satisfactory. This pratcice is covered by the following rule: "Unless otherwise provided, in automatic signal territory, lights will not be maintained on trailing-point switches, nor on facing-point switches which are not more than 500 ft. beyond the signal."

Considers Switch Lamps Not Essential

F. B. Wiegand
Signal Engineer, New York Central, Cleveland, Ohio

Automatic block signals are installed to facilitate train movements. To do this they must convey all information necessary for the purpose, such as: block clear, switches properly set, stop at next signal, stop at second signal, pass next signal at restricted speed, proceed at slow speed, and so forth. Switch lamps repeat intermittently only one of the many indications given by the block signals. The other indications so given are not intermittently repeated throughout the block—and there is no reason why they should be. Therefore, in my opinion switch lamps in automatic block territory are not needed.

Eliminated Nearly All Main-Line Switch Lamps

W. H. Stilwell
Signal Engineer, Louisville & Nashville, Louisville, Ky.

As I understand the question, it should pertain to lamps on main-line switches only. The Louisville & Nashville, on May 1, 1930, discontinued the use of switch lamps as follows: (a) On double main-track trailing-point switches where automatic block signals are in service. (b) On all main-track switches where automatic-block signals are in service, provided the switch is located within 250 ft. of the protecting signal. (c) On all main-track switches in territory where automatic train control or train stop of the continuous type, with locomotive cab signals, is in service. This, of course, has resulted in the elimination of nearly all the main-line switch lamps in our automatic-signal territory. The practice has worked out very satisfactorily and substantial savings have been effected. This is a practical demonstration of what can be done in this regard.

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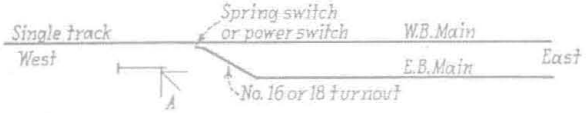
Signal or Rule?

"What indication should be given by signal A (see diagram) to an eastbound train running from the single track through the turnout to the eastward main of the double track. That is, should the regular high-speed indication be given, dependence being placed upon operating rules for the proper restriction of speed through the crossing? Or must a Caution indication be displayed, in order to insure proper operation through the turnout?"



Signaling to Conform With Interlocking Rules

R. A. Sheets
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If the junction between single track and double track is equipped with a power-operated switch, it is my opinion that interlocking rules would apply, and that the signaling would necessarily conform with interlocking practice. In such a case, signal *A* would be a standard interlocking home signal with one high arm, and a call-on arm or a dwarf signal. The high arm would govern train movements to the eastbound main of the double track and the low-speed arm probably would govern movements to either the eastbound or the westbound main, depending upon the position of the switch. Assuming that this is route signaling, and not speed signaling, I cannot see, in this instance, any necessity of trying to convey by signal indication the information that the high arm governs over the turnout to the eastbound main. The high arm should indicate primarily that the main-track route was properly set up, and that the block was clear. Any speed restriction that would be required by reason of the turnout should be a matter of time-card instruction applying at that particular interlocking plant.

Assuming that the junction was equipped with a spring switch with the switch set normally for movements from the single track to the eastward main, and that the switch would be trailed through by trains operating from the westward main to the single track, I cannot see that signal *A*, when clear, should indicate anything except