

PARTIAL SUMMARY SHOWING SIGNALING PRACTICE ON THE PRINCIPAL RAILWAYS OF THE UNITED STATES AND CANADA.—(CONTINUED.)

	NIGHT INDICATIONS						NUMBER OF ARMS		
	COLOR OF LIGHT USED						On Home Interlocking Signals	On Automatics	Day Indications
	Dist. Sig. Caution	Home Sig. Caution	Home Sig. Permiss'v'e	Home or Distant Sig. Clear	High Sig. Stop	Dwarf Sig. Stop			
Southern	Green	Green	Green	White	Red	Red	1, 2 and 3	1 u. q. 2 l. q.	2 pos. l. q. 3 pos. u. q.
Southern Illinois & Missouri Bridge	Yellow	Not used	Green	Green	Red	Red	2	2	2 pos. l. q.
Southern Pacific (Atlantic System)	Yellow	Not used	Not used	Green	Red	Red	1, 2 and 3	1 and 2	2 pos. l. q.
Southern Pacific (Pacific System)	Yellow	Not used	Not used	Green	Red	Red	1, 2 and 3	1 and 2	2 pos. l. q.
Southern Pacific Lines (East of Sparks)	Yellow	Not used	Not used	Green	Red	Red	1 and 2	1 and 2	2 pos. l. q.
Terminal R. R. Assn. of St. Louis St. Louis Merchants Bridge Terminal	Yellow	Not used	Not used	Green	Red	Red	1	1	2 pos. l. q. int. sig. 3 pos. l. q. auto sig.
Toledo, Peoria & Western	Green	Not used	Not used	White	Red	Red	2 .....	.....	2 pos. l. q.
Union Pacific	Yellow	Not used	Not used	Green	Red	Red .....	.....	1 and 2	2 pos. l. q.
Wabash	Green	Green	Green	White	Red	Red	2	1	3 pos. l. q.
Wabash-Pittsburgh Terminal .....	.....	.....	Green	White	Red	Not used	None	1	3 pos. l. q.
Washington Terminal	Yellow	Yellow	Not used	Green	Red	Red	3 (2 operative) semi. auto.	1	3 pos. u. q.

Abbreviations: *u. q.*, upper quadrant; *l. q.*, lower quadrant; *int. sig.*, interlocking signal; *auto. sig.*, automatic signal; *2 pos.*, two-position; *3 pos.*, three-position; *dist. sig.*, distant signal; *home sig.*, home signal; *req.*, required; *h. and d.*, home and distant; *l. r. h.*, lower right-hand; *semi. auto.*, semi-automatic; *u. l. h. q.*, upper left-hand quadrant.

The Chicago & North-Western, and the Cincinnati, Hamilton & Dayton will use the upper quadrant for new work.

On about 35 miles of the Pennsylvania in the New York and Washington terminals the following indications are used: Distant signal caution—yellow; home signal caution—yellow; home signal permissive—yellow; home and distant clear—green; high signal stop—red; dwarf signal stop—red. Three-position upper quadrant signals are used on all new work, the 45-deg. position indicating "next signal at stop." This signal is also used in permissive blocking. On home interlocking signals on new work three-position upper quadrant arms are used. On old work combinations of one, two, and three arms are employed. The automatic signals on new work will have one arm three-position upper quadrant signals with a diagonal red marker light. The use of green for clear, yellow for caution, double yellow for permissive, and purple for the dwarf signal stop indication, is being discussed.

The replies which have been received since September 1, and additional replies, will be summarized in a future issue of *The Signal Engineer*, when a more complete discussion of the different signaling standards in use on the various railways will be published.

INTERURBAN BLOCK SIGNALS.

The Indiana Railroad Commission on September 12, 1911, issued the following order to the interurban railways in the state, asking that replies be made by October 31, 1911. A similar circular was issued to the steam roads of Indiana, to which replies were requested by July 1, 1911. The latter order was published on page 281 of *The Signal Engineer* for July, 1911:

"To all interurban railways:—The commission wishes to call your attention to the Block Signal Act, Chapter 118 (page 466. Acts of 1911), approved March 4, 1911, requiring the installation of block signals on all the railways of the state by January 1, 1912, giving the commission the power to relieve any line or part of line, and also to extend the time of installation.

"On account of the fact that the art of block signaling for electric railways is not as fully developed as for steam roads, the commission found it necessary to appoint a committee to investigate the subject. The work of the committee has pro-

gressed sufficiently to indicate that block signals are now to be had to meet the conditions existing on the electric railroads in this state.

"In order that the commission may have complete information as to the conditions on all roads, to the end that the legislative will may be carefully and fully observed, this commission has divided the electric railways into three classes, which are as follows:

- (A) Roads having signals in service, asking for approval of the system now in operation;
- (B) roads installing signals, either automatic or other, asking the commission to approve the proposed system;
- (C) roads asking to be relieved from installing any system.

"And the commission hereby directs that certain information shall be furnished to it, as follows, by classes A and B:

- (1) Territory covered, between what points;
- (2) miles of road, number of blocks, maximum length of block, minimum length of block, average length of block;
- (3) single or double track;
- (4) number of trains per day under normal traffic conditions, dividing trains into the following classes: (a) regular passenger; (b) extra passenger; (bb) extra passenger at heaviest season of the year; (c) regular express or freight; (d) extra or special express or freight; (dd) extra or special express or freight at heaviest season of the year.
- (5) is any part of territory used by trains of a foreign company, and if so, between what points and by what company?
- (6) statement as to system proposed to be used, and if other than automatic, is it proposed to use permissive blocking, at what points and under what conditions?
- (7) if system other than automatic is proposed to be used, will all block stations be operated for 24 hours per day, and if not, state what stations will be closed and between what hours;
- (8) furnish (a) blue print showing main line, passing tracks, junction points, grade crossings, stations, signals, etc.; (b) profile showing grades, curvature and signal locations; (c) detail of any circuits used in connection with signal system, and (d) general and special rules to trainmen and other employes for the operation and maintenance of signals.

"Class C shall furnish information under questions above, one to five inclusive, and shall also make a general statement as to why block signals are not necessary to be installed on their lines, or on any part of their line."

A conference of interurban railway managers and operating officers will be held in Indianapolis on October 31 to discuss operating matters, including block signaling.