UNITED STATES RAILROAD ADMINISTRATION
DIRECTOR GENERAL OF RAILROADS
CHICAGO AND NORTH WESTERN RAILROAD

RULES

FOR THE GOVERNMENT

OF THE

OPERATING DEPARTMENT

TO TAKE EFFECT JUNE 1, 1919

ISSUED IN ACCORDANCE WITH THE STANDARD CODE
ADOPTED BY
THE AMERICAN RAILWAY ASSOCIATION
NOVEMBER 17, 1915.

minutes and then proceed with caution to the next block station, where the conductor must report the fact to the chief train dispatcher.

373. A block station must not be considered as closed, except as provided for by time-table or special instructions.

374. Time-tables or special instructions indicate block stations.

TIME SPACING.

380. In districts in which the movement of trains is not controlled by the manual or automatic block system, trains will be spaced under special instructions contained in the time-table of each division, by train order signal.

381. When a train has passed train order signal and the signalman has seen the markers he must display the Stop signal and keep it in that position after the train has departed, as per Rule 91*a*.

382. When a train is passed by another at a station or intermediate siding, the following train may proceed, as per Rule 91*a*.

383. Operators will record in a book the arrival and departure of each train.

AUTOMATIC BLOCK SYSTEM.

REQUISITES OF INSTALLATION.

1. Signals of prescribed form, the indications given by not more than three positions; by lights of prescribed color; or by both.

2. The apparatus so constructed that the failure of any part controlling the operation of a signal will cause it to display its most restrictive indication.

3. Signals located preferably over or upon the right of and adjoining the track to which they refer.

3*a*. On double track signals, if practicable, will be located over or upon the left of and adjoining the track to which they refer.

4. Semaphore arms that govern, displayed to the right of the signal mast as seen from an approaching train.

4*a*. When one arm is used on an upper quadrant semaphore signal a marker will be used placed below the arm and extending to the right of the signal mast on a Stop signal and to the left on a Stop and Proceed signal. At night the marker will show a white light vertically below the upper light on a Stop signal and diagonally below on a Stop and Proceed signal.

When two arms are used on an upper quadrant semaphore signal the lower semaphore casting will appear to the right of the signal mast on a Stop signal and to the left of the signal mast on a Stop and Proceed signal. At night the lower light will show vertically below the

upper light on a Stop signal and diagonally below on a Stop and Proceed signal.

4*b*. Where the disc is used, the indications will be given by two positions of a red or green disc, and, in addition, at night, by lights of prescribed color. The face of a home signal case is painted black, and the back yellow. The face of a distant signal case is painted white and the back yellow.

6. Continuous track circuits.

7. Signal connections and operating mechanism so arranged that a Home Block Signal will display the indications provided in Rules 501 A, 501 AA or 501 G after the front of a train shall have passed it.

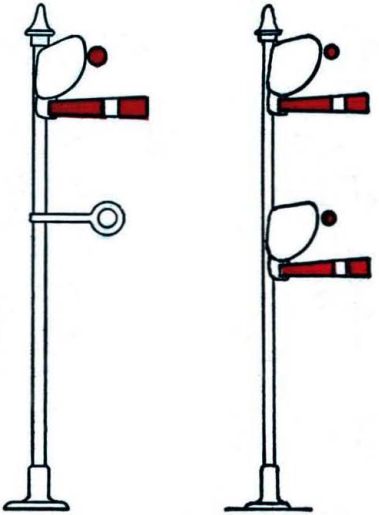
8. Switches in the main track so connected with the block signals that the Home Block Signal in the direction of approaching trains will display the indications provided in Rules 501 A, 501 AA or 501 G when the switch is not set for the main track.

8*a*. Cross-over switches between the main tracks so connected with the block signals, that the Home Block Signals in the direction of approaching trains will display the indications provided in Rules 501 A or 501 AA when either switch of the cross-over is not set for the main track.

RULES.

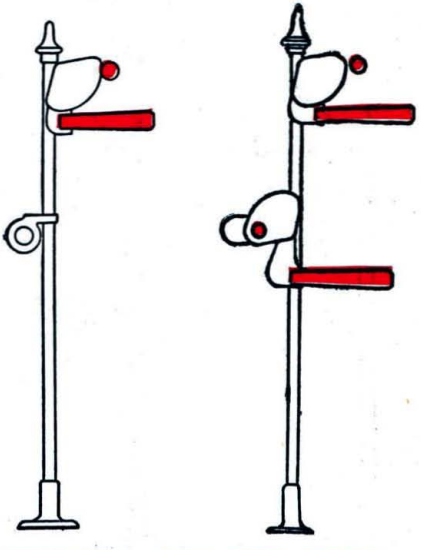
The aspects shown in the following rules are those mostly used. Other combinations of semaphores or combinations of semaphores and disc signals may be used.

THREE-POSITION BLOCK SIGNALS.



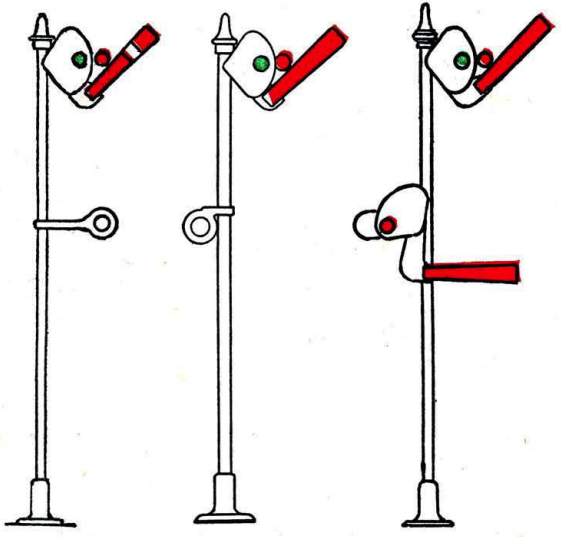
INDICATION — STOP.
NAME — STOP-SIGNAL.
501 A.

THREE-POSITION BLOCK SIGNALS.



INDICATION — STOP; THEN PROCEED.
NAME — STOP AND PROCEED-SIGNAL.
501 AA.

THREE-POSITION BLOCK SIGNALS.

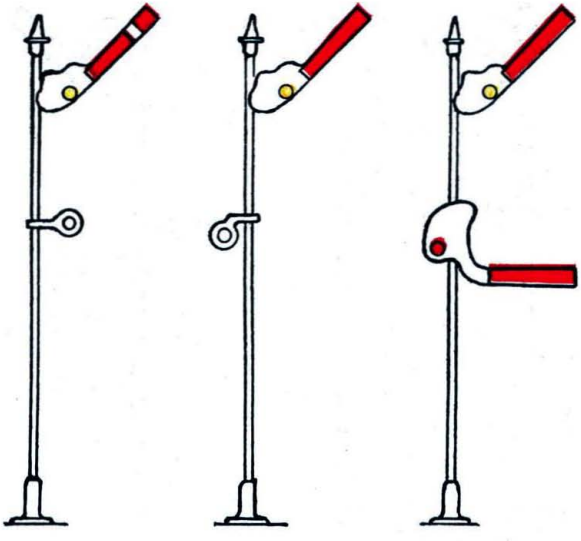


INDICATION — APPROACH NEXT SIGNAL PREPARED TO STOP.

NAME — APPROACH-SIGNAL.

501 B.

THREE-POSITION BLOCK SIGNALS.

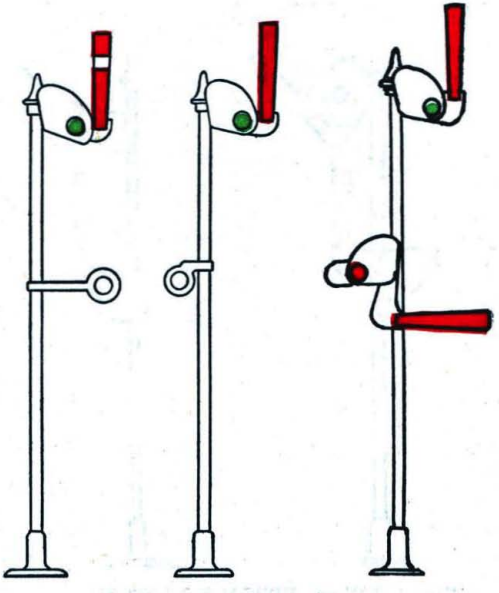


INDICATION—APPROACH NEXT SIGNAL PREPARED TO STOP.

NAME—APPROACH SIGNAL

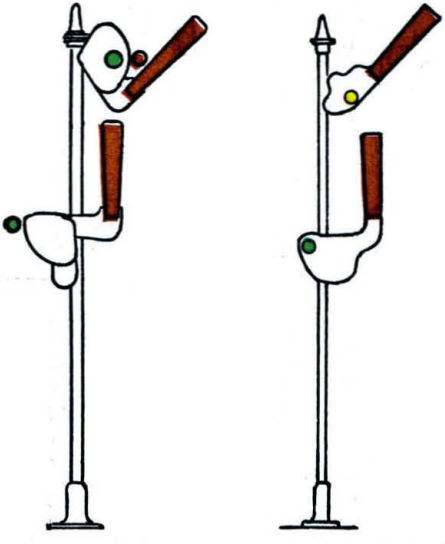
501 B.

THREE-POSITION BLOCK SIGNALS.



INDICATION — PROCEED.
NAME — CLEAR-SIGNAL.
501 C.

THREE-POSITION BLOCK SIGNALS.

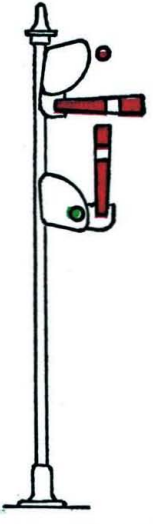


INDICATION — APPROACH NEXT SIGNAL AT RESTRICTED SPEED.

NAME — APPROACH-RESTRICTING-SIGNAL.

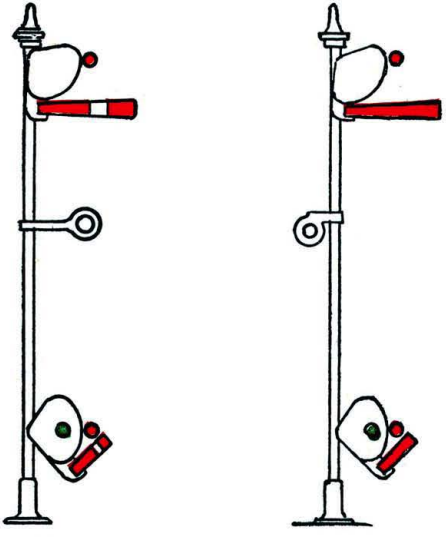
501 E.

THREE-POSITION BLOCK SIGNALS.



INDICATION — PROCEED AT RESTRICTED SPEED.
NAME — CLEAR-RESTRICTING-SIGNAL.
501 F.

THREE-POSITION BLOCK SIGNALS.

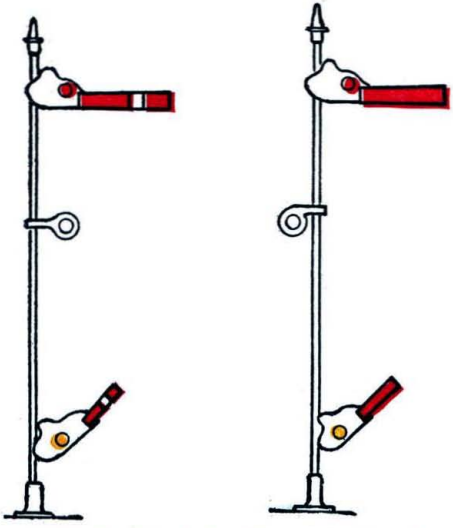


INDICATION — PROCEED AT SLOW SPEED PREPARED TO STOP SHORT OF TRAIN OR OBSTRUCTION.

NAME — PERMISSIVE-SIGNAL.

501 G.

THREE-POSITION BLOCK SIGNALS.

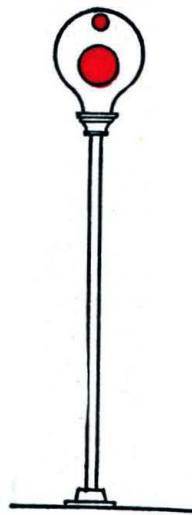


INDICATION—PROCEED AT SLOW SPEED PREPARED TO STOP SHORT OF TRAIN OR OBSTRUCTION.

NAME—PERMISSIVE-SIGNAL.

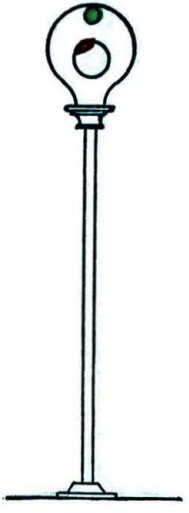
501 G.

TWO-POSITION HOME BLOCK SIGNALS.



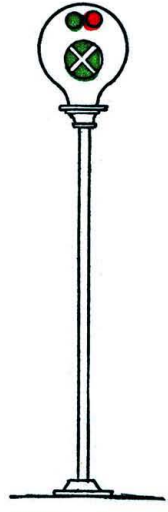
INDICATION — STOP; THEN PROCEED.
NAME — STOP AND PROCEED-SIGNAL.
502 AA.

TWO-POSITION HOME BLOCK SIGNALS.



INDICATION — PROCEED.
NAME — CLEAR-SIGNAL.
502 C.

TWO-POSITION DISTANT BLOCK SIGNALS.



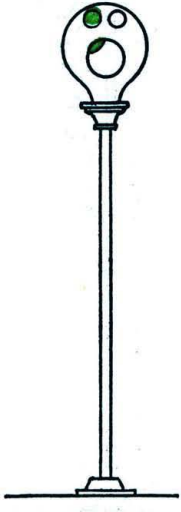
INDICATION — APPROACH HOME SIGNAL WITH CAUTION.

NAME — CAUTION-SIGNAL.

503 J.

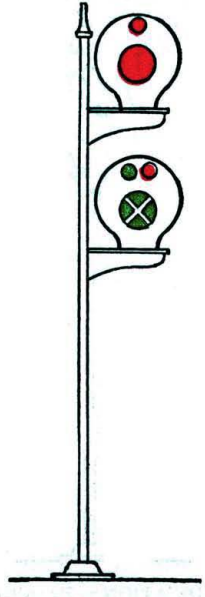
TWO-POSITION DISTANT BLOCK SIGNALS.

Automatic



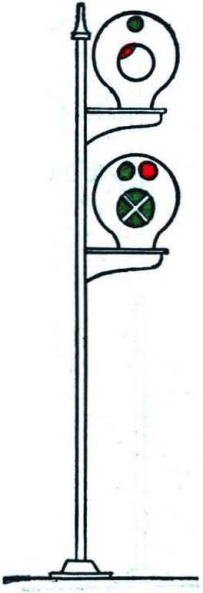
INDICATION — PROCEED.
NAME — CLEAR-SIGNAL.
503 K.

TWO-POSITION HOME AND DISTANT BLOCK SIGNALS.



INDICATION — STOP; THEN PROCEED.
NAME — STOP AND PROCEED-SIGNAL.
504 AA.

TWO-POSITION HOME AND DISTANT BLOCK SIGNALS.

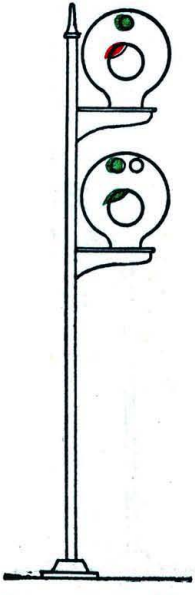


INDICATION — APPROACH NEXT SIGNAL PREPARED TO STOP.

NAME — APPROACH-SIGNAL.

504 B.

TWO-POSITION HOME AND DISTANT BLOCK SIGNALS.



INDICATION — PROCEED.
NAME — CLEAR-SIGNAL.
504 C.

505. Block signals govern the use of the blocks, but, unless otherwise provided, do not supersede the superiority of trains; nor dispense with the use or the observance of other signals whenever and wherever they may be required.

506. Lights must be used upon all block signals from sunset to sunrise and whenever the signal indications cannot be clearly seen without them.

ENGINEMEN AND TRAINMEN.

508. Block signals for a track apply only to trains moving with the current of traffic on that track.

509. When a train is stopped by a Stop-signal it must stay until authorized to proceed, or in case of failure of means of communication it may proceed when preceded by a flagman to the next signal displaying a proceed indication.

When a train is stopped by a Stop and Proceed-signal it may proceed:

(A.) On single track when the signal is cleared, or if not immediately cleared and except when train is proceeding under flag from last Stop-signal, it may proceed at once at slow speed expecting to find train in block, broken rail, obstruction or switch not properly set.

(B.) On two or more tracks at once at slow speed, expecting to find a train in the block, broken rail, obstruction or switch not properly set.

509*c*. When a train is stopped by a Stop signal on single track and authority to proceed is requested, before it is given by the Train Dispatcher, he will ascertain if there is any opposing train or yard engine movement which will affect that Stop signal. When assured that there is no such movement, authority will be issued to the train in the following form:

"You may proceed at slow speed expecting to find a broken rail, obstruction or switch not properly set."

Should the Train Dispatcher not be able to assure himself that there is no opposing train or yard engine movement, authority to the train will be issued as follows:

"You may proceed under protection of flag to the first signal that indicates proceed."

These instructions must be repeated by the conductor or engineman to insure correct understanding, and entry made in the Train Order Book.

510. When a train is stopped by a block signal which is evidently out of order, and not so indicated, the fact must be reported to the Chief Train Dispatcher.

510*a*. In reporting a signal out of order it will be done by its number.

510*b*. When a rail is broken in track which is bonded for track circuit the signal maintainer must be notified immediately so that he can restore normal conditions as soon as track is repaired.

511. Both switches of a cross-over must be open before a train starts to make a cross-over movement, and the movement must be completed before either switch is restored to normal position.

512. Where switch indicators are used, the indications displayed do not relieve enginemen and trainmen from protecting their train as required by the rules.

512*a*. A switch must not be opened to permit a train movement to a main track when the semaphore arm is horizontal or the disc is visible in the indicator box at the switch, except under protection as per Rule 99.

INTERLOCKING.

DEFINITIONS.

INTERLOCKING.—An arrangement of switch, lock and signal appliances so interconnected that their movements must succeed each other in a pre-determined order.

INTERLOCKING PLANT.—An assemblage of switch, lock and signal appliances, interlocked.

INTERLOCKING STATION.—A place from which an interlocking plant is operated.

FIXED SIGNAL.—A signal of fixed location indicating a condition affecting the movement of a train.

INTERLOCKING SIGNALS.—The fixed signals of an interlocking plant.

HOME SIGNAL.—A fixed signal at the entrance of a route or block to govern trains in entering and using said route or block.

DISTANT SIGNAL.—A fixed signal used in connection with one or more home signals to govern the approach thereto.

DWARF SIGNAL.—A low home signal.

REQUISITES OF INSTALLATION.

1. Signals of prescribed form, the indications given by not more than three positions; by lights of prescribed color; or by both.

2. The apparatus so constructed that the failure of any part controlling the operation of a signal will cause it to display its most restrictive indication.

3. Signals located preferably over or upon the right of and adjoining the track to which they refer.

3*a*. On double track the high signals, if practicable, will be located over or upon the left of and adjoining the track to which they refer.

4. Semaphore arms that govern, displayed to the right of the signal mast as seen from an approaching train.

4*a*. When one arm is used on an upper quadrant semaphore signal, a marker will be used placed below the arm and extending to the right of the signal mast. At night the marker will show a white light vertically below the upper light on a Stop signal and a red and green light vertically below on a Distant signal.

When two arms are used on an upper quadrant semaphore signal the lower semaphore casting will appear to the right of the signal mast on a Stop signal. At night the lower light will show vertically below the upper light.

5. The normal indication of Home Signals—Stop.

9. Latch locking, or its equivalent.

10. Interlocked levers, or their equivalent, by which switches, locks and signals are operated.

12. The interlocking of switches, locks, railroad crossings, drawbridges and signals through levers, or their equivalent.

13. Locks for all switches.

14. Detector bars, or their equivalent, for all interlocked switches.

15. Pipe, or its equivalent, compensated for changes in temperature, in mechanical interlocking, for connecting levers, with switches and locks.

16. The interlocking of signals with switches, locks, railroad crossings, or drawbridges, so that a signal permitting a train to proceed cannot be displayed unless the route to be used is set and Stop-signals displayed for all conflicting routes.

17. The established order of interlocking such that:

A signal permitting a train to proceed cannot be displayed until the switches in the route to be set are in position and locked; derails, if any, in conflicting routes set to diverge and all opposing

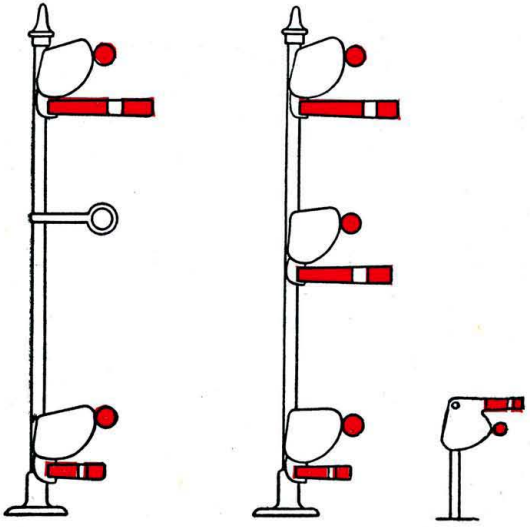
or conflicting signals display their most restrictive indication. The display of a signal to proceed shall lock the arrangement.

18. Interlocking and Block Signals, interconnected, where both are operated from the same station.

RULES.

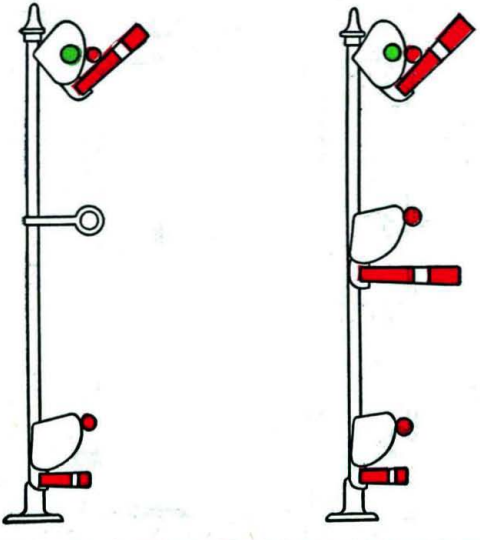
The aspects shown in the following rules are those mostly used. Other combinations of semaphores or combinations of semaphores and disc signals may be used.

THREE-POSITION SIGNALS.



INDICATION—STOP.
NAME—STOP-SIGNAL.
601 A.

THREE-POSITION SIGNALS.

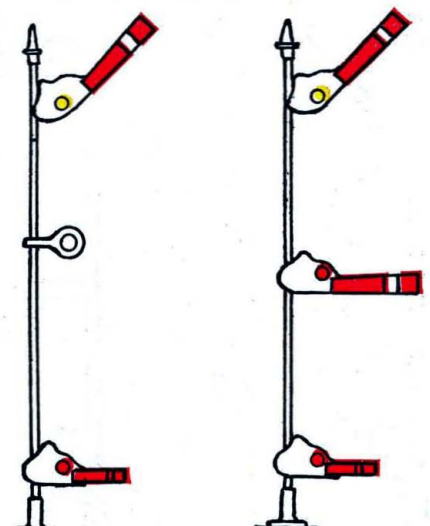


INDICATION—APPROACH NEXT SIGNAL PREPARED TO STOP.

NAME—APPROACH-SIGNAL.

601B.

THREE-POSITION SIGNALS.

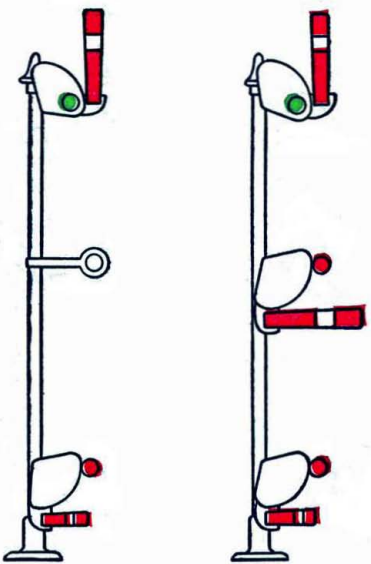


INDICATION—APPROACH NEXT SIGNAL PREPARED TO STOP.

NAME—APPROACH-SIGNAL.

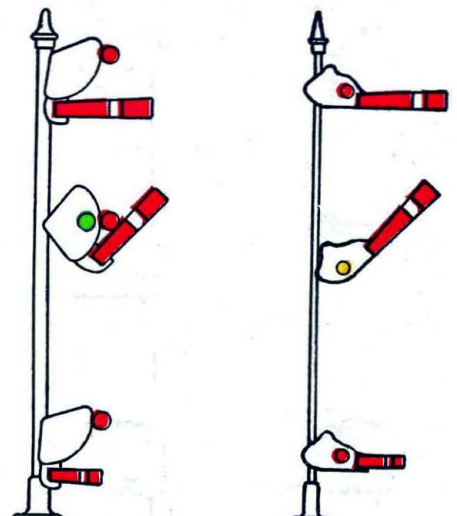
601 B.

THREE-POSITION SIGNALS.



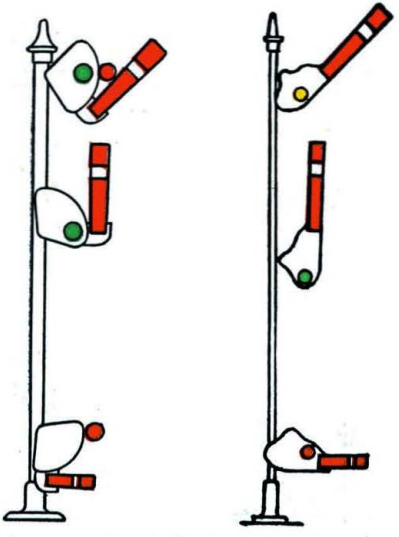
INDICATION—PROCEED.
NAME—CLEAR-SIGNAL.
601C.

THREE-POSITION SIGNALS.



INDICATION—PROCEED AT RESTRICTED SPEED PREPARED TO STOP AT NEXT SIGNAL.
NAME—RESTRICTING-SIGNAL.
601 D.

THREE-POSITION SIGNALS.

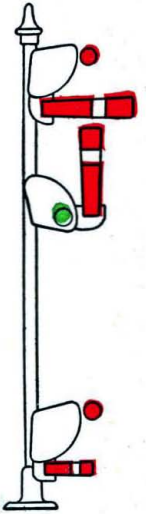


INDICATION—APPROACH NEXT SIGNAL AT RESTRICTED SPEED.

NAME—APPROACH-RESTRICTING-SIGNAL.

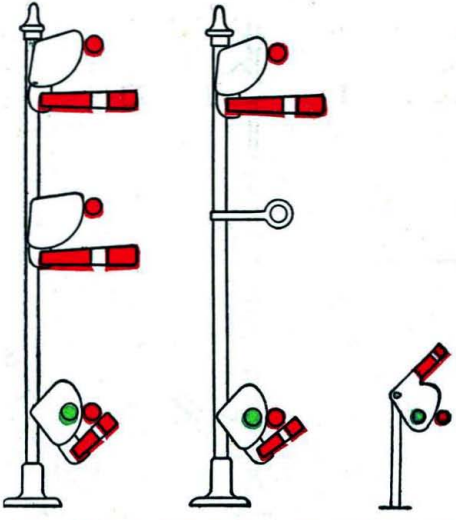
601 E.

THREE-POSITION SIGNALS.



INDICATION—PROCEED AT RESTRICTED SPEED
NAME—CLEAR-RESTRICTING-SIGNAL.
601 F.

THREE-POSITION SIGNALS.

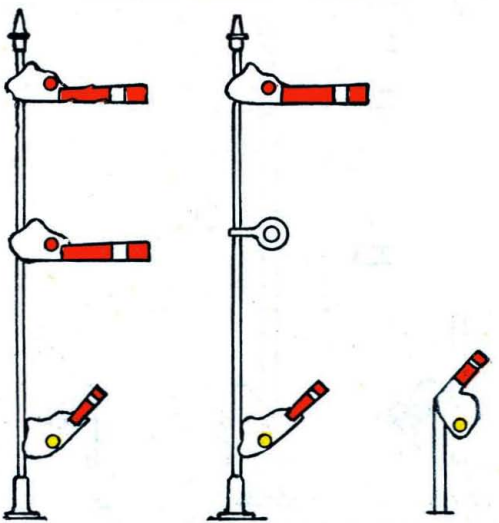


INDICATION—PROCEED AT SLOW SPEED PREPARED TO STOP.

NAME—SLOW-SPEED-SIGNAL.

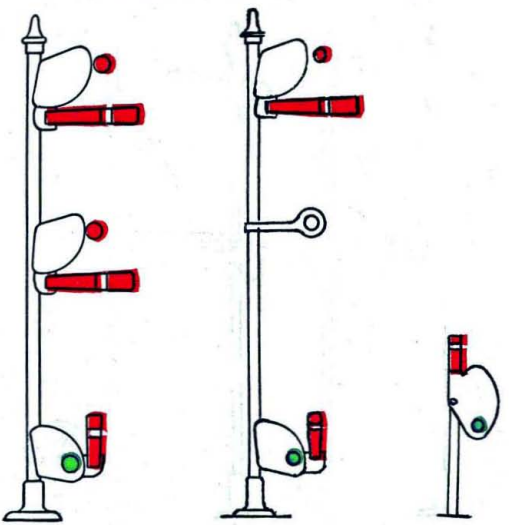
601 G.

THREE-POSITION SIGNALS.



INDICATION—PROCEED AT SLOW SPEED
PREPARED TO STOP.
NAME—SLOW-SPEED-SIGNAL.
601 G.

THREE-POSITION SIGNALS.

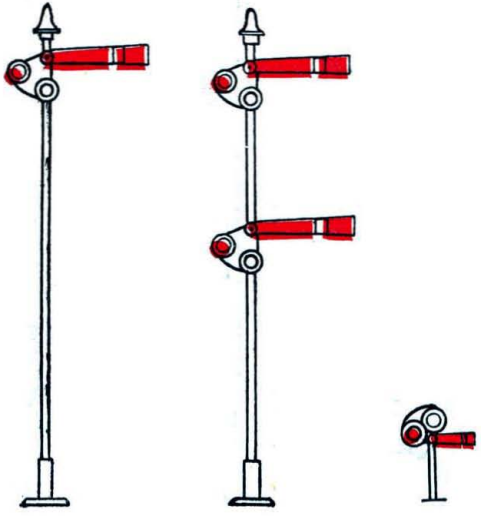


INDICATION—PROCEED AT SLOW SPEED

NAME—CLEAR-SLOW-SPEED-SIGNAL.

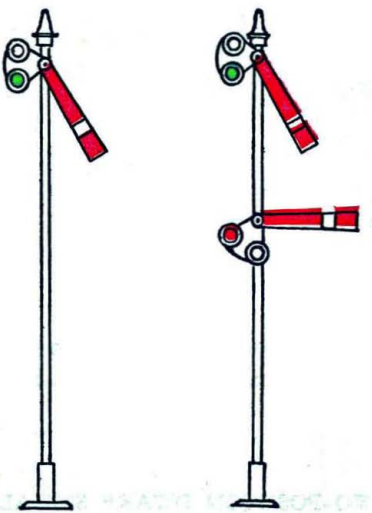
601 H

TWO-POSITION HOME SIGNALS.



INDICATION — STOP.
NAME — STOP-SIGNAL.
602 A.

TWO-POSITION HOME SIGNALS.



INDICATION — PROCEED.
NAME — CLEAR-SIGNAL.
602 C.

TWO-POSITION HOME SIGNALS.

INDICATION—PROCEED AT RESTRICTED SPEED.

NAME—CLEAR-RESTRICTING-SIGNAL.

602 F.

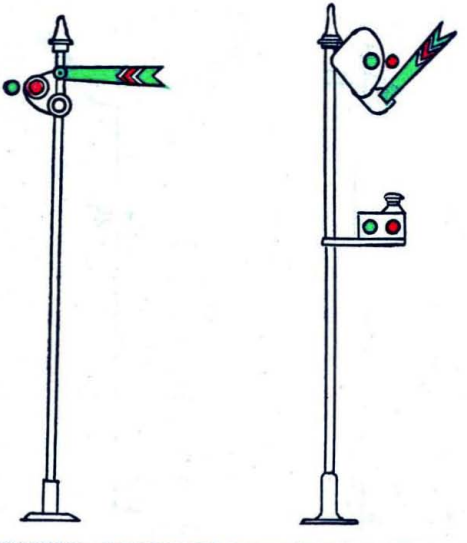
TWO-POSITION DWARF SIGNALS.

INDICATION—PROCEED AT SLOW SPEED PREPARED TO STOP.

NAME—SLOW-SPEED-SIGNAL.

602 G.

TWO-POSITION DISTANT SIGNALS.

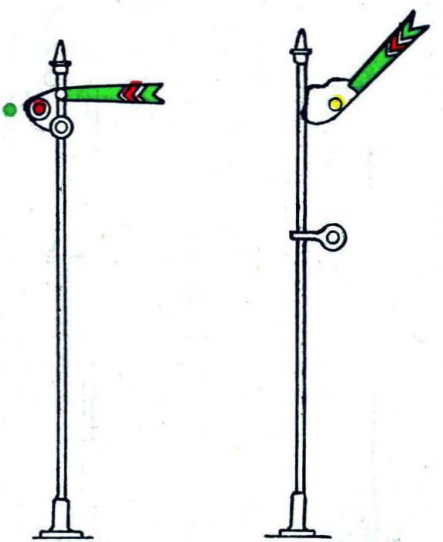


INDICATION--APPROACH HOME SIGNAL WITH CAUTION.

NAME—CAUTION-SIGNAL.

603 J.

TWO-POSITION DISTANT SIGNALS.

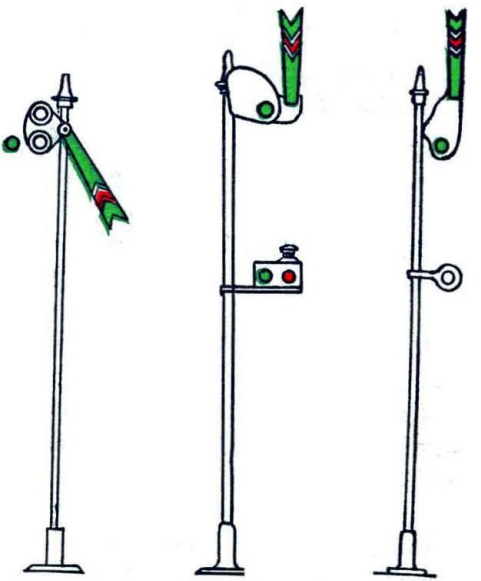


INDICATION—APPROACH HOME SIGNAL WITH CAUTION.

NAME—CAUTION-SIGNAL.

603 J.

TWO-POSITION DISTANT SIGNALS.



INDICATION—PROCEED.
NAME—CLEAR-SIGNAL.
603 K.

605. Interlocking signals govern the use of the routes of an interlocking plant, and as to movements within Home signal limits, their indications supersede the superiority of trains, but do not dispense with the use or the observance of other signals whenever and wherever they may be required.

SIGNALMEN.

611. The normal indication of Home Signals—Stop; of Distant Signals—Caution.

612. Levers, or other operating appliances, must be used only by those charged with that duty and as directed by the rules.

613. When the route is set the signals must be operated sufficiently in advance of approaching trains to avoid delay.

614. Signals must be restored so as to display their most restrictive indication as soon as the train or engine for which they were cleared has passed within the home signal limits of the interlocking plant.

615. If necessary to change any route for which the signals have been cleared for an approaching train or engine, switches must not be changed or signals cleared for any conflicting route until the train or engine, for which the signals were first cleared, has stopped.

616. A switch, or lock, must not be moved when any portion of a train or an engine is standing on or closely approaching the switch, detector bar or circuit.

616*a*. A route must not be changed when a car or engine is standing inside of the home or dwarf signals of that route.

617. Levers must be operated carefully and with a uniform movement. If any irregularity, indicating disarranged connections, is detected in their working, the signals must be restored so as to display their most restrictive indication and the connections examined.

618. During cold weather the levers must be moved as often as may be necessary to keep connections from freezing.

619. During storms or while snow or sand is drifting special care must be used in operating switches. If the force whose duty it is to keep the switches clear is not on hand promptly when required, the fact must be reported to the chief train dispatcher.

620. If a signal fails to work properly its operation must be discontinued and until repaired the signal secured so as to display its most restrictive indication.

621. Signalmen must observe, as far as practicable, whether the indications of the signals correspond with the positions of the levers.

622. Signalmen must not make nor permit any unauthorized repairs, alterations or additions to the plant.

Any defects in the interlocking plant must be promptly reported to the chief train dispatcher and the interlocking repairman and only duly authorized persons permitted to make repairs.

623. If there is a derailment or if a switch is run through, or if any damage occurs to the track or interlocking plant, the signals must be restored so as to display their most restrictive indication, and no train or switching movement permitted until all parts of the interlocking plant and track liable to consequent injury have been examined and are known to be in a safe condition.

624. If necessary to disconnect a switch, derail, detector bar or its equivalent, or a lock, all switches or derails affected must be safely secured.

625. When switches or signals are undergoing repairs, signals must not be displayed for any movements which may be affected by such repairs, until it has been ascertained from the repairmen that the switches are properly set for such movements.

625*a*. When any part of an interlocking plant essential to the safe operation of a train at normal speed is defective or out of order, the Stop Signals must be held at the Stop position until the train stops, and then, if movement can be made with safety, a signal to proceed may be given. This practice must continue until repairs are made and the plant is in good order.

626. Signalmen must observe all passing trains and note whether they are complete and in order; should there be any indication of conditions endangering the train, or any other train, the signalman must take such measures for the protection of trains as may be practicable.

627. If a signalman has information that an approaching train has parted he must, if possible, stop trains or engines on conflicting routes, clear the route for the parted train, and give the Train-parted signal to the engineman.

628. Signalmen must have the proper appliances for hand signaling ready for immediate use. Hand signals must not be used when the proper indication can be displayed by the interlocking signals. When hand signals are necessary they must be given from such a place and in such a way that there can be no misunderstanding on the part of enginemen or trainmen as to the signals, or as to the train or engine for which they are given.

629. If necessary to discontinue the use of any interlocking signal, hand signals must be used and the chief train dispatcher and interlocking repairman notified.

629*a*. When necessary to use hand signals to proceed, the route must be known to be properly set up and the train come to a stop before the signal is given.

630. Signalmen will be held responsible for the care of the interlocking station, lamps and supplies; and, unless otherwise provided, of the interlocking plant.

631. Lights in interlocking stations must be so placed that they cannot be seen from approaching trains.

632. Lights must be used upon all interlocking signals from sunset to sunrise and whenever the

signal indications cannot be clearly seen without them.

633. If a train or engine overruns a Stop-signal the fact must be reported to the chief train dispatcher, also on the daily interlocking report.

634. Signalmen must not permit unauthorized persons to enter the interlocking station.

ENGINEMEN AND TRAINMEN.

661. If a signal, permitting a train to proceed, after being accepted, is changed to a Stop-signal before it is reached, the stop must be made at once. Such occurrence must be reported to the chief train dispatcher.

662. Trains or engines must not pass a signal indicating stop, except as provided in Rule 663.

663. Trains or engines must not proceed on hand signals as against interlocking signals until enginemen and trainmen are fully informed of the situation and know that it is safe to proceed.

663*a*. Trainmen must not give a proceed signal against interlocking signals that are in operation.

663*b*. Enginemen and trainmen must bring their train to a stop at a fixed signal indicating Stop, also at the Stop signal of an interlocking plant reported out of service, before accepting a hand signal.

663*c*. When a train is stopped by a signal without apparent cause, trainman or engineman will at once ascertain the cause from signalman.

664. The engineman of a train which has parted must sound the whistle signal for Train-parted on approaching an interlocking plant.

665. An engineman receiving a Train-parted signal from a signalman must answer by the whistle signal for Train-parted.

666. When a parted train has been re-coupled the signalman must be notified.

667. Sand must not be used over movable parts of an interlocking plant.

667*a*. In freezing weather overflow from injectors must not be permitted over movable parts of an interlocking plant.

668. Conductors, or enginemen of yard engines, must report to the chief train dispatcher any unusual detention at interlocking plants.

669. Trains or engines stopped by the signalman in making a movement through an interlocking plant, must not move in either direction until they have received the proper signal from him.

670. A reverse movement within the limits of an interlocking plant, or a forward movement after making a reverse movement, must not be made without the proper interlocking signal or permission from the signalman.

SIGNAL REPAIRMEN.

681. Repairmen are responsible for the inspection, adjustment and proper maintenance of all the interlocking plants assigned to their care.

682. When the condition of switches or track does not admit of the proper operation or maintenance of the interlocking plant, the fact must be reported to the division superintendent and supervisor of signals or division engineer.

683. When any part of an interlocking plant is to be repaired a thorough understanding must first be had with the signalman, in order to secure the safe movement of trains and engines during repairs. The signalman must be notified when the repairs are completed.

684. If necessary to disconnect a switch, derail, detector bar or its equivalent, or a lock, all switches or derails affected must be safely secured before any train or engine is permitted to pass over them.

685. Alterations or additions to an interlocking plant must not be made unless authorized by the signal engineer.

RULES FOR EMPLOYES IN GENERAL.

NOTICE.

In addition to the rules under this heading, all employes of the operating department must provide themselves with the rules, regulations and instructions issued by other departments which affect their duties, be thoroughly conversant and comply therewith.