### MIESOURI PACIFIC LINES

September 1, 1929

### Missouri Pacific Lines

## RULES

## FOR THE GOVERNMENT OF THE OPERATING DEPARTMENT

EFFECTIVE 12:01 A. M. SUNDAY, SEPTEMBER 1, 1929

The rules, as far as practicable, are in accordance with the Standard Code adopted by the American Railway Association.

They govern the Railroads operated by the MISSOURI PACIFIC LINES, superseding all previous rules and instructions inconsistent therewith.

Special Instructions may be issued by proper authority.

J. CANNON

Vice President and
General Manager.

W. G. CHOATE General Manager.

# Block Signal and Interlocking Rules.

#### DEFINITIONS.

Block System.—A series of consecutive blocks.

Manual Block System.—A series of consecutive blocks, governed by block signals operated manually, upon information by telegraph, telephone or other means of communication.

Controlled Manual Block System.—A series of consecutive blocks governed by block signals, controlled by continuous track circuits, operated manually upon information by telegraph, telephone or other means of communication, and so constructed as to require the co-operation of the signalmen at both ends of the block to display a Clear or a Permissive Block Signal.

Automatic Block System.—A series of consecutive blocks governed by block signals operated by electric, pneumatic or other agency actuated by a train, or by certain conditions affecting the use of a block. (Rules 501 to 519, inclusive.)

Absolute and Permissive Block System.—An Automatic Block System. (Rules 501 to 536, inclusive.)

Interlocking.—An arrangement of switch, lock and/or signal appliances so interconnected that their movements must succeed each other in a predetermined order.

Block Station.—A place from which block signals are operated.

Interlocking Station.—A place from which an interlocking plant is operated.

Block.—A length of track of defined limits, the use of which by trains is governed by block signals.

Interlocking Plant.—An assemblage of switch, lock and/or signal appliances, interlocked.

Fixed Signal.—A signal of fixed location indicating a condition affecting the movement of a train.

Block Signal.—A fixed signal at the entrance of a block to govern trains entering and using that block.

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 entering and using said route or block.

Distant Signal.—A fixed signal used in connection with one or more signals to govern the approach thereto.

Dwarf Signal.—A low home signal.

Absolute Block.—A block in which but one train at a time is permitted.

Permissive Block.—A block in which two or more trains are permitted under restricting instructions.

Intermediate Siding.—A siding between block stations, or where a block station is closed.

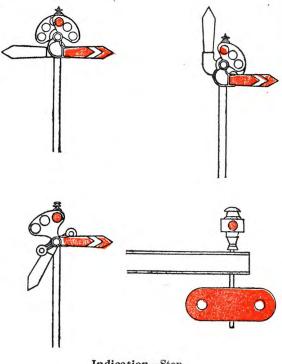
Medium Speed.—A speed not exceeding onehalf the maximum authorized at point involved, not exceeding thirty miles per hour.

#### MANUAL BLOCK SYSTEM.

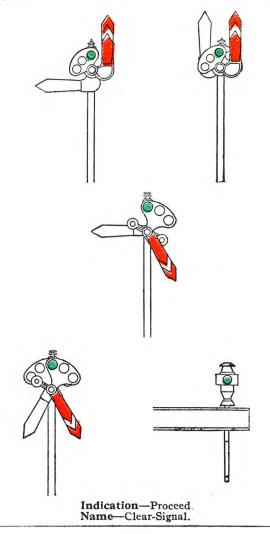
302. Train Order signals are used for Block Signals, and all rules applying to train order signals remain in effect.

The following signals will appear where conditions require their use:

#### 302 A.



Indication—Stop. Name—Stop-Signal.



- 305. 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.
- 306. When a block station is open at an irregular hour, trains must be notified by train order or by special instructions, and special precautions must be taken to call the attention of trains approaching such block stations to the indications of the block signals.
- 311. The normal indication of Home or Block Signals is Stop.
- 312. Signals must be operated carefully and with a uniform movement. If a sign 1 fails to work properly its operation must be discontinued and the signal secured so as to display its most restrictive indication until repaired.
- 313. Signalmen must observe, as far as practicable, whether the indications of the signals correspond with the positions of the levers.
- 314. Signalmen must not make nor permit any unauthorized repairs, alterations or additions to the apparatus.
- 315. A block record must be kept at each block station.

#### 316. COMMUNICATING CODE.

- 1-Display Stop Signal.
- 13-I understand.
- 17—Display Stop Signal. Train following.
  - 2—Block Clear.
  - 3—Block wanted for train other than passenger.

- 36—Block wanted for passenger train.
  - 4—Train other than passenger has entered block.
- 46—Passenger train has entered block.
  - 5—Block is not clear of train other than passenger.
- 56-Block is not clear of passenger train.
  - 7—Train following.
  - 8—Opening block station. Answer by record of trains in the extended block.
  - 9—Closing block station. Answer by 13.
- 316(a). When the block is operated by telephone, signalmen shall give their names in each case when arrangements are made for the admission of a train into a block, and same is to be recorded on the block record, and in the operation, the words set opposite the code numbers shown in Rule 316 will be spoken in place of the code numbers.
- 317. To admit a train to a block, the signal-man must examine the block record, and, if the block is clear, give "1 for....." to the next block station in advance. The signalman receiving this signal, if the block is clear, must display the Stop-signal to opposing trains and reply "2 for....." If the block is not clear, he must reply "5 of......" or "56 of....." The signalman at the entrance of the block must then display the proper signal indication.

A train must not be admitted to a block which is occupied by an opposing train or by a passenger train, except as provided in Rules 317(c), 333, or by train order.

The approaching train will then be admitted to the block with Permissive Card Form B, authorized by the Trainmaster.

317(a). Except by train order in case of necessity, as instructed by the Trainmaster, or as provided in these rules, the Absolute block will be used.

The Permissive Block will be used only when authorized by these rules or by the Trainmaster, and must be protected by Permissive Cards.

The Permissive Block will not be authorized:

(a) In the rear of passenger trains.

(b) During snowy, foggy, or otherwise blinding weather. Signalmen will act immediately on the appearance of such obscurity, and will inform the Trainmaster. The Trainmaster will issue specific instructions covering the points on each district where Permissive Block is prohibited.

When a passenger train is standing at a block station, a Permissive Card, when specially authorized by the Trainmaster, may be issued at the block station in the rear to a following train whose run terminates in a yard before reaching the track occupied by the passenger train.

A work train may be given Permissive Card to occupy block in rear of a passenger train, subject to Rule 91, when working limits of work train terminate short of open block office, and when the work train and signalmen at each end of the block hold train order of Form "19" to the work train and to the Operators at each end of the block:

#### EXAMPLE:

Operator A.
Operator B.

C & E Work Extra 501.

Work Extra 501 may use permissive card at restricted speed behind passenger trains Nos..... between ..... and ......

To give a work train the right to work within certain limits, protecting against specified trains, permissive cards addressed to the trains mentioned in the work order at the open block stations on each side of the working limits will be authorized at the same time the order is sent to the work train.

- 317(b) Signalmen will make three manifold Permissive Cards, one for Conductor, one for Engineman and place one on file.
- 317(c). When trains either by time-table or train order are to meet or pass at an intermediate siding, a Permissive Card for each train will be authorized by the Trainmaster and delivered at last open Block Station.

When the inferior train is not found at the intermediate siding designated on the Permissive Card, the superior train if not otherwise restricted, may proceed at restricted speed through the block, unless the expected train is met before the next open Block Station is reached.

The conductor of a 2nd or 3rd class or extra train which has arrived at an intermediate siding to be met or passed by a first class train, will, as soon as train is clear of main line, and the switches have been properly set, notify the signalman at the block station on each side of the intermediate siding by telephone, that train is clear of main line, giving time, number of train or engine, in case of an extra train, and the conductor's name in full, stating that train will not re-enter block until block rights are again obtained.

When an inferior train is at a Block Station on siding, awaiting arrival of an opposing train, to enable it to depart promptly when opposing train has arrived and cleared the switch, Signalman will fill out Clearance Card Form C, previously arranging for the use of the block, excepting the train or trains specified.

- 317(d). When a second or third class, or Extra train is within Yard Limits, it may be reported as arrived, provided, the Signalman has seen the markers or has been notified by the Conductor. Following trains may be given a clear signal, except that if a first class train is to enter the block, it must have a Permissive Card. When a passenger train is at a Block Station no train will be permitted to follow until the passenger train has cleared the block, except as provided in Rule 317(a) or by train order.
- 319. When a train enters a block, the signal-man must give "4....," or "46....," and the time, to the next block station in advance, and when the train has passed the Home or Block Signal and the signalman has seen the markers he must display the Stop-signal, and when the rear of the train has passed 300 feet beyond the Home or Block Signal, he must give the record of the train to the next block station in the rear, except when such train has passed the Home or Block Signal under the authority given by Rule 362(a).
- 320. Unless otherwise provided, signalmen must not ask for the block until they have received a report of the train from the next block station in the rear.
- 321. Signalmen must observe all passing trains and note whether they are complete and in order, and the markers properly displayed.
- 322. Should a train pass a block station with any indication of condition endangering the train, or a train on another track, the signalman must immediately notify the signalman at the

next block station in advance, and each must display Stop-signals to all trains that may be affected, and must not permit any train to proceed until it is known that its track is not obstructed.

- 323. Should a train without markers, pass a block station, the signalman must notify the signalman at the next block station in each direction, and must not report that train clear of the block until he has ascertained that the train is complete.
- 324. Should a train pass a block station in two or more parts, the signalman must stop all trains moving in the same direction and notify the signalman at the next block station in advance. A signalman having received this notice must stop all trains moving in the opposite direction. The Stop-signal must not be displayed to the engineman of the parted train if the train can be admitted to the block in advance under Block Signal Rules, but the Train-parted Signal must be given. Should a train in either direction be stopped, it may be permitted to proceed when it is known that its track is not obstructed.
- 325. A signalman informed of any obstruction in a block must immediately notify the signalman at the other end of the block and each must display Stop-signals to all trains that may be affected and must not permit any train to proceed until it is known that its track is not obstructed.
- 326. When a train takes a siding or otherwise clears the main track the Signalman must know that it is clear of the block before giving 2 or displaying a Clear signal for that block.

The signalman must obtain control of the block before permitting a train to re-enter the block.

326(a). When trains are to meet at a block station, signalman will block all trains until the

train or trains that are to be met have arrived and the markers have been seen or the conductor reports that all of the train has arrived. Should the train reported to signalman by conductor, as having arrived, be unable to clear main track, permissive card may be authorized for following or opposing trains, previously arranging for the use of the block excepting train specified.

D-327. On two or more tracks, when a train is to cross over or obstruct the other track, Signalman will so inform the Trainmaster and obtain authority to issue a cross-over card Form "E", before allowing the train to obstruct the other track.

All cross-over movements must be entered on the block record.

Cross-over movements will be designated by letter and not by number.

- 328. When coupled trains are separated, as prescribed by Rule 364, the signalman must regard each portion as an independent train.
- 329. When necessary to stop a train for which either a Clear Home or Block Signal has been displayed or Permissive Card delivered and accepted, the signalman must give hand signals in addition to displaying Stop-signal.
- 330. A signalman having train orders for a train must display the block signal at "Stop." He may permit trains so stopped to proceed under Block Signal Rules after complying with Rules for Movement by Train Orders.
- 331. When, from the failure of block signal apparatus the block signal can not be changed from the normal indication, a signalman, having information from the signalman at the next block station in advance that the block is clear, may admit a train to the block by the use of

Clearance Card, Form C. If the block is occupied by a train, other than an opposing train or a passenger train, the signalman may admit a following train by the use of a Permissive Card, Form B.

333. When, from any cause, a signalman is unable to communicate with the next block station in advance, he must stop all trains approaching in that direction. Should no cause for detaining a train be known, it may then be permitted to proceed with Permissive card, Form B, provided five minutes have elapsed since the passage of the last preceding train (except a passenger train). If unable to communicate with the train dispatcher, the Signalman may issue Permissive Card, Form B, signed by himself, without designating letter, time made complete and the Trainmaster's initials as required by Rules 317(b) and 362(b).

The Conductor of a train holding a Permissive Card issued under such circumstances must deliver it to the signalman at next block station in advance.

- 334. 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 block signals, except as prescribed by Rule 329 or 343. 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.
- 335. Block signals for a track apply only to trains moving with the current of traffic on that track.

Manual Block System Rules will govern when moving trains against the current of traffic.

336. Signalmen will be held responsible for the care of the block station, lamps and supplies, and, unless otherwise provided, of the signal apparatus.

- 337. Lights in block stations must be so placed that they cannot be seen from approaching trains.
- 338. If a train overruns a Stop-signal, the fact must be reported to the Trainmaster.
- 339. If a Stop-signal is disregarded, the fact must be reported to the next block station in advance and then to the Trainmaster.
- 340. To open a block station the signalman must give 8 to the next block station in each direction and record the trains that are in the extended block. He must then display the normal signal indication and notify the next block station in each direction and the Trainmaster that the block station is open.

When trains, which were in the extended block when the block station was opened and which had passed his block station before it was opened, clear the block in advance he must repeat the record to the block station in the rear.

- 341. A block station must not be closed except upon authority of Trainmaster.
- 342. Unless otherwise provided, a block station must not be closed until the block in each direction is clear of all trains.

To close a block station, the signalman must give 9 to the next block station in each direction, and when he receives 13 enter it on his block record, with the time it is received from each block station.

The block signals must then be placed at Proceed, all lights extinguished and the block wires arranged to work through the closed block station.

343. When a block station is open at an irregular hour, signalman must use hand signals, in addition to block signals, to give the required indications until all trains have passed which

have not been notified by train order or by special instructions that the block station is open. Signalmen must take special precautions to call the attention of trains approaching the block station to the indications of the block signals.

- 344. Signalmen must not permit unauthorized persons to enter the block station.
- 362. Trains must not pass a Stop-signal without receiving a Clearance Card, Form C, except as prescribed by Rule 362(a).
- 362(a). A Stop-signal at a Block Station may be passed at restricted speed in order to take fuel, water, or to perform station work within yard limits; also, at time-table or train order meeting point when siding is in advance of signal and it is necessary for a train to head in on siding, subject to the restrictions prescribed by the rules for movement of trains, but in every case a Clearance Card must be obtained before departing from the station.

When a siding is in advance of a block station, although at an open office, it may be treated as an intermediate siding, and in such case a Permissive Card must be issued as provided in Rule 317(c).

- 362(b). Permissive Cards will be designated by letter and not by number.
- 362(c). When a Permissive Card is issued to a train, it must proceed at restricted speed as specified. Clearance Card is also necessary to release the train from the Block Signal.
- 363. Trains must not proceed on hand signals as against block signals.
- 364. Unless otherwise directed, when two or more trains have been coupled and so moved past any block station, they must be separated only at a block station and the signalman notified.
- 365. When a train takes a siding or otherwise clears the main track it must not again enter the

block or foul the main track without permission of the signalman.

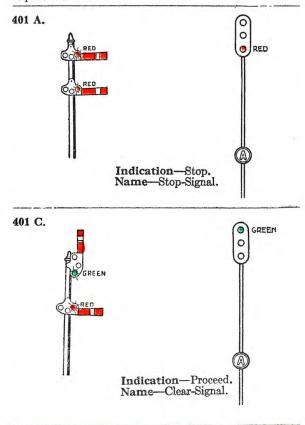
A train having passed beyond the limits of a block must not back into that block without permission from the signalman.

- 365(a). Trains of an inferior class or extra trains must not occupy the main track in any block when a first class train is due to enter the block at the block station in advance, or in the rear, and must clear the time of the first class train at the entrance to the block, not less than five minutes.
- 367. The engineman of a train which has parted must sound the whistle signal for Trainparted when approaching a block station.
- 368. An engineman receiving a Train-parted signal from a signalman must answer by the whistle signal for Train-parted.
- 369. When a parted train is recoupled the signalman must be notified.
- 370. When there is an obstruction between block stations, notice must be given to the nearest signalman.
- 371. When a train is stopped by a Home or Block Signal the Conductor and Engineman must immediately ascertain the cause.
- 372. Conductors must report to Trainmaster any unusual detention at Block Stations.
- 373. A block station must not be considered as closed, except as provided for by time-table or special instructions.

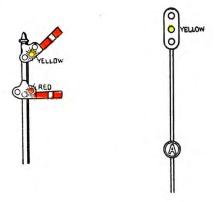
# Controlled Manual Block System.

401. Three-Position Home or Block Signals.

The following signals will appear where conditions require their use:



#### 401 G.



Indication—Proceed at restricted speed. Name—Permissive-Signal.

#### 402. Two-Position Home or Block Signals.

The following signals will appear where conditions require their use:

#### 402 A.



Indication—Stop.
Name—Stop-Signal.

#### 402 C.



Indication—Proceed. Name—Clear-Signal.

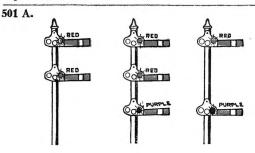
- 405. Controlled manual block signals govern the use of the block, and unless otherwise provided, their indications supersede time-table superiority and take the place of train orders; they do not dispense with the use or the observance of other signals whenever and wherever they may be required.
- 405(a). Except as modified by these rules, the Manual Block System Rules are in effect.
- 462. A train must not pass a Stop-signal without receiving Permissive Card, Form F, or a train order authorizing it to do so.
- 465. When a train takes a siding or side track, it must not again enter the block without communicating with and obtaining permission from the signalman.

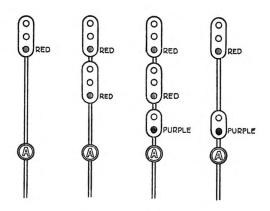
A train having passed beyond the limits of a block must not re-enter that block without permission from the Signalman.

# Automatic Block System.

501. Three-Indication Signals

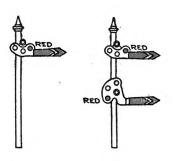
The following signals will appear where conditions require their use:

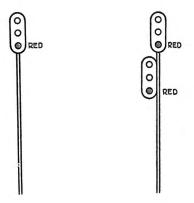




Indication—Stop.
Name—Stop-Signal.

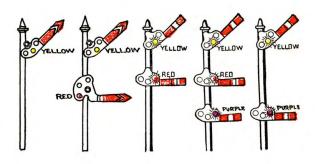
#### 501 AA.

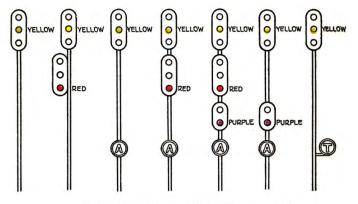




Indication—Stop, then proceed. Name—Stop and proceed-signal.

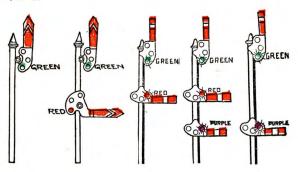
#### 501 B.

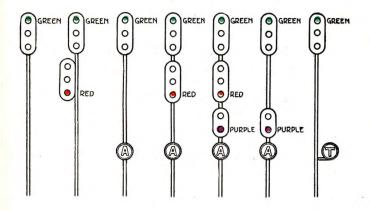




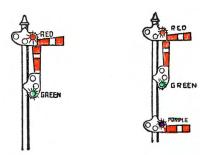
Indication—Proceed at restricted speed. Name—Permissive-Signal.

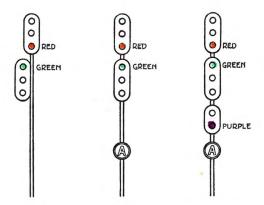
#### 501 C.



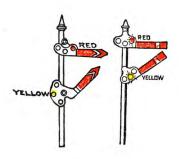


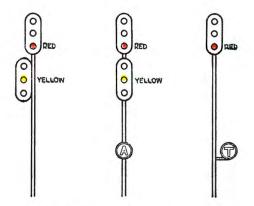
Indication—Proceed. Name—Clear-Signal.





Indication—Proceed at restricted speed. Name—Clear-Restricting-Signal.



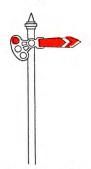


Indication—Proceed at restricted speed.
Name—Permissive-Signal.
\*Applicable only to trains handling over 75% of tonnage rating. Other trains must "stop-then-proceed"—Rule 501 AA.

#### 502. Two-Position Home or Block Signals.

The following signals will appear where conditions require their use:

#### 502 AA.



Indication—Stop; then proceed. Name—Stop and proceed-signal.

#### 502 C.

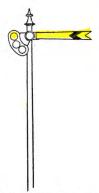


Indication—Proceed. Name—Clear-Signal.

#### 503. Two-Position Distant or Block Signals.

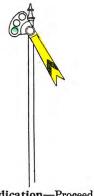
The following signals will appear where conditions require their use:

503 J.



Indication—Proceed at restricted speed. Name—Permissive-Signal.

503 K.

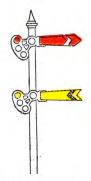


Indication—Proceed. Name—Clear-Signal.

#### 504. Two-Position Home and Distant Block Signals.

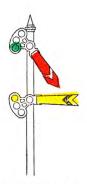
The following signals will appear where conditions require their use:

#### 504 AA.



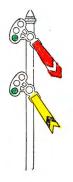
Indication—Stop; then proceed. Name—Stop and proceed-signal.

504 B.



Indication—Proceed at restricted speed. Name—Permissive-Signal.

504 C.



Indication—Proceed. Name—Clear-Signal.

- 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.
- 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 and Proceed Siginal it may proceed at restricted speed, expecting to find a train in the block, broken rail, obstruction or switch not properly set.
  - (a). On single track, after waiting five minutes
- (b). On two or more tracks, after waiting one minute.
- 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 at once to the Trainmaster.
- 511. Both switches of a cross-over must be opened 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(c). Signals located not more than eight hundred feet from head-block of main track switches will be used as switch indicators for such switches.
- 513. On single track within the limits of a block, a train which has made an unusual stop of a length to exceed two (2) minutes, must run at restricted speed until the train clears the block.

- 514. At meeting points in the Automatic Block System, the train taking siding may pass, at restricted speed and without stopping, a signal at "Stop" at entrance of block in which siding is located, and so proceed to the siding.
- 515. A train which is to hold main track at a meeting point, when arriving before the train which takes siding, must not pass the post marked "BLOCK," nor must trainmen change siding switch in this track section so as to set the signal at distant end of adjacent block against the expected train.
- 516. A Home or Block Signal may assume the "Stop" position after the distant signal has been passed at "Proceed."
- 517. To avoid setting signals at stop, cars or engines must not be allowed to stand on side tracks between the insulated joints at clearance point and the main track switch. At a meeting point in the Automatic Block System, a flagman should be sent promptly to notify the expected train and avoid the wait of five (5) minutes when train on siding is not clear.

#### 512. Switch Indicators for Main Track Switches.

The following signals will appear where conditions require their use:

#### 512 A.



Indication—Block occupied.
Name—Block-Occupied-Indicator.

#### 512 B.



Indication—Block clear. Name—Clear-Indicator.

- 518. Engineman must not clean ash pans or cinders from smoke arches on the main track inside of track circuit limits.
- 519. Indications given by all signals must be observed whether or not the signals have been bulletined as in service.

## ABSOLUTE AND PERMISSIVE BLOCK SYSTEM.

Note—Except as modified by Rules 529 and 536, the Automatic Block System Rules are in effect.

529. When a train is stopped by a Stop Signal, it must stay until authorized to proceed; or on information from the Train Dispatcher that there is no opposing train in the block, it may, after filling out Clearance Card, Form C, proceed at restricted speed to the next signal, displaying a Proceed indication. In case of failure or lack 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, at restricted speed, expecting to find a train in the block, broken rail, obstruction or switch not properly set, except that when a train is proceeding under protection of a flagman from the last Stop Signal, it must continue under protection of a flagman to the next Signal displaying a Proceed indication.

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

536. A train which is to take siding at a point where the switch to be used is within 100 feet in advance of an Automatic Block Signal may pass such signal at "Stop" to enter the siding, at restricted speed, providing the switch is set for the siding and the track known to be clear. In such case Rule 529 will not be effective.

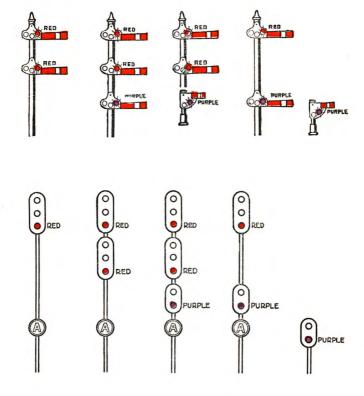
## Interlocking Rules.

601.

Three-Indication Signals.

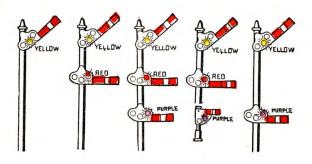
The following signals will appear where conditions require their use:

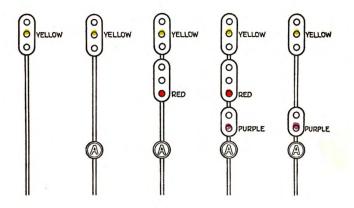
601 A.



Indication—Stop.
Name—Stop-Signal.

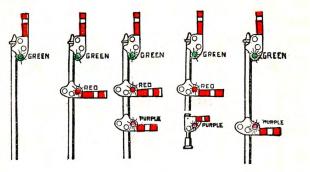
601 B.

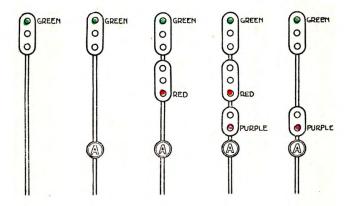




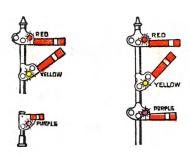
Indication—Proceed at restricted speed. Name—Permissive-Signal.

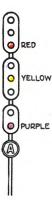




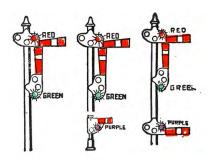


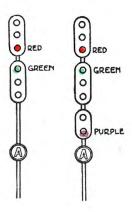
Indication—Proceed. Name—Clear-Signal.



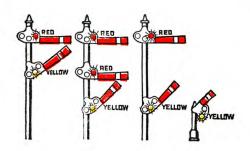


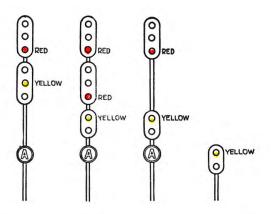
Indication—Proceed at restricted speed, Name—Restricting-Signal.





Indication—Proceed at medium speed. Name—Clear-Restricting-Signal.

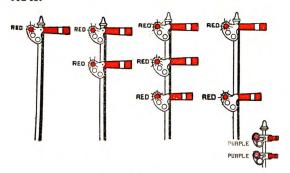




Indication—Proceed at restricted speed. Name—Restricted Speed Signal.

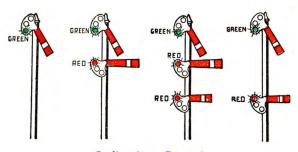
The following signals will appear where conditions require their use:

#### 602 A.



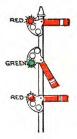
Indication—Stop.
Name—Stop-Signal.

#### 602 C.



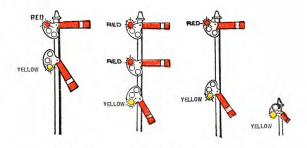
Indication—Proceed.
Name—Clear-Signal.

#### 602 F.



Indication—Proceed at medium speed. Name—Clear-Restricting-Signal.

#### 602 G.



Indication—Proceed at restricted speed. Name—Restricted Speed Signal.

The following signals will appear where conditions require their use:

#### 603 J.



Indication—Proceed at restricted speed. Name—Permissive-Signal.

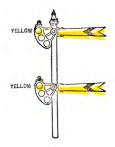
#### 603 K.



Indication—Proceed. Name—Clear-Signal.

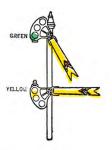
The following signals will appear where conditions require their use:

#### 604 J.



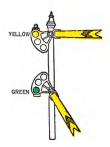
Indication—Proceed on main track at restricted speed. Name—Permissive-Signal.

#### 604 K.



Indication—Proceed on main track. Name—Clear Signal.

#### 604 L.



Indication—Enter siding at first switch. Name—Enter-Siding-Signal.

604 M.





Indication—Stop. Name—Stop-Signal. 604 N.

604 P.





Indication—Enter main track with traffic.

Name—Restricted Speed Signal.

Indication—Proceed at restricted speed on siding.

Name—Restricted Speed Signal.

604 Q.



Indication—Enter main track at first cross-over. Name—Clear-Restricting-Signal.