

CHAPTER –1

GENERAL INSTRUCTIONS APPLICABLE TO BLOCK WORKING

1.1 System of working: The instructions contained in the succeeding rules of this Manual refer to the working of trains under the Absolute Block System alone, unless otherwise specially stated.

1.2 Means of communication:

- (a) The following means of communication are given in the order of priority for obtaining line clear :-
 - (i) Block instruments, Track Circuit or axle counters
 - (ii) Telephone attached to Block Instruments.
 - (iii) Station to Station fixed Telephones wherever available.
 - (iv) Fixed telephone such as Railway Auto phones & BSNL phones.
 - (v) Control telephone.
 - (vi) VHF Sets.
- (b) If all the above means of communications fails the block section shall be considered totally interrupted and the procedure prescribed in SR 6.02 shall be followed for working of trains over such section.

1.3 Object of provision of Electrical Block Instruments: The object of signalling trains by Electrical Block Instruments are to provide at all time

- (i) A visual indication of the condition of the Block Section to which they refer to and
- (ii) To guard against more than one train being admitted into a block section at the same time.

The following types of Block Instruments are in use on this Railway :-

(a) Single line :-

1. Neale's Ball Token Instruments.
2. Neale's tablet Token instrument.
3. Push Button type Tokenless instrument.(RAB)
4. Daido handle type Tokenless Block Instrument. (FM)

(b) Double line :-

1. Sieman's General Electric (S.G.E.) Lock and Block Instrument.

1.4 Block Competency Certificate (GR. 14.04.)

- (1) The Principal, Zonal Railway Training Institute (ZRTI), is responsible for proper training and issue of Block Competency Certificates (BCC) to staff connected with block working, attending initial/promotional/refresher course and other special courses after necessary tests are conducted by him. Such certificates shall be valid only for a period of 3 years from the date of issue upto the last day of the month in which the BCC is due for any work it can be revalidated only once for six more months by Sr. Divisional Operations Manager / Divisional Operations Manager. **(CM No.11 dated 08.10.2020)**
2. The holder of the Block Competency Certificate shall advise the Sr.Divisional Operations Manager / Divisional Operations Manager in writing through the Station Master not less than 15 days in advance of the date of expiry of Block Competency Certificate.
3. Sr.Divisional Operations Manager / Divisional Operations Manager shall renew the same after conducting necessary test. A record of such test with its result shall be made at the back of the original Block Competency Certificate.
4. The Block Competency Certificate shall be in the personal custody of the staff while on duty, to whom it is issued (except when it is submitted for renewal)and it shall be promptly produced when demanded by inspecting Officials of the Operating and Signal Departments.

1.5 Train Signal Register: –

- (1) A Train Signal Register shall be maintained for each Block Instrument.
- (2) The Station Master on duty shall, himself, record the actual time at which the bell signals are given or received on the Block Instrument, in the Train Signal Register, correct to the nearest minute.
- (3) All entries shall be made in ink.
- (4) All signatures shall be recorded in full and not by initials.
- (5) No erasures or overwriting shall be made in the Train Signal Register. If any entry is found to be incorrect, a line shall be drawn lightly over it, so that it may be read at any time and the correct entry made above it and signed.
- (6) A line shall be drawn in red ink, below the entry for the last train of the date.
- (7) A line shall be drawn across the Train Signal Register whenever Station Masters change duty. The time of taking over / handing over of the instruments with requisite keys for each type of instruments, shall be recorded with time and shall be signed by

both the outgoing and incoming Station Master in the Train Signal Register.

- (8) The Station Master taking over charge shall test the Block Instrument and record the result instantly in the Train Signal Register.
- (9) The Station Master who makes entry for a train in the Train Signal Register shall continue to be on duty till all entries relating to that train are completed except in cases specially exempted under special instructions.
- (10) The Train Signal Register in use shall be examined and signed daily by the Station Master in charge of the Station.
- (11) The Train Signal Register shall be examined by Officers and Inspectors of the Operating, Safety and Signal & Telecommunication Departments and any irregularities noticed shall be reported to the Divisional Railway Manager. If the irregularity affects the Block Instrument, block shall be suspended and the concerned Signal and Telecommunication officials shall also be intimated.
- (12) The Train Signal Register in use shall not be removed from the cabin or room in which the Block Instruments are kept without the orders of the Divisional Railway Manager. If reference to the Train Signal Register is required, the authorized official shall go to the cabin or room and take necessary extracts.
- (13) The Train Signal Register shall be preserved at stations for one year after the use.
- (14) On both single and double line sections entries shall be made in **red ink** in the Train Signal Register on the following occasions: -
 - i. Suspension or Interruption of block working.
 - ii. Standard time.
 - iii. Block Back & Block Forward
 - iv. Trolleys, Lorries, Motor Trolleys, Motor Lorries Ladder Trolleys and Tower Wagons on line.
 - v. Line Blocks order.
 - vi. Obstruction on running lines.
 - vii. Exchange of "Testing Signals" and extraction of Last Stop Signal control key for testing Last Stop Signal.
 - viii. Power Block order.

- ix. Working of trains during abnormal conditions.
- x. Station Master breaking “off” duty after making an entry for a train in the Train Signal Register but before the transaction is completed.
- xi. Performing shunting in push button type Tokenless block territory when shunt key can’t be extracted.
- xii. Any other special occurrence.

1.6 Private Numbers :

- 1) Different series of Private Number books are printed. The numbers are printed in the Private Number books at random in two digits. There are three columns in the Private Number Book Viz., Private Number, Train Number and Date.
- 2) The Transportation (Traffic) Inspector is responsible for the supply of the Private Number books to all stations. Care must be taken by him to see that Private Number books supplied to adjacent station /cabin are not of the same series.
- 3) The Station Master / Cabin Station Master on duty at every Station /Cabin is provided with three Private Number books one for his use and other two to be kept as a spare. They should be kept under lock & key and in the personal custody of the Station Master /Cabin Station Master on duty. Whenever stock of Private Number book is run down to one it should be intimated to Traffic Inspector for arranging supply of new Private Number Book.
- 4) Private Numbers should be allotted to the successive train movements in the order in which they are printed in the book in use. When a number is allotted to a train, it must be scored with a line drawn horizontally through it, the number of the train for which it is issued are date on which it is issued, being entered in the columns provided for the purpose. If a Private Number has been allotted to a train the running of which is subsequently cancelled, the same Private Number shall not be allotted to any succeeding trains. If it is found from any cause that the next number to be used is the same as the last one issued, the sender shall cancel the number in his book and add the remark “Same as last Private Number”, sign it and issue the next consecutive number. The station, receiving the number shall also be responsible for seeing that no two consecutive numbers received from the same station giving the Line Clear are the same. Single digit Private Numbers or number ending with ‘Zero’, if any found in the Private Number book shall not be used

and scored out with a remark 'single digit' or ending with 'Zero' and signed by the Station Master.

- 5) While handing over charge, the Station Master /Cabin Station Master who is handing over charge, shall hand over the Private Number book in use, together with the spare Private number books to the Station Master /Cabin Station Master who is taking over charge, noting down the last Private Number issued in the Station Diary and Train Signal Register and record the transaction. This shall be signed by both the Station Masters.
- 6) The Transportation (Traffic) Inspectors during inspection of station shall see that the Private Numbers are scored off correctly and that the Train Number, Level Crossing gate number and date are entered against each.
- 7) Used Private Number books shall be preserved by the Station Master incharge for a period of six months and there after shall be treated as old records and disposed off.
- 8) Whenever normal working is in force on sections provided with push button type Tokenless Block Instrument, the Station Master at sending station before setting Block Instrument to "Train Going To" condition shall inform the Station Master at the other end the train number and description. The Station Master at the other end shall acknowledge, if he is willing to receive the train, by repeating the train number and description, communicating his willingness to receive the train, supported by a Private Number. When the Private Number book in use is lost or mislaid, spare book shall be brought into use. Whenever the spare Private Number book is brought into use, the same shall be recorded in the Station Diary and Train Signal Register. The Station Master / Cabin Station Master shall inform the Station Master in charge of the station who shall arrange for prompt replacement. If the Private Number book which is lost mislaid is subsequently traced out, the same shall not be used but shall be returned to the Transportation (Traffic) Inspector, by the Station Master in a sealed cover.
- 9) If no spare Private Number Book is available, the Station Master shall prepare a manuscript Private Number sheet and use the same till such time a Private Number Book is supplied. Such manuscript Private Number sheet should be preserved and sent to the Transportation Inspector/Divisional Railway Manager along with the used Private Number Book.

1.7 Precedence of Trains.-

- (i) On controlled sections, trains shall be worked in accordance with controller's orders.
- (ii) On non - controlled sections or in the event of interruption in control communications, trains shall be given precedence over each other in the following order: -
 - 1st - MRV and / or ART or light engines proceeding to work such trains or to accident spot.
 - 2nd -Rajdhani/Shatabdi/Superfast/ Express Trains.
 - 3rd -Troop Trains.
 - 4th - Passenger Trains including Rail cars and Rail Motor coaches.
 - 5th - Mixed trains.
 - 6th - Inspection trains.
 - 7th -Relief trains returning from Scene of accident. (if with Injured passenger higher priority will be given)
 - 8th - Goods Trains.
 - 9th - Light Engines not going to accident spot.
 - 10th - Material and all othertrains.
- (iii) Owing to irregular running of trains, if two or more trains are ready to start from a same end of a Block Section, preference shall be given to the train standing higher in the table of precedence. If both trains have the same order of precedence, preference shall be given to the one having the longer distance to run.
- (iv) In order to avoid excessive detention to train of lesser importance, a Mail/ Express train running less than 10 minutes late may be detained up to 10 minutes in order to save a delay of 30 minutes or more to a passenger train or 45 minutes to a Goods train.
- (v) A passenger train running less than 10 minutes late may be detained up to 10 minutes in order to avoid a delay of 30 minutes or more to a Goods train.

1.8 Testing of Block Instruments.-

- (i) The Block Instruments and apparatus in conjunction with them may be tested by the authorized Signal and Telecommunication department official only.
- (ii) Testing Signal shall not be exchanged unless the authorized Signal and Telecommunication department official is at one end of the Block Section.

- (iii) The instrument and apparatus in connection with them shall not be tested after “Line Clear” has been given or obtained for a train or when the instrument is not in the “Line Closed” condition.
- (iv) Necessary entries for exchange of Testing Signals shall be made by the Signal and Telecommunication department official and the Station Master at the other end in the Train Signal Register, **in red ink**.
- (v) Whenever the Signal and Telecommunication official opens the Block Instrument such as for restoration of block working after a failure or for maintenance work or when fixing a new instrument, he shall test the instrument.
- (vi) The Signal and Telecommunication department official shall test the working of the Last Stop Signal during his maintenance work or while restoring failures.

Note: *The authorized official for the purpose of the above said rules are Sr.DSTE/ DSTE, ADSTE, SSE/SE/JE/Sig, Technician (Electrical Singal).*

1.9 Contact between Block Circuit and any other Circuit/Cables.-

- (i) If a contact exists between the block wires and any other circuit, there will be either a permanent or intermittent deflection of the Galvanometer needle and possibly irregular beats on the bell. A contact between two block wires would cause signals given on one instrument to be repeated on the neighboring instrument.
- (ii) In such cases, not only the Block Instruments but also the block telephone connected with the instruments shall be considered as having failed and Block Instrument and telephone working shall not be resumed until authorized by the S & T official.

Note: *The authorized official for the purpose of the above said rules are Sr.DSTE/ DSTE, ADSTE, SSE/SE/JE/Sig, Technician (Electrical Singal).*

1.10 Responsibility of Station Master.-The Station Master on duty is responsible to ensure that no unauthorized person operates the Block Instruments.

1.11 Precautions when Government or Railway Telecommunication staff are required to work on the Telecommunication Wires/Cables.

- (1) Before starting work on a telecommunication wire alignment carrying block wires or cables, the staff shall give notice in the following form to the Station Masters at both ends of the Block Section :-

To

Date:

Time:

The Station Masters, 'X' and 'Y'

Staff will commence work on wires/cables in the section from
to.....KMs on (Date) from To Hours Acknowledge.

Designation

Station

- (2) Only after the receipt of acknowledgement from Station Masters, the work shall be started.
- (3) If the notice is from the telecommunication department, the Station Master shall also inform the concerned Railway Signal and Telecommunication department official. If it is from concerned Signal and Telecommunication department official, he shall inform the Divisional Railway Manager.
- (4) The Station Masters need not suspend block working, but shall do so when they suspect a contact.
- (5) The above precautions shall be observed till notice is received about the completion of the work on the wires. The same shall be communicated to the concerned Signal and Telecommunication department official if received from the telecommunication department and to Divisional Railway Manager if received from the official of Signal and Telecommunication department. (Through control if available)

Note:*The authorized official for the purpose of the above said rules are SSE/SE/JE/Sig, Technician (Electrical Singal).*
