PART- I

CHAPTER 1

GENERAL INSTRUCTIONS APPLICABLE TO SINGLE LINE, DOUBLE LINE, MULTIPLE LINES AND QUADRUPLE LINES

1.01 Applicability:

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

1.02 Means of communication:

The following are the authorized means of communication between block stations for giving or obtaining ‘Line Clear’:

(i) Block Instruments or Track Circuits or Axle Counters;
(ii) Telephone attached to the Block Instrument,
(iii) Station to station fixed telephones.
(iv) Fixed telephone such as Railway Auto Phones and BSNL phones.
(v) Control telephone, and
(vi) Very High Frequency sets under special instructions, but not as the sole means of communication on sections where passenger trains run.

1.03 Object of provision of electrical Block Instrument:

(i) The object of signalling trains by electrical Block Instruments is to provide—
   (a) At all times a visual indication of the condition of the block section to which they refer, and
   (b) To guard against more than one train being admitted into a block section at one and the same time.

(ii) The following types of Block Instruments are in use on this railway:

(a) Single line—
   (1) Neale’s Ball Token Instrument
   (2) Neale’s Tablet Token Instrument
   (3) Push Button type Tokenless Instrument
   (4) Handle type Tokenless Instrument - Frequency Modulation type (F.M.Type)

(b) Double line—
   Siemens General Electric Lock and Block Instrument. (S.G.E)

1.04 Certificate of competency:

The Principal, Zonal Railway Training Institute, Tiruchchirappalli, shall issue the Block Competency Certificates to staff connected with Block Instrument working, attending initial / promotional / refresher course and other special courses after conducting necessary tests. Such certificates shall be valid only for a period of 3 years from the date of their issue up to the last day of the month in which the BCC is due for renewal. It can be revalidated only once for 2 more months by Senior Divisional Operations Manager / Divisional Operations Manager. In such cases, the holder of the Block Competency Certificate shall advise the Senior Divisional Operations Manager /
Divisional Operations Manager in writing through the Station Manager/ Station Master-in charge not less than 15
days in advance of the date of expiry and the Senior 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.

(i) The Block Competency Certificate shall be in the personal custody of the staff to whom it is issued and it
shall be promptly produced for inspection by the Officers, Inspecting Official s of the Operating, Safety and
Signal and Telecommunications departments.

(ii) **Issue of Duplicate / Provisional Block Competency Certificate:**

(a) Principal, Zonal Railway Training Institute, Tiruchchirappalli is the Officer authorised for the issue of
Duplicate Block Competency Certificate whenever the original Block Competency Certificate is lost.

(b) The Station Manager / Station Master-in charge shall obtain a statement in writing from the
employee concerned regarding the loss of the Block Competency Certificate. The Station
Manager/Station Master-in charge of the station shall advise the Sr. Divisional Operations Manger/
Divisional Operations Manger, Transportation Inspector with a copy to the Principal, Zonal Railway
Training Institute, Tiruchchirappalli.

(c) However the Sr. Divisional Operations Manger/ Divisional Operations Manager is authorised to issue
a Provisional Block Competency Certificate in lieu of the Block Competency Certificate, which is
lost. The Sr. Divisional Operations Manager/Divisional Operations Manager, issuing the Provisional
Block Competency Certificate shall send a message to the Principal, Zonal Railway Training
Institute, Tiruchchirappalli for issuing a Duplicate Block Competency Certificate. This Provisional
Block Competency Certificate shall be valid for a period of ten days.

(d) In case of the Duplicate Block Competency Certificate is not received till the expiry of the ten days
period mentioned above a fresh Provisional Block Competency Certificate shall be issued duly
withdrawing the Provisional Block Competency Certificate issued earlier.

(e) The Sr. Divisional Operations Manager / Divisional Operations Manager shall monitor the matter
closely till the Duplicate Block Competency Certificate is issued by the Principal, Zonal Railway
Training Institute; Tiruchchirappalli to the concerned staff.

(f) The Provisional Block Competency Certificate shall be in the following format:-:

![Provisional Block Competency Certificate](image)

**Provisional Block Competency Certificate**

Division: 
No:

This is to certify that the Block Competency Certificate No. _________ dated _________ valid
upto_________ issued by the Principal, Zonal Railway Training Institute, Tiruchchirappalli is lost and Shri.
______________, Staff No. ______ is authorised to perform his duties on the strength of this authority.

Station: 
Date: 
DOM
(Officer Seal)

**1.05 Responsibility of Station Master regarding Block Instrument operations:**

(i) No Station Master shall work with any Block Instrument unless he is in possession of a valid Block
Competency Certificate.
(ii) The Station Master on duty is responsible to ensure that no unauthorised person operates the Block Instrument and its appliances or uses the Block Telephone/Control Telephone, where the Block Instruments or Block Telephone/Station to station fixed telephones/Control Telephone are kept.

(iii) The Station Master shall keep the Block Instrument in locked condition when not in use.

1.06 Train Signal Register:

(i) A Train Signal Register shall be maintained for each Block Instrument and also at block stations, where Block Instruments are not provided.

(ii) 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, except that any fraction of a minute shall be counted as one.

(iii) All entries shall be made in ink.

(iv) All signatures shall be recorded in full and not by initials.

(v) 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.

(vi) A line shall be drawn in red ink, below the entry of the last train of the date.

(vii) A line shall be drawn across the Train Signal Register by outgoing Station Master whenever Station Masters change duty. The outgoing Station Master shall affix his signature legibly and enter the time above the line. The incoming Station Master shall also affix his signature legibly and enter the time below the line.

(viii) The time of relief and handing over/taking over of the Block Instrument with requisite keys for each type of Block Instrument shall be recorded by the outgoing/incoming Station Master in the Train Signal Register and signed by both the Station Masters respectively.

(ix) The Station Master taking over charge shall test the Block Instrument and record the result in the Train Signal Register.

(x) The Station Master who makes an 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 specifically exempted under S.R. 14.07(i)

(a).

Note:— The Station Master who grants ‘Line Clear’ for a train shall remain on duty till the train has arrived and the ‘train out of block section’ signal is given and acknowledgement obtained. The Station Master who obtains ‘Line Clear’ for a train to enter a block section shall remain on duty till the ‘train out of block section’ signal is received and acknowledged.

(xi) The Train Signal Register in use shall be examined and signed daily by the Station Manager or Station Master-in-charge.

(xii) The Train Signal Register shall be examined by Officers, Inspectors of the Operating, Safety and Signal and Telecommunication departments.

(xiii) Any irregularities noticed shall be recorded in the Train Signal Register and reported to the Divisional Railway Manager/T. If the irregularity affects the Block Instrument, the Signal and Telecommunication department official s concerned shall also be intimated.

(xiv) 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/T. If any reference to the Train Signal Register is required, the authorized Official shall go to the cabin or room and take necessary extracts.

(xv) The Train Signal Register shall be retained at stations for one year after the half-year in which it is completed, unless ordered to the contrary.
(xvi) **The following information shall also be recorded in the remarks column of the TSR:**

(a) Progressive number of caution order.
(b) Road of reception & despatch.
(c) Actual time of despatch / arrival of Patrolmen.
(d) Signature of Guard / Loco Pilot in case of trains working with T.1408 / T/A 602 / T/C912.
(e) Progressive number of LCT or any other paper Authority to proceed.
(f) Identification Nos. whenever used.
(g) Whenever ‘Line Clear’ is cancelled, the reasons for doing so.

(xvii) **On both single and double line sections entries shall be made in red ink in the Train Signal Register on the following occasions:**

(a) Failure / suspension of Block Instrument working and resumption of normal working.
(b) Standard time.
(c) Block back / Block forward.
(d) Trolleys, Lorries, Motor Trolleys, Motor lorries, Tower wagons, Track maintenance machine and Ladder Trolleys on line.
(e) Line Block Order.
(f) Power Block Order.
(g) Obstruction on running lines.
(h) Exchange of ‘Testing’ signals.
(i) Last Stop signal control key handed over to S&T staff for ‘testing’ the Last Stop Signal.
(j) Balancing of tokens at 00.00 hours below the entry for the last train.
(k) Trains running on ‘Authority to Proceed without line clear’ (T.1408) / ‘T/A 602’.
(l) Station Master breaking ‘off’ duty after making an entry for a train in the Train Signal Register but before the transaction is completed in terms of S.R. 14.07 (i) (a)
(m) Performing shunting in Push Button type / Handle type Tokenless Block Instrument when Shunt key cannot be extracted.
(n) Any other special occurrences.

1.07 **Private Numbers:**

(i) The Station Master/Cabin Master on duty at every station / Cabin is provided with Five Private Number books, one for his use and the other Four to be kept as spare. They should be kept under lock and key in the safe custody of the Station Master/Cabin Master on duty.

(ii) The Transportation Inspectors are responsible for the supply of the Private Number books to all stations in their section including junction stations. Care must be taken by them to see that Private Number books supplied to adjacent station/cabin are not of the same series.

(iii) Different series of Private Number books are printed. The numbers are printed in the Private Number books at random. There are three columns in the Private Number book viz., the Private Number, the train number and date.

(iv) Private Number shall 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, and the Train number for which it is issued and the date on which it is issued shall be entered in the columns provided for the purpose. If a Private Number has been allotted to a train and the running of which is subsequently cancelled, the same Private Number shall not be allotted to any succeeding train. If it is found from any cause that the next number to be used is the same as the last one issued, the person giving the PN shall cancel the number in his book and make the remark, ‘same as last Private Number’,
initial it and issue the next different number.

(v) The Station Master/Cabin Master receiving the number shall also be responsible for seeing that no two consecutive numbers received from the same station/cabin giving Line Clear or for any other transaction are the same. Single digit Private Numbers, numbers ending with zeros if any, found in the Private Number book shall not be used and they shall be scored out, cancelled and initialled by the Station Master/Cabin Master.

(vi) While handing over charge, the Station Master/Cabin Master who is handing over duty, shall hand over the Private Number book in use, together with the spare Private Number books to the Station Master/Cabin Master who is taking over duty 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 persons, viz., handing over charge and taking over charge.

(vii) The Transportation Inspectors and Supervisory Officials when visiting stations shall see that the Private Numbers are properly used.

(viii) Used up Private Number books shall be sent to the Transportation Inspector concerned in a sealed cover who shall arrange immediate replacement. Used Private Number books shall be preserved for Six months after the half-year in which they are completed and after that they shall be treated as old records and disposed off as such.

Note: - When the Private Number book in use is lost or mislaid or exhausted, the spare book shall be brought into use. Whenever a spare Private Number book is brought into use, the same shall be recorded in the station diary. The Station Master on duty shall inform the Station Master in charge of the station who shall arrange for prompt renewal. If the Private Number book, which is lost or mislaid, is subsequently traced out, the same shall not be used but shall be returned to the Transportation Inspector, by the Station Master in a sealed cover.

1.08 Precedence of trains:

(i) (a) On controlled sections, trains shall be worked in accordance with Control's orders.

(b) 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 - Medical Relief Trains/Breakdown specials and light engines proceeding to work such trains
2nd - Super fast trains
3rd - Mail and Express trains
4th - Troop trains
5th - Passenger trains
6th - Mixed trains
7th - Inspection trains
8th - Goods trains
9th - Light engines not proceeding to accident spot
10th - Material trains and all other trains

(ii) On single line, 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.

1.09 Testing of Block Instruments.

(i) The Block Instruments and apparatus in conjunction with them may only be tested by the authorized Signal and Telecommunication department official.

(ii) ‘Testing’ signal shall not be exchanged unless the authorised Signal and Telecommunication department official is at one end of the block section.

(iii) The Block 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 Block 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 department official opens the Block Instrument such as for restoration of Block Instrument working after a failure or for maintenance work or after installing a new Block Instrument, he shall test the Block Instrument. During inspections also, S&T officials may test the block 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:- SSE/SE/JE (Signal)/ESM is the Official authorized for the purpose of these rules.
1.10 Contact between block circuit and any other circuit:

(i) If a contact exists between the block wire and any other circuit, there will be either a permanent or intermittent deflection of the Galvanoscope needle and possibly irregular beats. A contact between two block wires would cause signals given on one Block Instrument to be repeated on the neighbouring Block Instrument.

(ii) In such cases, not only the Block Instrument but also the block telephone connected with the Block Instrument shall be considered as having failed and Block Instrument and telephone working shall not be resumed until authorised by the Signal and Telecommunication department official.

Note: SSE/SE/JE (Signal)/ESM is the official authorised for the purpose of these rules.

1.11 Precautions when Government or Railway Telecommunication staff are required to work on the telephone wires:

(i) Before starting work on a telegraph alignment carrying block wire, the staff shall give notice in the following form to the Station Master at both ends of the block section.

To

The Station Masters ‘X’ and ‘Y’

Telecommunication staff will commence work on the telephone wires in the section from ______ to ______ on _______ from ________ hours.

Acknowledge.

Designation : _____________
Station : _______________

(ii) Only after the receipt of acknowledgement from Station Masters the work shall be started.

(iii) If the Notice is from the Government Telecommunications Department, the Station Master shall also inform the Signal and Telecommunication department official concerned. If it is from Signal and Telecommunication department official concerned, he shall inform the Divisional Railway Manager/T (through Control, if available).

(iv) The Station Masters need not suspend Block Instrument working, but shall do so when they suspect a contact.

(v) The above precautions shall be observed till notice is received about completion of the work on the wires. The same shall be communicated to the Signal and Telecommunication department official concerned, if received from the Department of Telecommunications and to Divisional Railway Manager/T, if received from Signal and Telecommunication department official (through Control, if available).

Note: SSE/SE/JE (Signal) / ESM is the official authorised for the purpose of these rules.
CHAPTER 2

EXPLANATION OF BELL CODE SIGNALS AND USE OF SPECIAL SIGNALS IN EMERGENCIES

2.01 Bell Code: Bell code signals are exchanged for train operation and in emergencies between stations. Following are the prescribed bell codes:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Indication</th>
<th>Code</th>
<th>How signalled (in stroke or beat)</th>
<th>How acknowledged (in stroke or beat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Call Attention or Attend telephone</td>
<td>●</td>
<td>One</td>
<td>One</td>
</tr>
<tr>
<td>(ii)</td>
<td>Is Line Clear or Line Clear Enquiry</td>
<td>● ●</td>
<td>Two</td>
<td>Two</td>
</tr>
<tr>
<td>(iii)</td>
<td>Train entering block section</td>
<td>● ● ●</td>
<td>Three</td>
<td>Three</td>
</tr>
<tr>
<td>(iv)</td>
<td>(a) Train out of block section</td>
<td>● ● ●●</td>
<td>Four</td>
<td>Four</td>
</tr>
<tr>
<td></td>
<td>(b) Obstruction removed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(v)</td>
<td>(a) Cancel last signal given</td>
<td>● ● ●●</td>
<td>Five</td>
<td>Five</td>
</tr>
<tr>
<td></td>
<td>(b) Signal given in error</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(vi)</td>
<td>(a) Obstruction danger signal (General)</td>
<td>● ● ●●●●</td>
<td>Six</td>
<td>Six</td>
</tr>
<tr>
<td></td>
<td>(b) Stop and examine train</td>
<td>● ● ●●●● –</td>
<td>Six pause one</td>
<td>Six pause one</td>
</tr>
<tr>
<td>(c)</td>
<td>Train passed without tail lamp or tail board</td>
<td>● ● ●●●● –</td>
<td>Six pause two</td>
<td>Six pause two</td>
</tr>
<tr>
<td>(d)</td>
<td>Train divided</td>
<td>● ● ●●●●–</td>
<td>Six pause three</td>
<td>Six pause three</td>
</tr>
<tr>
<td>(e)</td>
<td>Vehicles running away in wrong direction on Double line or into the block section on Single line</td>
<td>● ● ●●●● –</td>
<td>Six pause four</td>
<td>Six pause four</td>
</tr>
<tr>
<td>(f)</td>
<td>Vehicles running away in right direction on Double line</td>
<td>● ● ●●●● –</td>
<td>Six pause five</td>
<td>Six pause five</td>
</tr>
<tr>
<td>(vii)</td>
<td>Testing</td>
<td>●●●●●●●●●●</td>
<td>Sixteen</td>
<td>Sixteen</td>
</tr>
</tbody>
</table>

Note:- (1) ‘●’ indicates a stroke or a beat and ‘__’ indicates a pause.
(2) Each signal shall be given slowly and distinctly.
(3) In cases where block instruments are placed in signal cabins, the Cabin Station Master or Cabin Master shall, whenever the code signals for the following are given or received, immediately advise the Station Master on duty at the station:

(a) Obstruction danger signal

(b) Stop and examine train.

(c) Train passed without tail lamp or tail board

(d) Train divided

(e) Vehicles running away into the block section on Single line or in wrong direction on Double line
2.02 Acknowledgement of signals:

(i) Each signal received shall be acknowledged by sending its authorised acknowledgement.
(ii) No signal shall be acknowledged until it is clearly understood.
(iii) A signal shall not be deemed to be complete until it is acknowledged.
(iv) If the station to which a signal is sent does not reply, the signal shall be repeated at intervals of not less than 20 seconds until reply is received.
(v) Under no circumstances, any unauthorised bell signal be exchanged on the block instrument. As a precaution against unauthorised manipulation of the block instruments, staff shall not acknowledge any but the correct authorised signals. Strange or indistinct bell signals such, as may sometimes be received from disturbances by lightening, contact of wires or other irregularity shall, on no account, be acknowledged or responded to on the block instrument. No attempt shall be made to operate the block instrument, which is affected, by one or other of the causes mentioned above.

2.03 The ‘Call Attention’ signal:

(i) The ‘Call Attention’ signal shall be given when it is necessary to draw Attention to the block instrument.
(ii) In order to ascertain that only the correct block station is in contact and to convey the number and description of the train for which Line Clear is required, as well as to ascertain whether the block station in advance is in a position to accept the ‘Is Line Clear’ signal, the ‘Call Attention or Attend telephone’ signal shall be sent to the block station in advance.
(iii) It shall be acknowledged by the Station Master at the other end by giving One beat.

2.04 The ‘Is Line Clear’ signal:–

When to be asked:

(i) At train starting stations, Line Clear shall be asked 5 minutes before the booked departure of trains.
(ii) At intermediate stations, Line Clear shall be asked when a train is sighted in the case of trains stopping for less than 5 minutes and on arrival of a train in the case of trains stopping for 5 minutes and more.
(iii) In the case of run through trains, where the running time from the block station in rear is more than 7 minutes and Line Clear shall be asked 7 minutes before the train is to pass through the station.
(iv) In the case of run through trains with a running time of 7 minutes and less, Line Clear shall be asked immediately on receipt of the ‘Train entering block section’ signal from the block station in rear or as may be specified in Station Working Rules.
(v) In the case of Push Button Type Tokenless Instruments the ‘Train going to’ condition shall be set on the instrument for stopping and run through trains as given above.

2.05 Acceptance of the ‘Is Line Clear’ signal”:-

On the receipt of the ‘Is Line Clear’ signal, if the conditions under which Line Clear can be given are complied with, the block station in advance shall accept the signal by sending the prescribed signal to indicate ‘Line Clear’ on the particular block instrument in use. This will not apply to Push Button type tokenless Block Instrument.

2.06 The “Train entering block section” signal:

(i) On the entry of a train into the block section the “Train entering block section” signal shall be sent to the block station in advance and shall be duly acknowledged.
(ii) When so acknowledged, the block section should be deemed to be blocked against any other train.
2.07 The ‘Train out of block section’ or ‘Obstruction removed’ signal:

(i) When the block section has been cleared by the complete arrival of the train or by the removal of the cause of blocking, the ‘Train out of block section’ or ‘Obstruction removed’ signal shall be given by the block station in advance.

(ii) Before the ‘Train out of block section’ signal is given, the Station Master shall satisfy himself as per the prescribed special instructions-

(a) that the train has arrived complete or the cause of blocking the section has been removed; and

(b) that the conditions under which Line Clear may be given are complied with.

(iii) The provisions of clause (b) of sub rule (ii) above may be relaxed at Class ‘A’ single line crossing stations. In such cases, the Station Master shall satisfy himself that the train is standing at its Starter clear of the line on which the second train is to run.

2.08 The ‘Cancelling’ signal / ‘Signal given in error’:

(i) The ‘Cancelling’ signal cancels the last signal given from the block station from which it is sent.

(ii) Where an ‘Is Line Clear’ signal has been sent and it is afterwards found that the train to which it refers has to be detained for shunting or other purposes or has returned to the block station from which that signal was sent, the ‘Cancelling signal’ shall be sent to the block station in advance, so that the previous signal may be cancelled.

(iii) Whenever Line Clear is cancelled, the Station Master shall enter the reasons for doing so in the ‘remarks’ column of the Train Signal Register.

(iv) Whenever incorrect beats have been given or whenever beats received are not understood, the Station Master detecting the irregularity shall give the ‘Signal given in error’ signal. After this has been acknowledged, the signal which ought to have been sent shall be distinctly given.

(v) During the cancellation operations in Neale’s token block instruments or if the ‘signal given in error’ is received on single line, the deflection of the Galvanoscope needle at ‘X’ and ‘Y’ shall be watched or that Station Master shall check up the instrument at his end and see that the token has been properly inserted and then give ‘train out of block section signal’. If the correct deflection is not obtained, ‘Y’ shall not acknowledge the ‘cancellation signal’ but call ‘X’ on the telephone and point out the irregularity. If even with further correct operation, the deflection of the needle is not correct, block instrument working shall be suspended.

(vi) If Line Clear has been obtained by ‘X’ from ‘Y’ for a certain train, and it is afterwards found necessary to pass another train over the block section instead of the train for which ‘Is Line Clear’ was originally asked, Line Clear shall be cancelled and a fresh Line Clear obtained. If the Line Clear has been obtained with incorrect description and number, this should be cancelled and fresh Line Clear obtained. If the mistake is noticed after the departure of the train, this shall immediately be notified over the telephone to the station ahead to enable the latter to arrange for correct train reception and handling.

(vii) The cancelling signal shall also be given after the completion of ‘Block back’ or ‘Block forward’ operations whenever it is applicable.

2.09 Refusal of the ‘Is Line Clear’ signal and sending of the ‘Obstruction danger signal’:

(i) If, for any reason, the station in advance ‘Y’ is unable to accept the ‘Is Line Clear’ signal, such station shall refuse it by sending the ‘obstruction danger’ signal to the station in rear ‘X’. The words ‘Line Clear refused’ shall be written in the Train Signal Register, with the time and reasons therefore on the same line against the entry for the train. On removal of the obstruction, the Station Master ‘Y’ shall give ‘Obstruction removal signal’ and that shall be acknowledged by the Station Master ‘X’. They shall make new entries in their Train Signal Register when ‘X’ asks ‘Y’ ‘Is Line Clear’ signal again.

(ii) If after granting Line Clear, if any obstruction or danger is apprehended ‘Obstruction danger’ signal shall be sent immediately to prevent a train entering section. On receipt of the ‘obstruction danger’ signal, ‘X’ shall take all efforts to prevent the train from entering the ‘X’ – ‘Y’ block section. Should he succeed in stopping
the train he shall acknowledge ‘Y’s signal by repeating it. Line Clear shall then be cancelled. ‘X’ shall permit
the train on fresh Line Clear only after the cause of obstruction has been removed and ‘Obstruction removed’
signal has been exchanged.

Note:-
1. If Station Master of ‘X’ station is not able to stop the train, he should intimate the fact to ‘Y’ on the block
telephone.
2. The Station Master shall communicate with the Guard and Loco Pilot of the train through Walkie-talkie to
stop the train immediately.
3. In the case of electrified sections, the Station Masters shall advise the “Traction Power Controller” either
directly or through the Section Controller on duty to switch off the power supply to stop the train in case of
trains hauled by electric locomotives.
4. He shall inform the Gateman at Level Crossing if any, in the “X”-“Y” block section to stop the train.
5. The Station Master at Station ‘Y’, after sending the ‘obstruction danger’ signal to ‘X’ shall take suitable
action for removal of the obstruction. When the obstruction cannot be removed he should arrange for
protection vide GR & SR.6.03, as expeditiously as possible

A. Model Diagrams

B. SINGLE LINE

DOUBLE LINE

UP

2.10 ‘Stop and Examine train’ signal ”: - (6-1)(Six pause One)

(i) When the Station Master at ‘X’ notices anything unusual in a train during its passage (other than the Tail
board / Tail lamp missing or extinguished as the case may be) such as goods falling off, hot axle, hanging
parts in coaching / goods etc., he shall take all efforts to stop the train immediately by putting back the
Signals to ‘ON”, exhibiting Hand danger signal and also by communicating with the Guard and Loco Pilot of
the train through Walkie-talkie.

(ii) If he does not succeed in stopping the train, he shall advise the “Traction Power Controller” either directly or
through the controller on duty, to switch off the power supply and arrange to stop the train in case of trains
hauled by electric locomotives.

(iii) The Gatemen, if any, available, in the block section, shall be advised to stop the train.

(iv) He shall send the above signal to the block station in advance (Station ‘Y’) and intimate the nature of the
irregularity noticed in the form of a telephone message.

(v) The Station Master at ‘Y’ receiving the signal shall acknowledge it by repeating the signal. On a Double line section, the Station Master ‘X’ shall not grant ‘Line Clear’ to a train coming from ‘Y’ – ‘X’. The Station Master at ‘Y’ shall stop trains proceeding in the opposite direction on Double / Multiple / Twin Single line sections until it is safe to do so. If a train has already entered the ‘Y’ - ‘X’ block section, the Gatemen if any on the block section should be advised by both end Station Masters to stop the train. Both end Station Masters shall communicate to the Guard and Loco Pilot of a train through Walkie-Talkie to stop the train on the adjacent line.

(vi) The Station Master “Y” shall stop the train, even run-through trains shall be stopped out of course for this purpose. He shall ascertain the defect and take remedial action as necessary. On ensuring that the train is complete and there is no possibility of the track or any other equipment having been affected on its run, he shall send the ‘train out of block section’ signal to the station in rear or establish ‘line closed’ condition, as the case may be, as an intimation that all is right. This shall be followed by a telephone message that all is right.

(vii) If the Station Master at ‘X’ noticing anything unusual in a train suspects that it would have caused obstruction or damage to the block section ‘W’ - ‘X’, he shall inform on telephone the Station Master of the block station in rear at ‘W’ the nature of irregularity with an advice to the Engineering official concerned.

Note:-
(i) On Double / Multiple lines sections, both end Station Masters (Station “X” & Station “W”) shall issue caution order for all trains entering on each direction i.e “W”-“X” & “X”-“W” block sections until the track is certified fit by engineering official s.
(ii) On Single / Twin Single line sections, both end Station Masters (Station “X” & Station “W”) shall issue caution order for all trains entering (“W”-“X” / “X”-“W”) block sections until the track is certified fit by engineering official s.

(viii) If the Station Master at ‘Y’ noticing anything unusual in a train suspects that it would have caused obstruction or damage to the block section ‘X’ - ‘Y’, he shall inform on telephone the Station Master of the block station in rear at ‘X’ the nature of irregularity with an advice to the Engineering official concerned.

Note: - (i) On Double / Multiple lines sections, both end Station Masters (Station “X” & Station “Y”) shall issue caution order for all trains entering on each direction i.e. “Y”-“X” & “X”-“Y” block sections until the track is certified fit by engineering official s.
(ii) On Single / Twin Single line sections, both end Station Masters (Station “X” & Station “Y”) shall issue caution order for all trains entering (“Y”-“X” / “X”-“Y”) block sections until the track is certified fit by engineering official s.

2.11 Train passed without Tail lamp or Tail board’ signal:  (6-2) (Six pause Two)

(i) When the Station Master at ‘X’ notices a train passing without Tailboard or Tail lamp, he shall send ‘Train passed without Tail board or Tail lamp’ signal to the Station Master of the block station in advance ‘Y’

(ii) Station Master at ‘X’ shall not give ‘Train out of block section’ signal to the block station in rear at ‘W’ or establish ‘Line closed’ condition until he receives the ‘Train out of block section’ signal from the block station in advance ‘Y’ or the Station Master of the block station in advance establishes the ‘Line closed’ condition.

(iii) The Station Master at either end shall communicate with the Guard and Loco Pilot of the Train through Walkie-talkie (if available) and convey the information that he suspects train parting.

(iv) If he suspects train parting, he shall follow instructions given in Rule 2.12 of this chapter. In Double / Multiple line sections, the Station Master ‘X’, who gave (6 – 2) to the Station Master in advance, shall stop the trains running on the adjacent line between ‘X’ – ‘W’, and issue Caution Order with reference to S.R.4.09 (i) (32).

(v) The Station Master at ‘Y’ receiving ‘the Train passed without Tail lamp or Tail board’ signal (6 - 2) shall acknowledge it and stop the train, even if booked to run through informing Loco Pilot and Guard and examine the train. If only the tail board is missing or the tail lamp is extinguished, the same shall be rectified. Then only he shall send ‘Train out of block section’ signal or establish ‘Line closed’ condition. If he finds that the train is not complete, the occurrence shall be reported as an accident and Station Masters shall take necessary action thereon vide Rule 2.12 of this chapter.

(vi) Only after the Station Master ‘Y’ gives the ‘Train out of block section’ signal to Station Master ‘X’, the Station Master ‘X’ shall give the ‘Train out of block section’ signal or establish ‘Line closed’ condition for the “W” - “X”
2.12 ‘Train Divided’ signal: (6-3) (Six pause Three)

(i) When a train passes through a station and when the Station Master at 'X' has reason to think that the train is not complete, he shall not send ‘Train out of block section’ signal to the block station in rear 'W'. Instead, he shall send the ‘Train divided’ signal. He shall not show a Stop hand signal to the Loco Pilot but shall act in accordance with GR /SR 6.08, (Train parting). After sending the ‘Train divided’ signal to the station in rear 'W', he shall also send ‘Train passed without Tail lamp or Tail board’ signal to the block station in advance 'Y'. On Double Line / Twin single lines sections/Multiple line sections, the Station Master 'X' shall stop all trains proceeding on the other line in the direction of the station in rear 'W' and issue to the Loco Pilot a Caution Order explaining the occurrence.

(ii) On receipt of the ‘Train divided’ signal, the Station Master of the block station in rear, at 'W' shall acknowledge by repeating it and shall take immediate steps to secure the safety of any train or vehicles which may be on the line, especially if the gradient is a falling one. He shall remove the shunt key in Push Button type token less block instrument of the block section in rear and keep it in his safe custody. He shall not give Line Clear for a following train to the block station in rear. If a train is already on the block section, the Station Master “W” shall stop it at the First Stop signal and warn the Loco Pilot of the impending danger. If the layout of the yard permits safe reception of the train into the station, this may be done.

(iii) If the gradient in the "W" – "X" block section is falling towards the Station "W", and if a train is approaching his station from the station in rear, he shall take all efforts to stop the vehicles coming parted. This shall be done by covering the rails heavily with sand, earth or broken stones, for as great a distance as possible, before the vehicles come in sight and the points shall be set for a through loop line or dead-end siding to receive the vehicles, in case it is not stopped by the obstruction on the rails. It is preferable to receive a runaway vehicle on a loop line than receiving it on a dead-end siding, the trailing points of such loop line being set and locked to force the vehicle to trail through them.

(iv) If no train is approaching with which the divided vehicles can collide and the line is not on a falling gradient, the vehicles may be allowed to run through the station, but warning shall be sent promptly to the Station Master of the station in advance who shall act according to these instructions. In all cases, the Station Master shall take into consideration the circumstances existing at the time and be guided by the state of his yard (i.e., as to whether the sidings are occupied or not) and vary his action accordingly

(v) If the vehicles contain passengers or railway servants or live stock, it shall not ordinarily be turned into a dead-end siding unless for the purpose of avoiding a more serious accident.

(vi) In the absence of a clear information regarding the stoppage of the parted portion in a block section, a relief engine may be sent to pick up the parted portion only after a lapse of 30 minutes plus the running time of the slowest goods train.

(vii) When it is known that the line is clear again, the ‘Train out of block section’ signal shall be sent or the 'Line closed' condition shall be established over the concerned block sections 'Y' – 'X' and 'X' – 'W' and this will be an intimation that all is right.

2.13 ‘Vehicles running away in wrong direction on Double line or into the Block section on Single line’ signal (6-4) (Six pause Four).

(i) If an engine or vehicles escape and run away into the block section on Single line or on the wrong line on Double line, the Station Master at 'X' shall send ‘Six pause Four signal’ to the Station Master at the other end of the block section (either “Y” or “W” as the case may be) on Single line or to the Station Master of the block station in rear on Double line.

(ii) The Station Master receiving the signal shall acknowledge by repeating the signal and take immediate protective steps as prescribed in Rule 2.12 of this chapter.

(iii) No train or engine shall be allowed to enter the block section on Single line or on the adjacent line or lines of Double/Multiple lines, until information has been received that the engine or vehicles have come to a stand in the block section or arrived at the station or taken back to the station from where they escaped.
(iv) A relief engine shall be sent only after a lapse of 30 minutes plus the running time of the slowest goods train to pick up the parted rear portion unless a clear information regarding stoppage of the escaped vehicle is received, in which case, the relief engine can be started earlier.

(v) If vehicles contain passengers, railway servants or livestock, the fact shall be specially communicated to the Station Master at the other end.

(vi) When the obstruction has been removed and block section is clear ‘Obstruction removed’ signal shall be sent or ‘Line closed’ condition shall be established.

2.14 The ‘Vehicles running away on right direction in Double line signal’ (6-5) (Six pause Five)

If an engine or vehicles escape and run away on the right line on Double lines, the Station Master at “X” shall send the Six pause five to the Station Master “Y”. The Station Master receiving the signal shall acknowledge by repeating the signal and take immediate protective steps as prescribed in Rules 2.13.

2.15 The Testing signal: (16 beats) (Sixteen beats)

The ‘testing’ signal shall be used only for the purpose of testing the block instruments. The rule number 1.10 may be referred.
CHAPTER 3

GENERAL INSTRUCTIONS IN CONNECTION WITH
TOKEN WORKING

3.01 Type of token Block Instruments in use:

The under mentioned token Block Instruments are in use on single line sections of this Railway –

(i) Neale’s Ball Token Instrument.
(ii) Neale’s Tablet Token Instrument.

3.02 Authority to Proceed:

(i) The token is the Authority to Proceed for the Loco Pilot when token Block Instrument working is in force.
(ii) The Loco Pilot shall ensure that the token is not damaged and refers to the block section into which he is going to enter with his train
(iii) The Loco Pilot shall not accept a damaged token as the Authority to Proceed. A damaged token is a token which cannot be readily inserted into or extracted from the Block Instrument or the station code initials, class and number engraved on the token have been defaced beyond recognition.
(iv) When Block Instruments are failed or suspended, ‘Line Clear Ticket’ shall be issued as Authority to Proceed.

3.03 Securing of token for delivery to Loco Pilot:

(i) The Station Master shall ensure that the token extracted for a train is secured in the pouch provided for the purpose and that it is kept in his personal custody until it is delivered to the Loco Pilot.
(ii) If the pouch for the token is provided with openings, the Station Master shall also ensure that the token is secured in the pouch in such a manner that the station names engraved on it are visible through the openings.
(iii) It shall be ensured that the pouch is in good condition.
(iv) Reminder Caution Order or other communications intended for the Loco Pilot of non-stopping trains shall also be secured in the token pouch or in the special pocket sewn on to the pouch.

3.04 Delivery of token:

(i) Delivery of token (Authority to proceed) to Loco Pilot - General:

(a) The Station Master shall be responsible for proper delivery of token to the Loco Pilot, and it shall be delivered to the Loco Pilot through Sweeper-cum porter, or Porter or Pointsman / Levermen or Shunting Jamadar or Shunting Master.
(b) The Station Master shall ensure that the correct token is delivered to the Loco Pilot and the Loco Pilot shall ensure that he has received the correct token for the train.
(c) The outgoing token shall be handed over to the Loco Pilot only after he delivers the incoming token.
(d) The token of an incoming train shall not, under any circumstances, be handed over directly to another outgoing train.
(e) If there are two engines on one train, the token shall be handed over to the Loco Pilot of the leading engine.
(f) In the case of trains having shunting, the token shall be handed over after completion of shunting and recovering the Shunt Metal token from the Loco Pilot and when the train is ready to start.

(ii) Delivery of token (Authority to proceed) to the Loco Pilot of non-stopping train:

(a) The token shall be delivered to the Loco Pilot either directly by hand (with pouch and hoop) or
through the token pick up apparatus where provided.

(b) The token shall be delivered to the Loco Pilot by hand (at stations not provided with token pick up apparatus) opposite to the station house.

c) At night, a lighted torch shall be exhibited to enable the Loco Pilot to see where the hoop is being held.

d) If, for any reason, a torch cannot be used, a bright white light (hand signal lamp) shall be shown.

e) At stations where the station house is located at one end of the platform, the outgoing token may be delivered to the Loco Pilot and the incoming token dropped by the Loco Pilot at the place fixed by the Divisional Railway Manager/T which shall be stipulated in the respective Station Working Rules. A 'Token Exchange Board' shall be provided at such a place. Reference to the provision of such boards shall be made in the Station Working Rules.

f) When a pouch with hoop is not available or defective for delivery of the token, the Station Master is authorised to hand over the naked token to the Loco Pilot either personally or through a competent railway servant. Run through trains shall be stopped out of course for this purpose.

g) At stations where the token pick up apparatus is in use, Loco Pilots of trains shall drop the incoming token and pick up the outgoing token by means of the token pick up apparatus. The Station Master on duty shall be present on the platform and shall depute a competent railway servant to remain at the token pick up apparatus and at night the latter shall exhibit a bright white light or torch to indicate to the Loco Pilot that the token is ready for picking up.

(iii) Delivery of token (Authority to proceed) to the Loco Pilot of a stopping train:

(a) The token shall be handed over just before starting, when trains stop for more than 5 minutes.

(b) For trains booked to stop for less than 5 minutes, the token shall be handed over in front of the Station Master’s office or at the place at which the train is required to come to a stand.

(c) One token only shall be sent at a time through the same person when there is more than one train to start. In such cases, the Station Master shall ensure that the correct token is delivered to each train.

3.05 Delivery of token by Loco Pilot at stations:

(i) The Loco Pilot shall drop the incoming token opposite to the Station Master’s office or at a place specifically mentioned otherwise.

(ii) The Station Master shall himself pick up or arrange for a competent railway servant to pick up the incoming token immediately.

(iii) If the incoming token is without a pouch, it shall not be dropped but shall be handed over personally to the Station Master or to a competent railway servant, non-stopping trains shall be stopped out of course at the station for this purpose.

3.06 Loss of token:

(i) When a token is lost, the Station Master shall immediately inform the Officials of Signal and Telecommunication department concerned. If subsequent to the issue of message the token is found, the Station Master shall not insert the token into the Block Instrument but shall keep it in safe custody and hand it over to the Signal and Telecommunication department official.

(ii) The Signal and Telecommunication department official shall proceed to the stations concerned without delay. If the token has since been found, he shall, if the token is in good condition, insert it into the Block Instrument and authorise resumption of Block Instrument working. If the token is still not found or if the token is not in good condition, he shall authorise resumption of Block Instrument working after phasing and testing the Block Instrument. The Station Masters shall then resume Block Instrument working. Entries shall be made by the Station Masters in the Train Signal Register at both stations in red ink about the lost token, suspension and resumption of Block Instrument working.

(iii) The Signal and Telecommunication department official shall advise the Station Masters concerned
SSE/SE/JE / Permanent Way, Loco, Carriage & Wagon and Traction Distribution (TRD), about the loss of token so that the lost token is not accepted as an authority to proceed. The engineering department staff will be on the look out for the token. In case the token is found, it shall be handed over to the nearest Station Master.

(iv) The particulars of lost token shall be conspicuously exhibited by the Signal and Telecommunication department official near the relevant Block Instrument for the information of the operating staff by pasting a ‘lost token notice’.

(v) A token found after restoration of the Block Instrument working shall not be inserted by the Station Master, but shall be kept under safe custody. He shall advise this fact immediately to the Official of the Signal and Telecommunication department concerned who shall insert the token in the Block Instrument, if the token is in good condition and advise all Official s who were advised earlier, about the restoration of the token.

(vi) If after a thorough search, a token which has been lost cannot be found, a Joint Certificate to this effect shall be given to the Sr.DSTE / DSTE by the Sr.SE/SE/JE (Signal) and the Transportation Inspector. On receipt of this certificate, a Joint Circular shall be issued by the Sr.DSTE /DSTE and Sr.DOM /DOM, to all official s concerned giving full particulars of the lost token and cancelling the same. In addition, the particulars of the lost token should be published in the Railway’s Gazette.

(vii) If the token is found subsequent to the issue of the Joint Certificate, the token shall be inserted only on the orders of the Divisional Signal and Telecommunication Engineer.

(viii) If the token is not found for six months, it shall be replaced with a token of the next higher number in continuation of the series in use on the block section duly cancelling the ‘Lost token notice’. The lost token, if found subsequently shall not be inserted into the Block Instrument, but shall be broken and returned to Stores by the Official of the Signal and Telecommunication department.

Note:- The SSE/SE/JE (Signal) of the section is the Official authorised for the purpose of this rule.

3.07 Missing of token by Loco Pilot of run through trains:

On occasions where the Loco Pilot enters a block section without the token (i.e., leaving the token behind at the station), and proceed onwards without the token, Block Instrument working should be suspended. In the case of trains passing through the station without stopping, when a token is missed and the Loco Pilot immediately takes steps to stop his train within the station section and the missed token is redelivered to him, there is no need to suspend the Block Instrument working.

3.08 Balancing of tokens:

(i) The Station Master shall record the total number of tokens relating to each Block Instrument in the remarks column of the Train Signal Register, after every insertion or extraction of a token into or from the Block Instrument.

(ii) At ‘0’ hours daily, the Station Master at either end of the block section shall verify the entries regarding the token and tally it with the total number of tokens provided for the block section and make entries in red ink entry in the Train Signal Register below the last train entry.

(iii) When token balance in their Block Instrument falls to six and is expected to be exhausted, the Station Masters shall inform the Signal and Telecommunication Official concerned.

(iv) The Signal and Telecommunication department official shall proceed by first available means to the station where tokens are accumulated. While balancing, tokens shall be taken out of the Block Instruments in the normal ‘Line Closed’ position.

(v) The individual number of each token removed by the Signal and Telecommunication Official and the time at which the transaction takes place shall be recorded by the Station Master in the Train Signal Register on the line immediately below the entries for the last train in red ink. These entries shall be signed by the Signal and Telecommunication Official and the Station Master. The Signal and Telecommunication Official shall retain in his possession all the tokens he has withdrawn until he deposits them in the Block Instrument at the other end of the block section.

(vi) The Station Master at the station to which the tokens are transferred shall make a note of the individual
number of each token brought by the Signal and Telecommunication Official and after all these tokens have been deposited by the Signal and Telecommunication Official in the proper Block Instrument, shall enter the individual number of each token and the time in the Train Signal Register in red ink and these entries shall be signed by the Signal and Telecommunication Official s and the Station Master.

Note:- The SSE/SE/JE/ESM of the section is the Official authorised for the purpose of this rule.

3.09 **Removal of defective tokens or provision of new tokens:**

When a defective token is removed from the Block instrument or a new token is inserted into the Block Instrument, an entry shall be made in red ink in the Train Signal Register showing the class and number of the token removed or inserted the reasons therefore and the date and time at which it is done. These entries shall be signed by the Signal and Telecommunications department official and counter signed by the Station Master.

*Note: The SSE/SE/JE/ESM of the section is the Official authorised for the purpose of this rule.*

3.10 **Replacement of token Block Instruments:**

(i) Whenever a token Block Instrument in use at a station is replaced by another of the same type and class, the Station Master shall satisfy himself that all the tokens, which were in the old Block Instrument, are transferred to the new Block Instrument.

(ii) An entry shall be made by the Signal and Telecommunication Official in the Train Signal Register giving the time and date at which the change of Block Instruments is effected, with the individual number of each token transferred and signed by him. The entry shall be countersigned by the Station Master with a further remark regarding the testing of the Block Instrument made by him and the result of the same.

(iii) Whenever a Block Instrument in use at a station is replaced, an entry shall be made by the Signal and Telecommunication Official specifying the number, class and type of the Block Instruments removed or replaced with the individual numbers of the token in each. Whenever a Block Instrument in use at a station is replaced by a Block Instrument of different type, an Officer of the Signal and Telecommunication department shall also be present. An entry shall be made in the Signal History Book to this effect.

*Note: The SSE/SE/JE/ESM of the section is the Official authorised for the purpose of this rule.*

3.11 **Outlying sidings controlled by the token of the block section:**

(i) Outlying sidings, taking off the running lines are provided on certain block sections.

(ii) The points of such sidings taking off the running line, are provided with locking arrangements, the siding lock being controlled and operated by the token of the block section, on certain block sections.

(iii) On sections worked with Neale’s (Ball or Tablet) token instruments, a token Key Exchanger (Siding Key Apparatus) is provided at the siding since such tokens cannot be directly inserted into the siding locks. The ball or tablet token shall be inserted into the siding key apparatus, which will, in turn release the siding key. The siding key shall, then be inserted into the siding lock and the lock unlocked for performing shunting into and out of the siding.

3.12 **Procedure to be followed when the Last Stop signal control key is required by the Signal and Tele-communication department official for testing:**

(i) An authorized official of the Signal and Telecommunication department shall give a written requisition to the Station Master.

(ii) On receipt of requisition, the Station Master shall obtain ‘Line Clear’ in the usual manner.

(iii) The Token, shall be immediately inserted back into the instrument.

(iv) The control key of the Last Stop signal shall be given to the Signal and Tele-communication department official for testing.

(v) When the Key is returned after testing, the Station Master shall ensure that –

(a) The Last Stop signal is at “ON”.
(b) The Last Stop signal lever is normal: and

(c) The Last Stop signal key is in good condition. He shall then insert the key into the instrument.

(vi) The Station Master shall then cancel the ‘Line Clear’ in the normal manner.
(vii) Entries shall be made in red ink by both the Station Masters in the Train Signal Register regarding the above. This shall contain-

(a) At the station where the Last Stop signal Control key is extracted- The Date, Token Number, time Last Stop signal control key has been extracted as well as the time at which the Block Instrument has been normalised.

(b) At the station giving 'Line Clear'- The purpose for which 'Line Clear' is given, the time at which 'Line Clear' is given as well as the time at which Block Instrument has been normalised.

(viii) All the Maintainers and officials of Signal and Tele-communication Department are authorized to test the Last Stop signal as described above.

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CHAPTER 4

TOKEN BLOCK INSTRUMENTS - SINGLE LINE

A. Neale’s Ball Token Block Instrument

4.01 Diagram of Neale’s Ball Token Block Instrument:

![Diagram of Neale’s Ball Token Block Instrument]

4.02 Description of Neale’s Ball Token Instrument:

(i) **Token Receiver Cover:**
This is lifted for inserting the token into the token receiver drum.

(ii) **Token Receiver Handle:**
This is turned anti-clockwise for depositing token into the Block Instrument.

(iii) **Galvanoscope:**
This consists of a needle housed in a glass fronted cover. The correct deflection of the upper portion of the needle shall be observed by the Station Master at the time of turning the operating handle.

(iv) **Telephone:**
A telephone is provided in conjunction with the Block Instrument for communication with the Station Master at the other end of the block section.

(v) **Plunger:**
This is used for giving bell signals and for releasing the operating handle of the Block Instrument at the station at the other end of the block section. Each time the plunger is pressed, the bell or gong at the other station will give one beat.
(vi) **Operating handle:**

The position of the operating handle is indicated by an arrow provided on the operating handle. This has three positions as under:--

(a) The ‘Line Closed’ position, with the handle vertical and the arrow pointing upwards. This is the normal position and indicates that the block section concerned is clear.

(b) The ‘Train Coming From’ position, with the handle horizontal and the arrow pointing to the right. The handle is turned to this position when Line Clear is given to the station in rear for a train or for testing purposes.

(c) The ‘Train Going To’ position, with the handle horizontal and the arrow pointing to the left. The handle is turned to this position for extraction of token for a train as an authority to proceed or for testing purposes.

(d) The operating handle is normally locked. It is released only when a prolonged beat is received after correct sequence of operations, from the station at the other end.

(e) The operating handle can be turned to “Train Coming From” position only when the galvanoscope deflection is clockwise.

(f) The operating handle can be turned to “Train Going To” position only when the galvanoscope deflection is anti-clockwise.

(g) The operating handle can be turned from either “Train Going To” to “Line Closed” or “Train Coming From” to “Line Closed” position, only when the galvanoscope deflection is clockwise.

(vii) **Token exit:**

Token exit is provided at the bottom left hand corner of the Block Instrument. Through this, the token comes out when the operating handle is turned to the ‘Train Going To’ position.

(viii) **Token window:**

Token windows (four in all) indicate availability of tokens.

(ix) **Token indicator:**

It shows a green disc when there is a token in the Block Instrument. It shows a red disc when there is no token. With the operating handle in the “Line Closed” condition, and there is no token, the operating handle is locked and prevented from being turned to ‘Train Going To’ position. The operating handle can, however, be turned to ‘Train Coming From’ position when the indicator shows red.

(x) **Bell or Gong:**

The bell or gong responds to the signals given by the station at the other end of the block section. At stations where more than one Block Instrument is provided, different bells or gongs with distinctive sounds are fitted to identify the individual Block Instrument whose bell or gong rings.

(xi) **Token receiver lock and Station Master’s key:**

(a) The token receiver lock and Station Master’s Key when locked performs the following functions:

1. It locks the token receiver handle.
2. It locks the operating handle.
3. It disconnects the telephone.
4. It disconnects the plunger circuit. However, does not prevent receipt of incoming bell signals from the station at the other end.

(b) The token receiver handle shall be normally kept locked.

(c) The SM’s key shall be kept in the personal custody of the Station Master on duty. When relieved, the Station Master on duty shall hand over the key or keys to his successor. A record of each such
transfer, with the time and date, shall be entered in the Train Signal Register and signed by both the Station Masters.

(xii) **Last Stop signal Control key:**
This key when provided can be extracted when the operating handle is in ‘Train Going To’ position and is used to unlock the Last Stop signal lever/slide.

### 4.03 Neale's Ball Token:

(i) The ball token is a metal ball with a hole, which suits the spigot on the token receiver. The holes and spigots vary in shape so that a Station Master who has more than one set of tokens to deal with cannot, by mistake, insert any of them in the wrong Block Instrument.

(ii) The code initials of the two stations on the single line between which constitute the block section and the number and class of the token are engraved on each token.

(iii) The token is inserted into the Block Instrument by lifting the token receiver cover, placing the token on the spigot and rotating the token receiver handle anti-clockwise.

(iv) The token is extracted from the token exit at the bottom left hand corner of the Block Instrument by turning the operating handle to ‘Train Going To’ position.

(v) When one token has been taken out, say at one end station, another token cannot be taken out at the same or at the other end station, until the token previously taken out, has been replaced in the Block Instrument at same station or at the other station.

(vi) The Block Instruments of a block section are normally furnished with 36 tokens in all, but only one token can be taken out at any one time.

(vii) A token shall not be replaced in either Block Instrument, at any time, without communication being made with the station at the other end of the block section.

(viii) Except as otherwise provided for, the Station Master on duty is the sole person authorised to extract a token from the Block Instrument or insert a token into the Block Instrument.

(ix) The deflection of the galvanoscope needle shall be carefully watched before attempting to extract the token. If the needle points to right, no attempt shall be made to extract the token but the ‘signal given in error’ (five beats) shall be given to the block station at the other end.
B. Neale’s Tablet Token Instrument

4.04 Diagram of Neale’s Tablet Token Instrument:

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TOKEN RECEIVER SLIDE
SM’S KEY
GALVANO-SCOPE
TELEPHONE
BELL OR GONG
PLUNGER
OPERATING HANDLE
TOKEN EXIT

TOKEN WINDOW

LSS CONTROL KEY

4.05 Description of Neale's Tablet Token Instrument:

The operational set up of the Neale's Tablet Token Instrument is practically the same as Neale's Ball Token Instrument, except for the following differences in the component parts:

(i) The token slide:

This is provided on the top of the Block Instrument. A tablet token is inserted into the Block Instrument by pulling out the slide, placing the tablet token in the recess and pushing back the slide. There is no token receiver cover.

(ii) The token window:

A token window with glass front is provided at the bottom left hand corner of the Block Instrument through which a token or tokens in the Block Instrument can be seen. A separate token indicator is not provided.

4.06 Neale’s Tablet Token:

(i) Neale’s Tablet Token consists of a metal tablet with varying notches, which fit inside a corresponding circular recess in the slide.
(ii) The notches on the token and the slide vary according to the class of the Block Instrument, so that a token can be inserted only in the particular class of Block Instrument to which it belongs.

(iii) The code initials of the two block stations to which it relates and the number and class of the token are engraved on each token.

(iv) Token is inserted into the Block Instrument by pulling out the slide, placing the tablet token in the recess and pushing back the slide. It is extracted from the token exit at the bottom of the Block Instrument.

(v) When one token has been taken out, say at one end station, another token cannot be taken out at the same or at the other end station, until the token previously taken out, has been replaced in the Block Instrument at same station or at the other station.

(vi) The two Block Instruments for a block section are normally furnished with 40 tokens in all, but only one token can be taken out at any one time.

(vii) A token shall not be replaced in either Block Instrument, at any time, without communication being made with the station at the other end of the block section.

(viii) Except as otherwise provided for, the Station Master on duty is the sole person authorised to extract a token from the Block Instrument or insert a token into the Block Instrument.

(ix) The deflection of the galvanoscope needle shall be carefully watched before attempting to extract the token. If the needle point is to right, no attempt shall be made to extract the token but the 'signal given in error' (five beats) shall be given to the block station at the other end.
C. Rules Applicable to both Neale’s Ball Token and Neale’s Tablet Token Instruments.

4.07 Last Stop Signal Control:

(i) The provision of Last Stop Signal control may be-

(a) With an internal electrical contact arrangement in the Block Instruments itself, or

(b) With a mechanically interlocked Control key kept on the Instrument.

(ii) In the case of electrical control, the turning of the operating handle to the “train going to” position and the operation by the Station Master of the Last Stop signal slide/lever in the control frame allows the taking “OFF” the Last Stop signal from the cabin/lever frame. On the train passing the Last Stop signal, the control slide or the lever shall be restored to normal.

(iii) In the case of mechanical control, the control key is kept in a lock fitted up on the left hand side of the Instrument. It can be extracted from the lock only when the operating handle has been turned to “train going to” position. This control key, on such extraction is to be used to unlock the Last Stop signal Control and the Station Master’s control frame, where provided, or inserted directly on the lever of the Last Stop signal itself for taking “OFF” the Last Stop signal. The withdrawal of the control key from the Block Instrument mechanically locks the operating handle in the “train going to” position.

(iv) As soon as the train has passed the Last Stop signal, the control slide or lever or signal lever as the case may be, shall be restored to normal and the control key extracted thereafter from the control frame or signal lever and inserted back into the Block Instrument.

(v) Should the control key be lost, the operating handle, turned to the “Train going to” position for the extraction of the control key, would remain locked in that position. The loss of the control key shall be promptly reported to the Signal and Telecommunications department official s concerned for necessary action.

(vi) Should token working be interrupted in any way, after the Last Stop signal control has been given or free to be given by means of control key or electrically, the Last Stop signal shall be considered defective and the Block Instrument working be suspended.

Note:- SSE/SE/JE/Signal/ESM is the official authorized for the purpose of this rule.

4.08 Testing before taking over charge:

(i) The Station Master shall try to turn the operating handle to the ‘Train Going To’ and ‘Train Coming From’ positions without the co-operation of the Station Master at the other end. If the operating handle cannot be so turned to the two positions, the Block Instrument shall be considered to be in order.

(ii) The Station Master shall also satisfy himself that the deflections in the galvanoscope and the bell signals are correct.

(iii) If the test conditions detailed above are not satisfied, the Block Instrument shall be treated as defective and Block Instrument working be suspended.

(iv) Whenever a token can be extracted during such tests without the cooperation of the Station Master at the other end, Token Working shall be suspended immediately, duly advising the Signal and Telecommunications department official s concerned and the token so extracted shall be secured in safe custody and delivered to the authorised Signal and Telecommunication department official on arrival.

Note:- SSE/SE/JE/Signal / ESM is the Official authorized for the purpose of this rule.
4.09 **Precautions to be taken before giving ‘Is Line Clear’ signal:**

The operating handle shall be in the ‘Line Closed’ position.

(i) The token indicator shall show green. (Applicable for Neale’s ball token only).

(ii) The Last Stop signal control key, if provided, shall be in the Block Instrument.

(iv) ‘The train out of block section’ or ‘Obstruction removed’ signal should have been received or given and entered in the Train Signal Register for the previous train and the block section should also be clear and free from obstruction.

(v) Line Clear should not have been given or obtained by any other means.

(vi) A Private Number should have been obtained for the train.

4.10 **Precautions to be taken before giving ‘Line is Clear’ signal:**

(i) The operating handle shall be in the Line Closed position.

(ii) The Last Stop signal control key, if provided, shall be in the Block Instrument.

(iii) The ‘Train out of block section’ or ‘obstruction removed’ signal should have been received or given and entered in the Train Signal Register for the previous train and the block section should also be clear and free from obstruction.

(iv) Line Clear should not have been given or obtained by any other means.

(v) A Private Number should have been given for the train.

4.11 **Precautions to be taken before closing the block section:**

The Station Master shall –

(i) Satisfy himself that the train has arrived complete.

(ii) Ensure that all the reception signals taken OFF for the train are put back to ON.

(iii) Ensure that the token received from the Loco Pilot is correct in all respects and not damaged in any way and dirt, (if any), removed.

4.12 **Signalling a train from one block station to another block station:**

<table>
<thead>
<tr>
<th>Sending station ‘X’</th>
<th>Receiving station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give ‘Attention’ signal.</td>
<td>(ii) Insert Station Master’s key and turn. Acknowledge Attention signal. Attend telephone and give out station name.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement attend telephone. Ensure correct station has responded. Give out station name. Give number and description of train and ask ‘Is Line Clear’ orally</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td>(iv) Ensure correctness of the station. Repeat number and description of the train. If line is clear say ‘Line is Clear’ and give the Private Number for the train.</td>
<td></td>
</tr>
<tr>
<td>(v) Repeat the Private Number received.</td>
<td></td>
</tr>
<tr>
<td>(vi) Give ‘Is Line Clear’ signal ●● prolonging the last beat till the needle of Galvanoscope jerks.</td>
<td></td>
</tr>
<tr>
<td>(vii) Observe the needle points to right and turn the operating handle to ‘Train Coming From’ position. Acknowledge ‘Is Line Clear signal ●●’ prolonging the last beat till the needle of galvanoscope jerks.</td>
<td></td>
</tr>
<tr>
<td>(viii) Observe Needle points to left. Turn the operating handle to ‘Train Going To’ position. A token comes out.</td>
<td></td>
</tr>
<tr>
<td>(ix) After seeing the needle jerking, release the plunger.</td>
<td></td>
</tr>
<tr>
<td>(x) Give ‘Attention signal ●’.</td>
<td></td>
</tr>
<tr>
<td>(xi) Acknowledge ‘Attention signal ●’, attend telephone.</td>
<td></td>
</tr>
<tr>
<td>(xii) Give token number with class</td>
<td></td>
</tr>
<tr>
<td>(xiii) Repeat token number with class</td>
<td></td>
</tr>
</tbody>
</table>
| (xiv)(a) Take OFF Last Stop signal.  
(b) Handover token to the Loco Pilot.  
(c) On train entering block section put back the Last Stop signal to ‘ON’. |
| (xv) Give ‘Attention signal ●’. |
| (xvi) Acknowledge ‘Attention signal ●’. |
| (xvii) Give ‘Train entering block section’ signal ●●●’. |
| (xviii) Acknowledge ‘Train entering block section signal ●●●’. |
| (xix)(a) Take OFF reception signals.  
(b) Ensure train has arrived complete.  
(c) Put back reception signals to ON.  
(d) Obtain the token from the Loco Pilot. Ensure its correctness. |
| (xx) Give ‘Attention signal ●’. |
| (xxi) Acknowledge ‘Attention signal ●’. |
| (xxii)(a) Insert token into token receiver and turn token receiver handle anti-clockwise in case of Neale’s Ball Token Instrument.  
(b) Draw out the token slide; Keep the tablet in the space provided; push back the token slide in case of Neale’s Tablet Token Instrument. |
| (xxiii) Give ‘Train out of block section signal ●●●●’ prolonging the last beat till the needle of 30 |
(xxiv) Observing the needle deflection to right, turn the operating handle to ‘Line Closed’ position. Acknowledge train out of block section signal ●●●●, prolonging the last beat till the needle of Galvanoscope jerks.

<table>
<thead>
<tr>
<th>Galvanoscope jerks.</th>
</tr>
</thead>
</table>

(xxxv) Turn the operating handle to ‘Line Closed’ position. Lock the Block Instrument.

(xxvi) Lock the Block Instrument.

**Note:** Before turning the Operating handle, it shall be ensured that the Galvanoscope is deflecting correctly as under.

(a) Both the Instruments of the block section in ‘Line Closed’ positions, -the incoming and outgoing beats give clockwise deflection.

(b) Both the Instruments not in ‘Line Closed’ position and a token out, - Incoming and outgoing beats give anti-clockwise deflection.

(c) One or both the Instruments not in ‘Line Closed’ position and no token out,-outgoing and incoming beats give deflection in opposite direction.

(d) When the token which is taken out is re-inserted, the deflection in both instruments shall be clockwise

4.13 To cancel ‘Line Clear’:

<table>
<thead>
<tr>
<th>Sending station 'X'</th>
<th>Receiving station 'Y'</th>
</tr>
</thead>
<tbody>
<tr>
<td>The operating handle is in “train going to” condition.</td>
<td>The operating handle is in “train coming from” condition.</td>
</tr>
<tr>
<td>(i) Give ‘Attention signal ●’.</td>
<td>(ii) Acknowledge ‘Attention signal ●’ and attend telephone.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement attend telephone and inform intention to cancel ‘Line Clear’ specifying the reason.</td>
<td>.</td>
</tr>
<tr>
<td>(v) Insert token into the Block Instrument.</td>
<td>(iv) Give consent.</td>
</tr>
<tr>
<td>(vi) Send ‘Cancellation signal ●●●●’ prolonging the last beat till the Galvanoscope needle jerks.</td>
<td>(vii) After observing the needle deflection towards right, turn the Operating handle to ‘Line Closed’ position. Acknowledge ‘Cancellation signal ●●●●’ prolonging the last beat till the Galvanoscope needle jerks.</td>
</tr>
<tr>
<td>(viii) After observing the needle deflection towards right, turn the operating handle to ‘Line Closed’ position and lock the Block Instrument.</td>
<td>(ix) Lock the Block Instrument</td>
</tr>
</tbody>
</table>

4.14 Procedure for testing the Block Instrument by Signal and Telecommunication department official :
<table>
<thead>
<tr>
<th>Authorised Signal and Telecommunication department official at 'X'</th>
<th>Station Master at 'Y'</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert the Station Master’s key and turn. Give ‘Attention signal ●’.</td>
<td>(ii) Insert the Station Master’s key and turn. Acknowledge ‘Attention signal ●’ and attend telephone.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement, attend telephone. Inform intention for testing the Block Instrument.</td>
<td></td>
</tr>
<tr>
<td>(iv) Give consent</td>
<td>(v) Give ‘Testing signal. ●●●●●●●●●●●●’. (16 beats)</td>
</tr>
<tr>
<td>(viii) Observe the needle points to right and turn the operating handle to ‘Train Coming From’ position. Acknowledge ‘Is Line Clear signal ●●’ prolonging the last beat till the needle of galvanoscope jerks.</td>
<td></td>
</tr>
<tr>
<td>(ix) After observing the needle points to left turn the operating handle to ‘Train Going To’ position. A token comes out. Note down the token number and class. Take ‘OFF’ the Last Stop Signal, if any. Return the LSS lever/knob and SM’s control to normal to ensure that the Last Stop Signal goes to ON. Give Attention Signal ●.</td>
<td>(x) Ensure the deflection of the Galvanoscope needle is towards the left and Acknowledge ‘Attention signal ●’.</td>
</tr>
<tr>
<td>(xi) Insert the token into the Block Instrument and give ‘Cancellation signal ●●●●’ prolonging the last beat.</td>
<td>(xii) Watch the deflection of the galvanoscope needle to the right and then turn the operating handle to the ‘Line Closed’ position and acknowledge ‘Cancellation signal ●●●●’ prolonging the last beat.</td>
</tr>
<tr>
<td>(xiii) Turn the operating handle to the ‘Line Closed’ position.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:-**

(1) *This operation shall be repeated, in the reverse direction, the Station Master at ‘Y’ commencing with the ‘testing’ signal and the Signal and Telecommunication department official at station ‘X’ acknowledging it with sixteen beats and then the Block Instrument shall be locked at both ends.*

(2) *Following entries shall be made in red ink in the Train Signal Register by the authorised Signal and Telecommunication department official at ‘X’ and the Station Master at ‘Y’.*

*Date:*
Time _________ hours _________ minutes. Exchanged 'Testing' signal with the Station Master / authorised Signal and Telecommunication department official at __________________ station. Extracted token number ___ and Last Stop Signal taken ‘OFF’ and restored to normal. Token restored to the Block Instrument.

__________________________________
Signature of the S&T Department official / Station Master

The time recorded shall be the time when the 'testing' was completed.

(3) SSE/SE/ JE (Signal) / Electrical Signal Maintainer is the Official authorised for the purpose of this rule.
4.15 **Failure of the Instrument:**

The Neale's Ball/Neale's Tablet token instrument working shall be considered interrupted and its working suspended in the following circumstances:

(i) The Block Instrument or its battery counter is found unlocked.

(ii) There is reason to believe that there is contact between the block wire and any other circuit.

(iii) Attention of the Station Master at the other end cannot be had on the Block Instrument including the failure of block telephone.

(iv) Bell signals are received indistinctly or fail altogether.

(v) An accident relief train is required to enter the block section, which is already occupied by a trolley on Form T/1518 with 'Line Clear Refused' endorsement.

(vi) When a Station Master has lost or mislaid his Private Number book at the time of granting Line Clear.

(vii) When a train is required to enter the block section, which is already occupied by a trolley on Form T/1518 with Caution Order protection and removal report is not received even after sunset.

(viii) A relief train/engine is required to enter a block section obstructed due to accident or any other reason.

(ix) A material train, motor trolley, trolley, wiring train and track maintenance machine etc., is required to enter the block section into which line block has been imposed.

(x) The key of the token receiver drum is lost or the token receiver lock is out of order in case of Neale's Ball Token Instrument and if the key of the token slide is lost or token slide lock is out of order in case of Neale's Tablet Token Instrument.

(xi) The glass front of the galvanoscope or the token indicator or token windows is / are broken.

(xii) Galvanoscope needle fails to respond to the bell signals or the deflection of the needle is incorrect

(xiii) The operating handle cannot be turned to the correct position with a prolonged beat from the station at the other end.

(xiv) The operating handle can be turned to any one of the three positions without a prolonged beat from the station at the other end.

(xv) The Last Stop signal control key, where provided on the Block Instrument is lost or has become defective.

*Note:* When the Last Stop signal control key cannot be extracted after obtaining 'Line Clear' Block Instrument working need not be suspended. The Station Master shall however issue the prescribed authority in form number T/369-(3b) for passing the Last Stop signal at ON along with Section Token.

(xvi) Whenever the First Stop Signal key where interlocked with the Block Instrument (at stations equipped with double-wire signalling) is lost or has become defective.

(xvii) A token cannot be taken out from the Block Instrument after proper signals have been exchanged.

(xviii) A token can be taken out from the Block Instrument without exchanging proper signals or without co-operation of other end Station Master.

(xix) A token is broken or damaged in any way during or after extraction.

(xx) A token received by a train cannot be inserted.

(xxi) A token extracted at a station or delivered to the Loco Pilot or dropped by the Loco Pilot of a train at a station cannot be found.

(xxii) A token belonging to the block section has been over carried to another station.
(xxiii) The Loco Pilot of a running train enters the block section without the token referring to the block section or with the token not properly obtained for the particular train.

(xxiv) A train arrives at a station without the token referring to the block section or with the token not properly obtained for the train.

(xxv) There is no token in the Block Instrument at the station at the time of starting a train.

(xxvi) A token is issued to the Signal and Telecommunication department official for carrying out any work at the siding points controlled by the token of the block section.

(xxvii) When the last Motor Trolley following a train under the specified conditions does not, for any reason, go through to the station at the other end and the key of the token clamp is returned to the station in rear.

(xxviii) When a token is lost or not found

(xxix) When FSS/LSS fails in ‘OFF’ aspect

(xxx) If the Block Instrument is defective in any way other than those specified above.

4.16 Occasions for keeping the Token under safe custody by the Station Master and handing it over to the Signal and Telecommunication department official on arrival during suspension of Token working:

(i) A token can be taken out from the Block Instrument without exchanging proper signal or without cooperation of other end SM.

(ii) A token is broken or damaged in any way during or after extraction.

(iii) A token received from a train cannot be inserted.

(iv) A token is lost but subsequently found after suspension of the Block Instrument working.

(v) A token referring to the block section has been over carried to another station.

(vi) A train arrives at a station with a token not properly obtained for the train.

4.17 Occasions for keeping the First Stop signal / Last Stop Signal control keys under safe custody by the Station Master and handing them over to the Signal and Telecommunication department official on arrival:

(i) Whenever the First Stop Signal key, at Stations equipped with Double wire signalling has become defective.

(ii) Whenever the Last Stop Signal control key, where provided on the Block Instrument has become defective.

4.18 Occasions when the Station Master themselves shall resume Block Instrument working without certification by the Signal and Telecommunication department official:

(i) When the key of the token receiver drum in case of Neale’s Ball Token Instrument and token receiver slide key in case of Neale’s Tablet Token Instrument is lost but subsequently recovered in good condition.

(ii) If the Last Stop Signal control key is lost and subsequently recovered in good condition.

(iii) When the First Stop Signal control key is lost but subsequently recovered good condition.

(iv) When there is no token in the Block Instrument at one end of the block section and when a train is ready to start from the station at the other end of the block section where all the tokens have accumulated.

(v) When the Signal and Telecommunication department official returns the token to the Station Master after carrying out work at the outlying siding points.

(vi) When the key of the token clamp is handed over to the Station Master of the block station in rear by the Official of a motor trolley following a train and when the key is sent by the next available train to the block
station ahead.

(vii) When the Block section which was obstructed due to an accident is now clear of the obstruction.

(viii) When a traffic train is ready to enter the block section after line block has been removed or line block period has expired and material trains, track machines etc if any, in the block section have cleared the section.

(ix) When an accident relief train clears the block section occupied by a trolley on Form 1518 with 'Line Clear Refused' endorsement.

(x) When the Station Master is unable to give a Private Number for a train at the time of giving Line Clear due to Private Number books being lost or mislaid but the same is subsequently found before giving Line Clear to another train or when he has a train to be started from his end.

(xi) When a train is required to enter the block section which is already occupied by a trolley on Form T/1518 with Caution Order protection and removal report is received after sun set.

4.19 Procedure for working of Motor trolleys.

(i) A motor trolley shall be worked under the rules for working trains. Motor trolley shall be worked between the stations under any one of the following procedures.

❖ Working of Single Motor trolley from one block station to another.
❖ Motor trolley/Motor trolleys following a train.
❖ Motor trolley/Motor trolleys following a Motor trolley.
❖ Placing a Motor trolley outside the station limits.

Note:- A Motor trolley shall not be pulled when it cannot be propelled by hand, use of sails, or any other unauthorized aids for the propulsion is strictly prohibited.

(ii) Working of Single Motor trolley from one block station to another

(a) Motor Trolley running from one station to another station shall be worked as a train. The official in charge of the Motor trolley shall advise the Station Master about the block section into which the Motor trolley will enter and the time at which he shall clear the block section. The Station Master shall advise the Controller and obtain his permission for starting the Motor Trolley. The Station Master shall then advise the Station Master at the other end of the block section, obtain ‘Line Clear’ and hand over the section token to the official in charge. Despatch signal, if any, can be taken ‘Off’. In case of Block Instrument failure, the Station Master shall obtain ‘Line Clear’ from the station in advance, and issue ‘Line Clear Ticket’. Both the Station Masters shall enter in red ink in the Train Signal Register the Motor trolley Number (in the Train number column) and other particulars as for a train. Immediately after the Motor trolley has left the station, both end Station Masters shall place the Motor trolley cap on the plunger. The official in charge is entirely responsible for clearing the block section by the specified time. While approaching the station in advance, the Motor trolley shall be received on signals. On arrival, the official in charge shall handover the section token/ ‘Line Clear Ticket’ to the Station Master. The Station Master shall cancel ‘Line Clear Ticket’ and return the same to the official in charge. Then the Station Master shall close the block section.

(b) If the Motor trolley fails and cannot be propelled by hand, the official in charge shall remove it from the line, prepare ‘Removal Advice’ in duplicate and send it along with Token / ‘Line Clear Ticket’ to the nearest Station Master through a messenger. On getting the ‘Removal Advice’ along with Token/ ‘Line Clear Ticket’, the Station Master shall advise the Station Master at other end about the removal of the Motor Trolley and then close the block section.

(iii) Motor trolley / Motor trolleys following a train

(a) One or more Motor trolleys may be allowed to follow a train on Single line Token territory during day and clear weather provided the train, which is to be followed, is worked with vacuum/air brake throughout in good working order.
The official in charge shall advise the Station Master about the block section into which the Motor trolley(s) shall follow the train and the time at which Motor trolley(s) shall clear the block section. The Station Master after getting permission from Section Controller shall obtain ‘Line Clear’ for the train and advise the Station Master in advance, the particulars of the Motor trolley(s) following the train. The Station Master in advance shall acknowledge the same, by confirming with individual Private Number for each Motor trolley following the train.

The official in charge of the last Motor trolley shall provide the clamp on the token to be handed over to the Loco Pilot of the train, lock it and keep with him the key of the clamp in order to prevent the section being cleared before its arrival. The Station Master shall prepare Motor trolley permit in Form T/ 1525 in duplicate mentioning the Private Number obtained from the station in advance for the Motor trolley. The Station Master shall then issue the original copy of Form T/ 1525 to the official -in charge duly obtaining his signature in the duplicate copy. The entries for each Motor trolley following the train shall be made in the Train Signal Register below the train entry in red ink. Block section occupied by T.No.____ followed by

(i) Motor trolley No____PN________
(ii) Motor trolley No____PN________
(iii) ..................

Immediately after the Motor trolley(s) following the train has left the station, both end Station Masters shall place the Motor trolley cap on the plunger.

The official in charge of the each following Motor Trolley shall ensure that their Motor Trolleys are kept at a safe distance from the preceding train or Motor Trolley. Except in an emergency the signals taken ‘OFF’ for the despatch/reception of a train shall not be put back to ‘ON’ until all the following Motor Trolleys have passed them. At Stations where the despatch/reception signals are automatically put back to ‘ON’ by the train, the route set for the train shall not be altered until all the following Motor Trolleys have passed them. However the official - in charge of the Motor Trolleys following a Train may pass the despatch/reception signals at ‘ON’. They shall be responsible to verify the correct setting of points during despatch/reception. The official -in charge shall, on arrival at the station in advance handover the original copy of Form T/ 1525 to the Station Master who shall cancel the same and return to the official -in charge. The official -in charge of the Last Motor trolley shall handover Form T/ 1525 along with the key of the clamp to enable the Station Master to unlock the clamp. The Station Master at the receiving end shall ensure that all the following Motor Trolleys have arrived or the “Removal Advice” along with the original of Form T/1525 is received before he clears the block section. On arrival of the Motor trolleys, the Station Master concerned shall advise the Station Master at the other end by giving a message quoting the Private Number given for the Motor trolleys and enter the same in red ink in the Train Signal Register. The Station Master at the other shall acknowledge the same. The messages to be exchanged by the Station Masters shall be in the following format:---

From: Station Master _____ To: Station Master_____
No_____

1. Motor trolley No____ started under Private Number _______ arrived here at ___ hours. ____Mts./
"Removal Advice" received at _____ Hours ____ mts.

2. .........................

*Strike out whichever is not applicable.

From: Station Master _______ To: Station Master_____
No_____

37
1. Understand that Motor trolley No ______ started under Private Number _______ arrived at yours at ______ hours____mts. /"Removal Advice" received at ________ hours____mts.

2……………………..

*Strike out whichever is not applicable.

(f) During failure/suspension of Block Instrument, when a Motor trolley has to follow a train, ‘Line Clear Ticket’ shall be issued for the train and Form T/ 1525 for the following Motor trolleys, duly following the above said procedures.

(g) Break down of Motor trolleys when following a train ----

(1) If the following Motor trolley other than the last one breaks down and cannot be propelled by hand, the official - in charge shall promptly remove it from the line and send a “Removal Advice” along with the original of Form T/1525 to the block station in advance through the official - in charge of the Motor trolley immediately following it. If the last Motor trolley breaks down the official - in charge shall promptly remove it from the line and send the “Removal Advice”, with the original of Form T/1525 along with the key of the clamp to the block station in advance.

The “Removal Advice” shall be prepared as given below-

To

The Station Master

Removed my Motor trolley Number _________ from the line owing to ________ (give reasons). I will not place the Motor trolley on the line again, until permitted to do so.

Date____________

Signature and designation of the official -in charge.

(2) On receipt of the “Removal Advice” along with original of Form T/ 1525 with key of the clamp, the Station Master in advance, shall unlock the clamp on the token and clear the block section. The “Removal Advice”, with the original of Form T/1525 along with the key of the clamp may be sent to the block station in rear only when it is unavoidable. When the key of the clamp along with the “Removal Advice” is received at the block station in rear, the Station Master shall advice him the fact over telephone, and send it under free service way bill to the Station Master of the block station in advance.

(iv) Motor trolley/ Motor trolleys following a Motor trolley ----

(a) One or more Motor trolleys may be allowed to follow a Motor trolley on Single line Token territory in day and night clear weather.

(b) The official - in charge shall advise the Station Master about the block section into which the Motor trolley(s) shall follow the Motor trolley and the time at which he shall clear the block section. The Station Master on getting permission from Section Controller, shall obtain ‘Line Clear’ for the first Motor trolley and advise the Station Master in advance, the particulars of the Motor trolley(s) following the Motor trolley. The Station Master in advance shall acknowledge the same, by confirming with individual Private Number for each Motor trolley following the Motor trolley.

(c) The official - in charge of the last Motor trolley shall lock the clamp on the token to be handed over to the official - in charge of the first Motor trolley and keep with him the key of the clamp in order to prevent the section being cleared. The Station Master shall prepare Motor trolley permit in Form T/ 1525 in duplicate mentioning the Private Number obtained from the station in advance for the Motor trolley. The Station Master shall then issue the original copy on Form T/ 1525 to the official - in charge of the Motor trolley following the Motor trolley, duly obtaining his signature in the duplicate copy. Both the Station Masters shall make an entry in red ink in the Train Signal Register for all the Motor trolleys.
Block section occupied by M.Trolley No.____, followed by

(i) Motor trolley No.____ PN________

(ii) Motor trolley No.____ PN________

(iii) ........

(d) Immediately after the Motor trolley(s) following the Motor Trolley has left the station, both end Station Master shall place the Motor trolley cap on the plunger. The official in charge of the following Motor Trolleys shall ensure that their Motor Trolleys are kept at a safe distance from the preceding Motor Trolley.

(e) Except in an emergency the signals taken ‘Off’ for the despatch/reception of the first Motor trolley shall not be put back to “on” until all the following Motor Trolleys have passed them. At Stations where the despatch/reception signals are automatically put back to ‘ON’ by the passage of the first Motor trolley, the route set for first Motor trolley shall not be altered until all the following Motor Trolleys have passed them. However the official in charge of the Motor Trolleys following a Motor trolley may pass the despatch/reception signals at ‘ON’. They shall be responsible to verify the correct setting of points during despatch/reception. The official in charge of the first Motor trolley shall handover the clamped token to the Station Master. The official in charge of the following Motor trolleys on arrival at the station in advance, shall handover the original copy of Form T/1525 to the Station Master who shall cancel the same and return it to the official in charge. The Station Master at the receiving end shall ensure that all the following Motor Trolleys have arrived or the “Removal Advice” along with the original of Form T/1525 is received before he clears the block section. On arrival of the Motor trolleys, the Station Master concerned shall advise the Station Master at the other end by giving a message quoting the Private Number given for the Motor Trolleys and enter the same in red ink in the Train Signal Register. The Station Master at the other end shall acknowledge the same. The messages to be exchanged by the Station Masters shall be in the following format,

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master</td>
<td>Station Master</td>
</tr>
</tbody>
</table>

No____

1. Motor trolley No____ started under Private Number ________ arrived here at ___ hours____ mts____.

/*"Removal Advice“ received at _____ hours_____ mts.

2.                        

*Strike out whichever is not applicable.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master</td>
<td>Station Master</td>
</tr>
</tbody>
</table>

No____

39
1. Understand that Motor trolley No ______ started under Private Number _______ arrived at yours at ____ hours ____ mts /“Removal Advice” received at ______ hours ______ mts.

2. ……………………………………………
*Strike out whichever is not applicable.

(f) During failure/suspension of Block Instrument, when a Motor trolley has to follow a Motor trolley, ‘Line Clear Ticket’ shall be issued for the first Motor trolley and Form T/1525 for the following Motor trolleys, duly following above said procedures.

(g) Break down of Motor trolleys when following a Motor trolley:

If the first Motor trolley breaks down and cannot be propelled by hand, the official -in-charge shall promptly remove it and send the “Removal Advice” along with clamped token to the Station Master through the official -in-charge of the Motor trolley immediately following. If the following Motor trolley other than the last one breaks down and if it cannot be propelled by hand the official in charge shall promptly remove it from the line and send a “Removal Advice” along with the original of Form T/1525 to the block station in advance through the official -in-charge of the Motor trolley immediately following it.

The “Removal Advice” shall be prepared as given below-

To
The Station Master

Removed my Motor trolley Number ______ from the line owing to ______ (give reasons). I will not place the Motor trolley on the line again, until permitted to do so.

Date___________ Signature and designation of the official -in-charge.

If the last Motor trolley breaks down the official -in-charge shall promptly remove it from the line and send the “Removal Advice”, with the original of Form T/1525 along with the key of the clamp to the block station in advance. On receipt of the “Removal Advice” along with original of Form T/1525 with the key of the clamp, the Station Master in advance, shall unlock the clamp on the token and clear the block section. The “Removal Advice”, with the original of Form T/1525 along with the key of the clamp may be sent to the block station in rear only when it is unavoidable. When the key of the clamp along with the “Removal Advice” is received at the block station in rear, the Station Master shall advise him the fact over telephone and then send it under free service way bill to the Station Master in advance.

Note:- The Loco Pilot of the train or the first Motor trolley shall drop the clamped token at the station in advance carefully to avoid damage to the token.

(v) Placing a Motor trolley on the line outside the station limits.

(a) The official -in-charge shall send a memo through a messenger, in duplicate, for ‘Line Clear’ to the Station Master of the nearest block station indicating therein the time required for clearing the block section and the station at which the Motor trolley shall clear the block section. The Station Master after obtaining permission from controller shall obtain ‘Line Clear’ from the station Master at the other end of the block section and hand over the Section Token along with the duplicate copy of the memo to the messenger after obtaining his signature/thumb impression in the Train Signal Register. The official -in-charge shall place the Motor Trolley on the line only on receipt of the section token with the duplicate copy of the memo. In case of Block Instrument failure, the Station Master shall prepare ‘Line Clear Ticket’ and send it through the messenger along with the duplicate copy of the memo, duly obtaining his signature/thumb impression in the Train Signal Register.
(b) On arrival at the station, the official -in-charge shall handover the section token/Line Clear Ticket to the Station Master as the case may be. The Station Master shall cancel 'Line Clear Ticket' and return the same to the official -in-charge in case of Block Instrument failures. The Station Master shall then clear the block section.

(vi) Removal of Motor trolley from the line outside station limits:

After placing the Motor trolley in the mid-section, if the official -in-charge, wants to remove it, the official -in-charge shall prepare the “Removal Advice” after removing the Motor trolley off the track and send the “Removal Advice” to the nearest Block station along with the Section Token/Line Clear Ticket. He shall not place it on track once again unless he is in possession of the authority to proceed.

4.20 Shunting in Token Territories:

(i) Shunting upto Advanced Starter / Shunting Limit Board (within the station section), when the block section is clear of trains:

(a) The Station Master shall prepare Form T/806 and authorize the Loco Pilot to shunt up to Advanced Starter / Shunting Limit Board.

(b) On completion of shunting, Loco Pilot shall return the Form T/806 to the Station Master if given, who shall cancel it with time and date and return the same to the Loco Pilot.

Note:- For performing Shunting upto Advanced Starter / Shunting Limit Board, when Shunt signals are taken ‘OFF’, T/806 need not be given.

(ii) Shunting upto opposing First Stop signal when the block section is clear:

(a) Station Master shall prepare Form T/806 and hand it over to the Loco Pilot along with “Shunt Metal Token”, authorizing him to shunt upto Opposing First Stop signal.

(b) On completion of shunting, Loco Pilot shall hand over the Form T/806 along with Shunt metal token to the Station Master. Station Master shall cancel Form T/806 with time and date and return the same to the Loco Pilot keeping the Shunt metal token in his safe custody.

Note:- When shunt metal token is lost or misplaced, Station Master shall make an endorsement in Form T/806 that “Shunt metal token is lost”.

(iii) Shunting beyond opposing First Stop signal (Block Back):

<table>
<thead>
<tr>
<th>Station “X”</th>
<th>Station “Y”</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Insert Station Master’s key and turn. Give ‘Call Attention signal’ ●.</td>
<td>(b) Insert Station Master’s key and turn. Acknowledge ‘Call Attention signal’ ●. Attend telephone and give out station name.</td>
</tr>
<tr>
<td>(c) On receipt of acknowledgment, attend telephone and give out station name. Inform intention to shunt beyond opposing First Stop signal.</td>
<td>(d) Give consent for shunting confirmed by a Private Number.</td>
</tr>
<tr>
<td>(e) Give ●● beats prolonging the last beat.</td>
<td>(f) Turn the operating handle to “Train coming from” and give ●● beats, prolonging the last beat.</td>
</tr>
</tbody>
</table>
(g) Turn the operating handle to “Train going to” and extract the token. Inform the Station Master at the other end, the token number and its class. Prepare Form T/806 and hand it over to the Loco Pilot along with Token authorizing him to shunt beyond Opposing first stop signal. Shunt signal / Starter, if any except LSS, can be taken ‘off’. If not, hand signal shall be shown.

*Note:* In case of Block Instrument failure, Station Master shall prepare 'Line Clear Ticket' and issue it to the Loco Pilot along with Form T/806.

(h) For return movement, Shunt signal can be taken ‘off’. If not, hand signal shall be shown. Outer / Home signal shall not be taken. On completion of shunting, Loco Pilot shall hand over the section token / Line Clear Ticket with Form T/806 to the Station Master who shall cancel Form T/806 with time and date and return the same to the Loco Pilot.

(i) Give Attention signal● Inform the Station Master at the other end that the shunting is completed.

(j) Acknowledge Attention signal ● and completion of shunting.

(k) Send ‘Cancellation signal ●●●●●’ beats, prolonging the last beat.

(l) Turn the operating handle to “Line Closed: position. Acknowledge ‘Cancellation signal by giving ●●●●●’ beats and prolong the last beat.

(m) Turn the operating handle to “Line Closed” position and lock the Block Instrument.

(n) Lock the Block Instrument.

*Note:* - This method of working trains is prohibited at stations provided with catch siding.

(iv) Shunting upto Advanced Starter / Shunting Limit Board in the face of an approaching train, where permitted.

(a) Ensure that the opposing First Stop signal is kept at “ON”.

(b) Station Master shall prepare Form T/806 authorize the Loco Pilot to shunt up to Advanced Starter / Shunting Limit Board.

(c) On completion of shunting, Loco Pilot shall return the Form T/ 806 to the Station Master, who shall cancel it with time and date and return the same to the Loco Pilot.

*Note:* - For performing Shunting upto Advanced Starter / Shunting Limit Board in the face of an approaching train, when Shunt signals are taken ‘OFF’, T/ 806 need not be given.
CHAPTER 5

TOKENLESS BLOCK INSTRUMENTS – SINGLE LINE

A. Push Button Type Tokenless Block Instrument

5.01 Diagram of the Push Button type Tokenless Block Instrument
5.02 Description of Push Button type tokenless Block Instrument:

(i) **Bell Push button**: - This is operated to transmit ‘Bell code’ signals and is coloured black.

(ii) **‘Train Going To’ button**: - This is operated along with ‘Bell Push’ button by the Station Master of the sending station to set his instrument to ‘Train Going To’ condition and the instrument at the receiving station to ‘Train Coming From’ condition and is coloured green.

(iii) **‘Line Closed’ button**: - This is operated along with ‘Bell Push’ button by the Station Master of the receiving station to set both the instruments referring to the block section to ‘Line Closed’ condition and is coloured White.

(iv) **‘Cancellation’ button**: - This is operated along with the ‘Bell Push’ button to enable cancellation of ‘Train Going To’ condition when the train has not entered the block section and is coloured red. The same button is operated along with the ‘Bell Push’ button to enable cancellation of ‘Train On Line’ condition after the train has pushed back to the sending station.

(v) **‘Panel Lamp’ button**: - Wherever provided, it is operated to light up the various indicators except the ‘Free’, ‘Train On Line’ and SNR indications and is coloured yellow.

(vi) **Cancellation Counter**: - This counter registers the next higher number whenever cancellation button is operated along with Bell Push button for cancelling ‘Line Clear’.

*Note*: - At the time of change of duties the Station Masters handing over and taking over charge shall record the last number registered at the counter in the Train Signal Register duly signed by them.

(vii) **‘Line Closed Indicator’**: - This is an indication lit white, when the instrument is in ‘Line Closed’ condition and remains lit, where panel lamp button is not provided.

(viii) **‘Train Going To’ indicator**: - This is an indication lit green, when the instrument is set to ‘Train Going To’ condition and remains lit, where panel lamp button is not provided.

(ix) **‘Train Coming From’ indicator**: - This is an indication lit green when the instrument is in ‘Train Coming From’ condition and remains lit, where panel lamp button is not provided.

(x) **‘Train On Line’ indicator**: - This is an indication lit red when a train enters the block section in ‘Train Going To’ / ‘Train Coming From’ condition and remains lit till the section is closed.

(xi) **‘Free Indicator’**: - This is an indication lit green after 90 seconds from the operation of cancellation button when a train has not entered the block section and remains lit till the Block Instrument is brought to ‘Line Closed’ condition.

(xii) **SNR Indicator**: - This is lit white when the First Stop signal and Last Stop signal are at ‘ON’ with their controls are normal and when the Shunt key remains in and locked in ‘EKT’ apparatus at both ends of the block section to which the Instrument relates.

(xiii) **Last Stop signal Indicator**: - When lit red, it means that the Last Stop signal is at ‘ON’ and when lit green, it indicates that the Last Stop signal is ‘OFF’.

*Note:* -
(1) Indicators mentioned in items (vii), (viii), (ix) & (xiii) will remain normally extinguished and get lit up only when either the panel lamp button or bell push button is pressed.

(2) Item no. (vii), (viii), (ix) & (xiii) are permanently lit, if panel lamp button is not provided.

(xiv) **Station Master’s key**: When taken out, it prevents unauthorized operation of the instrument. However, Bell codes, ‘Train Coming From’ indication, ‘Train On Line’ indication and ‘Train On Line’ buzzer etc., can still be received.

(xv) ‘Train On Line’ Buzzer: - This provides intermittent audible warning at the receiving station when a train enters the block section and can be stopped by pressing the Bell Push button.

(xvi) ‘LVT Buzzer’ - This provides continuous audible warning at the receiving station when the last vehicle passes the Last Vehicle Track circuit. It can be stopped by normalizing the Home Signal lever/knob/slide.

Note: - This does not indicate the complete arrival of the train.

(xvii) **Telephone**: - This is provided for communication with the Station Master at the other end of the block section.

(xviii) **The Shunt key**

(a) It is provided in the electric key transmitter connected with the Block Instrument concerned. It can be extracted in any condition, except the ‘Train Coming From’ condition.

(b) To extract the Shunt key, SHK button should be pressed and when there is deflection in ‘EKT’ apparatus, the Shunt key shall be turned anti-clockwise and taken out.

(c) When the Shunt key is taken out, it prevents any operation of the Block Instrument but does not prevent transmission of bell code signals.

(d) **The Shunt key shall be extracted on the following occasions**: -

1. When it is necessary to permit shunting in advance of Starter.
2. When it is required to prevent the Station Master at the other end from setting his instrument to ‘Train Going To’ condition
3. When the Block Instrument is suspended/failed, (Whenever possible)
4. During ‘Line block’.
5. When ‘Train Divided signal’ is received and acknowledged.
6. When the Station Master at one of the block section could not extract Shunt key, he shall advise the Station Master at the other end to extract Shunt key.
7. When a Motor trolley/ Motor trolleys following a Train / Motor trolley.

Note: -

(i) On all the occasions listed above except when the Shunt key is to be given to the Loco Pilot as in item (1), the Station Master shall keep it in his safe custody.

(ii) It shall be properly secured in a pouch and handed over to the Loco Pilot during shunting.

(iii) For restoring the Shunt Key to the instrument it shall be inserted and turned clock wise to the maximum extent possible.

(xix) **S.H.K. Button**: - This is coloured blue. This is pressed whenever Shunt key is to be extracted.

(xx) **S.C.K. Button**: - This is coloured blue. This is pressed whenever control key of slip / catch siding points, where provided is to be extracted.

Note: -

1. Failure of slip siding key: - When slip siding key controlled by the Block Instrument cannot be
extracted, Block working shall be suspended after bringing the instrument to 'Line Closed' condition. Only then the emergency key provided for this purpose shall be used for setting the point and train shall be started on 'Line Clear Ticket'.

2. Failure of catch siding key: Whenever the instrument is in ‘Train coming from’ condition, but the catch siding key cannot be extracted, the emergency key provided for this purpose can be taken out of the sealed box and used. However, block working shall immediately be suspended after the complete arrival of the train and after bringing the instrument to 'Line Closed' condition.

5.03 Outdoor apparatus: -

(i) First Vehicle Track Circuit: (FVT)
   (a) This is placed slightly in advance of the Last Stop signal.
   (b) It is actuated when the engine / first vehicle passes over it.
   (c) When it is actuated-
      ❖ The Last Stop signal is replaced to ‘ON’
      ❖ ‘Train On Line’ indication appears on both the instruments of the block section.
      ❖ ‘Train On Line’ buzzer will sound intermittently at the receiving station.
      ❖ Restores First Stop signal to ‘ON’:

Note:– In Multiple aspect signalling territories occupation of the first vehicle track by the Train will replace the Home signal/Calling-on signal to ‘ON. However, the Home signal lever / knob /slide or Calling-on signal lever/knob shall not be put back to normal, until the ‘LVT buzzer’ sounds. Failure to adhere to this will result in block failure and the ‘LVT buzzer’ will not sound.

(ii) Last Vehicle Track circuit: - (LVT)

This is placed in advance of the Home signal and between Outermost facing points and LSS. When the last vehicle of a train passes over it, the ‘LVT buzzer’ starts operating, indicating the arrival of the train and can be stopped by putting back Station Master’s control slide for Home signal or Home signal lever/knob/slide or Calling-on signal lever/knob to normal. However, this does not indicate the complete arrival of the train.

5.04 Testing before taking over charge: -

(i) The Station Master shall take ‘OFF’ the Last Stop signal without setting the instrument to ‘Train Going To’ condition.

(ii) It shall not be possible to take ‘OFF’ the Last Stop signal in the 'Line Closed' condition, which indicates that the Block Instrument is in proper working order.

(iii) If it is possible to take ‘OFF’ Last Stop signal, the Block Instrument working shall be suspended.

5.05 Precautions to be taken before setting the Instrument to ‘Train Going to’ condition:-

(i) SM’s key shall be in the reverse position.

(ii) The Instrument shall be in the ‘Line Closed’ condition.

(iii) SNR’ indication is available and the Last Stop signal indicator shows ‘red’.

(iv) Slip/Catch siding key, if provided and Shunt key, are intact in the instrument.
Entries for the previous train in the Train Signal Register are complete and the block section is clear and free from obstruction.

Line Clear should not have been given or obtained by any other means.

A Private Number should have been obtained.

**5.06 Precautions to be taken before giving, ‘Line Clear’**

(i) SM’s key shall be in the reverse position.

(ii) The Instrument shall be in the ‘Line Closed’ condition.

(iii) SNR indication is available.

(iv) Slip/Catch siding, if provided, and Shunt key are intact in the instrument.

(v) Entries for the previous train in the Train Signal Register are complete and the block section is clear and free from obstruction.

Line Clear should not have been given or obtained by any other means.

**Note:** After ensuring all the above said precautions, the Station Master shall give a Private Number as a categorical assurance.

**5.07 Precautions to be taken before closing the block section:**

(i) The train should have arrived complete and the entry for the train is completed in the TSR.

(ii) Reception signals behind the train should have been put back to ‘ON’ and Station Master’s control restored to normal position.

(iii) The ‘SNR’ indication is available on the instrument.

**5.08 Method of signalling a train from one block station to another block station:**

<table>
<thead>
<tr>
<th>Sending station ‘X’</th>
<th>Receiving station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give ‘Attention signal ●’.</td>
<td>(ii) Insert Station Master’s key and turn. Acknowledge ‘Attention’ signal ● and give out station name.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement, attend telephone. Ensure the correctness of the station. Give out station name. Give Number and description of train and ask, ‘Is Line Clear (orally).’</td>
<td>(iv) Ensure the correctness of the station. Repeat number and description of the train. If the line is clear say, ‘Line is Clear’ and give the Private Number for the train.</td>
</tr>
<tr>
<td>(v) Repeat the Private Number received. Operate ‘Train Going To’ button along with ‘Bell push’ button and keep them pressed.</td>
<td></td>
</tr>
</tbody>
</table>

47
(vi) Block Instrument displays ‘Train Coming From’ indication.


(viii) (a) Take ‘OFF’ Last Stop signal.
    (b) Train enters block section actuating ‘first vehicle track circuit’
    (c) Last Stop signal returns to ‘ON’ automatically.
    (d) ‘Train On Line’ indication appears automatically.
    (e) Return the Last Stop signal lever/knob / Station Master’s control slide to normal.

    (b) Press Bell push button to stop the buzzer.
    (c) Audible warning stops.

(x) (a) Take OFF reception signals.
    (b) Train passes over ‘first vehicle track circuit’.
    (c) First stop signal returns to ‘ON’ automatically.
    (d) As last vehicle passes ‘Last Vehicle Track circuit’, ‘LVT buzzer’ sounds continuously.
    (e) Put back the Station Master’s control slide for Home signal or Home signal lever/knob to normal. When the train is received on Calling-on signal, the calling-on signal lever/knob to be put back to ‘ON’ to stop LVT buzzer.
    (f) Audible warning stops.

Note:-

1. In Multiple Aspect signalling territory though Home Signal Calling-on signal may go back to ‘ON’ automatically by the passage of the train. Station Master’s control slide for Home signal or Home signal lever/knob or Calling-on signal lever/knob shall not be put back to normal, until the whole of the train has arrived and the ‘LVT buzzer’ sounds. Failure to adhere to this will result in block failure and the ‘LVT buzzer’ will not sound.

2. In case of failure of Home Signal, train shall be received as per G.R/SR 3.69 However, the Lever/ Knob of the defective Home Signal and the Station Master’s control slide shall be kept in the reversed position so that the ‘LVT buzzer’ may sound and the block section can be closed, as otherwise, this will lead to suspension of Block Instrument working.

3. Do not reverse the Home Signal lever/knob during partial failure of points (N or R), even it leads to Block failures if the signal is likely to assume ‘OFF’ aspect. Immediately advise
5.09 To cancel ‘Line Clear’ before a train enters the block section:

<table>
<thead>
<tr>
<th>Sending station ‘X’</th>
<th>Receiving station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Instrument displays ‘Train Going To’ indication and all concerned signals and signal levers/knobs are normal</td>
<td>Block Instrument displays ‘Train Coming From’ indication and all concerned signals and signal levers/ knobs are normal</td>
</tr>
<tr>
<td>(i)(a) Press ‘Cancellation’ button along with ‘Bell Push’ button. (b) Cancellation counter registers next higher number (c) Give ‘Attention’ signal ●</td>
<td>(ii) Acknowledge ‘Attention’ signal ● and attend telephone.</td>
</tr>
<tr>
<td>(iii) Attend telephone and advise on telephone intention to cancel ‘Line Clear’.</td>
<td>(iv) Acknowledge intention to cancel ‘Line Clear’.</td>
</tr>
<tr>
<td>(vii) Send ‘Cancellation’ signal ●●●●● by pressing ‘Bell push’ button.</td>
<td>(viii) Acknowledge ‘Cancellation’ signal ●●●●● by pressing ‘Bell Push’ button and keep ‘Line Closed’ button also pressed on the last beat.</td>
</tr>
<tr>
<td>(xi) Block Instrument set to ‘Line closed’ indication. Release buttons and lock the Block Instrument</td>
<td>(xii) Lock the Block Instrument</td>
</tr>
</tbody>
</table>

Note:-Whenever ‘Line Clear’ has been cancelled, an entry regarding the same with time and reasons shall be entered in red ink in the Train Signal Register.

5.10 To cancel ‘Line Clear’ when a train returns to the starting station:

<table>
<thead>
<tr>
<th>Sending station ‘X’</th>
<th>Receiving station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Give ‘Attention’ signal</td>
<td>(ii) Acknowledge ‘Attention Signal’ ● and attend telephone</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>(iii) Attend telephone and advise that the train is returning to the starting station and the intention to cancel ‘Line Clear’.</td>
<td>(iv) Acknowledge the same and replace reception signal levers/knobs and Station Master’s slide to normal, if the signals had been taken ‘OFF’.</td>
</tr>
</tbody>
</table>
| (v)(a) Take ‘OFF’ reception signals.  
  (b) Train passes over first vehicle track circuit.  
  (c) First Stop signal returns to ‘ON’.
  (d) As the last vehicle passes the Last Vehicle Track circuit, the ‘LVT buzzer’ sounds continuously.  
  (e) Put back Station Master’s Control slide for Home signal or Home signal lever/knob or Calling-on signal lever/knob to normal.  
  (f) Audible warning stops.  
  Note:- In Multiple Aspect signalling territory though Home Signal/Calling-on signal may go back to ‘ON’ automatically by the passage of the train, Station Master’s control slide for Home signal or Home signal lever/knob or Calling-on signal lever/knob shall not be put back to Normal, until the whole of train has arrived and the ‘LVT buzzer’ sounds. Failure to adhere to this will result in block failures and the ‘LVT buzzer’ will not sound alarm. |
| (vi) After ensuring that the train has arrived complete and all signals are at ‘ON’,  
  (a) Press cancellation button ●●●●● along with bell push button.  
  (b) Cancellation counter registers next higher number.  
  (c) Give Attention signal ●. | (vii) Acknowledge ‘Attention’ signal ●. |
| (viii) Send ‘Cancellation’ signal ●●●●● by pressing ‘Bell Push’ button | (ix) Acknowledge ‘Cancellation’ signal ●●●●● by pressing ‘Bell Push’ button. Keep ‘Line Closed’ button also pressed on the last beat. |
| (xii) Block Instrument set to ‘Line Closed’ indication. Release buttons and lock | |
the Block Instrument.

(xiii) Lock the Block Instrument.

Note:-Whenever ‘Line Clear’ has been cancelled, an entry regarding the same with time and reasons shall be entered in red ink in the Train Signal Register.
5.11 Procedure for testing the Block Instrument by the Authorized Signal and Telecommunication official:

<table>
<thead>
<tr>
<th>Authorized Signal and Tele-communication department official at ‘X’.</th>
<th>Station Master at ‘Y’.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give Attention signal. ●</td>
<td>(ii) Insert Station Master’s key and turn. Acknowledge Attention signal. ● and attend telephone.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement, convey intention for testing the Block Instrument.</td>
<td>(iv) Give consent</td>
</tr>
<tr>
<td>(v) Give Testing signal (16 beats) ······················.</td>
<td>(vi) Acknowledge Testing signal by giving (16 beats) ······················.</td>
</tr>
<tr>
<td>(vii) Set the Instrument to ‘Train Going To’ indication by pressing ‘Bell push button’ and ‘Train Going To’ button simultaneously.</td>
<td>(viii) Instrument displays ‘Train Coming From’ indication</td>
</tr>
<tr>
<td>(ix) Instrument displays ‘Train Going To’ indication.</td>
<td></td>
</tr>
<tr>
<td>(x)(a) Take ‘OFF’ the Last Stop signal.</td>
<td></td>
</tr>
<tr>
<td>(b) Return the Last Stop signal lever / knob / Station Master’s control slide to normal.</td>
<td></td>
</tr>
<tr>
<td>(c) Last Stop signal returns to ‘ON’.</td>
<td></td>
</tr>
<tr>
<td>(d) Press ‘cancellation’ button along with the ‘Bell Push’ button.</td>
<td></td>
</tr>
<tr>
<td>(e) Counter registers next higher number.</td>
<td></td>
</tr>
<tr>
<td>(xi) (a) ‘Free’ indication appears 90 seconds after ‘cancellation’ button is operated.</td>
<td></td>
</tr>
<tr>
<td>(b) Give ‘Attention’ signal ●.</td>
<td>(xii) Acknowledge ‘Attention’ signal ●.</td>
</tr>
<tr>
<td>(xiii) Send ‘Cancellation’ signal ····· by pressing ‘Bell Push’ button.</td>
<td>(xiv) Acknowledge ‘Cancellation’ signal ····· by pressing Bell Push button, keep Line Closed button also pressed on the last beat.</td>
</tr>
</tbody>
</table>
Test the possibility of incorrect operation by trying to take ‘OFF’ Last Stop signal without setting the instrument to ‘Train Going To’ condition and satisfy that the Last Stop signal cannot be taken ‘OFF’.

Note:-

(1) The above operations shall be repeated by the Station Master at ‘Y’ beginning with sixteen beats. The instruments at both ends shall be locked after completion of testing.

(2) Following entries shall be made in red ink in the Train Signal Register by the authorized Signal and Telecommunication department official at ‘X’ and the Station Master at ‘Y’.

Time_________ Hours _________ Minutes Date____

Exchanged ‘Testing Signal’ with Station Master /Authorized Signal and Tele-communication department official at _________ station. Taken ‘OFF’ Last Stop signal and restored it to normal and cancellation counter number recorded on the Instrument is _______.

______________________________
Authorized S&T official / Station Master

Note:- SSE/SE/JE/Signal & ESM are the official authorized for the purpose of these rules. The time to be recorded shall be the time when the testing was completed.

5.12 Failure of the Instrument:-

The Block Instrument working shall be considered as interrupted and its working shall be suspended in the following circumstances:

(i) Attention cannot be obtained on the Block Instrument, including the failure of block telephone.

(ii) Bell signals are received indistinctly or fail altogether.

(iii) Last Stop signal can be taken ‘OFF’ when the Block Instrument is not set to ‘Train Going To’ condition.

Note:- However, Block Instrument working need not be suspended, if the Last stop signal could not be taken off even after setting the instrument to ‘Train Going To’ condition.

a. The Station Master shall issue Form T/ 369(3b) duly making an endorsement with a Private Number, obtained from the block station in advance as an authority to pass the Last stop signal at ‘ON’ position.

b. In cases where the train is to be started from Non-signalled road, during such failures, T / 511 shall be issued with an ‘endorsement’.

(iv) There is reason to believe that contact exists between block wire and any other circuit.

(vi) The Block Instrument or battery counter is found unlocked.

(vii) A train arrives without proper Line Clear.

(viii) Train going to’ condition cannot be cancelled even after correct sequence of operations.

(ix) When a Material train, Motor trolley, trolley, lorry, and track maintenance machine is required to enter the block section when ‘Line block’ is in force.

(x) When a relief train/engine is required to enter a block section obstructed due to an accident or any other reason.

(xi) When an Accident Relief Train is to enter a block section occupied by a trolley on Form T/ 1518 with Line
Clear Refused endorsement.

(xii) ‘LVT buzzer’ does not sound after complete arrival of the train.

Note:- Even, if the ‘LVT buzzer’ operates for subsequent trains after suspension of Block Instrument, no attempt shall be made to bring the Block Instrument to normal until the Block Instrument is restored by the Signal and Telecommunication department official.

(xiii) The Block Instrument cannot be set to ‘Line Closed’ condition, after the arrival of the train.

(xiv) Before arrival of the train, the instrument can be set to ‘Line Closed’ condition.


(xvi) Train on line’ buzzer fails at the receiving station.

(xvii) ‘Train On Line’ indication fails either at the sending station or receiving station.

(xviii) Motor trolley, OHE Ladder trolley or Lorry is required to enter a block section and when a trolley is required to enter the block section on ‘Line Clear.’

(xix) The Last Stop signal fails to return to ‘ON’ automatically as a train passes it.

(xx) Last Stop signal goes to ‘ON’ or ‘Train On Line’ indication appears prematurely, before the train actuates first vehicle track circuit.

(xxi) If the Station Master’s key is lost or becomes defective.

(xxii) If the Shunt key is lost or becomes defective.

(xxiii) When a train is required to enter the block section, which is already occupied by a trolley on T/1518 with Caution Order protection and removal report is not received even after sunset.

(xxiv) Private Number books are lost or misplaced at the time of granting Line clear.

(xxv) When slip / catch siding key controlled by the Block Instrument cannot be extracted.

(xxvi) Any other circumstances not mentioned above necessitating suspension of Block Instrument.

5.13 Occasions when Block Instrument working is to be resumed by DSTE / ASTE or any other S & T official authorized by name after rectification of defects:

(i) Last Stop signal can be taken ‘OFF’ when the Block Instrument is not set to ‘Train Going To’ condition.

(ii) The Block Instrument can be set to ‘Line Closed’ condition before the arrival of the train.

(iii) ‘Train On Line’ indication disappears before the arrival of the train.

5.14 Occasions when Station Masters themselves may resume Block Instrument working without being certified by Signal and Telecommunication department official:

(i) When a traffic train is ready to enter the block section after the removal of ‘Line block’ or expiry of ‘Line block’ period and when the block section is clear of material trains, motor trolley, track maintenance machine etc.

(ii) When an Accident Relief train clears block section already occupied by a trolley on form T/1518 with ‘Line Clear refused’ endorsement.

(iii) When the Block section which was obstructed due to an accident is now clear of the obstruction.

(iv) Motor trolley, trolley, OHE Ladder trolley and Lorry have cleared the block section.

(v) When the Station Master’s key is lost but subsequently recovered in good condition.
(vi) When the Shunt key is lost but subsequently recovered in good condition.

(vii) When a train is required to enter the block section, which is already occupied by a trolley on Form T/1518 with Caution Order protection and removal report is received after sunset.

(viii) When the Station Master is unable to give a Private Number for a train at the time of giving 'Line Clear' due to Private Number book being lost or mislaid but the same or another is subsequently found before granting 'Line Clear' to another train or when he has a train to be started from his end.

B. HANDLE TYPE TOKENLESS BLOCK INSTRUMENT
(Frequency Modulation Type)

5.15 Diagram of the Handle Type Tokenless Block Instrument:

- BELL
- GALVANOMETER
- TIME RELEASE INDICATOR
- S1 COUNTER
- S2 COUNTER
- TRAIN ON LINE INDICATOR
- S1 Cancellation switch
- S2 Cancellation switch
- OPERATING HANDLE
- PUSH BUTTON PB1
- PUSH BUTTON PB2
- SHUNT KEY
- SM’S KEY
- BLOCK TELEPHONE
Single line sections with Class 'B' working in Multiple Aspect Colour light Signalling Territories (Tokenless) indicating the Outdoor Apparatus.
5.16 Description of Handle type tokenless Block Instrument-F.M. type:

Parts and functions of the instrument:-

(i) **Push button PB1**: To transmit bell code signals.

(ii) **Push button PB2**: It is pressed along with PB1 to release the operating handle of the connected Block Instrument.

(iii) **Galvanometer**: It indicates flow of current. When operating handle is turned, the needle gives a jerk.

(iv) **Bell**: For exchange of bell code signals.

(v) **Operating handle**: This has three positions as under-
   (a) The ‘Line Closed’ position, with the handle vertical and arrow pointing upwards. This is the normal position.
   (b) The ‘Train Coming From’ position, with the handle horizontal and the arrow pointing to the right. The handle is turned to this position when ‘Line Clear’ is being given to the station in rear for starting a train or for testing purposes.
   (c) The ‘Train Going To’ position with the handle horizontal and the arrow pointing to the left. The handle is turned to this position when Line Clear’ is being obtained from the station in advance or for testing purposes.
   (d) The operating handle is normally locked in the vertical position i.e. ‘Line Closed’ position. The operating handle can be turned to ‘Line Closed’, or ‘Train Going To’ or ‘Train Coming From’ positions only with the co-operation of the Station Master of the adjacent Block station by operating the concerned Block Instrument.

   **Note**: - The operating handle with the plunger must always be left exactly in the ‘Line Closed’ or ‘Train Going To’ or ‘Train Coming From’ positions, as otherwise transmission of Bell signals will not be possible.

(vi) **Buzzer 1**: It provides audible indication at both the stations when a train enters the block section and after actuating First vehicle track circuit.

(vii) **Buzzer 2 (‘LVT buzzer’)**: It provides audible indication at the receiving station when the last vehicle of the train has passed the Last Vehicle Track circuit.

(viii) **‘Train On Line’ indicator**: Normally it will show a white indication at both ends. When the first vehicle track circuit is actuated, the white indication automatically changes to red and ‘Train On Line’ indications appear at both ends. This indicates that the block section is occupied by a train.

(ix) **‘Cancellation switch’ S1**: This is operated for cancellation of the ‘Line Clear’ for a train, which has not entered the block section. Each operation gets recorded on the associated S1 counter.

(x) **‘Cancellation Switch’ S2**: This is operated for receiving a train on signals, while returning to the starting station. (e.g. a material train). Each operation gets recorded in the associated S2 counter.

   **Note**: - At the time of change of duties, the Station Master handing over and taking over charge should record the number registered on the counters S1 and S2 in the Train Signal Register duly signed by them.

(xi) **‘Time release indicator’**: It is a visual indicator, which changes from ‘locked’ to ‘free’ making cancellation of the ‘Line Clear’ possible, about 120 seconds after cancellation is initiated by turning S1 cancellation switch to reverse.

(xii) **‘Shunt key’**: This is given as an authority to the Loco Pilot for shunting beyond the Starter and up to the First Stop signal in the opposite direction. This key also authorizes the Loco Pilot to shunt beyond the First Stop signal under ‘Block Back’ operation. It can be taken out from the Block Instrument in any condition except ‘Train Coming From’ position.

(xiii) **Station Master’s Key**: - When taken out, it prevents unauthorized operation of the Block Instrument. It should be in the personal custody of the Station Master.

(xiv) **Telephone**: It is provided for communication with the Station Master at the other end of the Block section.
5.17 Out-door apparatus: -

(i) First vehicle track circuit:-

(a) This is placed slightly in advance of the Last Stop signal.
(b) It is actuated when the engine / first vehicle passes over it.
(c) When it is actuated:-
   ❖ The Last Stop signal is replaced to ‘ON’
   ❖ ‘Train On Line’ indication appears on both the instruments of the block section.
   ❖ ‘A continuous buzzer sound will be heard at the sending station and at the receiving station.
   ❖ The buzzer is stopped by pressing the PB1 button at the receiving station.
   ❖ Restores First Stop signal to ‘ON’: during reception of a train.

Note: - In Multiple aspect signalling territories occupation of the first vehicle track by the Train will replace the Home signal/Calling-on signal to ‘ON. However, the Home signal lever / knob /slide or Calling-on signal lever/knob shall not be put back to normal, until the ‘LVT buzzer’ sounds. Failure to adhere to this may result in block failure and the ‘LVT buzzer’ will not sound.

(ii) Last vehicle track circuit: - (LVT)

This is placed in advance of the Home signal and between Outermost Facing Points and LSS. When the last vehicle of a train passes over it, the ‘LVT buzzer’ will sound continuously indicating the arrival of the train. This can be stopped by putting back Station Master’s control slide for Home Signal or Home signal lever/knob/slide or Calling-on signal lever/knob to normal. However, this does not indicate the complete arrival of the train.

5.18 Testing before taking over charge: -

(i) The Station Master shall, when taking over charge of the Block Instrument, test the instruments by attempting to take ‘OFF’ the Last Stop signal, without the instrument in the “Line clear: condition. If the signal cannot be taken ‘OFF’, the Block Instrument shall be considered to be in order. A record of this test shall be made in the Train Signal Register.

(ii) If the signal can be taken ‘OFF’, Block Instrument working shall be suspended immediately and all concerned advised.

5.19 Precautions to be taken before giving ‘Is Line Clear’ signal :-

(i) The reception /despatch signals and their control in normal position.
(ii) The operating handle shall be in the ‘Line Closed’ position.
(iii) The Shunt key shall be in the Block Instrument.
(iv) Cancellation switch S1 and S2 shall be in their normal position.
(v) The ‘Train out of block section’ or ‘obstruction removed’ signal should have been received and entered in the Train signal Register for the previous train, the block section should also be clear and free from obstruction and ‘Line Clear’ has not be given or obtained by any other means.
(vi) A Private Number should have been obtained.

5.20 Precautions to be taken before giving ‘Line is Clear’ signal :-

(i) The reception /Despatch signals and their control in normal position.
(ii) The operating handle shall be in the ‘Line Closed’ position.
(iii) The Shunt key shall be in the Block Instrument.
5.21 Precautions to be taken before closing the Block section.

(i) The train should have arrived complete.

(ii) Reception signals should have been put back to ‘ON’ and signal levers/knobs/slides/controls restored to normal position.

5.22 Signalling a train from one block station to another block station.

<table>
<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give Attention signal ●.</td>
<td>(ii) Insert Station Master’s key and turn. Acknowledge Attention signal ●. Attend telephone and give station name</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement, attend telephone. Ensure correct station has responded. Give out station name.</td>
<td></td>
</tr>
<tr>
<td>(iv) Give number and description of the train and ask ‘Is Line Clear’.</td>
<td>(v) Ensure correctness of the Station. Repeat number and description of the train. If Line is Clear, say Line is Clear and give a Private Number for the train.</td>
</tr>
<tr>
<td>(vi) Repeat the Private Number received. Give Is line clear signal ●● by pressing PB1 and keep the PB1 and PB2 pressed on the last beat.</td>
<td>(vii) Turn the operating handle to ‘Train Coming From’ position and then give ●● beats by pressing PB1 and keep the PB1 and PB2 pressed on the last beat.</td>
</tr>
<tr>
<td>(viii) (a) Turn the operating handle to ‘Train Going To’ position. (b) Take ‘OFF’ the LSS. (c) On train entering the block section, the Last Stop signal goes back to ‘ON’. (d) Train on Line indication appears and the buzzer starts sounding continuously. (e) Put back the Last Stop signal lever/knob/slide to normal. (f) Give ‘Attention’ signal by pressing PB1 button. ●</td>
<td>(ix) ‘Train On Line’ indication appears and buzzer starts sounding continuously. Acknowledge ‘call Attention’ signal and keep the PB1 button pressed sufficiently long to stop the incoming buzzer.</td>
</tr>
<tr>
<td>(x) Buzzer stops.</td>
<td></td>
</tr>
</tbody>
</table>

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(xii) Give ‘train entering block section’ ●●● beats signal by pressing PB1 button.

|xiii| (a) Acknowledge, ‘train entering block section’ ●●● by pressing PB1 button. Take ‘OFF’ reception signals.
| | (b) Train passes over first vehicle track circuit and the First Stop signal goes back to ‘ON’.
| | (c) As the last vehicle passes Last Vehicle Track circuit, ‘LVT buzzer’ sounds continuously.
| | (d) Put back Station Master’s slide for Home Signal or Home Signal lever/knob/slide or Calling-on signal lever/knob to normal.
| | (e) Audible warning stops.

**Note:**
1. In Multiple Aspect Signalling area though the Home signal /Calling-on signal may go back to ‘ON’ automatically by the passage of the train, Station Master’s control slide for Home signal or Home signal lever/knob/slide or Calling-on signal lever/knob shall not be put back to normal, until the ‘LVT buzzer’ sounds. Failure to adhere to this will result in block failure and the ‘LVT buzzer’ will not sound.

2. In case of failure of Home signal, train shall be received as per GR/SR3.68 & 3.69. However, the lever/knob/slide of the defective Home signal and the Station Master’s control slide should be kept in the pulled over position so that the ‘LVT buzzer’ may sound and the block section can be closed as otherwise this will lead to block instrument failure.

3. Do not reverse the Home signal lever/knob/slide during partial failure of points (N or R), even it leads to Block failure if the signal is likely to assume ‘OFF’ aspect. Immediately advise S&T staff concerned for rectification of Block failure.

(xiv) After ensuring that the train has arrived complete, give Call Attention signal ●.

(xv) Acknowledge call Attention signal ●.

(xvi) Give ‘Train out of block section signal’ beats ●●●● by pressing PB1 and keep the PB1 and PB2 buttons pressed on the last beat.

(xvii) Turn the operating handle to ‘Line Closed’ position. Then give ‘train out of block section signal’ beats, ●●●● by pressing PB1 and keep the PB1 and PB2 buttons pressed on the last beat.

(xviii) Turn the operating handle to Line closed position. Lock the Block Instrument.

(xix) Lock the Block Instrument.

5.23 **To cancel ‘Line Clear’ before a train enters the block section**

<table>
<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating handle is in ‘Train Going To’ position and</td>
<td>Operating handle is in ‘Train Coming From’ position and</td>
</tr>
</tbody>
</table>
all the concerned signals and signals levers/knobs/slides are normal.  

(i) Turn ‘cancellation switch’ S1 to reverse position for cancellation Give ‘Attention’ signal ●.

(ii) Acknowledge ‘Attention’ signal ●.

(iii) Advise on telephone intention to cancel ‘Line Clear’.

(iv) Acknowledge the same.

(v) ‘Time release indication’ operates and the indication changes to ‘Free’ about 120 seconds after the S1 switch is operated. Restore S1 switch to normal. 

   Ensure that S1 counter registers next higher number and record the same in the S1 counter cancellation register. Give ‘Attention’ signal ●.

(vi) Acknowledge ‘Attention’ ●.

(vii) Send Cancellation signal ●●●●● Beats by pressing PB1 and keep the PB1 and PB2 pressed on the last beat.

(viii) Turn the operating handle to ‘Line Closed’ position.

   Give Cancellation signal beats ●●●●● by pressing PB1 and keep the PB1 and PB2 buttons pressed on the last beat.

(ix) Turn the operating handle to ‘Line Closed’ position.

   Lock the Block Instrument.

(xi) Lock the Block Instrument

Note: - Whenever ‘Line Clear’ has been cancelled, an entry regarding the same with time and reasons shall be entered in red ink in the Train Signal Register.

5.24 To cancel ‘Line Clear’, when a train returns to the starting station.

<table>
<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating handle is in ‘Train Going To’ with ‘Train On Line’ position.</td>
<td>Operating handle is in ‘Train Coming From’ with ‘Train On Line’ position.</td>
</tr>
<tr>
<td>(i) Give ‘Attention’ signal ●.</td>
<td>(ii) Acknowledge ‘Attention’ signal ● and attend telephone.</td>
</tr>
<tr>
<td>(iii) Attend telephone and advise that the train is returning to the starting station and his intention to cancel ‘Line Clear’.</td>
<td>(iv) Acknowledge the same and replace reception signal levers/ knobs/slides and Station Master’s slide to normal, if the signals had been taken ‘off’.</td>
</tr>
<tr>
<td>(v) Turn Cancellation switch S2 to reverse position. Take ‘OFF’ reception signals.</td>
<td></td>
</tr>
<tr>
<td>(vi) Train passes over the first vehicle track circuit and the first Stop signal goes back to ‘ON’. After the last vehicle passes over Last Vehicle track circuit ‘LVT buzzer’ starts sounding.</td>
<td></td>
</tr>
<tr>
<td>(vii) Put back the Home Signal lever/knob/slide to</td>
<td></td>
</tr>
</tbody>
</table>
normal. 'LVT buzzer' stops. Restore the cancellation switch S2 to normal. Cancellation counter registers next higher number. Give Attention signal ●.

(ix) Send cancellation signal ●●●●●● beats by pressing PB1 and keep the PB1 and PB2 pressed on the last beat.

(viii) Acknowledge Attention Signal ●.

(x) Turn the operating handle to 'Line Closed' position. Send cancellation signal ●●●●●● beats by pressing PB1 and keep PB 1 and PB2 pressed on the last beat. Lock the Block Instrument.

(xi) Turn the operating handle to 'Line Closed' position and lock the Block Instrument.

Note:- Whenever 'Line Clear' has been cancelled, an entry regarding the same with time and reasons shall be entered in red ink in the Train Signal Register.

5.25 Procedure for testing the Block Instrument by the Authorised Signal and Telecommunication Department official :-

<table>
<thead>
<tr>
<th>Authorized Signal and Telecommunication Department official at ‘X’,</th>
<th>Station Master at ‘Y’.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give Attention signal ●.</td>
<td>(ii) Insert Station Master’s key and acknowledge Attention signal ●.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement attend telephone. Inform intention for testing the Block Instrument.</td>
<td>(iv) Give consent.</td>
</tr>
<tr>
<td>(v) Give (16) ●●●●●●●●●●●●●●●● beats by pressing PB1.</td>
<td>(vi) Acknowledge (16) ●●●●●●●●●●●●●●●● beats by pressing PB1</td>
</tr>
<tr>
<td>(vii) Give ● ● beats by pressing PB1 and keep the PB1 and PB2 pressed on the last beat.</td>
<td>(viii) Turn the operating handle to 'Train Coming From' position. Give ●● beats by pressing PB1, and keep PB1 and PB2 pressed on the last beat.</td>
</tr>
<tr>
<td>(ix)(a) Turn the operating handle to 'Train Going To' position. (b)Take ‘OFF’ the Last Stop signal. (c) Put back the Last Stop signal lever/knob/slide to normal.</td>
<td></td>
</tr>
<tr>
<td>(x)(a) Turn ‘Cancellation switch S1 to reverse. Wait for 120 seconds until ‘Time release indicator’ operates and ‘Free’ indication appears. (b) Restore S1 switch to normal. Counter number registers next higher number. (c) Give ‘Attention' signal●</td>
<td>(xi) Acknowledge ‘Attention’ signal ●.</td>
</tr>
<tr>
<td>(xii) Give ●●●●● beats by pressing PB1 button, and keep PB1 and PB2 button pressed on the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>(xiv) Turn the operating handle to ‘Line Closed’ position. Give 5 beats by pressing PB1 button, and keep PB1 and PB2 pressed on the last beat.</td>
<td></td>
</tr>
<tr>
<td>(xv) Turn the operating handle to ‘Line Closed’ position.</td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. This operation shall be repeated by the Station Master at ‘Y’ in the same order as done by the Signal and Telecommunications official at ‘X’ commencing with the testing signal. The Block Instruments at both ends shall be locked after the testing signal is completed.

2. Following entries shall be made in red ink in the Train Signal Register by the Signal and Telecommunication department official at ‘X’ and the Station Master at ‘Y’.

<table>
<thead>
<tr>
<th>Time _______ Hours _______ Minutes</th>
<th>Date__________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchanged ‘Testing Signals’ with the Station Master station/ authorized Signal and telecommunication official at ________ station. Taken ‘OFF’ Last Stop Signal and restored it to normal. Number registered on the associated counter of cancellation switch S1 is ________.</td>
<td></td>
</tr>
</tbody>
</table>

Signature of the S & T official / Station Master

The time to be recorded shall be the time when the testing was completed.

5.26 Failure of the Instrument:

(i) When the Block Instrument or battery counter is found unlocked.

(ii) When there is a reason to believe that there is contact between block wire and any other circuit.

(iii) Bell signals are received indistinctly or fail altogether.

(iv) When the glass front of the galvanometer is broken.

(v) Galvanometer fails to respond to bell signals.

(vi) The operating handle cannot be turned even after correct sequence of operation.

(vii) The operating handle can be turned without prolonged beat from the other end.

(viii) When the operating handle could be turned to ‘Line Closed’ position before the arrival of the train.

(ix) ‘Line Clear’ cannot be cancelled even after correct sequence of operations.

(x) When the ‘Train On Line’ indication disappears prematurely or fails to appear at one or both the instruments.

(xi) When the ‘Train On Line’ buzzer fails to sound at one or both the stations.

(xii) When the ‘LVT buzzer’ does not operate after the complete arrival of the train.

(xiii) Attention cannot be obtained on the Block Instrument, including the failure of the Block Telephone.

(xiv) When the Last Stop signal fails to return to ‘ON’ position automatically as a train passes over the first vehicle track circuit.

(xv) The ‘Last Stop signal’ can be taken ‘OFF’ when the operating handle is not in the ‘Train Going To’
condition.

Note: - However, Block Instrument working need not be suspended, if the Last stop signal could not be taken ‘OFF’, even after setting the Block Instrument to ‘Train Going To’ position.

(a) The Station Master shall issue Form T/369(3b) duly making an endorsement with a private number, obtained from the block station is advance as an authority to pass the Last stop signal at ‘ON’ position.

(b) In cases where trains are to be started from Non-signalled road, during such failures, T/511 shall be issued with an endorsement.

(xvi) If the Last Stop signal goes back to ‘ON’ or ‘Train On Line’ indication appears prematurely i.e. before the train actuates the first vehicle track circuit.

(xvii) When the Motor trolley, ladder trolley, or lorry is required to enter the block section and when a trolley is required to enter the block section on ‘Line Clear’.

(xviii) A train arrives without proper Line Clear.

(xix) When a material trains, trolley, lorry, motor trolley and track maintenance machines are to enter the block section during Line Block.

(xx) When a relief train/engine is required to enter a block section obstructed due to an accident or any other reasons.

(xxii) Private Number books are lost or mislaid at the time of granting ‘Line Clear’.

(xxiii) When a train is required to enter the block section, which is already occupied by a trolley on Form T/1518 with Caution Order protection and removal report is not received even after sunset.

(xxiv) If the Station Master’s key is lost or becomes defective.

(xxv) If the shunt key is lost or becomes defective.

(xxvi) If the Block Instrument is known to be defective in any manner other than those described above.

5.27 Occasions when the Station Master themselves may resume Block Instrument working without being certified by the Signal and Telecommunication department official.

(a) When Motor trolley, trolley or lorry or Ladder Trolley has cleared the block section.

(b) When a traffic train is ready to enter the block section after the removal of ‘Line Block’ or expiry of ‘Line Block’ period and when the block section is clear of material train, motor trolley, lorry and track maintenance machine.

(c) When the Block section, which was obstructed due to an accident is clear of the obstruction.

(d) When Private Number books are lost or mislaid at the time of granting line clear for a train and later on if a book is available or when a train is ready to start from his end.

(e) When an accident relief train clears a block section already occupied by a trolley on form number Form T/1518 with ‘Line Clear Refused’ endorsement.

(f) When a train is required to enter the block section, which is already, occupied by a trolley on Form T/1518 with Caution Order protection and removal report is received after sunset.

(g) When the Station Master’s key is lost but subsequently recovered in good condition.

(h) When the Shunt key is lost but subsequently recovered in good condition.
5.28 Occasions when block working is to be resumed by DSTE/ASTE or any other Signal and Telecommunication department official authorized by name after rectification of defects:

(i) Last Stop signal can be taken off when the operating handle is not in ‘Train Going To’ position.
(ii) Operating handle can be turned to ‘Line Closed’ position before the complete arrival of the train.
(iii) Operating handle can be turned to ‘Train Going To’ or ‘Train Coming From’ position or ‘Line Closed’ position without the cooperation of the Station Master at the other end.
(iv) ‘Train On Line’ indication disappears before arrival of the train.
C. Rules applicable to both Push Button type tokenless Block Instrument and FM type Tokenless Block Instrument.

5.29 Procedure for working of Motor trolley

(i) A motor trolley shall be worked under the rules for working trains. Motor trolleys are not ordinarily heavy enough to actuate the track circuits used in connection with the Block Instruments. Hence the Block Instrument shall be suspended and motor trolleys shall be worked on ‘Line clear ticket’. Motor trolley shall be worked between the stations under any one of the following procedures.

- Working of single Motor trolley from one block station to another.
- Motor trolley/Motor trolleys following a train.
- Motor trolley/Motor trolleys following a Motor trolley.
- Placing a Motor trolley outside the station limits.

Note:- A Motor trolley shall not be pulled when it cannot be propelled by hand, use of sails, or any other unauthorized aids for the propulsion is strictly prohibited.

(ii) Working of single Motor trolley from one block station to another:

(a) Motor Trolleys running from one station to another shall be worked as a train. The official in charge of the Motor trolley shall advise the Station Master about the block section in to which the Motor trolley will enter and the time at which he shall clear the block section. The Station Master shall advise the Section Controller and obtain his permission for starting the Motor trolley. The Station Master shall then advise the Station Master at the other end of the block section, suspend the Block Instrument working and exchange messages as given under rules vide BWM 7.03 (a) or (b) Both end Station Masters shall extract Shunt key and keep it in their safe custody The Station Master shall obtain line clear, issue ‘Line Clear Ticket’ to the official in charge of the Motor trolley. Starter may be taken off, where interlocking permits. Both the Station Masters shall enter in red ink in the Train Signal Register the Motor trolley Number (in the Train number column) and other particulars as for a train. Immediately after the Motor trolley had left the station, the Station Masters at both ends shall place the Motor trolley Cap on the ‘Train Going To button/operating handle’. The official in charge is entirely responsible for clearing the block section by the specified time. At the receiving station, the Motor trolley shall be received on signals. On arrival of the Motor trolley, the official in charge shall handover the ‘Line Clear Ticket’ to the Station Master who shall cancel the same and return it to the official in charge. Both end Station Masters shall insert Shunt key in their respective Block Instruments/EKT apparatus, and resume normal working and exchange messages vide BWM 7.03(c).

(b) If the Motor trolley fails and cannot be propelled by hand, the official in-charge shall remove it from the line, prepare ‘Removal Advice’ in duplicate and send it along with the ‘Line Clear Ticket’ to the nearest Station Master through a messenger. On getting the ‘Removal Advice’ along with ‘Line Clear Ticket’, the Station Master shall advise the Station Master at the other end, about the removal of the Motor trolley through a message. Both end Station Masters shall insert ‘Shunt key’ and resume Block Instrument working.

(iii) Motor trolley / Motor trolleys following a train ----

(a) One or more Motor trolleys may be allowed to follow a train on Single line Tokenless territory in day clear weather provided the train, which is to be followed, is worked with vacuum/air brake throughout in good working order.

(b) The official in charge shall advise the Station Master about the block section in to which the Motor trolley(s) shall follow the train and the time at which he shall clear the block section. The Station Master shall obtain ‘Line Clear’ for the train and advise the Station Master in advance, the particulars of the Motor trolley(s) following the train. The Station Master in advance shall acknowledge the same, by confirming with individual Private Number for each Motor trolley following the train.

(c) The train shall be started after setting the instrument to ‘Train Going To’ position. After getting ‘Train On Line’ indication, the Station Master shall extract ‘Shunt key’ and keep it in his safe custody. The Station Master shall prepare Motor trolley permit in Form T/ 1525 in duplicate mentioning the Private Number obtained from the station in
advance for the Motor trolley. The Station Master shall then issue the original copy of Form T/1525 to the official in charge duly obtaining his signature in the duplicate copy. The entries for the Motor trolleys following the train shall be made in the Train Signal Register below the train entry in red ink.

Block section occupied by T.No____, followed by

(i) Motor trolley No____PN_______
(ii) Motor trolley No____PN_______
(iii) ...........

Immediately after the Motor trolley(s) following the train have left the station, both end Station Masters shall place the Motor trolley Cap on the operating handle/Train Going To button.

(d) The official in charge of the each of the following Motor Trolleys shall ensure that their Motor trolleys are kept at a safe distance from the preceding train or Motor Trolley.

(e) Except in an emergency the signals taken off for the despatch/reception of a train shall not be put back to ‘ON’ until all the following Motor trolleys have passed them. At Stations where the despatch/reception signals are automatically put back to ‘ON’ by the train, the route set for the train shall not be altered until all the following Motor trolleys have passed them. However the official in charge of the Motor Trolleys following the Train may pass the despatch/reception signals at ‘ON’. They shall be responsible to verify the correct setting of points during despatch/reception. The official -in charge shall on arrival at the station in advance, handover the original copy of Form T/1525 to the Station Master who shall cancel the same and return it to the official -in charge. The Station Master at the receiving end shall ensure that the following Motor trolleys have arrived or the removal advice along with the original of Form T/1525 is received before he clears the block section.

(f) On arrival of Motor trolley(s), the Station Master concerned shall advise the Station Master at the other end by giving a message quoting the Private Number given for Motor trolleys and enter the same in red ink in the Train Signal Register. The Station Master at the other end shall acknowledge the same.

From To
Station Master __________ Station Master __________

No____

1. Motor trolley No____ started under Private Number ________ arrived here at ____ hours /*Removal advice received at _______ hours.
2. ........................................

*Strike out whichever is not applicable

From To
Station Master __________ Station Master __________

No____

1. Understand that Motor trolley No ____ started under Private Number ________ arrived at yours at ____ hours. */Removal advice received at _______ hours.
2. .................................

*Strikeout whichever is not applicable.

(g) The station Master at the sending station shall then insert the ‘Shunt key’. The Block Instrument shall then be brought to the ‘line closed’ condition.

(h) During failure/suspension of Block Instrument, when Motor trolley/Motor trolleys following a train, ‘Line Clear Ticket’ shall be issued for the train and Form T/1525 for the following Motor trolleys, duly following the above
(i) **Break down of Motor trolleys when following a train:**

If the following Motor trolley other than the last one breaks down and cannot be propelled by hand, the official in charge shall promptly remove it from the line and send a removal advice along with the original of Form T/1525 to the block station in advance through the official in charge of the Motor trolley immediately following it. If the last Motor trolley breaks down the official in charge shall promptly remove it from the line and send the removal advice, with the original Form T/1525 to the nearest block station.

The removal advice shall be in following format,

To The Station Master,

Removed my Motor trolley No____ from the line owing to _________________ (give reasons). I will not place the Motor trolley again on the line, until permitted to do so.

Date_______________

Signature and Designation of the official -in charge

(iv) **Motor trolley/ Motor trolleys following a Motor trolley.**

(a) One or more Motor trolleys may be allowed to follow a Motor trolley on Single Line Tokenless territory in day and night clear weather.

(b) The Station Master shall suspend the Block Instrument working and exchange a message as given vide BWM 7.03 (a) or (b). Both ends Station Master shall extract Shunt key and keep it in their safe custody. The Station Master shall obtain ‘Line Clear’ for the first Motor trolley and also advise the Station Master in advance, the particulars of the Motor trolley/ Motor trolleys following the Motor trolley. He shall issue ‘Line Clear Ticket for the first Motor trolley. Starter may be taken ‘off’, if interlocking permits. The Station Master in advance shall acknowledge the same, by confirming with individual Private Number for each Motor trolley(s) following the Motor trolley.

(c) The Station Master shall prepare Motor trolley permit in Form T/ 1525 in duplicate mentioning the Private Number obtained from the station in advance for the Motor trolley. The Station Master shall then issue the original copy Form T/1525 to the official -in charge duly obtaining his signature in the duplicate copy. Both ends Station Master shall make red ink entries in the Train Signal Register for all the Motor trolleys.

Block section occupied by Motor trolley No.____, followed by

(i)Motor trolley No____PN_______

(ii)Motor trolley No____PN_______

Immediately after the Motor trolley(s) following the Motor trolley has left the station, both ends Station Master shall place the Motor trolley Cap on the ‘Train Going To button/operating handle’.

(d) The official in charge of each of the following Motor Trolleys shall ensure that their Motor Trolleys are kept at a safe distance from the preceding Motor Trolley.

(e) Except in an emergency the signals taken off for the despatch/reception of a first Motor trolley shall not be put back to ‘on’ until all the following Motor Trolleys have passed them. At Stations where the despatch/reception signals are automatically put back to ‘ON’ by the first Motor trolley, the route set for first Motor trolley shall not be altered until all the following Motor Trolleys have passed them. However the official in charge of the Motor Trolleys following the Motor trolley may pass the despatch/reception signals at ‘ON’. They shall be responsible to verify the correct setting of points during despatch/reception. On arrival of the first Motor trolley at the station in advance, the official -in charge shall handover the ‘Line clear ticket’ to the Station Master who shall cancel the same and return it to the official -in charge. The official -in charge of the following Motor trolleys on arrival at the station in advance,
shall handover the original of T/1525 to the Station Master who shall cancel the same and return it to the official -in charge. The Station Master at the receiving end shall ensure that all the following Motor Trolleys have arrived or the removal advice along with the original of Form T/1525 is received before he clears the block section. On arrival of the Motor trolleys, the Station Master concerned shall advise the Station Master by giving a message quoting the Private Number given for the Motor Trolleys and enter the same in red ink in the Train Signal Register. The Station Master at the other end shall acknowledge the same.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master</td>
<td>Station Master</td>
</tr>
</tbody>
</table>

No____

1. Motor trolley No____ started under Private Number ________ arrived here at ____ hours /*Removal advice received at _______ hours.

2…………………..

* Strike out whichever is not applicable

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master</td>
<td>Station Master</td>
</tr>
</tbody>
</table>

No____

1. Understand that Motor trolley No____ started under Private Number ________ arrived at yours at ____ hours. /Removal advice* received at _______ hours.

2…………………..

*Strike out whichever is not applicable

(f) After exchanging messages, both end Station Masters shall insert the Shunt key, and exchange messages vide BWM 7.03 (c) and resume Block Instrument working.

(g) During failure/suspension of Block Instrument, when Motor trolley(s) following the Motor trolley, Line Clear Ticket shall be issued for the first Motor trolley and Form T/1525 for the following Motor trolleys, duly following the above said procedures.

(h) Break down of Motor Trolleys when following a Motor trolley.

   If the first Motor trolley breaks down and cannot be propelled by hand, the official -in charge shall promptly remove it and send the removal advice along with ‘Line clear ticket’ to the Station Master in advance through the official -in charge of the Motor trolley immediately following.

The removal advice shall be in following format,

To
The Station Master,

Removed my Motor trolley No____ from the line owing to __________________ (give reasons). I will not place the Motor trolley again on the line, until permitted to do so.

Date______________ Signature and Designation of the official -in charge.

If the following Motor trolley other than the last one breaks down, the official in charge shall promptly remove it from the line and send a removal advice along with the original of Form T/1525 to the block station in advance through the official in charge of the Motor trolley immediately following it. If the last Motor trolley breaks down the official in charge shall promptly remove it from the line and send the removal advice, with the original Form T/1525 to the nearest block station. On receipt of the removal advice along with original of Form T/1525 the Station Master in
advance, shall clear the block section.

(v) Placing a Motor trolley on the line outside the station limits.

(a) The official in charge shall send a memo through a messenger, in duplicate, for ‘Line Clear’ to the Station Master of the nearest block station indicating there in the time required for clearing the block section and the station at which the Motor trolley shall clear the block section. The Station Master shall suspend the Block Instrument working, extract Shunt key and obtain ‘Line Clear’ from the station Master at the other end of the block section. Before granting Line clear for Motor trolley, the receiving end Station Master shall extract key from his instrument. He shall hand over the ‘Line Clear ticket’ along with the duplicate copy of the memo to the messenger duly obtaining his signature/thumb impression in the Train Signal Register. The official in charge shall place the Motor Trolley on the line only on receipt of the ‘Line clear ticket’ with the duplicate copy of the memo.

(b) On arrival at the station, the official -in-charge shall handover the ‘Line Clear Ticket’ to the Station Master who shall cancel the same and return it to the official -in-charge. Both end Station Masters shall insert ‘Shunt key’ and resume Block Instrument working.

(c) After placing the Motor trolley in the mid-section, if the official -in-charge, wants to remove it, the official -in-charge, shall prepare the removal advice and send it to the nearest Block station along with the ‘Line Clear Ticket’.

5.30 Shunting In Tokenless Territory:

(i) Shunting beyond Starter signal and up to the Advanced Starter/Shunting Limit Board (within station section) under ‘Line Closed’ condition

(a) The Station Master shall hand over Form T/806 along with shunt key to the Loco Pilot authorizing him to shunt only up to Advanced Starter/Shunting Limit Board (within station section)

(b) On completion of shunting, Loco Pilot shall handover Form T/806 with shunt key to the Station Master who cancel it and return the same to the Loco Pilot.

(c) The Station Master shall then insert the ‘Shunt key’.

Note: For performing shunting upto Advanced Starter / Shunting Limit Board, when shunt signal is taken ‘off’, T / 806 need not be given.

(ii) Shunting beyond Starter signal and up to the opposing First Stop Signal under ‘Line Closed’ condition;

(a) The Station Master shall prepare Form T/806 and hand it over to the Loco Pilot along with ‘Shunt key’, authorizing him to shunt up to Opposing First Stop Signal.

(b) On completion of shunting, Loco Pilot shall handover T/806 along with ‘Shunt key’ to the Station Master.

(c) Station Master shall cancel Form T/806 and return the same to the Loco Pilot and insert the ‘Shunt key’ in to the Block Instrument/EKT apparatus.

(iii) Shunting beyond opposing First Stop Signal (Block Back):

<table>
<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Insert Station Master’s key and turn. Give Call Attention signal. ●</td>
<td>(b) Insert Station Masters key and turn. Acknowledge Call Attention signal. ●</td>
</tr>
<tr>
<td>(c) On receipt of acknowledgement, attend telephone and give out station name. Inform intention to shunt beyond opposing First</td>
<td></td>
</tr>
<tr>
<td>Stop Signal.</td>
<td>(d) Acknowledge and give consent confirmed by a Private Number.</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>(e) Prepare Form T/806 clearly authorizing him to shunt beyond opposing First stop signal. Mention the Private Number obtained from the Station in advance in the Form T/806. He shall issue the same along with Shunt key. Shunt signal / Starter if any, can be taken ‘off’. If not, hand signal shall be shown.</td>
<td></td>
</tr>
<tr>
<td>(f) For return movement, Shunt signal can be taken ‘off’. If not, hand signal shall be shown. Home signal shall not be taken ‘off’. On completion of shunting, Loco Pilot shall handover the Form T/806 along with Shunt key to the Station Master on duty.</td>
<td></td>
</tr>
<tr>
<td>(g) Insert the Shunt key in to the Block Instrument/EKT apparatus and cancel the Form T/806 and return the same to the Loco Pilot.</td>
<td></td>
</tr>
<tr>
<td>(h) Give Call Attention and inform completion of shunting. Lock the Block Instrument.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(i) Acknowledge completion of shunting. Lock the Block Instrument.</td>
</tr>
</tbody>
</table>

**Note:**
(1) When Shunt key cannot be extracted at station ‘X’, for any shunting upto *Advanced Starter/Shunting Limit Board/*upto Opposing First Stop Signal/*beyond Opposing First Stop Signal, the Station Master shall ensure that the Block Instrument for the direction of shunting is in ‘Line Closed’ condition. Station Masters at both ends of the block section shall exchange a numbered message to this effect. The Station Master at ‘Y’, shall take out the ‘Shunt key’, keep it in safe custody and give a categorical assurance supported by a Private Number. Station Master at ‘X’ shall make an endorsement in Form T/806 that ‘Shunt key cannot be taken out’ mentioning the Private Number obtained from station ‘Y’, authorizing the Loco Pilot to shunt up to the *Advanced Starter/Shunting Limit Board/ opposing First Stop Signal/ Beyond opposing First Stop Signal*. After completion of shunting, the Loco Pilot shall handover Form T/806 with the endorsement to the Station Master. The Station Master shall cancel Form T/806 and return the same to the Loco Pilot. On completion of shunting, the Station Master ‘X’ shall inform the Station Master by a numbered message with Private Number. The Station Master at ‘Y’ shall acknowledge the same and insert the ‘Shunt key’. The entries shall be made in the TSR in red ink.

(2) When Block Instrument working is suspended and shunting has to be performed, the Station Masters at both ends shall extract ‘Shunt key’, wherever possible, and keep it in safe custody. Thereafter the above procedure shall be followed. An endorsement that ‘Block Instrument has failed’ in Form T/806 shall be duly mentioning the Private Number obtained from the other end.

(3) Shunting up to opposing First Stop Signal and beyond is prohibited at stations provided with ‘catch siding’.

*Strike out whichever is not applicable*

(iv) **At stations where shunting in the face of an approaching train is permitted:**

For shunting up to Advanced Starter/ Shunting Limit Board :
(The Block Instrument being in ‘Line Closed’, ‘Train Coming From’ or ‘Train going to-with Train on line’ condition).
(a) Station Master shall prepare Form T/806 and hand over the same to the Loco Pilot along with ‘Home Signal key’, authorizing him to shunt only up to Advanced Starter / Shunting Limit Board.

(b) On completion of shunting, Loco Pilot shall handover the Form T/806 along with ‘Home signal key’ to the Station Master, who shall cancel Form T/806 and return the same to the Loco Pilot retaining the Home Signal key.

Note: If ‘Home Signal key’ could not be extracted for any reasons, both end Station Masters shall exchange numbered messages with Private Number. The Station Master at ‘X’, shall make an endorsement in Form T/806 that Home signal key could not be extracted. The entries shall be made in the TSR in red ink.

(iv) **Shunting beyond Starter signal/Advanced Starter and opposing First Stop signal behind a departing train with the Block Instrument in ‘Train Going To’ with ‘Train On Line’ condition:**

<table>
<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Give call Attention.</td>
<td>(b) Acknowledge call Attention and attend telephone.</td>
</tr>
<tr>
<td>(c) Attend telephone and inform intention to shunt behind a departing train up to opposing First Stop signal.</td>
<td>(d) Give consent for the same.</td>
</tr>
<tr>
<td>(e) Prepare Form T/806 and hand it over to the Loco Pilot along with ‘Shunt key’, authorizing him to shunt up to Opposing First Stop Signal.</td>
<td></td>
</tr>
<tr>
<td>(f) On completion of shunting, Loco Pilot shall handover Form T/806 along with ‘Shunt key’ to the Station Master.</td>
<td></td>
</tr>
<tr>
<td>(g) Cancel Form T/806 and return the same to the Loco Pilot and insert the ‘Shunt key’ in to the Block Instrument/EKT apparatus.</td>
<td></td>
</tr>
<tr>
<td>(h) Give call Attention.</td>
<td>(i) Acknowledge the call Attention and attend telephone.</td>
</tr>
<tr>
<td>(j) Inform completion of shunting and insertion of ‘Shunt Key’.</td>
<td>(k) Acknowledge the same. Only after getting this information from station ‘X’, the block section shall be cleared, if the train has already arrived.</td>
</tr>
</tbody>
</table>
CHAPTER 6
S.G.E. LOCK AND BLOCK INSTRUMENT

6.01 Diagram of S.G.E. Lock and Block Instrument:

Double Line sections with Class 'B' working in Multiple Aspect Colour light Signalling Territories indicating the Outdoor apparatus.

6.02 Description of the S.G.E Lock and Block Instrument:

(i) The "Train Going To" dial:

This is provided on the upper portion of the instrument. The indications of this dial refer to trains leaving the station and the dial serves as a visual indicator of the condition of the block section in advance. These indications are electrically controlled by the Station Master at the block station immediately in advance and the indications can be altered only by him. The indications of the "Train Going To" dial correspond with those of the 'Train Coming From' dial at the station in advance. There are three indications, namely-

(a) 'Line Closed' indication: - This is shown on a white segment, when there is no train in the block section and when 'Line Clear' has not been given for any train to enter the block section. The needle point towards white segment and remains vertical.

(b) 'Line Clear' indication: - This is shown on a green segment, when 'Line Clear' has been received for a train to enter the block section. The needle points towards the right on the green segment of the
(c) ‘Train on Line’ indication: - This is shown on a red segment, when the block section is occupied by a train or other obstruction and the needle points to the left on the red segment.

(ii) The ‘Train Coming From’ dial: -
This is provided below the TGT dial. The indications of this dial refer to trains approaching a station and the dial serves as a visual indicator of the condition of the block section in rear. The indications of the ‘Train Coming From’ dial at a station correspond with those of the ‘Train Going To’ dial of the corresponding instrument at the station in rear. It is controlled entirely by the Station Master of the station at which the instrument is located. These indications are the same as those described against the ‘Train Going To’ dial in the instrument at the station at the other end.

(iii) The Operating Handle: - The operating handle has three positions:

(a) ‘Line Closed’:- when the arrow on the operating handle is vertical or the middle position, then the operating handle is in the ‘Line Closed’ position or the normal position.

(b) ‘Line Clear’: - When turned to the right, it assumes ‘Line Clear’ position.

(c) ‘Train On Line’:- When turned to the left, it assumes ‘Train On Line’ position.

For turning the operating handle from one position to the other position, the plunger is to be pressed. The operating handle is free to rotate from

- ‘Line Closed’ to either ‘Line Clear’ or ‘Train On Line’,
- ‘Line Clear’ or ‘Train On Line’ position to ‘Line Closed’ position. However, when handle is turned from ‘Line Closed’ to ‘Line Clear’ and then to ‘Train On Line’ position, the handle gets locked in that position, until the train has actuated the last vehicle track circuit and the Home Signal lever/knob/slide has been put back to normal.

(iv) Bell Plunger: - The Bell plunger is used to give bell signals to the station at the other end of the block section. The Bell plunger in its normal position locks the operating handle in any of its three positions. Pressing of the plunger releases the lock on the Operating Handle and it shall therefore be pressed before the handle is turned.

(v) Bell: - The Bell is intended to receive bell signals from station at the other end of the block section. Every time the Bell plunger is pressed at the station at the other end, the bell will sound once.

(vi) Telephone: - A Telephone is provided along with each instrument for communication with the station, at the other end of the block section.

(vii) Station Master’s Key:- The key when taken out locks the bell plunger and will prevent unauthorized operation of the Block Instrument. The key shall be under the personal custody of the Station Master on duty. When handing over charge, the Station Master on duty shall hand over the key to the Station Master taking over charge. A record of such transfer with time and date shall be entered in the Train Signal Register and signed by both the Station Masters.

(viii) Alarm Bell: An Alarm Bell is provided in the Instrument and it rings at both stations, when the train passes the Last Stop signal at the starting station actuating the first vehicle track circuit. The Bell at the starting station continues to ring until the Station Master replaces the Last Stop signal lever/knob to its normal position. The bell continues to ring at the receiving station, until the Station Master turns the operating handle to the ‘Train On Line’ position.

6.03 Indoor apparatus—
(i) **Last Stop signal lever Key:** - A mechanical key or electrical key lock is also provided for the Last Stop signal lever/knob. The key, when extracted locks the lever/Last Stop Signal control in the normal position and the key is used for shunting movements past the Last Stop signal. The Station code and the line, ‘Up’ or ‘Down’ to which it applies are inscribed on the respective keys.

(ii) **Home Signal lever contacts:** - The electrical contacts on Home signal lever/ control knobs are necessary for the release of the lock on the operating handle after the arrival of the train. The Home signal lever/knob, which has been operated, for the reception of a train shall be put back to normal only after the train has passed the last vehicle track circuit. The replacement of the Home signal lever/knob to normal together with the operation of the last vehicle track circuit releases the lock on the operating handle.

6.04 **Outdoor apparatus:** -

(i) **First Vehicle track Circuit:** - It is located slightly in advance of the Last Stop signal. Once the engine or first vehicle of a train, actuates the first vehicle track circuit at the train starting station,

(a) The Last Stop signal is replaced to ‘ON’ automatically

(b) In the “Train Going To” dial of the train starting station and in the ‘Train Coming From’ dial at the receiving station, the needle automatically turns towards the ‘Train On Line’ indication.

(c) At the starting station, a continuous alarm bell rings. This can be stopped by restoring the Last Stop signal lever/knob to normal.

(d) At the receiving station, a continuous ‘Train On Line’ alarm bell sounds. This can be stopped by turning the operating handle to ‘Train On Line’ position at that station.

**LSSR indicator:**

1) The LSSR indicator is an indicator provided near the LSS on the CCIP/VDU (Control cum Indication Panel/Visual Display Unit) to indicate whether the LSS relay (which controls the LSS) is in normal condition or dropped condition. The LSSR indicator will normally show no light and will display ‘RED’ light when FVT drops.

2) The dropping of LSSR relay when the Block Instrument is in Line Closed condition will cause Block failure for subsequent trains. When the Block Instruments are in Line Closed position with the LSS at ‘ON’, if LSSR drops, a ‘RED’ indication appears in the LSSR indicator. When the LSSR indicator is lit ‘RED’ it indicates that the FVT is disturbed and to avoid block failure for the subsequent train the procedure as given in Note under Para 6.06 shall be followed.

3) When the Block instrument is in Line Clear condition, normally, the First Vehicle Track circuit (FVT) drops due to a train passing over it, the LSSR indicator will show ‘RED’ and the Block Instrument will show ‘TOL’ condition. After the train has cleared the first vehicle track circuit (FVT) and when the LSS is normalized, LSSR ‘RED’ indication gets extinguished.

In Line Clear condition, if the First Vehicle Track circuit (FVT) drops without a train passing over it, LSSR indicator shows ‘RED’ and the Block Instrument shows ‘TOL’ condition, the block instrument shall be treated as failed and the train has to be despatched as per the procedure mentioned in BWM.
(ii) Last Vehicle Track Circuit: - This is fixed at the foot of the Block Section Limit Board or in rear of outermost facing points in Multiple Aspect signalling territories. When the last vehicle of the train passes over the last vehicle track circuit it permits the operating handle to be restored from 'Train on Line' position to 'Line Closed' position after the Home signal lever/knob/slide has been replaced to its normal position.

6.05 Testing before taking over charge: -

(i) The Station Master shall when taking over charge of the Block Instrument, test the instrument by attempting to take ‘Off’ the Last Stop signal, without obtaining ‘Line Clear’. If the signal cannot be taken ‘Off’ the instrument shall be considered to be in order. A record of this shall be made in the Train Signal Register.

(ii) If the signal can be taken ‘Off’, the Block Instrument working shall be suspended immediately and all concerned advised accordingly.

6.06 Precautions to be taken before giving 'Is Line Clear' signal:-

i) The “Train Going To” dial shows ‘Line Closed’ indication.

ii) The Last Stop signal referring to the train is at ‘ON’

iii) Ensure that the LSSR indicator available in the CCIP/VDU near LSS is not lit

iv) All the entries relating to the previous train despatched are complete on the “Train Going To” side of the Train Signal Register

v) No Line Clear has been obtained for any other train by any other means of communication.

vi) A Private Number has been obtained for the train.

Note:- Procedure to be followed when the LSSR indicator is lit showing ‘RED’ in the CCIP/VDU with the block instrument in Line Closed condition.

<table>
<thead>
<tr>
<th>SL.No.</th>
<th>Sending Station ‘X’</th>
<th>Receiving Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signal levers/knobs/slides relating to X – Y block section is in normal position and the TGT dial of the Block Instrument is in ‘Line Closed’ condition. LSSR indicator shows red light.</td>
<td>Signal levers/knobs/slides relating to X – Y block section is in normal position and the TCF dial of the Block Instrument is in ‘Line Closed’ condition.</td>
</tr>
</tbody>
</table>
### Precautions to be taken before giving ‘Line is Clear’ signal:

1. The ‘Train Coming From’ dial shows ‘Line Closed’ indication.
2. The Operating handle is in ‘Line Closed’ position.
3. All the entries relating to the previous train received are complete in the ‘Train Coming From’ side of the Train Signal Register.
4. No ‘Line Clear’ has been given for any other train by any other means of communications.
5. A Private Number has been given for the train to the station in rear.

#### Table:

<table>
<thead>
<tr>
<th>SL.No.</th>
<th>Sending Station ‘X’</th>
<th>Receiving Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Give ‘Attention’ signal *</td>
<td>(ii) Acknowledge ‘Attention’ signal • and attend telephone.</td>
</tr>
<tr>
<td>(iii)</td>
<td>After ensuring that there is no train or vehicle in the Block section, advise the Station Master at station ‘Y’ regarding the LSSR indicator being lit ‘RED’, duly supported by a Private Number, and inform about the need to perform the normalizing process.</td>
<td>(iv) After ensuring that there is no train or vehicle in the Block section, acknowledge the information regarding the LSSR indicator being lit ‘RED’ supported by a Private Number. Then turn the operating handle of the Block Instrument pertaining to ‘X’ – ‘Y’ block section from ‘Line Closed’ to ‘Train On Line’ and back to ‘Line Closed’ position.</td>
</tr>
<tr>
<td>(v)</td>
<td>LSSR indication in the panel disappears. Inform Station Master at ‘Y’ regarding the same.</td>
<td>(vi) Acknowledge receipt of information regarding the disappearance of LSSR ‘RED’ indication, through Block telephone.</td>
</tr>
</tbody>
</table>

Note: The information with regard to the above transactions, including the Private Numbers exchanged with time, shall be recorded in the TGT side of the TSR at the train sending station and in the TCF side of the TSR at the train receiving station.
### 6.08 Precautions to be taken before closing the block section:

- **i)** Ensure that the train has arrived complete.
- **ii)** Ensure that all the Reception signals taken ‘off’ for the train, have been put back to ‘ON’.

### 6.09 Method of signalling a train from one block station to another block station:

<table>
<thead>
<tr>
<th>Sending Station ‘X’</th>
<th>Receiving Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give ‘Attention’ signal ●.</td>
<td>(ii) Insert Station Master’s key. Acknowledge ‘Attention’ signal ●. Attend Telephone and give out the station name.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement attend telephone. Ensure correct station has responded. Give out station name.</td>
<td></td>
</tr>
<tr>
<td>(iv) Give number and description of train and ask ‘Is Line Clear’ orally.</td>
<td>(v) Ensure correctness of the station. Repeat Number and description of train. If Line is Clear, say, ‘Line is clear’ and give Private Number for the train.</td>
</tr>
<tr>
<td>(vi) Repeat the Private Number received and give ‘Is Line Clear’ signal ●●.</td>
<td></td>
</tr>
</tbody>
</table>
| (vii) (a) Acknowledge ●● beats and hold the bell plunger pressed during the last beat and turn the operating handle to ‘Line Clear’.  
(b) This will change the indication of the ‘Train Coming From’ dial to ‘Line Clear’ position. | |
| (viii) The indications of the ‘Train Going To’ dial will change to ‘Line Clear’ position. | |
| (ix) Take ‘Off’ the Last Stop signal. | |
| (x) As the train passes the Last Stop signal and actuates the first vehicle track circuit  
(a) The Last Stop signal goes back to ‘ON’  
(b) The needle in the ‘Train Going To’ dial automatically goes to ‘Train on line’ position  
(c) Alarm bell rings.  
(d) Restore the Last stop signal lever / Knob to normal, which stops alarm bell.  
| (xii) The operating handle will be locked on the ‘Train On Line’ position. | |
| (xiii) (a) Take ‘OFF’ reception signal.  
(b) After ensuring that the train has arrived inside the last vehicle track circuit, put back the Home signal lever/ knob to | |
The restoration of the signal lever/knob and the train actuating the last vehicle track circuit releases the lock on the operating handle.

Note: (1) In case of failure of Home Signal train shall be received as per GR & SR 3.69. However, the Lever/Knob of the defective Home Signal and Station Master’s control slide shall be kept in the pulled over position so that lock on the operating handle gets released, as otherwise this will lead to suspension of Block Instrument working.

(2) Do not reverse the Home Signal lever/knob during partial failure of points (N or R), even if it leads to Block Instrument failure, if the signal is likely to assume ‘OFF’ aspect. Immediately advise the Signal and Telecommunication staff concerned for rectification of Block Instrument failures.

(xiv) Give Call Attention Signal ●.

(xv) Acknowledge Call Attention Signal ●.

(xvi)(a) Give the ‘Train out of block section’ signal ●●●● hold the bell plunger on the last beat and turn the operating handle to ‘Line Closed’ position.

(b) The ‘Train Coming From’ dial will now change to ‘Line Closed’ position.

(xvii) After ensuring that the “Train Going To” dial changes to ‘Line Closed’ position give ‘train out of block section’ signal ●●●●.

(xviii) Lock the Block Instrument.

(xix) Lock the Block Instrument.

6.10 Procedure to cancel ‘Line Clear’

<table>
<thead>
<tr>
<th>Sending station ‘X’</th>
<th>Receiving Station ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal levers/ knobs/ slides relating to the block section are in the normal position.</td>
<td>Signal levers/ knobs/ slides relating to the block section are in the normal position.</td>
</tr>
<tr>
<td>(i) Give ‘Attention’ signal ●.</td>
<td>(ii) Acknowledge ‘Attention’ signal ● and attend Telephone.</td>
</tr>
<tr>
<td>(v) Send ‘cancellation’ signal ●●●●.</td>
<td>(vi)(a) Acknowledge the ‘cancellation’ signal ●●●● hold the bell plunger on the last beat and turn the operating handle from ‘Line Clear’ to ‘Line Closed’ position.</td>
</tr>
<tr>
<td></td>
<td>(b) ‘Train Coming From’ dial shows ‘Line Closed’ position.</td>
</tr>
<tr>
<td>(vii) “Train Going To” dial shows ‘Line Closed’ position.</td>
<td></td>
</tr>
<tr>
<td>(viii) Acknowledge the ‘cancellation signal ●●●●.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ix) Lock the Block Instrument.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: - Whenever. ‘Line Clear’ has been cancelled, an entry regarding the same with time and reasons for cancellation shall be made in the Train Signal Register.
6.11 Procedure for testing the Block Instrument by the Authorised Signal and Telecommunication department official.

<table>
<thead>
<tr>
<th>Authorized Signal and Telecommunication department official at ‘X’</th>
<th>Station Master at ‘Y’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Insert Station Master’s key and turn. Give ‘Attention signal’●.</td>
<td>(ii) Insert Station Master’s key and turn. Acknowledge ‘Attention signal’● and attend telephone.</td>
</tr>
<tr>
<td>(iii) On receipt of acknowledgement, communicate intention for testing the Block Instrument.</td>
<td>(iv). Give consent.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Take ‘OFF’ the Last Stop signal.</td>
<td></td>
</tr>
<tr>
<td>(c) Put back the Last Stop signal lever/knob to normal.</td>
<td></td>
</tr>
<tr>
<td>(x) Give Call Attention Signal●.</td>
<td>(xi) Acknowledge Call Attention Signal●.</td>
</tr>
<tr>
<td></td>
<td>(b) ‘Train Coming From’ dial shows ‘Line Closed’ position.</td>
</tr>
<tr>
<td>(xiv)(a) ‘Train Going To’ dial shows ‘Line closed’ Position.</td>
<td>(b) Attempt to take ‘Off’ the Last Stop signal and satisfy that it cannot be taken ‘Off</td>
</tr>
<tr>
<td>(b) Acknowledge ‘cancellation’ signal●●●●●.</td>
<td></td>
</tr>
</tbody>
</table>

Note: (1) The above operations shall be repeated by the Station Master at ‘Y’ beginning with sixteen beats. The Block Instruments at both ends shall be locked after completion of testing.

(2) Following entries shall be made in red ink in the Train Signal Register by the Signal & Telecommunication Department official at ‘X’ and by the Station Master at ‘Y’:

<table>
<thead>
<tr>
<th>Time _________ Hours _________ minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchanged Testing signals with Station Master/Authorized Signal and Telecommunications department official at _________ station. Taken ‘OFF’ Last Stop signal and restored it to normal.</td>
</tr>
<tr>
<td>Date______</td>
</tr>
<tr>
<td>Signature of the Authorized S &amp; T official /Station Master</td>
</tr>
</tbody>
</table>

80
6.12 Failure of the Block Instrument:

The Block Instrument shall be considered to have failed and Block Instrument Working shall be suspended in the following circumstances:

i) The Block Instrument or its Battery Counter is found unlocked.

ii) There is reason to believe that there is contact between the Block wire and any other circuit.

iii) Attention cannot be obtained on the Block Instrument, including the failure of the Block Telephone.

iv) The dial indicator glass is broken.

v) When a train arrives at a station without ‘Line Clear’ given for it.

vi) The indications of the ‘Train Going To’ dial at ‘starting station’ do not correspond with the indications of the ‘Train Coming From’ dial at ‘other end’ or the position of the operating handle at receiving station.

vii) The indications on the ‘Train Coming From’ dial do not correspond to the position of the Operating handle.

viii) The Operating handle cannot be turned to Train on Line’ or ‘Line clear’ or to ‘Line Closed’ position in the process of granting or canceling ‘Line Clear’

ix) The Operating handle, which was turned from ‘Line Clear’ position to ‘Train On Line’ position, can be restored to ‘Line Closed’ position before the arrival of the train.

x) The Last Stop signal can be taken ‘Off’ with no ‘Line Clear’ indication on the ‘Train Going To’ dial.

Note: However, Block Instrument working need not be suspended if the Last stop signal could not be taken ‘Off’ even after getting ‘Line Clear’ in the ‘Train Going To’ dial.

(a) The Station Master shall issue Form T/ 369(3b) duly making an endorsement with a Private Number, obtained from the Block Station in advance as an authority to pass the Last stop signal at ‘ON’ position.

(b) In cases where the trains are to be started from Non-signalled road, during such failures, T / 511 shall be issued with an endorsement.

xi) The Last Stop Signal does not go back to ‘ON’ even after the train has entered the block section and the Operating handle at the other end has been turned to ‘Train On Line’ position.

xii) When bell signals are received indistinctly or fail altogether.

xiii) When a train for which ‘Line Clear’ has been obtained and which has operated the first vehicle track circuit, changing the dials to ‘Train On Line’ is backed for any reason in rear of the Last Stop signal.

xiv) When Single line working on Double line is introduced.

xv) When the Motor trolley, ladder trolley, or lorry is required to enter the block section and when a trolley is required to enter the block section on ‘Line Clear.’

xvi) If the Station Master’s key is lost/defective in any way.

xvii) When a relief train/engine is required to enter a block section obstructed due to an accident or any other reasons.

xviii) Whenever a Material train, trolley, Lorry, wiring train, and track maintenance machine is required to enter the block section during ‘Line Block’.

xix) When the Private Number books are lost or misplaced at the time of granting Line Clear.

xx) When an accident relief train is required to enter a block section occupied by a trolley on Form T/1518 with ‘Line Clear Refused’ endorsement.

xxi) When a train is required to enter the block section, which is already occupied by a trolley on Form
T/1518 with Caution Order protection and removal report is not received even after sunset.

xxii) Whenever, the operating handle gets locked in the ‘Train On Line’ position in case of “Block Back” (or) ‘Block Forward’ operation immediately following cancellation of ‘Line Clear’.

xxiii) Whenever a train is piloted into a non- signalled/ non- running line and the operating handle gets locked in the ‘Train On Line’ position.

xxiv) After the complete arrival of the train and Home signal/knob/lever/slide or Calling-on signal lever/knob put back to normal, the operating handle cannot be turned from TOL to line closed position.

xxv) In line clear condition, LSSR indicator shows RED without the train passing over FVT

xxvi) If it is known that the instrument is defective in any other way not specified above.

6.13 Occasions for suspension of one dial of the Block Instrument only to which the cause of suspension applies:

i) When the indications on the “Train Going To” dial at ‘starting station’ do not correspond with the indication of the ‘Train Coming From’ dial or the position of the Operating handle at the receiving station.

ii) When the indications on the ‘Train Coming From’ dial do not correspond to the position of the Operating handle.

iii) If the Operating handle which was turned from ‘Line Clear’ to ‘Train On Line’ position can be restored to ‘Line Closed’ position before arrival of the train.

iv) If the Last Stop signal can be taken ‘Off’ with no ‘Line Clear’ indication on the “Train Going To” dial.

v) If the Last Stop signal fails to go to ‘ON’ after the train has entered the block section and the Operating handle at the other end is turned to ‘Train On Line’ position.

vi) When train for which ‘Line Clear’ has been obtained and which has operated the first vehicle track circuit, changing the dials to ‘Train On Line’ is backed for any reason, in rear of the Last Stop signal.

vii) When the Motor trolley, ladder trolley, or lorry is required to enter the block section and when a trolley is required to enter the block section on ‘Line Clear’.

viii) When a train arrives at a station without ‘Line Clear’ given for it.

ix) Whenever, the operating handle gets locked in the ‘Train On Line’ position in case of “Block Back” (or) ‘Block Forward’ operation immediately following cancellation of ‘Line Clear’.

x) Whenever a train is piloted into a non- signalled/ non- running line and the operating handle gets locked in the ‘Train On Line’ position

xi) When a relief train/engine is required to enter a block section obstructed due to an accident or any other reason.

xii) When an accident relief train is required to enter a block section occupied by a trolley on Form T/ 1518 with ‘Line Clear Refused’ endorsement.

xiii) When a train is required to enter the block section, which is already occupied by a trolley on Form T/1518 with Caution Order protection and removal report is not received even after sunset.

xiv) Whenever a Material train, trolley, lorry, Motor trolley, wiring train and track maintenance machine is required enter the block section during ‘Line Block’.

xv) When the Private Number books are lost or misplaced at the time of granting Line Clear.

6.14 Restoration of Block Working by the Station Master themselves without certification by Signal and Telecommunication department official:

i) Whenever, the operating handle gets locked in the ‘Train On Line’ position in case of “Block Back” (or) ‘Block Forward’ operation immediately following cancellation of Line Clear, the failure is restored automatically with the passage of first train dealt thereafter on ‘Line clear Ticket’. If the Station Master is definitely aware that such “Block Back” or “Block Forward” operation has caused this failure, he
may restore block working after the failure is automatically restored with the passage of the first train.

ii) Whenever a train is piloted into a non-signalled/ non-running line and the operating handle gets locked in the ‘Train On Line’ position and such a failure is restored automatically with the passage of the first train dealt thereafter on ‘Line clear Ticket’ and the Station Master is definitely aware that the failure has been caused by such, Non-Signalled / Non-running line reception, he may restore block working after the failure is automatically restored with the passage of the first train.

iii) Motor Trolley, Ladder trolley, trolley or lorry has cleared the block section.


v) When the Block section, which was obstructed due to an accident is clear of the obstruction.

vi) When a traffic train is ready to enter the block section after the removal of ‘line block’ or expiry of ‘line block’ period and when the block section is clear of material trains, motor trolley, track maintenance machine etc.

vii) When the Station Master’s key is lost but subsequently recovered in good condition.

viii) When a train is required to enter the block section, which is already occupied by a trolley on form T/1518 with Caution Order protection, and removal report is received after the sunset.

ix) When an Accident Relief train clears block section already occupied by a trolley on Form T/1518 with ‘Line Clear Refused’ endorsement.

6.15 Occasions when Block Instrument working is to be resumed by DSTE / ASTE or any other S & T official authorized by name after attending the defects:

(i) The Last Stop signal can be taken ‘Off’ with no ‘Line Clear’ indication on the “Train Going To” dial

(ii) If the Operating handle which was turned from ‘Line Clear’ to ‘Train On Line’ position can be restored to ‘Line Closed’ position before complete arrival of the train.

6.16 Procedure for Working of Motor Trolley

(i) A Motor trolley shall be worked under the rules for working trains. Motor Trolleys are not ordinarily heavy enough to actuate the track circuits used in connection with the Block Instrument. Hence, the Block Instrument working shall be suspended and the Motor trolleys shall be worked on ‘Line Clear Ticket’. The Motor Trolleys shall be worked between the stations under any one of the following procedures:

O Working of Single Motor trolley from one block station to another.

O Motor trolley/Motor Trolleys following a train.

O Motor trolley/Motor Trolleys following a Motor trolley.

O Placing a Motor trolley outside the station limit.

Note:- A Motor trolley shall not be pulled when it cannot be propelled by hand, use of sails, or any other unauthorized aids for the propulsion is strictly prohibited.

(ii) Working of single Motor trolley from one block station to another

(a) Motor trolley running from one station to another shall be worked as a train. The official in-charge shall advise the Station Master about the block section in to which the Motor trolley will enter and the time at which he shall clear the block section. The Station Master shall advise the Section Controller and obtain his permission for starting the Motor Trolley. The Station Master shall then advise the Station Master at the other end of the block section, suspend the Block Instrument working and exchange messages as given Para 7.03(a) or (b). The Station Master shall obtain ‘Line Clear’ and issue ‘Line Clear Ticket’. However before suspending the Block Instrument, the operating handle shall be turned to ‘Train On Line’ position at the other end. Starter may be taken ‘off’, where interlocking permits. Both ends Station Masters shall make entries in red ink in the Train Signal Register. The official in charge is entirely responsible for clearing the block section by the specified time. At the
receiving station, the reception signals shall be cleared for the Motor trolley. On arrival of the Motor Trolley, the official -in charge shall handover the ‘Line Clear Ticket’ to the Station Master on duty who shall cancel the same and return it to the official-in charge. The Operating handle shall be restored to ‘Line Closed’ position, and Station Masters shall exchange messages vide Para 7.03(c) and resume normal working.

(b) If the Motor trolley fails and cannot be propelled by hand, the official -in charge shall remove it from the line, prepare “Removal Advice” in duplicate and along with ‘Line Clear Ticket’ send it to the nearest Station Master through a messenger. On getting the removal advice along with Line Clear Ticket, the Station Master shall advise the Station Master at the other end of the block section about the removal of the Motor trolley. The Station Master in advance shall turn the operating handle to the ‘Line Closed’ position, and exchange messages vide Para 7.03 and then resume Block Instrument working.

(iii) Motor trolley/ Motor trolleys following a train :-

a) One or more Motor trolleys may be allowed to follow a train on the Double line sections during day in clear weather provided the train, which is to be followed, is worked with vacuum/air braked throughout in good working order.

b) The official -in charge shall advise the Station Master about the block section in to which the Motor trolley(s) shall follow the train and the time at which he shall clear the block section. The Station Master of the sending station after obtaining ‘Line Clear’ for the train shall advise the Station Master in advance, the particulars of the Motor trolley(s) following the train. The Station Master in advance shall acknowledge the same by confirming with individual Private Number for each Motor trolley(s) following the train.

c) The train shall be started after getting ‘Line Clear’ in the “Train Going To” dial. The Station Master shall prepare Motor trolley permit in Form T/1525 in duplicate mentioning the Private Number obtained from the Station in advance for the Motor trolley. The Station Master shall issue the original copy of Form T/1525 to the official -in charge duly obtaining the signature in the duplicate copy. The entries for the Motor trolleys following the train shall be made in the Train Signal Register in red ink. The official in charge of the each of the following Motor Trolley shall ensure that their Motor Trolleys are kept at a safe distance from the preceding train / Motor trolley.

d) Except in an emergency the signals taken off for the despatch/reception of a train shall not be put back to ‘ON’ until all the following Motor Trolleys have passed them. At Stations where the despatch/reception signals are automatically put back to ‘ON’ by the train, the route set for the train shall not be altered until all the following Motor Trolleys have passed them. However the official in charge of each Motor Trolley following the Train may pass the despatch/reception signals at ‘ON’. They shall be responsible to verify the correct setting of points during despatch/reception. The official -in charge on arrival at the station in advance, shall handover the original copy of Form T/1525 to the Station Master, who shall cancel the same and return it to the official -in charge. The Station Master at the receiving end shall ensure that the following Motor Trolleys have arrived or the ‘Removal Advice’ along with the original of Form T/1525 is received before he clears the block section.

(e) On arrival of Motor trolley /Motor trolleys, the Station Master concerned shall advise the Station Master at the other end by giving a message quoting the Private Number given for each Motor trolley and enter in red ink in the Train Signal Register. The Station Master at the other end shall acknowledge the same.

From
Station Master__________
No_____

To
Station Master__________

1. Motor trolley No _____ started under Private Number ______ arrived here at _____ hours /”Removal advice received at ______ hours.

2. _________________

Strikeout whichever is not applicable.
From  
Station Master_________  

To  
Station Master _________

No_____

1. Understand that Motor trolley No ____ started under Private Number ________ arrived at yours at ____ hours /*Removal advice received at ______ hours.

2……………………..

*Strikeout whichever is not applicable

(f) The Station Master at the receiving station shall then close the block section by turning the operating handle to ‘Line Closed’ position.

(g) During failure/suspension of Block Instrument, when Motor trolley(s) following a train, ‘Line Clear Ticket’ shall be issued for the train and Form T/ 1525 for the following Motor trolley, duly following the above said procedure.

(h) **Break down of Motor Trolleys when following a train.**

If a following Motor Trolley other than the last one breaks down, the official in charge shall promptly remove it from the line and send a ‘Removal Advice’ along with the original of Form T/1525 to the block station in advance through the official in charge of the Motor Trolley immediately following it. If the last Motor Trolley breaks down the official in charge shall promptly remove it from the line and send the ‘Removal Advice’, with the original of form T/1525 to the nearest block station in the following format,

To  
The Station Master,  

Removed my Motor trolley No ______ from the line owing to ______________ (give reasons). I will not replace the Motor trolley again on the line, until permitted to do so.

Date_______________  
Signature and Designation of the official -in charge

(iv) **Motor trolley/ Motor trolleys following a Motor trolley :---**

a) One or more Motor trolleys may be allowed to follow a Motor trolley on Double line sections during day and night clear weather.

b) The Station Master shall inform the Station Master at the other end, suspend the Block Instrument working and exchange a message as given under Para 7.03 (a) or (b). The Station Master at the other end shall turn the operating handle to ‘train on line’ indication on the ‘Train Coming From’ dial. The Station Master shall obtain ‘Line Clear’ for the first Motor trolley and also advise the Station Master in advance, the particulars of the Motor trolley(s) following the Motor trolley. The Station Master in advance shall acknowledge the same, by confirming with individual Private Number for each Motor trolley/ Motor trolleys following the Motor trolley. The Station Master shall issue ‘Line clear ticket’ for the first Motor trolley. The Station Master shall prepare Motor trolley permit in Form T/1525 in duplicate mentioning the Private Number obtained from the station in advance for the Motor trolley. The Station Master shall then issue the original copy of Form T/1525 to the official -in charge duly obtaining his signature in the duplicate copy. Both the Station Masters shall make red ink entries in the Train Signal Register for all the Motor trolleys. The official in charge of the each of the following
Motor trolley shall ensure that their Motor trolleys are kept at a safe distance from the preceding Motor trolley.

d) Except in an emergency the signals taken off for the despatch/reception of a first Motor trolley shall not be put back to ‘on’ until all the following Motor trolleys have passed them. At Stations where the despatch/reception signals are automatically put back to ‘ON’ by the first Motor trolley, the route set for the first Motor trolley shall not be altered until all the following Motor Trolleys have passed them. However the official in charge of the Motor trolleys following a Motor trolley may pass the despatch/reception signals at ‘ON’. They shall be responsible to verify the correct setting of points during despatch/reception. On arrival of the first Motor trolley at the station in advance, the official in charge shall handover the ‘Line Clear Ticket’ to the Station Master who shall cancel the same and return it to the official in charge. The official in charge of each of the following Motor trolley shall hand over Form T/1525 to the Station Master, who shall cancel the same and return it to the official in charge. The Station Master at the receiving end shall ensure all the following Motor Trolleys have arrived or the ‘Removal Advice’ along with the original copy of Form T/1525 is received before he clears the block section. On arrival of the Motor trolleys, the Station Master in advance shall advise the Station Master by giving a message quoting the Private Number given for each Motor trolley and enter the same in red ink in the Train Signal Register. The Station Master at the other end shall acknowledge the same.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master</td>
<td>Station Master</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

1. Motor trolley No____ started under Private Number ________ arrived here at ____ hours/ *Removal advice* received at ______ hours.
2. ........................................

*Strike out whichever is not applicable

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master</td>
<td>Station Master</td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

1. Understand that Motor trolley No____ started under Private Number ________ arrived at yours at ____ hours / *Removal advice received at ______ hours.
2. .................................

* Strike out whichever is not applicable

(e) After exchanging the message, the Station Master in advance shall turn the operating handle to ‘Line Closed’ position duly resuming Block Instrument working vide Para 7.03 (c).

(f) During failure/suspension of Block Instrument, when Motor trolley/Motor trolleys following a Motor Trolley, ‘Line Clear Ticket’ shall be issued for the first Motor trolley and Form T/1525 for the following Motor trolleys, duly following the above said procedures.
(g) Break down of Motor Trolleys when following a Motor trolley:---

If the first Motor trolley breaks down, the Official-in-charge shall promptly remove it and send the 'Removal Advice' along with 'Line Clear Ticket' to the Station Master in advance through the Official-in-charge of the Motor trolley immediately following in the following format.
To
The Station Master,

Removed my Motor trolley No ______ from the line owing to ____________ (give reasons). I will not replace the Motor trolley again on the line, until permitted to do so.

Date_______________
Signature and Designation of
the Official -in charge

If the following Motor Trolley other than the last one breaks down, the Official in charge shall promptly remove it from the line and send a “Removal Advice” along with the original copy of Form T/1525 to the block station in advance through the Official in charge of the Motor Trolley immediately following it. If the last Motor Trolley breaks down the Official in charge shall promptly remove it from the line and sent the ‘Removal Advice’, with the original copy of Form T/1525 to the nearest block station. On receipt of the ‘Removal Advice’ along with original copy of Form T/ 1525, the Station Master in advance, shall clear the block section.

(v) Placing a Motor Trolley/Trolley/Lorry/OHE Ladder Trolley outside the Station limits. –

a) When it is necessary to place a Motor Trolley/Trolley/ Lorry/OHE Ladder trolley in mid-section, the Official in-charge must fill up, in triplicate, the ‘Notice’ portion of Form T/A 1525 and send it through a messenger to the Station Master of the nearest block station who shall advise by Telephone to the Station Master at the other end of the block section. The Station Master receiving Form T/A 1525 shall ensure the following: -

(1) The Block Instrument working is suspended.
(2) The ‘Train On Line’ indication shall be made to appear on the concerned dial on the Block Instrument by turning the Operating handle to ‘Train On Line’.
(3) Form T/A 1525 shall be dealt with after obtaining a Private Number with the Station Master at the other end for the Motor trolley

b) The Station Master who has received the ‘Notice’ portion must then fill up the ‘Certificate’ portion in triplicate, take the original and hand over the second and third copies to the messenger obtaining his signature or thumb impression in the Train Signal Register.

c) The Official in-charge shall place a Motor Trolley in the right line after he has received the Certificate from the Station Master. On arrival at the station in advance, the Official in-charge must fill up the ‘Advice of arrival’ portion and send it to the Station Master who must then clear the section in the usual manner, fill up the ‘Cleared section’ portion keep the duplicate copy and return the triplicate copy to the Official in-charge. The Motor Trolley in the above case shall be received in to the station in the same way as trains are received.

(vi) Motor Trolley entering in to the Block section and returning to starting station without running through: -

(a) When a Motor Trolley requires to enter the block section in advance, (in advance of Last Stop signal) and then returning to the starting station, it shall be performed under ‘Block Forward’ vide Para 6.17(ii).

(b) When a Motor trolley requires to enter the block section in rear, (in rear of Outermost Facing Point or Block Section Limit Board) and returns to the starting station, it shall be performed under ‘Block Back’ vide Para 6.17(iii).

Note: (1) In an emergency, under ‘Block Back’ operation, a Motor trolley with an Officer-in charge may be permitted to clear at the other end. On arrival of the Motor Trolley at the other station, the officer in charge shall give the ‘Removal advice’ along with Form T/806 to the Station Master, who shall cancel the ‘Block
(2) When a Motor trolley breaks down, it shall be removed from the line and the Official in charge shall send the ‘Removal Advice’ along with Form T/806 and Last Stop signal key in case of ‘Block Forward’ to the sending station or ‘Removal Advice’ along with Form T/806 in case of ‘Block Back’.

6.17 **Shunting in Double line territory:**

(i) **Shunting within the station section:**

a) Station Master shall prepare Form T/806 and hand it over to the Loco Pilot.

b) On completion of shunting, Loco Pilot shall handover Form T/806 to the Station Master who shall cancel the same and give it to the Loco Pilot.

*Note: For performing shunting upto Advanced Starter, when shunt signal is taken ‘off’, T/806 need not be given.*

(ii) **Shunting in advance of Last Stop Signal (‘Block Forward’):**

“Block Forward” means performing shunting or obstruction of line in advance of Last Stop Signal in the right direction. ‘Block Forward’ may be done only when the Block section in advance is clear of trains / obstruction.

<table>
<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘Y’</th>
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<tbody>
<tr>
<td>(a) Insert Station Master’s key and turn. Give ‘Attention’ signal ●</td>
<td>(b) Insert Station Master’s key and turn. Acknowledge ‘Attention’ ● signal Give out station name</td>
</tr>
<tr>
<td>(c) Give out station name and inform intention to shunt in advance of Last Stop Signal.</td>
<td>(d) Acknowledge and give consent with a Private Number.</td>
</tr>
<tr>
<td>(e) Ask Is Line Clear for ‘Block Forward’ by giving ●● beats.</td>
<td>(f) Give Line Clear for ‘Block Forward’ by giving ●● beats and turn the operating handle to ‘Train On Line’ position. The ‘Train Coming From’ dial will show ‘Train On Line’.</td>
</tr>
<tr>
<td>(g) On getting ‘Train On Line’ indication in “Train Going To” dial, prepare Form T/806 clearly indicating the Loco Pilot to shunt in advance of Up / Down Last Stop Signal of his station and issue the same along with Last Stop Signal key. Shunt signal / Starter may be taken ‘OFF’.</td>
<td></td>
</tr>
<tr>
<td>(h) The return movement may be given by taking ‘OFF’ shunt signal, if any or by giving hand signal. On completion of ‘Block Forward’, Loco Pilot shall handover Form T/806 with Last Stop Signal key to the Station Master.</td>
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<tr>
<td>(i) Insert the Last Stop Signal key in to the relevant Last Stop Signal lever/EKT apparatus and cancel Form T/806 with time and date and return it to the Loco Pilot.</td>
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</tr>
<tr>
<td>(j) Give ‘Attention’ signal ●</td>
<td>(k) Acknowledge ‘Attention’ signal ●</td>
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</table>
(l) Inform the Station Master at the other end, that the ‘Block Forward’ is completed and to cancel “Block Forward” operations.

(m) Give consent.

(n) Give ●●●●● beats.

(o) Give ●●●●● and turn the operating handle to ‘Line Closed’ position. The ‘Train Coming From’ dial will show ‘Line Closed’ position.

(p) After getting ‘Line Closed’ indication, in “Train Going To” dial, Station Master shall acknowledge ●●●●● beats.

(q) Lock the Block Instrument.

(r) Lock the Block Instrument.

Note: (1) In case of Last Stop Signal key could not be extracted for any reason, Station Master shall make an endorsement in T/806 that ‘Last Stop Signal key could not be extracted’ mentioning the Private Number obtained from the station in advance.

(2) In case of Block Instrument failure, both end Station Masters shall exchange numbered messages with Private Number. The Station Master shall then make an endorsement in Form T/806 that the ‘Block Instrument has failed’ mentioning the Private Number obtained from the station in advance.

(iii) Shunting in rear of Outermost facing point or Block Section Limit Board (‘Block Back’).

‘Block Back’ on Double Line means performing shunting or obstruction of line in rear of outermost facing point or Block Section Limit Board in Multiple Aspect area.

‘Block Back’ may be done only when the Block section in rear is clear of train / obstruction.

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<thead>
<tr>
<th>Station ‘X’</th>
<th>Station ‘W’ (in rear)</th>
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<tr>
<td>(a) Insert Station Master’s key and turn. Give ‘Attention’ signal. ●</td>
<td>(b) Insert Station Master’s key and turn. Acknowledge ‘Attention’ signal ●. Give out station name</td>
</tr>
<tr>
<td>(c) Give out station name. Inform intention to perform shunting in rear of Outermost facing point or Block Section Limit Board (‘Block Back’) and instruct Station Master ‘W’, to apply for Line Clear.</td>
<td>(d) Ask ‘Is Line Clear’ for ‘Block Back’</td>
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<tr>
<td>(e) Say Line is Clear for ‘Block Back’ and give Private Number.</td>
<td>(f) Repeat the Private Number and ask Is Line Clear for ‘Block Back’ by giving beats. ●●.</td>
</tr>
<tr>
<td>(g) Give Line Clear for ‘Block Back’ by giving ●● beats and turn the operating handle to ‘Train On Line’ position. The ‘Train Coming From’ dial will show ‘Train On Line’ indication.</td>
<td>(h) The “Train Going To” dial will show ‘Train On Line indication.</td>
</tr>
<tr>
<td>(i) On getting ‘Train On Line’ indication in ‘Train Coming From’ dial, prepare Form T/806 and authorize the Loco Pilot to shunt in rear of Outermost facing</td>
<td></td>
</tr>
</tbody>
</table>
point or Block Section Limit Board. Shunt signal may be taken ‘OFF’ or hand signal may be shown. For return movement also shunt signal if any may be taken ‘OFF’ or hand signal may be shown. Home signal shall not be taken ‘OFF’.

(j) On completion of shunting, Loco Pilot shall handover Form T/806 to the Station Master who shall cancel the same with time and date and return it to the Loco Pilot.

(k) Give ‘Attention’ signal.

(l) Acknowledge ‘Attention’ signal.

(m) Inform the Station Master at the other end, that the ‘Block Back’ is completed and to apply for cancellation of ‘Block Back’.

(n) Give consent. Give ●●●●● beats.

(o) Give ●●●●● beats and turn the operating handle to ‘Line Closed’ position.

(p) Acknowledge ●●●●● beats after ensuring ‘Line Closed’ position in “Train Going To” dial.

(q) Lock the Block Instrument.

(r) Lock the Block Instrument.

Note: In case of Block Instrument failure, both end Station Masters shall exchange numbered messages with Private Number, and Station Master shall give Form T/806 with an endorsement that ‘Block Instrument has failed’ mentioning the Private Number given for ‘Block Back’.

§
CHAPTER 7
FOLLOW UP ACTION DURING BLOCK INSTRUMENT FAILURES ON SINGLE LINE AND DOUBLE LINE

7.01 Procedure to be followed if a station fails to get the adjacent station’s Attention on the Block instrument:

If a Station Master fails to get the Attention of the Station Master of the adjacent station on the block instrument, he shall try to advise him to attend the Block Instrument through Station to station fixed telephones or Railway Auto Phones and BSNL phones or Control Telephone or Very High Frequency set.

Alternative means of communication

If it is found that the Block Instrument is not in working order, ‘Line Clear’ shall be obtained through alternative means of communication in the order of priority as given below:-

i) Direct means of communications: -
(a) Telephone attached to Block Instrument.

ii) Indirect Means of communications: -
(a) Station to station fixed telephones
(b) Fixed telephone such as Railway Auto Phones and BSNL phones
(c) Control Telephone
(d) Very High Frequency sets under special instructions, but not as the sole means of communication on sections where passenger trains run

iii) If all the above means of communications fail, and Line Clear can not be obtained by any of the above means, the procedure prescribed in S.R.6.02 (ii) or S.R.6.02 (iii) as the case may be shall be followed.

7.02 Record of Block instrument failures:

A record of the block instrument failures shall be maintained in the Signal, Block Failure and Inspection register.

7.03 Exchange of failure messages and instructions for signaling trains between stations;

(a) Direct means of communication:-

In the event of failure of Block Instrument, the Station Master shall advise the Station Master at the other end indicating time, date and probable cause of the failure if known. The Station Master of the concerned station shall immediately advise the concerned authorized S & T official, Section Controller and Divisional Railway Manager/ Traffic through Railway Auto phone / BSNL phone /Control telephone. They shall exchange Block Failure messages, which shall be recorded in red ink in the Train Signal Register in the following format

From
Station Master ___(Station)
No___________

To
Station Master ___(Station)

Block Instrument working failed/suspended between _____ and _______ stations at ____ Hours ______ minutes due to/as (Reasons e.g. operating handle could not be turned or token lost or Motor trolley working etc.). Train signalling shall be done through block telephone.

Message given by ............ (Name of SM)
The above message shall be recorded by both Station Masters in their TSRs and the receiving end Station Master shall acknowledge by giving the following message, which shall also be recorded by both SMs in their TSRs.

From Station Master ___(Station) To Station Master ___(Station)

No________

Your No________ understand that Block Instrument and/or Block telephone working failed/suspended between _______ and _______ stations at ___Hours______ minutes due to/as (Reasons e.g. operating handle could not be turned or token lost or Motor trolley working etc.). Train signaling shall be done through Station-to-Station fixed telephone/Railway Auto Phone/BSNL phone or Control Telephone/Very High Frequency set.

Message given by ------ (Name of SM)

(b) Indirect means of communication:-

In the event of failure of Block Instrument, Block telephone, when Line Clear is to be obtained through Station to Station fixed telephone/Railway Auto Phone/BSNL phone/Control Telephone/Very High Frequency set, the Station Master shall advise the Station Master at the other end in the following Format.

From Station Master _____(Station) To Station Master ___(Station)

No________

Block instrument and/or Block telephone working failed/suspended between _______ and _______ stations at ___Hours______ minutes due to/as (Reasons e.g. Operating handle could not be turned or token lost or Motor trolley working etc.). Train signaling shall be done through Station-to-Station fixed telephone/Railway Auto Phone/BSNL phone or Control Telephone/Very High Frequency set.

Message given by ------ (Name of SM)

Note:- The means of communication which is to be used on that occasion only to be mentioned.

The above message shall be recorded by both Station Masters in their TSRs and the receiving end Station Master shall acknowledge by giving the following message, which shall also be recorded by both SMs in their TSRs.

From Station Master ___(Station) To Station Master ___(Station)

No________

Your No________ understand Block instrument and/or Block telephone working failed/suspended between _______ and _______ stations at ___Hours______ minutes due to/as (Reasons e.g. operating handle could not be turned or token lost or Motor trolley working etc.). Train signaling shall be done through Station-to-Station fixed telephone/Railway Auto Phone/BSNL phone or Control Telephone/Very High Frequency set.

Message given by ------ (Name of SM)

Note: (1) The Station Master shall exchange the above failure messages through Block Telephone/Stations to Station fixed telephone/BSNL/Railway Auto phone/Control Telephone/Very High Frequency set as the case may be.

(2) (i) On Double Line sections, where Block Instruments are kept in the cabins and worked by Cabin Master/Cabin Station Master without Control telephone and other alternative means of communications, during failure of Block Instrument and block telephone, the Cabin
Master / Cabin Station Master shall, at first, suspend Block Instrument working in the concerned section, and make entries in red ink in the TSR as per rule 7.03 (b) duly consulting the Platform Station Master regarding the alternative means of communication to be used. The Platform Station Master shall then transmit the Block failure message as per 7.03 (b) to the Platform Station Master at the other end and to all concerned. The Platform Station Master of the receiving station, shall convey this message to the Cabin Station Master / Cabin Master who shall record the same in the Train Signal Register in red ink and acknowledge the same as per 7.03 (b). The acknowledgement shall be transmitted to the Platform Station Master at the starting station who shall communicate the same to the Cabin Master / Cabin Station Master at his station for recording the same in the Train Signal Register.

ii) The Cabin Master/Cabin Station Master shall draw a prominent red line below the entry and thereafter inform the platform duty Station Master to obtain ‘Line Clear’ for the waiting train through the alternative means of communication.

iii) The platform duty Station Master shall then obtain ‘Line Clear’ through alternative indirect means of communications from the PF Station Master / Cabin Station Master at the other end and communicate the same to the Cabin SM/Cabin Master of his station under exchange of Private Numbers. Cabin Master/Cabin Station Master shall then prepare the Line Clear Ticket (T/C 1425 or T/D 1425 as the case may be) and despatch the train.

iv) The Platform Station Master at the receiving end, before granting ‘Line Clear’ shall get the consent of Cabin Master / Cabin Station Master of his station under exchange of Private Numbers. The Private Number obtained from the Cabin shall be communicated to the Platform Station Master of the starting station.

(3) At stations on both single line and double line sections, where block instruments are kept in the cabin worked by Cabin Station Master which are not connected to control or where Control Telephone has also failed and when other means of communication are not available in the cabin, the procedure detailed above shall be followed.

Note (1) (2) and (3) are common for both the rules 7.03 (a) & (b).

(4) Crosschecking of Private Numbers given for the last three preceding trains shall be done as per instructions given under S.R. 14.01 (ii) by both end Station Masters when ‘Line Clear’ is obtained through indirect means such as Station-to-Station fixed telephone /Railway Auto Phone / BSNL phone / Control Telephone/Very High Frequency sets, in which case trains shall run at normal speed.

(c) Resumption of Block Instrument working:

i) In cases where the Station Masters themselves are authorized to resume Block Instrument working, they shall do so. In other cases, the Block Instruments shall be certified by the authorized Signal and Telecommunication Department official concerned. The Station Masters at both ends of the block section on which Block working was suspended shall, in all cases satisfy themselves that the line between their stations is clear of trains by exchanging messages giving the time of arrival and departure of the last train at each end of the block section. Both end Station Masters shall make red ink entries in the Train Signal Register in the following format,
Message given by -----(Name of SM)

Note:- The relevant statement may be made according to the Last train dealt in the Block section. The above message shall be recorded by both Station Masters in their TSRs and the receiving end Station Master shall acknowledge by giving the following message, which shall also be recorded by both SMs in their TSRs.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Master__(Station)</td>
<td>Station Master__(Station)</td>
</tr>
</tbody>
</table>

Your No_____. Understand last Train No ____ which left your station at ---- hours --- minutes arrived at my station at _____ Hrs _____ mts and / Last train which left my station at ____ Hrs ____ mts arrived at your station at ____ Hrs ____ mts.

Block instrument working between ____ Station _______ station restored _______ Hours ______ minutes.

Message given by -----(Name of SM)

Note:-

i) The relevant statement may be made according to the Last train dealt in the Block section.

ii) Before resuming normal working, the Signal & Telecommunications official and Station Master shall test the Block Instrument working and exchange testing signals. An entry shall be made to this effect in the Train Signal Register in red ink.

iii) On restoration of the failure, resumption of normal working to be advised to the Section Controller with a copy to all concerned.

iv) In tokenless / Double line sections, in cases of failures as referred in rule Nos. 5.13, 5.28 & 6.15 where the Divisional Signal and Telecommunication Engineer/ Assistant Signal and Telecommunication Engineer or authorized Signal and Telecommunication Department official are to be advised, restoration shall be done only by the Divisional Signal and Telecommunication Engineer/ Assistant Signal and Telecommunication Engineer or authorized Signal and Telecommunication Department official holding a “special permit” signed by the Divisional Signal and Telecommunication Engineer/ Assistant Signal and Telecommunication Engineer. This special permit will specifically authorize the holder by name to open the Block Instrument during such abnormal conditions.

v) The special permit referred above will be as under-

This is to authorize Shri ___________ designation _____ to open the Single Line Tokenless / Double Line Block Instrument and resume normal Block working for failures mentioned in Rule 5.14, 5.29 and 6.15 of this Block Working Manual.

Date_____

Signature of the DSTE/ASTE.

NOTE: - The SSE/SE/JE/E.S.M is the authorized Official for the purpose of this rule.

7.04 Authority to proceed to be given when ‘Line Clear’ is obtained by alternative means of communication:

On both Double Line and Single Line sections, during Block Instrument failures, when ‘Line Clear’ is obtained
through alternative means of communication, train shall be worked on ‘Line Clear Ticket’.

7.05 Train Message books: -

i) Form T/A 1425 shall be used as the train message book for working of trains at Train Despatching Station and Form T/B 1425 as the train message book for working of trains at Train Receiving Station in all sections of this Railway.

ii) A Train Signal Register shall be maintained in conjunction with each block instrument. The Train Signal Register shall always be referred to, before any entries are made in the train message book.

iii) Form T/A 1425 (Used by the SM at Train Despatching Station) contains the following sections: -

   - Column ‘A’ - Line clear enquiry despatched and Line clear Reply received.
   - Column ‘B’ – Train Entering Section report despatched.
   - Column ‘C’ - Train Out of Section report received.
   - Column ‘D’ - Line clear Cancellation, if any, despatched.

iv) Form T/B 1425 (Used by the SM at Train receiving Station) contain the following sections: -

   - Column ‘A’ - Line clear enquiry received and Line clear Reply dispatched.
   - Column ‘B’ – Train Entering Section report received.
   - Column ‘C’ - Train Out of Section report despatched.
   - Column ‘D’ - Line clear Cancellation, if any, received.

7.06 Line Clear Tickets: 

The Line Clear Tickets for Up and Down directions are distinctly marked as under:

T/C 1425- Up direction with an arrow pointing upwards.

T/D 1425- Down direction with an arrow pointing downwards.

Note: Form T/C 1425 or T/D 1425 shall be prepared only in conjunction with Form T/A 1425.

7.07 Use of train message books:- Responsibility of Station Master:-

(i) The Station Master shall check that the pages are machine numbered in sequence.

(ii) He shall refer to the Train Signal Register before making entries in the train message books and satisfy himself that the entries for the last train are complete and the block section is clear.

(iii) Line Clear Enquiry and Reply message shall be entered in the train message book before despatch.

(iv) The Station Master shall personally record the messages under his clear signature.

(v) The names of the Station Master who receive / despatch messages and the station names shall be recorded in the relevant columns.

(vi) The time of receipt/despatch of messages shall be recorded.

(vii) Each outward message shall have a serial number. The number shall be in sequence starting from 1 at 00.00 hrs.

(viii) The Private Number shall be recorded in words and figures at the appropriate columns

7.08 Method of signalling a train from one block station to another during block failure or suspension:-

i) Precautions to be taken before asking ‘Line Clear’; During block instrument failure/suspension, the Station Master shall personally ensure the following:

   (a) The entries for the last train, which occupied the concerned block section, are completed in
(b) The block section concerned is clear and free from obstruction.

(c) Messages recorded in the ‘Train message book’ relating to the last train are complete.

ii) Precautions to be taken before ‘granting Line Clear’:- During Block Instrument failure/suspension, the Station Master shall personally ensure the following;

a) The entries for the last train, which occupied the concerned block section, are completed in the Train Signal Register.

b) The block section concerned is clear and free from obstruction

c) Messages entered in the ‘Train message book’ relating to the last train are complete.

Note: - After ensuring all the above said precautions, the Station Master at the Train receiving end shall grant ‘Line Clear’ confirmed by a Private Number.
Preparation and exchange of Train messages:-

a) The Station Master at the Train despatching station shall prepare Form T/A 1425 and the Station Master at the Train receiving station shall make relevant entries in form T/B 1425.

b) The Station Master at the Train despatching station shall fill up the ‘A’ column (Line Clear Enquiry) of Form T/A 1425. The Station Master at the Train receiving station shall make entries in the column ‘A’ (Line clear reply) of form T/B 1425.

c) After correctly and properly filling the column ‘A’ of T/A 1425, and obtaining Line clear confirmed by Private Number, the Station Master shall prepare Form T/C 1425 or T/D 1425 as the case may be and issue it to the Loco Pilot of the waiting train. After the train has left the station, the Station Master shall make necessary entries in the column ‘B’ (Train Entering Section report despatched) of Form T/B 1425. Then, he shall communicate the “Train Entering Section” report to the Station Master of the station in advance, who shall record the same in the ‘B’ column of Form T/B1425.

d) The train shall be received on signals wherever possible. The SM shall ensure complete arrival of the train by following S.R. 14.10 (i), (ii) & (iii). The Station Master shall then make necessary entries in the column ‘C’ (Train Out of section despatched) of Form T/B 1425. He shall communicate the Train Out of section report to the station Master in rear who shall record the same in the column ‘C’ of Form T/A1425.

e) Separate books shall be maintained for each Block Section.

f) Both the Station Masters shall make necessary entries in the Train Signal Register in red ink.

7.09 Preparation of Line Clear Ticket: -

i) The ‘Line Clear Ticket’ shall be prepared in ink and in duplicate by the Station Master himself and signed by him in full.

ii) The ‘Line Clear Ticket’ shall be in the authorized printed Form T/C 1425 or T/D 1425 for Up and Down directions respectively.

iii) The Station Master shall be responsible for seeing that the ‘Line Clear Ticket’ is correct and complete in every detail and bears no alteration in any of the entries made.

iv) The name of the station at which ‘Line Clear Ticket’ is issued shall be affixed with the station stamp.

v) The name of the station to which the Loco Pilot is authorized to proceed shall be written in full in the ‘Line Clear Ticket’ and shall conform to the official spelling of names of stations as shown in the Working Time Table.

vi) In case of any error while preparing the form, the Station Master shall cancel both the copies of the ‘Line Clear Ticket’ and prepare a fresh ‘Line Clear Ticket’.

vii) On Twin Single Line section, the speed of the first train entering the block section shall be restricted to 25 kmph, even when cross checking of Private Numbers is done to confirm the identity..

viii) The progressive number of the ‘Line Clear Ticket’ issued to each train shall be recorded in the remarks column of the Train Signal Register against the entry for the train.

7.10 Delivery of Line Clear Ticket to the Loco Pilot of trains:-

i) The Station Master shall deliver the ‘Line Clear Ticket’ to the Loco Pilot personally or through a competent railway servant.

ii) In any case the Station Master shall be responsible for ensuring that the correct ‘Line Clear Ticket’ is delivered to the Loco Pilot and the Loco Pilot is equally responsible for ensuring that he has received the correct ‘Line Clear Ticket’ for the train.

iii) If there are two or more locomotives on one train, the ‘Line Clear Ticket’, shall be delivered to the
Loco Pilot of the leading locomotive.
7.11 Responsibility of Loco Pilot with respect to ‘Line Clear Ticket’: -

i) The Loco Pilot shall be responsible for seeing that the ‘Line Clear Ticket’ is prepared in ink and is completely filled in the authorized printed form.

ii) He shall ensure that it pertains to the concerned Block Section.

iii) The Loco Pilot shall also ensure that there is no alteration in any of the entries made and ensure that all the entries such as the train number and description, date, direction and the names of the stations, ‘from’ and ‘to’ are correct.

iv) Should a mistake be detected by the Loco Pilot, he shall not start the train but return the ‘Line Clear Ticket’ to the Station Master. The Station Master shall then comply with the above said procedures and issue a fresh ‘Line Clear Ticket’.

v) The Loco Pilot shall sign in full with his name written in block letters in the duplicate copy of ‘Line Clear Ticket’.

vi) When Line Clear has been obtained through Station to Station fixed telephone or Railway Auto Phones or BSNL phone or Control Telephone or Very High Frequency set, supported with cross checking of Private Numbers given for three preceding trains, the Loco Pilots are authorized to run at normal speed.

7.12 Additional instructions to be followed when ‘Line Clear’ is obtained through indirect means of Communication: -

i) The following are the indirect means of communication :----

(a) Station-to-Station fixed telephone
(b) Fixed telephone such as Railway Auto Phones and BSNL phones
(c) Control Telephone
(d) Very High Frequency sets under special instructions, but not as the sole means of communication on sections where passenger trains run

ii) ‘Line Clear Ticket’ shall be issued as Authority to proceed.

iii) The Loco Pilot shall be given the original copy of the Form T/C 1425 or Form T/D 1425 as the authority to proceed in Single Line and Double Line sections, duly obtaining his signature in the duplicate copy.

iv) When ‘Line Clear’ is obtained through indirect means of communication, the identity of the concerned Station Masters and Stations shall be established by cross checking of Private Numbers given for the last three preceding trains, as given in S.R. 14.01 (ii) ,in which case, the train shall run at normal speed. However, on Twin Single Line sections, the speed of the first train entering the block section shall be restricted to 25 kmph, even when cross checking of Private Numbers is done to confirm the Identity.
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