

CHAPTER XIV

BLOCK WORKING

A. General Provisions

14.01. Means of granting or obtaining Line Clear.-

The running of every train shall, in its progress from one block station to another, be regulated by means of any one or a combination of the following-

- (a) electrical block instruments of token or tokenless type,
- (b) track circuits,
- (c) axle counters, or
- (d) electrical communication instruments.

SR 14.01.01 : The following means of granting or obtaining line clear shall be used as per their availability and strictly in order of preference :

1. Block Instruments, Track Circuits or Axle counters
2. Telephones attached to Block Instruments
3. Station to Station fixed telephones wherever available
4. Fixed telephone such as Railway auto phones and BSNL phones
5. Control telephone and
6. VHF sets

SR 14.01.02 : USE of VHF as sole means of communication:-

The order of preference as mentioned in SR 14.01.01 shall not be violated under any circumstances. VHF set should not be used as the sole means of communication on the sections where passenger trains run. However, it can be used as the only means of communication with issuance of special instructions by COM in the newly commissioned sections where only operation of freight trains are involved, till such time any other communication is provided as above but in no case more than one year. Wherever GSMR is provided, the use of VHF sets for the purpose of obtaining line clear is prohibited. In all cases, line clear shall be obtained only after exchange of Identification Number supported by a private number as mentioned in SR 6.02.06 (1).

SR 14.01.03 : Use of walkie-talkie sets : Walkie Talkie is a communication instrument which can be easily carried for making conversations between various officials involved in train working. This shall be used in the following instances :

(i) In case a train has come to an out of course halt in automatic signalling territory between two stations and is not in a position to move ahead and requires a relief engine, the Guard of that train shall guide the crew of the relief engine when it is to come to pick up the train, except in suburban sections.

(ii) Station Master/Loco Pilot/Guard may communicate on walkie-talkie among themselves for advising abnormalities that require immediate attention by Station Master/loco pilot/guard for controlling/stopping the train.

(iii) Use of walkie-talkie sets should in no way contravene conditions required to be satisfied for reception/despatch of trains as mentioned in this manual.

(iv) Walkie-talkie sets should not be used as an alternative to written authority to proceed and authority to pass defective signal at danger, etc.

(v) These sets shall not be used for communicating the aspects/position of any signal by SM to Loco Pilot/Guard. The Loco Pilot/Guard may advise if the aspect of any signal is ON.

(vi) Walkie-talkie should not be used as alternative to or replace physical exchange of signals. However in case of full length of trains, in following circumstances, walkie-talkie sets may be used for exchange of signals between Loco Pilot and Guard; When it is not possible to exchange signals physically and the conditions for exchange of signals have been fulfilled :-

(a) To despatch/start the train from a station.

(b) To start a train stop in curvatures/tunnels in block section and

(c) on run, when it is not possible due to curvature or due to geographical layouts.

In all the above cases where SM or Loco Pilot/Guard used the walkie-talkie, he will clearly mention his identity along with station name/train number while communicating and also confirm the identity of the speaker at the other end.

14.02. Provision of instruments.-

(1) Electrical communication instruments shall be provided at every station, except at class 'D' stations where they may be provided under special instructions.

(2) (a) The electrical block instruments, where provided, and electrical communication instruments at any station shall be of a type approved by the Commissioner of Railway Safety and shall not be brought into use in the first instance unless they have been passed by him.

(b) The person in charge of the maintenance of electrical block instruments shall not without the approval of the Commissioner of Railway Safety, permit the substitution, for the instruments and installation brought into use in the first instance, of any instruments or installation which do or does not satisfy the conditions prescribed in clause (a).

14.03. Consent required before interfering with Block working equipment. - No railway servant shall interfere with the block working equipment, or their fittings for the purpose of effecting repairs, or for any other purpose except with the previous consent of the Station Master.

SR 14.03.01.- For detailed procedure for effecting repairs of block working equipment, see Block Working Manual.

B. Block Stations at which Electrical Block Instruments, Track Circuits or Axle counters are provided.

1 4.04. Certificate of competency.-

(1) No person shall operate the electrical block instruments until he has passed a test in the operation of block instruments and unless he holds a certificate of competency granted by a railway servant appointed in this behalf by the

Railway Administration.

(2) The certificate of competency referred to in sub-rule (1) shall only be valid for a period of three years or such longer period as may be laid down by special instructions.

SR 14.04.01.-The Principal, Zonal Railway Training Institute Sini, is authorised to examine and to issue the certificate of competency on prescribed form No. OP/T1B referred to in sub-rule (1) of GR 14.04 which shall only be valid for a period of three years in case of Station Superintendents, Deputy Station Superintendents, Station Masters and Asstt. Station Master and Cabin Master from the date of test as shown in the certificate. However, in exceptional circumstances, the validity of a competency certificate issued by the Principal, Zonal Railway Training Institute, Sini may be extended locally by an officer not below the rank of an A.O.M. for a period not exceeding six months.

14.05. Bell code.- For the signalling of trains, the prescribed code of bell signals as detailed below, shall be used, and a copy thereof shall be exhibited in each block station near the place of operation of the block working equipment :-

Ref. No.	Indication	Code	How signalled	How acknowledged.
1.	Call Attention Or Attend Telephone	0	One stroke or beat	One stroke or beat
2.	Is Line Clear, or Line Clear Enquiry	00	Two	Two
3.	Train Entering Block Section	000	Three	Three
4.	(A) Train Out Of Block Section (B) Obstruction Removed	0000	Four	Four

Ref. No.	Indication	Code	How signalled	How acknowledged
5.	(A) Cancel Last Signal	00000	Five	Five
	(B) Signal Given in Error			
6.	(A) Obstruction Danger Signal (General)	000000	Six	Six
	(B) Stop and Examine Train	000000-0	Six Pause one	Six Pause one
	(C) Train Passed Without Tail board	000000-00	Six Pause two	Six Pause two
	(D) Train Divided	000000-000	Six Pause three	Six Pause three
	(E) Vehicles Running Away In Wrong Direction On Double Line Or into the Block Section On Single Line	000000-0000	Six Pause four	Six Pause four
	(F) Vehicle Running Away In Right Direction on Double Line	000000-00000	Six Pause five	Six Pause five
7.	Testing	0000000000000000	Sixteen	Sixteen

NOTE. - (1) 'O' INDICATES A STROKE OR A BEAT AND '___' INDICATES A PAUSE.

(2) EACH SIGNAL SHALL BE GIVEN SLOWLY AND DISTINCTLY.

(3) Exchange of bell codes under reference numbers 3 and 4 are not required in a section provided with block providing axle counter or track circuit having complete track circuiting of station yard excluding non-running lines on either end.

14.06. Acknowledgement of signals.-

(1) Each signal received shall be acknowledged by sending its authorised acknowledgement.

(2) No signal shall be acknowledged until it is clearly understood.

(3) A signal shall not be deemed to be complete until it is acknowledged.

(4) 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.

14.07. Train Signal Register.-

(1) A Train Signal Register shall be kept by the Station Master or under his orders.

(2) All signals received or sent on the electrical block instruments and the timings of receipt and despatch shall be entered therein, immediately after acknowledgement, by the person operating the block instrument.

(3) The timings entered in the register shall be the actual timings, except that any fraction of a minute shall be counted as one.

(4) All entries in the register shall be made in ink.

(5) No erasure shall be made in the register, but if any entry is found to be incorrect, a line shall be drawn through it, so that it may be read at any time and the correct entry shall

be made above it.

(6) The person who keeps the register for the time being shall be responsible for all entries made therein and for correctly filling in each column thereof.

SR 14.07.01.- (a) The Station Master who makes an entry for a train, shall continue on duty till all entries affecting that train are complete. The Station Master who gives line clear for a train shall remain on duty till the train has arrived and the 'Train out of Block Section' signal has been given by him to the station in rear and acknowledged. Similarly, the Station Master who receives line clear shall remain on duty till the "Train out of Block Section" signal is received from the station in advance and is acknowledged by him.

Except as indicated above, the change of duty should follow the prescribed roster.

(b) Whenever the Station Master changes duty, a line shall be drawn right across the Train Signal Register, and the outgoing Station Master shall sign his name legibly and enter the time above the line or make any of the following endorsements as may be appropriate in the event of his having to sign off at any time after his rostered duty hours terminate

Signed off at _____ hours in order to admit _____ train, arrived at _____ hours or Signed off at _____ hours in order to receive train out of Block section report for _____ train despatched to _____ station, arrived there at _____ hours.

Similarly, the incoming station Master shall sign his name legibly and enter the time below the line.

(c) In the event of another train being signalled after the incoming Station Master has reported and before the outgoing Station Master has signed 'off' the Line Clear shall be given by the former and latter need not wait for completing the transactions in respect of that train.

(d) Sub-rule (a) above shall not apply if the detention to a train in block section due to an accident or for any other exceptional reasons exceeds by more than one hour beyond the normal running time. In such case the Station Master may sign 'off' after making the following entries in red ink in the Station Master's diary as well as in the Train Signal Register :-

(i) On the double line -"UP or Down line (as the case may be) occupied by No _____ train left _____ at _____ Hrs."

(ii) On the single line _____ 'Block section between _____ and _____ occupied _____ by No _____ Up/Down train left _____ at _____ Hrs'.

The above entry shall be signed jointly by the Station Master who goes off duty and the Station Master who relieves him.

14.08. Authority to proceed.-The Loco Pilot shall not take his train from a block station unless he has been given an authority to proceed-

(a) On the double line, by the taking 'off' of the last stop signal, and

(b) On the single line, either-

(i) by a token for the block section, taken from an electrical block instrument, or

(ii) by a Line Clear Ticket duly signed by the Station Master, or

(iii) by any document prescribed in this behalf by special instructions, or

(iv) by the taking 'off' of the last stop signal in lieu of tangible authority as mentioned in sub clauses (i) to (iii) on sections provided with electrical block instruments of tokenless type or track circuits or axle counters.

SR 14.08.01.- For special instructions see Block Working Manual.

14.09. Loco Pilot to examine authority to proceed.-

(1) The Loco Pilot shall ensure that the authority to proceed given to him is proper authority under the system of working and refers to the block section he is about to enter, and if the said authority is in writing that it is complete and duly signed in full and in ink.

(2) If the conditions mentioned in sub-rule (1) are not complied with, the Loco Pilot shall not take his train past or start from the station until the mistake or the omission is rectified.

14.10. Conditions for closing the block section.-

(1) When the block section has been cleared by the arrival of the train or by the removal of the cause of blocking, block section shall be closed by the block section in advance by giving the prescribed bell code signal.

(2) Before such 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 can be given, are complied with.

(3) The provision of clause (b) of sub-rule (2) 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.

(4) Where in a section a block proving axle counter or continuous track circuiting between block stations and complete track circuiting of station section excluding non-running lines of the receiving station is installed and is functioning and there is a clear indication of clearance of block section as well as complete arrival of the train as per indication given, it would be taken as assurance for complete arrival of the train to the Station Master.

14.11. Responsibility of Station Master as to authority to proceed.-

(1) An authority to proceed shall not be given to the Loco Pilot until the procedure prescribed for the purpose, so far as it is applicable in the particular case, has been followed.

(2) An authority to proceed shall not be given to the Loco

Pilot except by the Station Master or by some railway servant appointed in this behalf by special instructions.

(3) The Station Master shall see that the authority to proceed given to a Loco Pilot is accurate and that, when it is in writing, it is complete and is signed in full and in ink.

(4) If the train stops at the station and is waiting to cross another train, the authority to proceed shall not be given to the Loco Pilot until the whole of the latter train has arrived and is clear of the running line for the former train.

(5) If two engines are coupled together or if one engine is in front and another in rear of the train, the authority to proceed shall be given to the Loco Pilot of the leading engine.

14.12. Special responsibility as to electrical token instruments and to the token.-

(1) The Station Master shall be responsible to ensure that-

(a) no one but himself operates the electrical block instruments.

(b) the procedure regarding bell signals and, in addition any communication made by electrical communication instruments including the use of a private number, as laid down under special instructions, is correctly carried out,

(c) in the case of stopping trains, the incoming token is surrendered by the Loco Pilot before an outgoing token is delivered to him.

(d) when he receives the token of an incoming train, it is put in the electrical block instrument immediately, and

(e) no one except the person authorised by special instructions opens the electrical block instruments.

(2)(a) a token shall not be taken out of an electrical block instrument earlier than necessary and when taken out, its number shall be recorded in the Train Signal Register, and it shall be kept in the personal custody of the Station Master till issued to a Loco Pilot or returned to the instrument.

(b) On arrival of the train at the block station in advance, the Loco Pilot shall give up the token in accordance with special instructions, and his token shall then be placed in the electrical block instrument at that station.

(c) If the train has to return to the block station from which it started, the token shall, on such return, be replaced in the electrical block instrument from which it was extracted.

14.13. Failure of electrical block instruments or track circuits or axle counters.-

(1) If the electrical block instruments, track circuits or axle counters or their electric connections fail, line clear shall be obtained through the electrical communication instruments.

(2) When Line Clear has been so obtained, an entry to that effect shall be made in the Train Signal Register, and the train may be allowed to proceed on the issue of a written authority to proceed, which shall also bear a remark to that effect.

14.14. Closing of Intermediate Block Post.- If the electrical block instruments provided at the stations on either side of an Intermediate Block Post or the track circuiting provided beyond the last stop signal, or the axle counters provided at either end of block section fail, the Intermediate Block Stop signal shall be treated as defective and the Intermediate Block Post shall be deemed to be closed and section between the stations on either side of the Intermediate Block Post shall be treated as one block section.

C. Block Stations at which Electrical Block Instruments are not provided.

14.15. Transmission of signals.- For the working of trains at such stations where electrical block instruments are not provided, signals as prescribed under special instructions shall be transmitted, as occasion may require on the electrical communication instruments.

14.16. Train Signal Register.-The Train Signal Register referred to in Rule 14.07 shall also be maintained at block stations where block instruments are not provided.

14.17. Forms for messages and written authority to proceed.-

(1) All messages despatched in connection with the working of trains, and all written authorities to proceed, shall be written on forms specially provided for the purpose by the Railway Administration.

(2) Such forms shall be bound up in books and kept at each block station by the Station Master, or by some railway servant appointed in this behalf by special instructions.

14.18. Distinction of messages.-

(1) Every message despatched in connection with the working of a train shall distinctly describe the train to which it relates.

(2) For every train a separate inquiry and reply shall be sent.

14.19. Writing and signing of messages and written authorities to proceed.-

(1) All messages despatched in connection with the working of trains, and all written authorities to proceed, shall be written up in ink and signed by the person authorised to despatch or issue the same.

(2) No message or written authority to proceed shall be written out, either in full or in part, or signed, until necessary

14.20. Completion of messages- No part of any message shall be despatched or acted upon until the whole message has been written out except with a view to the prevention of an accident, or in some other case of emergency

14.21. Preservation of messages and written authorities to proceed.- Messages and written authorities to

proceed shall be destroyed at such time after issue as may be prescribed by special instruction:

Provided that no message or written authority to proceed shall be destroyed before one month after issue.

SR 14.21.01. - Retention of Train message Books. - Train message books after completion and other messages received and despatched under these rules shall be retained for six months at the station. After six months they may be disposed off as prescribed unless required to be preserved any longer in connection with a pending case.

14.22. Cancellation of Line Clear.- On a single line when a Line Clear has been cancelled, no train shall be allowed to leave in the opposite direction until a message has been received acknowledging such cancellation and stating that the train for which the Line Clear has been given is and shall be detained.

14.23. Loco Pilot to have authority to proceed.- The Loco Pilot shall not take his train from a stations unless he has in his possession, as his authority to proceed, a Line Clear Ticket duly signed by the Station Master.

14.24. Authority to proceed : when to be given to Loco Pilot- An authority to proceed shall not be given to the Loco Pilot until the procedure prescribed for the purpose, so far as it is applicable in the particular case, has been followed.

SR 14.24.01.- For procedure of Delivery of Authority to proceed, Block Working Manual Rule 2.04 shall be referred to.

D. Line Clear Tickets

14.25. Line Clear Tickets.-

(1) When owing to failure or non-provision of electrical block instruments, the authority to proceed is a Line Clear Ticket, it shall, except under special instructions, be in the following form-

Form No. T/D 1425

Sr. No. _____

RAILWAY
PAPER LINE CLEAR TICKET

Down _____ (Loco Pilot/Record)
 Number of Train _____ Down (Description) _____
 Date _____ Time ____ hrs. ____ mins.
 From Station Master _____
 To The Loco Pilot of Train No. _____ Down
 The line is clear and you are authorized to proceed to
 _____ station.
 Last train No. _____ cleared section at _____ Station
 Private No. (In words) _____ (In figures) _____

AUTHORITY TO PASS SIGNAL AT ON POSITION

*You are authorized to pass Last Stop Signal in danger when the signal is interlocked with Block Instrument.

Signature of Station Master

Station Master Stamp

*Strike out which ever is not applicable.

Form No. T/C 1425

Sr. No. _____

RAILWAY
PAPER LINE CLEAR TICKET

Up _____ (Loco Pilot/Record)
 Number of Train _____ Up (Description) _____
 Date _____ Time ____ hrs. ____ mins.
 From Station Master _____
 To The Loco Pilot of Train No. _____ Up
 The line is clear and you are authorized to proceed to
 _____ station.
 Last train No. _____ cleared section at _____ Station
 Private No. (In words) _____ (In figures) _____

AUTHORITY TO PASS SIGNAL AT ON POSITION

*You are authorized to pass Last Stop Signal in danger when the signal is interlocked with Block Instrument.

Signature of Station Master

Station Master Stamp

*Strike out which ever is not applicable.

(2) Each such ticket shall bear a serial number which shall be recorded in the Train Signal Register, the numbers for the Down direction being clearly distinguished from those for the Up direction.

(3) The ticket referred in Sub-rules (1) and (2) shall be printed on white paper with blue font. To distinguish paper line clear ticket for up and down directions, water mark arrow pointing “Up” and “Down” shall be printed on the ticket”.

E. Use and Operation of Block Working Equipment

14.26. Use and operation of block working equipment.- The use and operation of electrical block instruments shall be governed by special instructions to be issued with the prior approval of the Railway Board.

