BLOCK INSTRUMENT

No: 78/W3/SG/A/6   New Delhi, dtd: 1.11.1978. .......................................................... 2
No: 78/W3/SG/A/6   dt: 20.3.1984.................................................................................. 3
No: 74/W3/SGF/6    New Delhi, dated: 18.5.1982.............................................................. 4
No: 81/W3/SG/G/3   New Delhi, dated: April 30, 1985 ...................................................... 7
No: 85/W3/SG/G/12  New Delhi, dated: 10.1.1986 .............................................................. 11
No: 8/WS/SG/G/3    New Delhi, dt. 10.8.88 ................................................................. 12
No.STS/RE/S/FU    Dated: 06-12-98 ................................................................. 13
No: 93/SIG/M/11    New Delhi, dt. 16.2.96 ................................................................. 14
No: 85/W3/SG/CLS/1 New Delhi, dated: 26.6.1985 ......................................................... 15
No: 88/SIG/G/28    dated: 27.7.89 ................................................................. 16
No: 93/SIG/M/11    New Delhi, dt. 16.2.96 ................................................................. 18
No: 77/W3/SG/G/11  New Delhi, dt. 4.1.78 ................................................................. 19
No: 85/W3/SG/G/9   New Delhi, dt. 11.09.1985 ............................................................. 20
No: 77/W3/SGB/5    New Delhi, dt. 27.2.1982 ............................................................. 21
No.STS/RE/S/FU    Dated: 06-12-98 ................................................................. 22
No: 85/W3/SG/G/12  New Delhi, dated: 10.1.1986 ......................................................... 23
No: 72/W3/SG/3     dated: 1th March, 1974 .............................................................. 24
No: 81/W3/SG/G/3   New Delhi, dated: April 30, 1985 ...................................................... 25
No: 74/W3/SGF/6    New Delhi, dated: 18.5.1982 .............................................................. 30
No: 72/W3/SG/A/1   New Delhi, dated: 9.3.1982 .............................................................. 31
No: 78/W3/SG/A/6   dt: 20.3.1984 .................................................................................. 33
No: 78/W3/SG/A/6   New Delhi, dt: 1.11.1978 .............................................................. 34
No: 75/W3/SG/G/1   New Delhi, dt: 16.2.1979 .............................................................. 35
No: 78/W3/SG/A/6  New Delhi, dtd: 1.11.1978.

The General Managers(S&T)
All Indian Railways.

Sub: Sealing and Locking of Block Instruments.

Under Board’s letter No.65/W3/A/11 dtd: 1.10.1965 and No.74/W3/SG/A/5 dt: 20.12.74 instructions have been issued to the Railways for Sealing and Locking all the Double Line Block Instruments and Single Line Token Instruments respectively.

2. The work has also been completed by all the Railways.

3. It has since been decided by the Board that the doors of these instruments giving access to the internal mechanics should be provided with a Double Lock, the key of one of which shall be in the custody of A.S.M. on duty and the key of the other will be with the E.S.M. in charge of the maintenance of Block Instruments. This will ensure that the door giving access to the inside mechanism of the Block/Token Instrument cannot be opened without the simultaneous use of the keys by A.S.M. and E.S.M. thus eliminating unauthorised manipulation of the instrument by one without the knowledge of the others.

4. The present arrangements for sealing the instruments should also be continued.

5. Suitable instructions will have to be incorporated in the Block Working Manual of the Railways to indicate the procedure to be followed in the opening of the doors of these Block Instruments by the ASM/ESM together for purposes of rectification.

6. Board desire that the work of providing Double Lock as mentioned in Para 3 should be completed expeditiously.

7. The design of the lock to be adopted may be finalised by each CSTE depending upon the local conditions.

8. Please acknowledge the receipt of this letter.

Sd/-
(K.Subrahmanyan)
Addl.Director(Signals)
Railway Board.
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)


The General Managers(S&T)
All Indian Railways.

Sub: Sealing and Locking of Block Instrument.

Ref: Board’s letter of even number dt.1.11.78.

In continuation to Board’s letter referred to above, it is informed that Double Lock key be provided for Tokenless Block Instrumnts also.

2. Please acknowledge receipt of this letter.

(This also disposes of South Central Railway’s letter No.SG/122/PC/BS dt.22.12.1983)

DA: Nil.

Sd/-
(A.K.Kapoor)
Joint Director(S&T)-I
Railway Board.


The General Managers(S&T), Cons., All Indian Railways and others.

Sd/-
Joint Director(S&T)-I
Railway Board.

The General Managers(S&T)
All Indian Railways.

The General Manager(S&T)/Constn.,
All Indian Railways,
(except Northeast Frontier Railway).

Sub: Tokenless Block Instruments(Diado Type) manufactured in
Signal Workshop-Howrah Eastern Railway.

The approval of the Ministry of Railways is hereby accorded to the use of Diado Type Tokenless
Block Instruments manufactured by Signal Workshop/Howrah,Eastern Railway in Railway Electrification
areas.

DA: Nil. Sd/-
(R.Krishnaswamy)
Joint Director(S&T),I,Rly.Board.

No; 74/W3/SGF/6 New Delhi,dated:m18.5.1982.

Copy to:
1. Director General(S&T)/R.D.S.O./Lucknow(Attention: Sri Mahabir Prasad,J.D.(S&T)Stds)with

2. C.S.T.E.,Easater Railway,Calcutta. He may please furnish a report on the working of these
Tokenless Instruments on Eastern Railway after about 6 months of use on line to RDSO with copy to this
office.

3. Principal,IRISET,Secunderabad.

4. C.S.T.E.(M.T.P)/Railway/Bombay,2nd floor,Churchage Station Building,
Bombay-400 020.

5. General Manager,Metro Railway Bhavan 33-A,Jawaharlal Nehru Road,Calcutta- 700 071.


*Instructions modified vide Board’s Sd/-
letter No.74/W3/SGE/6 dt: 21.8.82. (R.Krishnaswamy)
Joint Director(S&T)l, Rly.Board.
Government of India (Bharat Sarkar)
Ministry of Railway (Rail Mantralaya)
(Railway Board)

No: 74/W3/SGF/6


The General Manager (S&T)
Eastern Railway,
Calcutta.

Sub: Tokenless block instrument suitable for RE manufactured in Signal Workshop, Howrah.

Ref: 1) R.D.S.O.’s letter No.STE/RE/S/Block date: 6/7.1.81.
2) Board’s letter No.74/W3/SGF/6 dated: 18.5.82.

In view of the deficiencies pointed out by R.D.S.O. during the tests conducted in the Signal Workshop, Howrah on the tokenless block instruments which were type tested at Howrah shop, the following points may be noted before further supplies are effected although approval of this Ministry has already been communicated for use of Diodo type tokenless instruments manufactured by your signal Workshop, Howrah in RE areas.

a) All the transmitters and receivers should be checked by a responsible staff of the Signal Workshop, Howrah for AC immunity and other checks, and stamped as token of acceptance before these are fitted in the tokenless block instruments.

b) The tokenless instruments after they are thoroughly tested by the workshop staff of the Eastern Railway should be put up for inspection of Joint Director, Insp (S&T)/R.D.S., Calcutta and passed by him before these are despatched to the railways.

c) Failure to show momentary deflection of the galvanometer during block handle operation observed during prototype tests should be rectified.

d) Extraction of shunting key when S.M.’s key lies between ‘off’ and ‘on’ position should be prevented.

e) The timer relays (bi-metallic strip type) now provided in the tokenless block instruments should be replaced by fail-safe electronic time delay device within a period of six months.

f) In view of the observation of high current consumption of 35mA during normal working and 1400mA during cancellation as observed during prototype testing, attempts should be made to bring down the current and power consumption to the minimum.

g) Detailed circuit diagram for the transmitter and the receiver should be furnished to the R.D.S.O.

h) Erratic behaviour of the transmitter and the attenuator pad as observed during prototypetest in RDSO should be taken care of.
I) The design of the filter in the receiver should be improved to be fully effective under superimposed conditions during code transmission.

j) The suggestion made for alternative circuit for holding of 2R relay instead of rewinding of this relay in the workshop should be implemented.

k) Relays inspected and stamped by the inspecting officer of RDSO only shall be used in construction with this tokenless block instruments.

It may please be ensured that the above points are complied with before the tokenless instruments are put up for RDSO’s inspection.

SD/-
(R.Krishnaswamy)
Joint Director(S&T), Rly.Board.

No: 74/W3/SGF/6

Copy to:


2. The General Manager(S&T) and General Manager(S&T)/Constn. All Indian Railways. They are requested to see that the bi-metallic strip type relays if already in use on their railway(of Howrha Signal Workshop make) are to be replaced by approved fail-safe electronic time relays within a period of six months. Further, the relays to be used in conjunction with tokenless instruments shall be only those which are inspected and stamped by the Inspecting Officer of the RDSO.

Sd/-
(R.Krishnaswamy)
Joint Director(S&T), Rly.Board.
To
The General Managers,
All Indian Railways

The Director-General,
R.D.S.O., Lucknow.

Sub: Lock and block working on double line sections.

A few cases came to the notice of the Board where safety cover provided by the lock and block working was notified due to one reason or the other.

Instructions were issued to the Railways by the Board vide M.T.’s D.O.letter No: 84/Safety-I/3/1 dated: 19/21.9.84 to ensure metculous observance of basic safety rules by the operating and maintenance staff and not be jeopardise safety under any circumstances.

A committee consisting of -
1. CSTE,South Eastern Railway.
2. CSTE,Western Railway
3. CSTE(Con),Southern Railway &
4. Director(S&T),R.D.S.O.(Convener)

was also constituted to go into the look & block working system for double line. Instructions to this effect were issued vide Board’s letter of even number dated: 9.11.84. The committee was asked to study in depth the lock & block working for double line including the design aspect of the Block Instrument,particularly that of the SGE type which is most comonly in use,bring out weaknesses in the system,if any,and suggest remedial measures.

2. Committee’s report was received vide Director(S&T)/RDSO’s letter No.STS/E/B1 dated: 13.2.1985 and has since been examined. The committee’s recommendations and Board’s orders thereon are given in juxtaposition in the Annexure attached. Appendix ‘A’ referred to in recommendation No.7 is also sent herewith.

3. Necessary action may please be taken,where required,accordingly.

4. Receipt of this letter may be acknowledged.

Sd/- (Kalyan Singh)
Joint Director(S&T)III,Railway Board.

Copy alongwith enclosures to :-
1. CSTEs,All Indian Railways.
2. CSTEs(Constrn.),All Indian Railways(except NE Railway).
3. Director(S&T),R.D.S.O.Lucknow.
5. Principal,Railway Staff College,Vadodara.
6. AGM/RE/Allahabad.

Sd/- (Kalyan Singh)
Joint Director(S&T)III,Railway Board.

Copy to:
1. Safety(A&R),Branch Railway Board with 6 spare copies.
2. ADRE(S&T),Railway Board.
### ANNEXURE

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Summary of Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Quick acting relays like K-50 or QNL or PNI shall not be used for the stick circuit of the block instrument; ‘QSPA’ type or 2 QNA-I relays in tandem, with only S-4 shelf type relays or alternatively two QNAL with a minimum pickup time of 300 ms. only be used in stick circuit for the block instrument.</td>
</tr>
<tr>
<td>2.</td>
<td>AEI-GRS polarised relays can be used in RE areas for present, only after increasing the contact gap to 1.5mm and pickup current to 16 m. As a solution, only relays fully conforming to IRS.S.31-80 should be used in future in RE areas. AEI-GRS type polarised relays with the original 0.5mm contact gap can be used in non-RE areas; but if the block instruments are to IRS design, then a shunt resistance of 200 ohms shall be provided, so that the relays do not get over-energised. (Para 5.3)</td>
</tr>
<tr>
<td>3.</td>
<td>AEI-GRS to code No.193451 which is a 2-position polarised relay shall not be used for block working. The question of using 2-position polarised relay in the block circuit does not arise. 3-position polarised relay only must be used in the block circuit.</td>
</tr>
<tr>
<td>4.</td>
<td>Tyer’s 3-position relays which are only 11 in number in use on the Western Railway, should be replaced expeditiously. (Para 5.2).</td>
</tr>
<tr>
<td>5.</td>
<td>3-Position polarised relays should be overhauled once in 10-12 years. (Para 5.4). Accepted.</td>
</tr>
<tr>
<td>6.</td>
<td>All block instruments should be manufactured only to IRS Design. (Para 6). Accepted.</td>
</tr>
<tr>
<td>7.</td>
<td>The present practice or overhauling block instruments is not uniform in regard to replacements of vital parts. Certain vital parts detailed in Appendix ‘A’ should be compulsorily replaced at the time of overhauling. (para 7). Accepted.</td>
</tr>
<tr>
<td>8.</td>
<td>All the block instruments manufactured in the Railway workshop also should be duly inspected by RDSO. (7) Accepted.</td>
</tr>
<tr>
<td>9.</td>
<td>Inspection and maintenance of Double line block instruments by inspectors and maintainers should be detailed in the Signal Engineering Manual. RDSO should also issue detailed instructions regarding maintenance practice. (para 9). Accepted.</td>
</tr>
<tr>
<td>10.</td>
<td>For clear division of responsibility between two contiguous Railways/Divisions, both block instruments along with associated gears shall be maintained by one agency. (para 10). Accepted.</td>
</tr>
</tbody>
</table>
11. The undermentioned features should be incorporated in future in the external circuity of lock and block working.
(para 11).

a) The last st signal should go to ON whenever the commutator at the receiving station is turned to any position other than line clear.

b) NBPR/RECK picked-up contact should be proved in line clear circuitry.

c) Sequential clearance of two track circuits should be provided for block clearance.
d) To pick up QR relay the block commutator must be turned to TOL position before arrival of the train.

12. Block working should be suspended wherenever the Last Stop Signal following conditions are observed the lock block should be treated as defective and its working suspended:-

(I) the last stop signal is not restored to ‘ON’ position automatically by the passage of train.(ii)If it is found possible to take off the without obtaining the indication on the instru-

ment commutator be turned from ‘TOL’ to ‘Line clear’ position without the arrival of train.

(iv) When the Block instrument shows erratic movements of the indicators or any other way.
Copy of letter No.72/W3/SG/3 dated: 11th March, 1974 addressed to GM(S&T)/Southern Railway with copy to other GMs(S&T).

Sub: Single line tokenless block working.


On section provided with tokenless block working and MACLS operated either from a panel or lower frames, the advance starter signal may be dispensed with and starter signal itself treated as a last stop signal provided that :

1. Such signal is provided at wayside station where there are no shunting operations.

2. Starter signals are replaced to “on” immediately after the train occupies a track circuit provided just beyond the starter signal covering the entire point portion.

3. The starter signals are provided with all the interlocking arrangements necessary for the last stop signal in tokenless block working.

4. The green aspect of the homesignal the aspect which signifies the non-through is released by the clear aspect lamp of the main line starter burning and being provided continuously.

5. The red aspect of Km. the starter is provided burning after each operation.

Sd/-

(K. Viswanathan)
Joint Director(Signals)
Railway Board.
General Manager(S&T)
All Indian Railways

Sub: Single line Tokenless Block working.

Copy of Board’s letter No.72/W3/SG/E/3 dt: 11.3.74 on the above mentioned subject in enclosed. Board desire that the instructioned contained therein may be strictly adhere to.

DA: One.

For (Kalyan Singh)
Joint Director(S&T)-III
Railway Board.

Copy to:-
1. CSTE(Con),All Indian Railways.
2. Principal,IRSET,Secunderabad.
3. Chief Commissioner of Railway Safety Patiala House,
   16-A Ashok Marg,Lucknow-226 001.
4. Commissioner of Railway Safety Western Circle,2nd Floor,
   Churchgate Stn. Bldgs.Annexe,Maharshi Marve Road,Bombay-400020
5. Commissioner of Railway Safety Central Circle,2nd Floor,Churchgate
6. Commissioner of Railway Safety-Eastern Circle,Multistoreyed
   Bldg.of Eastern Rly. 12th Floor,14,Strand Rd.,Calcutta-700 001.
   of Eastern Rly.s 12th Floor,14-Strand Rd.,Calcutta-700 001.
8. Commissioner of Railway Safety(Metro Rly.)C/o C.R.S./Eastern Circle
   Multistoreyed Bldg.,of E.Rly. 12th Floor,14-strand Rd.,Calcutta-700 001.9.
9. The C.R.S/Southern Circle,C/o Sechadr Road,Gandhanagar P.O.
   Bangalore City-560 009.
10. The C.R.S./South Central Circle North Eastern Railway Bldg.,
    Gorakhpur-273 001.
11. The C.R.S./South Central Circle,C/o C.R.S./Southern Circle,
    7,Seshadra Road,Gandhi Nagar P.O. Bangalore-560 009.
12. The C.R.S./N.F.Circle,C/o The Commissioner of Rly.Safety,
13. The C.R.S./Northern Circle,Northern Railway,Stn.Bldg.Charbagh,
    Lucknow-226 001.

DA: One.

For (Kalyan Singh)
Joint Director(S&T) III
The General Manager,
Railway Electrification,
Allahabad.


Approval is accorded for a retention of existing block clearance arrangement with one track circuit till provision of standard arrangement with two track circuits is programmed and got approved by South Eastern Railway.

You may, however, provide necessary spares in the cable so that the railway can do the work as and when the same is sanctioned.

Sd/-
( K. N.Jain )
Exec. Director (S&T) R
Railway Board.

Copy to: General Manager(S&T), S.E. Railway, Calcutta for information and necessary action.
Sub:- Use of Filter Unit for Block Instruments.

Ref:- 1) Your letter No. RE/S&T/ALD/STORES/Spec.
    Dated 11-8-98.
2) Your letter No.RE/S&T/ALD/STORES/Spec.
    Dated.19-9-98 addressed to Secy/RE Railway
    Board and copy to this office.

In reference to the above, the matter has been examined and the following recommendations are offered:

An extract of the Minutes of meeting held between S&T Engineers of SNCF and Indian Railways held on 6-3-1959 on this subject is reproduced below:-

“Para II 2(a): the experts pointed out that a maximum of 2.5 V AC induced voltage on the 3 position Polarised relay will arise under normal conditions due to earth return.

The experts recommended that working current of the relay should be 17 ma and this is to be achieved by increasing the voltage of the battery only.

The experts pointed out that there is no question of demagnetisation of permanent magnet of the relay due to A.C. induced voltages provided this voltage is limited to 2.5V.”

I would thus be appreciated that to avoid demagnetisation of the permanent magnet of the 3-position relay associated with the block instruments, the induced voltage across the polarised relay is not be exceed 2.5V AC.

Under the circumstances, in sections electrified with 25 KV AC, the use of Filter Unit is a must irrespective of the length of parallelism. Accordingly, even in cases of the use of Optic Fibre Cable when derivation cable/PIJF cable is proposed to be used for extending the block instruments/drop insert point circuit to the end cables, the Filter Unit is to be invariably used for the block instrument circuits.

Sd/-
(M. L. GAMBIHR)
DIRECTOR STDs.(TELECOM).
for DIRECTOR GENERAL.
No; 93/SIG/M/11

New Delhi, dt.16.2.96.

The Chief Signal & Telecom Engineers,
All Indian Railways.

Sub: Proving of 'ON' aspect of signals in tokenless and double line
Block instrument circuits.

Ref: (I) Railway Board's letter No.72/W3/SG/E/2/pt. Dated:11.3.74 and 28.8.80 addressed to
GM(S&T)/S. Rly.
(ii)CSTE/W. Rly's letter No.G.611/7/1/2 Vol. II dated:1.11.95.

The issue of proving 'ON' aspect of signals in the tokenless and double line block instrument
circuits has been considered by the Board and following clear instructions are issued:-

"In the tokenless and double line block instrument circuits the 'ON' aspect of first stop and last
stop signal shall be proved to provide interlocking such that it is not possible to close the line and grant or
receive 'line clear' unless the signals have assumed 'ON' aspect".

This supersedes all previous instructions on this subject.

Kindly acknowledge receipt of this letter.

Sd/-
(S.B.Bhamu)
Joint Director (Signal)
Railway Board.
No:85/W3/SG/CLS/1  
New Delhi, dated: 26.6.1985

The General Managers(S&T)  
All Indian Railways.

The A.G.M.,  
Railway Electrification,Allahabad.

Sub: Focussing of Colour Light Signalling.

Cases have been brought to the notice of the Board where colour light signals are reported to have not been correctly focussed resulting in poor visibility to the driver.

It is a well known fact that the visibility of green Colour Light Signalling aspect is poorer than red and yellow aspects. Efforts are being made by the indigenous manufacturer,namely,M/s. Paisa Funds,and the R.D.S.O. to improve the quality and composition of the material used for the green lens so as to achieve better visibility. It is hopefully expected that the efforts will yield results in the near future.

So far as adjustment for focussing is concerned,Railways should ensure that the focussing is correctly done. It should be impressed upon the maintenance staff that focussing must be checked,and readjusted if required, whenever the lamp is replaced or any other work is done in the Colour Light Signalling unit which can disturb the focussing.

Hitherto, the practice has been to do focussing by “hit-and-trial” manual method.

Some indigenous manufacturers are reported to have developed scientific instrument which can be used for achieving optimum focussing. A local Calcutta firm demonstrated such electronic instrument during C.S.T.Es’ Conference held in Calcutta in June, 1983. The address of the firm is given below for information benefit of the Railways:-

M/S. Micro DIGI SENS Corporation, 48/2/1, Dr.Suresh Sarkar Road, Calcutta-700014.

Railways are well advised to make use of such scientific instruments to full advantage to achieve better focussing.

Sd/- Kalyan Singh  
Jt. Directorate(S&T)III, Rly.Bd.


C.C. to CSTE/Con, All Indian Rlys.(except North Eastern & Northeast Frontier Rlys.).


Sd/- Kalyan Singh
No: 88/SIG/G/28 dated: 27.7.89

Rail Bhavan, New Delhi-110001

General Managers,
All Indian Railways.

Sub: Single line working on double line section during Engineering blocks.

I. The subject of operating trains during Engineering blocks on the non-signalled line has been under consideration of the Board for some time. In order that the best use of the available line is made with minimum inputs, the Board have decided that the following action should be taken by the Railways to facilitate abnormal working during Engineering blocks. Mechanised track maintenance has already been introduced in a big way on the Railways on heavy density routes. It is necessary that action is initiated quickly so that track maintenance and renewal works do not suffer and effective utilisation of track machines is ensured.

1. All stations on double line should have both facing and trailing emergency crossovers. All crossovers and turn-outs in the station yard should be equipped with facing point lock and detection arrangements to enable movements to be done in both directions. This will facilitate movements over facing points without the necessity to clamp points at site.

2. A telephone gumty should be provided at the place where the driver of a train is required to bring his train to a stop before entering the station yard during abnormal working as laid down under the existing rules.

3. This location may be marked by the provision of Stop Board. A warning board in rear at an adequate distance should also be fixed so that the driver can start controlling his speed from this point to stop at the stop board.

4. Temporary telephone arrangement should be provided at all the manned level crossings in the section in case telephones are not already provided.

5. Look out men should be provided at unmanned level crossings, as many be found necessary, to caution road ousers about trains approaching in the wrong direction.

6. Emergency crossovers may be provided with curved switches so that it is not necessary to impose any special restriction for the movement of passenger trains on these. In panel interlocked stations new crossovers should also be worked by electric machines which set and lock the points.

II. Comprehensive operating instructions for working the trains in the wrong direction may be made out with specific references to emergency working for engineering blocks. Since such engineering blocks are planned and are made known to all concerned, restrictions normally imposed in the running of trains in the working direction, during emergency single line working need not be imposed. Trains may be allowed to proceed at a normal speed on the wrong line but with a stipulation that the driver should control the train and stop at the stop receiving end. Instead, Station Masters should exchange private numbers with the drivers on the telephone provided at the stop board and permit the train to enter the station. Other rules regarding notification of gangmen, gatemen may be modified taking in view the provision of phone at the level crossings.

III. Based on the above guidelines, Railway may issue necessary amendments to the Block Working Manual to enable the working of trains during Planned Engineering Blocks. It has also been decided by the Board that the expenditure in connection with the provision of the above facilities will be chargeable to Track Renewals as far as practicable.
IV. The temporary single line working arrangements will be implemented in a phased manner wherever Railways are unable to grant blocks for repairs/renewals as per Board’s directive. In the first phase alternate block stations could be taken up including provision for stabling of track machines at suitable places.

V. This issues with the concurrence of Safety, Signalling and Finance Directorates of the Railway Board.

Receipt of the letter may please be acknowledged.

(SD/- J.S.Mundrety)
Adviser(CE)
Railway Board.
No; 93/SIG/M/11

New Delhi, dt.16.2.96.

The Chief Signal & Telecom Engineers,
All Indian Railways.

Sub: Proving of 'ON' aspect of signals in tokenless and double line Block instrument circuits.

(ii)CSTE/W. Rly's letter No.G.611/7/1/2 Vol. II dated:1.11.95.

The issue of proving 'ON' aspect of signals in the tokenless and double line block instrument circuits has been considered by the Board and following clear instructions are issued:-

"In the tokenless and double line block instrument circuits the 'ON' aspect of first stop and last stop signal shall be proved to provide interlocking such that it is not possible to close the line and grant or receive 'line clear' unless the signals have assumed 'ON' aspect".

This supersedes all previous instructions on this subject.

Kindly acknowledge receipt of this letter.

Sd/-
(S.B.Bhamu)
Joint Director (Signal)
Railway Board.
The G.Ms(S&T)/All Indian Railways.

Sub: Intermediate Block Signalling.

The present rules stipulate that when an Intermediate Block Home is defective, the Driver has to establish communication with the Station Master controlling the signal, for further instructions, and in the event of his inability to establish such a communication, he may wait for five minutes and then proceed cautiously ahead.

1. A situation may arise when a train enter the section ahead of the Intermediate Block Home in the above mentioned manner, while the earlier train that had gone ahead on proper “Line Clear” to be given, although the second train which had passed the IBH in the “ON” position in the interregnum is still between the IBH and the station in advance.

2. Such a situation will obtain in those cases of Intermediate Block Signalling where one half of the section that has been split is track circuited and the other half is still controlled by the Block Instrument.

3. *It is essential to ensure that every such case of a train passing IBH in the ‘ON’ position, after waiting for five minutes should be detected by means of proper circuits, and it should be ensured, by suitable stipulations in the Station Working Rules aided by suitable indications and emergency operation duly recorded on counters, that a third train does not get Line Clear” unless the second train which had passed IBH in the ‘ON’ position has actually arrived at the station ahead and its complete arrival is verified there. A diagram showing the arrangements in vogue on Northern Railway is enclosed for your guidance. Actual arrangements may be finalised by each Railway.

4. Please acknowledge receipt of this letter and ensure that this situation is looked after in your systems in not already done.

DA: As above. Sd/- (K.Subrahmanyan)
Joint Director(Signal/Rly.Board).

*Para-4 modified vide Bd’s
letter No.85/W3/SG/G/9 dt.11.9.85.
Copy for information to:-
1.CSTE(Cons)/S.E.Rly. and others(C.E.N.S.E.,W.Rlys)
2.CAO(R)/MTP/Calcutta/Bombay/Delhi/Madras.
3.Prindipal,IRISET,SC
4.Principal(S&T)/Staff College/Baroda.
5.The Director General(S&T)/RDSO/Lucknow.

Sd/- Joint Director(S)/Rly.Board.
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)


The G.Ms(S&T)/All Indian Railways.

Sub: Intermediate block signalling.
Ref: Board’s letter No.77/W3/SG/G/11 dt.4.1.78.

On a reference received from W.Railway, the matter has been reviewed and the Ministry of Rlys. have decided that in partial modification of the letter under reference, para 4 of this letter may be submitted by the following:

*4. It is essential to ensure that every such case of a train passing IBH in the ‘on’ position, after waiting for five minutes, should be detected by means of proper circuits, and it should be ensured, by suitable indications and emergency operations duly recorded on counters, that the last stop signal and the IB signal cannot be taken ‘off’ for a third train unless the second train which had passed the IB signal in the ‘on’ position, has actually arrived at the station ahead and its complete arrival is verified there.

It should be explicity made clear in the station working rules that under such circumstances, the SM at sending station shall not take action to despatch the third train, unless the second train, which passed the IBS in the ‘on’ position has actually arrived and its complete arrival is verified by the receiving station”.

This also disposes of W.Rly’s letter No.216/11/45 dt. 20.4.1985.

This receipt of this letter may please be acknowledged.

Sd/- Kalyan Singh,
Joint director(S&T)-III/Rly.Board.

Copy to C.C.R.S. Patiala House, 16-A,Ashok Marg,Lucknow-226001 with 15 spare copies for information.
The General Manager,
All Indian Railways.

Sub: Provision of resetting button for axle counter used for block working viz. Intermediate block signalling and tokenless block working.

Ref: Board’s letter of even No.dt.6.2.1979.

Vide Board’s letter of even number dt.6.2.79 the Railways had been asked to provide reset button so that where axle counters show fault condition the same can be reset manually by the ASM In-charge after ensuring that the monitored portion is vacant. Instructions were also issued that each and every operation of the reset button should be counted on a Veeder Counter and must be properly recorded in the Train signal Register indicating the movement before and after the operation of the reset button. It was also emphasized that such procedures/records to verify the vacancy of the track before resetting should be meticulously checked during inspection and the staff should be properly educated during the various course at the zonal Training Schools.

2. In spite of the above, it is seen that adequate precautions are not being observed and has resulted in an accident on the S.C.Railway. Arising out of the enquiry into the rear end collision between No.17 Janata Express and No.42 Passenger on 5.10.81 between Tunduru and Tenali, the Commissioner of Railway Safety had recommended that the emergency reset button should be taken away from being operated by the station staff.

3. The matter has been considered and where axle counters are used for block working viz. Intermediate block signalling, tokenless block working, automatic signalling etc. for following safeguards should be introduced.

3.1 Once the axle counter has failed and the concerned signal cannot be taken off the despatching station should verify clearance of the block section by exchange of private number with the station in advance. After ensuring that the block section is cleared, the axle counter shall be reset by cooperative effort between the ASMs of the despatching and the receiving stations. The circuitry will be so modified as to obviate the possibility of the resetting by the despatching/receiving station independently.

3.2 Each and every operation of the reset button should be recorded in the Train signal Register by both the stations and during inspection of the stations the Signal and Traffic inspecting official should specifically check up the procedures being followed in respect of the above reset buttons and ensure that the exchange of private number in this regard is being maintained properly.

As axle counter is a new piece of safety equipment being provided for the block working and the staff are yet to get adequately acquainted with the working of the system performance of the axle counters used for block working as also the compliance of the rules for resetting given above may be furnished to the Board every 3 months for the next one year.
General Manager(S&T),
Railway Electrification,
Allahabad.

Sub:- Use of Filter Unit for Block Instruments.

2) Your letter No.RE/S&T/ALD/STORES/Spec. Dated.19-9-98 addressed to Secy/RE Railway Board and copy to this office.

In reference to the above, the matter has been examined and the following recommendations are offered:

Anb extract of the Minutes of meeting held between S&T Engineers of SNCF and Indian Railways held on 6-3-1959 on this subject is reproduced below:-

“Para II 2(a): the experts pointed out that a maximum of 2.5 V AC induced voltage on the 3 position Polarised relay will arise under normal conditions due to earth return.

The experts recommended that working current of the relay should be 17 ma and this is to be achieved by increasing the voltage of the battery only.

The experts pointed out that there is no question of demagnetisation of permanent magnet of the relay due to A.C. induced voltages provided this voltage is limited to 2.5V.”

I would thus be appreciated that to avoid demagnetisation of the permanent magnet of the 3-position relay associated with the block instruments, the induced voltage across the polarised relay is not be exceed 2.5V AC.

Under the circumstances, in sections electrified with 25 KV AC, the use of Filter Unit is a must irrespective of the length of parallelism. Accordingly, even in cases of the use of Optic Fibre Cable when derivation cable/PIJF cable is proposed to be used for extending the block instruments/drop insert point circuit to the end cables, the Filter Unit is to be invariably used for the block instrument circuits.

Sd/-
(M. L. GAMBHIR)
DIRECTOR STDs.(TELECOM),
for DIRECTOR GENERAL.
GOVERNMENT OF INDIA
MINISTRY OF TRANSPORT
DEPARTMENT OF RAILWAYS
(RAILWAY BOARD)

No: 85/W3/SG/G/12

New Delhi, dated: 10.1.1986.

General Manager(S&T)
All Indian Railways

Sub: Single line Tokenless Block working.

Copy of Board’s letter No.72/W3/SG/E/3 dt: 11.3.74 on the above mentioned subject in enclosed.

Board desire that the instructioned contained therein may be strictly adhere to.

DA: One.

SD/-
For (Kalyan Singh)
Joint Director(S&T)-III
Railway Board.

No: 85/W3/SG/G/12

New Delhi, dt: 10.1.86

Copy to:-

1. CSTE(Con),All Indian Railways.
2. Principal,IRSET,Secunderabad.
3. Chief Commissioner of Railway Safety Patiala House,
   16-A Ashok Marg,Lucknow-226 001.
4. Commissioner of Railway Safety Western Circle,2nd Floor,
   Churchgate Stn. Bldgs.Anneexe,Maharshi Marve Road,Bombay-400020
5. Commissioner of Railway Safety Central Circle,2nd Floor,Churchgate
6. Commissioner of Railway Safety,Eastern Circle,Multisotreyed
   Bldg.of Eastern Rly. 12th Floor,14,Strand Rd.,Calcutta-700 001.
   of Eastern Rly.s 12th Floor,14-Strand Rd.,Calcutta-700 001.
8. Commissioner of Railway Safety(Metro Rly.)C/o C.R.S./Eastern Circle
   Multistoreyed Bldg.,of E.Rly.12th Floor,14-strand Rd.,Calcutta-700 001.9.
9. The C.R.S/Southern Circle,C/o Secadr Road,Gandhanagar P.O.
   Bangalore City-560 009.
10. The C.R.S./South Central Circle North Eastern Railway Bldg.,
    Gorakhpur-273 001.
11. The C.R.S./South Central Circle,C/o C.R.S./Southern Circle,
    7,Seshadra Road,Gandhi Nagar P.O. Bangalore-560 009.
12. The C.R.S./N.F.Circle,C/o The Commissioner of Rly.Safety,
13. The C.R.S./Northern Circle,Northern Railway,Stn.Bldg.Charbagh,
    Lucknow-226 001.

DA: One.

SD/-
For (Kalyan Singh)
Joint Director(S&T) III
Railway Board.
No.72/W3/SG/3 dated: 1th March, 1974

addressed to GM(S&T)/Southern Railway with copy to other GMs(S&T).

Sub: Single line tokenless block working.


On section provided with tokenless block working and MACLS operated either from a panel or lower frames, the advance starter signal may be dispensed with and starter signal itself treated as a last stop signal provided that :-

1. Such signal is provided at wayside station where there are no shunting operations.

2. Starter signals are replaced to “on” immediately after the train occupies a track circuit provided just beyond the starter signal covering the entire point portion.

3. The starter signals are provided with all the interlocking arrangements necessary for the last stop signal in tokenless block working.

4. The green aspect of the homesignal the aspect which signifies the non-through is released by the clear aspect lamp of the main line starter burning and being provided continuously.

5. The red aspect of Km. the starter is provided burning after each operation.

Sd/-

(K. Viswanathan)
Joint Director(Signals)
Railway Board.
No: 81/W3/SG/G/3

New Delhi, dated: April 30, 1985

To
The General Managers,
All Indian Railways

The Director-General,
R.D.S.O., Lucknow.

Sub: Lock and block working on double line sections.

A few cases came to the notice of the Board where safety cover provided by the lock and block working was notified due to one reason or the other.

Instructions were issued to the Railways by the Board vide M.T.’s D.O. letter No: 84/Safety-I/3/1 dated: 19/21.9.84 to ensure meticulous observance of basic safety rules by the operating and maintenance staff and not be jeopardise safety under any circumstances.

A committee consisting of -
1. CSTE, South Eastern Railway.
2. CSTE, Western Railway
3. CSTE(Con), Southern Railway &
4. Director(S&T), R.D.S.O. (Convener)

was also constituted to go into the lock & block working system for double line. Instructions to this effect were issued vide Board’s letter of even number dated: 9.11.84. The committee was asked to study in depth the lock & block working for double line including the design aspect of the Block Instrument, particularly that of the SGE type which is most commonly in use, bring out weaknesses in the system, if any, and suggest remedial measures.

2. Committee’s report was received vide Director(S&T)/RDSO’s letter No. STS/E/B1 dated: 13.2.1985 and has since been examined. The committee’s recommendations and Board’s orders thereon are given in juxtaposition in the Annexure attached. Appendix ‘A’ referred to in recommendation No.7 is also sent herewith.

3. Necessary action may please be taken, where required, accordingly.
4. Receipt of this letter may be acknowledged.

Sd/- (Kalyan Singh)
Joint Director(S&T)III, Railway Board.

Copy alongwith enclosures to :-
1. CSTEs, All Indian Railways.
2. CSTEs(Constr.), All Indian Railways(except NE Railway).
3. Director(S&T), R.D.S.O. Lucknow.
5. Principal, Railway Staff College, Vadodara.
6. AGM/RE/Allahabad.

Sd/- (Kalyan Singh)
Joint Director(S&T)III, Railway Board.

Copy to:
1. Safety(A&R), Branch Railway Board with 6 spare copies.
2. ADRE(S&T), Railway Board.
### ANNEXURE

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Summary of Recommendation</th>
<th>Board’s Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Quick acting relays like K-50 or QNL or PNI shall not be used for the stick circuit of the block instrument; ‘QSPA’ type or 2 QNA-I relays in tandem, with only S-4 shelf type relays or alternatively two QNAL relays with a minimum pickup time of 300 ms.</td>
<td>S-4 shelf type relay or other suitable relay(s), like only be used in stick circuit for the block instrument.</td>
</tr>
<tr>
<td>2.</td>
<td>AEI-GRS polarised relays can be used in RE areas for present, only after increasing the contact gap to 1.5 mm and pickup current to 16 m. As a solution, only relays fully conforming to IRS.S. 31-80 should be used in future in RE areas.</td>
<td>Polarised relays conforming to IRS.S.3-80 only be used in the block circuit.</td>
</tr>
<tr>
<td></td>
<td>AEI-GRS type polarised relays with the original 0.5 mm contact gap can be used in non-RE areas; but if the block instruments are to IRS design; then a shunt resistance of 200 ohms shall be provided, so that the relays do not get over-energised.</td>
<td>However, AEI-GRS polarised relays with permanent minimum pickup current of 16 M.A. can be allowed to continue till these are progressively replaced with polarised relays conforming to IRS.S.31-80.</td>
</tr>
<tr>
<td>3.</td>
<td>AEI-GRS to code No.193451 which is a 2-position polarised relay shall not be used for block working.</td>
<td>The question of using 2-position polarised relay in the block circuit does not arise. 3-position polarised relay only must be used in the block circuit.</td>
</tr>
<tr>
<td>4.</td>
<td>Tyer’s 3-position relays which are only 11 in number Accepted. in use on the Western Railway, should be replaced expeditiously.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>3-Position polarised relays should be overhauled once in 10-12 years.</td>
<td>Accepted.</td>
</tr>
<tr>
<td>6.</td>
<td>All block instruments should be manufactured only to IRS Design.</td>
<td>Accepted.</td>
</tr>
<tr>
<td>7.</td>
<td>The present practice or overhauling block instruments is not uniform in regard to replacements of vital parts. Certain vital parts detailed in Appendix ‘A’ should be compulsorily replaced at the time of overhauling.</td>
<td>Accepted.</td>
</tr>
<tr>
<td>8.</td>
<td>All the block instruments manufactured in the Railway workshop also should be duly inspected by RDSO.</td>
<td>Accepted.</td>
</tr>
<tr>
<td>9.</td>
<td>Inspection and maintenance of Double line block instruments by inspectors and maintainers should be detailed in the signal Engineering Manual. RDSO should also issue detailed instructions regarding maintenance practice.</td>
<td>Accepted.</td>
</tr>
<tr>
<td>10.</td>
<td>For clear division of responsibility between two contiguous Railways /Divisions, both block instruments along with associated gears shall be maintained by one agency.</td>
<td>Accepted.</td>
</tr>
</tbody>
</table>
11. The undermentioned features should be incorporated in future in the external circuity of lock and block working. (para 11).

a) The last signal should go to ON whenever the commutator at the receiving station is turned to any position other than line clear.

b) NBPR/RECK picked-up contact should be proved in line clear circuitry.

c) Sequential clearance of two track circuits should be provided for block clearance.

d) To pick up QR relay the block commutator must be turned to TOL position before arrival of the train.

12. Block working should be suspended wherever the Last Stop Signal is observed the lock block should be treated as defective and its working suspended:

(i) the last stop signal is not restored to ‘ON’ position automatically by the passage of train.

(ii) If it is found possible to take off the last stop signal without obtaining the ‘Line Clear’ indication on the instrument.

(iii) If the block instrument commutator be turned from ‘TOL’ to ‘Line clear’ position without the arrival of train.

(iv) When the Block instrument shows erratic movements of the indicators or any other way.
Government of India (Bharat Sarkar)
Ministry of Railway (Rail Mantralaya)
(Railway Board)

**No: 74/W3/SGF/6**


The General Manager (S&T)
Eastern Railway,
Calcutta.

Sub: Tokenless block instrument suitable for RE manufactured in Signal Workshop, Howrah.

Ref: 1) R.D.S.O.’s letter No. STE/RE/S/Block date: 6/7/81.
2) Board’s letter No. 74/W3/SGF/6 dated: 18.5.82.

In view of the deficiencies pointed out by R.D.S.O. during the tests conducted in the Signal Workshop, Howrah on the tokenless block instruments which were type tested at Howrah shop, the following points may be noted before further supplies are effected although approval of this Ministry has already been communicated for use of Diodo type tokenless instruments manufactured by your signal Workshop, Howrah in RE areas.

a) All the transmitters and receivers should be checked by a responsible staff of other Signal Workshop, Howrah for AC immunity and other checks, and stamped as token of acceptance before these are fitted in the tokenless block instruments.

b) The tokenless instruments after they are thoroughly tested by the workshop staff of the Eastern Railway should be put up for inspection of Joint Director, Insp (S&T)/R.D.S., Calcutta and passed by him before these are despatched to the railways.

c) Failure to show momentary deflection of the galvanometer during block handle operation observed during prototype tests should be rectified.

d) Extraction of shunting key when S.M.’s key lies between ‘off’ and ‘on’ position should be prevented.

e) The timer relays (bi-metallic strip type) now provided in the tokenless block instruments should be replaced by fail-safe electronic time delay device within a period of six months.

f) In view of the observation of high current consumption of 35mA during normal working and 1400mA during cancellation as observed during prototype testing, attempts should be made to bring down the current and power consumption to the minimum.

g) Detailed circuit diagram for the transmitter and the receiver should be furnished to the R.D.S.O.

h) Erratic behaviour of the transmitter and the attenuator pad as observed during prototyep test in RDSO should be taken care of.

i) The design of the filter in the receiver should be improved up to be fully effective under superimposed proposed conditions during code transmission.

j) The suggestion made for alternative circuit for holding of 2R relay instead of re-winding of this relay in the workshop should be implemented.
k) Relays inspected and stamped by the inspecting officer of RDSO only shall be used in construction with this tokenless block instruments.

It may please be ensured that the above points are complied with before the tokenless instruments are put up for RDSO’s inspection.

SD/-
(R.Krishnaswamy)
Joint Director(S&T),Rly.Board.

No: 74/W3/SGF/6

Copy to:


2. The General Manager(S&T) and General Manager(S&T)/Constn. All Indian Railways. They are requested to see that the bi-metallic strip type relays if already in use on their railway(of Howrha Signal Workshop make) are to be replaced by approved fail-safe electronic time relays within a period of six months. Further, the relays to be used in conjunction with tokenless instruments shall be only those which are inspected and stamped by the Inspecting Officer of the RDSO.

Sd/-
(R.Krishnaswamy)
Joint Director(S&T),Rly.Board.

The General Managers(S&T)
All Indian Railways.

The General Manager(S&T)/Constn.,
All Indian Railways,
(except Northeast Frontier Railway).

Sub: Tokenless Block Instruments(Diado Type) manufactured in
Signal Workshop-Howrah Eastern Railway.

The approval of the Ministry of Railways is hereby accorded to the use of Diado Type Tokenless Block Instruments manufactured by Signal Workshop/Howrah, Eastern Railway in Railway Electrification areas.

DA: Nil.  
Sd/-  
(R.Krishnaswamy)  
Joint Director(S&T),I,Rly.Board.

No; 74/W3/SGF/6 New Delhi, dated:18.5.1982.

Copy to:


2. C.S.T.E.,Eastern Railway,Calcutta. He may please furnish a report on the working of these Tokenless Instruments on Eastern Railway after about 6 months of use on line to RDSO with copy to this office.

3. Principal,IRISET,Secunderabad.

4. C.S.T.E.(M.T.P)/Railway/Bombay,2nd floor,Churchage Station Building,
Bombay-400 020.

5. General Manager,Metro Railway Bhavan 33-A,Jawaharlal Nehru Road,Calcutta- 700 071.


*Instructions modified vide Board’s letter No.74/W3/SGE/6 dt: 21.8.82.  
Sd/-  
(R.Krishnaswamy)  
Joint Director(S&T),I,Rly.Board.
The General Managers,
All Indian Railways,
The Director General,
R.D.S.O., Lucknow.

In a recent case of an accident enquiry, the following recommendations have been made by ACRS:

(a) It is recommended that starters on the tokenless block sections should be provided with electrical reversors controlled through Advanced Starter so that when the latter is replaced automatically to ‘ON’ position, the former should return to ‘ON’ position automatically and immediately or any other suitable method to achieve the same purpose.

(b) The investigations by the Signal Inspector into cause of failures as required in Para 1309 (Indian Railway Signal Engineering Manual) are not being carried out as is evident from the absence of records which are required to be mentioned in the forms prescribed in Paras 728 & 729).

(c) At present all failures on the tokenless block working sections are being attended to and rectified by the maintainers. It is desirable to issue directions regarding investigation and rectification of failures at the approved in to supervisory level.

(d) It is suggested the normal practice to work a line relay at not more than two times its pick up voltage should be followed.

(e) As suggested in para 44, the Research, Designs and Standards Organisation should carry out trails to achieve minimum value of 4.0hms per kilometre ballast resistance on sections worked with coded track circuits.

Railway Board’s views on the recommendations are as follows:

Recommendation (a)
If the Starter Signals are provided with electrical reversors controlled through the advance starter, so that the Starter Signal is restored to ‘ON’, there will be severe restrictions in the functional utility of starter signals. Starter Signal in this case cannot be used for shunting and there will be serious dislocation in the event of failure of an advance starter, which under these circumstances, would render starter also defective, necessitating clamping and padlocking of points in advance of the starter. The Board are, therefore, of the view that the short track circuit located in advance of the last stop signal should be utilised for replacing the starter signals to ‘ON’ in addition to last stop signal; starter signals will have to be provided with electrical signal reversers for this purpose in less sections. Where, however, track circuit is available advance of the starter signal itself, its use for replacing the starter signal to ‘ON’ should be preferred. Railways should carry out these improvements progressively, taking into account the position of resources.

Recommendations (b) to (a)
Board’s views on these recommendations will be advised in due course.
Receipt of this letter may please be acknowledged.

Sd/-
( D. P. Joshi )
Deputy Director, Signals,
Railway Board.

Copy forwarded to:
1) The Principal, IRSSET, Secunderabad.
2) The Principal, Railway Staff College, Baroda.
3) The Chief Administrative Officer, Metropolitan Transport Project (Rlys.)
   Bombay, Calcutta, Delhi and Madras.
No: 78/W3/SG/A/6


The General Managers(S&T)
All Indian Railways.

Sub: Sealing and Locking of Block Instrument.

Ref: Board’s letter of even number dt.1.11.78.

In continuation to Board’s letter referred to above, it is informed that Double Lock key be provided for Tokenless Block Instruments also.

2. Please acknowledge receipt of this letter.

(This also disposes of South Central Railway’s letter No.SG/122/PC/BS dt.22.12.1983)

DA: Nil.  
Sd/-
(A.K.Kapoor)
Joint Director(S&T)-I
Railway Board.

No: 78/W3/SG/A/6
New Delhi, dt.20.3.1984.

1. The General Managers(S&T), Cons., All Indian Railways and others.

Sd/-
Joint Director(S&T)-I
Railway Board.
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No: 78/W3/SG/A/6  New Delhi, dtd: 1.11.1978.

The General Managers(S&T)
All Indian Railways.

Sub: Sealing and Locking of Block Instruments.

Under Board’s letter No.65/W3/A/11 dtd: 1.10.1965 and No.74/W3/SG/A/5 dt: 20.12.74 instructions have been issued to the Railways for Sealing and Locking all the Double Line Block Instruments and Single Line Token Instruments respectively.

2. The work has also been completed by all the Railways.

3. It has since been decided by the Board that the doors of these instruments giving access to the internal mechanics should be provided with a Double Lock, the key of one of which shall be in the custody of A.S.M. on duty and the key of the other will be with the E.S.M. in charge of othe maintenance of Block Instruments. This will ensure that the door giving access to the inside mechanism of the Block/Token Instrument cannot be opened without the simultaneous use of the keys by A.S.M. and E.S.M. thus eliminating unauthorised manipulation of the instrument by one without the knowledge of the others.

4. The present arrangements for sealing the instruments should also be continued.

5. Suitable instructions will have to be incorporated in the Block Working Manual of the Railways to indicate the procedure to be followed in the opening of the doors of these Block Instruments by the ASM/ESM together for purposes of rectification.

6. Board desire that the work of providing Double Lock as mentioned in Para 3 should be completed expeditiously.

7. The design of the lock to be adopted may be finalised by each CSTE depending upon the local conditions.

8. Please acknowledge the receipt of this letter.

Sd/-
( K.Subrahmanyan )
Addl.Director(Signals)
Railway Board.
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No: 75/W3/SG/G/1

New Delhi, dt: 16.2.1979.

The General Managers,
All Indian Railways.

Sub: Custody of the Key of Cabin Basement Lock.

The issue of custody of the key for the Cabin Basement Lock has been under consideration in this office for some time the Ministry of Railways have decided that -

I) At stations where S&T Maintenance staff are posted round-the-clock in the relay rooms attached to the cabins/stations, the relay room/cabin basement may be provided with a lock whose key shall be with the maintainer only.

ii) At stations where the cabin basement/relay room is not manned by maintenance staff round the clock the cabin basement/relay room may be kept locked with a double lock which can be opened only after both keys are inserted and turned. One key of the lock shall be kept with the station Master in his custody and the other with the Maintainer. Whenever required the key in the custody of the Station Master shall be given to the maintainer and the transaction properly recorded in the Basement Key Register maintained at the station and duly signed by the Station Master and the maintainer concerned.

Please acknowledge receipt of this letter.

Sd/- ( R.Krishnaswamy )
Dy.Director(Signals)
Railway Board.

No: 73/W3/SG/G/1

New Delhi, dt.16.2.1979.

Copy for information to :-

The General Managers(S&T)/Cons., S.E.Railway and others.

Sd/- ( R.Krishnaswamy )
Deputy Director, Signals,
Railway Board.