NORTH CENTRAL RAILWAY
AGRA DIVISION

Station Working
Rule No.AGRA/46

Date of issue:-
Date brought in force:- 25.05.2023

ACHNERA (B.G.)

NOTE: - The Station working rules (SWR) must be read in conjunction with General & Subsidiary Rules and Block Working Manual. These rules do not in any way supersede any rule in the above books a copy of which must always be in possession of the SM on duty. These rules do not in any way supersede any rules in the above books.

1. STATION WORKING RULES DIAGRAM:
SWR Diagram No.D-1107/2 dated 10.03.2023 based on CSTE/N.C. Railway and Signal Interlocking Plan No.SI- 1107/2 C.U.T.-2 dated 21.02.2023. The track accommodation is shown in the Station Working Rule Diagram.

2. DESCRIPTION OF STATION:
It is a 'B' class single line, interlocked standard-IIIR with Multiple aspect colour light signals and Panel is installed in SM office.

2.1. GENERAL (LOCATION):
Achnera Station is a 'B' class station on the Mathura Jn.– Achnera Jn. single line– electrified B.G.section of North Central Railway on E route, It is situated at a distance of 26.20 Kms from Agra Fort

2.2 BLOCK STATION IBH,IBS ON EITHER SIDE AND THEIR DISTANCES AND OUTLYING SIDINGS: -
Achnera station is situated between Achnera JN. Cabin at a distance of 992Mtrs. in the North side at Mathura end and West side at Bharatpur End, Raibha station in the East side at a distance of 6.25Km. at Agra end, .

KHEDA SADAN is a 'D' class station on AH-PRK section at a distance of 6.43Kms from Achnera.

2.3. BLOCK SECTION LIMITS ON EITHER SIDE AND THEIR DISTANCES:

Between stations	The point from which the 'Block section'commences	The point from which the 'Block section 'ends
Achnera - Raibha	DN advanced starter signal No.1 of AH	UP advanced starter signal No.S49 of RAI

2.4. GRADIENT, IF ANY

1 From CIK side, there is falling gradient of 1 in 504 at KM-27.602 further rising 1 in 479 up to KM-27.324 further falling gradient of 1 in 3165 up to CH:760 rising gradient of 1 in 6000 up to CH:580, further rising gradient of 1 in 6600 up to CH:80, further rising gradient of 1 in 5600 up to CH:487 further level gradient up to CH:1200, further rising gradient of 1 in 1500 up to CH:1595, further level gradient up to CH:2200,

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further rising gradient of 1 in 465 up to CH:2400, further rising gradient of 1 in 1460 up to CH:2840 further rising gradient of 1 in 4770 up to further level.

2 From PRK side, there is rising gradient of 1 in 900 at KM-381.748 up to KM-384.448 further level up to KM-385.148 further rising gradient of 1 in 400 up to KM-385.454, further level up to KM-386.727.

2.5. LAY OUT: The lay out consists of 05 lines, namely line number 1 to 5 are the UP & DN running lines.

2.5.1. RUNNING LINES,DIRECTION OF MOVEMENT & HOLDING CAPACITY IN CSR:

Running Line Number	Clear Standing Room in Meters. (CSR)	Remarks.
Line No.1	715Meters (CSL-682.96)	Platform Line
Line No.2	715 Meters (CSL-678.31)	-
Line No.3	893 Meters (CSL-863.90)	Platform Line
Line No.4	717 Meters (CSL-685)	Platform Line
Line No.5	717 Meters (CSL-685)	-

2.5.2. NON RUNNING LINES AND THEIR CAPACITY IN CSR:

Non running lines	Holding capacity	Remark
A&D Siding	99 Meters	Connected to Line No. 1 at BKI end
Tower Wagon Siding	35 Meters	Connected to Line No.1 at AF end
Ballast sliding	CSR 829 Meters	Connected to Line No.5at BKI & AF ends

2.5.3 ANY SPECIAL FEATURE IN THE LAY OUT : NIL

2.6 LEVEL CROSSING: -The class and situation of the level crossing within the station limits and th estaff responsible for operating are indicating below.

Description	18
Classification	"C" (Tfc)
Section	AH-RAI
MG/BG	BG
Kilometers	25/4-5
NI / INT	INT
Normal position	Open
L.B./Leaves	E.O.L.B. sliding boom
Telephone with	SM AH
Operated by	Traffic Gateman

NOTE:-For detailed instructions for working of level crossing gates. See appendix 'A'.

3. SYSTEM AND MEANS OF WORKING:-

a) Trains are worked on :

b) System of working in force:

i. Block working by means of continuous track circuiting, slotting and telephone are provided between AH-Achnera Jn. Cabin towards CIK & PRK side.

ii. Single line block proving axle counter panel block instruments along with HASSDAC with station to station telephones are installed in the SM's office for working the trains between AH-RAI stations. The station master on duty shall be responsible for their operation and custody of keys.

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4. SYSTEM OF SIGNALLING AND INTERLOCKING:

4.1

i. Standard of interlocked is STD-III.

ii. Achnera station is equipped with manually operated multiple aspect colour light signalling. Points and signals are operated by control panel.

iii. Track circuits have been provided at this station as per diagram attached.

iv. Point indicators are provided as per diagram attached.

v. Panel interlocking is provided at this station. Panel is provided in SM's office.

vi. Calling 'ON' Signals are provided below Dn Home signal No.S2 and UP Home signals No.S17 & S19.

vii. Digital Axle counters (HASSDAC) is provided near UP Advance starter signals for clearance of block section.

viii. Crank handle is provided in the SM's office for manual operation of motor points. Crank handle shall be kept in the case specially provided for this purpose. The key of the case shall be in personal custody of the SM on duty and the case shall be kept locked. The details of operation are given in Appendix'B'.

ix. The combined control panel and illuminated diagram has been provided in the SM's office. This depicts schematic re-production of track layout, signals and points, controlled by panel. Adjoining track circuits have been shown in different colours. Indication regarding setting of points, routes, occupation of track circuits and the signal aspects are provided on the control panel.

ix) **Emergency operation of points :-**

In the event of failure of the track circuit controlling the points, if the points have to be operated, the SM on duty will personally verify that the concerned track is not occupied by any 'Train' or vehicle and then only the SM should press the emergency point button (EWN) and release. Each time a point is thus operated, it will be recorded on the EWN counter. It shall also be recorded in the register by SM on duty.

x) **Emergency route cancellation :-**

Please see Appendix 'B'

TRAPS:-

(i) Point No.203 on line no 1 at AF end is the trap for the protection of 1st L/line.

(ii) Point No.293 on line no 1 at BKI end is the trap for the protection of 1st L/line.

NOTE:-Dead ends must not be used for loading, un-loading and stabling of vehicles.

4.2 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF: -

When ever relay room is required to be opened for maintence/attending failure etc., the following procedure shall be observed:-

(1) At station where Relay Room is not manned by the S&T staff round the clock, the relay room shall be kept locked with double lock, i.e. one padlock of station master and other of an authorised S&T staff. Such key of the SMs padlock must be kept with SM on duty and shall be given to the authorised S&T staff when required.

(2) During the period when the key of the relay room is with the S&T staff, the station staff concerned should pre-warn the S&T officials regarding the movement of trains.

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(3) S&T staff while carrying out maintenance work / inspection etc. in the relay room will be personally responsible to ensure that no unsafe practices are adopted.

(4) When the key of relay room is handed over to S&T staff at the time of any failure of signal / S&T gear the station master should remain extra vigilant and in case of the failure of any S&T gear, the rules prescribed for reception / dispatch of the trains at the time of failure of signal / points should be strictly followed.

(5) When the key of relay room is received back from the railway servants of signal department, the SM on duty should ensure personally that the relay room is properly locked.

4.3 POWER SUPPLY:-

a) **SOURCES OF POWER SUPPLY FOR SIGNALING ARE AS UNDER:-**

i) Power supply to signalling installations of this station is drawn normally from Railway Overhead Equipment system (OHE), through its Auxiliary Transformer up AT or from State Electricity Board (EB).

ii) The Automatic change over CLS panel is provided at the station under the control of the duty SM.

iii) A five way rotary switch is provided in the automatic change over CLS panel. The five positions of Power Selection Rotary switch are:
(a) OFF (b) Up AT supply- (Normal supply) (c) State Electricity Board (d) OFF & (e) Auto mode.

iv) Luminous indicators are provided in the panel for individual incoming source of supply. It will be lit when power supply is available in the respective source, otherwise the indication will extinguish. The outgoing supply to signalling installations is in the auto mode. If any of these indicators are not glowing, the on duty SM shall inform to TPC and Electrical Controller.

v) Normally the rotary switch must be kept in auto position. Whenever power supply fails, the change over from Up AT to EB will be automatic. When the indication for automatic operation fails, an alarm will be activated. SM on duty shall acknowledge the same by pressing the reset button provided on the panel. There after he shall turn the selector to Up AT or EB as of its availability to draw power supply to the installations.

vi) Before such change over, the on duty SM shall observe the relevant circuit breaker. If the circuit breaker happens to have tripped to 'OFF' position, the same shall be put to its 'ON' position and the same source of supply maintained.

vii) If no tripping is noticed, or despite apparent tripping and the circuit breaker put to 'ON' position, and still supply does not resume, the on duty SM shall switch over to AT or EB as of its availability.

viii) In case power is drawn from State Electricity Board, the on duty SM shall be watchful of resumption of AT supply and shall change over to Up AT supply (being the normal source of supply) soon, it resumes.

ix) In the event of circuit breakers tripping again and again one after the other of all the sources of supplies, i.e., Up AT & State Electricity Board it shall be deemed as 'Total Power Break Down, Trains shall be delat on written memo as is relevant to reception or dispatch. Relevant provisions under GR & SR 3.68 to 3.70 shall be adhered.

x) All power supply failures shall be recorded in a special register and reported to Traction Power Controller. While failure of AT supply shall be reported to Traction Power Controller with copy to section SSE/TRD for immediate restoration of AT supply, the failure of State Electricity Board supply shall be reported to section SSE/Electrical with copy to Tech./SSE (Sigg.) and Divisional Operations Manger.

xi) In case CLS Panel going blank, Panel SM on duty should check whether AT/local power supply is available or not. The same can be checked from the indication of pilot lamps provided on the power supply change over board provided in the SM's office. In case of non availability of both AT & local power supply, he will operate the Diesel Generator provided at the station as explained in para (xi) below. In case of non availability of AT/local power supply as well as Diesel Generator supply being not available due to any defect, no normal operation from the Panel shall be done. Points will be clamped and movements will be done as per G&SR 3.77 as in a non interlocked yard. However for local operation of points through crank handle, crank handle control key (NX Key) can be extracted from KLCR Box by giving control from the panel.

xii) **Diesel Generator supply.**

Three sources of Power Supply AT, Main (Supply from UPSEB), and DG set are available for feeding the Signaling Circuits at this station. The primary source is AT supply the secondary source is from Local Power from SEB and the third source is from DG sets. these supplies have been made available in the Automatic Change over Panel (MACLS Panel) provided in the SM's room having an Auto/Manual changeover switch. Pilot lamps have been provided in the MACLS Panel to indicate the availability of supplies in the MACLS Panel. Whenever a power from both AT & SEB fails the Auto Change over panel switches automatically to DG supply after stat of DG. In case the Auto Change over Switch fails to operate after one source of power supply fails, the Station Master on duty shall operate the Manual changeover switch to the position of other source of power supply mentioned on the panel. Whenever the supply from RSEB fails for longer duration, the switch should be put to other position for ensuring power supply and Electrical Controller shall be informed through the Section Controller.

Beside this, one SM for IPS is also provided in the SM's room for monitoring the status of Integrated Power Supply (IPS) system for Signaling. The audiovisual indications available on the SM are for any failure in IPS and monitoring the status of batteries to generate the audio-visual alarm for the following conditions;

Voltage Monitoring bar graph: - This shows voltage level.

Start Generator: - The indication glows when battery voltage reaches approximately 109 V. audio alarm is also provided for this condition. Once the generator is start the indication goes 'off'. Audio alarm can be acknowledged by pressing reset push button.

Emergency Start Generator:- This indication glows when battery voltage reaches to approx 107V. This is a second indication alarm to SM to start the generator. The audio alarm can be reset using reset push button.

System shut down:- This indication glow when battery is discharged to 105V approx. The audio alarm will continue to operate until the generator is started.

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Call S&T staff: - This LED glows when any of the modules, converters (DC-DC), CVT etc fails, SM on duty should bring it to the notice to S&T staff when this LED glows.

If start the DG set indication appears on the IPS monitoring panel the SM on duty should start the DG set provided for the purpose by pressing the Start Push Button provided in the SM room & rotate the Change over Switch to the DG position. As soon as the local power supply from RSEB resumes the SM on duty should put off the DG set by pressing the stop button provided in the SM room. In case the failure of local power supply prolongs for more than 04 Hours then the SM on duty should put off the 1st DG set & start the other DG sets by pressing the respective push buttons along with changing of position of change over switch to make selection between two DG sets. The SM on duty should also ensure the entry of the start & stop of the DG sets in the logbook provided for this purpose. If both the supplies fail for long time, the SM on duty will inform ESM/SIM of the station about the fact and advised him to attend the failure. He will also inform Signal Control through Section Controller about the failure and T/369(3b) will be issued for the signals as per SR 3.68 & 3.69 of the GR & SR book

b) **Failure of Power supply** :- Please see in Appendix 'B'

5. TELECOMMUNICATION: -

Available telecommunications facilities at Achnera station are:-

i) Section Control.
ii) Auto /Dot Telephone –BSNL Telephone/Auto telephone.
iii) Block Telephone
iv) Telephone /Secured Communication with LC-18.
v) IBS Telephone with IBS at Km.- Not available
vi) Telephone with Axle Counter reset boxes - Not available.
vii) Telephone for yard communication - Not available.
viii) VHF set
ix) Mobile Train Radio Communication (MTRC) - Not available

Trains will be worked in accordance with the procedure as laid down in SR 6.02/4 of G & SR.

(Details of working should be given in Appendix 'B')

6. SYSTEM OF TRAIN WORKING: -

6.1 DUTIES OF TRAIN WORKING STAFF: -

See Appendix 'D' for the duties of train working staff.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT: -

i) SM (Panel operator) - 1 AS per roster.
ii) Points man -2 As per roster.
iii) Gateman -1 As per duty roster.

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINE AND ZONES RESPONSIBILITY.

a) 'Line Admission book' is not in force at this station.

b) SM is responsible for ascertaining clearance of all lines through panel indication when working otherwise physically.

6.1.3 ASSURANCE OF STAFF IN THE ASSURANCE REGISTER :-

Every train passing staff posted newly at the station or leave reserve staff at the station or regular staff who has resumed his duties after more than 15 days absence must go through station working rules in force and give assurance in the prescribed Assurance Register.

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6.2 CONDITION FOR GRANTING LINE CLEAR:-

The line shall not be considered clear and line clear shall not be given, unless:-

a) The whole of the last preceding train has arrived complete.

b) All necessary signals have been put back to 'on' behind the said train; and

c) The line is clear -

i) Up to the advanced starter at the end of the station nearest to the expected train.

a. For train coming from Agra side line shall be clear up to the advanced starter signal No.20 (See G & SR No.8.03 (2) and block working manual.

(b) For train coming from Achnera Jn. Cabin (from CIK line or PRK line) – line must be clear up to the respective lines starter signal and a adequate distance beyond it .(See GR 8.01)(1)(a) and (c) and 8.03(2).

6.2.1 ANY SPECIAL CONDITION TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN: -

6.2.1.1 Setting of points against block line;-

When a running line is blocked by a stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points in rear on double line sections and at either end on single line sections should be immediately set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line.

6.2.1.2 Reception of train on blocked line:-

1. In case of reception of train on an obstructed line, the Station Master shall -

a) Whenever possible, intimate the Loco Pilot through the station master of the station in rear that the train is to be received on an obstructed line.

b) Ensure that the signal or signals controlling the reception of the train are not taken 'off' and

c) Ensure that all the points over which the train has to pass are correctly set and the facing points locked.

2. After the train has been brought to a stand at the relevant stop signal, it may by received on the obstructed line by -

(a) Authorizing the Loco pilot to pass the stop signal at 'on' by taking 'off' the calling on signal, where provided. or

(b) Authorizing the Loco pilot on signal post telephone, where provided to pass the stop signal at 'on' in accordance with special instructions, or

(c) Authorizing the Loco pilot to pass relevant signal or signals at 'on' through a written authority to be delivered by competent railway servant who shall pilot the train past such signal or signals.

3. The train shall be brought to a stand at the facing points leading to the reception line until hand signaled forward by a competent railway servant.

4. A stop hand signal shall be exhibited at distance of not less that 45 metres from the point of obstruction to indicate to the Loco pilot as to where the train shall be brought to a stand.

5. The Loco pilot shall keep shall his train well under his control and be prepared to stop short of any obstruction.

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6.2.1.3 Reception of train on non-signalled line: -

1. It is necessary in emergency to receive a train on the line which is not signalled for reception then station master shall ensure that-

a) The train has brought is a stand at the first stop signal.

b) The line on which it is intended to receive the train is clear up to the trailing point or upto the place at which the train is required the come to a stand.

c) All the points over which, train has to pass are correctly set and facing point locked.

d) The loco pilot is authorized to pass the approach stop signals at on through a written authority to be delivered by a competent railway servant who shall pilot the train on non signaled line.

e) The loco pilot while entering a non signaled line, shall proceed cautiously and be prepared to stop short of any obstruction.

6.2.1.4 Dispatch of train from non-signalled line:-

1) In the event of a train having to be started form line not provided with a starter signal, the loco pilot shall be given a written permission to shunt.

2) The written permission or the tangible to proceed referred to in sub rule(1) shall not be given unless all the point for the departure of the train have been set and the facing point locked.

In the case of a train having to be started from a line not provided with a starter signal an authority on the prescribed T/511 shall be given in addition to the authority to proceed.

6.2.1.5 Dispatch of train from line provided with common starter signal:-

Not applicable

6.2.1.6 Priority for berthing of the train reception at the station:

A train coming passenger and stopping at station must ordinarily be received on up loop down line No. 1 or 3 or 4 (Platform line).

6.3 CONDITIONS FOR TAKING 'OFF' APPROACH SIGNALS:-

Before the home signal is to be taken 'Off' by the SM on duty for reception of trains, the following conditions must be complied with: -

The SM on duty shall not take signals 'OFF' to admit a train until:-

(I) He has seen by referring to the Panel that the line on which the train is to be received is clear as given below-

1. For reception of train from ACHNERA Jn. Cabin train departure will be given on control telephone by SM/ ACHNERA Jn. Cabin.
2. For reception of train from RAI side, Train departure will be given on Block telephone or on control telephone by SM/RAI.
3. All the facing points over which the train will pass are correctly set and locked.
4. All the trailing points on which the train will pass are correctly set.
5. The line on which the train is intended to be received is clear and free from all obstruction not only up to the trailing points but also up to adequate distance and will give instructions to where necessary to the gate man on duty at the road traffic on telephone.
6. Level crossing Gate No.18 shall be closed for reception of UP trains on 1 to 5 lines and DN trains on line No.1 to 3 only.
7. When a DN train will receive on line No.4 and 5 after setting of sand hump, closing of gate No.18 is not necessary.
8. The SM on duty will then select a vacant line for admission of the train and set and lock the points of the selected line. After the route has been set and locked correctly the SM will take 'OFF' the correct Home signal for the

reception of the train on the selected line and verify the indication on the panel.

9. Immediately after the train passed reception signals completely, the SM on duty will ensure that the signals taken 'OFF' for the train are restored to 'ON' position as per Para No.7.40 (v) of BWM.

6.3.1 **Responsibility of station master for restoration of signals to 'ON' :-**

Station master should ensure that signal is put back to 'ON' after passage of the train as per 3.36.2 (b) and the procedure as laid down in Para 8.03 of BWM must be followed.

6.4. **Simultaneous Reception/ Despatch, Crossing And Precedence OF Trains:**

1. **Simultaneous reception of the train at this station shall be as under:-**

a. Reception from ACHNERA Jn. Cabin side on line No.1 and Raibha side on Line No.4 & 5.

b. Reception from ACHNERA Jn. Cabin side on line no.3 and Raibha side on Line No.1.

2. **Simultaneous dispatch of the train at this station shall be as under:**

a. Departure to ACHNERA Jn. Cabin (Chiksana side) from line No.1, Parkham side from line No.3 & Raibha side from Line No.4 and 5.

b. Departure to ACHNERA Jn. Cabin (Chiksana side) side from Line No.2, Parkham side from line No.3 and Raibha side from line No.1, 4 and 5.

c. Departure to ACHNERA Jn. Cabin (Chiksana /Parkham)side from Line No.3 and Raibha side from Line No.1, 2, 4 and 5.

d. Departure to ACHNERA Jn. Cabin (Chiksana /Parkham)side from Line No.4 and Raibha side from Line No.1, 2, 3 and 5.

e. Departure to ACHNERA Jn. Cabin (Chiksana /Parkham) side from Line No.5 and Raibha side from Line No.1, 2, 3 and 4.

6.5. **COMPLETE ARRIVAL OF THE TRAINS:**

Block proving axle counter between block stations and complete track circuiting of station section excluding non-running lines of the receiving station is installed and are functioning and there is 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. If a block proving axle counter between block stations and complete track circulating of station section is failed, the following procedure shall be adopted.

Before giving the 'Train out of section' advise to the station in rear on arrival of a train, the SM on duty will satisfy himself that the train has arrived complete or passed with the Tail Lamp/Tail Board, on the last vehicle in the manner as indicated below:-

i) The SM /SM on duty is responsible for giving 'Train out of section ' by seeing the indication of clearance of block section as well as complete arrival of train provided on the panel. In addition, if the complete arrival of train inside the fouling mark can not be ascertained by personal observation /clear indication on the panel. The SM./SM must ascertain the complete arrival of train in the manner indicated in SR 4.56/1(C) of G & SR and Para 4.17 of BWM..

ii) In case of Dn. and Up trains SM after ensuring personally that the complete arrival has passed with Tail Lamp /Tail board will advise to SM/ RAI and SM

/Achnera Jn cabin supported by a Private No. time wise .SM RAI /Achnera JN cabin will do it and suitable entry be made in the train register.

NOTE:- Immediately after arrival of a Dn or an Up train at the station, the points should be set against the blocked line, stabled load or less important nature' /loop line etc. as per para No. 4.17 of BWM before giving 'Train out of section' Signal to the station in rear.

6.6

(A) DESPATCH OF THE TRAINS TOWARDS RAI:-

i) After obtaining the Line Clear on the Block Instrument for despatch of the train towards Raibha as the case may be SM on duty will personally verify that correct route has been set and locked and gate No. 18 is closed against road traffic and gate closed indication is available on the panel. The line is clear for passage of the train up to Advance starter including its overlap track circuit.

ii) The SM on duty will then take 'OFF' the departure signals.

iii) After the complete passage of the train, the signals taken 'OFF' will go to 'ON' position automatically and the red indication on panel will get extinguished.

(B) DESPATCH OF THE TRAIN TOWARDS ACHNERA JN CABIN:-

i) After obtaining the Line Clear by Slotting for dispatch of the train towards ACHNERA JN CABIN slot indication is available on the PANEL and SM on duty will personally verify that correct route has been set and locked. The line is clear for passage of the train up to signal No.S6 (for CIK line)/ S10(For PRK line) of Achnera JN Cabin including its overlap track circuit.

ii) The SM/SM on duty will then take 'OFF' the signal No.20 or/and 22.

iii) After the complete passage of the train, the signals taken 'OFF' will go to 'ON' position automatically and the red indication on Panel will get extinguished.

TRAINS RUNNING THROUGH:-

1) DN train to Raibha side after obtaining line clear from SM RAI may be permitted to pass run-through from line No.2 with out stopping at the station, if line No.2 is occupied then the train may be permitted to pass run through at a restricted speed of 30 KMPH provided the points are correctly set and locked and correct signals are taken 'OFF' via line No.1, 3, 4 & 5.

2) UP train to Achnera Jn. Cabin (Chiksana side), after obtaining SLOT NO. 501 on signal no S20 from SM Achnera Jn. Cabin, may be permitted to pass run-through from line No.2 with out stopping at the station, if line No.2 is occupied then the train may be permitted to pass run through at a restricted speed of 30 KMPH provided the points are correctly set and locked and correct signals are taken 'OFF' via line No.1, 3, 4& 5.

3) DN train to Achnera Jn. Cabin (Parkham side), after obtaining SLOT NO. 502 on signal no S22 from SM Achnera Jn. Cabin, may be permitted to pass run-through at a restricted speed of 30 KMPH provided the points are correctly set and locked and correct signals are taken 'OFF' via line No.1,2 & 3.

6.7 WORKING IN CASE OF FAILURE :-

a) FAILURE OF SIGNALS:

When any signal becomes defective, the relevant points if in facing direction shall invariably be correctly set clamped and pad locked and the procedure laid down in GR 3.68, 3.69, 3.70, 3.71 3.76 and SRs their under must be followed.

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b) **FAILURE OF POINTS**:

When any point is defective and indication is not available on the panel, action as per SR 3.77/1 must be complied with i.e. point should be reported and inspected for any obstruction etc.and S&T staff should be advised. No movement should be permitted over the point unless it is correctly set, clamped & padlocked under personal custody of the SM on duty as per SR 3.68/1(d) of G&SR (SR 3.51/4 should also be followed).

c) **FAILURE OF TRACK CIRCUITS: -**.

In case of failure of track circuits /axle counters the trains shall be received by taking 'OFF' Calling ON signals and the SM will personally verify the clearance of lines.

d) **Reception of Trains on Obstructed Lines**:-

Please see Para No. 6.2.1.2

e) **Reception of Trains on non signaled line** :-

Please see para No.6.21.3

f) **WORKING OVER DAMAGED POINTS** :-

Whenever points, crossing or guardrails are defective or damaged, the railway servant in charge of operation of points shall protect them and immediately arrange to report the circumstances to the station master. (SR. 3.77/1 & 3.77/2 must be complied with.)

g) **Failure to read the occupation of line by trolley or light engine**:-

After passing the trolley or light engine from station on duty Station Master is responsible to verify the clearance of line.

h) **FAILURE OF BLOCK PANEL INSTRUMENTS/BLOCK AXLE COUNTERS: -**

When the single line block proving axle counter panel block instrument installed for working the train between AH-RAI appears to be affected by outside influences causing failure of Axle counters and ringing bell or in any other way works defectively they must be considered as having failed and the trains must be worked as per para 9.06 of BWM.

(for detailed working see Appendix-"B")

j) **FAILURE OF AXLE COUNTER**:-

1. When at reset box clear (Green) indication is available but block section Including overlap is not clear.
2. When at reset box occupied (RED) indication is available but block section Including overlap is clear.
3. When at reset box no indication is available.

6.9 PROVISIONS FOR WORKING OF TROLLEYS / MOTOR TROLLEYS MATERIAL LORRIES :-

Some of the precautions such as given below –

(i) The section where axle counters are provided in lieu of track circuits, Trolleys, Motor trolleye, Lorries etc., which are not insulated, shall not be allowed to run except on the line clear.

(ii) Motor Trolleys/Tower Wagon/Material Lorries are not likely to actuate Axle counter correctly. When they are to run over the section split by axle counters, the whole section to be treated as one and next train to be started after the last train has arrived complete.

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(iii) In all other respects the working of a light Motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to these laid down for motor trolleys while running under block protection or following another light Motor trolley or a Motor trolley.

(iv) Any other restriction on movement of trolleys/motor trolleys/material lorries/tower wagon etc.

Provisions of GR 15.18 to 15.28 and SRs there under be followed for working of Motor Trolleys / Material Lorries etc.

7. BLOCKING OF LINES :

Whenever it is necessary to block a running line, the SM on duty shall obtain the permission from the section controller and provisions of SR 5.19/1 be complied with. In addition button collars shall be used as per SR 3.38/1 of G&SR. The button collars must be placed by the SM on duty on the point's route buttons of a line on which a train an engine or a vehicle is left standing or which is otherwise obstructed. The button collars must also be used whenever line is occupied by a train whether it is stopping in the normal course or otherwise to give precedence to another train or for any other reason in accordance with SR 3.38/1 of G&SR. In addition when running line is blocked the points should be set for a vacant line/less important load / loop line etc. as per SR 3.38/2 of G & SR besides the points of the blocked line must be set clamped and padlocked against the line and keys kept with the SM as per SR 5.23/1 of G&SR. The button collars must be placed on the buttons on the panel as under when the line is blocked: -

Line occupied	Button collar to be placed on the route buttons.
Line No.1	Route button of line No.1 (BB)
Line No.2	Route button of line No.2 (BC)
Line No.3	Route button of line No.3 (BD)
Line No.4	Route button of line No.4 (BE)
Line No.5	Route button of line No.5 (BF)

NOTE: - Button collars should be removed when the line is cleared.

8. SHUNTING : -

8.1 General precautions:-

(a) All shunting should be performed under personal supervision of Guard of the train/SM/ person in charge of shunting.

(b) T-806 must be issued to the guard and driver of the train for all shunting operations prior to commencement of shunting by SM on duty.

(c) Shunt signal must be taken off for shunting operation of concerned line when ever possible.

d) To display hand signals during shunting.

8.2 Shunting in the face of approaching train:-

If necessary signals are kept at on shunting may be carried out on with in station section even after granting line clear to an approaching trains as per GR 8.10 of G&SR.

When signals have been taken off for an incoming train on to a line which is not isolated, no shunting movement shall be carried on towards the points over which the incoming train will pass.

8.3 Prohibitation of shunting, special features if any:-

On non isolated lines:

1. Shunting is not permitted over the points on which the approaching train will pass and signals are taken OFF for approaching trains.
2. Loose shunting is not permitted.

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3. Hand shunting or obstruction to main line is prohibited at both ends.
4. Hand shunting of wagons fitted with roller bearing such as BOX, BOBs, BCXs etc.is prohibited
5. Roller bearing stock shall be secured in accordance with SR.5.23/2 and other stock as per SR: 5.23/1 of G&SR.
6. Shunt signal may be taken off for shunting purpose where possible.

8.4 SHUNTING WITHIN STATION SECTION:

(1) If the necessary signals are kept at ON, shunting may be carried on within station section, provided the provisions of Rule 8.09 are complied with for shunting up to shunting Limit Board or Advanced Starter, where provided.

(2) When signals have been taken off for an incoming train on to a line which is not isolated, no shunting movement shall be carried on towards the points over which the incoming train will pass.

SHUNTING OUTSIDE STATION SECTION:

i) **BETWEEN LAST STOP SIGNAL AND OPPOSITE FIRST STOP SIGNAL:-.**

a) TOWARDS ACHNERA JN CABIN:-

Shunting outside advance starter signal upto Home signal shall be carried out when section is block backed.

b) TOWARDS RAIBHA:-

Shunting may be performed outside DN Advanced starter signal No. 1 only after ensuring closure of concerned level crossing gates and blocking back the section as per SR-8.12/1.

8.5. SHUNTING ON DOUBLE LINE :-

Shunting outside Advance starter signal upto home signal shall be carried out when section is block backed..

8.6 Shunting in the siding taking off from station yard/goods yard:-

8.6.1 SHUNTING IN A&D. SIDING :-

The A&D siding is situated at the BKI end of station yard and connected to line No. 1 through D/S point no. 293.When shunting is required to be done in this siding the Station Master on duty shall operate the point no. 294a/b in normal & 293 in reverse and take 'OFF' the relevant shunt signal no. 116. When shunting is completed the point no. D/S point no. 293 shall be set in normal position.

8.6.2 SHUNTING IN T.W. SIDING :-

The T.W. siding is situated at the Agra Fort end of station yard and connected to line No. 1 through D/S point no. 203. When shunting is required to be done in this siding the Station Master on duty shall operate the point no. 202a/b in normal & 203 in reverse and take 'OFF' the relevant shunt signal no. 113. When shunting is completed the point no. D/S point no. 203 shall be set in normal position.

Note-The shunting in the siding taking off from station yard/siding shed will be done under personal supervision of guard of the train/SM/ person in charge of shunting.

8.6.3 SHUNTING IN BALLAST SIDING :-

The K-points are provided with hand plunger key lock and can be operated to reverse position when lock of the point is unlocked by means of key extracted from the normal position of control leaver No.1 of GF. EKT (Electric Key transmitter) and telephone connected to SM/AH are provided in location boxes near K1 /K2 point. Normally 'Yellow steady' indication is there on the panel near K1/K2 YN button indicating the normal condition of slot i.e. not released. The K-points are provided with hand plunger key lock and can be operated to reverse

position when lock of the point is unlocked by means of key extracted from the normal position of control leaver No.1 of GF. The normal position of K1 (South end) & K2 (North end) are set in open condition, whenever it is required to receive train in ballast siding, reverse setting of points will be done for this SM on duty will release GBN and 301 YN button as in case of release of key for operation of K- point through Hand Lever.
By the operation of these buttons yellow indication will turn into flashing and slot free indication will also appear in the location near 2 GF lever. The points man on duty authorized by SM on duty to perform shunting movements on seeing free indication in the location and as per instructions of SM AH on duty will normalize the lever No.1 which is having Key lock in normal position of lever No.1, key shall be extracted by points man from the key lock and operate the point No 1-K/2 –K as the case may be as per instruction of SM on duty by unlocking if from the key extracted and reversing the concerned lever. After the points have been set to reverse position it shall be again locked by hand plunger key lock and key extracted back to operate lever No.1 its reverse position with above operation yellow flashing indication will extinguish and red flashing will appear on the panel it will turn to steady red when control withdrawn by SM on duty.

Now SM /on duty allow the train to come in ballast siding by issuing proper authority for non signaling movement as per extent rules .
For every operation of K- point the above procedure shall be followed and every time points man shall ask for the slot for free indication for the key from SM on duty whenever it is required to operate the lever No.1 to normal from its reverse position irrespective of the setting of GF points lever.

This ensures the one slot one train movement principal. After shunting movement is completed as instructed by SM on duty the points man will normalize the GF lever No.1 on obtaining one slot again from SM on duty, restore the K- point in normal setting and lock them as per procedure described in the above para's, then operate the lever No.1 to its reverse setting . He shall then inform the SM on duty for the above operations, after confirming that the K-point is normal with their lever in normal position and lever No. 1 in reverse position. On advice of the point man, The SM on duty will receive back the slot by pressing button 301 YN and GBRN a yellow steady indication will appear on the panel, indicating normalization of slots.

NOTE:- if the slots released by SM is to be taken back by him due to any reason before performing shunting movements , he will receive back in the slot by pressing the concerned slot button and GBRN button, which will cause yellow flashing indication to become steady yellow indication again.

9. ABNORMAL CONDITIONS:-

(a) **The Rules to be observed in the Event of abnormal Conditions.**

(The Procedure to be followed for working trains during abnormal working).

(i) During partial interruption /failure of Electrical communication instrument; SR.6.02-3 of G&SR must be followed.

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(ii) The authority to proceed in the occupied Block section in case of obstruction of line or accident; GR.6.05 and SR 6.05/1 & SR 6.05/2 must be followed.

(iii) Trains delayed in Block section SR.6.04/1 must be followed.

(iv) Failure/passing of intermediate block stop signal at 'ON' -Nil.

(v) Failure of Axle Counter Block/BPAC as per Para 7.29 of BWM (Details working to please see in Appendix 'B'.

(vi) Failure of MTRC: - Nil

(b) **PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE.**

MANUAL OPERATION OF MOTOR POINT& CUSTODY AND USE OF CRANK HANDLE:-

i) Crank Handle has been provided at this station for manual setting of Motor Operated points during failures or maintenance. This Crank Handle shall be kept in box specially provided for the purpose. This case will be locked and the keys kept in the personal custody of the SM on duty. The crank handle box will be sealed by the ESM of the section in addition to the locking by SM.(Detalled working please see in Appendix 'B').

ii) **Procedure for Emergency operation of point with point zone Axle counter /Track circuit failure and emergency route release :-** Procedure laid down in GR 3.37, GR 3.39 and SR these under should be complied with)

c) **Certification of Clearance of Track Before Calling on signal operation is initiated:-**
Before taking off Calling-on signal during failure of track circuit /axle counter, the route and the clearance of the track over which train would pass to be verified by SM physically. The SM on duty after verifying the clearance of the defective track circuit set and locked the correct required points and requisite route and the issue T/369 (3b) to the Loco pilot.

d) **Reporting Failure of points.Track Circuit/Axle counter and Interlocking**
Whenever there is failure of signals, calling-on signals, points, track circuits/Axle counter or any other interlocking gear at the station, the failure should be reported in writing by SM on duty to the concerned signaling Maintenance staff on duty responsible for attending to the failure and only after receipt of the written memo from the signalling maintainer for rectification of the fault, SM should restore the normal working. The entries in the failure register to be done with message to the Section Controller

e) **Failure of Block Panel instrument** Single line block proving axle counter block panel instrument installed for working the train between AH-RAI. When panel block instrument fails to work trains shall be worked as per procedure laid down in Block Working Manual (Single line) and G&SR N0. 14.13 when block instrument out of order . Last stop signal shall be treated as defective SM on duty shall hand over PLC to the driver in such situation
(Details working to please see in Appendix 'B')

9.1 **TOTAL FAILURE OF COMMUNICATIONS** :-
In the event of total interruption of communication i.e. when line clear cannot be obtained by any of the following means namely.

i) Panel Block Instrument.
ii) Telephone attached to Axle Counter/ Block Instrument.
iii) Station to station fixed telephones wherever available,

iv) Fixed telephones such as railway, auto phones and BSNL phones,
v) Control telephones.
vi) VHF sets.

The trains shall be worked as under :-

a) All trains are to be stopped at the station, Guard and Loco Pilot of the train should be advised of the circumstances.

b) Before dispatching light Engine / Train Engine / Motor Trolley / Trolley / Cycle Trolley / Moped Trolley / EMU Rake / RRV the Station Master on duty shall hand over 'Authority or opening communication during TFC on single line (T/B 602) to the Loco pilot / Motor man / Guard / SM who is being sent to open communication which includes following information :-

i) An 'Authority' to proceed with out Line clear'
ii) A caution Order, specifying the speed upto, which the engine or self-propelled Vehicle or other vehicle may be run to the affected block station.
iii) An Authority to pass the last stop signal in the 'ON' position in case the last stop signal is the starter, in additional to written authority, green hand signal shall also be shown at the foot of this signal.
iv) A Line clear Enquiry message addressed to the SM of the block station at the other end of the affected block section asking for line Clear for the trains waiting to be dispatched to the station.
v) A condition Line clear message to the SM of the block station at the other end of the affected block section permitting him.

a) To return the light engine / train engine, either light or attached to a train waiting to be dispatched from his station, or attached with another engine ; or
b) To return Tower wagon/ Diesel car / Rail Motor Car / EMU rake / RRV running by itself : or
c) To return Motor trolley / Cycle trolley/ Moped trolley either running by itself or loaded in a train waiting to be dispatched from his station.

Provision of SR – 6.02/4 must be complied with

NOTE:- (1) Fixed telephones (Rly Auto phones and BSNL telephones should be alternative in case of failure of block instrument as well as block telephones is not Available/functional: VHF set should be used for obtaining /granting line clear.

(2) The system of establishing the identity of the Station Master on duty by cross checking private numbers given for line clear to preceding three trains.

9.2 TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION

Not applicable.

9.3 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN.

Whenever it is necessary to send a train to assist the crippled train into the block section on 'Authority to proceed without line clear', the station master will:-

i) Inform the SM at the other end of the affected section.
ii) Advise Guard and Loco Pilot of the assisting train of the circumstances.
iii) Handover the following authority (T/A 602) to the Loco Pilot of assisting train.
iv) Provision of SR 6.05/2 of G & SR must be complied with.

10. VISIBILITY TEST OBJECT:

a) UP Advance Starter Signal No. 20 and DN Main line Starter Signal No. 05 have been nominated as visibility test objects at this station.

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b) **WORKING OF TRAIN IN THICK AND FOGGY WEATHER**

Whenever on account of fog, dust storm or rains, the UP and/or DN Main Line Starting Signal are not visible from opposite the SM's, office the SM on duty will immediately arrange for detonators to be placed in accordance with the provisions of SR.3.61/1 of the G & SR.

11 ESSENTIAL EQUIPMENTS AT THE STATION:

See Appendix 'E' for essential equipments at the station.

12 NAMES OF THE SIGNALMAN NOMINATED TO BE CALLED IN CASE OF FOG:

(To be filled by the Station Master)

Sr. No	Names of the Fog Signalmen	Designation	Department	Remarks

NOTE: - Only permanent staff to be nominated as fog signalmen.

Station Master
ACHNERA

LIST OF APPENDICES:

Appendix 'A'	Working of level crossings Gates.
Appendix 'B'	System of signaling & Interlocking & Tele communication arrangements at the station.
Appendix 'C'	Anti collision Device (Raksha Kavach).
Appendix 'D'	Duties of train passing staff and staff in each shift.
Appendix 'E'	List of Essential equipment provided at the station.
Appendix 'F'	Rules for working of DK stations, Halts IBH, IBS and Outlying Sidings.
Appendix 'G'	Rules for working of trains in electrified section.

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APPENDIX 'A'

WORKING OF LEVEL CROSSING GATES:

A GENERAL:

1.1 DESCRIPTION OF THE LEVEL CROSSING GATES:

01	No. of LC gate	18
02	Classification	"C"
03	Engg/Traffic	Traffic
04	With SS/ SE -P.Way	SS
05	Kilometers	25/4-5
06	Station	AH
07	Between Station	AH-RAI
08	BG/MG/NG	BG
09	Single/Double/Mixed line	Single
10	INT / NI	INT
11	Type of Interlocking	With Stop signal with Sliding Boom
12	Provision of Gate Signals at Kms.	-
13	Telephone/ Bell	Tele.
14	Normal Position	Open
15	No. of Staff	2
16	Width of L.C. gate	5.5 m
17	Type of Road (NH/SH/others)	VR
18	Name of Road	KACHORA-ACHNERA
19	Paccka / Kachha	Paccka
20	Paccka Road	Paccka
21	Width of Road	5.5 m
22	Crossing angle of Road (for Esq. gate)	Straight
23	Slope of the Road	
	i)Towards N / E,	Level upto 8 m after that 1:20
	ii)TowardsS/ W	Level upto 8 m after that 1:20
24	Width of Road.	
	i)Towards N / E	5.5 m
	ii)TowardsS/ W	5.5 m
25	Provision of Height Gauge	YES
26	Type of Barrier	E.O.L.B. with sliding boom
27	Length of Check rail	7.5 m
28	Surface at the centre of LC gate	Level
29	Length of Road strip/ Speed barker	5.5 m
30	Road sign	Yes
31	Speed breaker board.	Yes
32	T.V.U.	141986 (Sep—22)
33	Census next due on	Sep-25
34	Place of keeping detonators	Standard place
35	Nearest Railway Medical Assistance	AH
36	Nearest Privately Medical Assistance	AH
37	List of equipment available	Yes

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1.2 EQUIPMENT

S.N.	Items	Quanitity/Numbers
1	Hand Signal Lamp/Tri Colour Torch	3
2	Hand Signal Flag Green	1 Mounted on sticks.
3	Hand Signal Flag Red	3 Mounted on sticks.
4	Banner Flag Red	3
5	Posts for exhibiting red banner flag	2
6	Spare chains with padlocks	2 with stop mark.
7	Detonators	10 in plastic case.
8	Gate lamps	-
9	Tommy Bar	1
10	Mortar Pan	1
11	Spade/Fowrah	1
12	Hammer	1(In case of Asphalt Road if is not provided)
13	Pick Axe	1 (In case of Asphalt Road if is not provided)
14	Tin case for flags	1
15	Can for oil	-
16	Water pot/Bucket	1
17	Canister for Muster Roll	-
18	Set of spare spectacles of gateman wearing glasses	1
19	Board demarcating protection of level crossing gate diagram in case of obstruction on gate.	1
20	Basket	1
21	Whistle	1
22	Wall Clock	1
23	Small Chain	2

Note: (i) Item no. 11, 12, 13, 14, 16, 18, 20 and 21 shall be dispensed with at L-xing gates operated by cabin master, cabin man/ Lever man.

1.3. RECORDS TO BE KEPT AT GATE LODGE :

In addition to the above equipment, following records shall also be kept at the gate lodge.

1 Gate Working Instructions in Hindi/English.
2 Gateman Rule Book in Hindi / English.
3 List for tools and books.
4 Duty Roster.
5 Certificate for working as gateman.
6 Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety clamp, etc.
7 Accident Register.
8 Record of last census of road traffic at level crossing gate.
9 Public Complaint Book.
10 Inspection Book.
11 S&T register in case of interlocked engineering gate.

1.4 MODE OF OPERATION:

Since gate is provided with power operated lifting barrier so both booms working simultaneously.

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1.5 DUTIES OF GATEMAN :-

1 ALERTNESS:

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2 POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gate man will stand in the manner indicated below:

i. Gateman will stand attentively in front of the gate-lodge facing the approaching train.

ii. In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively

iii. In night time, gateman shall hold lighted hand signal lamp with while light facing the track.

iv. He shall keep the whistle slung around his neck from a cord.

3 ROUTINE DUTIES OF GATEMAN:

i. Gateman shall ensure that red banner flag/ red light is placed across the track whenever the gate is kept in open condition at non-interlocked level crossing and during emergencies or obstruction on track at there type of gate.

ii. Gateman shall ensure the gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.

iii. Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must closed lock the gates against rod traffic, before leaving the gate.

iv. Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.

v Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons/trains/battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

vi Gate man shall also be prepared to repeat any signal while guard may give to loco pilot on walkie-talkie or in any other way.

vii. If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.

viii. Gateman shall report to the nearest Station Master, Gang mat or SE (P.Way) any defect in his gate or apparatus pertaining to it, as soon as possible.

ix. In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.

x. At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the loco pilot to report the defect at the next station.

xi. Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.

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xii. Gateman shall ensure that he is having competency certificate in his possession while on duty.

xiii. Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.

xiv. Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.

xv. Gateman shall see that the channel for the flange of the wheel is kept clear.

xvi. Gateman shall keep the road surface well watered ad rammed in case of un-metalled roads.

xvii. Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

xviii. Gate man on electrified section shall watch that road vehicle/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate

xix. Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4 **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:**

In case gateman observes any thing unusual with a passing train, he shall take following action:

i. He shall take prompt action to warn the loco pilot/Guard of the passing train by showing red flag by day and red light by night.

ii. But in case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting i.e. green hand signal during day and white light during night weaving UP & DN vertically.

iii. He shall simultaneously try to draw the attention of the loco pilot/guard by whistling continuously, shouting gesticulating, and throwing ballast on the brake van or by any other means.

iv If loco pilot /Guard fail to take notice, gateman shall immediately inform the Station Master/ Cabin Master. If connected on telephone, to take appropriate action, under exchange of private number.

5 **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

i. In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.

ii. Thereafter, if he is unable to remove the obstruction gateman shall immediately advise the Station Master on duty, if connected by telephone, regarding the defects/obstructions at the gate, under exchange of private number.

iii. If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.ivIn

iv In which gate, emergency switch has been provided which helps to raised up the gate signal during any unusual occurrence at the gate. At this condition the gateman must be switch off the gate emergency switch.

The Gateman shall protect the line/ Gate as under-

a) **On single line section:**

i. Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.

ii. Then he will similarly protect the other side.

iii. Gateman shall then proceed to protect the gate along with detonators, red flag by day and red hand signal lamp by night.

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iv. Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v. Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in sub para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi. Having returned to the level crossing gate, he mist then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

vii. In case the Gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

viii. Thereafter, he shall light up and fix the fusee to warn the Loco Pilot and stop the approaching train by waving his red flag by day and red hand signal lamp by night repeatedly.

Note The Level crossing gates, which are located between outermost stop signals of the station, are exempted for placing the detonators as described in para (iv) above.

b) **Other action to be taken by Gateman:**

i. At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a)& (b) above.

ii. If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

iii. He shall note down the particulars of the road vehicles, vehicle number, name of the loco pilot and owner and relay these details to the nearest Station Master or JE/SE/SSE/P.Way regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.6 ENGINEERING ITEMS:

For visibility requirements at level crossings, provision of speed breakers on the approach roads of level crossings and census of traffic at level crossings are described in Para 916, 918, 919 of IRPWM.

1.7 WORKING INSTRUCTIONS FOR INTERLOCKED TRAFFIC 'SPL' CLASS LEVEL CROSSING GATE NOs.- 18 OPEN TO ROAD TRAFFIC WITH SLIDING BOOM.

1) This level crossing is provided with electrically operated lifting barriers.

1) The level crossing is controlled by button numbers LX-18 XN and GBN provided on the operating panel. The normal position of the level crossing is open to road traffic, which is indicated on the indication panel by a circular yellow flashing light, near LX-18 Button .

2) The gateman manning the level crossing is responsible to operate the lifting barriers against road traffic for the reception / departure of trains and for shunting operations near the level crossing gate.

3) Telephone communication is provided between the gate and SM's office .

4) The level crossing is interlocked and protected by all up and down trains in that direction in such a way that the signals for the movement in these directions cannot be taken 'OFF' unless the level crossing is closed and locked against road traffic and the control has been transferred to the panel.

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5) Whenever the signals are required to be taken 'OFF' for the reception / dispatch of trains or for any shunting across the gate, the SM/ASM on duty will inform the gateman on duty about train No. description to close the gate against the road traffic.

6) The gateman on receipt of instructions from Panel SM will press the red button till the close indication will appear on the gate panel. This indication shows the gate is closed and locked against road traffic.

7) After closing, locking the gate, the gateman will ensure that there is no any vehicle or any obstruction on track or between barriers then he will transfer control to the Station Master by pressing the acknowledge button on the gate operating panel & advise the SM on duty on the Telephone about closing of the gate against road traffic.

8) On receipt of the above advice from the gateman and after observing the 'Gate closed' indication (Circular white flashing light) on the control panel, the SM on duty will withdraw the control by pressing LX18 XN and GBN button on panel when gate closed and locked, this will cause steady white light to appear on panel to take 'OFF' the requisite signals.

9) After arrival/passage of the train, the panel ASM on duty will release his control by pressing simultaneously level crossing release button GBRN along with L/crossing gate button LX-18 XN and a visual 'Free indication' will also be displayed at the gate for gateman to open the gate, instruct the gate man on phone to open the gate for passage of road traffic.

10) On receipt of the above instructions from panel ASM on duty to open the gate and observing the 'Free indication' the gate man will press the green button on gate panel till the gate open for road traffic and indication will appear on gate panel.

11) During failure of interlocking the gate must be treated as non-interlocked and procedure for reception/dispatch or train as prescribed for non-interlocked gates should be adopted.

12) Emergency Crank Handle shall keep in a sealed box at Gate loadge. In emergency gate man shall advice to SM on duty and unlock the box and broken sealed to take crank handle and as per requirement shall open and lock the gate. After opening the gate man shall advice to SM then he shall advice to on duty ESM/SSE/Sig. to rectify the fault in writing.

13) When do not open or close the gate by Gate operating panel then lifting barrier may be treated as out of order and for movement of train gate closed by crank handle.

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1.7.1 **GENERAL:-**

Operation of Level Crossing Gate No. 18

(1) This gate is interlocked and lifting barriers are Power Operated. The description of Gate operating panel is as follows:-

(a) **Buttons provided at Gate operating panel:-**

1	Key for lock Panel
2	Green button for open the barrier
3	Red button for close the barrier
4	Road Signal control switch Normal/Reverse
5	Acknowledge button
6	Emergency switch for putting Signals to 'ON' .

(b) **Indications provided at Gate operating panel:-**

1	ON & OFF indication of Road Signal
2	Indication for Close Gate
3	Indication for Open Gate
4	Power ON indication

(2) **PROCEDURE TO PUT BACK THE SIGNALS TO 'ON' IN EMERGENCY**

An emergency switch, for put back the signal ON provided at gate panel. If after taking the signals 'OFF' the Gateman observes any obstruction or emergency on the track ,Gateman has to turn the emergency switch to 'REVERSE' position from 'NORMAL' position which will cause concern "OFF" signals to put back to 'ON'.

(B) **Procedure to put the Road signals to 'ON' when Gate is open :-**

In the open condition of the Gate and Road signals in 'OFF' position if the Gateman requires to put the road signals to 'ON' position due to any emergency then the Gateman has to turn the road signals switch to 'REVERSE' position from 'NORMAL' position. The road signal will become 'ON'

(3) **Procedure of closing/opening the Gate:-**

i. **Procedure for closing the gate:-** The Gateman after receiving information about arrival of train will ensure that there is no obstruction or vehicle in between track & will close the gate against the road traffic, then Gateman will press 'RED' button provided at Gate operating panel till the gate is closed fully and 'CLOSED' indication has appeared on Gate operating panel after closing and locking the gate for road traffic.

ii. **Procedure for opening the gate:-**

After passage of train from level crossing gate, the Gateman will inform to on duty ASM at station for opening of gate for road traffic. SM will release control from panel after receiving control indication at gate he will press the GREEN button to open the gate till the barriers have opened fully and the OPEN indication has appeared on the Gate operating panel.

NOTE:-

Before closing of gate to road traffic the Gateman will ensure that there is no vehicle or any obstruction on track or between barriers and then only he will press the button to close the gate. As soon as the Gateman presses the button a Hooter will start sounding which will stop sounding automatically as soon as the gate is closed and road signal will display 'RED' aspect which will indicate to road user's that the gate is closed. In the open condition of gate the road signal will display 'YELLOW' aspect.

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iii. **METHOD OF STOPPING/CLOSING,WHEN GATE IS IN HALF OPEN POSITION**:-

While gateman closing the gate and is partially closed, mean while gateman requires to stop the closing of gate, then he will release the button and barrier will stop in that position. If he again wants to close the gate, he will press the same button again.

iv. **OPERATION OF GATE IN CASE OF FAILURE OF POWER OPERATION OF GATE (USE OF EMERGENCY CRANK HANDLE):-**

In case the barriers are inoperative due to Power Failure or due to any other reason, the Gate can be operated by using Crank Handle. The Crank Handle is kept in a sealed and locked glass front Box at the Gate. For operation by the Crank Handle, the Gateman will break the seal of the box and after unlocking the box, will take out the Crank Handle. The crank handle will be inserted in the Crank Handle hole provided on the Boom Padstle and will operate the barriers. After breaking the seal of Crank Handle Box the Gateman must inform to the Station Master, which will inform to S&T staff to rectify the defect and to Re- Seal the Box.

The record of the date and time of usage of Crank Handle shall be recorded and signed with reasons.

In case gateman fails to close the gate in spite of the above operations, he shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals.

4. **WORKING OF SLIDING BOOM (for gate no. 18)**

I. Mode of operation for closing gate by sliding boom:

The gate is provided with one additional sliding boom on each side of power operated lifting barrier/Lifting barrier. Each sliding Boom will be parallel to the existing power operated lifting barrier/Lifting barrier of its side and would normally so positioned that the complete body of the boom is lying away from the road i.e. no part of the sliding Boom shall normally project on to the road leading to the L.C gate. The sliding booms installed are meant to be used in case of emergency when the power operated lifting barrier/ lifting barrier are damaged or close indication not found due to any reason. These are normally locked on its post, with padlock. The keys inside the locks provided n the Boom stand. Stop boards are fixed on each sliding boom. There can be the following conditions during opening/closing of the gate or the gate is in open condition.

a) When the gate barriers are damaged during opening/closing f the gate or the gate is in open condition.

b) Whenever the gate is broken during closing, opening or in open condition the gateman will inform the SM on duty who in turn will inform the S&T staff for rectification/ replacement of the damaged lifting gate/barriers.

c) When the close indication failed due to any reason.

The gateman, after getting specific instruction from SM on duty will turn the road switch provided at gate to reverse position to through the road signal to danger and start closing the sliding Boom during this process he will slide the sliding boom of side "FAR END" by pulling the handle to close position up to stand provided for the purpose. He will insert the chained key marked "X1" in the Boom

stand lock and lock it after turning in clock wise. Now he will turn second key marked "X" anticlockwise to release X key. Now he will insert this X key in X marked lock at other boom lock stand and turn to clockwise , as above he will close B side sliding boom and will insert the "Y" key in the lock marked "Y" and turn clockwise in Boom stand at side " NEAR END" After locking both keys in "NEAR END" side a 3rd key " Z" will be released. This Z is welded with a E-KLCR key, gateman will take the key, apply it to the T-2 lock/KLCR fitted in the gate lodge and turn it after doing that gate control relays energies and boom closed indication/control will be appear at the SM panel to take 'OFF' the requisite signals. Signal aspect will display as per aspect control chart.

ii. **Mode of opening the sliding Boom:**

For opening of the sliding Boom after passage of the train, gateman will get specific permission/slot from ASM on duty for opening the sliding boom to clear the road traffic. After getting permission/slot from ASM, gateman will press button provided below the E-KLCR and take out "Z" key by turning it in anticlockwise. He will insert "Z' key at boom lock post and turn clock wise therefore he will turn Y key anti clock wise to release it . Now He will insert this Y key in NEAR END side Y marked lock and turn in clock wise and unlock the boom by inserting chained key marked "Y1" key open to Sliding Boom same as above ,he will turn "X" key to open other side sliding boom and padlock both side sliding booms on open condition for the road traffic. After above, the gateman will operate the road signal switch for yellow aspect

1.7.2 WORKING OF LEVEL CROSSING, TRAFFIC, INTERLOCKED CLASS 'C' GATE NO.18 OPEN TO ROAD

1. **INTIMATION TO GATEMAN** :-

(i) The Station Master shall intimate the Gateman, through telephone connected at his end about movement of trains proceeding towards the level crossing gate.

ii) The Gateman shall close the gate and he will ensure that there is no any vehicle or any obstruction on track or between barriers then He will transfer control to the Station Master by pressing the acknowledge button on the gate operating panel (in case of EOLB).

(iii) The reception/departure signals will then be taken 'OFF'.

(iv) In order to ensure that road traffic is not held up for a long time, the Station Master must ensure that the train is ready for departure in all respects before he advises the Gateman of closing the gate.

v) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform shunting across the gate shall be personally responsible to ensure that the gate is closed against the road traffic before allowing any movement across the gate.

2. **FAILURE OF TELEPHONIC COMMUNICATION:-**

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

(i) Station Master on duty shall send written advice to the gate man through the point's man with full details of number, description and direction of the train.

(ii) The Gateman on receipt of such advice shall acknowledge the same after closing the gate, duly supported by a private number. On receipt of confirmation about closer of the gate, reception /departure signals will then be taken 'OFF'.

(iii) When sufficient time is not available because of greater frequency of train service, station master will issue written authority to the loco pilot to pass the signal at 'ON' position.
(iv) In addition, station master shall also issue a caution order advising the loco pilot to whistle continuously and approach the gate cautiously.
(v) The train loco Pilot should be instructed to pass the gate cautiously, on being hand signalled by the gate man. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and ensure that gate is closed following GR3.73 (2)(b).
(vi) In case of approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
(vii) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
(viii) He should also advise S&T staff, responsible for maintenance of the telephone to rectify the defect at the earliest.
(ix) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

3. **FAILURE OF ELECTRICAL OPERATION OF LIFTING BARRIER:-**

In case the barriers are inoperative due to Power failure or due to any other reason, the gate can be operated by using crank handle. The crank handle is kept in a sealed and locked glass front box at the gate. For operation by the crank handle, the gate man will break the seal of the box and after unlocking the box, will take out the crank handle. First of all barriers will be unlocked by 'L' type key than the crank handle will be inserted in the crank handle hole provided on the Boom Pedestal and will operate the barriers. After breaking the seal of crank handle box the gateman must inform to the station Master, which will inform to S&T staff to rectify the defect and to Re-Seal the box.

When the gate cannot be closed /opened due to failure of power operation of lifting barriers or the failure of gate opening command from the station master, the gateman will immediately inform the SM on duty, under exchange of private number.

The record of the date and time of usage of crank handle shall be recorded and signed with reasons.

In case of gateman fails to close gate by using crack handle, will operate sliding boom (if provided) as per prescribed manner.

In case gateman fails to close the gate in spite of the above operation, then the following procedure will be followed:

(i) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
(ii) Station Master on duty shall issue a caution order to the loco pilot of a departing train.
(iii) He shall also advise the SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
(iv) SM shall advise S&T staff responsible for maintaining the gate to repair the same at the earliest.
(v) Normal working will be resumed only after S&T staff repair the gate and issue reconnection/fit memo for the same.

NOTE :- When the gateman shall secure the gate against road traffic by means of chains and padlock the gate must be treated as non interlocked and procedure for reception and dispatch of trains as prescribed for non interlocked gate should be adopted.

4. **OBSTRUCTION AT THE LEVEL CROSSING GATE:-**

(i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any obstructions at the gate, the gateman shall immediately fix Red Banner flag by day and Red Lamp by night on posts provided at both ends of the gate, for this purpose.

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(ii) Emergency switch has been provided which helps to raised up the signals taken off for any train during any unusual occurrence at the gate. At this condition the gatemen must be switch off the gate emergency switch.

(iii) Immediately after this, the gateman shall advice the Station Master on duty regarding the defect/obstruction at the gate, under exchange of private number.

(iv) Station Master on duty shall be advised to put the reception/ departure signal back to 'ON' posltion, if taken 'OFF' for a train.

(v) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

(vi) Gateman shall then rush with detonators and red flag by day and flashing red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in general Instruction for duties of gateman under item No.1.5(5).

(vii) Thereafter he shall protect the gate from the other direction also.

(viii) He shall note down the particulars of the road vehicle, name of the loco pilot, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the Gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.

(ix) The Station Master shall also inform the station master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.

(x) After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange of private number.

(xi) Station Master shall then issue a Caution order to Loco Pilots of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the Gateman, if the gate is broken, but is clear of any obstruction The gateman will close sliding boom in prescribed maners.

(xii) If sliding boom also defective than Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.

(xiii) Station Master shall advice maintenance staff responsible for maintaining the lifting barriers/ leaf gates to rectify the same at the earliest.

(xiv) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

5. <u>OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:-</u>

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by Road Vehicle or derailment, which is visible to the Gateman, then the Gate man and Station Master will adopt the procedure given under item No.6 If the Obstruction fouls the level crossing gate. Gateman must keep the gates Closed against Road traffic till the track is cleared of the obstruction.

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APPENDIX "B"

SYSTEM OF SIGNALLING AND INTERLOCKING :-

1. LAYOUT:

See the Station Working Rules Diagram No. SWR Diagram No.D-1107/2 dated 10.03.2023 appended at the end of these rules.

1.1 Class of Station: "B" Class, Single line

1.2 Mode of Signalling: Multiple Aspect Colour Light Signalling.

2.0 BLOCK WORKING SYSTEM

The system of working trains with the adjacent block section is as follows:-

i) Single line Block proving axle counter panel block instrument along with HASSDAC with Station to Station telephones are installed in the station master office for working the train between Achnera Jn. Cabin – RAI

ii) Block working by means of continuous track circuiting are provided between Achnera-Achnera Jn. Cabin towards CIK & PRK side.

3. WORKING OF CONTROL PANEL:

3.1 Control Panel:

The control panel is installed in the SM's office. The panel depicts the schematic reproduction of the entire track layout of the station with different track circuit sections being painted in different colours.All the points, signals and controls are controlled by means of push buttons located within the track layout diagram on the panel at their respective geographical positions. Indications regarding setting of the points, setting of the route and signal aspects are given on the panel. The panel is also equipped with SM's lock up key to enable the SM on duty to lock up the panel. (The SM on duty must not permit unauthorised persons to operate the control panel and must lock the panel whenever he leaves his seat).

3.2 SIGNAL AND ROUTE BUTTON

S. No.	Signal Route.	Description.	Signal button.	Route button.
1.	S-1	DN Advance Starter Signal towards RAI	S-1	DZ
2.	S-2 (1)	UP Main to Line No.1.	S-2	BB
3.	S-2 (2)	UP Main to Line No.2.	S-2	BC
4.	S-2 (3)	UP Main to Line No.3.	S-2	BD
5.	S-2 (4)	UP Main to Line No.4.	S-2	BE
6.	S-2 (5)	UP Main to Line No.5.	S-2	BF
7.	CO-2 (1)	Calling On from UP Main to Line o.1	S-2	COGGN
8.	CO-2 (2)	Calling On from UP Main to Line No.2	S-2	COGGN
9.	CO-2 (3)	Calling On from UP Main to Line No.3	S-2	COGGN
10.	CO-2 (4)	Calling On from UP Main to Line No.4	S-2	COGGN
11.	CO-2 (5)	Calling On from UP Main to Line No.5	S-2	COGGN

NOTE: - Press S2 and COGGN Buttons simultaneously keeping press S2, Release COGGN button and press concerned Route button for CO2.

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12.	SH-102(1)	UP Main to Line No.1	SH-102	BB
13	SH-102(2)	UP Main to Line No.2	SH-102	BC
14	SH-102(3)	UP Main to Line No.3	SH-102	BD
15	SH-102(4)	UP Main to Line No.4	SH-102	BE
16	SH-102(5)	UP Main to Line No.5	SH-102	BF
17.	S-5	Line No.2 to DN Main Towards RAI	S-5	DX
18.	SH-104	T.W. Siding to Line No.1	SH-104	BB
19.	SH-105	Line No.2 to DN Main up to S-1.	SH-105	DX
20.	S-7	Line No.3 to DN Main Towards RAI	S-7	DX
21	SH-107	Line No.3 to DN Main up to S-1.	SH-107	DX
22	S-8	Line No.5 to UP Main Towards CIK	S-8	UX
23.	S-8	Line No.5 to DN Main Towards PRK	S-8	BX
24.	SH-108	Line No.5 to UP Main up to S-20	SH-108	UX
25	SH-108	Line No.5 to DN Main up to S-22	SH-108	BX
26.	S-9	Line No.4 to DN Main Towards RAI	S-9	DX
27	SH-109	Line No.4 to DN Main up to S-1.	SH-109	DX
28	S-10	Line No.4 to UP Main Towards CIK	S-10	UX
29.	S-10	Line No.4 to DN Main Towards PRK	S-10	BX
30.	SH-110	Line No.4 to UP Main up to S-20	SH-110	UX
31..	SH-110	Line No.4 to DN Main up to S-22	SH-110	BX
32.	S-11	Line No.5 to DN Main Towards RAI	S-11	DX
33.	SH-111	Line No.5 to DN Main up to S-1	SH-111	DX
34.	S-12	Line No.3 to UP Main Towards CIK	S-12	UX
35.	S-12	Line No.3 to DN Main Towards PRK	S-12	BX
36.	SH-112	Line No.3 to UP Main up to S-20	SH-112	UX
37..	SH-112	Line No.3 to DN Main up to S-22	SH-112	BX
38	S-13	Line No.1 to DN Main Towards RAI	S-13	DX
39.	SH-113	Line No.1 to DN Main up to S-1	SH-113	DX
40.	SH-113	Line No.1 to T.W.Siding	SH-113	TW
41.	S-16	Line No.1 to UP Main Towards CIK	S-16	UX
42.	S-16	Line No.1 to DN Main Towards PRK	S-16	BX
43.	SH-116	Line No.1 to UP Main up to S-20	SH-116	UX
44.	SH-116	Line No.1 to DN Main up to S-22	SH-116	BX
45.	S-17 (1)	UP Main to Line No.5. From PRK	S-17	BF
46.	S-17 (2)	UP Main to Line No.4. From PRK	S-17	BE
47.	S-17 (3)	UP Main to Line No.3. From PRK	S-17	BD
48.	S-17 (4)	UP Main to Line No.2. From PRK	S-17	BC
49.	S-17 (5)	UP Main to Line No.1. From PRK	S-17	BB
50	CO-17 (1)	Calling On from UP Main to Line No.5	S-17	COGGN
51	CO-17 (2)	Calling On from UP Main to Line No.4	S-17	COGGN
52	CO-17 (3)	Calling On from UP Main to Line No.3	S-17	COGGN
53	CO-17 (4)	Calling On from UP Main to Line No.2	S-17	COGGN
54	CO-17 (5)	Calling On from UP Main to Line No.1	S-17	COGGN

NOTE: - Press S17 and COGGN Buttons simultaneously keeping press S17, release COGGN button and press concerned Route button for CO17.

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55	S-18	Line No.2 to UP Main Towards CIK	S-18	UX
56	S-18	Line No.2 to DN Main Towards PRK	S-18	BX
57.	SH-118	Line No.2 to UP Main up to S-20	SH-118	UX
58.	SH-118	Line No.2 to DN Main up to S-22	SH-118	BX
59.	S-19 (1)	DN Main to Line No.5. From CIK	S-19	BF
60.	S-19 (2)	DN Main to Line No.4. From CIK	S-19	BE
61	S-19 (3)	DN Main to Line No.3. From CIK	S-19	BD
62	S-19 (4)	DN Main to Line No.2. From CIK	S-19	BC
63.	S-19 (5)	DN Main to Line No.1. From CIK	S-19	BB
64	CO-19 (1)	Calling On from DN Main to Line No.5	S-19	COGGN
65	CO-19 (2)	Calling On from DN Main to Line No.4	S-19	COGGN
66	CO-19 (3)	Calling On from DN Main to Line No.3	S-19	COGGN
67	CO-19 (4)	Calling On from DN Main to Line No.2	S-19	COGGN
68	CO-19 (5)	Calling On from DN Main to Line No.1	S-19	COGGN

NOTE: - Press S19 and COGGN Buttons simultaneously keeping press S19, release COGGN button and press concerned Route button for CO19.

69	S-20	UP Advance Starter Signal. towards CIK	S-20	UZ
70.	S-22	DN Advance Starter Signal. towards PRK	S-22	BZ
71	SH-195	SDG to Line No.1 UP to SH-113	SH-195	BB
72	SH-197(1)	UP Main to Line No.5	SH-197	BF
73	SH-197(2)	UP Main to Line No.4	SH-197	BE
74	SH-197(3)	UP Main to Line No.3	SH-197	BD
75	SH-197(4)	UP Main to Line No.2	SH-197	BC
76	SH-197(5)	UP Main to Line No.1	SH-197	BB
77	SH-199(1)	UP Main to Line No.5	SH-199	BF
78	SH-199(2)	UP Main to Line No.4	SH-199	BE
79	SH-199(3)	UP Main to Line No.3	SH-199	BD
80	SH-199(4)	UP Main to Line No.2	SH-199	BC
81	SH-199(5)	UP Main to Line No.1	SH-199	BB

Sequence of CONTROL SLOT operation :-

SN	SLOT	DESCRIPTION	Slot button.	Route button.
1	401	ES on S1(AH JN. Cabin) for "A" route	401 YN	GBN
2	402	ES on CO1(AH JN. Cabin) for "A" route	402 YN	GBN
3	403	ES on SH101(AH JN. Cabin) for "A" route	403 YN	GBN
4	406	ES on S3(AH JN. Cabin) for "B" route	406 YN	GBN
5	407	ES on CO3(AH JN. Cabin) for "B" route	407 YN	GBN
6	408	ES on SH 103(AH JN. Cabin) for "B" route	408 YN	GBN

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4. **FUNCTION OF PUSH BUTTONS:**

Working of push buttons and indications provided on panel in SM office and other locations in the yard with their functions are given below

PUSH BUTTON (GENERAL) :

NAME OF PUSH BUTTONS	COLOUR	FUNCTIONS
GBN	Green	Group button for releasing the crank handle/key point & gate control
GBRN	Black	Group button for locking the crank handle/Key point & gate control.
EGRN	Red	Emergency group signal cancellation button (Emergency)
GN	Red	Signal button
YN	Yellow	Shunt signal button
COGGN	Red	Calling ON signal group button
UN	White	Button for route setting
EUYN	Grey	Emergency route cancellation button
EUUYN	Grey	Emergency route release button
Power fail button (ack)	Red	To acknowledge the power failure
WN	Black	Point button
EWN	Blue	Emergency point operation
OYN	White	Overlap release button
WWN	Blue	Common button for operation of points
YN	Gray	Slot button
Train entry (ack) button	Black	To acknowledge the entry of a train
G/U/W/GR(N) ack	White	Signal, Point & Route button pressed ack. Button
Main signal LED failure(ack)	Red	When any signal LED fused buzzer will start ringing. Buzzer will stop after acknowledge.
Main signal LED rectification (ack)	White	After rectification buzzer will start ringing again and it will be stopped by acknowledging.

G/U/W GR(N) INDICATORS: If any of the signal, route & point button will be remained in pressed position then the Audio visual indication will appear lit on panel. Audio can be stopped by pressing the G/U/W acknowledge button by SM on duty and then check all the concerned buttons. For this four different groups have been made on panel. All the four i.e. signal, route and point group button with white light.

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5. PANEL INDICATION :-

i) POINT INDICATION:-

The position of the point is indicated on the control panel by the illuminated rectangular slits near the point on the panel. The normal setting of point is indicated by the illuminated slits on the straight route and the reverse setting by the illuminated slits on the diverging route. The slits will display a steady white light if the points are properly set and the track circuits controlling the points are clear or a steady red light if the track controlling the points are occupied or have failed. In the event of a point failing to set properly this steady light will change into a flashing light, the flashing indication will also appear for a short period when the points are being moved from one position to the other. The SM should not mistake this as point failure unless the flashing indication continuous for more than 10 seconds.

No setting of route should be initiated over the points showing flashing indication. When any particular points are engaged by a route this will be indicated on the panel by a circular indication of white light provided near the point, indicating that the points are not free for operation when this indication appears the SM must not interfere with the points.

ii) SIGNAL INDICATIONS :-

The 'ON' aspect of the main stop signal is indicated on the control panel by a 'RED' light and the 'OFF' aspect by a green light. The 'OFF' indication of the main stop signal on the control panel will display yellow, Double yellow respectively at site is displaying the yellow, double yellow or green, aspect. In case of distant signals which have yellow, double yellow and green aspects, the normal i.e. the yellow aspect will be indicated on the panel by a single yellow and the 'OFF' i.e. double yellow or green will be indicated by a single green light shunt signals 'ON' and 'OFF' aspect are indicated by yellow light slit in the respective signal aspect on the panel. Route indicators LH or RH are indicated by yellow light, straight slit on the signal.

NOTE: The clearance of the calling 'ON' signal is indicated by a circular white light on the control panel.

iii) ROUTE INDICATIONS:

When the route is set by the operation of the main signal button along with the concerned route button white lights will appear in the slits in the portion of the track-circuited section covering the route along with a white rectangular light on main signal. These white lights on the track-circuited portion will change into Red Light, when the track section is occupied by a train or a vehicle. The red lights will continue to the displayed until the track is clear again. After the passage of the train, when the track section is clear the white lights will appear and will extinguish only when the route gets cancelled.

iv) POINT FAILURE INDICATION :-

On the event of a points failure, the concerned point on the control panel will change form steady light to flashing light along with a warning bell/buzzer to draw the attention of the SM on duty who in turn should press blue WXYN button stop the bell/buzzer. He should, then, take the necessary action of the failure, advising

the concerned S&T staff. However the illuminated flashing indication will remain till the failure is rectified.

Whenever there is flashing of points either in normal or reverse or in both positions due to any defect/obstruction, the points in question should be treated as defective. The points must be clamped and padlocked before allowing any train movement over such points and the procedure for passage of trains as per 3.77-1(b) must be observed till the points are inspected and certified as safe by S&T staff.

v) **SIGNAL INDICATION ON PANEL :**

The aspect of all the signals are indicated on panel as per S-IP, fitted on the signal profile over the panel. On and off aspect of independepent shunt signals are indicated by horizontal white light and inclined white light. Off aspect of calling on signal is indicted by miniature white light and off aspect of dependent shunt signal is indicated by inclined white light.

vi) **BLOCK SECTION INDICATIONS:**

Occupancy of a block section is indicated on the control panel as follows:

Red illuminated LED to indicate occupied condition of the section and White illuminated LED to indicate clear condition of the section. As well as it will prove the last vehicle checking also.

vii) **BOBBING/FLICKERING SIGNALS :-**

Whenever a signal changes its aspect in succession shall be as bobbing/flickering signal and shall be considered as showing the most restrictive aspect and it should be passed by observing instructions contained in GR.3.68, 3.69, 3.70 and SRs there under.

The SM on receipt of information of a bobbing/flickering signal shall record the defect in the failure register and advise SI/ESM concerned immediately to rectify the defect. Such failures should also be reported to the section controller, who will record the same on the chart and take action accordingly.

viii) **INDICATION FOR PROLONGED OPERATION OF ANY BUTTON :-**

If any button is kept pressed for more than 15 seconds the buttons normal detection indication (NCR) will appear on the panel. When this indication appears the button should be released immediately. If the NCR indication appears due to any button not returning to its normal position even after being released, the ESM should be advised by the panel operator on duty.

ix) **MONITORING OF FLASHER INDICATION. :**

a) Function of flasher relay is repeated on the panel by continuous flashing indications, which will indication to the SM on duty that the flasher relay equipment is working satisfactorily.

b) In the event of flasher relay equipment becoming defective, the flashing indication on the panel will either get extinguished or become steady. SM will report the failure immediately to the ESM on duty.

c) During the period of failure of flasher relay equipment flashing indication to indicate the correct setting of points will not be available on the panel. Clearing of the signal, proves that the points involved in the route are correctly set and locked. During the failure of flasher indication, signaled moves are permitted

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without clamping and padlocking of the points involved in the route but before authorising any unsignaled move, the SM must ensure that the relevant points in the route are correctly set, clamped and pad-locked.

(6) **PANEL OPERATION:**

On every operation on the control panel, two buttons have to be pressed simultaneously and released i.e. the signal button and route button for setting route and clearing a signal or the point button and point group button for setting a point etc. The SM must ensure that not more than two buttons are pressed simultaneously at any time.

i) **UNSIGNALLED MOVE OVER ELECTRICALLY OPERATED POINTS**

Whenever any unsignalled move has taken place over a point operated by a electric point machine whether in the facing or trailing direction, the SM on duty shall operate the points to the normal and reverse settings for the purpose of testing the point. After the SM has ensured that indication regarding the normal and reverse setting are correctly available, normal signalled movements may be permitted over the point. In the event If no Indication appearing the points shall be treated as defective and procedure as laid down under SR. 3.77/1 and 3.68/1 to be followed.

ii) **OPERATION OF POINTS: -**

The points will at any time remain in the last operated position in order to set the points from normal to reverse and from Reverse to Normal individual point button and point group button (WWN) should be simultaneously (as the case may be) pressed and released, which will cause the points to change provided the points are not engaged by any route and also the track circuit/circuits controlling the points is are un-occupied.

NOTE: In the event of failure of the track circuit controlling the points, if the points have to be operated, the SM on duty will personally verify that the concerned track is not occupied by any 'Train' or vehicle and then only the SM should press the emergency point button (EWN) and release. Each time a point is thus operated, it will be recorded on the EWN counter. It shall also be recorded in the register by SM on duty.

iii) **OPERATION OF MAIN SIGNALS: -**

Before setting the route for a train movement, the point in the route, the points in the overlap if any and the isolation points should be set individually to the required position, if not already in that position. The route can then be set and the signal taken 'OFF' by pressing the concerned route and signal buttons simultaneously and releasing them.

NOTE: After setting the route and clearing the signal, the SM on duty must verify from the route illumination that the train move has been signalled on the intended line.

iv) **OPERATION OF CALLING ON SIGNAL: -**

The calling on signals provided below the signal No. S-2,S17 and S-19 signal can be taken 'OFF' during the failure of track circuits, except the track circuit immediately in advance of these signals, provided the requisite points have responded to the route setting for clearing calling on signals. Under track circuit

failure conditions the SM will set the requisite route by pressing the relevant signal and COGGN buttons. He will keep pressed the concerned signal button, press route button and release them, the yellow flashing indication will appear on panel near the concerned signal. The calling on signal will clear after a lapse of two minutes and flashing yellow indication will disappear. In case, calling on signal is not cleared after two minutes and flashing yellow indication is there on the indication Panel for calling on signal, it may be due to fusing of bulbs. SM on duty shall take necessary action to advise ESM of the section. The calling on signal will be restored to 'ON' position automatically by the occupation of track circuit immediately ahead of the signal. Every time the calling on signal is thus operated, it will be recorded on the 'COGGN' counter.

v) **OPERATION OF SIDING –POINTS:-**

OPERATION OF SIDING POINT NO.K1 AND K2

The K-points are provided with hand plunger key lock and can be operated to reverse position when lock of the point is unlocked by means of key extracted from the normal position of control leaver No.1 of GF. EKT (Electric Key transmitter) and telephone connected to SM/AH are provided in location boxes near K1 /K2 point.

Normally 'Yellow steady' indication is there on the panel near K1/K2 YN button indicating the normal condition of slot i.e not released. The K-points are provided with hand plunger key lock and can be operated to reverse position when lock of the point is unlocked by means of key extracted from the normal position of control leaver No.1 of GF. The normal position of K1 (South end) & K2 (North end) are set in open condition, whenever it is required to receive train in ballast siding, reverse setting of points will be done for this SM on duty will release GBN and 301 YN button as in case of release of key for operation of K- point through Hand Lever.

By the operation of these buttons yellow indication will turn into flashing and slot free indication will also appear in the location near 2 GF lever. The points man on duty authorized by SM on duty to perform shunting movements on seeing free indication in the location and as per instructions of SM AH on duty will normalize the lever No.1 which is having Key lock in normal position of lever No.1, key shall be extracted by points man from the key lock and operate the point No 1-K/2 –K as the case may be as per instruction of SM on duty by unlocking if from the key extracted and reversing the concerned lever. After the points have been set to reverse position it shall be again locked by hand plunger key lock and key extracted back to operate lever No.1 its reverse position with above operation yellow flashing indication will extinguish and red flashing will appear on the panel it will turn to steady red when control withdrawn by SM on duty.

Now SM on duty allow the train to come in ballast siding by issuing proper authority for non signaling movement as per extent rules.

For every operation of K- point the above procedure shall be followed and every time points man shall ask for the slot for free indication for the key from SM on duty whenever it is required to operate the lever No.1 to normal from its reverse position irrespective of the setting of GF points lever.

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This ensure the one slot one train movement principal After shunting movement is completed as instructed by SM on duty the points man will normalize the GF lever No.1 on obtaining one slot again from SM on duty, restore the K- point in normal setting and lock them as per procedure described in the above paras, then operate the lever No.1 to its reverse setting. He shall then inform the SM on duty for the above operations, after confirming that the K-point is normal with their lever in normal position and lever No. 1 in reverse position. On advice of the point man, The SM on duty will receive back the slot by pressing button 301 YN and GBRN a yellow steady indication will appear on the panel, indicating normalization of slots.

NOTE:- if the slots released by SM is to be taken back by him due to any reason before performing shunting movements , he will receive back in the slot by pressing the concerned slot button and GBRN button , which will cause yellow flashing indication to become steady yellow indication again.

(7) **RESTORATION OF SIGNAL TO 'ON':-**

Whenever it is required to put back a signal to 'ON' position during an emergency or due to any other reason, this can be done by pressing the concerned signal button along with the emergency signal cancellation button (ERN).

(8) **CANCELLATION OF ROUTE ALREADY SET:**

Ordinarily a route once set need not be cancelled as the same gets cancelled automatically by the passage of a train over the entire route and this is indicated on the control panel by the extinguishing of the route lights. However, should it become necessary to cancel a route already set due to any reason either before the passage of the train or due to route not getting automatically cancelled after the passing of the train SM on duty should first restore the signal controlling movement over the route to 'ON' as indicated (8) above. The SM will then press the concerned signal (Other than the last stop signal) button and the emergency route release button (EUUYN) simultaneously and release the later (i.e. EUUYN) button signal button still pressed and press the concerned route button.

This will release the route including the overlap provided no train has occupied the approach track circuit. However, if the approach track is occupied, the route will not be cancelled immediately but a route locked indication will appear on the route control indication (A small circular white light) near the signal. The route locked (i.e. the circular white indication will remain till the stipulated time interval not less than 120 seconds for releasing of the approach locking has lapsed. Only after the circular white indication has disappeared the route should be cancelled by repeating the procedure as indicated above.

NOTE:

a) Each time the route is thus cancelled, it will be required on EUUYN counter.

b) In case, the circular white light indication near signal button extinguishes immediately or before the lapse of stipulated time interval (i.e. not less then 120 seconds) due to the failure of equipment the SM should wait for two minutes and then cancel the route in the usual manner. Further, the SM should report the failure to the ESM immediately and record the same in the S&T failure register.

c) Normally the route set gets released automatically after the passage of the train over the same, when T.C. or point in the route has not failed. but when a T.C or

point failed after the passage of train the route does not get released either automatically or by EUUYN as mentioned in para7.2 above in such cases after physically verification of the vehicle, for releasing the Sub section route panel operator will first turn the EUYN key provided on the panel for authentic operation and then press EUYN button on the panel .

By doing so, sub section route release timer will start and flashing yellow indication will appear on panel , Now EUYN button can be left but key will remain in turned position . After 120 sec of times lapse, flashing yellow indication will turn into steady indication. After that panel operator will press the EUYN button and concerned route point/Signal button to release the sub section route which increment the EUYN counter.

After releasing the concerned sub section route , the panel operator will turn the EUYN key to normal position causing steady yellow indication to disappear and remove the key to keep in his safe custody.SM will record the EUYN movement in EUYN counter register and entry shall by signed by SM and will record the failure in signal failure register.

I. Sr. No.
II. Date & time.
III. Rout to be cancelled.
IV. Reason mentioning train No.
V. Signature of the SM on duty.
VI. Time route concealed.
VII. Reading of the EUYN counter after cancellation of the route.
VIII. Signature of the ESM
IX. Remarks.

(9) <u>CANCELLATION OF OVERLAP</u>:-

After the train arrives and occupied the berthing track the overlap gets automatically released after the lapse of a stipulated time interval of 02 minute should the overlap (Having points in the overlap) not get released automatically after the arrival of a train due to any reason which will be indicated by overlap portion remaining illuminated the SM on duty should press concerned route button behind the overlap and OYN button and release them. This will enable the overlap to be released each time the overlap is thus release it will be recorded on the OYN counter provided on the control panel.

(10) <u>RECORDING OF THE READING OF COUNTER</u>:-

Operations of the following buttons are recorded on the respective counters provided on the control panel:-

1) Emergency point operation button (EWN)
2) Emergency route Release button (EUUYN)
3) Emergency route section release button (EUYN)
4) Calling on signal group button (COGGN)
5) Over lap cancellation button (OYN)

The SM on duty should keep a proper record of all such operation separate registers or common register in separate portions should be maintained for each of the above buttons where in such time the button is operated, the reading on the counter should be recorded maintaining clearly the circumstances under which the emergency operation has to be required. The SM on duty, before

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handing over charges to his reliever, should record the last readings of all the counters in the daily diary.

(11) GENERAL INSTRUCTIONS/ INFORMATION:-

a) When a light diesel engine or Tower Wagon or any other light self propelled vehicle is to be passed over a point or cross over, the SM on duty must in addition to watching the track circuits on the control panel ensure that the diesel engine or tower wagon etc. has cleared the points/crossover and has entered the next track section which can be verified from the control panel as well as personally verification, before permitting any other move on the affected lines or before interfering with the points set for the previous move.

b) The panel is provided with SM's key to prevent unauthorized operation of points and signals. Normally all the buttons of the control panel are ready to be operated at any time unless the SM on duty locks by means of the SM's Key. When the control panel is locked it will not be possible to operate a point and clear a signal. The SM on duty must kept the key in his personal custody whenever he has to leave the panel.

NOTE:-In order to avoid destination to traffic, S&T staff should draw up a maintained program in consultation with operation staff so as to enable the letter to book special duty guard to ensure the correct setting clamping and padlocking of points. Whenever special duty guard is present the SM on duty will advise the former about the movement giving full details about the setting of the route. This will be confirmed by exchange of Private. Nos. on receipt of this advise, the special duty guard will obtain the signal of the S&T staff in the register in token of their consent to the contemplated move and sign himself. After the points have been set in the requisite position, the special duty guard will clamp and padlock the points keep the keys in his personal custody and then authorize the SM on duty supported by a Private .Nos. to undertake the move.

12). ADDITIONAL PRECAUTIONS TO BE OBSERVED:-

Button collars shall be placed on the button of defective disconnected point and the relevant route button. The button collars should not be removed except under the following circumstances:

a) When the disconnected point is reconnected and a reconnection memo to this effect is received.

b) When the defective point has been put right and reconnection memo is received, or

c) When the SM has to undertake a move after he has personally ensured the correct setting clamping and padlocking of the points and the keys are in his personal custody or,

d) When the special duty guard authorize the SM to undertake the movement over the points supported by a private numbers.

NOTE: - Manual setting of points by crank handles for passing traffic should not be carried out by S&T staff unless operating staff not below the rank of SM is present at site.

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13) MANUAL OPERATION OF MOTOR POINTS: -

(A) CUSTODY OF CRANK HANDLES:-

Crank handle has been provided in the SM's office for manual setting of Motor points during failures or maintenance. This crank handle shall be kept in case specially provided for the purpose. This case will be locked and the keys kept in the personal custody of the SM on duty. The crank handle case will be sealed by the ESM of the section in addition to the locking.

(B) USE OF CRANK HANDLE KEYS:-

The following crank handle keys which are applicable for group of points as stated against each have been provided for uncovering the flap on the point machines. These keys are normally held locked in the separate key locked relays housed in the glass fronted wooden box in the SM's office, the wooden box is kept padlocked by operating staff, the key is kept in the personal custody of SM on duty

Group No.	Crank handle key location	Application for point no.
1.	SM's Office	201a/201b
2.	SM's Office	202a/202b.203
3.	SM's Office	204a/204b,
4.	SM's Office	205a/205b,
94.	SM's Office	293.294a/294b,
95	SM's Office	295a/295b,
96	SM's Office	296a/296b,
97	SM's Office	297a/297b.
98	SM's Office	298
99	SM's Office	299a/299b.

A circular light indication (Showing white or red) has been provided on the panel separately each group as stated above indicating whether the crank handle controlling the key is held or blocked in the key locked relay or it has been released for manual operation of points respectively for releasing control of crank handle key for every group the SM on duty will press the CHYN and the point button, of the first point (Applicable to that group only) in that particular group simultaneously and release. The operation of CHYN and the point button mentioned above will cause the white indication of the particular group to flesh till the crank handle key is taken out from the key locked relay. When the crank handle key is taken out from the key locked relay, the white flashing indication will disappear and the red circular indication of that group appear. The insertion of the crank handle key in the key locked relay and its operation will cause the red indication of the group to disappear and flashing white indication of the group will reappear on the control panel, CHYRN and the button of the first point in that particular group must then be pressed simultaneously. This will cause the flashing white indication to be come steady.

Once the control on the crank handle key has been released corresponding routes and signals can not be initiated. After releasing the control, if the crank handle key is not extracted, control can be withdrawn by operating the CHYRN and corresponding point button simultaneously.

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C) **USE OF CRANK HANDLE DURING MAINTENANCE:**

i) When it becomes necessary for the crank handle along with the Crank Handle key pertaining to a particular group to be used general maintenance and repairs a members of the S&T staff not below the rank of an ESM should issue a disconnection memo on the prescribed form No. S&T/DN Annexure 'B' with an endorsement on the top as under:

"Crank handle required for point No. Crank handle key required for group No. and obtain the concerned keys from the SM on duty.

The seals of the crank handle case and that of the key locked relays box, and obtain the concerned keys from the SM locked relays box, will then be broken by the S&T staff in the presence of the SM on duty. Before the crank handle and the key are removed an entry should be made in the crank handle register provided for the purpose. The crank handle register will have the following columns.

1. Sr. No.
2. Designation of the person who required to use the crank handle and the concerned crank handle key.
3. Date and time of removal of crank handle and the crank handle keys.
4. Purpose, whether for normal maintenance or failure.
5. Disconnection memo number if given.
6. Signature of the persons who removes the crank handle.
7. Signature of the SM on duty..
8. Date and time of return of the crank handle and the concerned crank handle key.
9. Details of the use made of the crank handle and key.
10. Re-connection memo number if given.
11. Signature of the person who returns the crank handle and crank handle key.
12. Trains passed over disconnected/defective points giving private number against each train.
13. Signature of the SM on duty.

After the purpose for which the crank handle and the crank handle key were taken out from case and the box respectively is over, these will be replaced in the case/box by the S&T Staff or the special duty Guard or the SM on duty as the case may be. The crank handle case and the key locked relay box will then be locked and sealed as laid down in Para (A) and (B) above. The particulars required in the crank handle register will, be passed against the relevant entry and will be signed by either the S&T staff or the special duty guard and the SM on duty.

NOTE: -

a) In case of failure of point when the point has been set by crank handle, clamped and pad locked by the SM on duty him self retaining the padlock keys in his personal custody and traffic has been passed over the same. He will make suitable endorsement to that effect in column (12) of the crank handle register in lieu of private number.

(b) In case when the disconnection memo is issued for a point, but crank handle is not required an endorsement that "Crank handle not required" must be made on top of form S&T DN Annexure "B" .

ii) During the period from the issue of the disconnection memo by the S&T staff and the issue of the crank handle to them to the time of its return by them and the issue of the re-connection memo, if traffic has to be passed over the disconnected point, procedure detailed in sub-Para (C) must be followed.

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iii) Whenever, it becomes necessary for the crank handle and the concerned key to be remove for use to pass traffic during point failures. The SM on duty will do so only after making the relevant entries in the crank handle register in manner indicated in clause (i) above, He will immediately advise the ESM on duty and SI of the section about the failure, and record the failure in the S&T failure register.

D) PASSAGE OF TRAIN WHEN POINTS ARE DEFECTIVE:

1. When an electrically operated motor point fails to respond to the panel operation, the SM should first set the point to the last operated, position and depute a points man to find out if any obstruction is lying between the tongue and stock rails.
2. The points man on arrival at the concerned point will look for any obstruction between the stock and switch rails at both ends in case of crossover point, remove the same of found display an alright signal to the SM on duty to set the point by the waving an arm by day or white light by night across the body. In case no obstruction is found, the points man will display hand danger signal.
3. On receipt of an alright signal from the Points man the SM will set the points to the required position. If the points still fail to respond/on receipt of hand danger signal from Points man the SM will remove the crank handle and the concerned crank handle key, proceed to the defective points set the same in the required position a clamp and padlock and retain keys in his personal custody. He will then proceed to the station and authorize the move.

NOTE: While setting a cross over point from normal to the reverse provided with motors on both sides care should be taken to set the end marked (A) First, and then set the other end marked (B) later. Similarly while setting from reverse to normal and marked (B) should be set first and then the end marked (A) later.

E) PASSAGE OF TRAINS WHEN POINTS ARE DISCONNECTED

While the S&T staff are attending to disconnected defective points and traffic has to be pass over them, the SM on duty will proceed to the concerned points with the object of setting the points in the required position for the move. The SM will also take with him a special register opened for the purpose in which an entry of the move will be made and the signature of S&T staff attending to the points will be obtained against that entry as an assurance that the S&T staff has agreed to the move. The SM on duty will also sign against that entry. After the points have been set clamped and padlocked for the contemplated move by the SM. He will retain the padlock keys in his personal custody and then return to the station for undertaking the move. After the passage of traffic, the SM will return the padlock keys to the S&T staff to continue their work on points.

NOTE- 30 Kmph speed indicator board are provided on the post of both UP&DN Distant Signals for loop line.

14. WORKING OF BLOCK PROVING AXLE COUNTER PANEL BLOCK INSTRUEMENT BETWEEN AH-RAI ON SINGLE LINE.

For the purpose of line clear working block proving Axle counter panel block instruments have been provided between AH-RAI as per para No.739 of block working manual 2013. These block panels are provided with various push buttons, keys indication, counters and buzzers. Their nomenclature and functions are detailed below.

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i) **PUSH BUTTONS**

Push Button	Functions
	(i) To transmit BELL codes (ii) To take Line clear, when pressed along with TGT button (iii) To cancel Line Clear when pressed along with CANCEL button.
TRAIN GOING TO (TGT) RED	Station Master of dispatching station operates it along with bell button. When TGT button is pressed along with bell button , by the station which is dispatching a train , the block panel of that station gets TGT indication .Simultaneously, the block panel of the receiving station gets GREEN TCF indication.
CANCEL YELLOW IN COLOUR	It is operated along with "Bell" button to enable cancellation of 'Line Clear' condition if the train has not entered the block section or after the train has pushed back to the station in rear. This operation for cancellation of line clear is done by the train receiving station.
CANCEL CO-OP GREEN IN COLOUR	It is operated by train dispatching station for extending cancel co-operation to train receiving station.
ACKN BLACK IN COLOUR	It is operated to acknowledge the section occupied or section free condition. It mutes the SECTION OCCUPIED/FREE buzzer.

ii) **Description of Keys:**

Key	**Functions**
S.M Key	This key when taken out prevents the following: (i) Transmission of BELL code operations: (ii) Transmission of line clear enquiry code: (iii) Cancellation of line clear
MAINTENANCE BACK COVER LOCK KEY	A lock is provided at the back of block panel for maintenance purpose.
SM's BACK COVER LOCK KEY	For double lock arrangement of a lock on the back of Block panel is provided which can be operated by key kept in the custody of station master.
SHUNT RELEASE KEY	Shunt Release key (normally OUT) The following operation is possible when IN a) To take out SHUNT KEY from electric key transmitter (EKT). which serves as tangible authority from driver to shunt beyond last stop signal. b) The following operation are not possible when IN i) To take line clear ii) Other side station to take line clear iii) Closing of block iv) To take off the last stop signal

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iii) **Description of indicators:**

indicators	Function
'LINE CLOSED'	Circular indication in between directional arrowhead. in lit Condition (yellow), it indicates that section is free from vehicles & Line Clear has not been granted or received.
TRAIN COMING FROM GREEN FLASHING GREEN	Its shape is directional arrowhead pointing downwards for incoming traffic at train receiving station and a rectangular indication named TCF. To indicate LINE CLEAR granted, when TRAIN GOING To button and BELL button have been pressed at sending station and conditions for granting line clear at receiving station has been compiled with. To indicate a) Line clear has been withdrawn before the entry of train in block section or, b) Block section has cleared after the arrival of train, but associated signals & their controls have not been put to normal at either of the stations. c) Block section is cleared after arrival of train of train associated controls are normal at both the stations but after unintentional insertion of shunt key 'IN' in the sending sections when the train was in the sections.
TOL INDICATION RED	In a directional arrow head pointing upward snd rectangular Indication for outgoing traffic of the train sending station. To indicate TRAIN ON LINE on entry of incoming train on LINE CL
'TRAIN GOING TO GREEN FLASHING	In a directional arrowhead pointing upwards for outgoing traffic at train sending station and a rectangular indication named TGT. To indicate LINE CLEAR received, when TRAIN GOING TO button and BELL button have been pressed at sending station and the conditions for taking line clear have been complied with at stations To indicate: (a) Line clear has been withdrawn before the entry of train in block section or, (b) Block Section has cleared after the arrival of train , but associated signals& their controls have not been put to normal at either of the stations. (c) Block sections is cleared after arrival of train , associated controls are normal at both the station but after unintentional insertion of shunt key 'IN' in the sending section when the train was in the section.
TOL INDICATION RED	In a directional arrow head pointing upward snd rectangular indication for outgoing traffic of the train sending station To indicate TRAIN ON LINE on entry of outgoing train on LINE CLEAR.
CANCEL CO-OPREATION INDICATION YELLOW	Indication to indicate co-operation extended by station at other end for cancellation of line clear by pressing cancel cooperation button.

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COUNTERS	Functions
BLOCK BELL	It gives signal as per BELL Code sent by SM of the station at the other end of block section
SECTION BUZZER	It is an audible signal which informs the SM that the train has either occupied or cleared the block section
CANCEL INDICATION FLASHING YELLOW STEADY YELLOW	Circular LED To indicate progress of LINE CLEAR cancellation timer of 120 seconds the indication light up on pressing of CANCEL button along with bell button in presence of Cancel co-operation indication , WHEN TRAIN COMING FROM displays with FLASHING GREEN indication To indicate Cancellation timer matures but due to some reason the system does not go to line closed.
LINE FREE GREEN	An indication is provided near the arrowhead indication to show block section is clear of vehicles
SNKE(LOCAL) YELLOW	Tow such indication are provided 1) SNK: Yellow indication near TRAIN GOING TO directional arrowhead to indicate LAST STOP SIGNAL and its control at ON/Normal ii) SNK: Yellow indication provided near TRAIN COMING FROM directional arrowhead to indicate Home signal and its control at ON/Normal
SNKE (OTHER END)YELLOW	i) Provided near TRAIN COMING FROM directional arrowhead to indicate LAST STOP SIGNAL, Reception signal and its control at ON/Normal. ii) Shunt key of EKT at other station is "IN' and shunt release key in SM block panel is " OUT"
UFSBI/MUX OK indication	GREEN when UFSBI is OK otherwise extinguished
UFSBI/MUX FAIL indication	RED when UFSBI goes into a failure mode otherwise extinguished.
LAST STOP SIGNAL RED GREEN	Circular in monogram signal To indicate LAST STOP SIGNAL is 'ON' To indicate LAST STOP SIGNAL is 'OFF'
LINE OCCUPIED INDICATION RED	An indication is provided near arrowhead indication to show block section is occupied or axle counter is failed.
SM KEY (IN) GREEN	Indication near SM key To indicate SM key IN
SHK-IK/OUT	It has two indications, GREEN indicates shunting key has been taken out and RED indicates shunting key has been
TRAIN ACKNOWLEDGEMENT IN/OUT	An indication near ACKN button This is lit up (yellow) at the time of train entry into and exit from the Block Station Section. It remains lit until acknowledged.
Communication LINK FAIL indication	Steady YELLOW when LINK between two UFSBI's FAILS else extinguished

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(iv) **Description of Counters :**

Counters	Functions
CANCEL Line Clear	It keeps a record of cancellations of Line clear when train has not entered Block section or when a train has been pushed back.

(v) **Description of Buzzers :**

Counters	Functions
BIOCK Bell	It gives signal as per BELL Code sent by SM of the station at the other end of block section
SECTION Buzzer	It is an audible signal which informs the SM that the train has either occupied or cleared the block section.

B) **WORKING OF SINGLE LINE BLOCK PROVING AXLE COUNTER PANEL BLOCK INSTRUMENTS FOR DISPATCHING TRAINS AH TO RAI :-**

Whenever a train is to be dispatched from AH to RAI, the SM on duty at AH shall ask 'line clear' from SM on duty at RAI and shall inform SM on duty at RAI, the trains & its description supported by his Private Nos, requesting for granting 'line clear'. Making suitable entries in the train register, SM on duty at RAI will grant verbal line clear supported by his private number after ensuring that all the conditions for granting line clear are fulfilled.

On getting this verbal permission supported by Private Number from SM RAI, the SM on duty at AH shall press the 'BELL' button and 'TGT' button on his block panel simultaneously. As soon as the buttons are pressed as mentioned above, the 'LINE CLOSED' indication disappears and the relevant arrowhead indication with green lights appears on the block panel at both the ends i.e. 'TGT' at AH, and TCF' at RAI will be illuminated. The 'LINE FREE' indication at both the ends will continue to exhibit green lights as usual, indicating that the block section is still clear.

After setting of route for Dispatch of an train, SM/AH on duty shall lower the Starter & Advanced starter Signal. As soon as the train occupies the block section, the Directional arrowhead indications and 'LINE FREE' indication turn red at both stations. SECTION buzzer starts ringing and also TGT, TCF indication turns to RED of block panel at AH & RAI respectively. To stop the buzzer SM on duty shall press the ACKN button.

After this, SM RAI shall take off the UP Home signal. When the train clears the block section, SECTION buzzer starts ringing and 'TRAIN COMING FROM' indication turns to flashing green at AH.

To stop the buzzer at RAI,SM on duty shall press ACKN button 'LINE FREE' indication turns green, 'SECTION' buzzer starts ringing and 'TRAIN GOING TO' indication turns to flashing green at AH. SM on duty at AH acknowledges the buzzer by pressing ACKN button. 'TRAIN GOING TO' indication disappears and LINE CLOSED indication appears at AH.

When all the controls pertaining to reception of train at RAI are normalized, SNKE (Local) indication appears, TRAIN COMING FROM indication disappears and LINE CLOSED indication appears. At AH also TRAIN GOING TO indication disappears and LINE CLOSED indication appears on the block panel.

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C) **WORKING OF SINGLE LINE BLOCK PROVING AXLE COUNTER PANEL BLOCK INSTRUMENT FOR RECEPTION OF TRAINS COMING TO ACHNERA FROM RAIBHA.**

When a request for granting 'line clear' is received from SM RAI, for particular train supported by his Private Number, the SM on duty at AH shall note down the particulars in the train register and after satisfying himself that conditions for granting 'line clear' indicated on the panel are complied with, shall grant verbal line clear supported by his Private Number.

On getting this verbal permission supported by Private Number from SM/AH, the SM on duty at RAI shall press the 'BELL' button and 'TGT' button on his block panel simultaneously. As soon as the buttons are pressed as mentioned above, the 'LINE CLOSED' indication disappears and the relevant arrowhead indication with green lights appears on the block panel at both the ends i.e. 'TGT' RAI, and TCF' at AH will be illuminated. The 'LINE FREE' indication at both the ends will continue to exhibit green lights as usual, indicating that the block section is still clear.

After this SM RAI shall take off the Advanced Starter. As soon as the train occupies the block section, the Directional arrowhead indications and 'LINE FREE' indication turn red at both stations. SECTION buzzer starts ringing and also TGT, TCF indication turns to RED of block panel at RAI & AH respectively.

To stop the buzzer SM on duty shall press the ACKN button. After setting of route for reception of train, SM/AH on duty shall lower the Home Signal. When the train clears the block section, SECTION buzzer starts ringing and 'TRAIN COMING FROM' indication turns to flashing green at AH. To stop the buzzer at AH SM on duty shall press ACKN button. 'LINE FREE' indication turns green, 'SECTION' buzzer starts ringing and 'TRAIN GOING TO' indication turns to flashing green at RAI.SM on duty at RAI acknowledges the buzzer by pressing ACKN button. 'TRAIN GOING TO' indication disappears and LINE CLOSED indication appears at RAI. When all the controls pertaining to reception of train at AH are normalized, SNKE (Local) indication appears, TRAIN COMING FROM indication disappears and LINE CLOSED indication appears. At RAI also TRAIN GOING TO indication disappears and LINE CLOSED indication appears on the block panel.

D) **BLOCK BACK OPERATION**

The SM, who intends to Block back the line, shall inform the SM of station at other end on telephone for permission to Block Back, who will acknowledge the message supported by private number. SM puts the shunt release key in SM Block panel to 'IN' and takes SHUNT key of EKT OUT and hand over to driver of the train being block backed to perform shunting in block section.

On completion of shunting, section clear message will be sent to SM of station at other end on telephone about obstruction removed supported by private number. Thereafter SM will insert shunt key of EKT and turn to IN position and takes out the shunt release key.

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E) PUSH BACK OPERATION

After the train has been pushed back into train sending station following action appears-

SENDING STATION		RECEIVING STATION	
1	Train clears the block section, LINE FREE indicator turns GREEN. Section BUZZER starts ringing. ACKN indicator lights up	2	Train clears the block section, LINE FREE indicator turns GREEN. Section BUZZER starts ringing. ACKN indicator lights up
	TRAIN GOING TO arrowhead indication turns to FLASHING GREEN		TRAIN COMING FROM arrowhead indication turns to FLASHING GREEN
	Acknowledges the buzzer by pressing ACKN button. ACKN button turn off.		Acknowledges the buzzer by pressing ACKN button. ACKN button turn off.
3	Advises receiving end station SM about cancellation on telephone after prescribed call attention buzzer.	4	Agrees to request, ensures SNK indicator YELLOW, SNOEK indicator YELLOW, SHUNT KEY indicator GREEN and gives consent on telephone
5	After verbal consent from other end SM to ensure SNK indication yellow, shunt key indication green, presses CANCEL CO-OP button and releases on receipt of call attention buzzer	6	CO-OP to light up yellow, press BELL & CANCEL button with SM key IN. CANCEL COUNTER INCREMENTS. CANCEL indication lights up FLASING YELLOW & continues flashing for 120 seconds
7	TRAIN GOING TO arrowhead turns off, LINE CLOSED INDICATION lights up.	8	On expiry of 120 seconds. TRAIN COMING FROM arrowhead indication and cancel indication turns off. LINE CLOSED INDICATION lights up

15.1.1 **<u>Cancellation of Line Clear</u>:**

After a train sending station has taken line clear, the receiving station can carry out line clear cancellation with consent of other end station. Sending station puts back LSS to "ON", if already taken "OFF" and its control to normal ensures SNK at "YELLOW". Sending station extends co-operation by pressing CANCEL CO-OPERATION button. On receipt of co-operation indication, receiving station presses bell and cancel button with SM KEY "IN" .Receiving station observes cancel indication to light up flashing yellow and releases the buttons. TRAIN GOING TO /TRAIN COMING FROM Arrow Head indication turns to flashing green at sending/receiving station respectively. After 120 seconds LINE CLOSED indication lights up "YELLOW". TRAIN GOING TO /TRAIN COMING FROM Arrow Head indication and cancel indication extinguishes.

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Method of Cancellation:-

SENDING STATION		RECEIVING STATION	
1.	PUTS back LSS to 'ON', if already taken 'OFF' ensures SNK at YELLOW, Advices receiving end station SM about cancellation on telephone after prescribed Call attention buzzer.	2.	Agrees to request ,ensures SNK at YELLOW and SNOEK at YELLOW and gives consent on telephone after prescribed Call attention buzzer.
3.	After verbal consent from other end SM presses Cancel co-operation button and releases on receipt of Call attention buzzer.	4.	Waits for co-operation light up Yellow and presses, bell & cancel button with SM key IN. Cancel counter Increments. TRAIN COMING FROM indication turns to to flashing green. Cancel indication lights up flashing Yellow & continues flashing for 120 seconds.
5. 5.	'TRAIN GOING TO' indication turns flashing green.		
7.	'TRAIN GOING TO' indication turns off LINE CLOSED indication lights up.	6.	On expiry of 120 seconds, TRAIN COMING FROM Indication & cancel indication turns off. LINE CLOSED indication lights up.

15.1.2 SHUNTING OF TRAIN:-

Where shunt signals are not provided for shunting on line leading towards Block section, the driver of shunting train shall be given shunting order at the foot of STARTER SIGNAL/STOP BOARD/FOULING MARK before allowing any shunting. While shunting, the LAST STOP SIGNAL should be kept at ON.

Shunting of Train up to Last Stop Signal

SHUNT KEY of EKT shall be taken OUT and kept in safe custody. The driver of shunting train shall be given shunting order to shunt up LSS. On completion of shunting, the between STARTER/Shunt Signal/Stop Board/Fouling mark and LSS should be checked free from any vehicle. SHUNT KEY of EKT shall be inserted and turned to IN position.

When an IS LINE CLEAR enquiry is received from Block Station at other end of block section, permission for shunting up to LSS shall be granted only after compliance of GR 8.09 & 8.10 and as permitted by Station Working Rules (SWR).

Shunting behind a Train

Shunting behind a train should be performed with message to station at other end. SM shall take out SHUNT KEY of EKT after entry of train beyond LSS and hand over to Driver of shunting train along with shunting order.

On completion of shunting, Driver of shunting train hands over SHUNT KEY of EKT to SM. SM ensures clearance of line between STARTER/Shunt Signal/Stop Board/Fouling mark and LSS from any vehicle. The message regarding completion of shunting shall be sent to station at other end.

SM inserts SHUNT KEY of EKT and turns to IN position.

In case train arrives at station at other end before completion of shunting, TRAIN GOING TO/TRAIN COMING FROM arrowhead indication will remain at RED, till shunting train clears the section. During such period line shall be BLOCKED BACK as per procedure laid down in the specification (IRS:S-105/2012) at Cl.9.5.

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Shunting of Train Beyond Last Stop Signal

The shunting is done under protection of Block Forward only.

Shunting of Train in face of an approaching Train

Shunting in face of an approaching train, towards LSS, when permitted in SWR by special instructions, can be performed, the driver of shunting train shall be given shunting order to shunt up to LSS. On completion of shunting, the line between STARTER/SHUNT SIGNAL/STOP BOARD/FOULING MARK and FIRST STOP SIGNAL should be checked free from any vehicle.

Shunting in face of an approaching train, beyond LSS and up to FSS can be performed only, when approaching train has been brought to a stop at FSS of the station. Whenever such shunting is to be performed, SM key shall be taken OUT and kept in safe custody. The driver of shunting train shall be given shunting order to shunt up to FSS. On completion of shunting, the line between STARTER/SHUNT SIGNAL/STOP BOARD/FOULING MARK AND FSS SIGNAL should be checked free from any vehicle and only then SM key shall be inserted and turned to IN position.

Shunting of Train beyond LSS in cases other than shunting behind a train or shunting in face of approaching train

The Shunting should be done under protection of Block Back only.

15.1.3 FAILURE OF THE AXLE COUNTER BLOCK PANEL:

Where can be following failures of the BPAC (using UFSBI with digital Axle counter) single line Block Panel for Up / Down trains as the case may be.

They are to be immediately reported to signal Maintenance staff.

(When communication link failure steady yellow indication becomes flickering again block panel operation can be restored.)

i) When no indication of any sort at all appears on the block panel.
ii) When the Bell Code signals are received indistinctly.
iii) Any damage is seen or reported to block panel.
iv) When none of the indications viz. 'TRAIN COMING FROM and TRAIN GOING TO' appears on the block panel except 'LINE FREE'.
v) When no train has entered into the block section but the 'LINE OCCUPIED' indication lights on RED on both lines and these indication persists even after resetting of the Axle Counters have been tried.
vi) When a train has arrived at the receiving station but the block panel still shows 'TRAIN ON LINE' RED indication and persists on both lines
vii) When UFSBI / MUX fail indication comes.
viii) When Link Fail communication becomes steady yellow indication.
ix) When 'TRAIN GOING TO' or 'TRAIN COMING FROM' Arrow Head Indications do not appear by appropriate action through condition for asking 'LINE CLEAR' and granting permission to approach are available.
x) 'TRAIN GOING TO' or 'TRAIN COMING FROM' Arrow Head Indications do not turn to RED to give 'TRAIN ON LINE' on the entry of train into the block section at either of the stations.
xi) When a train has arrived at the receiving station but the Block Panel shows FLASHING GREEN /GREEN indication even after ensuring SNK indication and LCB key IN.
xii) When after a cancellation, CANCEL indication does not light up FLASHING YELLOW or STAEDY YELLOW after appropriate actions.
xiii) When Last Stop Signal cannot be kept at 'ON' during its suspension / disconnection.
xiv) When Last Stop Signal of the station does not go back to 'ON' position on the entry of a train into the Block Section.
xv) Total failure of communication during which train shall be worked as per as per extent rules in force on the railway.

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15.1.4 SUSPENSION OF DIGITAL AXLE COUNTER BLOCK PANEL:

The Block Panel shall be considered in-operative during following cases:-

i) When material lorries, motor trolleys, tie-tamping machines and rail motor/bus or rail cum road vehicle or tower wagon (4 wheeler) has to run in the section.
ii) An accident takes place in the mid section.
iii) When any part of Block panel is opened or removed for repairs under duly accepted disconnection notice.
iv) When last stop signal of the station has been taken by Signal staff for repairs.
v) During Block Forward.
vi) When the cause of suspension of Block Panel and/or Last stop Signal is removed the normal working of Block panel and/or Last stop Signal as the case may be shall be restored by SM.

15.2 SLOT WORKING :-
SIGNAL AND SLOTS WORKED WITH AH & ACHNERA JN CABIN-

a. Whenever a train is required to dispatch towards ACHNERA JN CABIN:

Whenever a train is to be dispatched from AH to Achnera Jn. Cabin (towards CIK or PRK as the case may be), the SM on duty at AH shall ask 'line clear' from SM on duty at Achnera Jn. Cabin and shall inform SM on duty at Achnera Jn. Cabin, the trains & its description supported by his Private Nos, requesting for granting 'SLOT'. Making suitable entries in the train register, SM on duty at Achnera Jn. Cabin will grant verbal line clear supported by his private number after ensuring that all the conditions for granting SLOT are fulfilled.

Achnera Jn. Cabin station will set the required route and give the Electric slot no 501 on signal S20 of AH through VDU for 'A' Route up to S6 (towards CIK)and Electric slot no 502 on signal S22 of AH through VDU for 'B' Route up to S10(Towards PRK), as the case may be and white illuminated LED will lit on the Panel to indicate that slot has been received for required route.

b. Whenever a train is required to reception from ACHNERA JN CABIN:

When a request for granting 'line clear' is received from ACHNERA JN CABIN, for particular train supported by his Private Number, the SM on duty at AH shall note down the particulars in the train register and after satisfying himself that conditions for granting 'SLOT' indicated on the panel are complied with, shall grant verbal line clear supported by his Private Number after ensuring that all the conditions for granting SLOT are fulfilled.

(i) From CIK side

AH station will set the required route and give the Electric slot no 401 on signal S1 of Achnera Jn. Cabin through panel by pressing 401 YN & GSB or Electric slot no 402 on signal CO1 of Achnera Jn. Cabin through panel by pressing 402 YN & GSB for 'A' Route up to S 19(AH), as the case may be and white illuminated LED will lit on the VDU of Achnera Jn. Cabin to indicate that slot has been received for required route.

From PRK side

(ii) AH station will set the required route and give the Electric slot no 406 on signal S3 of Achnera Jn. Cabin through panel by pressing 406 YN & GSB or Electric slot no 407 on signal CO3 of Achnera Jn. Cabin through panel by pressing 407 YN & GSB for 'B' Route up to S17(AH), as the case may be and white illuminated LED will lit on the VDU of Achnera Jn. Cabin to indicate that slot has been received for required route.

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16.0. WORKING OF AXLE COUNTER

16.1 WORKING OF HASSDAC:-

High Availability single section Digital axle counters **(HASSDAC)** have been provided to monitor the clearance of block section between AH-RAI on single line section as a last vehicle checking device. HASSDAC is known as dual SSDAC i.e SSDAC1 and SSDAC2 UP or DN Advance Starter can be taken off only if one or both SSDAC Channels (SSDAC1 /SSDAC2) is/are in clear condition. On duty SM comes to know the status of CLEAR by GREEN (large LED) or OCCUPIED by RED (large LED) of axle counter from axle counter Reset Box (provided in SM room).

Whenever any train enters the block section and passes over the detection points (kept at the entry of the block section) the axle counter equipment will start counting the number of axles passed over it. This count is recorded as IN-COUNT. Similarly, when the train reaches destination station and passes over the detection unit (kept at the entry of the block section) the axle counter equipment will count the number of axles which have passed over the detection point at the exit end. This count is recorded as OUT-COUNT.

When OUT-COUNT is same as IN-COUNT, the axle counter Indication cum Reset Box will show green indication. When the block section is occupied or there is mismatch in IN-COUNT and OUT-COUNT, the axle counter Indication cum Reset Box will show RED indication of section occupied. When axle counter Indication cum Reset Box is showing RED indication, it can have two implications: (i). A train portion is left behind in the block section OR (ii). HASSDAC is failed due to technical fault.

16.1.1 FAILURE OF HASSDAC:

There can be following scenarios:

i). **SSDAC 1 is showing 'CLEAR' and SSDAC2 is showing 'OCCUPIED'**:

In this case on duty SM not require to reset the failed axle counter (SSDAC2) this failed axle counter will auto resettled by reset box automatically and after auto resetting a Green color (small LED) of preparatory reset indication will glow on reset box and on reset box "WAIT FOR PILOT TRAIN" will display and internal (hidden) reset counter will increase by one number. After arrival of train axle counter will show CLEAR & OCCUPIED RED (small LED) indication will convert in GREEN by GREEN (small LED) CLEAR indication. No failure memo to be issued as signaling system is working on the other axle counter. If after arrival of train SSDAC 2 not show clear indication or not accepting auto resetting, In this case Signal Maintainer or concerned JE/SSE to be called for checking the axle counters. No failure memo to be issued as signaling system is working properly.

Same above shown procedure to be follow If SSDAC 2 is showing 'CLEAR' and SSDAC1 is showing 'OCCUPIED.

ii). **If both the axle counters (SSDAC1/SSDAC2) is in Failed state (OCCUPIED):**

Failure memo to be issued. As both axle counters (SSDAC1/SSDAC2) of a block section between AH-RAI (as the case may be) fail, the block instrument of AH-RAI (as the case may be), section will also fail and concern Advance Starter signal of AH cannot be taken 'OFF'. In such case, the on duty SM shall ensure complete arrival of train according to G.R. 4.17 and S.R's thereof. In case on duty SM is unable to ensure complete arrival of a 'run through' train, he shall ensure complete arrival of train though exchange of private number from train dispatching station in rear and also the section controller.

In this case on duty SM require to reset the axle counter manually.

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16.1.2 RESETTING OF HASSDAC:

(i) The HASSDAC is a dual axle counter system. On reset box installed in Station Master office, status of both axle counters are display (HASSDAC-1 & HASSDAC-2). If any one of them is failed than that HASSDAC will show occupied. If both are failed than both HASSDAC will show occupied. If one of them is failed than train working will be normal vla second unit of HASSDAC. If both axle counters (HASSDAC-1 & HASSDAC-2) are failed than block working will be failed.

(ii) After ensuring that the block section is clear, the HASSDAC axle counter shall be reset. The resetting operation shall be resorted to only when there is "Occupied" (Red Light–Large) Indication even though the Block Section is 'Clear'. The following procedure shall be adopted after advising the S&T staff concerned about the failure of HASSDAC Axle Counter.

(iii) The Station Master on duty at the receiving station in which the train has arrived complete shall give a private number to the Station Master at the other end (dispatch station) confirming the complete arrival of the train.

(iv) The Station Master on duty at dispatch end shall acknowledge the same by communicating a private number.

(v) The key of the reset box shall then be inserted in the reset box, turned & pressed along with pressing of reset push button by both Station Master's independently.

(vi) The reset operation pertaining to block section is carried out independently at both ends.

(vii) "Preparatory Reset" (Green Light–Small) indication will appear on the Axle Counter Indication cum reset box at both ends to indicate the Axle Counter resetting operation is complete.

(viii) The counter provided for recording resetting operation will register next higher number. Necessary entries shall be made in the 'Block Proving Axle Counter Resetting Register' maintained for this purpose. Similar entries are made by the Station Master at the other end of the block section also.

(ix) When the 'Preparatory Reset Indication' appears, the receiving end Station Master should advice the Station Master at the other end that the Block Section is being 'Closed'. The other Station Master shall give a Private Number to this effect to receiving end Station Master.

(x) The receiving end Station Master shall then 'Closed' the Block Section by normalizing the Block Instrument.

(xi) On clearance of the first train after 'Preparatory Reset' at the receiving Station, the HASSDAC axle Counter will show 'Clear' indication at both stations and subsequent train can be normally dealt.

(xii) If on arrival of the first train on 'Preparatory Reset', the HASSDAC axle Counter (When both HASSDAC-1 & HASSDAC-2 are failed) do not show 'Clear' indication but Preparatory indications continue and the Block Instrument remains in 'Train On Line' position, the Block working shall be suspended and S&T officials of the section shall be advice to attend the failures. The trains will work on laid down procedures for block failure by issuing necessary authorities until the failures is attended by S&T staff and put right.

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(xiii) The entries in Train Signal Register shall be made in red ink at both stations whenever 'Line Clear' has been obtained with both HASSDAC axle Counter (HASSDAC-1 & HASSADC-2) is showing 'Preparatory Reset Indication'.

(xiv) No attempt shall be made to close the Block Section on arrival of train on Preparatory Reset if HASSDAC axle Counter (HASSDAC-1 & HASSADC-2) is still showing Preparatory Reset indications, instead of 'Clear' indications.
The counter increments by one count, every operation of resetting should be recorded in separate register as per the columns indicated below:

1. Sr. No.
2. Time and date.
3. Failed after the train number.
4. First train which was passed on proper authority to pass a signal at ON position.
5. Counter reading (prior to resetting).
6. Counter reading (after resetting).
7. First train which passed on proper line clear after normalization of axle counter.
8. Signature of on duty SM/Cabin master.
9. Signature of on duty SM granting reset co-operation.
10. Remarks of SE/JE (Signal).

NOTE: -

1. No resetting of axle counter to be done if section is occupied or is going to be occupied. This must be ensured by on duty SM.
2. SE/JE /Signal and SM must ensure the size LED if the same gone defective.
3. SE/JE/Sig./ESM must seal the reset box after resetting.

16.2 <u>GENERAL INSTRUCTION FOR BLOCK PROVING AXLE COUNTER</u>:-

1. Movement of motor trolley will be done on proper authority to pass a signal at ON.
2. Digital axle counter provided for block proving may fail during movement of RCRV, TRC, motor trolley and dip lorry. SM on duty should remain vigilant to check last vehicle in case movement of above mentioned vehicles is permitted in block section. The SM should personally verify the last Vehicle. Block clearance even axle counter provided for block proving clears automatically before allowing next train in block section.
3. In case of block back/ block forward, block clearance should ensure personally by SM on duty even if axle counters clears automatically.

17. POWER SUPPLY EQUIPMENT AND POWER SUPPLY FAILURES:

(a) i. Power supply to signaling installations of this station is drawn normally from Railway Overhead Equipment system (OHE), through its Auxiliary Transformer up AT or from State Electricity Board (EB).

ii. The Automatic change over CLS panel is provided at the station under the control of the duty SM.

iii. A five way rotary switch is provided in the automatic change over CLS panel. The five positions of Power Selection Rotary switch are:
OFF (b) Up AT supply- (Normal supply) (c) State Electricity Board (d) OFF & (e) Auto mode.

iv. Luminous indicators are provided in the panel for individual incoming source of supply. It will be lit when power supply is available in the respective source, otherwise the indication will extinguish. The outgoing supply to signalling installations is in the auto mode. If any of these indicators are not glowing, the on duty SM shall inform to TPC and Electrical Controller.

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v. Normally the rotary switch must be kept in auto position. Whenever power supply fails, the change over from Up AT to EB will be automatic. When the indication for automatic operation fails, an alarm will be activated. SM on duty shall acknowledge the same by pressing the reset button provided on the panel. There after he shall turn the selector to Up AT or EB as of its availability to draw power supply to the installations.

vi. Before such change over, the on duty SM shall observe the relevant circuit breaker. If the circuit breaker happens to have tripped to 'OFF' position, the same shall be put to its 'ON' position and the same source of supply maintained.

vii. If no tripping is noticed, or despite apparent tripping and the circuit breaker put to 'ON' position, and still supply does not resume, the on duty SM shall switch over to AT or EB as of its availability.

viii. In case power is drawn from State Electricity Board, the on duty SM shall be watchful of resumption of AT supply and shall change over to Up AT supply (being the normal source of supply) soon, it resumes.

ix. In the event of circuit breakers tripping again and again one after the other of all the sources of supplies, i.e., Up AT & State Electricity Board it shall be deemed as 'Total Power Break Down, Trains shall be delat on written memo as is relevant to reception or dispatch. Relevant provisions under GR & SR 3.68 to 3.70 shall be adhered.

x. All power supply failures shall be recorded in a special register and reported to Traction Power Controller. While failure of AT supply shall be reported to Traction Power Controller with copy to section SSE/TRD for immediate restoration of AT supply, the failure of State Electricity Board supply shall be reported to section SSE/Electrical with copy to Tech./SSE (Sigg.) and Divisional Operations Manger.

In case CLS Panel going blank, Panel SM on duty should check whether AT/local power supply is available or not. The same can be checked from the indication of pilot lamps provided on the power supply change over board provided in the SM's office. In case of non availability of both AT & local power supply, he will operate the Diesel Generator provided at the station as explained in para 4.3.11 below. In case of non availability of AT/local power supply as well as Diesel Generator supply being not available due to any defect, no normal operation from the Panel shall be done.

Points will be clamped and movements will be done as per G&SR 3.77 as in a non interlocked yard. However for local operation of points through crank handle, crank handle control key (NX Key) can be extracted from KLCR Box by giving control from the panel.

i. **Diesel Generator supply.**

Three sources of Power Supply AT, Local power supply (Supply from UPPCL), and DG set are available for feeding the Signalling Circuits at this station. The primary source is AT & secondary source is Local Power from JVVNL and the third source is from DG sets. First two supplies have been made available in the Automatic Change over Panel (CLS Panel) provided in the SM's room having an Auto/Manual changeover switch. Pilot lamps have been provided in the CLS Panel to indicate the availability of supplies in the CLS Panel. Whenever AT power fails the Auto Change over panel switches automatically to JVVNL power. In case the Auto Change over Switch fails to operate after any one source of power supply fails, the Station Master on duty shall operate the Manual changeover switch to the position of other source of power supply mentioned on the panel. Whenever the supply from AT/ JVVNL fails for longer duration, the switch should be put to other position for ensuring

power supply and TPC/Electrical Controller shall be informed through the Section Controller.

Beside this, one SM Panel for IPS is also provided in the SM's room for monitoring the status of Integrated Power Supply (IPS) system for Signalling. The audiovisual indications available on the SM panel are for any failure in IPS and monitoring the status of batteries to generate the audio-visual alarm for the following conditions;

Selected power supply will also be utilized for Integrated Power supply installed at that station. Invertor provided in the Integrated Power Supply starts working automatically as soon as power supply fails. Maintenance of the Integrated Power supply is to be carried out by electrical signal maintainer. A status monitoring panel to monitor the working of Intergrated Power supply is provided in SM's office.

The SM on duty should take action on observing the various fault symptoms shown by status monitoring panel. Different Indication on the panel and the corrective action to be Taken when they appear is listed below:-

S.N.	Alarm/Indication Description	Fault Symptom	Corrective Action
1.	START GENERATOR	Alarm and RED indication appear.	Acknowledge alarm by pressing ACK/RESET push button for audio cut-off & start Generator.
2.	EMERGENCY START GENERATOR	Alarm and RED indication appear.	Acknowledge alarm by pressing ACK/RESET push button for audio cut-off & start Generator.
3.	SYSTEM SHUT DOWN	Alarm and RED indication appear.	Start Generator. (Alarm continues till Generator is started)
4.	CALL S&T STAFF	Alarm and RED indication appear. (For any equipment fault in IPS sub-modules)	Call S&T staff. Alarm can be acknowledged for audio cut-off.

When 'START GENERATOR' indication appears on status monitoring panel, SM should change the position of the changeover switch provided in his office from 'Local Supply' position to 'DG Supply' position and start the Diesel Generator in the DG room as per the instructions given further in this SWR. The stand-by power supply arrangement (IPS) shall continue till the AT/local power supply is restored which shall be indicated by the Pilot lamps. As soon as the normal supply gets restored between 180V to 240V the SM on duty will restore the changeover switch to the original position i.e. to 'AT/Local Supply' position and will stop the Diesel Generator as per the instructions given further in this SWR.

ii. **Failure of Panel Indication :**

In case Panel goes blank, SM on duty on Panel should check whether Local power supply is available or not. The same can be checked on the indication provided on the power supply change over board provided in the SM's Office.

In case of Local power supply is not available, he will operate the Diesel Generator provided at the station and will change over the switch to "Generator" position on the change over Board and normal working on the panel will continue. In case of Local Power supply and Generator supply are not available due to any defect, no normal operation from the Panel shall be done. Points shall be clamped and movements will be done as per G & SR 3.77 in a non interlocked yard. However for local operation of points, crank handle control key can be extracted for operation of points.

iii. **General Instructions :**

In case of Neon lamp on the board remaining permanently extinguished showing non availability of the normal supply. SM on duty will arrange to inform the SE/JE

(Electrical) & ESM of the section through XR/Control message for attending the equipment with copies to JE (E) & SE(S) of the section.

vii. **Instructions to Start and Stop the Diesel Generator :**

a. To start the engine, lift the decompress or lever and engage the starting handle, turn the engine as fast as possible, when the fly wheel is turning at a good speed knock down the decompress or lever and continue cranking firmly for a few turns, the engine will now fire.
If the first attempt fails lift the decompress or lever again and crank the engine slowly a few times before attempting to start again.

b. To stop the engine first remove the load on the engine i.e. change over switch in D.G .room should be operated first.

c. Push the pump rack operating lever (external) towards the fuel pump and held in that Position until the engine stops.

i. It is important to note that the engine must never be stopped by using the decompress or lever as this will lead damage of valve seats and cylinder head joints.

ii. If the power supply is uninterrupted for more than 3 days a test run of the engine should be carried out on load and if it fails to run, the matter should be reported to JE/SE/SSE/Signal of the Section immediately by XR Telegram.

iii. The Station Master on duty should check up daily the diesel oil level in the tank and lubricating oil level in the diesel engine by means of the indicator (Dip Stick) provided for the purpose.
If diesel oil or mobile oil level falls below the mark given on the dip stick he will get the required oil filled in by his staff up to required level.
He will also inform the SSE (Signal) of the section for the supply of diesel and mobile oil when required.

17.(b) i) Signal lights are normally lit by power available from AT/commercial power supply. In the event of failure of both AT and commercial power supply the Signal Lamps are lit by means of Stand by Diesel Generator.

ii In the case of both AT and commercial supply failure, the SM with the help of points man will change over the Switch to Generator side and start the D.G. set in the Generator room.

iii. If the Signals get extinguished due to any reason whatsoever after the permission has been granted and the train has left the Station in rear, the SM shall depute a competent Railway Servant with necessary hand signal / detonators as required to warn the Drivers of approaching trains about the location of unlit stop signals and arrange to pilot the train as per the extent rules.

iv. When the AT or commercial supply is restored, the Switch should be changed over to AT/ Commercial side. The Generator should be stopped.

v. Diesel Oil will be filled in the Generators and suitable entry made in the log book by S.M. The S.M. on duty will also maintain record of the use of 'Diesel Generator in the log book. Details of Service/over hauling repairs etc. should also be entered in the log book by S&T Staff in the remarks column.

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The S.M. on duty will maintain the record of the Power Supply failure /restoration in the following Performa in the log book.

Sr. No.	Date	Time Commercial Power Failed	Time Commercial Power Restored	Duration of Commercial Power Failure	Time Generator Started
1	2	3	4	5	6

Time Generator Stopped	Duration of Generator Run	Quantity Filled		Signature of Station Manager	Remarks
		Diesel	M. Oil		
7	8	9	10	11	12

vi. Diesel Generator sets may also be operated in case of Low Voltage of AT /commercial Supply.

vii. The Yard Stick for the consumption of diesel is as under.

a. The average consumption is 2.5 Litres per hour provided the Generator is in good condition.

b. Capacity of the Tank of D.G. Set = 10 Litres.

c. One inch of measuring stock is means for 1.5 litres.

d. In case of failure of D.G. Set, S.M. will inform the Signal Staff.

18. **The following telephones and telecommunication facilities have been provided at this station:-**

S. No	Type of Communications	Location
1	Station to Station	Block phone in SM's office attached with Panel block instrument meant for train working between AH-RAI & a block telephone provided between AH-Achnera Jn. Cabin
2	Control telephones	
	Control Telephone of AF-BKI / MTJ control	In SM's office
3	Group Telephones/ SECURED COMMUNICATION	
	LC- 18 (In Station section)	Between SM's office and gateman
4.	BSNL Phone and RLY. Auto Phone	
5.	VHF Set	

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19. **HEADQUARTERS OF THE OFFICIAL TO BE ADVISED**

In case of failure of S&T gears advice must be sent in writing and by wire to the following officials.

1.	Mechanical signal maintainer	:	ACHNERA
2.	Electrical signal maintainer	:	ACHNERA
3.	Junior Engineer (Signal -Section)	:	ACHNERA
4.	SE (Signal -	:	AH
5.	SSE/ Sig/ :	:	IDH
6.	Traffic Inspector	:	AGRA
7.	Chief Controller	:	AGRA
8.	ASSTT. Signal and Tele. Engr.	:	AGRA
9 .	Divl. Safety officer.	:	AGRA
10.	Sr. D.S.T.E.		AGRA

In case of failure of power supply advice must be sent in writing and by wire to the following in addition to the officials mentioned as above.

1.	Electric Wireman (Maintainer)	AGRA
2.	Sr. Electric Foreman (G)	AGRA
3.	Electric Foreman PSI	AGRA
4.	Sr. Divl. Elect. Engr./G	AGRA
5.	D.E.E. (PSI)	AGRA
6.	D.E.E. (G)	AGRA

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APPENDIX 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

-NOT PROVIDED-

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APPENDIX-`D'

TO STAION WORKING RULES OF ACHNERA STATION
DUTIES TO BE PERFORMED BY THE STAFF AT ACHNERA STATION

STATION MASTER :-

1.1 The Station Master on duty is responsible for efficient and safe train working at the Station in accordance with General and Subsidiary Rules Block Working Manual and directions laid down in various circulars issued from time to time. He shall not obey any order/instructions issued in Contravention to the above issued by any authority. He shall be responsible for obtaining the orders of section controller in regard to train operation with correct train number and description etc. if already not given by him.

1.2 (A) The Station Master shall obtain `ASSURANCE' of all train working staff as listed in Para 6.1 of these rules before allowing them to work independently and every time they resume dutys after an absence of 15 days or more or every time an amendment is made to the Station Working Rules or in the layout of the yard in accordance with the instructions contained in the operating manual.

(B) The Station Master shall also be responsible for proper upkeep of safety literature for obtaining assurance of concerned train working staff and for explaining to such class III & IV Staff who are not well conversant with English.

1.3 A duplicate assurance register shall also be kept with the Station Master under his personal custody who shall be responsible for obtaining the assurance from the staff as indicated above in Para 1.3 (A).

1.4 The Station Master shall explain in Hindi the related rules of Station Working Rules to such staff who do not understand them in English before taking an assurance to Station Working Rules.

1.5 The Station Master will deal with train passing, coaching and Goods traffic during his duty hours, and will maintain necessary record, in connection with the work entrusted to him.

1.6 It will be the personal responsibility of the Station Master for closing of cash earnings daily and its correct remittance. He will prepare all goods returns in time and shall see that goods as well as all coaching returns are correctly prepared and submitted in time.

1.7 The Station Master shall conduct different inspections of the Station as desired under rules and as directed from time to time.

2. ASSISTANT STATION MASTERS:

2.1 The Asstt. Station Masters will attend to train passing duties and also will issue necessary Transportation Forms correctly prepared and the messages as may required during their duty hours. They will deal with all coaching work in their duty hours.

2.2 They will maintain all records in-connection with the work entrusted to them and prepare in time all coaching returns correctly.

2.3 The Asstt. Station Masters will assist the Station Master in Railway Working when required and shall also be responsible for the efficient working of the station during their duty hours.

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2.4 Asstt. Station Masters shall always assist the Station Master in Safety Matters and in better maintenance of Safety Literatures and train work in records.

3.0 **GATEMEN** :- The duties of gatemen are given in Appendix "A" to these rules.

4. POINTSMAN :-

4.1 He shall obey all lawful orders of the SM on duty. They will deliver Transportation forms and messages in correct manner under the orders of Station Master on duty.

4.2 The Points man shall assist in shunting operation in safe and efficient manner and carry out all lawful orders passed on to them.

4.3 They will also supply clean drinking water to traveling public and staff on duty

4.4 They will wave-pass the trains from `OFF SIDE' or from any other place so advised by Station Master on duty and shall show all-right signals to train staff if all is right for the train to continue the journey. On observation of any thing abnormal they will immediately show stop hand signal to train staff and also inform the Station Master on duty for further action.

4.5 Points Man will secure vehicle as per SR 5.23/1 & 5.23/2 of G&SR under supervision of Guard/Station Master/ ASM, Person incharge of shunting.

4.6 He shall pilot the train in case of abnormal working and when ordered by the SM on duty.

4.7 He shall be responsible to see that fouling mark are kept clear after complication of shunting.

4.8 In case of track failure he shall assist the SM to ascertain the clearance of line.

5 GENERAL:

5.1 All station staff must adhere to any lawful duty / responsibility assigned to them from time to time.

5.2. All staff of the Station must appear in proper and neat uniforms when on duty (GR 2.10) and should promptly obey all lawful orders given to them by any official placed in authority over them (GR 2.06).

5.3. The staff will work in conformity with and according to Rosters issued by Divisional Railway Manager, North Central Railway, Agra and posted at the station. General and Subsidiary Rules 2.02, 2.05, 2.06 and 2.10 shall apply to all staff.

5.4. The Station master on duty will not go `OFF' duty until the train for which `Line Clear' has been given or received has cleared the Block Section and line has been closed behind it (GR 3.51 (2) & SR 14.07/3) except when a material train is working in the Block Section or a train that has been disabled in the Block Section or a train which cannot proceed due to impassable obstructions; when instructions contained in SR 14.07/4 shall apply. All the on duty staff will leave his duty after arrival of his reliever.

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APPENDIX 'E'

ESSENTIAL EQUIPMENT AT THE STATION:

S.No.	EQUIPMENTS	STATION
01	Detonators	40
02	Button collar	08
03	H.S. Lamp /Tri color Torch	08
04	Flag	10 (04 Green 06 Red)
05	Stretcher	01
06	Safety chains	02
07	Fire extinguisher	02
08	Fire buckets with stand	04
09	First Aid Box	01
10	Switch clamps	06
11	Pad locks	10
12	Wooden Wedges	04
13	Wagon clamp	02

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APPENDIX - `F'

RULES FOR WORKING OF 'DK' STATIONS, HALTS, IBH, IBS, OUTLYING SIDING

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Not applicable

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APPENDIX - `G'

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

This appendix will be prepared by Sr. DEE (TRD) office of AGC division.

This appendix pertaining to AC traction working, has been issued separately , by Sr. DEE(TRD)/Agra division, to be treated as the part of SWR/AH- Agra/46. Station staff to follow the rules mentioned, therein strictly.

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Sr.DOM/G&C/Agra

(PRAVEEN KUMAR YADAV)
Sr.DEE/TRD/Agra