

**NORTH CENTRAL RAILWAY  
JHANSI DIVISION**

**STATION WORKING RULE NO.475**

**Date of issue:  
Date into force:**

**MAHOBA STATION (B.G.)**

**NOTE:-** The Station Working Rules must be read in conjunction with General and Subsidiary Rules and Block Working Manual. These Rules do not in any way supersede any rule in above books.

**1. STATION WORKING RULES DIAGRAM:-**

The track accommodation is as shown on the Diagram No. SIP-E 2306/K dated 24.12.19 based on IP No. SIP-E 2306/K dated 17.12.19.Except Alt F.

**2. DESCRIPTION OF STATION**

**2.1 GENERAL LOCATION.**

MAHOBA Station is a 'B' Class station interlocked to Std. II (R) (Route setting type) with Panel operation of points and signals. The Station is situated on JHS-MKP electrified section at KM 1265.58 from CSTM.

**2.2 BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLAY SIDINGS:**

KULPAHAR (KLAR)	:	21.44 KM (JHS end)
KABRAI (KBR)	:	21.69 KM (MKP end)
SINGHPUR DUMRA (SPDM)	:	30.10 KM (KURJ end)
"D" Class Station is as under	:	(1) CHARKHARI ROAD (CRC) B/W MBA-KLAR (2) BARIPURA (BPRA) B/W MBA-KBR (3) CHITHARI & RAGAULI B/W MBA-SPDM
"D.K." Siding is as under	:	NIL
Outlying Siding Working rule	:	NIL

**2.3 BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS:**

Between Station	The point from which the "Block section" commences	The point from which the "Block section" ends
MBA-KLAR	MBA Up Advance Starter No. S-1	KLAR DN ADV STR Signal NO. S-19 .
MBA-KBR	MBA Down Advance Starter No. S-20	Up Advance Starter Signal S-1 KBR.
MBA-SPDM	MBA Down Advance Starter No. S-3	SPDM Up Advance Starter.

**2.4 GRADIENTS IF ANY:**

There is a raising gradient of 1 in 221.8 from KM 1263.820 up to KM 1265.103, Falling gradient of 1 in 260 from Km 1266.087 up to KM 1266.500 further falling gradient of 1 in 175 from KM 1266.500 up to KM 1266.742 and further falling gradient of 1 in 221 from KM 1266.742 up to KM 1269.44.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**2.5 LAY OUT:** As shown in the station working Rule Diagram attached.

**2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT AND HOLDING CAPACITY IN CSR:**

	<b>Line</b>	<b>CSR.</b>	<b>PF</b>
a)	Up Main Down Line	796 Mtrs.	-
b)	Up 1 <sup>st</sup> Loop DN Line	768.9 Mtrs.	H/L
c)	Up 2 <sup>nd</sup> Loop DN Line.	725 Mtrs.	H/L
d)	UP 3 <sup>rd</sup> Loop DN Line	680 Mtrs.	H/L

**NOTE:** For double headed trains, the capacity shall decrease by 2 FW Wagons.

**2.5.2 NON – RUNNING LINES AND THEIR CAPACITY IN CSR:**

	<b>Line</b>	<b>CSR.</b>	<b>PF</b>
a)	A & D Siding No.1	120 Mtrs.	-
b)	Goods Siding	375 Mtrs.	-
c)	Ballast Siding	375 Mtrs.	-
d)	Ballast Loading Siding	570 Mtrs.	-

**2.5.3 ANY SPECIAL FEATURE IN THE LAY OUT: NIL**

**2.6 LEVEL CROSSING:** These Gates as Given Below are not provided with T.A.W.D.

<b>Gate No</b>	<b>422</b>	<b>423</b>	<b>426</b>	<b>427</b>	<b>428</b>	<b>430</b>	<b>432</b>
<b>Classification</b>	'B' Class	'C' Class	'C' Class	'C' Class	'C' Class	'C' Class	'B' Class
<b>Deptt.</b>	Engg.	Engg.	Engg	Engg.	Engg.	Engg.	Engg.
<b>KMS/End.</b>	1255/4-5 KLAR- MBA	1256/2-3 KLAR- MBA	1260/9-10 KLAR- MBA	1262/3-4 KLAR- MBA	1263/9-10 KLAR- MBA	1267/0-1 MBA-KBR	1272/8-9 MBA-KBR
<b>Normal Position</b>	Open	Open	Closed	Closed	Closed	Open	Open
<b>Interlocked Or Non Interlocked</b>	Inter locked	Non- Inter locked	Non- Inter locked	Non- Inter locked	Non- Inter locked	Non- Inter locked	Inter locked
<b>Leaves/L.B.</b>	POLB+ Sliding Boom	L.B.	LB	LB	LB	LB	POLB+ Sliding Boom
<b>Telephone Provided</b>	SM's Office	SM's Office	SM's Office	SM's Office	SM's Office	SM's Office	SM's Office
<b>Operated by.</b>	Engg. Gate Man	Engg. Gate Man	Engg. Gate man	Engg. Gateman	Engg. Gate man	Engg. Gate man	Engg. Gate man

**NOTE:** For detailed working see-Appendix 'A'

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

### **3. SYSTEM AND MEANS OF WORKING.**

- a) Trains are worked on Absolute Block system.
- b) **MEANS OF WORKING.**
  - i) Block panel have been provided with HASSDAC (dual BPAC) for working the trains between MBA-KBR section. These block panels are provided with various push buttons, keys, indicators, counters and buzzers.
  - ii) Block panel have been provided with dual BPAC for working the trains between MBA-KLAR section. These block panels are provided with various push buttons, keys, indicators, counters and buzzers.
  - iii) Block panel instrument with HASSDAC (dual BPAC) Station to Station telephones is installed in the Station Master's office for working of UP & DN trains between MBA-SPDM section.
  - iv) SM on duty is responsible for their operation and custody of the keys.

### **4 SYSTEM OF SIGNALLING AND INTERLOCKING:**

- (A)(i) Station is equipped with multiple aspect colour light signals and interlocked to Std. II(R). The Points and signals are worked from Panel.
- ii) Track circuiting is provided between up home signal to down home signal including 'Calling On' track circuits and point zone area on main line.

#### **B- TRAPS:**

- i- Derailing switch Point No. 297 JHS end in A&D siding is the trap for protection of Up 1<sup>st</sup> Loop down Line.
- ii- Derailing switch Point No. 295 MKP end in UP 3<sup>rd</sup> Loop Down is the trap for protection of Up 2<sup>nd</sup> Loop Down Line.
- iii- Derailing switch Point No. 204 JHS end in Ballast siding is the trap for protection of Up 2<sup>nd</sup> Loop Down Line & 3<sup>rd</sup> Loop Down Line.  
(Details of Signaling and Interlocking are given in Appendix 'B')

#### **(C) CALLING 'ON' SIGNAL**

CO-19 is provided below up home signal number S-19 and CO-2 is provided below down home signal number S-2. (JHS end) & CO-4 is provided below Dn Home Signal No.S-4(KURJ Side).

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

The Relay Room is provided with double lock. The key of one lock will remain in the custody of SM/ASM on duty while the key of other lock will remain in the custody of ESM. The SM/ASM on duty will hand over the key to the maintainer on demand whenever he visits for maintenance. ASM on duty will ensure that the key is returned to him after maintenance. A register to record the transaction of Key on proper proforma will be maintained by the ASM/SM on duty.

#### **4.3 POWER SUPPLY:-**

- (a)i. Normally all the signaling circuits are fed and worked by AT power supply, local power supply & generator power supply from the distribution board provided in the ASM office. An illuminated red pilot lamp fitted on the switch board in the ASM's office indicate that the AT power supply & local supply is available. The above red pilot lamp when not burning will indicate that AT power supply & local power supply has failed. In the event of AT supply failure, auto change over panel will automatically transfer the load on to local power supply and if local power supply also failed then the auto change over panel will automatically transfer the load on to the generator power supply.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

An auto change over panel provided in SMs room will display availability of power supply in following order-

- i) AT Power supply.
- ii) Local Power supply.
- iii) Power supply of generator

And changeover will take effect in this order only. However if auto change over system fails to work then ASM on duty will attempt manual change over by the switch provided on auto changeover panel.

After the above operation of the switch the generator should be stopped as per the instructions for starting and stopping of the Diesel Generator.

When the local supply is not available and IPS indication panel indicate start generator indication ASM will start the Generator and extend the supply.

Details on DG working are given in Appendix "B".

### **5. TELECOMMUNICATION:-**

The following telephones and telecommunication facilities have been provided at this station.

<b>SN</b>	<b>Type of Communications</b>	<b>Location</b>
<b>1</b>	<b>Block Telephone</b>	Block phone in SM's office attached with single line Block panel with HASSDAC (dual BPAC) meant for train working between MBA-KBR stations.
	<b>Block Telephone</b>	Block phone in SM's office attached with single line Block panel with dual BPAC meant for train working between MBA-KLAR stations.
	<b>Block Telephone</b>	Block phone in Panel room attached block instrument with HASSDAC (dual BPAC) meant for train working between MBA-SPDM stations.
<b>2</b>	<b>Group Telephones</b>	
	LC-422,423,426,427& 428 (KLAR –MBA)	Between SMs Office and Gateman
	LC- 430 & 432 (MBA-KBR)	Between SMs Office and Gateman
<b>3</b>	<b>Railway phone/ BSNL phone 05281-244125</b>	SMs Office
<b>4</b>	<b>Control telephones</b>	
	Control Telephone of 1. JHS-BNDA control 2. MBA- KURJ control 3. TPC Phone	SMs Office
<b>5</b>	<b>VHF sets</b>	SMs Office

### **6. SYSTEM OF TRAIN WORKING:**

#### **6.1 DUTIES OF TRAIN WORKING STAFF:**

(For detailed duties of the Staff, see Appendix 'D')

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:**

i)	SM/ASM	1	As per roster.
ii)	Points-man	2	As per roster.
iii)	Shunting Master	1	As per roster

**NOTE:** See Appendix 'D' for the duties of the staff.

**6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINE AND ZONE OF RESPONSIBILITY:**

- a) 'Line Admission Book' is not in-force at this station.
- b) Station Master/Assistant Station Master on duty is responsible for ascertaining clearance of all lines through Panel indications 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 a 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 i.e. 'SWR Acknowledgement Register'.

**6.2 CONDITIONS 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' position behind the said train, and,
- c) The line is clear – Up to advanced starting signal nearest to the approaching train as per GR 8.03(2) of G&SR.

**NOTE:-**

- i. Before granting 'Line clear' SM on duty must ensure that the reception signals are lit. If reception signals are not lit, he should advise SM in rear under exchange of private number to issue caution order to the loco pilot for stopping the train.
- ii. Before granting 'Line clear' SM on duty shall satisfy by himself seeing the Block section clear indication green LED (Large) indication appears at Reset box of Digital Axle Counter in UP/DN direction provided near the Block panel.
- iii. Before granting/Taking line clear SM on duty must ensure that all the level crossing gates in section are closed for road traffic under exchange of private number.

**ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING A TRAIN:****(A) BERTHING OF TRAIN:**

- i) A train carrying passenger and stopping at the station must ordinarily be received on the UP Ist loop down line (Platform line). If it is necessary to cross two trains both carrying passenger and stopping at the station, the first train must be received on the UP 1<sup>st</sup> Loop down line (Platform line) and the second train on the Up 2<sup>nd</sup> loop Dn Line (PF Line).
- ii) A Goods train stopping at the station must ordinarily be received on the loop line unless that line is occupied or is required for a train carrying passenger in which case the goods train may be received on UP Main Dn line.
- iii) **SETTING OF POINTS AGAINST BLOCKED LINE:-As per GR 3.38/2 of G&SR.**
- iv) **RECEPTION OF A TRAIN ON A BLOCKED LINE:** Para 5.09 of G&SR will be followed.
- v) **RECEPTION OF A TRAIN ON A NON SIGNALLED LINE:** Nil
- vi) **DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:** Nil
- vii) **DESPATCH OF A TRAIN FROM LINE PROVIDED WITH COMMON STARTER:**  
There is no common starter at this station.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**6.3(A) CONDITIONS FOR TAKING OF APPROACH SIGNAL [GR 3.40]:-**

Before the home signals are authorized to be taken 'OFF' by the SM on duty for reception of a train the following conditions must be complied with:-

**i) TRAINS TO BE RECEIVED ON THE UP MAIN DOWN LINE:**

The Line must be clear up to the advanced starter at the far end. When two trains are to be crossed from opposite directions signals may be taken 'OFF' for the train to be received on the Main Line, provided the home signal for the train from the opposite direction is maintained in the 'ON' position. Signals are to be taken 'Off' for the reception of only one train at a time.

**ii) DOWN TRAINS TO BE RECEIVED ON THE UP 1<sup>ST</sup> LOOP DN LINE:**

When a train is to be received on a Loop Line, to give precedence to another train or to dispatch other train from the Main Line in the same direction or to be stabled the Points at the far end of the Loop Line should be set to connect the Sand Hump (If provided). Except the above conditions, far end points should be set to connect with the Main Line and the Line must clear up to the DN Advance Starter Signal No-20.

**iii) UP TRAINS TO BE RECEIVED ON THE UP 1<sup>ST</sup> LOOP DOWN LINE:**

The near end points must be closed and the points at the far end of the Up 1<sup>st</sup> Loop Dn Line must be set to connect with the Main Line and the line must be clear upto the Up Advanced Starter No.S-1 at the far end. When however, another train is being dispatched in the same direction or two trains are to be crossed from opposite direction, the points at the far end of the Up 1<sup>st</sup> loop Dn. line must be set in normal condition towards SPDM end. If there is no train from SPDM.

**iv) UP TRAINS TO BE RECEIVED ON THE UP 2<sup>ND</sup> LOOP DN LINE:**

The near end points must be closed and the points at the far end must be set to connect with the main line and the line must be clear up to the Up advanced starter No.S-1 at the far end. When, however another Up train being dispatched in the same direction from main line or two trains are to be crossed, the points at the far end of the Up 2<sup>nd</sup> loop DN line must be set to connect with Derailing Switch No.204 in normal position and the line must be clear, upto Derailing Switch No.204 in normal condition. Signals may be take 'OFF' for the reception of the train to be received on the Up 2<sup>nd</sup> Loop DN Line, provided signals for the train from the opposite direction are maintained in the 'ON' position. Signals are to be taken 'OFF' for the reception of only one train at a time.

**v) DOWN TRAINS TO BE RECEIVED ON THE UP 2<sup>ND</sup> LOOP DOWN LINE:**

When a train is to be received on a Loop Line, to give precedence to another train or to dispatch other train from the Main Line in the same direction or to be stabled the Points at the far end of the Loop Line should be set to connect the Sand Hump. Except the above conditions, far end points should be set to connect with the Main Line and the Line must clear up to the adequate distance as prescribed in the rules.

**vi) UP TRAINS TO BE RECEIVED ON THE UP 3<sup>RD</sup> LOOP DOWN LINE:**

The near end points must be closed and the points at the far end of the Up 3rd Loop Dn Line must be set to connect with the Main Line and the line must be clear up to the Up Advanced Starter No.S-1 at the far end. When however, another train is being dispatched in the same direction or two trains are to be crossed from opposite direction, the points at the far end of the Up 3rd loop Dn. line must be clear up to derailing switch No 204. The derailing switch No 204 should be in normal position.

vii) **DOWN TRAINS TO BE RECEIVED ON THE UP 3<sup>rd</sup> LOOP DOWN LINE:**

The near end points must be closed and the points at the far end of the Up 3<sup>RD</sup> loop down line must be set to connect with the main line and the line must be clear up to the down advanced starter No.S-20 at the far end. When, however another Dn train being dispatched in the same direction from main line or two trains are to be crossed, the points at the far end of the Up 3<sup>RD</sup> loop Dn line must be set to connect with the Sand Hump and the line must be clear, up to the Sand Hump. Signals may be take 'OFF' for the reception of the train to be received on the Up 3<sup>RD</sup> Loop Dn Line, provided signals for the train from the opposite direction are maintained in the 'ON' position. Signals are to be taken 'OFF' for the reception of only one train at a time.

6.3(B) **Procedure for the Reception of trains:**

- i) On receipt of 'Is Line Clear' signal for a train to approach from the station in rear the SM/ASM on duty will grant the same supported by a private number provided the conditions as laid down in 6.2 above are complied with.
- ii) The Station Master will select a vacant line for the admission of the train and verify the clearance of selected line and set the far end and near ends points in accordance with Para 6.3 (A)(i) to (vii) above. SM/ASM will then take 'Off' the correct Home Signals for the reception of the train on the selected line and verify the indications on the Panel. SM/ASM on duty must ensure the closure and locking of concerned LC gates falling in the path of the train.
- iii) Immediately after the train has passed the Home Signal completely, the Station Master on duty will ensure that the Signals taken 'Off' for the train are restored automatically to 'ON' position as per SR 3.36/2 of G&SR.

6.4 **SIMULTANEOUS RECEPTION/CROSSING OF TRAINS:**

a) Simultaneous reception of trains at this station is permitted provided the points at the far end of the respective lines are connected to the concerned Sand Hump or upto derauling switch No 204 in normal position and line is clear upto the sand hump or D/S 204 in normal Position.

b) **CROSSING OF TRAINS.**

- i) A train carrying passengers and stopping at the station must, ordinarily, be received on the Up 1<sup>st</sup> loop DN line (Platform). If it is necessary to cross two trains both carrying passengers and stopping at the station, the first train must, be received on the Up 1<sup>st</sup> loop line (Platform) and the second train on the Up 2<sup>nd</sup> Loop DN line (Platform line).
- ii) A goods train stopping at the station must, ordinarily be received on the Up 1<sup>st</sup> Loop Dn (Platform) line unless that line is occupied or is required for a train carrying passengers, in which case the goods train may be received on the Up Main Down Line or Up 2<sup>nd</sup> Loop DN line.

**NOTE:** SM/ASM on duty must ensure that the concerned L.C. Gates falling in the path of the train are closed and locked against road traffic.

6.5 **COMPLETE ARRIVAL OF A TRAIN [SR 4.56/1]**

- (i) The SM/ASM is responsible for ascertaining complete arrival of a train and giving train out of section to the station in rear.
- (ii) For through passing train and for stopping trains for which the station Master on duty can conveniently inspect the tail Board/Tail Lamp, the responsible for giving the train out of section signal to the station in rear shall be of the SM on duty.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

- (iii) When the complete arrival of a train inside fouling marks with Tail Lamp/Tail Board on the last vehicle cannot be ascertained by the SM/ASM by personal observation. The SM/ASM must send 'Train Intact Register' through a points man to Guard for certifying the complete arrival of train inside the fouling marks with Tail Lamp/ Tail Board. ( SR 4.56.1)

**Note:** When a running line is blocked by a stable 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 point in rear 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 [GR 3.38/2 of G&SR].

#### **6.6 DESPATCH OF TRAINS:**

- i) When a train is ready to leave, the Station Master on duty will obtain line clear from the station in advance on the concerned block instrument. On confirming personally that the required route is clear and concerned gates are closed and locked against road traffic; the SM/ASM will set the route and then take 'Off' the departure signals.(i.e. Advance starter signal shall first be taken OFF and then concerned starter signal should be taken OFF).
- ii) 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. SM on duty is responsible to see that the signals taken OFF for passage of train have been restored to 'ON' position [BWM Para (8.03)].

#### **6.7 TRAINS RUNNING THROUGH:**

- i) A train is ordinarily being allowed to run through the station over the Up main down line only. If the Up main down line is occupied, a non-stopping up or down train may be passed over the Up 1<sup>st</sup> loop down line (Except Up 3<sup>rd</sup> Loop Dn Line) at a speed not exceeding 30 KMPH provided the points are correctly set and locked and correct signals are taken 'OFF'.
- ii) In case of a run through train over Up main down line or Up 1<sup>st</sup> Loop down line as the case may be, the SM on duty will obtain line clear supported by a private number from the station in advance and will take 'Off' correct signals for the through passage of the train. (I.e. Advance starter signal shall first be taken OFF and then concerned starter signal should be taken OFF) and then reception signal should be taken OFF.
- iii) Trains run through at a speed not exceeding 10Kmph over Up 2<sup>nd</sup> Loop Dn Line due to 1 in 8½ (Straight Switch) Turnout at MKP end. The train should be brought to a stand on the line and then started as per SR 4.11/1 (d) of G&SR.

If a train passes the station without Tail Lamp/Tail Board being visible to the SM, he must not send 'Train out of section' signal to the station in rear but send 'Train passed without Tail lamp/Trail Board to the station in advance and must inform section controller also [SR 4.17/1 (a) & (b)]

#### **6.8 WORKING IN CASE OF FAILURE:**

##### **a) i. FAILURE OF BLOCK INSTRUMENTS:**

When the single line Block panel with HASSDAC (Dual BPAC) installed for working the train between MBA-KBR and single line Block panel with dual BPAC installed for working the train between MBA-KLAR & single line Block panel with HASSDAC (Dual BPAC) installed for working the train between MBA-SPDM appear to be affected by outside influences causing erratic movement of needles and ringing of bell or in any other way work defectively, they must be considered as having failed and trains shall be worked as per procedure laid down in Para No. 14.13 of G&SR and Para 9.06 of BWM.



- (For detailed working see Appendix-‘B’)
- ii. In case of failure of block instrument, the SM/ASM should advise the station concerned of this fact by telephone under exchange of private no. There after line clear should be obtained on block telephone or station to station fixed telephone or control phone or VHF set in selective calling mode on channel 5 to BTX & on channel 6 to MBA or other authorized means of communication, in accordance with GR 14.13 of G&SR and Para 9.06 of BWM. The record should be mentioned in T/A 1425 or T/B 1425, as the case may be in addition to the Train Signal Register (TSR).
- b) **FAILURE OF POINTS/POINT CONTROL:**  
When any point becomes defective, the signal which allows a movement over that point should be treated as defective and the procedure as detailed in GR. 3.77 and SR 3.77/1 & GR 3.68, 3.69, 3.70 & SR there in should be followed.
- c) **FAILURE OF SIGNALS:**  
When any signal becomes defective the procedure as laid down in GR.3.68, 3.69, 3.70, 3.71 & 3.72 of G&SR must be followed.
- d) **FAILURE OF BERTHING TRACK CIRCUIT:**  
Failure of the berthing track circuit will result in the failure of reception signal for main line & loop lines , all other signals will work as usual. When berthing track circuit becomes defective the procedure as laid down in Para GR.3.68, 3.69, 3.70, 3.71, 3.72 of G&SR must be followed.
- e) **FAILURE OF SIGNAL AND POINT INDICATION:**  
In case of failure of Signal lamp & Point indication a steady (RED) indication appears along with buzzer. Buzzer can be ‘Silenced’ by pressing the Button but the indication will remain till the failure is put right.
- f) **PANEL BECOMING NO LIGHT:**  
When panel becomes no light all the relative points and signals shall be treated as defective. And before allowing any movement over the points, points should be set, clamped and pad locked and T/ 369 (3b) must be issued.
- g) **FAILURE OF COMMUNICATION BETWEEN STATION AND LC GATE:-**  
Not applicable
- 6.9 **ANY SPECIAL PROVISIONS FOR WORKING OF MOTOR TROLRIES MATERIAL LORRIES ETC:** Provisions of GR: 15.18 to 15.28 and SRs there under should be followed.
7. **BLOCKING OF LINES:**  
Whenever it is necessary to block a running line, the Station Master on duty shall obtain the permission from the section controller and provisions of SR: 5.19-1 should be complied with in addition button collars shall be used as per SR: 3.38-1 of G&SR and load should be secured as per GR 5.23 and SR’s there under.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

The SM on duty must place the button collars on the route button 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 the 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.

When running line is blocked by a stabled load, wagon, vehicle or by a train which is to be cross or to give precedence to another train or immediately after the arrival of a train at the station etc, the points in either end should immediately be set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line (GR 3.38/2).

The button collars must be placed on the buttons on the panel as under when the line is blocked:-

<b>Line occupied</b>	<b>Button Collar to be placed on the route buttons.</b>	<b>Position of Points Buttons</b>
Up main down line.	Route Button of Up main down line.	299/R,298/R,202/R and 203/R
Up 1 <sup>st</sup> loop down line.	Route Button of Up 1 <sup>st</sup> loop down line.	298/N,202/N
Up 2 <sup>nd</sup> loop down line.	Route Button of Up 2 <sup>nd</sup> loop down line.	203/N,299/N
Up 3 <sup>rd</sup> loop down line.	Route Button of Up 3 <sup>rd</sup> loop down line.	205/N,295/N

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

## **8. SHUNTING:**

- a) All shunting should be performed under personal supervision of Guard of a train/Shunting Master in charge of the shunting. Shunting Master will be responsible to perform all the shunting movements including attaching/Detaching Vehicles and Engine, correct setting of the Points and securing of Vehicles as per Rules.

Guard will be responsible to ensure proper Attaching/Detaching of the Vehicles and Air Brake Continuity as per Rules.

- b) T-806 should be issued to the Guard and Loco Pilot of the train for all shunting operations prior to commencement of shunting. Shunting Master will also append their signature, on the T/806 before giving to the Guard.
- c) Shunt signals must be taken 'Off' for shunting operations.
- d) Since this station is situated on gradient step than 1 in 400 while petering shunting engine should be loading side.

## **8.1 SHUNTING IN FACE OF AN APPROCHING TRAIN [ GR 8.09]**

Shunting outside the Advance Starters is not permitted unless the train has come to a stop at the home signal and station Master personally has satisfied himself to this effect and provisions of GR 8.09 of G&SR must be followed rigidly.

### **8.1.1 SHUNTING WITHIN STATION SECTION [ GR 8.10]**

- (1) If the necessary signals are kept at ON, shunting may be carried on within station section following provisions of GR.8.09 of G&S Rules.
- (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. [GR 8-10(2)]

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**8.2 SHUNTING OUTSIDE STATION SECTION:**

- i) Shunting may be performed between Advance starter signal without blocking back the section.
- ii) Shunting or obstruction for any other purpose outside the Advance starter signal shall not be permitted unless it is blocked back.
- iii) The Loco Pilot shall be authorized to pass the relevant Advance starter signal in "ON" position by an endorsement on shunting order (T-806). Suitable entries to this effect shall be made in Train Signal Register of SM/ASM.

**8.4 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES:****1. SHUNTING IN GENERAL**

- i) Hand shunting that will foul the Main line is prohibited.
- ii) When line clear has been granted for a train to approach in either direction, no hand or loose shunting shall be permitted on the Main line or non-isolated loop line.
- iii) Hand shunting of any vehicle fitted with roller bearing such as BOXs, BOBs, BCXs, BRHs etc is not permitted.
- iv) Loose shunting of such stock fitted with roller bearings is strictly prohibited.
- v) Roller bearing stock shall be protected as per SR 5.23-2 and other stock as per SR 5.23-1.

**2 PRECAUTIONS IN REGARD TO HAND AND/OR LOOSE SHUNTING:**

- i) Hand and loose shunting is not permitted at this station beyond DN Advanced Starting signal due to falling gradient of 1 in 222/ 1 in 250.
- ii) When 'Line Clear' has been granted for a train to approach in direction, no hand or loose shunting shall be permitted on the main line.

**8.5.1 SHUNTING IN THE SIDING TAKING OFF FROM, STATION YARD/GOODS SHED.**

Shunting in A & D & Ballast Siding will be performed under supervision of train Guard/Shunting Master/Person incharge of Shunting.

**8.6 REMOVAL OF RAKES FROM THE SIDING: Not applicable****8.7 WORKING OF OUTLYING SIDING, IF ANY: NIL.****9.1 TOTAL FAILURE OF COMMUNICATION.**

In the event of total interruption of the communications, that is (i.e.) when 'Line Clear' cannot be obtained by any one of the following means namely -

- i) Block instruments.
- ii) Telephone attached to block instruments.
- iii) Railway/BSNL Fixed phones.
- iv) Control telephone.
- v) VHF sets.

The trains shall be worked in accordance with the procedure as detailed in SR 6.0 2-4 of G&SR.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

9.2 **TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION.**

Not applicable being single line section.

9.3 **DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED TO ASSIST THE CRIPPLED TRAIN.** Whenever it is necessary to send a train to assist the crippled train into the block section on 'Authority No. T/A 602, the station master will: -

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

10. **VISIBILITY TEST OBJECT.**

- a) Up main line starter signal no. S-5 is nominated as visibility test object at this station.

b) **WORKING OF TRAINS IN THICK AND FOGGY WEATHER:-**

Whenever on account of Fog, dust, storm or rains, the Up main line starter signal no. S-5 is not visible from the SM's Office, the SM on duty must immediately arrange for detonators to be placed in accordance with the provision of SR 3.61-1 of G&SR.

11. **ESSENTIAL EQUIPMENT AT THE STATION.**

(For essential equipment see appendix 'E').

12. **NAMES OF THE FOG SIGNALMEN NOMINATED TO BE CALLED IN CASE OF FOG.**

S.N.	Names of the fog Signalmen.	Design	Deptt.	Remarks
(Only permanent staff to be nominated)				<b>STATION MASTER MAHOBA</b>

**LIST OF APPENDICES**

Appendix 'A'	Working of level crossing gates.
Appendix 'B'	Working of signals and interlocking & Telecommunication.
Appendix 'C'	Anti collision device.
Appendix 'D'	Duties of staff.
Appendix 'E'	List of essential equipment.
Appendix 'F'	List of DK Station, Halt Station, IBS, outlying siding.
Appendix 'G'	Working of trains in electrified section-Not applicable.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**1. GENERAL.****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE.**

<b>S.N.</b>	<b>DESCRIPTION</b>	<b>REMARKS.</b>
1	Number of Level crossing Gate.	422
2	Engineering or Traffic Gate/ Classification	Engineering "B" Class
3	Under Control of SM / SSE(P.way)	SSE/PW/MBA
4	Location at Kms.	1255.520
5	At Station	MBA
6	In Between Station	CRC - MBA
7	BG/MG/NG	BG
8	Single Line/ Double Line/Multiple Line	Single Line
9	Normal Position.	Opened
10	Interlocked/ Non-Interlocked.	Interlocked
11	Means of Interlocking.	Interlocked With gate signal
12	Provision of Signal at Kms.	(1)DN G/Signal 1255/0 (ii)UP G/Sig. No. 1256/0
13	Signalling arrangement	MCLS
14	Means of communication – Telephone/ Bell etc.	Station Master MBA Telephone
15	Width of Level crossing Gate	5.70M
16	Type of Road (NH/SH/Others)	NH-76
17	Name of Road	JHS-MIRJAPUR
18	Metalled/ Non-Metalled	Metalled
19	Approach Road	Metalled
20	Width of the Road	8.14 M
21	Angle of the Road crossing.(In case of the skew Gate)	90°
22	Road Gradient (if any)(i) North/East Side (ii) South/West side.	Level Level
23	Road Alignment. (Straight/ Curve) (i) North/East Side (ii) South/West side.	Curve Curve
24	Provision of Height Gauges	NIL
25	Type of Barriers.	P. O. L. B. with Sliding boom
26	Length of check rail.	10.95 M
27	Road surface in between Level crossing Gates	Metalled
28	Length of rumble strip/ Speed breakers	9.0M/Available
29	Road signs	Available
30	Speed Breaker Indication Board.	Available
31	TVU.....on.....	124929 on 20.06.2019
32	Census next due on.	20.06.2022
33	Demarcation for placement of Detonators	Provided
34	No. of Gateman working.	03
35	Nearest Railway Medical Assistance.	MBA
36	Nearest private Medical Assistance available (if any)	CRC
37	List of Equipment available Yes/No.	Yes.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

**1.2 EQUIPMENT KEPT:-**

<b>S. No.</b>	<b>Items</b>	<b>Quantity/Number</b>
01	Hand Signal Lamp Tri Colour	3
02	Hand Signal Flag Green	1 mounted on stick
03	Hand Signal Flag Red	3
04	Banner Flag Red	3
05	Posts for exhibiting red banner flag	2
06	Spare chains with padlocks	2 with stop mark
07	Detonators	10 in plastic case
08	Gate lamps	2
09	Tommy Bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for Oil	1
16	Water pot/Bucket	1
17	Canister For muster Roll	1
18	Set of spare spectacles of gateman wearing glass	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

**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) Biodata particulars of Gatemen, including date of passing vision test, Initial/ refresher course, safety camp, etc.
- (7) Accident Register.
- (8) Record of last census of road traffic at lever crossing gate.
- (9) Public complaint book
- (10) Inspection Book
- (11) S&T Register in case of Interlocked Engineering Gate

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

**1.4 MODE OF OPERATION :**( as given in “working instruction”)**1.5 DUTIES OF GATE MAN:****(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, gateman 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 white 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 other type of gate.
- ii. Gateman shall ensure that 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 and lock the Gates against road 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, handing battery any vehicle/wagon/train /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. Gateman shall also be prepared to repeat any signal which 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 mate or Permanent Way Inspector 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.
- ii. 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 and 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- xviii Gateman on electrified section shall watch that road vehicles/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 anything 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 waving 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 SM / ASM. 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.

**The Gateman shall protect the line 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 a with detonators, red flag by day and red flashing hand signal lamp by night.
- (iv) Gateman shall proceed exhibiting red flag by day and red flashing hand signal lamp by night towards the direction from which a train is expected to arrive first, to point 600 meters on BG and place one detonator on he line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and palace 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 Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- (vi) Having returned to the gate, he must 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 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



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

- (ix) At night Gateman shall light two hand signal lamp and take action to exhibit red light and protect the lines as described in sub para (a) above.
- (x) 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 other obstruction at the gate, the gateman shall take immediate action.
- (xi) He shall note down the particulars of the road vehicle, vehicles number, name of the driver, owner and relay these details to the nearest Station Master or permanent way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

**1.6. ENGINEERING ITEMS**

Please see Para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approach roads of level crossings and census of traffic at level crossings.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE INTERLOCKED WITH GATE SIGNALS PROVIDED WITH TELEPHONE WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC".**

**1. (A.) MODE OF OPERATION GATE :**

- i) The level crossing is provided with Power Operated Lifting Barriers.
- ii) Operation of the Gate for opening shall be possible only after time delay of 120 Seconds.
- iii) Rotary Switch is provided on panel for operation of signals.
- iv) Gate is protected by signals which are operated by a panel situated in the gate lodge. After closing the gate, 'OFF' aspect is controlled by signal button no. S-4 for UP Direction and S-3 for DN Direction.

**Description of the push button are as under:**

Button No.	Description
S-3	DN Gate signal (Button)
S-4	UP Gate signal (Button)
SW	Barriers switch open/close.

**1. Procedure for closing the gate and taking "OFF" Gate Signals :**

- i) Before permitting each train to enter the block section, SM/ASM on duty must ask the Gateman on telephone to close the gate against the road traffic for the passage of the train.
- ii) After receiving advise of the train through SM/ASM on telephone, the Gateman on duty will rotate barrier switch (SW) to 'R' (close) side. After time delay of 120 Seconds. Free indication will appear on the gate panel. A hooter becomes ringing. After hearing the hooter the Gateman on duty will press 'RED' close button on gate operation panel for closing the gate against the road traffic and gate buzzer stopped when booms UP & DN fully closed and locked against road traffic. After closing the gate and after ensuring closed indication the Gateman will press concerned signal button no. S-4 or S-3 (as the case may be) for taking 'off' concerned Gate Signal.

**01 (B.) Mode of Operation:-**

- (i) This gate is interlocked and provided with lifting barriers operated by a power operated panel. The following Buttons & indications are provided this gate panel.
  - a) Green Button - For opening the gate barrier.
  - b) Red Button - For closing the Gate barrier.
  - c) Green - Gate opened indication.
  - d) Red - Gate closed indication.
  - e) Power ON/OFF key.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- (i) The normal position of lifting barriers is open for road traffic, which is indicated on the control panel by a green light.
- (ii) The telephone communication is provided between the gate and Station Master on duty at the station MBA.
- (iii) Whenever the signals are required to be taken 'off' for the reception of a UP train or for an DN train to leave across the level crossing gate, the SM on duty will instruct the gateman on duty to close the barriers against the road traffic.
- (iv) On receipt of the above instructions, the gateman will close the barriers against the road traffic, by operating the gate panel, pressing the Red button till the barrier is fully operated and closed against Road traffic and a red indication appeared on panel.
- (v) After passing the UP/DN train the Gateman will put back the UP/DN gate signal then Gateman will press the Green button till the barrier is fully operated and opened for Road traffic.

**USE OF EMERGENCY GATE CRANK HANDLE** :In case when lifting barrier fails to operate due to failure of power supply or on account of failure of barrier, an emergency Gate Crank handle/key is provided at the Gate Lodge for manual operation of gate. To open gate, crank handle shall be inserted into the motor of the boom in the groove provided for the purpose after unlocking the boom at boom stop by key on one side of the boom. Similar action is required for opening of second boom. S&T staff shall immediately be advised in case of failure of barrier and use of crank handle for LC gate.

**NOTE:** - An emergency crank handle/key provided in a glass fronted, locked & sealed box at this gate lodge for use of crank handle in case of emergency / power failure.

### **1 (B.) Working of sliding boom:**

#### **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. Each sliding Boom will be parallel to the existing power operated 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 barriers 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 on the boom stands.

There can be the following conditions necessitating the use of Sliding Boom Barriers:

- a. When the gate barriers are damaged during Opening/Closing of 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 "A" by pulling the handle to close position up to stand provided for the purpose. He will insert the chained key marked "X" in the boom stand lock and lock it, a key marked "Y" will be released, thereafter he will go to the other side "B" and by pulling the handle to close position of the sliding Boom up to its boom stand will insert the chained key marked "X" in the boom stand lock and lock it. Also insert the "Y" key in the lock marked "Y" and turn clockwise in boom stand of side "B". After locking both keys in "B" side a 3<sup>rd</sup> key "Z" will be released. The gateman will take the key, apply it to the T-2 lock/KLCR fitted in the gate lodge and turn it after doing that he will now turn barrier switch to reverse position to activate the gate control relays to energies. Before inserting the 'Z' key in KLCR lock in gate lodge, gate man will position STOP BOARD in the middle of each pulled sliding boom. The stop board is fitted in the sliding boom.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

**NOTE:**

- (a) At the time of operating the sliding boom gateman can put back the road signal to RED by operating the RSR switch, provided in gate lodge and after complete closing of sliding boom the road signals get locked automatically in Red position.
- (b) When the gate is secured by sliding boom and close indication found the controlling signals allowing the train movements towards the gate will be take off to caution aspect.

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

For opening of the sliding boom after passage of the train, gateman will get specific permission from ASM on duty for opening the sliding boom to clear the road traffic. After getting permission from ASM, gateman will back the gate signal slide. Switch to normal position to throw the gate signal to danger and take out Z key from T-2 lock/KLCR and apply it in sliding boom of Z lock and adopt procedure in reverse order of closing the sliding boom to clear the road traffic. Now he will turn the road signal switch to clear the road signal.

**ROAD TRAFFIC SIGNALS**

Road traffic signals are provided on tubular posts on each side of LC for road users at a suitable location so as to be visible clearly to the approaching vehicles. The road traffic signals shall show the following aspects.

1. Steady Red aspect to indicate the 'closed' condition on the road barriers.
2. Steady Yellow aspect to indicate the "OPEN" condition on the road barriers.
3. Gateman can put the road signal to "RED" by operating the switch provided on gate lodge for the purpose if it becomes necessary.

**HOOTERS:-**

Hooters, mounted on posts near each barrier pedestal and working in conjunction with the road traffic signals are provided at the LX to warn the road users to the imminent closing of barrier while the barrier are being closed. The hooters shall cease sound when the barriers are closed

**02 Intimation to Gateman:-**

- {i} The SM/Cabin man/Cabin master shall intimate the Gateman through telephone connected at his end about movement of trains proceeding towards the level crossing gates.
- {ii} If the telephone is connected to the station at the receiving end this advice shall be given by the SM/ASM to the Gateman as soon as he receives train entering section advice from the dispatch in station.
- {iii} If the actual running time of the train from either end of the section is less than 10 minutes, SM/ASM on duty will convey this advice to the gateman before obtaining/granting line clear.
- {iv} It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

**03. 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 adopted:

- {i} If the telephone fails at the gate connected with the station at the dispatching end, SM shall issue a caution order to the Loco pilot of the departing train.
- {ii} SM shall advise the Loco pilot to whistle continuously and proceed cautiously while approaching the gate .
- {iii} In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- {iv} In case of an approaching train, the SM shall advise the SM at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- {v} The SM at the dispatching end shall then issue a caution order to the Loco pilot before dispatching a train the block section from his end.
- {vi} SM will also advise the gateman through Gang man/Patrolman/ Loco pilot of the first train that the telephone has become defective.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- {vii} SM should also advise S &T Staff responsible for maintenance of the telephone to rectify the same at the earliest.
- {viii} Normal working will be resumed only after S & T Staff rectify the telephone and issue reconnection/fit memo for the same.

#### 04 **Failure of lifting Barriers :**

- {i} When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the SM on duty under exchange of private number and ensure that lifting barriers do not foul the track.
- {ii} He shall immediately fix Red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- {iii} Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- {iv} After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- {v} SM on duty shall issue caution order to the Loco pilot of a departing train.
- {vi} He shall also advise the SM/ASM at the dispatching end, under exchange of private number; similarly to issue a caution order to the loco pilot before dispatching a train in the block section.
- (vii) Station Master shall advise Maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- {viii} Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection/fit memo for the same.

#### **5&6. Failure of the Gate barrier with the gate in open condition / closed condition in case of power supply Failure.**

- {i} If the gate cannot be closed & opened then gateman must immediately inform the SM/ASM/Switchman on duty on telephone, under exchange of private number.
- {ii} Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch of trains as prescribed for non-interlocked gates, should be adopted
- {iii} The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- {iv} Station Master on duty shall issue a caution order to the loco pilot of a departing train.
- {v} 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.
- {vi} SM shall advise S&T staff responsible for maintaining the gate to repair the same at the earliest.
- {vii} Normal working will be resumed only after S&T staff repair the gate and issue reconnection/fit memo for the same.

**Note:-**An emergency Crank Handle/ key is provided in a glass fronted, locked & sealed Box at this Gate Lodge in emergency (power failure), when the gateman operates gate with the Crank Handle/key by breaking the glass sealed box .

#### **7. Defective Gate Signals:**

- {i} The Gateman shall treat the gate signal as defective and must not lower them under following circumstances :
- (ii) If gate signals can be taken 'OFF' without closing the gate, or
- (iii) The gateman will immediately advise the SM on duty, under exchange of private number, regarding defective gate signals.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- {iv} Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch as prescribed for non-interlocked gates should be adopted.
- {v} He shall shown green hand signal flag by day and green light by night to the passing train after closing the gate.
- {vi} SM on duty will issue a caution order to the loco pilot of a departing train.
- {vii} 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 the block section from his end.
- {viii} SM shall advise S&T staff responsible for maintaining the gate to repair the same at the earliest.
- {ix} Normal working will be resumed only after S & T staff repair the gate and issue reconnection/fit memo for the same.

### **8. Obstruction at the Gate:**

- {i} If the gate is broken by a road vehicle which is fouling the track, or if lifting barrier or any other part of the gate foul the track., or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- {ii} He shall fix red banner flag by day and red flashing lamp by night on posts provided at both ends of the gate for this purpose.
- {iii} Immediately after this, the gateman shall advise the SM on duty regarding the defects/obstructions at the gate, under exchange of private number.
- {iv} If there is no response from the SM after two or three attempts, he shall first protect the gate and then inform on phone.
- {v} Gateman shall then rush with detonators, red flag by day and red flashing 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}.
- {vi} Thereafter he shall protect the gate from the other direction also.
- {vii} He shall note down the particulars of the road vehicle, name of the loco pilot, owner and relay these details to the SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- {viii} The SM shall also inform the SM 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.
- {ix} After the track has been cleared of all obstructions the gateman shall inform the SM accordingly, under exchange of private number.
- {x} SM shall then issue a caution order to Loco pilot of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- {xi} 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.
- {xii} SM shall advise S&T staff responsible for maintaining the gate/barrier to repair the same at the earliest.
- {xiii} Normal working will be resumed only after S&T staff repair the Gate barrier and issue reconnection/fit memo for the same.

### **9. Obstruction on the Track near Level Crossing Gate :**

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, the gateman and SM will adopt the procedure given under item No. 8 above. 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

**1. GENERAL****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE**

<b>S.N</b>	<b>DESCRIPTION</b>	<b>REMARKS</b>
1	No. of Level Crossing gate	423
2	Engineering or Traffic Gate	Engg 'C' class
3	Under control of Station Master/section engineer P. Way	SSE(P.way) MBA
4	Location at Km.	1256/2-3
5	At station.	MBA
6	In between Station.	Charkhari-MBA
7	BG/MG/NG	BG
8	Single Line/Double line/Multiple line	Single Line
9	Normal Position.	Open
10	Interlocked / Non- interlocked.	Non-Interlocked.
11	Means of Interlocking	Nil
12	Provision of gate Signals at Km. UP line DN line	Nil Nil
13	Signalling arrangement.	Nil
14	Means of communication –Telephone / Bell etc.	Telephone with SM/ASM MBA
15	Width of Level crossing Gate.	5.92 M
16	Type of Road (NH/SH/Others.)	other
17	Name of Road.	Soopa- Srinagar
18	Metalled / Non-metalled.	Metalled
19	Approach road.	Metalled
20	Width of road.	7.00 M
21	Angle of road crossing ( in case of the skew gate )	90 <sup>0</sup>
22	Road gradient (if any) i) North / East side. ii) South /West side.	Level Level
23	Road alignment (Straight /curve) i) North/East side. ii) South /West side.	Straight Straight
24	Provision of height Gauge.	Nil
25	Type of barrier.	Lifting Barrier
26	Length of Check rail.	7.60M
27	Road Surface in between Level Crossing Gate.	Metalled
28	Length of rumble strip/ Speed barker	Available
29	Road signs	Available
30	Speed breaker indication board.	Available
31	T.V.U.	48714 on 08.06.2018
32	Census next due on.	08.06.2021
33	Demarcation for placement of detonators.	Provided
34	No. of Gateman working.	02
35	Nearest Railway Medical Assistance.	MBA
36	Nearest Private Medical Assistance (if any)	Soopa (Charkhari)
37	List of equipment available Yes/No.	Yes

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

<b>1.2 EQUIPMENT:</b>		
<b>S.N</b>	<b>Items</b>	<b>Quantity/Numbers</b>
1	Hand Signal Lamp Tri Colour	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	2
9	Tommy Bar	1
10	Mortar Pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for oil	1
16	Water pot/Bucket	1
17	Canister for Muster Roll	1
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

### **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 camp, etc.
- 7 Accident Register.
- 8 Record of last census of road traffic at level crossing gate.
- 9 Public Complaint Book.
- 10 Inspection Book.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**((S.C.DUBEY))**  
Sr.DEN/E/JHS

**1.4 MODE OF OPERATION:** (As given in next Para on page:)**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 nighttime, gateman shall hold lighted hand signal lamp with white 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/ flashing 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 these 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 road 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 which 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, Gangmate or SE (P.Way) any defect in his gate or apparatus pertaining to it, as soon as possible.
- xi. Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- x. Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xi. Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xii. Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiii. Gateman shall see that the channel for the flange of the wheel is kept clear.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



- xiv. Gateman shall keep the road surface well watered and rammed in case of un-metalled roads.
- xv. Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi. Gateman on electrified section shall watch the road vehicles/ animals passing from gate are within the height loading gauge provided on either side of the level crossing gate .
- xvii. 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 anything unusual with a passing train, he shall take following action:

- i. He shall take prompt action to warn the loco pilot and Guard of the passing train by showing red flag by day and flashing red light by night.
- ii. But in case of train parting, gateman shall not show stop hand signal and 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 and guard by whistling continuously, shouting gesticulating, throwing ballast on the brake van or by any other means.
- iv. If loco pilot and Guard fail to take notice, gateman shall immediately inform the station master, If connected on telephone, to take appropriate action, under exchange of private number.

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

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

**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 flashing 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 flashing hand signal lamp by night.
- iv. Gateman shall proceed exhibiting red flag by day and red flashing hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protect the line he shall return to the level crossing gate picking up the intermediate detonator on the 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 must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

- 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 warn the Loco Pilot and stop the approaching train by waving his red flag by day and red flashing 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) above.
  - ii. 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 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 Driver 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** 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, and 919 of IRPWM.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE, NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC.**

**1 Mode of Operation:**

- i The Gate is non-interlocked.
- ii Normal position of the gate is open to road traffic.
- iii The gate is provided with L.B. operated by Engg. Gateman.
- iv Telephonic communication is provided between the gate and SM Office

**2 EXCHANGE OF PRIVATE NUMBERS:**

**(a) When Gate is connected with the Station at the Despatching End:**

- (i) Station Master at the despatching end shall advise the Gateman, Number, description, direction and expected time of passage of train at the gate under exchange of private number.
- (ii) Such advise shall be given before taking 'Off' departure signals or giving an authority to proceed to the Loco Pilot.
- (iii) The Gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of Private Number.
- (iv) Station Master will 'take off' the departure signals after getting the Private Number of the Gateman.
- (v) Gate once closed can be opened by the gateman, after passage of the train/trains or change in planning of the train movement etc, with the permission of the station master as the need of opening is known to gateman according to road traffic to be cleared. Obviously it can be done only after exchanging private number with the control station master who will ensure that there is no train movement towards the level crossing gate.

On a single line, the gateman shall be authorized to open the Level Crossing Gate after complete passage of train from the gate by observing tail board/ tail lamp.

**(b) When Gate is connected with the Station at the Receiving End :**

- (i) Station Master at the despatching end shall advise the Station Master at the other end, the number, description, direction and expected time of passage of the train at the Gate under exchange of Private Number.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- (ii) Such advice shall be given before obtaining line clear.
- (iii) The Station Master at the Receiving End shall in turn convey the same advice to the Gateman under exchange of Private Number.
- (iv) The Gateman shall close the gate and thereafter give his Private Number to the Station Master.
- (v) Only then the Station Master at the receiving end shall grant line clear to the Station Master at the despatching end.
- (vi) Gate once closed for road traffic must on no account be opened unless this is authorised by the Station Master, under exchange of Private Number.

### **3 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 at the dispatching end shall issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- ii. The caution order should advise the loco pilot to whistle continuously and approach the gate cautiously.
- iii. The loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his Assistant loco pilot to see the condition of the gate, If the gate is closed, the Assistant loco pilot will give the All Right Signal and if the gate is not closed the Assistant loco pilot must close the gate and then give All Right Signal. In the absence of the Asstt. Loco pilot, the loco pilot may take the assistance of the Guard and shall stop clear of the level crossing to pick up the assistance loco pilot who will reopen the gate for passage of road traffic.
- iv. In case of an 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.
- v. 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.
- vi. Station Master shall also advise the gateman through Gang-man/Petrol-man or loco pilot of the first train that the telephone has become defective.
- vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii. Normal working will be resumed only after S&T staffs rectify the telephone and issue reconnection/fit memo for the same.

### **4. Failure of Lifting Barriers:**

- i. When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers gates do not foul the track.
- ii. He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv. After securing the gate against road traffic, Gate-man shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- v. Station Master on duty shall issue a caution order to the loco pilot of a departing train.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- vi. The Station Master shall also advise the station master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in block section from his end.
- vii. The Station Master shall also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect at the earliest.
- viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

**5. Obstruction at the 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 other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red signal lamp by night on posts provided at both ends of the gate, for this purpose.
- ii. Immediately after this, the gateman shall advise the Station Master on duty, regarding the defect/obstruction at the gate, under exchange of private number.
- iii. Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv. 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.
- v. Gate man shall then rush with detonators, and red flag by day and red flashing 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).
- vi. Thereafter he shall protect the gate from the other direction also.
- vii. He shall note down the particulars of the road vehicle, name of the driver, 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 are not fouling the track.
- viii. 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.
- ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly under exchange of private number.
- x. Station master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi. 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.
- xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers gates to repair the same at the earliest.
- xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

**6. Obstruction on the Track near Level Crossing:**

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 gateman and station Master will adopt the procedure given under item No.5 above. 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



<b>1.2 EQUIPMENT:</b>		
	<b>Item</b>	<b>Quantity/Numbers</b>
1	Hand Signal Lamp Tri Colour	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	2
9	Tommy Bar	1
10	Mortar Pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for oil	1
16	Water pot/Bucket	1
17	Canister for Muster Roll	1
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

### **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 language.
- 2 Gateman Rule Book in Hindi/English language.
- 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 camp, etc.
- 7 Accident Register.
- 8 Record of last census of road traffic at level crossing gate.
- 9 Public Complaint Book.
- 10 Inspection Book.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

**1.4 MODE OF OPERATION:** (As given in next Para on page:)**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 nighttime, gateman shall hold lighted hand signal lamp with white 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 these 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 road 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. Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- x. Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xi. Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xii. Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xii. Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv. Gateman shall keep the road surface well watered ad rammed in case of un-metalled roads.
- xv. Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- xvi. Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xvii. 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 anything 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 flashing 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 SM/ ASM. If connected on telephone, to take appropriate action, under exchange of private number.

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

- i. 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.
- ii. 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.

**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 flashing 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 and red flag by day and flashing red hand signal lamp by night.
- 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 and 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 must 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



- viii. Thereafter, he shall 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) above.
  - ii. 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 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 Driver, 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** 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, and 919 of IRPWM.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE, NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION “CLOSED TO ROAD TRAFFIC.**

**1 Mode of Operation:**

- i. The Gate is non-interlocked.
- ii. Normal position of the gate is closed for road traffic.
- iii. The gate is provided with L.B. operated by Engg. Gateman.
- iv. Telephonic communication is provided between the gate and SM Office

**2 Exchange of private number:**

- i. Gateman must seek permission from Station Master for opening the gate.
- ii. At Level Crossing gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gateman shall exchange private number with the SM and confirm that the train has passed completely from his gate, thereafter the SM may allow the Gateman to open the gate..In such situation, the SM, before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the Gateman is taken through exchange of private number.
- iii. Suitable entries shall be made by the Station Master in the Train Signal Register/Private number sheet and log book in red ink.
- iv. After passage of road traffic, the gateman shall close the gate and confirm this to Station Master, under exchange of private number.
- v. Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been exchanged.
- vi. Gate once closed can be opened by the gateman, after passage of train / trains or change in planning of train movement etc., with the permission of the SM/ASM, as the need of opening is known to gateman according to road traffic to be cleared. Obviously, it can be done only after exchange of Pvt. No. with the controlling SM who will ensure that there is no train movement towards the level crossing.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

### **3 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 at the dispatching end shall issue a caution order to the loco pilot of the departing train.
- ii. The caution order shall advise the loco pilot to whistle continuously and approach the gate cautiously.
- iii. The loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his Assistant loco pilot to see the condition of the gate. If the gate is closed, the Assistant loco pilot will give the All Right Signal and if the gate is not closed the Assistant loco pilot must close the gate and then give All Right Signal. In the absence of the Asstt. Loco pilot, the loco pilot may take the assistance of Asstt. Guard/Guard.
- iv. In case of an 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.
- v. 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.
- vii. Station Master shall also advise the gateman through Gang-man/Petrol-man or loco pilot of the first train that the telephone has become defective.
- vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii. Normal working will be resumed only after S&T staffs rectify the telephone and issue reconnection/fit memo for the same.

### **4. Failure of Lifting Barriers:**

- i. When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers gates do not foul the track.
- ii. He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv. After securing the gate against road traffic, Gate-man shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- v. Station Master on duty shall issue caution order to the loco pilot of a departing train.
- vi. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in block section from his end.
- vii. Station Master shall also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.
- viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

**5. Obstruction at the 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 other obstruction 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.
- ii. Immediately after this, the gateman shall advise the Station Master on duty, regarding defects/obstruction at the gate, under exchange of private number.
- iii. Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv. 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.
- v. Gate man shall then rush with detonators, and red flag by day and 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).
- vi. Thereafter he shall protect the gate from the other direction also.
- vii. 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 is not fouling the track.
- viii. 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.
- ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly under exchange of private number.
- x. Station master shall then issue caution order to Loco Pilot of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi. 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.
- xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

**6. Obstruction on the Track near Level Crossing:**

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 gateman and station Master will adopt the procedure given under item No.5 above. If the obstruction fouls the Level Crossing Gate, gateman he must keep the gates closed against road traffic till the track is cleared of the obstruction.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



<b>1.2 EQUIPMENT:</b>		
	<b>Item</b>	<b>Quantity/Numbers</b>
1	Hand Signal Lamp Tri Colour	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	2
9	Tommy Bar	1
10	Mortar Pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for oil	1
16	Water pot/Bucket	1
17	Canister for Muster Roll	1
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

### **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 language.
- 2 Gateman Rule Book in Hindi/English language.
- 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 camp, etc.
- 7 Accident Register.
- 8 Record of last census of road traffic at level crossing gate.
- 9 Public Complaint Book.
- 10 Inspection Book.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

**1.4 MODE OF OPERATION:** (As given in next Para on page:)**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 nighttime, 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 these 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 road 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, Gangmat or SE (P.Way) any defect in his gate or apparatus pertaining to it, as soon as possible.
ix.	Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
x.	Gateman shall ensure that he is having competency certificate in his possession while on duty.
xi.	Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
xii.	Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
xiii.	Gateman shall see that the channel for the flange of the wheel is kept clear.
xiv.	Gateman shall keep the road surface well watered ad rammed in case of un-metalled roads.
xv.	Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
xvi.	Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
xvii.	Gateman shall prevent tress passing by persons or cattle to the maximum extent.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

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

In case gateman observes anything 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 flashing 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 SM/ ASM. If connected on telephone, to take appropriate action, under exchange of private number.

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

- i. 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.
- ii. 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.

**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 flashing 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 and red flag by day and flashing red hand signal lamp by night.
- 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 and 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 must 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 warn the Loco Pilot and stop the approaching train by waving his red flag by day and red hand signal lamp by night repeatedly.

**(ATUL YADAV)**  
**Sr. DOM G&G JHS**

**(S.C.DUBEY)**  
**Sr.DEN/E/JHS**

**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) above.
- ii. 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 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 Driver, 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** 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, and 919 of IRPWM.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE, NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION “CLOSED TO ROAD TRAFFIC.**

**1 Mode of Operation:**

- i. The Gate is non-interlocked.
- ii. Normal position of the gate is closed for road traffic.
- iii. The gate is provided with L.B. operated by Engg. Gateman.
- iv. Telephonic communication is provided between the gate and SM Office

**2 Exchange of private number:**

- i. Gateman must seek permission from Station Master for opening the gate.
- ii. At Level Crossing gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gateman shall exchange private number with the SM and confirm that the train has passed completely from his gate, thereafter the SM may allow the Gateman to open the gate..In such situation, the SM, before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the Gateman is taken through exchange of private number.
- iii. Suitable entries shall be made by the Station Master in the Train Signal Register/Private number sheet and log book in red ink.
- iv. After passage of road traffic, the gateman shall close the gate and confirm this to Station Master, under exchange of private number.
- v. Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been exchanged.
- vi. Gate once closed can be opened by the gateman, after passage of train / trains or change in planning of train movement etc., with the permission of the SM/ASM, as the need of opening is known to gateman according to road traffic to be cleared. Obviously, it can be done only after exchange of Pvt. No. with the controlling SM who will ensure that there is no train movement towards the level crossing.

**3 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 at the dispatching end shall issue a caution order to the loco pilot of the departing train.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



- ii. The caution order shall advise the loco pilot to whistle continuously and approach the gate cautiously.
- iii. The loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his Assistant loco pilot to see the condition of the gate. If the gate is closed, the Assistant loco pilot will give the All Right Signal and if the gate is not closed the Assistant loco pilot must close the gate and then give All Right Signal. In the absence of the Asstt. Loco pilot, the loco pilot may take the assistance of Asstt. Guard/Guard.
- iv. In case of an 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.
- v. 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.
- vii. Station Master shall also advise the gateman through Gang-man/Petrol-man or loco pilot of the first train that the telephone has become defective.
- vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii. Normal working will be resumed only after S&T staffs rectify the telephone and issue reconnection/fit memo for the same.

**4. Failure of Lifting Barriers:**

- i. When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers gates do not foul the track.
- ii. He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv. After securing the gate against road traffic, Gate-man shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- v. Station Master on duty shall issue caution order to the loco pilot of a departing train.
- vi. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in block section from his end.
- vii. Station Master shall also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.
- viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

**5. Obstruction at the 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 other obstruction 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.
- ii. Immediately after this, the gateman shall advise the Station Master on duty, regarding defects/obstruction at the gate, under exchange of private number.
- iii. Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- iv. 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.
- v. Gate man shall then rush with detonators, and red flag by day and 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).
- vi. Thereafter he shall protect the gate from the other direction also.
- vii. 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 is not fouling the track.
- viii. 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.
- ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly under exchange of private number.
- x. Station master shall then issue caution order to Loco Pilot of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi. 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.
- xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

**6. Obstruction on the Track near Level Crossing:**

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 gateman and station Master will adopt the procedure given under item No.5 above. If the obstruction fouls the Level Crossing Gate, gateman he must keep the gates closed against road traffic till the track is cleared of the obstruction.

**(ATUL YADAV)**  
**Sr. DOM G&G JHS**

**(S.C.DUBEY)**  
**Sr.DEN/E/JHS**



**1.3 EQUIPMENT KEPT:-**

<b>S. No.</b>	<b>Items</b>	<b>Quantity/Number</b>
01	Hand Signal Lamp Tri Colour	3
02	Hand Signal Flag Green	1 mounted on stick
03	Hand Signal Flag Red	3
04	Banner Flag Red	3
05	Posts for exhibiting red banner flag	2
06	Spare chains with padlocks	2 with stop mark
07	Detonators	10 in plastic case
08	Gate lamps	2
09	Tommy Bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for Oil	1
16	Water pot/Bucket	1
17	Canister For muster Roll	1
18	Set of spare spectacles of gateman wearing glass	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

**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 language.
- 2 Gateman Rule Book in Hindi/English language.
- 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 camp, etc.
- 7 Accident Register.
- 8 Record of last census of road traffic at level crossing gate.
- 9 Public Complaint Book.
- 10 Inspection Book.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

**1.4 MODE OF OPERATION:** (As given in next Para on page:)

**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 nighttime, gateman shall hold lighted hand signal lamp with white 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 these 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 road 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, Gangmat or SE (P.Way) any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix. Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- x. Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xi. Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xii. Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xii. Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv. Gateman shall keep the road surface well watered ad rammed in case of un-metalled roads.
- xv. Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi. Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xvii. Gateman shall prevent tress passing by persons or cattle to the maximum extent.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

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

In case gateman observes anything 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 flashing 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 SM/ ASM. If connected on telephone, to take appropriate action, under exchange of private number.

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

- i. 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.
- ii. 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.

**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 flashing 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 and red flag by day and flashing red hand signal lamp by night.
- 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 and 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 must 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 warn the Loco Pilot and stop the approaching train by waving his red flag by day and red hand signal lamp by night repeatedly.

**(ATUL YADAV)**  
**Sr. DOM G&G JHS**

**(S.C.DUBEY)**  
**Sr.DEN/E/JHS**

**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) above.
- ii. 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 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 Driver, 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** 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, and 919 of IRPWM.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE, NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION “CLOSED TO ROAD TRAFFIC.**

**1 Mode of Operation:**

- i The Gate is non-interlocked.
- ii Normal position of the gate is closed for road traffic.
- iii The gate is provided with L.B. operated by Engg. Gateman.
- iv Telephonic communication is provided between the gate and SM Office

**2 Exchange of private number:**

- i. Gateman must seek permission from Station Master for opening the gate.
- ii. At Level Crossing gates with normal position closed to road traffic, if the gate is required to be opened to pass the road traffic, the gateman shall exchange private number with the SM and confirm that the train has passed completely from his gate, thereafter the SM may allow the Gateman to open the gate..In such situation, the SM, before dispatching or giving line clear for any other train in the block section in question shall ensure that the level crossing gate is closed for road traffic and assurance of the Gateman is taken through exchange of private number.
- iii. Suitable entries shall be made by the Station Master in the Train Signal Register/Private number sheet and log book in red ink.
- iv. After passage of road traffic, the gateman shall close the gate and confirm this to Station Master, under exchange of private number.
- v. Before any train is allowed to enter the block section again, the Station Master must ensure that private number from the gateman has been exchanged.
- vi. Gate once closed can be opened by the gateman, after passage of train / trains or change in planning of train movement etc., with the permission of the SM/ASM, as the need of opening is known to gateman according to road traffic to be cleared. Obviously, it can be done only after exchange of Pvt. No. with the controlling SM who will ensure that there is no train movement towards the level crossing.

**3 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 at the dispatching end shall issue a caution order to the loco pilot of the departing train.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- ii. The caution order shall advise the loco pilot to whistle continuously and approach the gate cautiously.
- iii. The loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his Assistant loco pilot to see the condition of the gate. If the gate is closed, the Assistant loco pilot will give the All Right Signal and if the gate is not closed the Assistant loco pilot must close the gate and then give All Right Signal. In the absence of the Asstt. Loco pilot, the loco pilot may take the assistance of Asstt. Guard/Guard.
- iv. In case of an 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.
- v. 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.
- vii. Station Master shall also advise the gateman through Gang-man/Petrol-man or loco pilot of the first train that the telephone has become defective.
- vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii. Normal working will be resumed only after S&T staffs rectify the telephone and issue reconnection/fit memo for the same.

**4. Failure of Lifting Barriers:**

- i. When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers gates do not foul the track.
- ii. He shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv. After securing the gate against road traffic, Gate-man shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- v. Station Master on duty shall issue caution order to the loco pilot of a departing train.
- vi. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in block section from his end.
- vii. Station Master shall also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.
- viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

**5. Obstruction at the 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 other obstruction 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.
- ii. Immediately after this, the gateman shall advise the Station Master on duty, regarding defects/obstruction at the gate, under exchange of private number.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



- iii. Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
  - iv. 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.
  - v. Gate man shall then rush with detonators, and red flag by day and 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).
  - vi. Thereafter he shall protect the gate from the other direction also.
  - vii. 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 is not fouling the track.
  - viii. 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.
  - ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly under exchange of private number.
  - x. Station master shall then issue caution order to Loco Pilot of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
  - xi. 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.
  - xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
  - xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.
- 6. Obstruction on the Track near Level Crossing:**  
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 gateman and station Master will adopt the procedure given under item No.5 above. If the obstruction fouls the Level Crossing Gate, gateman he must keep the gates closed against road traffic till the track is cleared of the obstruction.

**(ATUL YADAV)**  
**Sr. DOM G&G JHS**

**(S.C.DUBEY)**  
**Sr.DEN/E/JHS**

**1. GENERAL.****1.3 DESCRIPTION OF THE LEVEL CROSSING GATE.**

<b>S.N</b>	<b>DESCRIPTION</b>	<b>REMARKS</b>
1	No. of Level Crossing gate	430
2	Engineering/Traffic Gate	Engg 'C' class
3	Under control of SM/ SSE (P.Way)	SSE(P.way) MBA
4	Location at Km	1267/0-1
5	At Station	-
6	In Between Stations	MBA- Baripura
7	BG/MG/NG	BG
8	Single line/Double line/Mixed line	Single Line
9	Normal Position	Open to Road Traffic
10	Interlocked / Non-Interlocked	Non-Interlocked.
11	Means of Interlocking	Nil
12	Provision of Gate Signals at Kms. i. UP line ii. DN line	Nil Nil
13	Signalling arrangements	Nil
14	Means of communication -Telephone/ Bell	Telephone with SM/ASM on duty MBA
15	Width of Level Crossing gate	5.50 M
16	Type of Road (NH/SH/others)	Other
17	Name of Road	Mahoba - Bilbai
18	Metalled / Non-Metalled	Metalled
19	Approach Road	Metalled
20	Width of Road	4.00 M
21	Angle of Road Crossing (in case of the skew gate)	90°
22	Road gradient (If any) i) Towards N/E ii) Towards S/W	1:70 1:50
23	Road alignment (Straight/Curve). i) Towards N/E ii) Towards S/W	Straight Straight
24	Provision of Height Gauges	Provided
25	Type of Barriers	Lifting Barrier
26	Length of Check rails	7.50M
27	Road surface in between Level Crossing gates	Metalled
28	Length of Rumble strip/ Speed breaker	Available
29	Road sign	Available
30	Speed restriction board.	Available
31	T.V.U.	86346 on 08.06.2018
32	Census next due on	08.06.2021
33	Demarcation for placement of detonators	Provided
34	No. of Gateman working	02
35	Nearest Railway Medical Assistance	MBA
36	Nearest Privately Medical Assistance (if any)	MBA
37	List of equipment available Yes/No	Yes

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

<b>1.2 EQUIPMENT:</b>		
<b>S.N</b>	<b>Items</b>	<b>Quantity/Numbers</b>
1	Hand Signal Lamp Tri Colour	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	2
9	Tommy Bar	1
10	Mortar Pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for oil	1
16	Water pot/Bucket	1
17	Canister for Muster Roll	1
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

### **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 camp, etc.
- 7 Accident Register.
- 8 Record of last census of road traffic at level crossing gate.
- 9 Public Complaint Book.
- 10 Inspection Book.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

**1.4 MODE OF OPERATION:** (As given in next Para on page:)**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 nighttime, gateman shall hold lighted hand signal lamp with white 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/ flashing 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 these 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 road 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 which 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 mate or SE (P.Way) any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix. Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- x. Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xi. Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xii. Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiii. Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv. Gateman shall keep the road surface well watered ad rammed in case of un-metalled roads.
- xv. Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- xvi. Gateman on electrified section shall watch the road vehicles/ animals passing from gate are within the height loading gauge provided on either side of the level crossing gate .
- xvii. 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 anything unusual with a passing train, he shall take following action:

- i. He shall take prompt action to warn the loco pilot and Guard of the passing train by showing red flag by day and flashing red light by night.
- ii. But in case of train parting, gateman shall not show stop hand signal and 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 and guard by whistling continuously, shouting gesticulating, throwing ballast on the brake van or by any other means.
- iv. If loco pilot and Guard fail to take notice, gateman shall immediately inform the station master, If connected on telephone, to take appropriate action, under exchange of private number.

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

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

**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 flashing 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 flashing hand signal lamp by night.
- iv. Gateman shall proceed exhibiting red flag by day and red flashing hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protect the line he shall return to the level crossing gate picking up the intermediate detonator on the 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 must 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 warn the Loco Pilot and stop the approaching train by waving his red flag by day and red flashing 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.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

- 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) above.
  - ii. 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 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 Driver 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** 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, and 919 of IRPWM.

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE, NON-INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION “OPEN TO ROAD TRAFFIC.**

**1 Mode of Operation:**

- i The Gate is non-interlocked.
- ii Normal position of the gate is open to road traffic.
- iii The gate is provided with L.B. operated by Engg. Gateman.
- iv Telephonic communication is provided between the gate and SM Office

**2 EXCHANGE OF PRIVATE NUMBERS:**

**(a) When Gate is connected with the Station at the Despatching End:**

- (i) Station Master at the despatching end shall advise the Gateman, Number, description, direction and expected time of passage of train at the gate under exchange of private number.
- (ii) Such advise shall be given before taking ‘Off’ departure signals or giving an authority to proceed to the Loco Pilot.
- (iii) The Gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of Private Number.
- (iv) Station Master will ‘take off’ the departure signals after getting the Private Number of the Gateman.
- (v) Gate once closed can be opened by the gateman, after passage of the train/trains or change in planning of the train movement etc, with the permission of the station master as the need of opening is known to gateman according to road traffic to be cleared. Obviously it can be done only after exchanging private number with the control station master who will ensure that there is no train movement towards the level crossing gate.  
On a single line, the gateman shall be authorized to open the Level Crossing Gate after complete passage of train from the gate by observing tail board/ tail lamp.

**(b) When Gate is connected with the Station at the Receiving End:**

- (i) Station Master at the despatching end shall advise the Station Master at the other end, the number, description, direction and expected time of passage of the train at the Gate under exchange of Private Number.
- (vii) Such advice shall be given before obtaining line clear.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- (viii) The Station Master at the Receiving End shall in turn convey the same advice to the Gateman under exchange of Private Number.
- (ix) The Gateman shall close the gate and thereafter give his Private Number to the Station Master.
- (x) Only then the Station Master at the receiving end shall grant line clear to the Station Master at the despatching end.
- (xi) Gate once closed for road traffic must on no account be opened unless this is authorised by the Station Master, under exchange of Private Number.

### **3 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 at the dispatching end shall issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- ii. The caution order should advise the loco pilot to whistle continuously and approach the gate cautiously.
- iii. The loco pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and depute his Assistant loco pilot to see the condition of the gate, If the gate is closed, the Assistant loco pilot will give the All Right Signal and if the gate is not closed the Assistant loco pilot must close the gate and then give All Right Signal. In the absence of the Asstt. Loco pilot, the loco pilot may take the assistance of the Guard and shall stop clear of the level crossing to pick up the assistance loco pilot who will reopen the gate for passage of road traffic.
- iv. In case of an 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.
- v. 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.
- vi. Station Master shall also advise the gateman through Gang-man/Petrol-man or loco pilot of the first train that the telephone has become defective.
- vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii. Normal working will be resumed only after S&T staffs rectify the telephone and issue reconnection/fit memo for the same.

### **4. Failure of Lifting Barriers:**

- i. When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers gates do not foul the track.
- ii. The Gateman shall immediately fix red banner flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- iii. Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv. After securing the gate against road traffic, Gate-man shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- v. Station Master on duty shall issue a caution order to the loco pilot of a departing train.
- vi. The Station Master shall also advise the station master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in block section from his end.

**(ATUL YADAV)**  
**Sr. DOM G&G JHS**

**(S.C.DUBEY)**  
**Sr.DEN/E/JHS**

- vii. The Station Master shall also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect at the earliest.
- viii. Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

**5. Obstruction at the 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 other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red signal lamp by night on posts provided at both ends of the gate, for this purpose.
- ii. Immediately after this, the gateman shall advise the Station Master on duty, regarding the defect/obstruction at the gate, under exchange of private number.
- iii. Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv. 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.
- v. Gate man shall then rush with detonators, and red flag by day and red flashing 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).
- vi. Thereafter he shall protect the gate from the other direction also.
- vii. He shall note down the particulars of the road vehicle, name of the driver, 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 are not fouling the track.
- viii. 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.
- ix. After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly under exchange of private number.
- x. Station master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi. 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.
- xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers gates to repair the same at the earliest.
- xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

**6. Obstruction on the Track near Level Crossing:**

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 gateman and station Master will adopt the procedure given under item No.5 above. 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS



**1. GENERAL.****DESCRIPTION OF THE LEVEL CROSSING GATE.**

<b>S.N</b>	<b>DESCRIPTION</b>	<b>REMARKS.</b>
1	Number of Level crossing Gate.	432
2	Engineering or Traffic Gate	Engineering 'B' class
3	Under Control of Station Master/Section Engineer (P-Way)	Section Engineer (P-Way)- MBA
4	Location at Kms.	1272/8-9
5	At Station	-
6	In Between Stations	Between MBA and KBR Stations
7	BG/MG/NG	BG
8	Single Line/ Double Line/Multiple Line	Single Line
9	Normal Position.	Open
10	Interlocked/ Non Interlocked.	Interlocked.
11	Means of Interlocking.	Interlocked with gate signals
12	Provision of Signal at Kms. (i) UP Line (ii) DN Line	3 GF. at Km..1273/2 1 GF. at Km..1272/6
13	Signalling arrangements	CLS Signalling
14	Means of communication – Telephone/ Bell etc.	With on duty SM/MBA
15	Width of Level crossing Gate	5.80 M
16	Type of Road (NH/SH/Others)	Jhansi – Mirjapur Road
17	Name of Road	NH-76
18	Metalled/ Non Metalled	Metalled
19	Approach Road	Metalled
20	Width of the Road	5.80 M
21	Angle of the Road crossing.( Incase of the skew Gate)	60°
22	Road Gradient (if any) (i) North/East Side (ii) South/West side.	1:80 1:100
23	Road Alignment.(Straight/Curve) (i) North/East Side. (ii) South/West side.	Curve Curve
24	Provision of Height Gauges	Provided
25	Type of Barriers.	P.O.L.B +Sliding Boom
26	Length of check rail.	12.90M
27	Road surface in between Level crossing Gates	Metalled
28	Length of rumble strip/Speed breakers	8.0 M/Provided
29	Road signs	Provided
30	Speed Breaker Indication Board.	Provided
31	TVU.	275620 on 23.08.2016
32	Census next due on.	23.08.2019
33	Demarcation for placement of Detonators	Marked
34	No. Of Gateman working.	Three (03)
35	Nearest Railway Medical Assistance.	Mohoba
36	Nearest private Medical Assistance available (if any)	Mohoba
37	List of Equipment available Yes/No.	Yes

**(ATUL YADAV)****(A.K. SAINI)****(S.C.DUBEY)**

**Sr. DOM G&G JHS****Sr. DSTE (BL) JHS****Sr.DEN/E/JHS****1.2 EQUIPMENT KEPT AT GATE LODGE:**

S.N.	Items	Quantity / Number
01	Hand Signal Lamp Tri Colour	3 (including one LED based lamp)
02	Hand Signal Flag Green	1 mounted on stick
03	Hand Signal Flag Red	3 (6 on quadruple/ line or twine single line and 7in case Hexaple section mounted on sticks)
04	Banner Flag Red	3(5 on quadruple/ line or twine single line
05	Posts for exhibiting red banner flag	2 (4 on quadruple/ line or twine single line and 5 on Hexaple section)
06	Spare chains with padlocks	2 with stop mark
07	Detonators	10 in tin case
08	Gate lamps	2
09	Tommy Bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Hammer	1 (In case of asphalted road this may not be provided)
13	Pick Axe	1 (In case of asphalted road this may not be provided)
14	Tin case for flags	1
15	Can for Oil	1
16	Water pot/Bucket	1
17	Canister For muster Roll	1
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 size chain	2

**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) Biodata particulars of Gatemen, including date of passing vision test, Initial/ refresher course, safety camp, etc.
- (7) Accident Register.
- (8) Record of last census of road traffic at lever crossing gate.
- (9) Public complaint book
- (10) Inspection Book
- (11) S & T Register in case of Interlocked Engineering Gate.

**(ATUL YADAV)**  
**Sr. DOM G&G JHS**

**(A.K. SAINI)**  
**Sr. DSTE (BL) JHS**

**(S.C.DUBEY)**  
**Sr.DEN/E/JHS**

#### 1.4 **MODE OF OPERATION:**

- i) Detailed working given in “working instruction” item No. (1).

#### 1.5 **DUTIES OF GATE MAN :**

##### (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, gateman 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 white 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 crossings and during emergencies or obstructions on track at other type of gate.
- (ii) Gateman shall ensure that 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 close and lock the Gates against road traffic, before leaving the Gate.
- (iv) Excepts 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/wagon/train /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) Gateman shall also be prepared to repeat any signal, which 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 the disc and padlocks for securing the gate against road traffic.
- (viii) Gateman Shall report to the nearest Station Master, Gang mate 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.
- (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.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(A.K. SAINI)**  
Sr. DSTE (BL) JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (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 and 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) Gateman on electrified section shall watch that road vehicles/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 his maximum extent.

**(4) ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN :**

In case gateman observes anything 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 flashing light by night.
- (ii) But in case of train parting, Gateman shall not show stop hand signal and shall show prescribed signal for train parting ie. Green hand signal during day and white light during night waving up and down vertically.
- (iii) He shall simultaneously, shouting gesticulating, throwing ballast on the brake van or by any other means
- (iv) If Loco pilot/guard fails to take notice, gateman shall immediately inform the SM, if connected on telephone, the 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.

**The Gateman shall protect the line as under :**

**(a) On Single line section :**

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

**(ATUL YADAV)  
Sr. DOM G&G JHS**

**(A.K. SAINI)  
Sr. DSTE (BL) JHS**

**(S.C.DUBEY)  
Sr.DEN/E/JHS**

- (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 must then take steps to remove the obstruction and warn the Loco pilot of the approaching train.
- (vii) In case the gateman observe 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.
- (ix) Thereafter, he shall warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
  - (b) Other action to be taken by Gateman:
    - (i) At night Gateman shall light two hand signal lamp and take action to exhibit red light and protect the lines as described in sub paras (a) above.
    - (ii) 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 other obstruction at the gate, the gateman shall take immediate action.
    - (iii) He shall note down the particulars of the road vehicle, vehicles number, name of the Driver, 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. For the visibility requirements at the 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 ENGINEERING LEVEL CROSSING GATES INTERLOCKED WITH GATE SIGNALS, PROVIDED WITH TELEPHONE WITH NORMAL POSITION ‘OPEN TO ROAD TRAFFIC.’ LEVEL CROSSING GATE No. 432 AT KMS. 1272/ 9-0 MBA-KBR STATIONS.**

**01 Mode of Operation:**

- (i) This gate is interlocked and provided with lifting barriers operated by a power operated panel. The following Buttons & indications are provided at this gate operating panel.
  - a) Green Button - For opening the gate barrier.
  - b) Red Button - For closing the Gate barrier.
  - c) Green - Gate opened indication.
  - d) Red - Gate closed indication.
  - e) Power ON - Yellow indication
- (ii) The normal position of lifting barriers is open for road traffic, which is indicated on the control panel by a green light
- (iii) The telephone communication is provided between the gate and Station Master Mahoba
- iv) UP & DN Gate signal is controlled through a Ground frame lever provided at Gate lodge
  - a) DN Gate signal lever No.- 1GF
  - b) UP Gate signal lever No. - 3GF
  - c) UP /DN Gate signal lock lever No.- 2GF
  - d) Gate signal lock lever No.- 2GF in reverse position when Gate is opened.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(A.K. SAINI)**  
Sr. DSTE (BL) JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

- (v) Whenever the signals are required to be taken 'off' for the reception/despatch of an UP train or for a DN train to leave across the level crossing gate, the SM/ASM on duty will instruct the gateman on duty to close the barriers against the road traffic.
- (vi) The gateman will close the barrier against the road traffic by operating, the gate operating panel pressing the red button till the barrier is fully operated and closed against road traffic and a indication will appear on Gate panel. After this Gateman will press the push button provided on gate operating panel to transmit the "gate closed position" to SM's panel & SM who will observe the Gate closed indication "yellow steady light" and will take 'off' the Signal. During the closing of Gate hooter starts, till the control is not transmitted to SM by gateman through push button.
- (v) After passing the UP/DN train the Gateman can open the Gate barrier, by normalizing the operated GF signal lever No.(1 or 3) and also he will reverse the Gate signals locking lever No.2GF for opening the gate. A flashing indication yellow light (LED) will appear on the gate indication panel, after one minute flashing indication turn to a steady yellow light. Then Gateman will press the Green button till the barrier is fully operated and opened for Road traffic and a green indication appear on the Gate operating panel.

**02 Intimation to Gateman:-**

- i) The SM/ASM shall intimate the Gateman through telephone connected his end about movement of trains proceeding towards the level crossing gates.
- {ii} If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master to the Gateman, as soon as he receives Train Entering section advice from the dispatching end.
- (iii) If the actual running time of the train from either end of the section is less than 10 minutes, SM/ASM on duty will convey this advice to the gateman before obtaining/granting line clear.
- {iv} It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

**Note:-** If gate is failed in open condition the Gateman will immediately put the Road signal in "ON position through a switch provided at Gate Lodge.

**03 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 adopted:

- {i} If the telephone fails at the gate connected with the station at the dispatching end, SM shall issue a caution order to the Loco Pilot of the departing train.
- {ii} SM shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate
- {iii} In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- {iv} In case of an approaching train, the SM shall advise the SM at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- {v} The SM at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train the block section from his end.
- {vi} SM will also advise the gateman through Gang man/Patrolman/Loco Pilot of the first train that the telephone has become defective.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

- {vii} SM should also advise S &T Staff responsible for maintenance of the telephone to rectify the same at the earliest.
- {viii} Normal working will be resumed only after S&T Staff rectifies the telephone and issue reconnection/fit memo for the same.

#### **4. FAILURE OF LIFTING BARRIERS**

- {i} When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the SM on duty under exchange of private number and ensure that lifting barriers do not foul the track.
- {ii} He shall immediately fix Red danger flag by day and red flashing light by night on the post at that end first from which the train is approaching and then at the other end.
- {iii} Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- {iv} After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the Loco Pilot of the approaching train.
- {v} SM on duty shall issue caution order to the Loco Pilot of a departing train.
- {vi} He shall also advise the SM at the dispatching end, under exchange of private number; similarly to issue a caution order to the Loco Pilot before dispatching a train in the block section.
- (vii) Station Master shall advise Maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- {viii} Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection/fit memo for the same.

#### **5&6. Failure of the Gate barrier with the gate in open condition / closed condition in case of power supply Failure:**

- {i} If the gate cannot be closed & opened then gateman must immediately inform the SM/ASM/CASM on duty on telephone, under exchange of private number.
- {ii} Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch of trains as prescribed for non-interlocked gates, should be adopted
- {iii} The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals
- {iv} Station Master on duty shall issue a caution order to the Loco pilot of a departing train.
- {v} 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.
- {vi} SM shall advise S & T staff responsible for maintaining the gate to repair the same at the earliest.
- {vii} Normal working will be resumed only after S &T staff repair the gate and issue reconnection/fit memo for the same.

#### **viii) USE OF EMERGENCY GATE CRANK HANDLE:-**

In case when lifting barrier fails to operate due to failure of power supply or on account of failure of barrier, an emergency Gate Crank Handle/ key is provided at the Gate Lodge for manual operation of gate. .

To open gate, crank handle shall be inserted into the motor of the boom in the groove provided for the purpose after unlocking the boom at boom stop by key on one side of the boom. Similar action is required for opening of second boom. S&T staff shall immediately be advised in case of failure of barrier and use of crank handle for LC gate.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(A.K. SAINI)**  
Sr. DSTE (BL) JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

**NOTE:-** An emergency crank handle/key is provided in a glass fronted, locked & sealed box at this gate lodge in emergency (power failure) when the gate man operate the gate with the crank handle/key by breaking the seal of the box.

- ix) After rectification, the Emergency key shall be replaced in the Emergency key Box and resealed by the S&T staff.

### **WORKING OF SLIDING BOOM**

**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. Each sliding Boom will be parallel to the existing power operated 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 barriers 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 on the boom stands. The stop boards fitted with sliding boom.

There can be the following conditions necessitating the use of Sliding Boom Barriers:

- a. When the gate barriers are damaged during Opening/Closing of 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 form SM on duty will turn the road switch provided at gate to reverse position to throw the road signal to danger and restrict the road traffic by closing the sliding boom during this process he will slide the sliding boom of side "A" by pulling the handle to close position up to stand provided for the purpose. He will insert the chained key marked "X" in the boom stand lock and lock it, a key marked "Y" will be released, thereafter he will go to the other side "B" and by pulling the handle to close position of the sliding Boom up to its boom stand will insert the chained key marked "X" in the boom stand lock and lock it.

Also insert the "Y" key in the lock marked "Y" and turn clockwise in boom stand of side "B". After locking both keys in "B" side a 3<sup>rd</sup> key "Z" will be released. The gateman will take the key, apply it to the T-2 lock/KLCR fitted in the gate lodge and turn it after doing that he will now turn barrier switch to reverse position to activate the gate control relays to energies. Before inserting the 'Z' key in the KLCR lock in gate lodge gate man will fix STOP BOARD on each pulled sliding boom. The stop boards fitted with sliding boom.

- NOTE:(a)** At the time of operating the sliding boom gate man can put back the road signal to RED by operating the RSR switch, provided in gate lodge and after complete closing of sliding boom the road signals get locked automatically in Red position.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(A.K. SAINI)**  
Sr. DSTE (BL) JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS



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

For opening of the sliding boom after passage of the train, gateman will get specific permission from ASM on duty for opening the sliding boom to clear the road traffic. After getting permission from ASM, gateman will back the gate signal slide to normal position to throw the gate signal to danger and take out Z key from T-2 lock/KLCR and apply it in sliding boom of Z lock and adopt procedure in reverse order of closing the sliding boom to clear the road traffic. Now he will turn the road signal switch to the normal to clear the road signal.

**Road Traffic signals:**

Road traffic signals are provided on tubular posts on each side of the L.C. for road users at a suitable location so as to be visible clearly to the approaching road vehicles. The road traffic signals shall show the following aspect:

- i. Steady Red aspect to indicate the “Closed” condition on the road barriers.
- ii. Steady Yellow aspect to indicate the “OPEN” condition on the road barriers.
- iii. Gate man can put the road signal to “RED” by operating the switch provided on gate lodge for this purpose if it becomes necessary.

**Hooters:**

Hooters, mounted on posts near each barrier pedestal and working in conjunction with the road traffic signals, are provided at the LX to warn the road users to the imminent closing of the barriers while the barriers are being closed. The hooters shall cease sound when the barriers are closed.

**7. Defective Gate Signals:**

- {i} The Gateman shall treat the gate signal as defective and must not put “OFF” them under following circumstances:
  - a) If gate signals can be taken ‘OFF’ without closing the gate, or
- (ii) If the Gate or the Gate signal becomes defective in ‘OFF’ position, the Gateman will make all efforts to put it at ‘ON’ position.
- {iii} The gateman will immediately advise the SM on duty, under exchange of private number, regarding defective gate signals
- {iv} Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch as prescribed for non-interlocked gates should be adopted.
- {v} He shall shown green hand signal flag by day and green light by night to the passing train after closing the gate.
- {vi} SM on duty will issue a caution order to the Loco pilot of a departing train.
- {vii} 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 the block section from his end.
- {viii} SM shall advise S&T staff responsible for maintaining the gate to repair the same at the earliest.
- {ix} Normal working will be resumed only after S&T staff repair the gate and issue reconnection/fit memo for the same.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(S.C.DUBEY)  
Sr.DEN/E/JHS

**8. Obstruction at the Gate:**

- {i} If the gate is broken by a road vehicle which is fouling the track, or if lifting barrier or any other part of the gate foul the track., or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- {ii} He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- {iii} Immediately after this, the gateman shall advise the SM on duty regarding the defects/obstructions at the gate, under exchange of private number.
- {iv} If there is no response from the SM after two or three attempts, he shall first protect the gate and then inform on phone.
- {v} Gateman shall then rush with detonators and red flag by day and red flashing 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}.
- {vi} Thereafter he shall protect the gate from the other direction also.
- {vii} He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- {viii} The SM shall also inform the SM 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.
- {ix} After the track has been cleared of all obstructions the gateman shall inform the SM accordingly, under exchange of private number.
- {x} SM shall then issue a caution order to Loco pilot of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- {xi} 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.
- {xii} SM shall advise maintenances staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- {xiii} Normal working will be resumed only after maintenances staff rectify the defective lifting barrier and issue reconnection/fit memo for the same.

**9. Obstruction on the Track near Level Crossing Gate:**

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, the gateman and SM will adopt the procedure given under item No. 8 above. 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.

**(ATUL YADAV)**  
Sr. DOM G&G JHS

**(A.K. SAINI)**  
Sr. DSTE (BL) JHS

**(S.C.DUBEY)**  
Sr.DEN/E/JHS

## Appendix –‘B’

### SYSTEM OF SIGNALLING AND INTERLOCKING:-

1. **LAYOUT:** as per Station Working Rules Diagram attached.
- 1.1 **Class of Station:** “B” Class, Single line panel inter locking.  
**Mode of Signaling:** Multiple Aspect Colour Light Signaling
  
2. **METHOD OF INTERLOCKING:**
  - 2.1 The Station is “B” Class Interlocked to Standard II (R) and is provided with colour light signalling. Interlocking is by means of Relay Interlocking (Route Setting type) through Control Panel installed in SM’s office. Continuous Track Circuiting is provided between DN Home and UP Home and 120 meters beyond them.
  - 2.2 All Points / Signals/ controls are operated electrically by means of push buttons located on the control panel. All the movements including shunting are controlled from Control panel.
  
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/ASM on duty to lock up the panel. (The SM/ASM on duty must not permit unauthorized persons to operate the control panel and must lock the panel whenever he leaves his seat).
  
  - 3.2 **SYSTEM OF BLOCK WORKING:**  
Block panel have been provided with HASSDAC (dual BPAC) for working the trains between MBA-KBR and Block panel have been provided with HASSDAC (dual BPAC) for working the trains between MBA-SPDM & Block panel have been provided with dual BPAC for working the trains between MBA-KLAR.  
The SM/ASM on duty on Panel is responsible for operation of the Block instruments and should keep Keys in his personal Custody.
  
4. **FUNCTIONS AND DESCRIPTION OF VARIOUS PUSH BUTTONS OF THE CONTROL PANEL:**
  - a. **Signal Button:**  
It is provided near the concerned signal and is of ‘RED’ in colour for stop signal and ‘Yellow’ in colour for shunt signal. The number of each signal button is inscribed near its location. Whenever any signal is to be taken “OFF” the route button of the concerned line along with signal button is to be pressed simultaneously for 10 seconds minimum and then released. Distant and inner distant signals are not having any buttons on the control panel.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

Circuitry arrangements permit these signals to assume the corresponding aspect, depending upon the aspect displayed by home Signal ahead. Normal aspect displayed by distant signal is 'Caution' i.e. single yellow, it changes to attention i.e. 'Double Yellow' when the concerned Home Signal ahead is taken "OFF" and it changes to 'Proceed' aspect i.e. Green in Conjunction with "Proceed or Attention aspect" of the concerned Home Signal.

**b. Point Button:**

It is located near the each crossover point with the number of point inscribed by its side and is 'Blue' in colour. Whenever any crossover point is required to be set, the group button along with the concerned point button is to be pressed. When the point is set, the concerning 'Slit' in the direction of points setting will get illuminated indicating white light. When any particular points are engaged by a route, this will be indicated on the panel by small white light provided in round slit on the point's position indicating that points are not free for operation.

**c. Route Button:**

Each route button is positioned appropriately on the panel and is 'Grey' in colour. It is pressed along with relevant signal button whenever the concerned signal is to be taken "OFF".

**d. Control Button:**

- i) The slot button is provided for releasing controls from crank handle Keys, which are locked in KLCR boxes. For releasing keys at site, the slot button (WN) along with the Group Slot button GBN in blue colour is to be pressed simultaneously. This operation will enable the authorized person on duty to extract Keys from KLCR Box.
- ii) For withdrawing Control Slot, key of concern point are put back at proper place in KLCR box and than SM on duty will press Control Button GBRN along with WN simultaneously. This operation will lock the Key in the KLCR Box.
- iii) The slot button is provided for releasing control of L.C gate, XN along with GBRN button in green colour are to be pressed simultaneously.
- iv) For withdrawing Control Slot, LC gate will be closed than SM on duty will press control button GBN along with XN simultaneously.

The following control buttons are provided

S.N.	Button No.	Colour	Functions
1.	CH1	Blue	Releasing/Withdrawing control on Crank Handle. Key for point 201a / 201b.
2.	CH2	Blue	Releasing/Withdrawing control on Crank handle Key for point 202a / 202b
3.	CH3	Blue	Releasing/Withdrawing control on Crank handle Key for point 203a / 203b
4.	CH4	Blue	Releasing/Withdrawing control on Crank handle Key for point 204
5.	CH5	Blue	Releasing/Withdrawing control on Crank handle Key for point 205

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

6.	CH6	Blue	Releasing/ Withdrawing control on Crank handle Key for point 206a / 206b
7.	CH95	Blue	Releasing/ Withdrawing control on Crank handle Key for point 295a / 295b.
8.	CH97	Blue	Releasing/ Withdrawing control on Crank handle Key for point 297a / 297b.
9.	CH98	Blue	Releasing/ Withdrawing control on Crank handle Key for point 298a / 298b.
10.	CH99	Blue	Releasing/ Withdrawing control on Crank handle Key for point 299a / 299b.

- e. **Group Button:** The group buttons are normally provided on the top of control panel. The following are the nomenclatures, colours & description etc. of the buttons.

Sr. No.	Group Code	Button Colour	Functions
1.	WWN	Blue	Group point button for individual operation of points /crossover. This button is to be pressed along with the concerned point button for point operation when track circuits are clear for setting the point to the required position
2.	GBN	Green	Group slot button for releasing slot to Crank Handles (To be pressed along with concerned point button).
3.	GBRN	Black	Group slot button for withdrawing slot to Crank Handles (To be pressed along with concerned point button).
4.	GBN	Green	Group slot button for releasing/ withdrawing slot to LC gate (To be pressed along with concerned gate control button).
5.	COGGN with counter	Red	Common 'Calling ON' Signal button for taking off the Calling ON Signal (To be pressed along with the respective Home Signal Button) when the calling on track circuit is occupied by the train.

- f. **Emergency Buttons:** In addition to the points, signals, slots and group buttons, some emergency buttons are also provided for emergency use such as operation of points when track circuit controlling the points has failed, putting back signals to danger, cancellation of route section and releasing the route when locked as well as the overlap when the train is not on the approach track.

The following are the nomenclatures, colours, description etc of the various buttons

No	Group Code	Button Colour	Functions
1.	EWN with counter on the panel	Blue	Emergency group Button for point operation for operating the point individually when the track circuit controlling the point has failed. Button remains sealed normally, and is provided with counter 'EWN' to count the number of operation. ASM will break the seal before the operation.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

2.	ERN	Red	Emergency Group Signal for putting back a signal /Shunt Signal to “ON” in case of an emergency even without SM’s key in the panel.
3.	EUYN button key with counter on the panel. (Route release button when the track circuit has failed.)	Grey.	This button to be used for releasing a portion of route which could not get released (though other sub route are released) after passage of train or otherwise. ASM on duty will turn the key and press EUYN and concern signal button/ point button and counter counts each such operation. SM/ASM on duty will make the necessary entry in the detail in the register.
4.	EUUYN with counter on the panel	Grey	Emergency route release button is used for releasing the route when locked and also the overlap when the train is not on the approach track. To cancel a route press concerned Signal and ERN buttons, release ERN keeping Signal button pressed, press EUUYN button, release it and press concerned route button keeping signal button press and the counter counts each cancellation.

**SMs Key**-This key is taken out by SM, ASM to avoid unauthorized operation of the panel in his absence. In case panel seized to operation, SM/ASM must see that SM’s key is inserted and kept turned to its proper position. In addition Separate RESET BOXES/INDICATIONS for track section Axle counters of either side station in each direction of UP/DN IBS/BPAC is provided in front of main operating panel.

- a) An “**Emergency SM’s key**” has been also provided on the control panel. This key is normally to be kept ”OFF” and remain in safe custody of SM/ASM on duty and to be used when main SM’s key ‘OUT ‘ indication (Red) appears on panel due to main SM’s Key contact failure. The Emergency SM’s key will be used by SM/ASM on duty by turning the key to ‘ON’ to normalize the panel operation. After verifying the SM’s key “IN” indication (Yellow) on the panel and the failure of main SM’s key to be advised to on duty S&T staff available at station.
- b) Emergency point operation button will be kept sealed by SE/JE/ESM. Whenever this button is made use of, after the seal is broken, the SE/JE/ESM should be advised immediately so that the button can be re-sealed. Use of the button should be recorded in a register.
- c) The operation of EUYN button is controlled by a key, which remains in the personal custody of SM/ASM on duty. Use of this button should be recorded in detail in a register and sealing of this button is not required.

**g. Indication Buttons:**

Indication buttons GXYN, WXYN and CHXYN are provided for silencing bell buzzer when any signal or points or Crank handle have failed.

The following are the nomenclatures, colours, description etc. of indication buttons & various indications on the panel.

S.N	Group Code	Button Colour	Functions
1.	GXYN Signal lamp failure buzzer Silencing button	Red	In case of failure of Signal lamp & steady (G) indication appears along with buzzer. Buzzer can be Silenced by pressing the Button but the indication will remain till the failure is put right. The concerned Signal indication will flash to indicate failure.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

2.	WXYN Point failure buzzer silencing button	Blue	In case of failure of Point detection, steady (W) indication appears along with buzzer. Buzzer can be silenced by pressing the button but the indication 'W' will remain Steady till the failure is put right. The concerned point indication will flash to indicate the failure.
3	CHXYN Crank handle failure/ buzzer silencing button	Grey	In case of failure of crank handle & steady (CH) indication appears along with buzzer. Buzzer can be Silenced by pressing the Button but the indication will remain till the failure is put right. The concerned crank handle indication will flash to indicate failure.
4.	NCR. Group Button failure indication	Red indication	It is only a red light indication without button. Whenever any button on the panel fails to come back to normal position when released red indication appears along with Buzzer.
5.	GNCR Button checking indication for signal buttons	S indication	This indication will appear when any of the signal buttons fails to come back to normal when released or kept pressed for long time. Indication appears along with the Buzzer.
6.	UNCR Button checking indication for route buttons.	R indication	This indication will appear when any of the route buttons fail to come back to normal position when released or kept pressed for long time. Indication appears with Buzzer.
7.	WNCR Button checking indication for point buttons	P Indication	This indication will appear when any of the point buttons fails to come back to normal when released or kept pressed for a long time. Indication appears along with the Buzzer.
8.	CHYNCR Button checking indication for crank handle.	CH Indication	In case of failure of crank handle & steady (CH) indication appears along with buzzer. Buzzer can be Silenced by pressing the Button but the indication will remain till the failure is put right. The concerned crank handle will flash to indicate failure.

**Note:**

- 1) All cancellation facilities are provided with Counter and that each number should be entered in the Register specially provided for along with brief reasons for cancellation.
- 2) Buttons provided with seal;- Assistant Station Master (Panel) can break such seal in emergency but the JE/SE/ESM on duty must be informed immediately for resealing the button / buttons.
- 3) EUYN (Sub route cancellation) is meant for releasing any sub route, if not released by passage of train or otherwise but the same can be used in emergency for release of full route also if process of EUUYN fails to release full route.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

- 4) The Assistant Station Master (Panel) on duty will be responsible for all emergency operations done by him and it is to be explained in the Special register giving corresponding numbers of the respective counters. The numbers on each counter will be registered in the Assistant Station Master's (Panel) charge book while handing over & taking over charge of the panel.
- 5) Facility is provided to the Assistant Station Master (Panel) on duty for operation of Motor Operated points in case of failure of point controlling track circuits by means of 'EWN' button. Before breaking the seal of the button and operating the same, Assistant Station Master (Panel) on duty should physically verify or get the same verified by Platform Assistant Station Master that the point/ track is not occupied by any vehicle and that the track concerned is intact and safe for the passage of trains.
  - 1) When one Signal or point failure is already indicated and the buzzer/bell already silenced, the second Signal or point failure will not be indicated by the Sounding of buzzer/bell. However, the respective Signal or point failed will be flashing on the panel.
  - 2) The audible buzzer sounded along with button checking indication can not be silenced unless the failure is put right. Assistant Station Master (Panel) on duty should check for any of the buttons remaining in the operated/ pressed condition and if so, the same should be released by him. JE/SE/ESM on duty should be informed in case if he is not able to locate the faulty button.

## 5. **PANEL INDICATION:**

### 5.1 **Point Indication:**

The position of the points is indicated on the control panel by the illuminated rectangular slits near the points on the panel. The normal setting of a point is indicated by the illuminated slit on the straight route and reverse setting by illuminated slit on the diverting route. These 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 circuit controlling the points are occupied or have failed. In the event of a point failing to set properly, this steady white light change into white 'flashing' light. The flashing light indication will also appear for a short period when the points are being moved from one position to other. The Station Master should not mistake this as a point failure unless the flashing indication continues for more than 10 seconds. **No setting of route should be attempted over point showing flashing light.**

#### 5.1.1 **Point Locking Indication:**

When any particular point is engaged by a route, this will be indicated on the panel by a small white light provided in round slit on the 'point position' indicating slits, indicating that the points are not free for operation. When this locking indication appears the Station Master must not interfere with the point.

## 5.2 **SIGNAL INDICATIONS:**

5.2.1 The aspects of all signals are indicated on the control panel in the Station Master's Office which proves that the signals are illuminated at site.

The indications of all signals will be repeated on the control panel. The 'ON' aspect of a stop signal is indicated by 'RED' light on the control panel and the 'OFF' aspect of a main stop signal on the control panel will be yellow, Double yellow or Green light irrespective of whether the signal at site is displaying the 'Yellow' or 'Double Yellow' or 'Green' aspects.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS



In case of Inner distant signals, the normal position of distant signal is Yellow i.e. Yellow aspect will be indicated on the control panel by a single Yellow light and the "OFF" aspect i.e. 'Double Yellow' or Green' aspects will be indicated by Double Yellow or 'Green' light. In case of distant signal the normal position of distant signal is Attention aspect will be indicated on the control panel by a Double Yellow light and the 'OFF' aspect i.e. Green' aspects will be indicated by 'Green' light. In the case of ground type shunt signals, the 'ON' and 'OFF' aspects are indicated on the control panel by the horizontal white and diagonal white slits respectively.

A White dot indication is lit below the main Signal when a calling on Signal or Shunt Signal provided below the main Signal is taken 'OFF'. Normally it has no light.

#### 5.2.2 **Indication of Directional Route Indicator:**

Signals fitted with directional route indicator pointing to direction of diversion, have normally no light on route indicator slot on control panel but when any one directional route indicator is lit up at site a vertical slit showing white indication appears on the concerned signal on the panel.

#### 5.2.3 **Route Indications :**

When the route is set by the operation of the signal button along with the concerned route button, white light will appear in the slits on the portion of the track circuited section covering the route up to the next signal and the overlap. When the route is thus set & locked, this will be indicated by a circular white light near the concerned points in the route. The white light on this track circuited portion will change into 'Red light' when the track section is occupied by a train or vehicle and until the track is cleared again. After the passage of the train when the track section is clear the white light will reappear and will extinguish only when the route gets released. In the case of shunt signals, the portion of the route excluding the berthing tracks and non track circuited portion will only be illuminated by the appearance of white route lights.

### 5.3 **Track Circuit Indication:**

5.3.1 All the Track circuits are marked in different colours on the track layout of controlled territory drawn on indication panel. Track circuit indicators on the panel consist of white and red lamps within the track lines. Normally, these indicators are not lit. When a route is set & locked, white light on all track sections of that particular route including overlap are lit. Subsequently, when train occupies the track sections, white lights extinguish and red lights are lit to indicate the presence of the train. Red light extinguishes and white lights are re-lit when the train travels and clears the track section. White light finally extinguish when the corresponding route section is released automatically or by cancellation.

5.3.2 Failure of Track Circuit section is indicated on control panel by lighting up of Red light of that particular track section irrespective of whether or not a route involving that tracks circuit section has been set. To prevent suppression of a track failure indication in case of an indication lamp failure, track circuit strip indicators are always formed with two or more indication lamp in parallel.

#### 5.4 **FLASHER INDICATIONS:**

A continuous flashing indication has been provided at the top row of the panel. Presence of this indication on the panel all the time, will indicate to SM/ASM at the panel that the flasher relay equipment is working.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

Should that the equipment become faulty, this indication will become steady and accordingly even when the points are not set properly the flashing indication will not appear for that particular point and instead steady indication will appear, which is therefore misleading.

SM on duty should therefore check for this continuous flashing indication at the time the points are set for a movement and signal is taken "OFF" and it should be ensured that flashing indication is always there.

During the period of failure of flasher indication signaled move are permitted without clamping and padlocking of the points involved in the route but before authorizing any unsignalled move, the SM/ASM must ensure that the relevant points in the route are correctly set., clamped and padlocked. The SM /ASM on duty should advise to JE/SE/ESM for 'failure of continuous flashing indication.

### **5.5 Point or Signal Lamp Failure Indications:**

In the event of a point failure or failures of a signal lamp, the concerned point or signal indication on the control panel will change from steady light to a flashing light. In case of signal, if the 'Green' indication only is flashing, this will mean that the Green lamp of the concerned signal has fused, but signal is exhibiting the next restrictive "OFF" aspect. But if the green flashing indication on the panel is also accompanied by the steady red indication, this will mean that the Yellow lamp of the signal has also fused and the signal is exhibiting the 'ON' aspect.

The failure of the red lamp of the signal will be indicated by flashing Red indication on the panel accompanied by an Audible Alarm Bell.

Failure of the signal lamp causes the signal to revert back to the next restrictive aspect and indication on panel also changes as shown in the tabulated form. When any signal is blank, an audible alarm bell will start ringing and the normal indication of the signal lamp will start flashing. On hearing such an alarm and on seeing the Red flashing indication, the ASM on duty should press the GXYN button in case of a signal lamp failure and WXYN button in case of point failure and CHXYN button in case of crank handle failure. Pressing of GXYN/WXYN/CHXYN will cause the alarm to stop but a permanent red indication will remain till the failure is put right.

### **POINT OR SIGNAL LAMP FAILURE INDICATIONS:**

In the event of a Point Failure or Failure of a Signal Lamp, the concerned Point or signal Indication on the control Panel will change from steady light to a flashing light for that particular indication. Signal at site will show less restrictive aspect and panel will also indicate accordingly.

But if the green/yellow flashing indication on the panel is also accompanied by the steady red indication, this will mean that the off aspect lamps of the Signal have fused and that the signal is exhibiting the 'ON' aspect. The failure of Red lamp of a signal will be indicated by a flashing red indication on the panel. In the event of failure of red lamp of a signal, the flashing red indication on the panel also is accompanied by a audible alarm. On hearing such an alarm and on seeing the flashing indication, the SM on duty should press the signal/point ack. button to silence the buzzer. Pressing of this button will cause the audible alarm to stop.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

On hearing audible alarm and noticing the fusing of Red lamp of Home signal or blanking of distant signal of both UP & DN lines, SM on duty will immediately advise the concerned Station Master of the station in rear to issue caution order to the Driver of the train to be vigilant and see the blank signal. He will also take action to advise ESM to replace the fused signal lamp.

#### 5.6 **Indication for Prolonged Operation of Button** :

If any of the button is kept pressed for more than 10 seconds, button detection NCR indication (Red light) will appear with buzzer. Panel ASM on duty should check and locate the button which has remained pressed and pull the same to release it.

So long as NCR indication persists, no operation of points or signal from the panel will be possible and panel will become inoperative. Panel ASM on duty should, therefore, be alert to notice NCR indication. Whenever, panel becomes inoperative, he should specially check NCR indication. Even after panel ASM on duty has attempted to pull and return to normal position a pressed button if NCR indication persists, he should immediately inform ESM/JE/SE.

#### 6 **PANEL OPERATION:**

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

#### 6.1 **Operation of Points** :

The points will remain in the last operated position. In order to set the point either from 'Normal to Reverse' or from 'Reverse to Normal', individual point button WN and point group button 'WWN' should be simultaneously pressed and released which will cause the point to change over, provided the points are not engaged by any route and also the track circuit controlling the point is unoccupied.

**Note:** In the event of failure of the track circuit controlling the points, if the points have to be operated, the panel ASM on duty will first personally verify that the concerned track circuit is not occupied by any train or vehicle and then press the concerned point button simultaneously with the Emergency Point Button (EWN) and release. Each time a point is thus operated, it will be recorded on the (EWN) counter. A register is maintained for EWN counter and each operation is recorded in it. The register has the same columns as mentioned for EUUYN and EUYN counter. SM on duty will break the seal before the operation and will immediately inform ESM to reseal the EWN button and make necessary entries in the register.

#### 6.2 **Operation of Main Signals:**

The L.C. gate if any should be closed & locked. and the signal taken "OFF" by pressing the concerned signal button and route button simultaneously and releasing them. , the points in the route and the isolation points will be automatically set to the required position, if not already in that position, provided slot from the slotting agencies is received in case of slotted signals. Point in the overlap will be set automatically in normal position. If diversion overlap is required then starter signal to be take off first before taking OFF home signal.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

### **6.3 Operation of Shunt Signals:**

In the case of shunting movements, The L.C. gate if any should be closed & locked and the signal taken "OFF" by pressing the concerned Shunt signal button and route button simultaneously and releasing them., the points in the route should be automatically set to the required position, if not already in that position. Provided slot from the slotting agencies is received in case of slotted signals.

### **6.4 Operation of Calling on Signals:**

'Calling On' signals are fixed on the same post and below the Home stop signal No. S2 & S19 governing the admission of trains. This will show normally no light in the 'ON' position and miniature Yellow light in the 'OFF' position and will be provided with a marker, consisting of a white enamel disc with letter 'C' in Black. In the event of failure of stop signal or due to failure of any track circuit in the route, it is not possible to receive a train by taking "OFF" the Home signal, but it can be received on calling on signal.

A train intended to be received on "Calling ON" signal should be brought to a dead stop short of the Home Signal occupying calling on track circuit CO2T or CO19T (5 rail length as the case may be). For clearing calling on signal for a particular route (Required route to be set), when main signal is not clearing and the route is set, first press concerned home signal button and ERN button for throwing signal to danger to the signal, release the buttons and then again press concerned home signal button with COGGN button and then release COGGN button only and then press concern route button keeping signal button pressed after which both the buttons are released. A white light will start flashing in round slit near the home signal on the panel which will become steady after 60 seconds and simultaneously the calling on signal will assume "OFF" aspect at site and white indication will appear in the calling on round slit on the panel. The calling on signal shall be automatically extinguished as soon as track circuit CO-2 or CO-19 as the case may be is picked up. Each time the calling on signal is operated, it is recorded on COGGN counter.

**Note :** If it is visible by seeing Panel indications that any track circuit of the route is failed than no necessity to attempt for home signal and than to cancel instead Calling On can be attempted directly by pressing signal button and COGGN keeping signal button pressed COGGN to be released and route button to be pressed for 10 second after which both the buttons to be released when white light will start flashing for 60 seconds after which light will become steady and Calling On signal will assume "OFF".

## **7. RESTORING SIGNAL TO 'ON' AND CANCELLATION OF ROUTES:**

### **7.1 Restoring 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) & releasing them.

**7.2** Cancellation of Route already set when Points have not Failed (EUUYN) Operation Ordinarily a route once set need not be cancelled as the same gets cancelled automatically by the passage of the 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 the SM on duty should first restore the Signal Controlling the movement over the route to 'ON' as indicated in Sub-Para [a] above.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

The SM on duty will then press the concerned Signal [other than Advanced Starter Signal] Button and the Emergency Route Release Button (EUUYN) simultaneously. This will release the route including the overlap, provided no train has occupied the approach track circuit. However, if the approach track circuit is occupied, the route locked flashing indication will appear (a small circular white light) at the right side of the signal.

The route locked indication will remain for stipulated time interval i.e. not less than 120 seconds for the release of the approach locking. The route should then be cancelled. Only after the route locked indication becomes steady. Each time the route is thus cancelled, it will be recorded on the Emergency Route Release Button (EUUYN) counter provided on the control panel. However, in the case of Advanced Starter Signals, the route will get cancelled when the signal is restored to 'ON' position by means of Emergency Signal cancellation Button (ERN). In case of any failure of track circuit on the route, the route cancellation must not be attempted by ASM as it may cause failure Calling On signal on the route.

**NOTE:**

- I] In case, the route locked indication on the panel control extinguishes immediately before the lapses of stipulated time interval i.e. not less than 120 seconds due to the failure of equipment the SM on duty 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.
- II} In case of one or more track circuit (s) is/are defective, the particular route section covered by the defective track circuit will not get cancelled either by the passage of the train or by operation of emergency route release button. In such cases, the SM on duty after verifying by personal observation that the defective track circuit is not occupied by a train or vehicle and inserting the key and turning, then will operate the emergency route section release button (EUYN) provided for this purpose on the panel and then release the particular route section. Such route will be cancelled by pressing EUYN along with (a) point button for route controlling the point, (b) signal button for route controlled by that signal.
- III] The SM on duty will maintain a register for recording the reading and the other details of the route cancellation with the emergency route section release button (EUYN) provided on the panel.

**IV) The register will have the following columns: -**

- 1) Sr. No.
- 2) Date & time
- 3) Route to be cancelled
- 4) Reason for cancellation of the route.
- 5) The train no. Before/after, which route to be cancelled.
- 6) Sig. Of the ASM on duty
- 7) Time route cancelled
- 8) Reading of the EUYN counter after cancellation of the route
- 9) Remarks

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**CANCELLATION OF OVER LAP:**

After the train arrives and occupies the berthing track, the overlap gets automatically released after the lapse of a stipulated time interval of two minutes. 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 the overlap portion remaining illuminated, the SM on duty should press the concerned starter signal button and the Overlap Release Button (OYN) simultaneously and release them. This will enable the overlap to be released. Each time the overlap is thus released, it will be recorded in the 'OYN' Counter provided on the Control Panel.

**RECORDING OF THE READINGS OF COUNTER:** Operation of the following Buttons are recorded on the counters provided separately for each of these Buttons:

1	EMERGENCY POINT BUTTON (EWN)
2	EMERGENCY ROUTE RELEASE BUTTON (EUUYN).
3	OVERLAP RELEASE BUTTON (OYN).
4	EMERGENCY ROUTE SECTION RELEASE BUTTON (EUYN).
5	GROUP BUTTON FOR CALLING ON SIGNAL (COGGN).

The SM on duty should keep a proper record of all such operations. Separate Registers should be maintained for each of the above buttons wherein each time the Button is operated, the reading on the counter should be recorded stating clearly the circumstances under which the emergency operation had to be resorted to. The SM on duty before handing over charge to his reliever should record the last reading of all the counters in the concerned Registers.

The SM who takes over the charge must verify by actual observation of the readings, on the counters that the last readings on the counters have been correctly recorded in the appropriate Register and the registers should be signed by the SM on duty in token of it.

**7.2.1** In case when a signal has been restored to 'ON' position, the route should cancel after a lapse of 120 seconds, if it is observed that the white flashing light near the signal becomes steady or extinguishes immediately before the lapse of the stipulated time interval i.e. less than 120 seconds due to the failure of the equipment, the ASM on duty should wait for two minutes after restoring the signal to 'ON' and then cancel the route in the usual manner. Further, the ASM should advise the ESM of the section on duty immediately about the failure and also record the failure in S&T failure register. Each time the route is thus cancelled it will be recorded on EUUYN counter.

**7.3 Cancellation of Route when track circuit or Points in the Route are in Failed Condition (EUYN Operation):**

Normally, the route set gets released automatically after the passage of the train over the same, when track circuit or point in the route has not failed. But when a track circuit or point failed after the passage of train the route does not get released either automatically or by EUUYN as mentioned in Para 7.2 above. The route will now be cancelled by another emergency operation called EUYN cancellation. The route gets cancelled instantly after a delay of minimum 120 seconds. Therefore, this operation should be restored to only after verifying by personal observation and physical verification by traffic representative that the defective track circuit is not occupied by a train or vehicle.

The ASM on duty will press EUYN button provided on the panel along-with concerned signal button and will turn EUYN Key simultaneously. The route gets cancelled after a delay of 120 seconds and recorded in EUYN counter. The SM/ASM will maintain a register for recording the readings and other details of route cancellation with 'EUYN' button in the following proforma.

1. Sr. No.
2. Date and Time

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

3. Route to be cancelled
4. Reason mentioning train no.
5. Signature of the SM/ASM on duty
6. Time route cancelled
7. Reading of the EUYN counter after cancellation of the route.
8. Remarks

### 7.3.1 Cancellation of route when a train is received on “CALLING ON” Signal:

When a Berthing track circuit has failed, the train can be received on “Calling On” Signal. On arrival of train on the berthing track the route will get released automatically. If it does not get released automatically it can be released by EUUYN operation as indicated above in Para 7.2.

### 7.4 Recording the Reading of Counter :

Operations of the following buttons are recorded on the counters provided with each of these buttons:-

1. Emergency Point button. (EWN)
2. Emergency Route Release Button (EUUYN)
3. Emergency Route Section Release Button (EUYN)
4. Calling ‘ON’ Signal clear Button (COGGN)
5. Overlap cancellation button (OYN)

Panel ASM on duty will be held personally responsible for all such emergency operations carried out during his duty and he should keep a proper record of such operations.

Separate register should be maintained for each of the above emergency operations where in each time the buttons are operated and the reading of the counters should be recorded stating clearly the circumstances under which the emergency operations had to be performed. Panel ASM on duty before handing over the charge must verify that the actual readings on the counters have been correctly recorded in the appropriate register and the seals are intact.

### 8. WORKING OF INTERLOCKED CRANK HANDLE FOR POINT MACHINES:

8.1.A Panel Control CH1 (201a/201b), CH 2 (202a/202b), CH 3 (203a/203b), CH4 (204), CH 5 (205), CH 6 (206a/206b), CH 95 (295a/295b), CH 97 (297a/297b), CH 98 (298a/298b) and CH 99 (299a/299b).

In case of the failure of Point Machines and in case of testing or maintenance of the Point Machines the crank handle is required by the operating & signal staff. The crank handle is interlocked with the signals. The interlocking is achieved by interlocking the ‘CRANK HANDLE KEY’ key. The CRANK HANDLE KEY is a device which when turned in the key hole of a Point Machine cuts “OFF” the power supply and it also opens the slot for inserting crank handle. As long as the CRANK HANDLE KEY is not turned in the Point Machine the crank handle cannot be inserted in the point machine for manual operation.

### 8.2 KLCR Relay with CRANK HANDLE KEY Key:

The CRANK HANDLE KEY normally remains locked in the relay called KLCR. Such KLCR of concerned crossover / points are provided in a box located in ASMs room.

### 8.3 Control units:

On the panel, one control unit for each group is provided which consists of the following :-

1.	CH/LC control Buttons	For releasing or withdrawing the control on CRANK HANDLE KEY Key / LC gates.
2	CHYN & WN slot Button	For releasing control on CRANK HANDLE KEY, CHYN & XXN button to be pressed and released along with concerned Slot Button .

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

3	CHYRN & WN slot Button	For returning control on CRANK HANDLE KEY, CHYRN & XRN button to be pressed.
4	White Light	Provided above Slot Button, normally steady and flash as -soon as control is released.
5	Red Light	Provided adjacent to Slot Button, white flashing light turn to red steady no sooner CRANK HANDLE KEY extracted from KLCR Relay.

#### 8.4 **Operations:**

Whenever crank handle operation of the points is desired the competent staff of traffic or signal department obtains crank handle from panel ASM on duty who should issue it after making necessary entries in the register.

The staff concerned will go to the box of KLCR located in ASMs office to take CRANK HANDLE KEY for the concerned points. The Panel ASM on duty will press Slot and CHYN buttons and release them. The white indication near slot button on panel will start flashing. Transmission of CRANK HANDLE KEY control of crank handle will be indicated by the appearance of red light on the key lock relay box. On seeing this red light, the push button provided on the key lock relay box is pressed and the key turned through 90 degree in the anti clock-wise direction to extract the key. Now the flashing white indication will disappear and red steady indication will appear on the panel.

The CRANK HANDLE KEY thus released is taken by the staff to the required Point Machine. After opening the key whole cover, CRANK HANDLE KEY is inserted & turned which makes opening for the insertion of the crank handle. The point machine now can be operated by rotating the crank handle. After the point is set & locked in the required position by the traffic staff in case of failure or after signal maintainer's work is over and after confirming from the panel ASM on duty the respective steady white point indication on the panel, the CRANK HANDLE KEY is taken to relevant KLCR relay Box. CRANK HANDLE KEY is inserted & turned through 90 degree in clock wise and control is returned to the panel. On the panel, the red light will disappear and white flashing light will appear above CH Slot button.

The Panel ASM on duty on seeing this, presses and releases CHYRN and WN Slot buttons on the panel and flashing white light will now become steady indicating the return of the crank handle control to Panel.

Panel ASM can now take "OFF" the signal and make a signaled move over the affected point. If the point indication still flashes then the point has to be clamped and padlocked and the ASM on duty has to pilot the train as per G&SR for defective points.

**3.70** The Panel ASM himself can take the control back, only if the CRANK HANDLE KEY has not been extracted from KLCR. In that case Panel ASM has to press 'slot' & 'CHYRN' buttons simultaneously and release them.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS



As long as the CRANK HANDLE KEY is out and in case the key is inserted back in 'KLCR' and turned but the ASM does not get the control back on the panel after the proper operation of buttons due to the failure of slot circuit itself, signal leading over affected points will be treated as a case of signal failure and trains received/dispatched as per GR 3.68, 3.69, 3.70 G&SR.

Crank handle register have the following columns:

- i) Sr. No.
- ii) Designation of person who required using the crank handle and the concerned handle key.
- iii) Date & time of removal of crank handle and the crank handle keys.
- iv) Purpose whether for normal maintenance or failure.
- v) Disconnection memo No. if given.
- vi) Signature of the person who removes the crank handle.
- vii) Signature of SS/ASM on duty.
- viii) Date & time of return of crank handle & concerned handle key.
- ix) Details of the use made of the crank handle and crank handle key.
- x) Reconnection memo No. if given
- xi) Signature of the person who returns the crank handle and crank handle key
- xii) Trains passed over disconnected/ defective points giving private number against each item.
- xiii) Signature of the SS/ASM on duty.

#### 8.5 **Button Collars** :

Six numbers of button collars have been provided on the panel and these should be placed on the signal/control buttons for which the line is blocked.

Button collars must be placed, when running lines is/are occupied obstructed, or fouled, on the slides/ push buttons that work/release the points and/or signals or control as indicated below :

S. N.	Running Lines	Stop Collars to be placed on Route Button
1.	Up Main Down Line	<b>BA</b>
2.	Up 1 <sup>st</sup> loop down Line	<b>BB</b>
3.	Up 2 <sup>nd</sup> loop down Line	<b>BC</b>
4.	Up 3 <sup>rd</sup> loop down Line	<b>BD</b>

#### 9. **WORKING OF COLOUR LIGHT SIGNALS:**

- a. Normal indication of all running signals is stop (Red) except that of the Distant Signal. The Down and UP Distant Signal has three aspects & the normal indication of these signal is caution (Yellow). Clear (Green) or Attention aspect (Double Yellow) automatically displays in conjunction with the aspects displayed by the home signal ahead.

#### b. **Route Indicators** :

Position light route indicators have been provided on UP Home and Down Home Signals. The route indicator will display a row of five white light illuminated directing towards the direction of turn out along with the 'Yellow' light indicating that the route is set for diversion and not for Straight-line movement.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

c. **Aspect chart** : The aspect of various signals for movements shown is as under:

R	=	Red (Stop)
Y	=	Yellow (Caution)
YY	=	Double Yellow (Attention)
G	=	Green (Clear)
RI	=	Route Indicator.

i. **Down Trains :**

Down Train Movement from Down Main Line	Down Distant	Down Home	Down Starter	Down Advanced Starter
	<b>S-2D</b>	<b>S-2</b>		<b>S-20</b>
Running through from Down Main Line	G	G	<b>S-18-G</b>	G
Stopping on Down Main Line	YY	Y	S-18 -R	-
Stopping on UP Loop Dn 1 Line	YY	Y(With Route Indicator)	-	-
Stopping on UP Loop Dn 2 Line	YY	Y(With Route Indicator)	S-16-R	-
Stopping on UP Loop Dn 3 Line	YY	Y (With Route Indicator)	S-14-R	-
Stopping on Home	Y	R	-	-

ii. **Up Trains :**

Up Train Movement from Up Main Line	Up Distant	Up Home	Up Starter	Up Adv Starter
	<b>UD S-19D</b>	<b>S 19</b>		<b>S-1</b>
Running through from Up Main Line	G	G	<b>S 5-G</b>	G
Stopping on Up Main Line	YY	Y	<b>S 5 -R</b>	-
Stopping on UP Loop Dn 1 Line	YY	Y(With Route Indicator )	<b>S-7 - R</b>	-
Stopping on UP Loop Dn 2 Line	YY	Y With Route Indicator )	<b>S-11 - R</b>	-
Stopping on UP Loop Dn 3 Line	YY	Y With Route Indicator )	<b>S-15 - R</b>	-
Stopping on Home	Y	R	-	-

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**10-a TRACK CIRCUITS:**

Track Circuits designations and their jurisdiction on Main & Loop Line are indicated in the SWR diagram.

<u>Panel</u>	<u>Berthing Track</u>
C 2 T	C19 T
1/2 T	19/20 T
5 T	18T
201 aT	298 bT
201 bT	298 aT
202 bT	295 T
202 aT	297 T
203 aT	299 aT
203 bT	299 bT
205 bT	
205 aT	
7 T	
2/3 T	
C4 T	

**11. BOBBING / FLICKERING OF THE SIGNALS:**

Whenever signals changes its aspect in succession, shall be treated 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 & SRs there under.

The SM/ASM on receipt of information of a bobbing/flickering 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.

**12. UNSIGNALLED MOVE OVER ELECTRICALLY OPERATED POINTS:**

When ever any unsignalled move has to be taken place on a point operated by a electric point machines whether in the facing or trailing direction, the SM/ASM on duty shall operate the points to the normal and reverse setting for the purpose of testing the points. After the panel operator has ensured that indication regarding the normal and reverse setting are correctly available normal signaled movements may be permitted over the points. In the event of no indication appearing, the points shall be treated defective and procedure a laid down under SRs 3.77-1 be followed.

**13. DESCRIPTION OF SIGNALS:**

- i) **Down distant signal (2D):** Normal aspect of the signal is “Caution”. “Attention”: (Two yellow light one above the other) is displayed automatically in conjunction with caution aspect of down home signal number S-2. Clear aspect of this signal is displayed automatically in conjunction with Clear aspect of signal number S- 2.
- ii) **Down distant signal (4D):** Normal aspect of the signal is “Caution”. “Attention”: (Two yellow light one above the other) is displayed automatically in conjunction with caution aspect of down home signal number S-4.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

- iii) **Down Home signal(S-4):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by signal button No. 4 & Main line route button on the panel. One yellow light with route indicator of the signal is controlled by SM signal button No. S-4 and loop or goods loop line route button on the panel.
- iv) **Down Home signal(S-2):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by signal button No. S-2 & Main line route button on the panel. One yellow light with route indicator of the signal is controlled by SM signal button No. S-2 and loop or goods loop line route button on the panel.  
Clear aspect is automatically controlled in conjunction with clear aspect of main line starter number S-18.
- v) **Down Main line starter(S-18):** Normal aspect of the signal is Red. Clear aspect (one green light) of the signal is controlled by SM signal button S-18 and route button DX on the panel in conjunction with clear aspect of down advance starter number S-20.
- vi) **Down 1<sup>st</sup> loop line starter (S-12):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button S-16 and route button DX on the panel.
- vi) **Down 2<sup>nd</sup> loop line starter (S-16):**Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button S-16 and route button DX on the panel.
- viii) **Down 3<sup>rd</sup> loop line starter (S-14):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button S-14 and route button DX on the panel.
- ix) **Down Advance starter(S-20):** Normal aspect of the signal is Red. Clear aspect is controlled by KBR side block panel in TGT position and also by SM signal button S-20 and route button DZ on the panel.
- x) **Up distant signal (19 D):**  
Normal aspect of the signal is “Caution”. “Attention”: (Two yellow light one above the other) is displayed automatically in conjunction with caution aspect of up home signal number S-19. Clear aspect of this signal is displayed automatically in conjunction with Clear aspect of signal No. S-19.
- xi) **Up Home signal (S-19):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button No. S-19 & main line route button on the panel. One yellow light with route indicator of the signal is controlled by SM signal button No. S-19 and loop or goods loop line route button on the panel.  
Clear aspect is automatically controlled in conjunction with clear aspect of main line starter number S-5.
- xii) **Up main line starter (S-5):** Normal aspect of the signal is Red. Clear aspect (one green light) of the signal is controlled by SM signal button S-5 and route button UX on the panel in conjunction with clear aspect of UP advance starter number S-1.
- xiii) **Up 1<sup>st</sup> loop line starter (S-7):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button S-7 and route button UX on the panel.

- xiv) **Up 2<sup>nd</sup> loop line starter (S-11):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button S-9 and route button UX on the panel.
- xv) **Up 3<sup>rd</sup> loop line starter (S-15):** Normal aspect of the signal is Red. Caution aspect (one yellow light) of the signal is controlled by SM signal button S-9 and route button UX on the panel.
- xvi) **Up Advance starter (S-1):** Normal aspect of the signal is Red. "Clear aspect is controlled by KLAR side block panel in TGT position and also by SM signal button S-1 and route button UZ on the panel.
- xvii) **Up Advance starter (S-3):** Normal aspect of the signal is Red. "Clear aspect is controlled by SPDM side block panel in TGT position and also by SM signal button S-3 and route button UZ on the panel.

#### 14. GENERAL INSTRUCTIONS:

##### (a) Passage of train when points are defective:

- (i) When an electrically operated motor point fails to respond to the panel operation the SS/ASM 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.
- (ii) 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 cross over point and remove the same if found & display alright signal to the SM/ASM on duty to set the point by waving and arm by day or white light by night across the body. In case no obstruction has found the Points-man will display hand danger signal.
- (iii) On receipt of an all right signal from Points-man the SM/ASM will set the points to the required position. If the point still fails to respond or on receipt of hand danger signal from Points-man the SM/ASM will remove the crank handle and the concerned handle key, proceed to the defective point and set the same in the required position. He will then proceed to the station and authorize the move.

**Note:** While setting a cross over point from normal to reverse provided with motors on both side 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, End marked B should be first set and then end marked A later.

##### (b) Passage of trains when points are disconnected:

While the S&T staffs are attending to disconnected defective points and traffic has to be passed over them, the SM/ASM on duty will proceed to the concerned points with the object of setting the points in the required position for the move. The SM/ASM will also take with him 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/ASM on duty will also sign against that entry. After the both end points have been set, clamped and padlocked for the contemplated move by the SM/ASM. He will retain the padlock keys in his personal custody and then returned 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.

- (b) Whenever a Motor Trolley or any other light vehicle is to be passed over a crossover controlled by a particular track circuit, SM on duty must in addition to watching track indication on the control panel ensure through visual verification also that the vehicle has cleared the concerned track circuit and has entered the next track section which can be verified from the control panel before interfering with the points set for the movement or before permitting any other movement on the affected lines.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

(d) Button Collars have been provided and these should be placed on the route buttons of the line which is blocked.

15(a) **AXLE COUNTERS ARE INSTALLED IN BLOCK SECTION:-**

- (i) Between MBA DN Line advance starter Signal S-20 to UP advance starter Signal S-2 KBR station (BXT1/BXT2) MBA-KBR and Between MBA DN Line advance starter Signal S-3 towards KURJ Side to UP advance starter Signal S-1 SPDM station (BXT1/BXT2) MBA-SPDM and Between MBA UP Line advance starter Signal S-1 to DN advance starter Signal S-19 KLAR station (BXT1) MBA-KLAR & (BXT2) MBA-KLAR

15(b) **FUNCTION OF DUAL AXLE COUNTER IN BLOCK SECTION:-**

**WORKING OF AXLE COUNTERS IN REDUNDANCY MODE FOR BLOCK PROVING AND BLOCK WORKING BETWEEN MBA-KBR , MBA-SPDM and MBA-KLAR SECTION: -**

Block working between MBA-KBR, MBA-SPDM and MBA-KLAR have been achieved through two Axle Counters for each track section. This is achieved by providing two Axle Counters having own Resetting Boxes.

**DIGITAL AXLE COUNTER FOR DUAL DETECTION HAVING SINGLE TRACK SECTIONS IN MBA-KBR , MBA-SPDM and MBA-KLAR SECTION WITHOUT PROVISION OF IBS.**

Axle Counters provided in (MBA -KBR) with one Track sections.	BXT 1/ BXT2 (MBA-KBR)	Detection for track section is provided from foot of Advance Starter signal to 180m ahead of Home Signal of station in ahead.
Axle Counters provided in (MBA -SPDM) with one Track sections.	BXT 1/ BXT2 (MBA-SPDM)/	Detection for track section is provided from foot of Advance Starter signal to 180m ahead of Home Signal of station in ahead.
Axle Counters provided in (MBA -KLAR) with one Track sections.	BXT 1(MBA-KLAR)/ BXT 2(MBA-KLAR)	Detection for track section is provided from foot of Advance Starter signal to 180m ahead of Home Signal of station in ahead.

**WORKING OF DUAL DETECTION DIGITAL AXLE COUNTER IN PARALLEL TO ANOTHER DIGITAL AXLE COUNTER INSTALLED BETWEEN FOOT OF DN ADVANCE STARTER SIGNAL OF MAHOBA (MBA) STATION TO UP ADVANCE STARTER SIGNAL KABRAI (KBR) STATION AND DUAL DIGITAL AXLE COUNTER INSTALLED BETWEEN FOOT OF DN ADVANCE STARTER SIGNAL OF MAHOBA (MBA) STATION TOWARDS KURJ SIDE TO UP ADVANCE STARTER SIGNAL SINGHPURDUMAR (SPDM) STATION BETWEEN FOOT OF UP ADVANCE STARTER SIGNAL OF MAHOBA (MBA) STATION TO DN ADVANCE STARTER SIGNAL KULPAHAR (KLAR) STATION**

The Dual Detection Axle counter provided in MBA-KBR & MBA-SPDM section is nominated as BXT 1/BXT2 (MBA-KBR), BXT 1/BXT2 (MBA-SPDM) for main mode axle counter and redundancy mode axle counter and Dual Detection Axle counter provided in MBA-KLAR section is nominated as BXT1 (MBA-KLAR) for main mode axle counter and BXT2 (MBA-KLAR) for redundancy mode axle counter Both axle counters i.e main and redundancy will work independently. Indication for each track section has been given separately over the indication cum resetting panel of each axle counter provided at operating cum indication panel at both end of stations. The occupancy and clearance of each track section is shown over this indication cum resetting panel. Each track section shall be treated as Clear if green indication exists on either of the track section on indication cum resetting panel and each track section shall be treated as occupied if red indication on the both of the track section on indication cum resetting panel of axle counters.

(ATUL YADAV)  
Sr. DOM(G&G) JHS

(A.K.SAINI)  
Sr. DSTE (BL) JHS

In case, any track section of any of the axle counter has failed after passage of any train and it is showing "Occupied" (Red indication) status over the SM's resetting panel and other axle counter of same track section is showing "Clear" status, the failed axle counter will automatically reset by the "Clear" status of other axle counter of same track section and failed axle counter will come in preparatory reset mode and preparatory indication (Yellow indication) will be lit on resetting box. After coming in preparatory reset mode the failed axle counter will show the "Clear" status (green indication) after complete passage of first passing train over that track section. If after the complete passage of first train passing over the failed track section of axle counter does not show the "Clear" status (green indication) on duty SS/SM will advise to S&T staff to attend the failure of failed axle counter.

### **RE-SETTING OF AXLE COUNTER**

In the station master's offices Re-set box for re-setting of axle counter is provided for proving the occupancy of trains in block section on either end of stations.

1. In case of sections provided without IBS working i.e. (MBA-KBR) & (MBA-SPDM) block section are provided with one track section.
2. (MBA-KBR) BXT1/BXT2,(MBA-SPDM) BXT1/BXT2 & BXT2 (MBA-KLAR) are used for redundancy mode.

#### **RE-SETTING OF AXLE COUNTER WILL BE AS FOLLOWS:-**

- (a) Axle Counter should reset in preparatory mode only
- (b) Line verification box should be dispensed with.
- (c) A working Axle counter will auto reset a failed Axle Counter after 10 Seconds.
- (d) When both Axle Counter have failed, manual resetting by station master will be done in addition to informing S&T maintenance staff.
- (e) On manual resetting, both the Axle Counter should reset to preparatory mode simultaneously.

(ATUL YADAV)  
Sr. DOM(G&G) JHS

(A.K.SAINI)  
Sr. DSTE (BL) JHS

**B) WORKING OF BLOCK PROVING AXLE COUNTER PANEL BLOCK INSTRUMENT BETWEEN MBA-SPDM, MBA-KBR and MBA-KLAR**

For the purpose of line clear working Block Proving Axle counter panel block instruments have been provided between MBA-SPDM, MBA-KBR and MBA-KLAR.

These block panels are provided with various push buttons, keys, indicators, counters and buzzers. Their nomenclature and functions are detailed below.

(i) **PUSH Buttons**

Push Button	Functions
BELL (BLACK IN COLOUR)	(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 green 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.
CANCELLATION COUNTER	To register cancellation of Line Clear.
ACKN. BLACK IN COLOR	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

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS



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 (SHK KEY)	When SHK is in, shunt key from (EKT) can be taken and which server as tangible authority for Loco pilot to shunt beyond last stop signal upto first stop signal. The following operation are not possible when SHK is IN i) To take line clear ii) other side station to take line clear iii) closing of block iv) To take last stop signal to 'OFF'

**(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 complied 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 arrivals of train, associated controls are normal at both the stations 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 and rectangular indication for outgoing traffic of the train sending station To indicate TRAIN ON LINE on entry of incoming train on LINE CLEAR

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

<p>'TRAIN GOING TO'</p> <p>GREEN</p> <p>FLASHING GREEN</p>	<p>In a directional arrow head pointing upwards for outgoing traffic at train sending station and a rectangular indication named TGT.</p> <p>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 both stations.</p> <p>To indicate:</p> <p>(a) Line Clear has been withdrawn before the entry of train in Block Section or,</p> <p>(b) Block Section has cleared after the arrival of train, but associated signals &amp; their controls have not been put to normal at either of the stations.</p> <p>(c) Block section is cleared after arrivals of train, associated controls are normal at both the stations but after unintentional insertion of shunt key 'IN' in the sending section when the train was in the section.</p>
<p>TOL INDICATION</p> <p>RED</p>	<p>In a directional arrow head pointing upward and rectangular indication for outgoing traffic of the train sending station</p> <p>To indicate TRAIN ON LINE on entry of outgoing train on LINE CLEAR</p>
<p>CANCELCO-OPERATION INDICATION</p> <p>YELLOW</p>	<p>Indication to indicate co-operation extended by station at other end for cancellation of line clear by pressing cancel cooperation button</p>
<p>CANCEL INDICATION</p> <p>FLASHING YELLOW</p> <p>STEADY YELLOW</p>	<p>Circular LED</p> <p>To indicate progress of LINE CLEAR cancellation timer of 120 seconds. The indication lights 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</p> <p>To indicate Cancellation timer matures but due to some reason the system does not go to line closed.</p>
<p>LINE FREE GREEN,</p> <p>LINE OCCUPIED INDICATION RED</p>	<p>An indication is provided near the arrowhead indication to show block section is clear of vehicles</p>
<p>SNK (LOCAL)</p> <p>YELLOW</p>	<p>Two such indications are provided</p> <p>i) SNK: Yellow indication provided near TRAIN GOING TO directional arrowhead to indicate LAST STOP SIGNAL and its control at ON/Normal</p> <p>ii)SNK: Yellow indication provided near TRAIN COMING FROM directional arrowhead to indicate Home signal and its control at ON/Normal</p>

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

SNOKE(OTHER END) YELLOW	i) Provided near TRAIN COMING FROM directional arrow head 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'
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
SHUNT KEY GREEN RED	To indicate Shunt Key of EKT's position indication. To indicate Shunt Key of EKT is IN. To indicate Shunt Key of EKT is OUT.
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.
SSBPAC(D)/UFSBI OK indication	GREEN when SSBPAC(D)/UFSBI is OK otherwise extinguished
SSBPAC(D)/UFSBI FAIL indication	RED when SSBPAC(D)/UFSBI goes into a failure mode otherwise extinguished.
Communication LINK FAIL indication	Steady YELLOW when LINK between two UFSBI's FAILS else extinguished

(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
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.

### 20.0(B)WORKING OF SINGLE LINE BLOCK PROVING AXLE COUNTER PANEL BLOCK INSTRUMENTS FOR DISPATCHING TRAINS MBA-SPDM , MBA-KBR and MBA-KLAR:-

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

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

On getting this verbal permission supported by Private Number from ASM SPDM/KBR/KLAR, the ASM on duty at MBA 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 MBA, and TCF' at SPDM/KBR/KLAR 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 UP train/DN train, ASM/MBA on duty shall take 'off' 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 MBA & SPDM/KBR/KLAR respectively. To stop the buzzer ASM on duty shall press the ACKN button.

After this, ASM SPDM/KBR/KLAR shall take off the UP/DN Home signal. When the train clears the block section, SECTION buzzer starts ringing and 'TRAIN COMING FROM' indication turns to flashing green at MBA.

To stop the buzzer at SPDM/KBR/KLAR, ASM 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 MBA. ASM on duty at MBA acknowledges the buzzer by pressing ACKN button. 'TRAIN GOING TO' indication disappears and LINE CLOSED indication appears at MBA.

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

### **(C)WORKING OF SINGLE LINE BLOCK PROVING AXLE COUNTER PANEL BLOCK INSTRUMENT FOR RECEPTION OF TRAINS SPDM/KBR/KLAR to MBA**

When a request for granting 'line clear' is received from ASM- SPDM/KBR/KLAR, for particular train supported by his Private Number, the ASM on duty at MBA shall note down the particulars in the train register and after with, shall satisfying himself that conditions for granting 'line clear' indicated on the block panel are complied grant verbal line clear supported by his Private Number. On getting this verbal permission supported by Private Number from ASM/MBA, the ASM on duty at SPDM/KBR/KLAR 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 SPDM/KBR/KLAR, and TCF' at MBA 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.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

After this ASM SPDM/KBR/KLAR shall take off the UP/DN 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 SPDM/KBR/KLAR & MBA respectively.

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

#### **F) PUSH BACK OPERATION**

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

<b>SENDING STATION</b>		<b>RECEIVING STATION</b>	
<b>1</b>	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 Acknowledges the buzzer by pressing ACKN button. ACKN button turn off.	<b>2</b>	Train clears the block section, LINE FREE indicator turns GREEN. Section BUZZER starts ringing. ACKN indicator lights up TRAIN COMING FROM arrowhead indication turns to FLASHING GREEN Acknowledges the buzzer by pressing ACKN button. ACKN button turn off.
<b>3</b>	Advises receiving end station SM about cancellation on telephone after prescribed call attention buzzer.	<b>4</b>	Agrees to request, ensures SNK indicator YELLOW, SNOEK indicator YELLOW, SHUNT KEY indicator GREEN and gives consent on telephone
<b>5</b>	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	<b>6</b>	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
<b>7</b>	TRAIN GOING TO arrowhead turns off, LINE CLOSED INDICATION lights up.	<b>8</b>	On expiry of 120 seconds. TRAIN COMING FROM arrowhead indication and cancel indication turns off. LINE CLOSED INDICATION LIGHTS UP

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**Sequence of Operations of Signaling a train between two stations.**

If the block section is clear and the 'LINE CLOSED' indication is displayed on block panel at both the stations, the action is taken by the sending station SM as under:

	<b>SENDING STATION</b>		<b>RECEIVING STATION</b>
1.	SM ensures LINE CLOSED indication YELLOW, SNK indication YELLOW, SNOEK indication YELLOW, LINE FREE indication GREEN UFSBI MUX/SSBPAC(D) OK indication GREEN Communication Link fail Extinguished SM inserts SM key & turn to IN. a) SM sends 'Call Attention' signal to receiving station by pressing BELL button	2.	SM inserts SM key & turn to IN a. SM acknowledges the 'Call Attention' signal by pressing BELL button.
3.	SM sends 'Attend Telephone' signal by pressing BELL button	4.	SM Acknowledges the Pressing BELL button and attends Telephone.
5.	SM attends telephone and advises station in advance the about the intended movement of the train on telephone & asks for LINE CLEAR	6.	d) Exchanges information regarding train movement and ensures LINE CLOSED indication YELLOW, SNK indication YELLOW, SNOEK indication YELLOW, LINE CLEAR indication GREEN, UFSBI / MUX OK indication GREEN, Communication link fail Extinguished & Turn LCB Key IN e) Grants verbal LINE CLEAR
7.	SM presses BELL & TRAIN GOING TO until 'TRAIN GOING TO' arrowhead indication lights up GREEN. (If aforesaid indicator does not appear after 3 sec. (Approx) of pressing the buttons, SM releases the button & rechecks conditions at his station and asks station at other end to recheck the conditions for granting of LINE CLEAR).	8.	'LINE CLOSED' indicator turns off and 'TRAIN COMING FROM' arrowhead indications lights up GREEN.
9.	'LINE CLOSED' indicator turns off 'TRAIN GOING TO' arrowhead indication lights up GREEN. Release BELL & TRAIN GOING TO buttons		

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

10.	Take LSS to 'OFF' Train enters the block section LSS replaces to 'ON' LINE OCCUPIED indicator turns to RED. SECTION buzzer sounds & 'TRAIN GOING TO' arrowhead indication turns RED. ACKN indication lights up. Acknowledges the buzzer by placing ACKN button. ACKN indications turn 'OFF'. Push back the LSS control to Normal. Ensures SNK Lights up YELLOW.	11.	LINE OCCUPIED indicator turns to RED. SECTION buzzer sounds & 'TRAIN COMING FROM' arrowhead indication turns RED. ACKN indication lights up. Acknowledges the buzzer by placing ACKN button. ACKN indications turn 'OFF'. SNK Lights up YELLOW. Takes reception signal 'OFF' to receive the train. Train passes Home Signal. Home Signal replaces to 'ON' Train Clears the Block Section including Block Overlap
12.	SECTION buzzer sounds. ACKN indication lights up YELLOW. LINE FREE indicator turns to GREEN. TRAIN GOING TO arrowhead indication turns to FLASHING GREEN. Acknowledge the buzzer by pressing ACKN button. ACKN indications Turns OFF.	13.	SECTION buzzer sounds. ACKN indication lights up YELLOW. LINE FREE indicator turns to GREEN. TRAIN COMING FROM arrowhead indication turns to FLASHING GREEN. Acknowledge the buzzer by pressing ACKN button. ACKN indications Turns OFF.
14	SNK indication lights up YELLOW. 'TRAIN GOING TO' arrowhead indication turns 'OFF'.  LINE CLOSED indication lights up.	15.	Replaces all controls pertaining to reception of train to normal. SNOEK indication lights up YELLOW. 'TRAIN COMING FROM' arrowhead indication turns 'OFF'. LINE CLOSED indication lights up.

**G FAILURE OF DIGITAL AXLE COUNTER:**

- (i) When at reset box clear (Green) LED indication is available but block section including its overlap is not clear.
- (ii) When at reset box occupied (Red) LED indication is available but block section including its overlap is clear
- (iii) When at reset boxes "No" indication is available.

**H RESET BOX FOR RESETTING DIGITAL AXLE COUNTER:**

- (1) Green (large) indication shows the clearance and Red (large) indication shows occupations the block section on reset box of digital axle Counter provided at station, separate reset boxes are provided for UP & DN line of a block section and a reset -operation button (one) for each digital axle Counter.
- (2) On reset box one reset key/ lock (key insert, press and turn). One reset push and an electrical counter (for counting the number of reset attempts carried out) has been provided. The reset box of the digital axle counter also provides an indication near.

FOLLOWING INDICATIONS ARE SHOWN ON RESET BOX:-		
A	Block section clear	Green LED (Large size)
B	Block section occupied	Red LED (Large size)
C	24V Electrical supply available for axle counter	Yellow LED (Small size)
D	Axle counter is in preparatory reset mode (when axle counter has failed and resetting attempted at both the ends.	Green LED (Small size)

- (3) Glowing of Green LED (small) indication indicates Digital axle counter after failure has been re-setted by inserting (turning and pressing the) key with reset button at both the ends with the glowing of this indication Green LED (small) along with flickering of 24 V supply indication yellow LED (small size) indicate the axle counter is in preparatory reset mode.

As this train passes the Home signal at receiving end and clears the block section with overlap track circuit, the Green LED (large) will glow and the Green LED (small) along with the Red LED (large) extinguishes which indicate the clearance of block section. Normal working for following train will be introduced.

- (4) The counter increments by one count, every operation of resetting should be recorded in separate register as per the columns indicated below:

- i Serial No.
- ii Date and Time.
- iii Failed after the train number.
- iv First train which was passed on PLC/ T369 (3b).
- v Counter reading (prior to resetting)
- vi Counter reading (after resetting)
- vii First train which passed on proper line clear after normalization of axle counter.
- viii Signature of on duty Station Master reset-operation done.
- ix Remarks of SSE/JE (Sig).

**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 Station Master.
- (2) SSE/JE Sig and ESM must ensure the replacement with same size LED if the same gone defective.

**PROCEDURE OF DIGITAL AXLE COUNTER**

Resetting of digital axle counter is required to be carried out when Red LED (large) indication for occupied position remain glowing at resetting box of both i.e. main and redundant digital axle counter at station even after complete arrival of UP/DN train or after block back/block forward movement or with no train entering in the block section, notices that the digital axle counter has failed.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS



The SM on duty shall ensure complete arrival of train as well as clearance of block section including its overlap for the particular block section line. Then both receiving end SM and dispatching end SM shall carry out the resetting process as under (clearance of block section including its overlap from a train/ obstruction shall be certified by the following means).

By watching LV Board /Tail lamp by Station Master as per GR 4.17.

By checking train signal register for last through train passing the station and description and details of the last preceding train received completely from SM's of next block section and also from section controller. The certification of complete arrival of the last preceding train will be supported with exchange of private number by on duty SM with SM of next block section/section controller.

After above certification, following procedure will be adopted for resetting of digital axle counter.

### RESETTING OF DIGITAL AXLE COUNTER

RECEIVING END STATION MASTER	DISPATCHING END STATION MASTER
CALL ATTENTION BEAT TO BE TRANSMITTED.	ACKNOWLEDGE THE CALL ATTENTION.
ATTEND BLOCK TELEPHONE.	BLOCK TELEPHONE ATTENDED.
AFTER COMPLETE ARRIVAL OF TRAIN INFORMATION FOR FAILURE OF AXLE COUNTER TO BE GIVEN.	ACKNOWLEDGE THE INFORMATION.
ON DUTY ASM/SM AFTER VERIFIED THE COMPLETE ARRIVAL OF LAST TRAIN AND WILL CONVEY HIS INTENTION TO RESET, THE AXLE COUNTER OF THE CONCERNED BLOCK LINE TO DISPATCHING END ASM. IN SUPPORT OF THIS HE WILL EXCHANGE PRIVATE NUMBER.	HE WILL ACKNOWLEDGE AND EXCHANGE PRIVATE NUMBER IN CONFIRMATION AND INTIMATION FOR INTENSION OF RESETTING OF AXLE COUNTER AT HIS END ALSO.
ON DUTY STATIONMASTER WILL INSERT THE RESETTING KEY, TURN AND PRESS ALONG WITH THE RESET BUTTON. HE WILL RELEASE THE RESET BUTTON ONLY AFTER TELEPHONICALLY VERIFICATION FROM OTHER END ASM FOR HAVING DONE RESET OPERATION THIS WILL CAUSE INCREMENT OF ELECTRICAL COUNTER BY ONE NUMBER FOR EACH RESET OPERATION, WITH COMPLETION OF RESET OPERATION RESET INDICATION GLOWS GREEN LED(SMALL) ON THE RESET BOX.(WHICH INDICATE AXLE COUNTER IS IN PREPARATORY RESET MODE.)	ON DUTY STATIONMASTER WILL INSERT THE RESETTING KEY, TURN AND PRESS ALONG WITH RESET BUTTON. HE WILL RELEASE THE RESET BUTTON ONLY AFTER TELEPHONICALLY VERIFICATION FROM OTHER END ASM FOR HAVING DONE RESET OPERATION THIS WILL CAUSE INCREMENT OF ELECTRICAL COUNTER BY ONE NUMBER FOR EACH RESET OPERATION, WITH COMPLETION OF RESET OPERATION RESET INDICATION GLOWS GREEN LED (SMALL) ON THE RESET BOX. (WHICH INDICATE AXLE COUNTER IS IN PREPARATORY RESET MODE.)

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

ON DUTY STATION MASTER WILL TAKE OUT THE KEY AND KEEP IN HIS SAFE CUSTODY	ON DUTY STATION MASTER WILL TAKE OUT THE KEY AND KEEP IN HIS SAFE CUSTODY
ON DUTY STATIONMASTER WILL CONFIRM THE COMPLETE ARRIVAL AND CLEARANCE OF BLOCK SECTION INCLUDING OVERLAP BY WATCHING TAIL LAMP/TAIL BOARD OF THE TRAIN, WHICH WAS SENT ON PROPER SIGNAL BY SENDING END AND EXCHANGE PRIVATE NUMBER.	ON DUTY STATION MASTER WILL EXCHANGE THE PRIVATE NUMBER WITH STATION MASTER ON DUTY AT RECEIVING END STATION IN CONFIRMATION OF COMPLETE ARRIVAL OF TRAIN AT RECEIVING STATION AND ALSO THAT NOW THE SECTION IS CLEAR.
ON DUTY STATION MASTER WILL WATCH THE BLOCK SECTION CLEARANCE INDICATIONS AVAILABLE I.E. GREEN LED (LARGE), PREPARATORY RESET MODE INDICATION GLOWS LED (SMALL) DISAPPEARS, OCCUPATION INDICATION RED LED (LARGE), DISAPPEARS AND REPEAT THEM TO OTHER END STATION MASTER.	ON DUTY STATION MASTER WILL WATCH THE BLOCK SECTION CLEARANCE INDICATIONS AVAILABLE I.E. GREEN LED (LARGE), PREPARATORY RESET MODE INDICATION GLOWS LED (SMALL) DISAPPEARS, OCCUPATION INDICATION RED LED (LARGE), DISAPPEARS AND REPEAT THEM TO OTHER END STATION MASTER.

- (1) First train will go on proper signal.
- (2) When Red LED (large) extinguishes and Green (large) glows normal working is to be introduced. The block instruments is electrically controlled in such a way that "Train On Line" position can not be turned to line closed position unless whole of train passes home signal and clears not only the block section, but over lap section also and track circuit/ axle counter shows clear indication also. The free indication provided near the block instrument appears with the clearance of block section with over lap track circuit/Axle counter. After getting the "free indication" of block instruments can be brought from train on line position to line closed position.

Normal working of following trains will be introduced. If after adopting the above method for resetting the digital axle counter, axle counter does not go in preparatory reset mode..

ASM's at the both the ends will repeat the above procedure once again and inform ESM/JE/SSE/Sig and make the entry in failure register Every attempt of resetting shall be supported with exchange of private number and train number should be recorded in register made for this purpose at both the ends station master.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

## 16 DOUBLE LOCK ARRANGMENT ON RELAY ROOM

16.1 The Relay Room is provided with double lock. The key of one lock will remain in the custody of SM/ASM on duty while the key of other lock will remain in the custody of ESM. The SM/ASM on duty will hand over the key to the maintainer on demand whenever he visits for maintenance.

ASM on duty will ensure that the key is returned to him after maintenance.

16.2 A register to record the transaction of Key on proper proforma will be maintained by the ASM/SM on duty.

17. **S&T REGISTER:-** The following S&T registers are kept at the station in the custody of SM/ASM. Signal Inspection & failure register:- SM/ASM on duty will record the signaling failures in appropriate columns.

The following will be under the custody of S&T officials.

- i) Signal History Register: - S&T staff will make entries in the book.
- ii) Signal Maintenance Book: - It will be filled by the maintainer on their visit.

## 18. POWER SUPPLY EQUIPMENT AND POWER SUPPLY FAILURES:

(a)i. Normally all the signaling circuits are fed and worked by AT power supply, local power supply & generator power supply from the distribution board provided in the ASM office. An illuminated red pilot lamp fitted on the switch board in the ASM's office indicate that the AT power supply & local supply is available. The above red pilot lamp when not burning will indicate that AT power supply & local power supply has failed. In the event of AT supply failure, auto change over panel will automatically transfer the load on to local power supply and if local power supply also failed then the auto change over panel will automatically transfer the load on to the generator power supply.

ii. An auto change over panel provided in SMs room will display availability of power supply in following order-

- i) AT Power supply.
- ii) Local Power supply.
- iii) Power supply of generator

And changeover will take effect in this order only. However if auto change over system fails to work then ASM on duty will attempt manual change over by the switch provided on auto changeover panel.

iii. After the above operation of the switch the generator should be stopped as per the instructions for starting and stopping of the Diesel Generator.

iv. When the AT supply & local supply are not available ASM will start the Generator and extend the supply.

### v. Failure of Panel Indication:

In case Panel goes blank, SM/ASM on duty on Panel should check whether AT supply or 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 ASM's Office.

In case of AT supply or Local power supply is not available; he will operate the Diesel Generator provided at the station for normal working on the panel. In case of AT supply, Local Power supply and Generator supply are not available due to any defect, and operating panel is blank, 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.

### vi. General Instructions:

In case of Neon lamp on the board remaining permanently extinguished showing non availability of the normal supply. ASM on duty will arrange to inform the SE/JE (Electrical), TPC & ESM of the section through XR/Control message for attending the equipment with copies to JE (E) & SE(S) of the section.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS



**(c) POWER SUPPLY SYSTEM FOR S&T EQUIPMENTS, SIGNALS, POINTS, CONTROL PANEL ETC:**

An integrated power supply system (IPS) is provided in equipment room to fulfill requirement of various power supplies required for S&T equipments, signals, track circuit, axle counters, points, control panel etc. This power supply system ensures uninterrupted supply to signaling system to avoid failure of signaling gear even when the mains power supply fails. The system has a very limited capacity to feed power in the absence of main supply. There is an indication panel provided in SM's room indicating the health of battery and the action required to be taken by SM. depending upon the alarm received on IPS indication panel, SM must immediately take action and inform sectional signaling and electrical staff as early as possible.

**19 SIGNAL AND ROUTE TABLE:**

Signal and Route Buttons to be pressed and released for taking "OFF" a particular signal are given below-

Signal No.	Description	Signal Button	Route Button
S-1	Up advance starter.	S-1	UZ
S-2(i)	Down home to up 1 <sup>st</sup> loop down line.	S-2	BB
S-2(ii)	Down home to up 2 <sup>nd</sup> loop down line.	S-2	BC
S-2(iii)	Down home to up 3 <sup>rd</sup> loop down line.	S-2	BD
S-2(iv)	Down home to main line.	S-2	BA
CO-2(i)	Down Calling On to up 1 <sup>st</sup> loop down line.	S-2	BB
CO-2(ii)	Down Calling On to up 2 <sup>nd</sup> loop down line.	S-2	BC
CO-2(iii)	Down Calling On to up 3 <sup>rd</sup> loop down line.	S-2	BD
CO-2(iv)	Down Calling On to main line.	S-2	BA
S-3	Up Branch advance starter.	S-3	UZ1
S-4(i)	Down home to up 1 <sup>st</sup> loop down line.	S-4	BB
S-4(ii)	Down home to up 2 <sup>nd</sup> loop down line.	S-4	BC
S-4(iii)	Down home to up 3 <sup>rd</sup> loop down line.	S-4	BD
S-4(iv)	Down home to main line.	S-4	BA
CO-4(i)	Down Calling On to up 1 <sup>st</sup> loop down line.	S-4	BB
CO-4(ii)	Down Calling On to up 2 <sup>nd</sup> loop down line.	S-4	BC
CO-4(iii)	Down Calling On to up 3 <sup>rd</sup> loop down line.	S-4	BD
CO-4(iv)	Down Calling On to main line.	S-4	BA
S-5	Up main line starter up to signal no.-S-1	S-5	UX
SH-105	Up Shunt from main to signal no.-S-1.	SH-105	UX
S-7	Up 1 <sup>st</sup> loop down line starter up to signal no.-S-1	S-7	UX
SH-107	Up Shunt from up 1 <sup>st</sup> loop down line to signal no.-S-3.	SH-107	UX1
S-11	Up 2 <sup>nd</sup> loop down line starter up to signal no.-S-1	S-11	UX
SH-111	Up Shunt from Up 2 <sup>nd</sup> loop down line to sig no.-S-1.	SH-111	UX
S-15	Up 3 <sup>rd</sup> loop down line starter up to signal no.-S-1	S-15	UX
SH-115	Up Shunt from Up 3 <sup>rd</sup> loop down line to sig no.-S-1.	SH-115	UX
S-12	Dn starter from up 1 <sup>st</sup> loop down line up to sig no.-S-20	S-12	DX
SH-112	Dn shunt from up 1 <sup>st</sup> loop down line up to sig no.-S-20	SH-112	DX
S-16	Dn starter from up 2 <sup>nd</sup> loop down line up to signal no.-S-20	S-16	DX

(ATUL YADAV)  
Sr. DOM G&G JHS

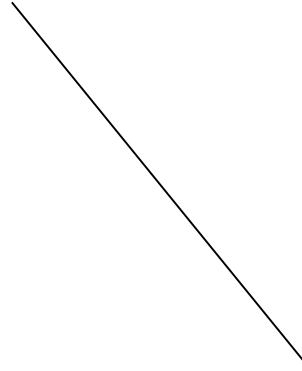
(A.K. SAINI)  
Sr. DSTE (BL) JHS

SH-116	Dn shunt from up 2nd loop down line up to signal no.-S-20	SH-116	DX
S-14	Dn starter from up 3rd loop down line up to signal no.-S-20	S-14	DX
SH-114	Dn shunt from up 3rd loop down line up to signal no.-S-20	SH-114	DX
S-18	Dn starter from up main down line up to signal no.-S-20	S-18	DX
SH-118	Dn shunt from up main down line up to signal no.-S-20	SH-118	DX
S-19(i)	Down home to up main down line.	S-19	BA
S-19(ii)	Down home to up 1st loop down line.	S-19	BB
S-19(iii)	Down home to up 2nd down line.	S-19	BC
S-19(iv)	Down home to up 3rd down line.	S-19	BD
CO-19(i)	Down Calling On to up main down line.	S-19	BA
CO-19(ii)	Down Calling On to up 1st loop down line.	S-19	BB
CO-19(iii)	Down Calling On to up 2nd loop line.	S-19	BC
CO-19(iv)	Down Calling On to up 3rd loop line.	S-19	BD
S-20	Down Advance Starter signal.	S-20	DZ
SH-102 (i)	Down Shunt from main line to up 2nd loop down line.	SH-102	BC
SH-102 (ii)	Down Shunt from main line to up 1st loop down line.	SH-102	BB
SH-102 (iii)	Down Shunt from main line to up main down line.	SH-102	BA
SH-102 (iv)	Down Shunt from main line to up 3rd loop down line.	SH-102	BD
SH-102 (v)	Down Shunt from main line to Goods siding up to SB.	SH-102	GS
SH-199 (i)	Up Shunt from Up main line to up main down line.	SH-199	BA
SH-199 (ii)	Up Shunt from Up main line to up 2 <sup>nd</sup> loop down line.	SH-199	BC
SH-199 (iii)	Up Shunt from Up main line to up 1 <sup>st</sup> loop down line.	SH-199	BB
SH-199 (iv)	Up Shunt from Up main line to up 3rd loop down line.	SH-199	BD
SH-199 (v)	Up Shunt from Up main line to A & D siding up to SH 110.	SH-199	AD1
SH-110	Down Shunt from A & D siding up to SH 199.	SH-110	DX
SH-106	Down Shunt from Ballast Loading siding up to S.B.	SH-106	GS
SH-106	Down Shunt from Ballast Loading siding up to SH 115.	SH-106	BD
SH-106	Down Shunt from Ballast Loading siding up to SH 111.	SH-106	BC
SH-104 (i)	Down Shunt from Up KURJ Dn line to up 2 <sup>nd</sup> loop down line up to SH 111.	SH-104	BC
SH-104 (ii)	Down Shunt from Up KURJ Dn line to up 3 <sup>rd</sup> loop down line up to S H 115.	SH-104	BD
SH-104 (iii)	Down Shunt from Up KURJ Dn line to Goods siding up to S.B.	SH-104	GS
SH-104 (iv)	Down Shunt from Up KURJ Dn line to up 1 <sup>st</sup> loop down line up to SH 107.	SH-104	BD
SH-104 (v)	Down Shunt from Up KURJ Dn line to up main down line up to Sh 105.	SH-104	BB
SH-117	Up Shunt from Goods siding to Ballast Loading siding up to SH 106	SH-117	BS
SH-117	Up Shunt from Goods siding to Up main Dn line up to SH 102	SH-117	UX

**Note:** After pressing & releasing COGGN button concerned route button to be pressed.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**APPENDIX 'C'****ANTI COLLISION DEVICE – NIL**

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**APPENDIX –‘D’  
DUTIES OF THE STAFF:**

**DUTIES OF THE SM / ASM:**

- a) The Station Master on duty shall be responsible for the efficient discharge of duties devolving upon the several members of the staff either permanent or temporarily under his orders at the station or within station limits and such staff shall be subject to his authority and direction in the working of the station. [GR 5.01]
- b) The Station Master on duty shall also be responsible that the general working at the station is carried out in strict accordance with the rules for the time being in force. [GR 5.01]
- c) No person other than the Station Master on duty shall ask for/or give line clear or give authority to proceed, T-369(3b), Caution order and Authority to proceed without line clear etc. [GR 5.01]
- d) The Station Master is responsible for giving ‘Train out of Section’ signal as per SR 4.56/1 of G&SR after ensuring that the train has passed with tail lamp / tail board on the last vehicle or the Guard’s alright signal or Train intact register.
- e) The Station Master on duty is responsible for ensuring that signals taken off for a train are put back to ‘ON’ immediately the train has passed them as per SR.3.36 (2) of G&SR.
- f) In case of unusual occurrence, the station master on duty must ensure safety reporting of occurrence and render assistance as per GR. 2.11 of G&S Rules.
- g) SM/ASM on duty is also responsible for watching safe passage of trains and exchanging of all right signals with crew of trough passage of train.
- h) Following keys must be kept under personal custody of SM:-
  - i- Block Instrument Lock Key
  - ii- Relay room Lock Key
  - iii- SM Emergency Key
  - iv- Isolator Box Key (Keys of various SMs/SS kept in Isolator BOX)

**DUTIES OF THE POINTSMAN**

- 1) The Points-men on duty are responsible to clamp and pad lock points as and when required and to exchange hand signals with train crew of all passing through trains from ‘OFF’ side.
- 2) The points-man on duty shall be responsible for handing over all the authorities to the driver and guard as & when required. He will be responsible for exchanging alright signals for run through trains from the opposite side of the Station Master.
- 3) Points-man will secure Vehicle as per S.R.5.23-1 and SR 5.23-2 of G&SR under supervision of Guard/SM/ASM person in charge of shunting.
- 4) He shall obey all orders given to him by SM / ASM on duty.

**DUTIES OF THE SHUNTING MASTERS/PERSONS INCHARGE OF SHUNTING:**

- a) They will obtain instructions from the SM/ASM as the case may be regarding shunting programs at the time of commencement of their duties.
- b) Anticipated move of shunting will be clearly intimated to the SM/ASM concerned and shunting move shall only be permitted after ensuring correct setting and locking of the points.
- c) Starting signals, where provided, shall be taken ‘OFF’. The in charge of shunting must ensure that the correct shunt signal has been taken ‘OFF’.
- d) They must ensure while blocking any line that the wagon/vehicles are placed inside the fouling marks.

(ATUL YADAV)  
Sr. DOM G&G JHS



**APPENDIX 'E'****ESSENTIAL EQUIPMENT AT THE STATION:**

S.N.	Name of equipment	Total number
01	Switch clamps	20
02	Padlocks	25
03	Button collar	06
04	Detonator	20
05	LED based H.S. Lamp	04
06	Flags Green	06
07	Flags Red	08
08	Safety chain	02
09	Fire extinguisher	02
10	Stretcher	01
11	Fire buckets with stand	04
12	First Aid Box.	01
13	Wooden wedges	10
14	Safety rubber gloves	02

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**APPENDIX 'F'****List of DK Station, Halt station, IBH & outlying siding etc..-**

**'D' Class Station:-** There are four 'D' Class Station in between MBA-KBR, MBA-KLAR, MBA-SPDM Namely CHARKHARI(CRC) between MBA-KLAR, Baripura between MBA-KBR, CHTHARI and RAGOULI between MBA-SPDM at all these stations 'H' boards are provided before the station on both side of this station to indicate the Loco pilot of stopping train.

Loco Pilot of the stopping trains will stop and Start has as per schedule given in working time table.

(ATUL YADAV)  
Sr. DOM G&G JHS

(A.K. SAINI)  
Sr. DSTE (BL) JHS

**APPENDIX 'G'****RULES FOR WORKING OF TRAINS IN ELECTRIFIED SINGLE LINE SECTIONS:-****1. KNOWLEDGE OF RULES:**

SR 17.01/1 SM shall ensure that all station staff working in the area where electric traction is in use are thoroughly conversant with the rules applicable for running of trains in the section provided with 25 KV AC traction. Ignorance of the rules shall not be taken as an excuse for non compliance.

**2. REPORTING OF BREAKDOWNS:**

Any break down or defects reported to SM shall be conveyed to the Traction Power Controller through TPC telephone or through section controller immediately. In case of failure of communication, he shall use his discretion regarding movement of traffic and advise the nearest traction official.

**3. SAFE CUSTODY OF OHE SWITCHES KEYS AND OPERATION OF SWITCHES:**

SR 17.03/4. SM shall make them self fully aware, through supplement to the SWR for AC traction, of the location of Isolator Switches provided for control of OHE power supply equipment at his station [SR 17.05/1(4)] and shall be fully conversant with the correct method of opening and closing the same in emergency. Key for all outdoor OHE switches shall be kept locked in glass fronted box provided with a lock, the key of which shall be kept in the custody of the SM. The key of OHE switches shall be issued on demand, only to authorized person whose signatures for receipt shall be obtained in register maintained for the purpose.

3.1 In the event of breakage of glass of the box containing the key of the OHE switches shall be kept in safe custody by the SM till the glass of the box is replaced. He shall also advise the concerned SSE OHE to arrange immediate replacement of the glass.

3.2 In case of emergency the SM by himself shall operate such OHE switches as per specific direction of the Traction Power Controller (TPC). If the TPC wishes to have any isolator switch opened or closed he shall ask Station Master under exchange of private number to carry out the required switching operation, if SSE (OHE) is not available to him. The SM by himself who after carrying out the orders lock the switch in last operated position and inform the TPC of the action taken. He shall not part with the key until receipt of further order from TPC. Record of every such operation shall be maintained on key transaction register. The key shall be deposited back to the SM who intern shall lock the keys in the glass fronted box and make an entry in the register maintained for transaction of the keys in case the SM has not done the operation by himself.

**4. ISSUE OF CAUTION ORDERS:**

In case of OHE breakdown on having been reported by the Traction Foreman or SSE (OHE), the SM, in consultation with the Section Controller shall issue the Caution Order in accordance with SR 4.09/1, to all Loco Pilots entering into the affected section mentioning clearly of the condition.

(ATUL YADAV)

(RAJAT KUMAR SINGH)

Sr. DOM G&amp;G JHS

Sr.DEE(TD)JHS

**5. WORKING OF OHE STAFF IN STATION LIMITS: SR 17.03/8.**

No person shall disturb the OHE, or carryout bonding or any other work within the Station limits, in such a way as to obstruct the line and necessitate showing of danger signals, without prior permission of the SM.

**6. POWER BLOCK:**

6.1 The SM shall grant local power blocks for working into the siding which does not affect the normal train working under advice to the Section Controller.

6.2 SM shall not permit any electric engine to enter into area over which power block has been granted. He shall put button collars on such points leading movement into the area which shall be removed only after cancellation of the block. He shall make entry on the log book accordingly while handing over charge to incoming SM.

**7. WORKING OF TOWER WAGON: SR 17.08/1.**

A tower wagon is to be treated like a train and shall be worked without a guard. In case of an arranged OHE block, one or more Tower wagons can be worked and follow one another. The SM while authorizing the following Tower Wagon/ Tower Wagons into occupied affected OHE section, shall issue an 'Authority to proceed without line clear' and a caution order mentioning the site of work indicating the speed which under no circumstances, shall exceed 10 KMPH. A Tower Wagon shall however not be permitted to enter the section following a train. The After completion of the work in charge of the Tower Wagon which entered last I the section shall certify at the station in advance about clearance of the section and initial against the relevant entry in the Train signal register in token of the section having been cleared of the last Tower wagon.

**8. DUTIES & RESPONSIBILITIES OF STATION MASTER IN CASE OF NO TENSION-FAULT TRIPPING IN OVERHEAD EQUIPMENT: SR 17.08/1**

8.1 in case of power supply in a section become faulty, on getting such information from TPC, the Section Controller shall advise the same to the SM under exchange of private numbers. The SM shall treat the section as under emergency power block and shall take action accordingly.

8.2 In case the train has entered into the faulty section: In case the train has entered into the faulty section and also into the section which has been isolated, the SM shall not allow any train to enter into the affected block section.

**9. DUTIES OF THE STATION MASTER IN CASE OF UNSAFE CONDITION OF A TRAIN WORKING ON ELECTRIFIED SECTION:**

In case of unsafe condition of a train working on electrified traction, the TPC shall advise the Section controller after switching off the power supply of the effected section, on getting such information from TPC, the Section Controller shall advise the same to the SM under exchange of private numbers. The SM shall treat the section as under emergency power block and shall take action accordingly. The SM shall not allow any train to enter into the affected section unless, there is no infringement.

**Note:-Traction working rule with TWRD is attached separately as appendix G which is part of SWR.**

(ATUL YADAV)

(RAJAT KUMAR SINGH)

Sr. DOM G&G JHS

Sr.DEE(TD)JHS



# NORTH CENTRAL RAILWAY

JHANSI DIVISION

MAHOBA STATION (B.G.)

# SWR NO - 475

Date of issue: - 12-2019

Date brought into force: