

**EAST COAST RAILWAY
SAMBALPUR DIVISION**

Sl. No. SWR/RAIR/8

STATION WORKING RULES OF RAIKAKHOL STATION (CODE: RAIR)

BG/MG/NG: Broad Gauge
Date of issue: 29.11.2013
Date brought into force:

NOTE: - The Station Working Rule (SWR) 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 the above books.

1. **STATION WORKING RULE;** -

1.1 **STATION WORKING RULE DIAGRAM NO.** S.I/WRD –10495 (ALT-E)

1.2 **SIGNAL INTERLOCKING PLAN NO.:** - S.I/WRD –10495 (ALT-E)

The Station Working Rule diagram and Signal Interlocking Plan shows the complete lay out of the yard, siding, normal position of points, the Signaling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the points number and signals when reporting accidents.

2. **DESCRIPTION OF STATION:** -

RAIRAKHOL is a three-line station situated in Sambalpur-Talcher section at KM. 70.912 from Sambalpur. It is Standard – III interlocked Class‘B’ station with central panel and absolute block system of working. LVCD axle counters at either end are provided at the station for last vehicle check.

2.1 **GENERAL LOCATION:-**

2.1.1 **NAME OF STATION:** - RAIKAKHOL

2.1.2 **CLASSIFICATION OF STATION:** - ‘B’ class

2.1.3 **NAME OF THE SECTION:** - Sambalpur - Talcher, Single Line, Non-RE, BG section

2.1.4 **ROUTE :** - D Spl.

2.1.5 **LOCATION:** - 70.912 from Sambalpur and 633.912 from HWH
(via JSG & SBP).

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

- i) Sambalpur end - CHARMAL (Code: CHAR) inter distance 15.00 K.M.
- ii) Talcher end - BAMUR (Code: BAMR) inter distance 15.65 K.M.
- iii) Passenger halt: - Nil
- iv) Flag station: - Nil
- v) Outlying siding: - Nil
- vi) D.K. station: - Nil.
- vii) IBH: - Nil
- viii) IBS: - Nil

2.3 BLOCK SECTION LIMITS: -

Between stations	The point from which 'Block section' commences.	The point at which 'Block section' ends.
Between RAIR- BAMR	UP advanced starter signal No.14 of RAIRAKHOL	DN advanced starter signal No.5 of BAMR
Between RAIR – CHAR	DN advanced starter signal No.5 of RAIRAKHOL.	UP advanced starter signal No.14 of CHAR.

2.3.1 STATION SECTION:

The station section is between the UP and DN advanced starter signals of the station.

2.3.2 STATION LIMIT: The portion of line between UP and DN distant signals of RAIR station is the station limit of the station.**2.4: GRADIENT: -**

(a) From the center of the station building towards CHARMAL.

Chainage in Meter		Inter-Distance	Gradient
From	To		
0 m	600 m	600 m	1 in 1200 F
600 m	800 m	200 m	Level
800 m	4800 m	4000 m	1 In 150 R
4800 m	5000 m	200 m	Level
5000 m	Block Section	----	1 in 200 F

(b) From the center of station building towards BAMUR.

Chainage in Meter		Inter distance	Gradient
From	To		
0 m	600 m	600 m	1 in 1200 R
600 m	2300 m	1700 m	1 in 150 R
2300 m	2400 m	100 m	Level
2400 m	3500 m	1100 m	1 in 150 F
3500 m	3590m	90m	Level
3590m	Block Section	-----	1 in 150 R

2.5 LAY OUT: -

- i) No. of running lines :- 3 (Three)
 ii) No. of sidings :- 1 (One) Engg. Siding, CAL-206M
 iii) No. of Passenger platform :- 2 (Two) High level Platform beside Line no.-1 (560 x 6.10 m) and Rail Level platform beside Line No-3 (285M x 7.25 M)
 iv) No. of goods shed platform :- Nil.
 v) FOB :- 01, CH 34.310 M from CSB at BAMR end.

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENTS AND HOLDING CAPACITY IN CSL: -

(i)

Line No.	Description	CSL	Isolation Provided	
			BAMR end	CHAR end
Line No. 1	1 st Loop	782.75 M	ORL	ORL
Line No. 2	Main line	795.90 M	-	-
Line No.3	2 nd Loop	788.40 M	ORL	ORL

- (ii) **DIRECTIONS OF MOVEMENT: -**
Trains arriving from CHAR are UP trains.
Trains arriving from BAMR are DN trains.

2.5.2 NON RUNNING LINES AND CAL

Sl. No	Description	Takes off	CSL	Exit	Operation.
1	Engineering siding.	Line No .3 at BAMR end.	206.0M (DE-DS)	One way.	Key Transmission, Panel control switch No.11.

(Working of siding is mentioned in Appendix –'B')

2.5.3 ANY ABNORMAL FEATURE IN THE LAY OUT:

There is a falling gradient of 1 in 150 towards block section at Bamur end beyond outermost facing point.

2.6 i) **LEVEL CROSSINGS: (STATION SECTION)** :- NIL -

ii) **LEVEL CROSSING: (IN BLOCK SECTION)** : - NIL -

3.0 SYSTEM AND MEANS OF WORKING :

(Rule No. Chapter XIV of GR & SR, Chapter III & IV of BWM)

- i) System of working: - Absolute block working on single line.
- ii) Type of block instruments: - Token less Block Instrument (Daido).
- iii) Instruments: -Co-operative.
- iv) Staff responsible for their operation: - SM on duty.
- v) Custodian of keys: -SM on duty.

4.0 SYSTEM OF SIGNALLING AND INTERLOCKING:

4.1 STANDARD OF INTERLOCKING AND TYPE OF SIGNALLING:

- i) **INTERLOCKING** : The station is provided with Standard III interlocking, central panel with Multiple Aspect Colour Light Signaling and Axle counter for last vehicle check. All the points are centrally operated from central panel by on duty Station Master. The Home signals and Advanced Starter signals are interlocked with respective single line token block instruments. GR 3.08(4) (b) governs the aspect and indications of the signals. The station has no end cabins.
- ii) **MINIMUM EQUIPMENT OF SIGNAL** – Distant, Home, Calling on, Starter and advanced starter in either direction.
- (iii) **AXLE COUNTER**: Both side block section is monitored by axle counter system, electronic axle counters along with associated entrance and exit trolley suppression tracks are provided at both end of the station just ahead of advanced starters. A pair of electronic axle counter each is provided between RAIRAKHOL and BAMUR, one beyond Up advanced starter of RAIRAKHOL and one before DN advanced starter signal of BAMUR station at other end for counting the axle 'IN' and for counting the axles 'OUT' to indicate whether the block section is clear of trains as well as to verify the last vehicle of the incoming train. Similarly, a pair of axle counter each is provided between RAIRAKHOL and CHARMAL station one just beyond DN advanced starter signal of RAIRAKHOL and other just before Up advanced starter signal of CHARMAL station for counting the axles 'IN' and counting the axles 'OUT' to indicate whether the block section is clear of trains as well as to verify the last vehicle of the incoming train.

The position of block section i.e. clear/occupied is reflected in the illuminated panel diagram provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when the block section is occupied.

Whenever a train enters into the block section, block section clear indications 'GREEN' disappears and occupied indication 'RED' appears. If after the complete arrival of the train the RED indication does not change to GREEN, it should be assumed as block instrument failure and necessary action as per GR 14.13 to be followed. The axle counter is interlocked with the Token less Block Instrument.

A RESET BOX consisting of a counter and one resetting key with a push switch and three indications i.e. 'RED' and 'GREEN' and 'YELLOW' with locking arrangement for each pair of axle counter is kept at the station masters office 'RED' and 'GREEN' indicates occupations and clearance of Block section respectively 'YELLOW' indications glows during resetting operation. The resetting key of this panel is kept locked and sealed in a separate box. The key of the box is kept under the custody of on duty stationmaster.

- iv) **SEALING OF EMERGENCY OPERATION BUTTONS/KEYS:** All 'emergency operation buttons' on the Station Master's control panel shall be kept sealed in normal condition by S&T staff. Whenever any emergency operation is initiated, SS/SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SS/SM on duty shall inform concerned S&T staff for sealing of the concerned button.
 - v) **TRACK CIRCUIT:** All the lines including point zone between UP and DN home signal is track circuited. Normally the panel is dark except for point and block section indication. The position of the running line is indicated in the illuminated diagram at the Station Master's office. It shows 'RED' when the line is occupied and 'WHITE' when the route is set and signal taken OFF. The position of points at either end are also indicated in the illuminated panel diagram. Whenever a signal is taken OFF the route set indication "WHITE" appears for the particular route set. As the Train occupies the track circuit the "WHITE" indication disappears and "RED" indication appears.
 - vi) **STATION MASTER'S CONTROL:** A push button type electric control apparatus is provided in the Station Master's office to operate electrically the UP and DOWN signals and points. The control apparatus is provided with a lock up key, which shall always remain in the personal custody of the Station Master on duty in terms of Subsidiary Rule 3.36.03(a). The position of all points and signals and running lines are available in the Station Master's illuminated panel diagram. Reminder block collars are provided for use on push buttons which will be placed on point button to prevent operation of the button in case of concerned line is blocked
- 4.2 **POSITION AND OPERATION OF POINTS:** The positions of all points are shown in station Working Rule Diagram and also on operating panel. All points are power operated through Station Master's control panel apparatus. All cross over points on running line are independently worked by electric point machine and have built in locking and detection arrangement.
- 4.3 **ROTARY KEY TRANSMITTER (RKT):** RKTs with crank handle keys are provided at the station and at both end locations for the operation of points in case of failure of motors. The keys for the crank handles are transmitted electrically to the crank handle locations for operating the points by crank handles.
- 4.4 **IBS: - NIL**
- 4.5 **POINT AND TRAP INDICATOR:- NIL**

- 4.6 **REPEATING SIGNAL (BANNER TYPE): - NIL.**
- 4.7 **EMERGENCY CROSSOVER: - NIL.**
- 4.8 **L.C.GATE OPERATION:- NIL.**
- 4.9 **CALLING ON SIGNALS:-** 'Calling on' signals have been provided below UP and DN Home signals. It shows no light when 'ON' and 'YELLOW' light when taken off.
- 4.10 **SHUNT SIGNALS: -** Position light shunt signals have been provided at either end of the yard ahead of top point Nos. 6 (BAMR end) & 9 (CHAR end) for back shunting in the yard and to be used whenever necessary. Forward shunting movement may be carried out with starter signals in addition to traffic signals.
- 4.11 **ANTI COLLISION DEVICE: - NIL**
- 4.12 **CRANK HANDLES-**

When any point fails to operate normally by the route setting operation or individual operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle, for motor operated points shall be followed.

For crank handle operation of the points, the SM has to press concerned CH 13 and Trans button. This will enable SM to extract key from RKT, which in turn can be transmitted from the adjacent RKT to end location for release of key from RKT there. The TPM after extracting the crank handle key will operate the required points to the desired position after unlocking the machine for crank handle operation by using the RKT key. After the work is over the TPM shall transmit the key back to station master on duty through RKT. The station master on duty shall take back the key and put it in original RKT and turn to key IN position. On pressing the release button on the group along with CH 13 green light glows indicating 'key in'. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for rectification. Station Master as per OM 20.06 (d) shall maintain an emergency crank handle register. The procedure for use of crank handle for Motor operated points shall be followed in terms of operating Manual 20.06.

- 4.13 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**
Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit and SM's emergency point key is 'IN' and turned shall press emergency point operation button by breaking the seal along with relevant point button simultaneously. Then retaining point button pressed, emergency point operation button to be released and the point group button normal / reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.
- 4.14 **EMERGENCY ROUTE RELEASE COUNTER:**
This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.
- 4.15 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):**
The panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally

the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this the emergency route release button (white with red dot) positioned in the top of panel to be pressed first by breaking the seal and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white flashing light will light indicating that the timer is working. After 120 seconds, the white flashing light along with the white strip of light will disappear suggesting the route has been released.

In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to get the emergency route release button resealed after rectification of fault if any.

Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary and in the train signal register.

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

As per JPO/02/2012 of 29.08.2012, the following procedure shall be adopted for opening of Relay Room:-

The Relay room of station shall have double locking system of operating and S&T Locks. One Godrej Lock shall be provided on the door of Relay Room by the Station Master. This lock is named as operating lock. The key shall be kept in the safe custody in the key- box with the SM on duty. Likewise, one Godrej lock shall be provided on the door of Relay Room by the Signal Maintainer/ Signal Supervisor of the Station /Section.

Names of the S&T staff authorized for opening of Relay Room is to be entered in the first page of Relay Room Key Register and jointly certified by SSE /Signal In-Charge and TI In- Charge of the Section. In emergency, if any S&T staff other than authorized wants to open Relay room, he must inform DSTE through Signal Fault Control. Signal Fault Control shall convey the permission of DSTE to SS/SM by giving Signal Fault Control order number.

Whenever relay room is to be opened either for scheduled maintenance or during failures or for other maintenance activities/construction works. The concerned Maintainer/Signal Supervisor will inform SM on duty for opening of Relay Room with reason. SM on duty will verify his identity from the list of authorized S & T Staff recorded in the first page of Relay Room Key register or as advised by Signal Fault Control in emergency. SM shall give the key of operating lock to S&T staff, after the entry is made in the Relay Room and also with Red Ink in TSR. Relay Room key shall not be handed over by SM on duty to any Group D staff of S&T department. On completion of work, the concerned Signal Maintainer/ Signal Supervisor shall properly close Relay Room door and lock it with both the locks and then return the key of operating lock to the SM on duty making the entry in the relay room register.

When the key of Operating Lock is returned by S& T staff to SM on duty, he shall first verify the Relay Room for proper locking and then keep the key in safe custody and acknowledge it on the Relay-Room key register. If the relay room key is handed over to the Signal staff regarding the interference in safety gears the train shall be piloted in and out.

For attending Failures of S& T gears within relay Rooms, the following steps shall be taken :

Entry to be made in S& T failure register by SM on duty and failure Memo has to be issued to S& T staff. S& T staff shall not take the Relay Room Key for attending failures and open the Relay Room unless the failure is recorded in Signal failure register. If disconnection is required, Disconnection Memo has to be given by S& T staff to SM on duty. Failure Memo should be acknowledged and entry in relay room key register to be made by S& T staff before obtaining Station Master's key. Relay Room key for Schedule maintenance shall be taken once in a calendar Month during monthly inspection by Sectional Supervisor. Relay room can be opened by following above procedure for special maintenance activities like cable insulation testing, block/ disconnection memos, selection/ locking table testing, maintenance work inside relay room by Electrical and Engineering staff, during failures, data logger resetting and inspection by Divisional and Headquarter officials, Track Circuit adjustments & voltage monitoring during monsoon and whenever required during rains. Works required by S& T Construction & open line staff for preparatory works and during commissioning. In each such case, the Construction Staff Shall follow the detailed guidelines issued regarding working on signaling gears under the charge of open line.

In case of emergencies such as fire, flood, earthquake etc., Open Line Section Engineer (Signal) / Signal Maintainer & SS/SM shall jointly decide the need for opening the Relay Room. Section Engineer Signal HQ at Divisional Control Office and Section controller shall be advised

respectively. In case of communication failure during such emergencies, Open Line Signal Maintainers/ Supervisors and SS/SM on duty shall jointly decide the need for opening the Relay Room and communicate later on to respective controls. In case key is lost /misplaced, it shall be reported to S&T control as well as section control for either lock. In normal course the spare key with respective custodians shall be used. In emergency situation, lock may be broken under advice to Section Control as well as S&T control. New lock shall be procured and provided.

In case SS/SM on duty comes to know of relay Room opening by unauthorized means or by unauthorized person or by any Group-D' Staff, the signaling system shall be suspended by him and matter immediately reported to Section Controller for necessary action. Senior section Engineer/ Signal & TI of the respective section will check the station records of relay room opening during their inspections and cross check it with data logger/counter reading if provided. Discrepancy, if any, shall be immediately inquired into and advised to Sr DSTE & Sr DOM by numbered control message from the station immediately for further action.

- 4.17 **POWER SUPPLY:** - Normally for signaling and interlocking installation power supply is drawn from WESCO (230V, 50Hz) but when this source fails, DG set for standby is installed at the station to feed the S&T equipments.

Whenever WESCO (Main) power supply fails, a buzzer on the panel will buzz on. SM on duty has to press the power acknowledgement button (RED coloured) positioned on the top of panel. The SM on duty shall start the Diesel generator for stand by (Auxiliary) power supply. After run of the Diesel generator and on resumption of power supply, SM shall acknowledge the same by pressing the power acknowledgement button. This will make the

panel operative again. As soon as local power supply resumes, the Diesel generator shall be stopped by SM on duty after isolating Diesel generator by change over switch. Each time the power supply goes OFF or ON, SM on duty shall acknowledge by pressing power supply acknowledgement button to make the panel operative.

IPS has been provided to prevent possibility of blank signals in case of WESCO power supply failure. Whenever WESCO power supply fails, it will immediately extend power supply to signals thereby preventing blank signals.

SM on duty shall immediately start Diesel Generator and operate the change over switch for connecting the Auxiliary power supply to the signaling installation in case of WESCO power failure. All controls are provided with battery back up.

The SM on duty must maintain record of power failure and he must promptly report the failure to the section controller and the concerned electrical and S&T maintenance staff

5.0 **TELECOMMUNICATION FACILITIES:** -

1. Telephone with single line Tokenless Block Instrument for either side Block Section
2. Station to Station fixed telephone (hot line) is provided
3. Station is provided with auto telephone connected with Railway Exchange
4. BSNL telephone is provided
5. The station is connected to Sambalpur – Talcher control circuit by control telephone.
6. Station to station 25 Watt VHF communication is provided.
7. Telephone is provided between Station and both end crank handle locations.

- Note:** (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.
(ii) VHF and Walkie Talkie sets should not be used for unnecessary discussions with Loco Pilots, Guards or any other staff.

5.1 **FAILURE OF COMMUNICATION:** -

The on duty SM shall use the above electrical communication instruments stated in Para-5.0 from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication between the adjacent block stations the SM on duty shall work vide SR 6.02.06. In the event of total failure of communications SR 6.02.04 shall be observed for working the train. During failures of signal, inter-locking, points, block instrument telephone etc. the S&T staff should be informed for rectification.

(Details are mentioned in Appendix 'B' of the SWR.)

- #### 6.0 **SYSTEM OF TRAIN WORKING:** - The movement of trains is controlled by Section Controller on duty whose orders shall be complied with, provided they do not contravene any General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual and other safe working instructions issued from time to time. In the event of suspension of control working, the Station Master on duty shall work independently in conjunction with the Station Master of adjoining block station and shall be responsible to ensure that there is no undue delay to train operation in general.

- #### 6.1 **DUTIES OF TRAIN WORKING STAFF:** - Details of duties of operating staff are mentioned in Appendix 'D' of the SWR.

- #### 6.1.1 **TRAIN WORKING STAFF:** - The following are the complement of train working and operating staff provided at this station to work in each shift.

SL No.	Designation	Roster	No. of staff in each shift	Hrs. of Duty
1.	Station Manager-I (In-charge)----	Continuous	01	--09 hrs.
	Dy.SS/SM/ASM-----	Continuous		--08 hrs.
2.	TP/Sr.TP/TPM-B/ TPM-A	Continuous	01	08 hrs.

The above staff shall work as per the rosters issued by DPO/SBP from time to time and these rosters shall be displayed in the SM office.

6.1.2 **RESPONSIBILITY OF ASCERTAINING CLEARANCE OF THE LINE:** The SM on duty is responsible to ascertain the clearance of the nominated line between outer most facing points of concerned line as per GR 14.10.-

6.1.3 **ASSURANCE OF STAFF IN ASSURANCE REGISTER:** - All staff before taking up independent charge of their duties at this station shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign such declaration.

No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.

The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

6.2 (A) **CONDITION FOR GRANTING LINE CLEAR: -**

The conditions laid down in GR 8.01 (1) (a) & (c), 8.01 (2) (b), 8.03 (2) (a)(b)(c)(II), BWM 2.07 (3) & (4) shall be complied with by the Station Master on duty before granting line clear. The line shall not be considered clear and line clear shall not be given unless.

- (i) The whole of the last preceding train has arrived complete.
- (ii) All the necessary signals are put back to 'ON' behind the said train.
- (iii) Block section is clear of trains running in the direction towards the block station for which such line clear is being given.
- (iv) The line is clear up to the advanced starter of station nearest to expected train i.e. (UP Adv. starter signal No 14 for a DN train and DN Adv starter signal No.5 for an UP train.).

NOTE: if the light of the reception signal is fused/ not burning, 'Line Clear' shall not be granted for a train till such time it is ensured that the concerned driver is notified of the fact in writing by the SM on duty of the station to which such line clear is granted.

(B) OUTLYING SIDING: - NIL.

6.2.1 ANY SPECIAL CONDITION TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN: - The DN train with 40 BCN load with single WDG3A/WDM 3A/WDG2 locomotives should run through as far as practicable.

6.2.1.1 SETTING OF POINTS AGAINST BLOCK LINE:- All Points shall normally be set for the straight except when otherwise authorized by special instruction. When a running line is blocked by stable load, wagon, vehicle or by train which is to cross or give precedence to another train or immediately after arrival of a train at the station, the points at either end should immediately be set against the blocked line except when shunting or for any other movement towards the blocked line is required to be done vide 3.51.06(a). If all the lines at the station happen to be blocked then SR. 3.51.06 (b) will be followed.

6.2.1.2 RECEPTION OF TRAIN ON BLOCKED LINE: - In case reception of a train on a obstructed line to the SMs shall follow GR 5.09 & SR 5.09.01.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE: - In case reception of a train on a non-signal line, the SMs shall follow GR 5.10 & SR thereto.

6.2.1.4 DESPATCH OF TRAINS ON NON-SIGNALLED LINE: - In case despatch of a train on a non-signal line, the SMs shall follow GR 5.11 & SR thereto.

6.2.1.5 DESPATCH OF TRAINS FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:- N/A

6.2.1.6 SPECIAL RESTRICTIONS -

- (i) The over run line shall not be obstructed for stabling vehicles or harboring engine. If it is obstructed by any accident or for any reason it ceases to be substitute for the adequate distance.
- (ii) Hand/Fly shunting is not permitted.
- (iii) Shunting in the face of an approaching train is prohibited.
- (iv) Line must be kept set towards loop line for a full load DN goods train hauled by single WDM2 and going towards CHAR till said train arrives at Charnal. The above rule is also applicable for UP train while going towards BAMR.
- (v) Speed is raised to 30 KMPH on first loop lines on either side of main line and over its turnouts. However, no train shall be allowed to negotiate at a speed more than 15 KMPH if it involves negotiating more than one crossover at a time.

6.2.1.7 SPECIAL INSTRUCTIONS:-

- i) DN Distant signal has been placed on the right side of the track.
- ii) The DN train with 40 BCN load with single WDG3A/WDM 3A/WDG2 locomotives should run through as far as practicable.

6.3 CONDITIONS FOR TAKING 'OFF' APPROACH SIGNAL: -

- A. Reception of trains is governed by General Rule 3.36, 3.38, 3.40, 4.17, Subsidiary Rule 3.42.02 (a)(iv), 3.42.03, 3.36.02, 3.36.04 and other relevant provisions of General and Subsidiary Rules, Block Working Manual and Station Working Rules of the station.
- B. Adequate distance to be kept clear vide General Rule 3.40. (1) (b). (CRS, SE Circle, Kolkatta's dispensation received vide Letter No-727 of dated 14.10.2009.)

LINE No.	CLEARANCE OF ADEQUATE DISTANCE			
	DN TRAINS		UP TRAINS	
	FROM	TO	FROM	TO
1 st Loop (L-1)	DN Starter Signal No. 2	The end of Over run line or DN Adv. Starter signal No. 5	UP Starter signal No. 16	The end of Over run line or UP Adv. Starter signal No. 14
Main Line (L-2)	DN Starter Signal No. 4	DN Adv. Starter signal No. 5	UP starter signal No. 17	UP Adv. Starter signal No. 14.
2 nd Loop (L-3)	DN. Starter signal No. 3	The end of Over run line or DN. Adv. Starter signal No. 5	UP starter Signal No.15	The end of Over run line or UP Adv. Starter signal No. 14

Before admitting a train on any line, it must be ensured that the route indication for the respective line shows 'WHITE' indication in the illuminated panel diagram. To receive a train, for which line clear is given, the Station Master on duty shall nominate a clear line in consultation with the Section Controller on duty. He shall personally satisfy himself that the nominated line is clear and free from all obstruction by seeing the track circuit indication or by physical verification of the nominated route in case of failure of track circuit. He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

Unless the track circuit indication for the concerned line is 'Clear' even with other conditions satisfied, the operation of panel control button by the station Master on duty will not permit the concerned home signal to be taken off. However reception of trains will be possible in such case with "Calling on signal" provided below home signal unless the first track circuit in advance of home signal does not show 'RED' indication.

The Station Master on duty shall then operate the concerned push button on control panel for taking off the reception signal. He shall then verify on the panel that the correct reception signal is taken off.

If for any reason after taking off signals, it is required to put back the signal and alter the route, in terms of Subsidiary Rule 3.36.02, a time delay of 2 minutes shall be observed before the points can be altered.

Miniature colour light Calling on signal is provided below the Home signals in terms of GR 3.13(6)(b). A Calling on signal shows no light in the 'ON' position. A calling on signal, is taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

C. TAKING OFF CALLING ON SIGNAL

To take off calling on signal, the train must come to a stop at the foot of the Home signal, occupying track circuit in rear of the signal. When train occupies the track circuit, RED light strip will appear on the panel. The particular route on which the train is intended to be received shall be set by individual point operation by operating point button & point group buttons or by setting route by pressing route button & signal button or by crank handling in the event of failure of operation of point through panel. After the route is set, the calling-on signal button C1 / C2 (Red with white dot), as the case may be, shall be pressed

simultaneously along with concerned route button for 2-3 seconds and released. After a lapse of 120 sec. The calling-on signal clears and a white light indication appears on the panel for the concerned calling-on signal.

- 6.3.1 **RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO 'ON' :**
- If for any reason after taking off signals, it is required to put back the signal and alter the route, in terms of Subsidiary Rules 3.36.02(b)(ii), a time delay of 2 minutes shall be observed before the points can be altered.

- 6.4 **SIMULTANEOUS RECEPTION, DESPATCH, CROSSING & PRECEDENCE OF TRAINS:**
According to the existing interlocking at this station, the simultaneous reception and despatch of trains are permitted as stipulated below (GR3.47).

(a)	Reception of a Down train on Line No.1 by setting over run line.	(a)	Despatch of a Down train from Line No.2 or Line No.3.
(b)	Reception of a Down train on Line No.3 by setting over run line.	(b)	Despatch of a Down train from Line No.1 or Line No.2.
(c)	Reception of a Up train on Line No.1 by setting over run line	(c)	Despatch of an Up train from Line No.2 or Line No.3.
(d)	Reception of a Up train on Line No.3 by setting over run line	(d)	Despatch of an Up train from Line No.1 or Line No.2
(e)	Reception of an Up train on line No.1	(d)	Reception of a DN train on line No. 3
(f)	Reception of an Up train on line No.3	(f)	Reception of a DN train on line No. 1

- 6.4.1 Rules laid down in SR 3.47.01 shall be followed.

- 6.5 **COMPLETE ARRIVAL OF TRAIN:** - (Rule no. GR 4.16 & SR 4.17.01, GR4.17.02, GR 14.10)

a) **STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL:** - SM on duty.

b) **MODE OF VERIFICATION:** Through AXLE COUNTER or through physical verification when axle counter fails.

- 6.5.1 **L.V. VERIFICATION THROUGH AXLE COUNTER:** - Entire block section at both sides of the station is monitored by axle counter system and the position of block section whether clear or occupied is indicated in the panel. As soon as a train enters in to the block section, the 'RED' indication appears in the axle counter indication panel. After the whole train clears the block section, 'GREEN' indication appears on the axle counter indication panel. This confirms the complete arrival of train and the SM on duty shall give train out of section report on seeing the section clear (GREEN) indication at the panel.

- 6.5.2 **L.V. VERIFICATION WHEN AXLE COUNTER FAILS:-** In case of failure of axle counter, the Station Master on duty shall obtain complete arrival certificate from the Guard of the train in the complete arrival register (T/1410) maintained at the station for stopping train. For through passing train the station master on duty shall satisfy himself about complete arrival of train by verification of the last vehicle indicator vide Subsidiary Rule 4.16.05 that the train is complete. In case a train arrives/passes incomplete, action shall be taken as per Subsidiary Rules 4.17.02. 'The train out of block section signal' shall be withheld to the station in rear until complete arrival certificate is received from the station in advance supported by a Private Number.

- 6.5.3 **L.V. VERIFICATION WHEN MOTOR TROLLEY FOLLOWING:-** On occasions when motor trolley follows a train, the points shall not be altered until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the Station Master on duty shall take action in terms of Subsidiary Rule 15.25.03 (b)(vi).
- 6.5.4 **RECEPTION OF TRAIN ON BLOCK LINE:** - For admission of a train on a blocked line the SM on duty shall comply with the instruction laid down in GR 5.09 and SRs thereto.
- 6.6 **DESPATCH OF TRAINS:** - Despatch of trains are governed by General Rules 3.36, 3.38, 3.39, 3.42, 5.11 & 8.01 Subsidiary Rule 3.36.04(b), 3.42.04 and Block Working Manual 2.07(5)(a)(b) and other provision of General Rules, Subsidiary Rules, Block Working Manual and Station Working Rules of the station.

To despatch a train, the SS/SM on duty, having obtained line clear for that train, shall set the route for the out going train correctly and satisfy himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting and then shall take off the concerned route starter and Advanced starter signal by operating concerned push button. After observing the 'OFF' aspect of the route starter and advanced starter signals the Driver shall start his train.

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the Advanced starter complete, he shall send the train entering block section signal to the station in advance.

If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rules 4.23.02 and 4.25.02 shall be followed

- 6.6.1 **PUTTING BACK SIGNALS TO 'ON' IN CASE OF EMERGENCY:** -If a signal once taken 'Off' for reception/despatch of a train has to be, in an emergency, put back to 'ON', the procedure laid down in General Rules 3.36.02 shall be followed. In case of reception of train, route shall not be altered until the train has come to a stand outside Home signal. In case of departure signal before changing route, the line clear authority is to be withdrawn from the Driver with a memo, taking his acknowledgement thereof.
- 6.7 **TRAINS RUNNING THROUGH:** - The procedure detailed in Para 6.06, 6.7 above and General Rules 4.17, 4.42 and Subsidiary Rules 3.36.04(b)(i) 3.42.02(a)(iv), shall be observed. When trains are to run through over the loop line the advanced starter and starter signal shall be taken off when the train actually enters the loop lines.

The SS/SM is responsible to observe/watch the condition of the vehicles on a train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02 until anything wrong is noticed on train. For this purpose the SM on duty shall stand in such a position that a clear view of the passing train is seen by him and that his hand signals can clearly be seen by the Driver and Guard of the train. He shall depute his points man with hand signal to the other side of the passing train who shall exhibit hand danger signal to draw the attention of the guard/driver of the train in case of observing any unsafe condition/abnormalities of the train. He shall also report to the SM on duty for taking further suitable action in terms of SR 4.42.02(d).

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General Rules 4.17 and Subsidiary Rules 4.17.02.

- 6.8 **WORKING IN CASE OF FAILURE:** - In case of failure of S&T equipments on duty Station Master shall work in accordance to GR 3.68, 3.69 and 3.70 and SRs thereto.
- 6.8.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL & INTERLOCKING INSTALLATION:** -Whenever there is a failure of points, signals, track circuits or any other interlocking gear at the station that includes level crossing gate (s). if any etc. the SM on duty shall follow the procedure detailed in GR 3.68, 3.72, 3.74 and SR thereto. In case of defective approach signals, the trains will be piloted in vide SR 3.69.02, 3.69.03 & 3.69.05. In case of defective departure signals, trains will be piloted out vide GR 3.70 & SR 3.70.01. & 3.70.02.
- 6.8.2 **TRACK CIRCUIT**
In the event of failure of track circuit in the yard trains shall be admitted in to yard after piloting 'IN' before piloting a train in to the yard the clearance of the track must be ensured by physical verification
- 6.8.3 **AXLE COUNTER**
In the event of failure of axle counter, Block instrument of concerned Block section will be suspended and all trains will be worked on PLCT till rectification.
- 6.8.4 **DEFECTIVE SIGNALS:**
When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.46, 3.52 to 3.56, 3.71, 3.80 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear, initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]
- 6.8.5 **BLOCK INSTRUMENT**
In the event of partial/total failure of tokenless Block Instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR [Ref. SR 6.02.06]
- 6.8.6 **DEFFECTIVE INTERLOCKING**
In the event of interlocking becoming defective, the points will be treated as defective. The SM on duty on receipt of this information will immediately introduce non-interlocking system of working at the station. Trains will be Piloted In or Out as the case may be. The SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train.
- 6.8.7 **DEFFECTIVE/DAMAGED POINTS**
When any point fails to operate normally by the route setting operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06.

The responsibility of correct setting of points, clamping and padlocking the points for reception and despatch of trains at the station, rests with SM on duty himself.

6.8.8 **RECEPTION OF A TRAIN ON BLOCKED LINE**

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken –off. If calling-on signal failed then the SM on duty shall authorize the on duty TPM with form T/509 indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less 45mts. from the point of obstruction to indicate to the Driver as to where the train shall be brought to a stand.

6.8.9 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Superintendent/Station Master irrespective of the position of the switches point laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)]. Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules there to. [Refer GR 3.49(4) and 3.68, 3.77]

6.8.10. **ISSUE OF CAUTION ORDER:** - Whenever in consequence of the line being under repair or for any other reason special precautions are necessary, a caution order detailing the kilometers and speed at which a train shall travel and the reasons for taking such precautions shall be handed over to the driver in terms of GR 4.09 and SR thereto.

6.9 **WORKING OF MOTOR TROLLEY, MATERIAL LORRIES ETC: -**

- (i) Motor Trolleys are run in accordance with Subsidiary Rules 15.25.03 to 15.25.07.
- (ii) Material Trolleys will work in accordance with Subsidiary Rules 15.27.05 to 15.27.08.
- (iii) Rail Dolleys will work in accordance with Subsidiary Rules 15.27.10.

The following precautions must be taken:

- i) The section where axle counters are provided in lieu of track circuits, trolleys, motor trolleys, Lorries etc which are not insulated, shall not be allowed to run except on line clear.
- ii) Motor trolleys / tower wagons / material Lorries are not likely to actuate the axle counter correctly. When they are to run over the sections split by axle counters, the whole section to be treated as one and next train to be started after the first train has arrived complete.
- iii) In all other respects, the working of a light Motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley or a motor trolley.

7.0 **BLOCKING OF LINES:** - Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement and reminder collars shall be placed on the concerned point push button and route button(s) for the blocked lines vide SR 3.36.03(b). A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured as per General Rules 5.23 and Subsidiary Rules 5.23.01 to prevent rolling down of vehicles.

7.1 **USE OF REMINDER COLLARS** :- Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train even for a short while or during shunting operations the reminder collars must be placed on concerned point push button, signal and route button(s) for the blocked lines on the operating panel by SM on duty.

7.2 **SECURING OF VEHICLES** :- As far as practicable loose vehicles shall not be allowed to stand on the running line. However, under unavoidable circumstances, if it is necessary to detach vehicles from a train or to stable a train and leave them standing on running line, SM on duty shall be responsible to secure vehicles/stable loads in accordance with GR 5.23 and SR 5.23.01 to prevent rolling down of vehicles and arrest obstruction of fouling.

NOTE: Special care shall be taken to secure special type vehicles fitted with roller bearings while standing in siding or on running lines. A stabled load register is to be maintained shift wise.

7.3 **ALTERING OF POINTS TO A CLEAR LINE WHEN RUNNING LINE IS BLOCKED:-**

- a) When a running line is blocked by stable load e.g., wagons, vehicles or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station etc. the points at either end should immediately be set against the blocked line except when shunting or another movement is required to be performed in that direction on the same line.
- b) If all the lines at a station happens to be blocked when line clear has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order so that in a case of mishap, the chances of casualties are minimized.
- c) In case all the lines are occupied by passenger carrying trains points should be set for a loop line, to negotiate which the speed of the incoming train would be reduced, which in turn would minimize the consequences of casualties. While doing so, points shall be set for a loop, occupied by a train if any, whose engine is facing the direction of approach of the incoming train rather than for a loop line occupied by a train where a passenger coach will in case of collision, receive the impact.
- d) These precautions shall be taken in addition to the observance of other precautions as contained in SR 5.04.01 and SR 5.23.01.

7.4 **LOADING AND UNLOADING OF VEHICLES ON RUNNING LINE:-**

Loading and unloading from vehicles on running line is prohibited unless permitted by Sr. DOM / SBP vide SR 5.19.01.

At stations where loading and unloading of goods is permitted whether full rake or part thereof, the station master shall ensure that no goods are left fouling any line before and after clearance of the rake from the line. The railway servant supervising loading and unloading shall also ensure that consignment does not foul any line vide SR 5.19.001: (a).

If the stations are on gradients, the rake should be properly secured as detailed in SR 5.23.01.

During the time of loading / unloading, the station master shall ensure isolation of the lines(s) as detailed in SR 3.51.06.

8.0 **SHUNTING: -**

8.1 **GENERAL PRECAUTIONS: -**

Shunting shall be performed in terms of General Rules 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23, 8.09, 8.14, 8.15 and Subsidiary Rules thereto. The Guard/Asst. Guard/SS/SM/ASM/TPM on duty is authorized to supervise shunting operation. The staff supervising shunting shall ensure correct setting of points, clamping and pad locking of points both in facing and trailing direction for non signal movement.

Normally, shunting operations will be conducted by means of hand signals, Shunt Signal and starter where Advanced starter is provided vide General Rule 3.46(2). Shunting authority should be either fixed signals or a written authority in form T/806 vide SR 5.13.02.

NOTE

For any non signaled movement physical verification of the clearance of the crossover points, clamping & padlocking of both facing and trailing points shall be ensured by the Guard/SM/TPM on duty for supervising shunting operations.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approach train is strictly prohibited vide General Rule No. 8.5(2) and 8.09.

8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY:

(i) Hand Fly & Loose shunting is not permitted at both end of the yard.

(ii) Shunting in the face of approaching train is prohibited

8.4 SHUNTING ON SINGLE LINE:

(i) Shunting within Station Section i.e. up to Adv.Starter at either end is permitted provided no line clear is given for a train.

(ii) The line outside the station section and up to the Home Signal shall not be obstructed unless a Railway Servant specially appointed on his behalf by the Station Master on duty who is the in-charge of the operations, and unless the block section into which the shunting is to take place is clear of approaching train and all relevant & necessary signals are kept at "ON" position (GR 8.12).

(iii) In case the section between BONA-HNPA & BONA-JRPD is clear, shunting can be performed beyond Up Adv.Starter after blocking back the section under exchange of private number.

(iv) The line outside the first stop signal shall not be obstructed unless line has been blocked back under exchange of private number.

8.5 DURING FAILURE OF BLOCK INSTRUMENT: -

The SM on duty shall ensure that there is no train in the block section and the last train has arrived complete clearing the fouling mark while conducting shunting at that end of the block section of which block instrument has been suspended and all necessary precautions have been taken as per rules laid down in G&SR.

8.6 SHUNTING ON DOUBLE LINE:- N/A.

8.7 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD: - When shunting in the station yard / Engg siding, proper shunting authority on T/806 to be issued to the train staff with clear instruction and limit upto which shunting is to be performed. While performing shunting in the siding, relevant GR 5.14 and SRs thereto to be followed.

9. ABNORMAL CONDITIONS: -

(A) THE RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITION: -
Procedure to be followed for working of trains during abnormal working

[I] **PARTIAL FAILURE OF COMMUNICATION: -** In the event of suspension of single line token Block Instrument and during partial failure of other available means of communications, trains will be worked in terms of Subsidiary Rule 6.02.06 and Chapter-III Part-I of Block Working Manual.

- [II] **DESPATCHING OF TRAINS ON THE AUTHORITY OF BLOCK TICKET:** - In case, it is necessary to allow a train into an obstructed block section due to engine failure, obstruction or accident, a block ticket shall be issued in terms of SR 6.02.05 Absolute Block System on the affected block section shall be suspended and concurrence of the SS/SM at other end shall be obtained and recorded in caution order register and train signal register.

On the block ticket (T/A 602) it shall be mentioned in detail the place of obstruction i.e. Engineering Km., B/Van Km., whether the train is to return or to wait at the place of obstruction for the arrival of another following train(s) or to proceed to next station.

A caution order shall be issued restricting the speed to 15 KMPH. in day light hours when the visibility is good and 10 KMPH at night or whenever clear view of 800 Mtrs. is not available.

On arrival at the station the block ticket shall be collected with necessary endorsement from Driver/Guard and cancelled and pasted to its record foil or shall be sent to the issuing station for cancellation.

In case of accident/engineering block assurance from SE/P.WAY concerned shall be obtained that the line is safe for movement of trains before resumption of normal working. When the obstruction is removed and assurance in writing is obtained from SE/P.WAY concerned or Guard/Driver the SM on duty may resume normal working after exchanging proper messages supported by Private Number.

- [III] **TRAINS DELAYED IN BLOCK SECTION:** - In case of train delayed in the block section the station master will take action as per GR 6.04 and SRs thereto.

- [IV] **FAILURE/PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT ON:- NIL**

- [V] **FAILURE OF L V AXLE COUNTER: -**

Details of the operation are given in Appendix 'B' of SWR.

- (B) **PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE:** - Details of the operation are given in Appendix 'B' of SWR.

- (C) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL IS OPERATED** To take 'OFF' a calling on signal during failure of track circuit on the route, the clearance of the track over which the train would pass must be physically checked by the SM on duty. After satisfying himself SM on duty shall initiate the calling on signal operation. The procedure shall be strictly followed.

- (D) **REPORTING FAILURE OF POINTS, TRACK CIRCUIT/AXLE COUNTER AND INTERLOCKING:** - In case of failure of any interlocking gear at the station, the failure report should be communicated by the SM on duty to the sectional Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per G & SR 3.68.04 and document all such transactions.

- 9.1 **TOTAL FAILURE OF COMMUNICATION: -**

In the event of total interruption of all communications occurring between RAIR-BAMR and RAIR-CHAR stations, i.e when line clear cannot be obtained by one of the following means stated in order of preference viz,

- a. Block Instruments, Track Circuits or Axle Counters
- b. Telephone attached to the Block Instruments
- c. Station to Station fixed telephones whenever available
- d. Fixed telephone such as Railway auto telephone & BSNL phone
- e. Control telephone
- f. VHF sets

and action shall be taken as per SR 6.02.04. The train which is to be dispatched to the affected section will be stopped and the Loco Pilot and Guard of the train shall be informed about the fact. Before dispatching the light engine /main engine/motor trolley /Tower wagon/Trolley /Cycle trolley/Moped trolley/Diesel car/rail motor car/EMU rake, the SM on duty shall hand over a Authority for opening of communication during total failure interruption of communication on Single Line Section to the Loco Pilot /motorman/Guard/SM who is being sent to open communication, which includes.

- (i) An authority to proceed without "Line Clear" in the prescribed form (T/B 602).
- (ii) A Caution Order restricting to speed of the train to 15Kmph by day when the view ahead is clear and 10 Kmph during night or when view ahead is obstructed in addition to other speed restrictions in force (T/B409).
- (iii) Paper Line Clear Ticket to pass the Last Stop Signal at 'ON' position.
- (iv) A "Line Clear" enquiry message (T/E602) asking "Line Clear" for the awaiting train (T/F602).
- (v) A conditional "Line Clear" message for the light engine to return with or without a train attached, supported by a Private Number.

On arrival of the engine at the next station the conditional line clear message and enquiry message shall be collected by the Station Master on duty who shall prepare a conditional line clear ticket for engine to return either light or with train attached and conditional line clear reply message for the enquiry message giving line clear for the train waiting at other station shall be handed over to the Loco Pilot of light engine. On return trip the Loco Pilot will come on booked speed subject to speed and other restrictions in force.

If there be an even flow of in both directions, Enquiry and Conditional line clear message for each succeeding train may be sent through the Guard of the preceding train.

If the Station Master at one end has more than one train to despatch in the same direction he may ask line clear not only for one train but also for the following trains. It must be stated that these later trains will be despatched after the first train at an interval of 30 minutes.

When despatching the second and subsequent train particulars of last preceding train along with its departure time will be endorsed and a caution order restricting the speed to 25 Kmph. over straight when view ahead is clear and 10 Kmph. when the view ahead is not clear is to be issued. While adopting this procedure the Guard and Loco Pilot should be instructed to keep a 'Sharp' lookout and be prepared to stop short of any obstruction. Trains must continue to work on this system until any one of the means of communication is restored.

As soon as any one of the means of communication has been restored, the conditional line clear working of trains shall be cancelled when there is no train in the affected block section and message shall be exchanged supported by Private Number keeping Section Controller informed.

9.2 TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION : - N.A..

9.3 DESPATCHING OF TRAINS UNDER AUTHORITY PROCEED WITGHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:- Refer para No. 9.9 (A))(II).

10 VISIBILITY TEST OBJECT: - The lights of loop Line No.1 starters on both ends are nominated as visibility test object. SM on duty will test the visibility during thick and foggy weather and if visibility is impaired, he will work as per GR 3.61 and relevant SRs.

11 ESSENTIAL EQUIPMENTS AT THE STATION: -

This is mentioned in the Appendix 'E' of the SWR.

Essential equipment shall be kept ready on hand in good condition with necessary relief stock.

12 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG: -

In order to indicate to the Drivers of approaching trains the location of signal during thick, foggy and tempestuous weather or during dust storm, the SS/SM on duty shall arrange for fog signaling in terms of General Rule 3.61 and Subsidiary Rules thereto. Assurance of the staff shall be taken in the Fog Signal Register in the month of October every year as token of their having knowledge of Fog Signaling Rules and their use.

Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway.

STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

(a) INSTRUCTIONS:

This register contains the following parts.

Part. - I: Particulars of fog signalmen posted at the station from time to time.

As soon as a person is posted for duty at the station as a Fog Signalman, the Station Master must satisfy himself that the person is fully acquainted with and understands rules regarding the placement of the detonators (Fog-Signals) at the station during thick or foggy weather. As an assurance of this, the Station Master shall take the thumb impression or signature of such persons in the appointed column of Part -I of the Fog Signal Register.

Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.

Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.

Part – IV: Particulars of issue and testing of fog signals at the station.

- (b) In charge of the station shall ensure that the information maintained in the register is kept upto date and is accurate in all respects.
- (c) Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.
- (d) Use of Detonator in case Home Signal is defective in 'OFF' Position:-
- (e) If Home Signal cannot be kept in the 'ON' position, a competent Rly. servant in uniform shall be deputed to exhibit a stop hand Signal at the foot of the defective Signal post and to place a detonator 90 mtrs. outside it. The Rly servant shall replace the detonator every time it is passed over by a train. He shall not leave his post until being relieved by a competent Rly servant.

CERTIFICATE:- NOTHING IN THIS RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES HENCEFORTH CANCEL ALL PREVIOUS STATION WORKING RULES OF RAIRAKHOL STATION.

APPENDICES

APPENDIX 'A'	--	WORKING OF L.C. GATE.
APPENDIX 'B'	--	SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
APPENDIX 'C'	--	ANTI COLLISION DEVICE (RAKSHA KAVACH).
APPENDIX 'D'	--	DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
APPENDIX 'E'	--	ESSENTIAL EQUIPMENT OF STATION.
APPENDIX 'F'	--	RULES FOR WORKING OF DK STATIONS, HALTS,IBH, IBS AND OUTLYING SIDINGS.
APPENDIX 'G'	--	WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

APPENDIX – 'A'

DETAILS OF LEVEL CROSSING GATES TOGETHER WITH INSTRUCTIONS TO THE OPERATING STAFF (INCLUDING LEVEL CROSSING GATE MEN) ABOUT THEIR NORMAL WORKING, THEIR MAINTENANCE AND THEIR WORKING INCASE OF FAILURES EMERGENCIES WITH SPECIAL PROVISIONS, IF ANY.

-NIL-

APPENDIX – ‘B’**DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND EMERGENCIES ETC., INCLUDING THE POWER SUPPLY ARRANGEMENTS.**

1.0 This is a ‘B’ Class Station with Standard III Interlocking (with isolations). The points and Signals are power operated from composite miniature central panel installed in the Station Master’s Office. The Station is equipped with manually operated Multi Aspect Colour Light Signalling.

1.1 **DESCRIPTION OF PANEL:** The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when SS/SM on duty faces the panel, the yard drawing of the panel corresponds to the actual layout.

1.1.1 **DESCRIPTION OF POINT PUSH BUTTON (RUNNING LINE POINT) :-**

Srl No	Point No.	Colour	Description
1	7	BLACK	Crossover point between main line and Loop line no.1 at TLHR end with over run line.
2	9	BLACK	Crossover point between Main Line and Loop line no.1 at SBP end with over run line.
3	6	BLACK	Crossover point between main line and Loop line no.2 at TLHR end with over run line.
4	8	BLACK	Crossover point between Main Line and Loop line no.2 at SBP end with over run line.

1.1.2 **DESCRIPTION OF POINT GROUP BUTTON:** - These are two buttons at the top of panel one for Normal and one for Reverse operation of points. These are coloured Black with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.1.3 **OPERATION OF POINTS BY POINT PUSH BUTTONS:** - Points are operated for NORMAL to REVERSE or vice versa by operating concerned point push button along with common point group button for normal or reverse operation. When the points are required to set from normal to reverse, the concerned point push button along with common point group button for reverse operation are to be pressed simultaneously. As soon as the operation is initiated the RED indication will start flashing till the point is correctly set to reverse at site and GREEN indication glows. Similar operation shall be done when the points are required to set from reverse to normal. Only one point can be operated individually at a time.

1.2.0 **POINT INDICATIONS:** - Points are normally operated automatically along with route setting operation. However, required points can also be operated individually. For this, POINT BUTTONS, which are BLACK in colour, are fitted over the point layout on the panel board. The individual operation of the electric point machine is controlled by these point push buttons in conjunction with the POINT GROUP BUTTON (which are BLACK with red dot on it) ‘N’ or ‘R’ as per requirement fitted on the top of panel board. These ‘N’ and ‘R’ positions are indicated on a small nameplate written below point buttons. On the name plate three luminous indications are provided for each point as follows:-

1.2.1. When a point is set and locked in Normal position, a ‘WHITE’ indication appears suggesting that the point is set in NORMAL position.

- 1.2.2 When a point is set and locked in REVERSE position, a 'GREEN' indication appears suggesting that the point is set in REVERSE position.
- 1.2.3 When the points of any route have been correctly set and relevant signal taken 'OFF', RED indication appears indicating that the concerned points are locked either in NORMAL or REVERSE position as the case may be.
- 1.2.4 When the points are not set or locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the RED indication will start flashing till such time the point is housed & locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This RED indication will flash during operation of point also. After completion operation of point during crank handle operation, NORMAL or REVERSE indication appears on panel
- 1.2.5 All points over running lines are operated by electric point machines
- 1.2.6 **NON SETTING OF POINTS:** -The cause for non-setting of the point in the desired position shall be checked up by the SM on duty according to GR & SR 3.68.01 (C). If there is a defect other than any obstruction, then the point shall be considered defective and action shall be taken for clamping and padlocking of these point in the desired position by Station Master on duty himself for all trains according to SR 3.69.03(C). In such case both ends of the points shall be clamped and padlocked.
- 1.2.7 **DESCRIPTION OF CRANK HANDLE BUTTONS:** - All motor operated points in the yard have been grouped together for emergency / manual operation of points by crank handles as follows:

SL NO.	CRANK HANDLE	COLOUR OF BUTTON	CONTROL POINTS
1	CH-13	BLUE	6A & B, 7 A & B at DN end and 8 A & B, 9 A & B at UP end.

Crank Handle buttons must be operated in conjunction with GROUP TRANS or GROUP RELEASE button to transmit or receive the crank handle.

- 1.3.0 **SIGNAL PUSH BUTTON:** Push buttons for operation of signals are provided near the signals on the panel. These are operated in conjunction with Route button (white coloured) to operate the signals.
- 1.3.1 **DESCRIPTION OF SIGNAL BUTTONS:**

SL.No .	BUTTON NO.	COLOUR	DESCRIPTION
01	C1	RED With white dot	DOWN Calling on Signal for Line Nos.1, 2 & 3
02	S1	RED	DOWN Home Signal for Line Nos.1, 2. & 3
03	S2	RED	DOWN Starter for Line No.1
04	S4	RED	DOWN Starter for Line No.2
05	S5	RED	DOWN Advance starter

06	S3	RED	DOWN Starter for Line No. 3
07	SH10	YELLOW	UP Shunt signal No. 10
08	S14	RED	UP Advance starter
09	S15	RED	UP Starter for Line No. 3
10	S16	RED	UP Starter for Line No. 3
11	S17	RED	UP Starter for Line No./2
12	S18	RED	UP Home Signal for Line No.1, 2 & 3
13	C18	RED with WHITE dot	UP Calling on Signal for line No.1, 2 & 3.
14	SH19	YELLOW	DOWN Shunt signal No. 19

1.3.2 **SIGNAL INDICATIONS:** - All signals in the yard are depicted on the panel along side the track as per their respective position in the yard. The aspects of all signals in the yard, at any time, are shown on the signal indications depicted on panel.

1.3.3 **ASPECTS OF SIGNALS:-**

G:-Green light indicates "PROCEED" aspect of the colour light signal and authorizes to proceed. **Y:** - Yellow light indicates the "CAUTION" aspect i.e. Proceed and be prepared to stop at the next stop signal. **YY:-**Double yellow light indicates "ATTENTION" aspect i.e. Proceed and be prepared to pass the next signal at restricted speed as may be prescribed by special instructions. **R:** - Red light indicates the "STOP" aspect i.e. Stop dead.

The aspect of Distant signal is corrected vide amendment to GR-3.07 and CPTM/ECOR's letter No.ECOR/Optg/SC/55/X/SWR, dtd.05.02.2014. The revised indications are given as under.

Receiving On	Existing		Revised	
To stop at home signal	Aspect Distant	of	Aspect of Home	of
	Y		R	
i)To stop at loop line starter, ii) Through via loop.	YY		Y with lunar	
To stop at main line starter	G		Y without lunar	
Through via main line	G		G	

2.0 **ROUTE BUTTONS:** - Route buttons are provided separately on each running line on the panel for initiation of route (viz. MNUN, LL1 UN, LL1 UN1, LL2 UN, and LL2 UN1). Common route buttons are also provided for taking off starters (viz.: IT1 UN, 18T1 UN). An individual route button is provided for taking off Advance starter (Viz.: 14 UN & 5 UN). For clearing the signals, it is necessary to operate the signal buttons and the concerned route button concurrently. In the panel, the routes are set automatically by operation of entry and exit button.

2.1 **DESCRIPTION OF ROUTE BUTTONS**

SL.NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	MNUN	WHITE	DN & UP common route button for Home/Calling on for main Line setting overlap up to advance starter in particular direction.
2	LL1UN	WHITE	DOWN & UP common route button for Home for Loop line no.1 setting route up to advance starter in particular direction
3	LL1UN1	WHITE	DOWN & UP common route button for Home/Calling on for loop line no.1 setting route up to the end of over run line in particular direction (for home).
4	LL2UN	WHITE	DOWN & UP common route button for Home for Loop line no.2 setting route up to advance starter in particular direction.
5	LL2UN1	WHITE	DOWN & UP common route button for Home/Calling on for loop line no.1 setting route up to the end of over run line in particular direction(for home).
6	IT1UN	WHITE	Common route button for UP starter No. 15, 16 & 17.

7	I8T1UN	WHITE	Common route button for DN starter No. 2, 3 & 4.
8	14UN	WHITE	Route button for UP Advance Starter No.14.
9	5UN	WHITE	Route button for DN Advance Starter No.5.

- 3.0 **TRAIN ARRIVAL INDICATION THROUGH AXLE COUNTER:** The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in RAIR - BAMR and RAIR – CHAR section to check the complete arrival of trains. The system is interlocked with respective Block Instrument. When the Axle counter section indication provided for each direction on the panel individually for sections indicates 'RED' i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section can be normalized after ensuring complete arrival of trains by means of physical verification of last vehicle for stopping as well as run through trains (refer resetting procedure of Axle counter).
- 4.0 **POWER FAILURE:** Normal power supply to the signalling and interlocking installations at this station is drawn from SEB power supply source (AC 230 Volt / 50 Hz). Whenever the normal supply connected to SEB power supply fails, WHITE indication on the panel will be off and a RED indication will appear on the panel along with an audible buzzer. The SM/SS on duty shall press the power acknowledgment button (RED) positioned on the top of panel. The SM now has to start the diesel generator for standby (Auxiliary) power supply. After stable run of the Diesel generator, the SM/SS on duty has to operate the change over switch for connecting the Auxiliary supply to the signalling installation. On resumption of power supply, SM/SS on duty has to acknowledge by pressing power acknowledgement button. This will make the panel operative again. Now the Diesel generator shall be stopped by SM/SS on duty after isolating Diesel engine by change over switch. Each time the power supply goes OFF or ON SM on duty shall acknowledge by pressing power supply acknowledgement button to make the panel operative.
- 4.1 IPS has been provided to prevent possibility of blank signals in case of SEB power supply failure. Whenever SEB power supply fails it will immediately extend power supply to signals thereby preventing blank signals.
- 4.2 SM on duty shall immediately start Diesel Generator and operate the change over switch for connecting the Auxiliary power supply to the signalling installation in case of SEB power failure.
- 5.0 **EMERGENCY ROUTE RELEASE COUNTER** : This counter is provided to register the number of operations made for emergency cancellation of route. The SM on duty must record the last number registered on the counter while taking over/ handing over duty.
- 6.0 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) / EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):** This panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken off on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken off vide SR 3.36.02 (a), the concerned signal must be put back to Danger by pressing the Signal cancellation button and the concerned signal button. Then the emergency route release button (white with red dot) positioned in the top of panel to be pressed by breaking the seal and subsequently the concerned signal button pertaining to the route is to be pressed. A white light will flash (Up or Down) indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route

has been released. In case the route illumination (a white strip of lights) does not disappear, it suggests that the route is not released/cancelled. In such case the emergency cancellation of route has to be resorted to. The concerned S&T staff should be advised immediately to get the emergency route release button sealed after rectification of fault if any. Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary and in the train signal register.

- 8.0 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT)** : Emergency point operation facility is provided to operate point in the event of failure of track circuit controlling the point. A push button (BLACK WITH RED DOT) is provided on the top of panel. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit, shall insert SM's emergency point operation key in and shall push the emergency Point operation button by breaking the seal and then operate the required point button and the point group button (Normal or Reverse). All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Before initiating emergency point operation when the concerned point zone track circuit is showing occupied SM/SS on duty must carry out physical verification at site to ascertain that the said track circuit is clear of vehicles.
- 8.1 **EMERGENCY GATE RELEASE OPERATION : NIL**
- 9.0 **BUTTON HELD ACKNOWLEDGEMENT BUTTON (WHITE WITH RED DOT)** :_All push button are self-restoring type. A button held acknowledgement push button (white with red dot) along with a white strip is positioned at the top of the panel. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light Indication. The Station Master shall stop the buzzer by pressing the button held acknowledgement button (white with Red dot). The buzzer will stop but the flashing white light will continue to glow till the pressed button is normalised. SM on duty shall try to find out the pressed button for normalisation or otherwise inform the maintenance staff to rectify.
- 10.0 **OVERLAP TIME RELEASE INDICATION (WHITE LIGHT)** : - These are two indications (white lights) for UP overlap time release and DN overlap time release to indicate the release of overlap. These indications will flash during releasing of overlap
- 11.0 **TRACK CIRCUITS:** - The station yard is fully track circuited from Home signal to Home signal and for five rail lengths in rear of the Home signals on either side. Track circuits 1AT & 18AT are calling-on track circuits. 7AT, 7BT, 6AT, 8 BT, 8AT, 9AT and 9BT are point track circuits. L1T1, L2T1, L3T1, L1T2, L2T2 and L3T2 are berthing track circuits. Other track circuits namely 1T, 1T1, 18T and 18T1 are for signal replacement, route holding and trolley suppression. Indications for all track circuits are indicated on the panel. Normally these are not lit when the track circuits are clear. RED light appears when the track circuit is occupied/failed. White lights for the track indications appear when the relevant route is set. In case of failure of any track circuit, the controlled signals or points are to be treated as non-interlocked and trains shall be worked as per relevant rules
- 12.0 **STATION MASTER'S PANEL CONTROL KEY:** - _The panel is fitted with Station Master's lock up key to prevent any unauthorised operation of the Panel. The SM on duty is the only authorised person to operate the panel and the panel Key must always remain in his personal custody vide SR 3.36.03 & GR 5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and Signal cancel button without releasing the panel lock also. However, the provisions of SR 3.36.02 shall be followed while replacing the signals to 'ON'.

- 13.0 **CRANK HANDLE CONTROL KEY AND OPERATION** : When any point fails to operate normally by the route setting operation or through the concerned Point button through panel, it is inevitable to operate the points with crank handle. Station master on duty shall personally ensure clamping and padlocking all facing and trailing points en route. Crank handles are interlocked with signals and interlocking system. The CH push button no.13 (Blue) and group button (white with black dot) is provided at the top of the panel board. This button has three indications, viz. WHITE, GREEN AND RED. The Green indication suggests that the crank handle key is in its interlocked position of the panel. This is called 'Crank Handle Key 'IN' indication. The Red indication suggests that the crank handle key is locked and not free for extraction from RKT. This is called 'Crank handle key locked' indication. The white indication suggests that the 'CRANK HANDLE' key is extracted from RKT. This is called 'KEY OUT' indication. The key out position of the crank handle locks all reception and departure signals in their normal position.

For crank handle operation of the points, the SM has to press CH 13 and Trans button. This will enable SM to extract key from RKT, which in turn can be transmitted from the adjacent RKT to end location for release of RKT there. After completion of point work the key shall be inserted in the end location RKT and transmitted to station. Station Master on getting information will press economizer button and will extract key 'P' from RKT and insert in original RKT and turn to lock the key IN indication will appear on panel on pressing release button in the group. The TPM after extracting the crank handle will operate the required points to the desired position after unlocking the machine for crank handle operation by using the RKT key. After the work is over the TPM shall transmit the key back to station master in duty through RKT. The station master on duty shall take back the key and put it in original RKT and turn to key IN position. ON pressing the release button on the group along with CH 13 green light glow indicating 'key in'. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for rectification. Station Master as per OM 20.06 (d) shall maintain an emergency crank handle register. The procedure for use of crank handle for Motor operated points shall be followed in terms of operating Manual 20.06.

- 14.0 **SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS**: - For setting a route all the concerned points must be set by operation of relevant point button and group button one at a time in the desired position or by operating signal button and route Button. As soon as the points on route, overlap and isolation are set to the required position, the concerned signal for the route will clear and a white strip of light will appear on the entire route confirming that the Route is set & locked. The signal 'off' indication will appear on the panel provided other conditions for taking 'OFF' reception signals are satisfied.
- 14.1 **SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS**: For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and point group button one at a time in the desired position or by operating signal button and route button. To take off Advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned Advanced starter signal button shall be pressed along with the Advanced starter route button to be pressed for two to three seconds and released. This will clear the Advanced starter signal and a white strip of light will appear on the panel up to the foot of the Advanced starter signal.
- 14.1.1 To take off the starter signal the concerned signal button to be pressed and at the same time common Route button to be pressed for two to three seconds and released. This will clear starter signal and a white Strip of light will appear on the route from the concerned Starter to the Advanced starter signal.

- 14.2. **TAKING OFF CALLING-ON SIGNAL:** - Miniature colour light Calling on signal is provided below the Home signals in terms of GR 3.13(6)(b). A Calling on signal shows no light in the 'ON' position. A calling on signal is taken 'OFF' for reception of a train when the Home signal above cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

To take off Calling-on signal the train must come to a stop at the foot of the home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit, a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating by point push button and group button individually or by route by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the calling on signal button 'C1'/'C18' (Red with white dot) (as the case may be), shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the calling on signal clears i.e., a white light glows at the concerned calling on signal on the panel. For loop lines, route button UN1 shall be used irrespective of the setting of the overlap point.

- 14.3. **RELEASE / CANCELLATION OF ROUTE:** Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.
- 14.4 **REPLACEMENT OF SIGNALS TO 'ON':** Signals are replaced to 'ON' automatically by the passage of a train past the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.
- 14.5. **INTERLOCKING OF SIGNALS/POINTS:** All running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant home signal and starters.
- 14.5.1 Advanced starter is interlocked with respective block instrument in sending position i.e., train going to position and by axle counter for last vehicle check.
- 14.5.2 The block instrument cannot be made normal unless the respective Home signal is put back to 'ON'.
- 14.5.3 Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the panel is locked up with Station Master's key.
- 14.6 **PILOTING OF TRAINS:** - In the event of failure of both Home signal and Calling ON signal simultaneously, it is inevitable to pilot the train 'IN'. For piloting the train, the setting of route must be ensured by SM/SS on duty personally and the points en-route must be clamped & padlocked at both facing & trailing end by Operating staff. Same procedure shall be adopted when route illumination fail to disappear. Facing and trailing ends of the all motor operated points must be clamped and padlocked while piloting 'IN' or 'OUT' and during non-signalled move.
- 14.7 **SHUNTING:** For shunting, OFF aspect of starter signals shall be used. For back shunting, shunt signals provided on each side of the yard shall be used.

14.8. **TOKEN LESS BLOCK INSTRUMENT:**14.9. **KEYS & BUTTONS**

SM's KEY-Intended to lock the instrument and to prevent unauthorised manipulation of the same during the absence of SM.

Shunting Key- This key remains normally inserted in the instrument and can be removed only if block handle is in either line closed position or TGT position.

Push button PB1- This is a push button used to transmit DC pulses for exchanging bell code signals.

Push button PB2- This is a push button used in conjunction with PB1 for releasing block handle of other instrument.

Switch S1 with counter- It is used for cancellation of line clear. The counter registers No of such operation.

Switch S2 with counter- For cancellation of line clear by the sending station after the train has entered the block section & return to the sending station and received on proper signals. The counter registers the number of such operation.

TOL Indicator- This indicator normally displays a white indication and displays red indication with caption "Train on line" when a train enters the block section.

Time-release indicator- This indicator is operated during canceling line clear operation when the required time delay has taken place. Normally the indicator displays white with caption 'Locked' and changes over to green with caption 'Free' when occupied.

Galvanometer- It deflects the flow of current from one instrument to another when either push button PB1 or PB2 is pressed

Block handle- Block handle can be set at 'N' (Line closed), 'L' (Train going to) and 'R' (Train coming from position). It is locked by the block lever lock in all positions.

Buzzer BZ1- Audible indications at both stations when the train enters the block section.

Buzzer BZ2- Audible indication at the receiving station when the whole of the train has arrived.

14.10. **MODE OF SIGNALING OF TRAINS ON DAIDO TYPE TOKENLESS BLOCK INSTRUMENT FOR A TRAIN TO LEAVE A BLOCK STATION FOR THE BLOCK STATION IN ADVANCE- (BWM 4.33)**

<u>Despatching Station</u>	<u>Receiving Station</u>
[Block handle in 'Line Closed position. All signals & concerned buttons are in normal position.]	[Block handle in 'Line Closed position. All signals & concerned buttons are in normal position.]
1. Inserts SM's key and turns	
2. Presses the button PB-1 and sends call attention code of bell signals.	3. Inserts SM's key
	4. Acknowledges the call attention code of bell signals by pressing the button PB-1.
5. Sends 'Attend telephone' code of bell signals	6. Acknowledges the 'Attend telephone' code of bell signals and attends on telephone.
7. Attends on telephone, gives the name of the station and asks B if he is prepared to receive train No..... [Refer BWM Rule No. 2.07 (3)]	8. Gives out the name of the station, and if he is prepared to receive, replies, 'Yes' take line clear for train No. Private Number.....
9. Repeats the PN given by Station Master 'B' and replaces telephone.	10. Replaces telephone.
11. Sends 'Is line clear enquiry' code of signals through button PB-1 & keeps the buttons PB-1 & PB-2 pressed on the last beat for 5 seconds or until the Galvanometer needle vibrates.	12. Turns the operating handle to 'Train coming from' position.

14. Turns operating handle
- 15(Takes 'OFF' the last Stop signal (after
 - a) ensuring that the route is clear and points are correctly set and locked)
 - (b) Train enters Block section.
 - (c) Last Stop signal returns to 'ON' position.
 - (d) 'Train on line' indication appears automatically.
 - (e) Buzzer I starts operating.
17. Sends 'Call attention' code of bell signals through button PB-1
19. Sends 'Train Entering Block section' code of bell signals after complying with BMW Rule 2.07 (5)
21. Buzzer 1 stops.
25. Acknowledges 'Call attention' code of bell signals
27. Turns operating handle to 'Line Closed' position.
28. Acknowledges 'Train out block section' code of bell signals through PB-1 and keeps" Buttons PB-1 and PB-2" pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.
13. Acknowledges the "Is line clear' code of bell signals through button PB-1 and keeps the buttons PB-1 and PB-2 pressed on the last beat for 5 seconds or till the Galvanometer needle vibrates.
16. 'Train on Line' indication appears automatically and Buzzer 1 starts operating.
18. Acknowledges 'Call attention' code of bell signals through button PB-1
20. Acknowledge 'train Entering Block section code of bell signals through PB-1. Buzzer stops.
22. Takes 'OFF' the reception signals (after ensuring that the line nominated is clear and points are correctly set and locked).
23. Train enters the station. Reception signals
 - (a) replaced to ON position automatically.
 - (b) Buzzer 2 starts operating.
 - (c) Buzzer 2 stops when reset push button is pressed.
 - (d) Complies with BMW Rule 2.07 (6)
24. Sends 'Call attention code of bell signals through PB-1
26. Sends 'Train out of block section' code of bell signals through PB-1 & the buttons PB-1 & PB-2 pressed on the last beat for 5 sec. or till the Galvanometer needle vibrates.
29. Turns operating handle to "Line Closed" position and thus buzzer 2 stops.

14.11. **TO CANCEL A LINE CLEAR WHICH HAS BEEN OBTAINED: (BWM 4.34)**

Before proceeding to cancel the line clear obtained, the Station Master at the station at which the instrument is in 'Train going to' positing, shall personally ensure that the train concerned has not started, the Last Stop Signal has been properly put back to 'ON' position and the concerned buttons on the panel are normal and that they remain so until the cancellation procedure is completed.

Despatching Station	Receiving Station.
<p>(Block Instrument handle at "train going to" position, concerned Last Stop signal is restored to normal) If the departure singles had been taken 'OFF' they are replaced to 'ON' position.</p> <ol style="list-style-type: none"> 1. Sends "Call attention" code of bell signal on PB-1 3. Sends "Attend Telephone" code of bell Signal on PB-1 5. Takes up telephone, calls out station name and asks for his consent. 7. (a) Turns switch SI, from normal to cancellation position. <li style="padding-left: 20px;">(b) The 'Counter' register next higher number, <li style="padding-left: 20px;">(c) Waits for 2 minutes. <li style="padding-left: 20px;">(d) T.E.R (Time Element Relay) Indicator operates. 8. Sends 'Call attention' code of bell signals. 10. Sends cancellation code of bell signals through PB-1 and keeps the buttons PB-1 & PB-2 pressed for 5 seconds on the last beat. 12. Turns switch SI to normal position, Turns Block handle to 'Line Closed' position. 	<p>(Block Instrument handle at "Train Coming from" position)</p> <ol style="list-style-type: none"> 2. Acknowledges on PB-1 4. Acknowledges on PB-1 and attends telephone. 6. Ensures that reception signal(s) is/are at 'ON', Calls out station name & then gives his consent on telephone. 9. Acknowledges 'Call Attention' code of bell signals. 11. Turns his Block handle to 'Line Closed' position & acknowledges the code of bell signals through PB-1 & keeps PB-1 & PB-2 pressed for 5 sec.

14.12. **NORMALISING OF BLOCK INSTRUMENT WHEN TRAINS RETURNS TO THE DISPATCHING BLOCK STATION:-**

Before receiving the train back into the station from which it started, the following is the sequence of actions to be taken:-

<u>Station 'A'</u>	<u>Station 'B'</u>
Despatching Station	Receiving Station.
(Block handle on 'Train Going to' position).	(Block handle on 'train Coming from' position)
<ol style="list-style-type: none"> 1. Advises Station Master B on telephone the intention to push back the train. 3. Turns the switch S2 from normal to cancellation position. <li style="padding-left: 20px;">(a) <li style="padding-left: 20px;">(b) The 'Counter' registers next higher number. 	<ol style="list-style-type: none"> 2. Gives consent on telephone.

- (c) Takes 'OFF' the reception signals.
 - (d) Train enters the station.
 - (e) Buzzer 2 for arrival of the train starts operating
 - (f) Buzzer to stop when reset push button is pressed.
4. Sends 'Train out of Block Section' code of bell signals through PB-1 & keeps the buttons PB-2 pressed for 5 seconds on the last beat or till the galvanometer needle vibrates.
 5. Turns his block handle to 'Line Closed' position.
 6. Acknowledges 'Train out of Block Section' code of bell signal and keeps buttons PB-1 and PB-2 pressed for 5 seconds on the last beat or till the galvanometer needle vibrates.
 7. Turns switch S2 to normal position.
 8. 'Turns the Block handle to 'Line Closed' position.

14.13 OPERATIONS OF TLBI (DIADO) INSTRUMENT:

SM shall follow the detail procedure vide 4.36 for shunting between last stop signal & the first stop signal from the opposite direction, 4.37 for shunting between the last stop signal & opposite first stop signal behind departing train, 4.38 for shunting outside first stop signal, 4.39 for working of Motor trolley, 4.40 for working of material trolley, 4.43 for failure of electrical instrument & 4.45 for resumption of normal working, of BWM Chapter-IV, Part-II.

14.14 INTERLOCKING BETWEEN SIGNALS AND BLOCK INSTRUMENTS:

- 1) a) The block working of the section RAIR-CHAR & RAIR-BAMR is controlled with the provision of Token-less Block Instrument (Diado type),
 - b) The Advanced starter signals are interlocked with the respective Block Instrument in such a way that the any Advanced starter signal can not be taken off unless the Line Clear is obtained from the block station in advance and the handle of the TLBI is turned to "TGT" position.
 - c) The concerned Advanced starter signal aspect will be changed its "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced starter signal replacement track circuit provided ahead of the respective signal.
- 2) **BLOCK RELEASE:-**
 - [a] The Block Instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block over lap ahead of the respective Home signal on either side of the Station yard.
 - [b] All the power signaling installations in the Station yard are centrally controlled from the panel and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be ensured by the operating personnel in the centrally located panel hence, to ensure complete arrival of the incoming train, Axle Counters are provided between RAIR-CHAR & RAIR-BAMR sections.
 - [c] In the event of failure of Axle Counter, block working of the section concerned is to be suspended, Line clear SM shall not normalize the commutator of the concerned Block Instrument to "Line Closed" position and shall not dispatch "Train out of block section" report to the station in rear until he is satisfied by seeing the Last Vehicle Indicator on the last vehicle of the incoming train (after arrival) of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train. Then station master shall resort to resetting procedure of the axle counter of concerned block section.

15 **DESCRIPTION OF SIDING:
ENGINEERING SIDING**

The Siding takes off from line no-3 with provision of one side entry at BAMR end. The Siding points are operated locally by Arc levers at site and these points are interlocked with the panel interlocking system. The normal detection of siding point on line No.3 is steady white light provided on the panel. Whenever it is necessary to operate the siding, siding control button No.11 is to be pressed along with common group Trans to release the control key from the corresponding RKT instrument fitted in the Station Master's office. key is to be taken out from the RKT and carried to the siding point by operating staff. The crossover point is to be operated manually through the arc lever after unlocking the hand plunger lock, set to the desired position and clamped for safe movement.

After completion of train movement the siding points are to be made 'Normal' and key is to be inserted into the RKT at SM's office and turned. A flashing 'White' indication will again appear on the panel. Then the SM on duty shall press the control button No. 11 along with common group release button and thus key 'IN' steady 'white indication will appear on the panel. When key is out from the RKT, reception and dispatch signals, shunt signal for line No. 3 will be locked.

16.0 **VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD:**

- In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SS/SM on duty personally through panel indications of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.

17.0 **CRANK HANDLING EMERGENCY OPERATION OF POINTS:**

Crank handle operation is interlocked with the signaling and interlocking system. When a route is not released after passage of a train or the Crank handle is in locked condition due to any failure, the "CH key" can also be extracted from the CH location box by applying emergency Crank Handle operation. The procedure is same for transmitting the CH key. In key "in" and lock condition, when the CH button and group trans button are pressed simultaneously, both the lock indication and key "in" indication start flashing. After 120 seconds the lock indication disappears and the key in indication continues to flash. At this position the key can be extracted from the RKT in the CH location box by pressing the push button switch provided inside the CH location box. The procedure for receiving the CH key is same like the normal operation of Crank handle.

18.0 **INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:** When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN', 'THROUGH' or 'OUT' at the station shall be done with a lot of care and diligence. SS/SM on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If SS/SM on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff be informed for attending to this.

19.0 **EMERGENCY OPERATIONS:** The following are the instructions for emergency operations.

- 20.1 **EMERGENCY ROUTE CANCELLATION BUTTON AND VEEDER COUNTER:** - For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'VEEDER COUNTER' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the panel). The SM on duty must press the emergency route cancellation button by breaking the seal and the signal button conforming to the section for which emergency route release is desired. A flashing indication will appear indicating that the cancellation operation has been initiated and after lapse of 120 seconds, the desired route will release provided all other conditions are favorable for route release.
- 20.2 The Veeder counter registers the number of such emergency cancellation operations. SM on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc. in the train signal register as well as in a separate register meant for this purpose.
- 20.3 **EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON:** - If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations.
- a) Firstly it must be ensured that the Signal is in the normal position.
 - b) Operation as detailed in para 6.0 of Appendix-B to be followed.

In case route is not released even after emergency route cancellation, facility of crank handling of points shall be used. For releasing the crank handle even when lock indication of crank handle appears on the panel, press Group Trans button and crank handle button. After two minutes key from RKT can be extracted. For further operation 12.0 of Appendix 'B' shall be followed.

- 21.0 **LOCKING OF RELAY ROOM:** - Refer para No.-4.16 of Main SWR.
- 22.0 **MAINTENANCE OF S&T INSTALLATION & ADHERENCE TO MAINTENANCE SCHEDULES:** - Regular maintenance of the S&T installations, adherence to schedules of maintenance, testing of points, track circuits, ground frames, level crossing gates, associated interlocking apparatus, cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.
- The tests, checks and replacements etc., including overhauling shall conform to the schedules of Maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject. During checking/ testing or during day to day as well as regular maintenance of S&T gears, SM on duty shall co-operate with S&T staff for safe and satisfactory maintenance.
- 22.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL INTERLOCKING INSTALLATION:** - In case of failure of any interlocking gear at the station, the failure report should be communicated by the SM on duty to the sectional Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per G & SR 3.51.04 and 3.68.04 and document all such transactions.
- 22.2 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:-** However, before declaring a signal or any other S&T gear as defective SM on duty shall verify them and setting of points on the route and overlap for a signal to which it applies shall be inspected by the SM on duty irrespective of the position of buttons and indications on the panel and will work vide GR 3.68.

- 22.3 **RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:** - After receipt of this information the sectional Maintainer shall attend to the failure after giving a Disconnection Memo. After rectification of the fault, the Sectional Maintainer shall give a Reconnection Memo detailing the rectification. Thereafter the SM on duty shall personally check the defective apparatus. After satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR 3.68.04 (c), (d) , (e) & (f).
- 22.4 **PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:** - Whenever any normal maintenance or special works for major renewals etc., are involved, the signal & Telecom should pre plan these works. Field staff and the JE/SE/SSE(SIG) should give 'Advance Intimation' to the SS/SM in writing about this work in terms of GR & SR 15.08.01.
- 22.5 **EMERGENCIES:** - Notwithstanding anything contained in the aforesaid paras when equipment is found to be defective and unsafe for passage of trains, the Signal & telecom. Staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of defect or damage to the interlocking installation to the SM on duty and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The SM on duty must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment according to extant instructions as contained in G & SR 3.77.
- 23.0 **PROCEDURE TO BE FOLLOWED IN THE CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF EMERGENCY CRANK HANDLE:** - Whenever a signal or a point becomes defective, any movement over the points on the running lines shall be made after clamping and padlocking of both facing and trailing points supervised by SS/SM on duty personally for all trains at this station.
- 23.1 In case of failure of a signal or a point and in case the point can not be point can not be operated from the panel, emergency crank handle, which is interlocked with system is to be extracted and the following procedure is to be adopted.
- 23.2 Emergency crank handle is provided for all motor operated points. This is mechanically attached to the key on RKT and can be released by pressing Crank Handle control push button and Group Trans button simultaneously. All signals will be locked in normal position as soon as the key is released. SM on duty shall transmit the key to required end of the yard and operate the point manually.
- 23.3 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody vests with the Station Master on duty, till it is replaced back in RKT.
- 23.4 The case of failure of motor operated points should be promptly reported to the concerned Signal maintainer/JE/SE/SSE for rectification.
- 23.5 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or attending to failure, the signal official will give a disconnection memo to the SS/SM on duty and after making necessary entries in the Emergency Crank Handle Register. The SS/SM on duty will obtain the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle. The points will be treated as defective till the Emergency Crank Handle is returned back to the SM on duty.

- 23.6 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the SM on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The SM on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN' and 'OUT' duly clamping and padlocking both facing and trailing points over which the train is to pass, as per GR 3.69 and 3.70 with relevant SRs. The SS/SM on duty will be personally responsible for setting and locking of points for reception or despatch of all trains.
- 23.7 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the SM on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.
- 24.0 **SUSPENSION OF LAST STOP SIGNALS:** - When the Block instrument is suspended with its handle in 'TRAIN ON LINE' position or "TRAIN GOING TO" position as the case may be for whatever reason, the concerned last stop signal controlled by the Block Instruments must be treated as suspended and trains shall be worked on PLCT.
- 24.1 The SM on duty shall not grant 'LINE CLEAR' unless he has ensured that the lamps of fixed signals, which apply, to the train are burning. If the signal lights can not be kept burning, the SS/SM on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in GR 3.61 to 3.71 & relevant SRs vide GR 3.49 (4).
- 24.2 The SM on duty shall not grant or ask 'LINE CLEAR', if the Axle Counter Section indicates section occupied and will treat the Block Instrument as suspended.
25. **SIGNAL LIGHTS:** - The SM on duty must also ensure from panel board that all the signal lights are burning properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.
26. **CORRECTING TIME IN STATION CLOCK:** - The SM shall set the time in his clock according to the time signal given by the Section Controller on duty at 16.00 hours every day according to G & SR 4.01.01 and 4.01.02.
- 27.0. **NORMAL POWER SUPPLY:** - The Station works on 230 volts AC single-phase power supply. The normal power supply is from the WESCO. Stand-by power is supplied by the diesel generators two in number. Solar power supply is also provided in this station
- 27.1 **POWER FAILURE AND REPORTING SUCH FAILURES:** - Normal power supply to the Signalling and Interlocking installations at this station is drawn from the WESCO Power supply source (at 230 V, 50 Hz). Whenever WESCO (Main) power supply fails, a buzzer on the panel will buzz on. SM on duty has to press the power acknowledgement button (RED coloured) positioned on the top of panel. The SM on duty shall start the Diesel generator for stand by (Auxiliary) power supply. After run of the Diesel generator and on resumption of power supply, SM shall acknowledge the same by pressing the power acknowledgement button. This will make the panel operative again.
- 27.2 The SM on duty must maintain record of power failure and he must promptly report the failure to the section controller and the concerned electrical and S&T maintenance staff.
- 28.0 **AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):-** The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in RAIRAKHOL-CHARMAL and RAIRAKHOL-BAMUR sections to check the complete arrival of trains. The system is interlocked with the Block Instrument. When the

Axle counter section indication provided on the topside of the panel individually for either section indicates (R) i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section is to be suspended and the trains will work as per Para No.30.

- 28.1 **PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF AXLE COUNTER (RESETTING)** : After arrival of a train section clear indication (GREEN) does not appear and/or section occupied indication (RED) continues to glow it may be assumed that the axle counter system has failed, the station master on duty shall verify that:

- a) The last preceding train has arrived complete at its destination.
- b) Block section is clear of any train/ vehicles.

Before resetting the Axle counter, despatching station should verify clearance of block section by exchanging private number with station in advance. During such failures the station master on duty shall obtain the resetting key after breaking the seal and unlocking the reset key in presence of in charge station master after due verification of complete arrival of trains. Resetting has to be done by inserting the reset key in the reset box. Pressing and turning it clockwise till the resetting indication (YELLOW) appears on the reset box. Each resetting operation shall be recorded in a register by the Station Master on duty. After resetting is over "RED" indication will be extinguished and "GREEN" indication will appear on the panel as well as on the reset box and the reset key shall be extracted from the reset box and will be kept under lock and seal.

When after resetting, "GREEN" indication does not appear on the panel or reset box, the Station Master on duty shall inform S&T staff regarding the failure. The block working in the concerned section shall be suspended and GR14.13 shall be followed in addition to para 6.05 of Station working Rule to ensure complete arrival of trains.

29. A. TELECOMMUNICATIONS: -

1. Telephone with single line Tokenless Block Instrument for either side Block Section
2. Station to Station fixed telephone (hot line) is provided
3. Station is provided with auto telephone connected with Railway Exchange
4. BSNL telephone is provided
5. The station is connected to Sambalpur–Talcher control circuit by control telephone.
6. Station to station 25 Watt VHF communication is provided.
7. Telephone is provided between Station and both end crank handle locations.

- Note: (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.
- (ii) VHF and Walkie Talkie sets should not be used for unnecessary discussions with Drivers, Guards or any other staff.
- (iii) The on duty SM shall use the above electrical communication instruments stated in Para-29 from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06.

30. FAILURE OF COMMUNICATION / FAILURE OF BLOCK INSTRUMENTS:

- 1) In the event of failure/suspension of block instrument, Track circuit & Axle Counter 'Line Clear' shall be obtained over telephone attached to the block instrument or station to station telephone by exchanging identification number and supported by private number as per SR 6.02.06 (a) and Chapter–III Part–I of Block Working Manual.

- 2) In the event of failure/suspension of block instrument and block telephone attached to the block instrument, or the Station to station fix telephone 'Line Clear' shall be obtained on Railway auto phone or BSNL phone, by exchanging identification number supported by private number vide SR 6.02.06 (1)(b) and Chapter-III Part-I of Block Working Manual.
- 3) In the event of failure/suspension of block instrument, block telephone and station to station fixed telephone or Railway auto phone or BSNL phone, Line Clear shall be obtained over the control phone exchanging identification number and supported by 'Private Number' vide SR 6.02.06(1) (c) and Chapter-III Part-I of Block Working Manual.
- 4) In the event of failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone Line clear shall be obtained on the VHF set exchanging ID number supported by Private Number provided that the instructions contained in SR 14.01.02 are followed vide SR 6.02.06(i)(d), Chapter-III part-I of Block Working Manual.
- 5) In the event of total failure of all communications trains shall be worked vide SR 6.02.04.

APPENDIX - 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX - 'D'**1.0 STATION MANAGER-I (INCHARGE) :**

He is the over all In-charge of the station; He is responsible for the efficient discharge of duties devolving upon all the Staff employed at the station whether permanent or temporary according to Station Working Rules, Manuals & safe working Instructions. He shall get himself well conversant with the detailed working of Station and panel, points and signals etc.

He is responsible for maintaining the Assurance Register up-to-date. He shall conduct surprise night inspection and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

He shall see that all signals, points, level crossing gates and the whole machinery at the station are in proper working order. He shall report all the defects to the concerned officials.

He shall satisfy himself that the staff employed under him are well conversant with Station Working Rules and perform their duties correctly. He is responsible for maintaining SWR, other Rule books and Assurance Register up to date.

He shall see that all safety records are maintained properly and all rules prescribed in G & SR, Block Working Manual, Operating Manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concerned and any irregularities if noticed are reported promptly to the authorities concerned.

He shall see that all accidents are promptly reported, attended to and GA-3 along with accident message is submitted to the concerned officers in time. He shall see that the staff is civil and helpful to all users of railway.

He shall frequently visit the platform, Station, LC gate etc. in order to maintain an effective supervision over the said staff and their working. He shall see that station premises are kept neat and clean.

He is responsible for booking all staffs working under him for PME and Refresher Course / Safety camp in their due time. His Special attention is drawn out to chapter II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter – XXII of Operating Manual.

He shall see that all equipment, apparatus and instruments including signal and interlocking gears are in proper working order and all failures are promptly reported to officials concerned for repairs/rectifications.

He shall pay special attention towards passenger amenities & coaching trains punctuality and yard feasibility. He shall endeavor for minimizing detention to freight trains by judicious planning of trains staff. He shall pay attention to smooth functioning of goods train to eliminate detentions. He shall attend to all compliance by traveling/trading public.

He shall see that the law and order in the station area is taken care of with the help of G.R.P. and R.P.F and civil authorities as per need.

He shall ensure compliances of all Operating, Safety and Commercial records maintained at the station. He is responsible for overall supervision of the station.

His special attention is drawn to chapter No.II of G & SR (Amendment) 2000 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instruction laid down in SR 3.68.01© & (d) and SR 14.07.01 and BWM 2.09 (e). He shall conduct surprise night inspection, safety meetings and fire drills. He shall maintain good public relation as well as look after passenger's amenities and be helpful to travelling public.

- 1.1.0 **ASSURANCE REGISTER**: All staff before taking up independent charge of their duties at this station, shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign such declaration.
- 1.1.1 No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.
- 1.1.2 The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.
- 1.1.3 The declaration shall be renewed in the following cases:-
- (i) Whenever there is a change in the Station Working Rules.
 - (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.
- 2.0 **USE OF PRIVATE NUMBER BLOCKS IDENTIFICATION NUMBER SHEET** :- Sufficient Private Number books and I.D number sheets in sealed covers shall be kept always in the stock by Station Superintendent under lock and key. He shall maintain a register for this purpose.
- 3.0 **ACCIDENTS**: Accidents shall be reported and immediate action shall be taken by the Station Superintendent in charge in accordance with the instruction laid down in the Accident Manual. Whenever the Station Superintendent received report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident message/reports and follow up all safety principles without delay.
- 4.0 **TESTING OF POINTS AND SIGNALS** :The Station Superintendent shall test the working of the reception signals daily during the day when there is no train due to arrive/leave the station. He shall also test the working of points, crossings etc. and record the result in the Station Master's diary.
- 5.0 **Dy.SS/STATION MASTER/ASSISTANT STATION MASTER**: He shall work in 8 hrs. shift for train passing and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time under the direction of the Station Manager. He shall assist the Station Manager for the up keep of the station in all aspects.
- 5.1 Station Master on duty who makes an entry in the train signal register must continue on duty till all the entries pertaining to the trains are completed vide Subsidiary Rule 14.07.01.
- 5.2 He is responsible for working beyond this period when called upon to do so in the exigencies of services. He will follow SR 3.68.01© & (d), SR 14.07.01. Their special attention is drawn to Chapter II of G & SR 1976 and GR 5.01 to 5.08 with relevant SRs. As an Assistant to the SMR/SS, he shall follow the instructions given to him by the Station

Superintendent.

6. **HANDING OVER AND TAKING OVER CHARGE:** The Station Manager in charge/ Dy.SS/Station Master/Assistant Station Master on duty shall record in the diary the condition of all the running lines, the caution orders in force at the time of handing over charge. These entries must be counter signed by Station Master/Assistant Station Master coming on duty while taking over charge. This will not, however, relieve any one of the SS/SM of his responsibility to ensure by physical check that the nominated line is clear of all obstructions before admission of any train on it.

7. **TRAFFIC POINTSMAN:**

He shall work under the instructions of the SM on duty and follow the GR 2.05 to 2.11 and other relevant rules laid down in GR & SR. He shall remain responsible for.

- (i) Delivery of authority to proceed and caution order etc. to the driver of train.
- (ii) Correct setting, locking and crank handling of points for reception / despatch and shunting operations under the supervision of Station Master.
- (iii) To couple and uncouple vehicles under the supervision of Station Master/Guard when shunting operation is in progress.
- (iv) Piloting and hand signaling of trains when necessary.
- (v) Knowledge of hand signals, detonators and their use.
- (vi) Protection of line in emergency and fog signaling.
- (vii) Exchange of signals with the Driver and Guard of passing trains as directed by the SM.
- (viii) Cleaning, Oiling and lighting of lamps.
- (ix) Loading/unloading of parcels, luggage and packages to and from the train and watching the packages and other materials by properly stacking in the station premises.
- (x) Dusting of station office, filling UP the fire buckets with sand/water and getting train intact arrival register (T-1410) signed by guard as and when required.
- (xi) Serving messages and other duties entrusted to them by the SMR//SM from time to time.
- (xii) Uses of emergency crank handle for setting of points.
- (xiii) To supervise shunting as per SR 5.13.03.
- (xiv) They must be thoroughly conversant with the GR 3.38, 3.46, 3.77 (I), 5.09, 3.52 to 3.60, 3.62, 5.13, 5.15, 5.16, 5.21, 5.23 & SRs there to.

GENERAL

- i) A set of flags and tri colour hand signal lamps will be part of the essential equipment of the staff while on duty. He shall not leave the station except when required by the SM on duty or with his permission and shall comply with subsidiary rules 4.42.02(b) (i) and (d).
- ii) Staff working at the station must be able to distinguish Up and Down line clear tickets and educated in distinguishing other operational forms and documents, delivered to Loco pilots and Guards and must also know how and when to ring the station bell.

APPENDIX - 'E'**ESSENTIAL EQUIPMENTS OF THE STATION**

Below is the list of essential safety equipment, which shall be readily available in good working order with necessary relief stock.

Sl.No.	Description	Quantity
1.	Detonators	10 in tin case
2.	Hand signal lamps/Tri colour torch	06 Nos.
3.	Hand signal flags	04 sets.
4.	Safety chains with pad locks	08 Nos.
5.	Wedges/Sprags	10 Nos.
6.	Fire buckets (with sand and water)	05 Nos.
7.	Clamps with padlocks	06 Nos.
8.	Reminder collars	06 Nos.
9.	"Motor Trolley on Line" boards	02 Nos.
10.	First aid Box	01 No.
11.	Blanket	01 No.
12.	Stretcher	01No.
13.	Fire extinguisher	01 No.
14.	Skids	06 Nos.
15.	Block suspension Board	02 Nos.

APPENDIX - 'F'**RULES FOR WORKING OF DK STATIONS , HALTS, IBH, IBS AND OUTLYING SIDING**

NIL.

APPENDIX - 'G'**RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS.**

NIL.

