

EAST COAST RAILWAY

WALTAIR DIVISION



STATION WORKING RULES OF LELIGUMA (LLGM)

EAST COAST RAILWAY

WALTAIR DIVISION

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EAST COAST RAILWAY

WALT AIR DIVISION

INDEX OF CORRECTION SLIPS

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EAST COAST RAILWAY
WALT AIR DIVISION

STATION WORKING RULES OF LELIGUMA [BROAD GAUGE]

Date of Issue:

Date brought in force:

NOTE: -

The Station Working Rules must be read in conjunction with General & Subsidiary rules, Block Working Manual and Operating Manual. These rules do not in any way supersede any rule in the above books.

1. STATION WORKING RULE DIAGRAM:

(i) The Station Working Rule diagram No: SI/WRD/231116Alt-'D'

(ii) CSTE/East Coast Railway Signal Interlocking Plan No: SI/231116 Alt-'D'

(iii) Date up to which corrected:

2. DESCRIPTION OF STATION:**2.1 GENERAL LOCATION:**

a) Name of the station	:	LELIGUMA
b) Class of station	:	'B' class, Std-IIR
c) Section	:	Koraput – Rayagada
d) Double line/Single line	:	Single line
e) Electrified/Non Electrified	:	Electrified
f) Gauge BG/MG/NG	:	BG
g) Railway	:	East Coast Railway
h) Route	:	'D' Special
i) Situated at	:	Km 112 from KRPU
j) Reckoned from	:	Koraput
k) Number of cabins	:	Centrally operated Domino type Panel.

2.2. BLOCK STATIONS, IBH. IBS ON EITHER SIDE AND THEIR DISTANCE AND OUT LYING SIDINGS:

Sl. No	Adjacent Block – section	Distance	Direction
a	BHALUMASKA (BLMK)	16.952 km	RGDA end
	RAULI (RUL)	16.55 km	KRPU end
b	Provision of IBS	Nil	
c	Automatic signal	Nil	
d	DK station/Outlaying sidings	Nil	
e	Passenger halt	Nil	

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

Between Stations	The Point from which the Block section commences	The Point at which the 'Block Section' ends
LLGM-BLMK DN Direction	From DN advanced starter signal no. 12 of LLGM	UP Advanced starter signal no. 11 of BLMK.
LLGM-RUL UP Direction	From UP advanced starter signal no. 11 of LLGM	DN Advanced starter sig no. 12 of RUL.

2.4 GRADIENTS:

a) From the centre of the station building towards BLMK:

Chainage in Mtrs from CSB		Stretch	Gradient
From	To		
Ch: 0.000	Ch: 600M	600M	1 in 400 Falling
Ch: 600M	Ch:875M	275M	1 in 100(c) Falling
Ch: 875M	Ch: 1800M	925M	1 in 125 Falling
Ch: 1800M	Ch: 2225M	425M	1 in 100(c) Falling
Ch: 2225M	Ch: 3825M	1600M	1 in 125 Falling
Ch: 3825M	Into section	---	1 in 100(c) Falling

b) From the centre of the station building towards RUL:

Chainage in Mtrs from CSB		Stretch	Gradient
From	To		
Ch: 0.000	Ch: 605M	605M	1 in 400 Raising
Ch: 605M	Ch: 1154M	549M	Level
Ch: 1154M	Ch: 1631M	477M	1 in 100(c) Falling
Ch: 1631M	Ch: 2000M	369M	Level
Ch: 2000M	Ch: 2882M	882M	1 in 800 Raising
Ch: 2882M	Into section	---	1 in 100(c) Raising

2.5 LAY OUT:

Sl no	Running/Non Running line	Electrified/Non Electrified
1	Route-1 (1 st loop)	Electrified
2	Route-2 (Main line)	Electrified
3	Route-3 (2 nd loop)	Electrified

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT AND HOLDING CAPACITY:

Sl no	Name of the line	Holding capacities on CSR	Direction of movement
1	Lineno-1 (1 st Loop)	723.6 M(STR-STR)	Trains coming from RUL and proceeding towards BLMK are DN trains. Trains coming from BLMK and proceeding towards RUL are UP trains.
2	Lineno-2 (Main Line)	726M (STR-STR)	
3	Line no-3 (2 nd Loop)	766.6 M(STR-STR)	

2.5.2 NON RUNNING LINES AND THEIR CAPACITY: NIL**2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:**

- UP Distant signal is placed on RH side of the track.
- DN Advn. Starter is placed at 51.7 M from outermost point.

2.6 LEVEL CROSSINGS: NIL**3. SYSTEM AND MEANS OF WORKING:-**

(i)System of working: Absolute block system:

Trains are worked under Absolute block system in accordance with GR 7.01(1) (a), 8.01(1) (a) &(c), 8.01(2) (b), 8.03(2) (a), (b), (c) (ii), 14.01 to 14.07, 14.08(b) (iv), 14.09 to 14.13 and BWM chapter-IV part I.

(ii)Block instruments: Single line Diado type Tokenless block instruments are provided for block sections LLGM-RUL and LLGM-BLMK vide GR 14.01(a) and the 'OFF' aspect of the last stop signal is the authority for the Loco pilots of all trains to enter into the block section vide GR 14.08(b) (iv).

(iii)Co-operative/Non Co-operative: Co-operative.

(iv)Provision of block telephone: Telephone attached to block instrument connecting the adjacent block stations concerned.

(v)Custody of keys of block instrument: Block instrument is provided with double locking. One key will be with SM and other key will be with S&T maintainer.

4.0 **SYSTEM OF SIGNALLING AND INTERLOCKING:**

4.1.0 a) Standard of Interlocking: This Station is provided with Standard-II(R)Panel Interlocking.

b) Type of signals: Multiple Aspect Colour Light Signals. The aspects and indications of the MACLS is governed by GR.3.08 (4) (b).

c) The Station is provided with central Panel Interlocking (PI). All signals and points are electrically operated from the central Panel provided at SM's Office.

d) Method of operation: Central Panel is provided in the Station Master's office to electrically control all signals and points.

e) Provision of axle counter/Track circuits on running lines:

Track circuits are provided in the yard as 1AT, 12AXT, 12AT, 21AT, 21BT, L₁T₁, L₁T₂, L₁T₃, L₂T₁, L₂T₂, L₂T₃, L₃T₁, L₃T₂, L₃T₃, 22AT, 22BT, 24BT, 11AT, 2T₁, 2T₂ and 2AT. Axle counters are provided for RUL-LLGM (BAXT) and BLMK-LLGM (BAXT). Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel at SM's office. When a signal is cleared the route indication 'Yellow' appears for the route set and 'Red' light appears as the train occupies the track circuit. Analog axle counter 12 AXT is provided between UP Home signal S-1 and LSS S-12 vide CRS observation No. 1760 dated 24.2.2015.

f) Calling on signals/IBS: Calling-on signals are provided below Home signals (i.e. in both UP & DN directions) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b).

g) IBS is not provided at this station.

h) The control Panel is provided with SM's key which shall always remain in the custody of the Station Master on duty for control of points, signals and crank handles control etc in terms of SR 3.36.03(a).

i) CRANK HANDLE:

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 became 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. CH-1 controls 21A/B, 23A/B; CH-2 controls 22A/B, 24A/B.

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the EKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are not taken 'OFF' and the route is not locked for whatever reasons. Crank Handle can be released by pressing common 'TRANS' push button and concerned Crank handle control push button simultaneously. When the keys are taken out no signal can be taken 'OFF' over the particular route on the points nominated by the crank handle.

This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points. The failure of motor operated points must be ensured by physical checking that there is no obstruction. SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency crank handle register shall be maintained by the SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle as per Appendix-'B').

The cases of failure of motor point, it should be promptly reported to the concerned signal maintainer/signal inspector for immediate rectification.

4.1.1 CRANK HANDLE FOR EMERGENCY OPERATION OF POINTS CRANK:

Crank handle is inter locked with the signaling and inter locking system at this station and the crank handle which is normally locked up in the RKT instrument in the location boxes at the both End of the yards can be taken out when the signals on the connected route are in normal position and the route is not locked for any reason.

Even when the route is locked the crank handle key can be extracted from the RKT through emergency operation by pressing the concerned crank handle button along with group Trans button concurrently. When this operation is resorted, the crank handle 'Key in' indication(white) and locked indication (Red) both start flashing. After 120 Second of flashing of both, the locked indication (Red) disappears. Similarly such red indication appears at the crank handle location at site near corresponding RKT and now the crank handle key can be taken out from the RKT at site, After key extracted at site from the RKT, the key in indication (white) on panel, board will extinguish. After completion of work, crank handle key shall be restored to RKT which will be indicated by flashing key in (white) indication on panel board, which comes steady only after pressing of concerned crank handle button along with group release button concurrently.

On account of the doubtful operation of any track circuit by light vehicle/ vehicle including self propelled vehicles such as motor trolley or a diesel shunting engine or a tower wagon, in indication of the occupancy of the track it is necessary that the SM on duty satisfied himself that the said vehicle/ vehicles has/have cleared the point zone track circuits by observing the track indication of the tracks on either side of the cross over by positively checking of the ENTRANCE and EXIT track circuit are showing occupancy and clearance in accordance with the train movement.

4.1.2 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 and Yellow light when taken "OFF". A calling-on signal, will be 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. Before taking 'OFF' Calling-on signal during failure of track circuit the route and clearance of the track over which the train will be admitted must be checked physically by SM on duty. The time release for Calling-On signal for both UP & DN Home signals is 120 seconds. (The detailed procedure is given in Appendix-B).

4.1.3 SHUNT SIGNALS:

Shunt back signal SH- 4 (A-C) is provided at RUL end for shunt back facility.

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

Relay room is provided with two independent locks. The key of one lock shall be in the personal custody of Station Master on duty and the key of other lock shall be in the custody of S&T Maintainer. In the event of necessity such as for attending failure, or regular maintenance, on being requisitioned by S&T maintainer, SM shall hand over the key to the Maintainer. On completion of the work, maintainer shall lock the relay room and shall return the key to SM. The particulars of such transactions shall be entered by the SM in the relay room key register vide OM 1.14.

4.3 (A) POWER SUPPLY:

Normal: AT supply.

Stand by: - 1. Local supply- 230v, 50Hz (Odisha State Electricity Board supply),
2. DG set (2 nos).

(i) An auto changeover switch is provided in the Station Master's Office with three power supplies viz., AT, Local and DG for changing the switch to the required supply position. SM on duty shall start DG in case of failure of AT & Local supply.

(ii) There are two DG systems provided at this station. SM on duty shall switch over to other DG system provided in DG room in case of failure of one DG.

(iii) SM on duty shall maintain Log register for fuel consumption record of DG systems.

(iv) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

(B) REMOTE MONITORING ASM BOX: Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-

	Instructions	Condition	LED indication	Remarks
A	Run DG set	50% DOD	Red	Audio/visual alarm. Alarm shall be acknowledged by SM on duty.
B	Emergency start	60% DOD	Red	Audio/visual alarm. Alarm shall be acknowledged by SM on duty.
C	System shut down	70% DOD	Red	Signal feed cut off and all DC-DC converters to work. Audio alarm will continue till Generator is started.
D	Call S&T staff	Equipment fault	Red	Failure of any module will give the alarm in SM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

In the event of failure of Remote Monitoring ASM console due to any reason when Local power supply is failed, the SM on duty shall start DG set immediately. In case "call S&T staff" or "system shut down" appears on the Remote Monitoring panel of IPS and/or malfunctioning of the Remote Monitoring panel, SM on duty shall inform the same to the concerned S&T staff immediately.

5. TELECOMMUNICATIONS:

- (a) Telephones attached to Token less Block Instruments is connected to adjacent stations on either side.
- (b) Hot line Telephone communication is provided between adjacent stations.
- (c) The station is connected to KRPU-RGDA Control & Traction Power Control Circuit.
- (d) Telephone communication is provided between Station Master on duty to UP CH locations and to DN CH Locations.
- (e) 25 w VHF set is provided at the station for emergency communication.
- (f) Railway Auto phone is provided.

5.1 FAILURE OF COMMUNICATION: -

- a. In the event of failure of communications between the adjacent block stations SR 6.02.06 shall be observed, for working the train.
- b. In the event of total failure of communications between the adjacent block stations SR 6.02.04 shall be observed, for working the train.

6. SYSTEM OF TRAIN WORKING:**6.1 DUTIES OF TRAIN WORKING STAFF:**

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual and any 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 Stations and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

The following is the complement of operating staff provided at the station in each shift for train passing duty.

STAFF IN EACH SHIFT:

SS/SM	1
Points Man	1

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Master's office.

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY:

The SM on duty is responsible to ascertain the clearance of the nominated line between first facing point and advanced starter signal in each direction.

The private number book should be under the custody of SM on duty who is authorized to use it.

6.1.3 ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:

Any staff before taking of independent charge of duties connected to train working or any staff who is away from his duty for the period of 15 days or more shall sign in the Assurance Register which is token of having understood the contents. However, in the event of any corrections or modifications in the SWR is involved, the assurance of all the staff whoever is entrusted the work of train passing duty shall be obtained afresh in the assurance register by the in-charge of the station before they are allowed to work vide SR 5.01.02.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

- a. The conditions laid in GR 8.03(2)(a) (b) (c) (ii) shall be complied with the SM on duty before line is considered clear and line clear is granted.
- b. Before granting a line clear for a train the SM on duty shall personally ensure that the reception signals pertaining to a train are in the 'ON' position and burning properly vide GR 3.49(4).
- c. Line shall not be considered clear and line clear shall not be granted to an UP train unless:
 - i) Whole of the last preceding UP train has arrived completely.
 - ii) UP Home signal No. S-3A/B/C or UP calling-on signal C-3A/B/C is put back to 'ON' and
 - iii) Line is clear up to DN advance starter signal No.12.
- d. Line shall not be considered clear and line clear shall not be granted to a DN train unless:
 - i) Whole of the last preceding DN train has arrived completely.
 - ii) DN Home signal No. S-2A/B/C or DN calling-on signal C-2A/B/C is put back to 'ON' and
 - iii) Line is clear up to UP advance starter signal No.11.

e. ADEQUATE DISTANCE: (SIGNAL OVERLAP)

To take off the Home signals for admission of a train, the adequate distance (overlap) as mentioned below shall be kept clear. [Refer GR.3.40 (3) (b) and SR thereto]

Adequate Distance:

CLEARANCE OF ADEQUATE DISTANCE				
LINE NO.	UP TRAINS		DN TRAINS	
	FROM	TO	FROM	TO
Line no.1 (1 st loop)	UP starter No. 5	The end of overrun line or Adv. Str. 11	DN starter No. 10	DN advanced starter No. 12.
Line no. 2 Main line	UP starter No. 7	UP advanced starter No. 11	DN Main line starter No. 8	DN advanced starter No. 12
Line no. 3 (2 nd loop)	UP starter No. 9	To the end of sand hump or advanced starter No. 11.	DN starter No.6	To the end of sand hump or Adv. Str.12

Remarks: However when a route is set leading to the Main line the overlap beyond the starter in that particular direction shall extend up to the advanced starter of the station in that direction.

6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN:- Nil**6.2.1.1 SETTING OF POINTS AGAINST BLOCKED LINE:**

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station, the points in rear should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line vide GR 3.51.06.

Safety Point Alarm Unit (SPAU):

A safety point alarm is provided on the panel board with different indications:

On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line. In case the SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived.

The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.

On setting the points against the occupied line, the RED indication will disappear.

In case SM fails to set the required points against the occupied line a fault message will be triggered SMS will be sent to concerned station mobile and all concerned staff.

If all the lines of a station happen to be blocked when line clear has been granted to a train the safety point alarm will not work and the point should be set for the line occupied by a stable load or a goods train by SM on duty in that order so that, in case of mishap, the chance of casualties minimized. In case of all the lines are occupied by passenger trains points should be set for a loop line to negotiate which the speed of incoming train would be reduced which in turn would minimize the consequences/causalities vide SR 3.51.06 (b). 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. Block collars to be placed on the concerned button of blocked line.

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE:

The rules laid down in GR 5.09 and relevant SRs shall be followed. Calling-On signal may be taken off for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

Not Applicable

6.2.1.4 DISPATCH OF TRAIN FROM NON-SIGNALLED LINE.

Not Applicable

6.2.1.5 DISPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:

NIL.

6.2.1.6 ANY SPECIAL CONDITIONS:

a) SPECIAL RESTRICTIONS:

- I. As per Note 15 of WRD, due to existence of gradient steeper than 1 in 400 i.e., 1 in 100(c) beyond 50M of outermost points, trains should not be drawn up to the last stop signal and held up on the steep gradient in order to clear the reception line for giving permission to approach to the following train.
- II. No shunting beyond outermost points on the steep gradient side should be allowed unless a locomotive is attached at the lower end of the load from the point of view of gradient.

b) SPECIAL INSTRUCTIONS:-

NIL

6.3 CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-

- (i) Conditions for taking off approach signals are governed by GR 3.40(1) (b), 3.40(2) (b), 3.40(3) (b).
- (ii) Calling-On signal may be taken off for the admission of train in the event of failure of Home signal in terms of SR 3.69.02(a) or for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON":

Station master should ensure that signal is put back to 'ON' after passage of the train as per GR 3.36 (2) (B), 14.01 and SR 4.17.01.

6.4 SIMULTANEOUS RECEPTION/DESPACTH, CROSSING AND PRECEDANCE OF TRAINS:

According to existing interlocking at this station, the simultaneous reception and dispatch of trains is permitted as stipulated below.

1	Reception of an UP train on line No.1 setting overlap to overrun line.	AND	Simultaneously reception of a DN train on line no.3 setting overlap to sand hump. OR Dispatch of another UP train from line no. 2 or 3.
2	Reception of a DN train on line No.3 setting overlap to sand hump.	AND	Simultaneously reception of an UP train on line no.1 setting overlap to overrun line. OR Dispatch of another DN train from line no. 1 or 2.

6.5 COMPLETE ARRIVAL OF TRAINS:

(A) For section LLGM-RUL & LLGM-BLMK:

Entire block section between LLGM-RUL & LLGM-BLMK is provided with digital axle counter.

For section LLGM-RUL:

A pair of digital axle counter is provided between LLGM-RUL one just beyond UP advanced starter signal no. 11 of LLGM and another beyond UP Home signal of RUL for last vehicle verification.

For section LLGM-BLMK:

A pair of digital axle counter is provided between LLGM-BLMK one just beyond DN advanced starter signal no. 12 of LLGM and another beyond DN Home signal of BLMK for last vehicle verification.

The position of the block section whether 'clear' or 'occupied' is reflected on the axle counter reset box provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when block section is occupied. Whenever a train enters into the block section "Block section clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication disappears and 'GREEN' indication appears. If after complete arrival of the train 'RED' indication does not change to 'GREEN' it should be assumed as Block instrument failure for the particular section and necessary action as per GR 14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, advanced starter signal cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.

A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting is to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section.

(B) A pair of Analog axle counter is provided between UP Home signal S-1 and DN LSS S-12 one just beyond DN Advanced starter signal no. S-12 of LLGM and another just beyond UP Home signal no. S-1 of LLGM vide CRS observation no. 1760 dated 24.2.2015.

The position of Analog axle counter zone 12AXT whether clear or occupied is reflected on the panel as well as on the Analog axle counter reset box provided in SM's office which shows 'Green' when 12AXT is clear and 'Red' when occupied.

After clearance of 12AXT by train, the 'Red' indication disappears and 'Green' indication appears. If after complete arrival of train, 'Red' indication does not change to 'Green' for 12AXT zone, SM/LLGM will reset the same in the reset box kept with SM/LLGM after ensuring that last train passed the section has arrived at the receiving station

completely with exchange of private number with SM/BLMK. Every reset operation will be incremented in the counter provided on reset box.

NOTE:

Before taking off reception and dispatch signals for UP or DN directions the SM on duty shall ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication.

6.6 DISPATCH OF TRAINS:

a) To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing 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. The 'OFF' aspect of the advanced starter is the authority to proceed into the block section. As soon as the train passes the advanced starter signal, SM will send the train entering the section signal to the station in advance.[Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)]

6.7 TRAINS RUNNING THROUGH:

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until anything wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train.

He shall also depute the TPM on duty to the other side, for passing the train. The TPM on duty shall wave Green hand signal horizontally. He shall show danger hand signal if he notices anything is wrong and reports the same to the SM on duty.

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 and Subsidiary Rule. [Ref GR 3.40,3.42, 4.17, 4.42, & SR 4.42.02 (b) (i), (ii), (iii), c & (d)].

6.7.1 TRAIN ENTERING BLOCK SECTION:

The SM on duty after verifying that the train has passed past the advanced starter signals shall send the Train Entering Block Section Signals vide BWM 2.07.5(a).

6.7.2 ISSUE OF CAUTION ORDERS:

Whenever in consequence of the line being under repairs or for any other reasons special precautions are necessary a Caution Order detailing the Kilometres and Speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Loco pilot in terms of GR 4.09 and SR thereto.

6.8 WORKING IN CASE OF FAILURE:

PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING FAILURE /SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:

a) TRACK CIRCUITS:

In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.

b) AXLE COUNTER:

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 26.0 of SWR (APP-B) if the axle counter indication does not appear 'GREEN & continues to show 'RED' indication after resetting, the concerned block instrument shall

be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for rectification. During failure of Analog axle counter zone "12AXT" SM/LLGM will reset the same (Reset box kept at SM/LLGM) after ensuring that last train passed the section has arrived completely at the receiving station with exchange of private number with SM/BLMK.

c) BLOCK INSTRUMENTS:

In the event of partial/total failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR (Refer SR 6.02.03 & 6.02.06)

a) RECEPTION OF A TRAIN ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line it is necessary that the train is piloted IN on a written authority given by the SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train or by taking off calling-on signal. [Refer GR 5.09 & SRs there to]

b) RECEPTION OF A TRAIN ON NON-SIGNALLED LINE:

NIL

c) DEFECTIVE SIGNALS:

Whenever signals become defective, the procedure laid down in GR & SR shall be followed. [Refer GR 3.68 to 3.71, 3.80 and SR 3.68.01(C)] In the event of signal showing no lights, station master on duty shall before giving line clear initiate action in accordance with the procedure laid down in GR and relevant SRs.

[Refer GR 3.51, 3.69, 3.49(4), 3.68 to 3.77]

d) DEFECTIVE INTERLOCKING:

When interlocking becomes defective the SS/SM on duty shall be responsible for correct setting, clamping, padlocking of points for admission of train. [Refer SR 3.69.03 (a) & (c).

e) DEFECTIVE/DAMAGED POINTS:

When any point fails to operate normally by route setting operation through panel, it is inevitable to operate the points with crank handle. The SS/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 shall be followed as per operating manual para 20.06.

Station master on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency crank handle register shall be maintained by SM at the station as per para 20.06 (d) of the Operating manual. Correct setting, clamping and padlocking of the points devolve on SM on duty. (Details of use of crank handle as per Appendix-'B'). The cases of the failures of the point should be promptly reported to the concerned signal maintainer/JE/SE (signal) for immediate rectification.

6.9 PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIAL LORRIES ETC":

a) Motor trolleys shall be worked as per GR 15.25 and SRs there to, BWM 5.11(1) (2), 5.12, 5.13, 5.14(2) (a) and circulars and orders issued from time to time. Material trolleys shall be worked as per GR 15.27 and SRs there to and in accordance with the provisions of Block Working Manual.

b) Tower wagons shall be worked as per GR 17.08 and SRs there to and BWM 4.39 and other circulars and orders issued from time to time.

c) Push trolleys shall run under block protection only vide SR 15.25.09(e).

d) Shunting key of token less block instrument at dispatch station as well as receiving station of the motor/push trolley shall be taken out and kept in the personal custody of SM on duty in addition "trolley on line" board shall be hung up on the handle of the block instrument. Special instructions contained in the circular No.19 of 6.4.88 should be followed.

Note: Trolleys which are to be run on track circuit area shall be insulated as per SR15.20.02.

7. BLOCKING OF THE LINES:

(a) 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. 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 to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

(b) SECURING OF VEHICLES: -

As far as practicable, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SS on duty shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling.

NOTE:

Special care should be taken to secure special type vehicles fitted with roller bearing while standing in siding or in running lines. [Refer GR 5.23 & SR 5.23.01]

(c) USE OF REMINDER BLOCK COLLARS:-

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, reminder collars shall be used by the SM on duty on the push buttons concerned.

8.0 SHUNTING:

8.1 GENERAL PRECAUTIONS.

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual [Refer GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16 to 5.23, 8.05, 8.06, 8.14 and 8.15] with relevant SRs and OM 7.01, 7.07, 7.08, 5.1(2) (B) shall be followed.

NOTE:

For any non signaled movement, physical verification of the clearance of the crossover points shall be ensured by the Guard/SM 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 GR 8.09 and SR thereto.

8.3 PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:

(i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.

(ii) Fly shunting is prohibited at both ends of the yard vide SR 5.21.01 (c)

(iii) For shunting in RGDA end of the yard, engine should be leading towards the falling gradient.

8.4 SHUNTING ON SINGLE LINE:

- i) Within station section: Governed by GR 8.10.
- ii) Between last stop signal and opposite first stop signal: Governed by GR 8.12.
- iii) Beyond opposite first stop signal: Unless the line is blocked back, the line outside the first stop signal shall not be obstructed vide GR 8.13.
- iv) During failure of Block instrument: Block back messages shall be exchanged between Station master at either end of the section which is intended to be obstructed supported by private number. Both the Station Masters shall fix line block collars on respective Block Instruments and shall continue shunting provided the Block section is clear.

8.5 SHUNTING ON DOUBLE LINE:

Not applicable.

8.6 SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD : NIL**9.0 ABNORMAL CONDITION:-****(a) RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITIONS:**

- (i) During partial interruption of communication between the adjacent block stations, SR 6.02.06 shall be observed.
- (ii) In the event of occupation of block section due to accident or obstruction the authority for the train to work up to obstruction as and when required is T/A 602 & SR 6.02.05 shall be observed.
- (iii) In the event of trains delayed in the block section, GR 6.04 and relevant SRs shall be followed.
- (iv) Failure/passing of Intermediate Block stop signal at 'ON' position: NIL.
- (v) Failure of Axle counter Block/BPAC: Procedure to be followed vide GR 14.13 & 14.14.
- (vi) Failure of MTRC: Not applicable.

(b) Procedure for emergency operation of points by Crank Handle.-

The detailed Procedure for emergency operation of points by Crank Handle of motor operated points shall be followed.

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary that SM on duty satisfies himself that the said vehicle has cleared point zone track circuits by observing the track indications of the track on either side of the cross over by positively checking the entrance and exit track circuits are showing occupancy and clearance in accordance with the train movement.

ii. Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release:

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is

necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously.

Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

Rules regarding locking of points and damaged points vide GR 3.39 and GR 3.77 to be followed.

(c) Certification of clearance of track before Calling –On Signal operation in initiated:-

Before taking off Calling –On signal during failure of track circuit/axle Counter, the route and the clearance of the track over which train would pass to be verified by SM on duty.

(d) Reporting of failure of points, Track circuits/axle counter and interlocking:-

Whenever there is a failure of points, Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure and only after receipt of the written memo from the Signaling

Maintainer for rectification of the fault, SM should restore the normal working. The entries in failure register to be done with message to the section controller.

9.1 TOTAL FAILURE OF COMMUNICATION:

Rules and regulations for working of trains during total interruption of communication on single line section shall be followed vide SR 6.02.04 and instructions laid down in BWM.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

Not applicable

9.3 DISPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:

(i) In the event of total failure of communication, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03.

(ii) In the event of necessity to send a train to assist the crippled trains, SR 6.02.05 shall be followed.

10. VISIBILITY TEST OBJECT:

The signal lights of UP starter signal No.5 and DN starter signal No.10 of Line No.1 are ear marked to serve as visibility test object during day and night vide GR 3.61.2(b)(iii)

11. ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

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

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR.3.61 as a token of their acknowledgement in fog signaling Rules.

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.

12.1 STATION DETONATOR REGISTER (OPT/124):

A Register regarding detonator is maintained at the station.

12.2 INSTRUCTIONS:

(a) This register contains the following parts.

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

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 up to 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 put initial with date as an indication having done so.

LIST OF APPENDICES:

APPENDIX-A	Working of Level crossing gates.
APPENDIX-B	System of signal Interlocking and Telecommunications.
APPENDIX-C	Anti collision device (Raksha Kavach).
APPENDIX-D	Duties of Train passing staff and staff in each shift.
APPENDIX-E	List of essential equipment provided at this station.
APPENDIX-F	Working of DK stations, Halts, IBS and outlying sidings.
APPENDIX-G	Rules for working of trains in Electrified sections.

APPENDIX-‘A’

WORKING OF LEVEL CROSSING GATES

--NIL--

APPENDIX 'B'**DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATION AND COMMUNICATION ARRANGEMENTS
AT THE LELIGUMA STATION****1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALATION:**

This is a 'B' Class Station with Standard-II(R) interlocking with route setting type panel. The points and signals etc are power operated from a composite 'DOMINO TYPE' central panel installed in the station Master's office. This Station is equipped with multi aspect colour light signaling. The Handle type Token less Single Line block instruments are provided in the SM panel room for section LLGM-RUL & LLGM-BLMK.

1.1 DISCRIPTION OF PANEL:

The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when the Station Master faces the panel, the yard drawing on the panel corresponds to the actual field lay out.

1.2 POINT PUSH BUTTONS:

Points are normally operated automatically along with route setting operation. However required points can be operated individually also. For this point push buttons BLACK in colour are fitted over the point layout on the panel board. The individual operation of electric point machine is controlled by these point push buttons in conjunction with the point group button (Black with Red dot) (Normal) or (Reverse) as per requirement, fitted on the top of the panel board.

1.2.1 When a point is set and locked correctly in NORMAL position, a 'Yellow' steady strip light indication on straight line appears suggesting that the point is in NORMAL position.

1.2.2 When a point is set and locked in REVERSE position, a yellow steady strip light indication in reverse appears suggesting that the point is in REVERSE position.

1.2.3 When the points of any route have been correctly set and relevant signal is taken 'OFF', 'RED' indication appears near the points indicating that the concerned points are locked either in NORMAL or REVERSE.

1.2.4 When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the indication will start flashing till such time the point is housed and 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 indication will flash during point operation also.

1.2.5 All points over running lines are operated by electric point machines.

1.2.6 The cause for non setting of the point in the desired position shall be checked up by the Station Master on duty according to GR and SR 3.68.01(C). If there is a defect other than an obstruction, this point shall be considered defective and action shall be taken for clamping and Padlocking of these points in the desired position by the Station Master on duty himself for all trains according to SR 3.69.03 (C). In such case both ends of the point shall be clamped and padlocked.

1.2.7 DESCRIPTION OF POINT PUSH BUTTONS:

SL. NO	POINT BUTTON NO.	COLOUR	DESCRIPTION
1	21 A/B	Black	Cross over point between Main line and line no.3 at BLMK end.
2	22 A/B	Black	Cross over point between Main line and line no.1 at RUL end.
3	23 A/B	Black	Cross over point between Main Line and line no.1 at BLMK end.
4	24A/B	Black	Cross-over Point between Main line and line no.3 at RUL end.

1.2.8 DESCRIPTION OF POINT GROUP BUTTON:

There are two point group buttons (Black with red dot) at the top of panel one for Normal and one for Reverse operation of points. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.3 SIGNAL PUSH BUTTON:

These are Red colored push buttons on the panel near the concerned stop signals on the panel. These are operated in conjunction with Route button (White colored) to take 'OFF' the signals.

1.3.1 DESCRIPTION OF SIGNAL BUTTONS:

SL NO	BUTTON NO.	COLOUR	DESCRIPTION
1	C-1GN	Red with white dot	Button for UP calling 'ON' signal up to S-3/C-3 signal.
2	S-1GN	Red	Button for UP Home signal up to S-3.
3	S-2 GN	Red	Button for DN Home signal for Line No.1 to 3
4	C-2GN	Red with white dot	Button for DN calling 'ON' signal for Line No.1 to 3.
5	S-3GN	Red	Button for UP Inner Home signal for Line no. 1 to 3.
6	C-3GN	Red with white dot	Button for UP calling 'ON' signal for Line No.1 to 3.
7	SH-4 GN	Yellow	Button for Shunt Signal for Line No.1 to 3.
8	S-5 GN	Red	Button for UP L-1 starter.
9	S-6 GN	Red	Button for DN L-3 starter.
10	S-7 GN	Red	Button for UP L-2 starter.
11	S-8 GN	Red	Button for DN L-2 starter.
12	S-9 GN	Red	Button for UP L-3 starter.
13	S-10 GN	Red	Button for DN L-1 starter.
14	S-11	Red	Button for UP Advanced starter.
15	S-12	Red	Button for DN Advanced starter.

1.3.2 SIGNAL INDICATION:

The aspects of the signals as obtained at any time are shown on the panel on the signal indication along line. The ON aspect indications of stop signals are RED and OFF aspect indications YELLOW/GREEN on panel. The ON aspect of distant signal is yellow and OFF aspect is Green on the panel.

1.4 ROUTE BUTTONS:

1.4.1 Route buttons are provided separately on each running line on the panel for initiation of route. Common route buttons are also provided for taking off starters. An individual route button is provided for taking 'OFF' advanced starter for clearing the signal. It is necessary to operate the signal button and the concerned route button simultaneously for taking OFF concerned signal.

1.4.2 DESCRIPTION OF ROUTE BUTTONS:

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L1/1- UN	White with black dot	Common route button for UP Home and calling-on signal set to overrun line and DN shunt signal of line No.1 (1 st loop).
2	L-1/2- UN	White	Common route button for UP and DN Home signals of line No. 1 set to Main line.
3	L-2 UN	White	Common route button for UP & DN Home, calling-on signals and DN shunt signal of Line no.2.

4	L3/1- UN	White with black dot	Common route button for UP & DN Home and calling-on signals set to sand hump and DN shunt signal of line No.3 (2 nd loop).
5	L-3/2- UN	White	Common route button for UP and DN Home signals of line No. 3 set to Main line.

1.5 CRANK HANDLE PUSH BUTTONS:

Sl no	CRANK HANDLE	CONTROL POINTS
1	CH-1	21 A/B, 23A/B
2	CH-2	22 A/B, 24A/B

1.6 MISCELLANEOUS PUSH BUTTONS:

SLNo	Button No	Colour	Description
1	SM's PANEL KEY	---	To lock the control panel to prevent unauthorized operation
2	GROUP TRANS PUSH BUTTON	WHITEWITH BLACK DOT	To be pressed to initiate crank handle operation along with concerned Crank Handle button.
3	GROUP RESTORE PUSH BUTTON	WHITEWITH BLACK DOT	To be pressed to withdraw/Normalize the control of crank handle operation along with concerned Crank Handle push button.
4	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate' NORMAL setting of point along with concerned point push button
5	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate' REVERSE' setting of point along with concerned point push button
6	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT	To be pressed for emergency Route Release
7	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for canceling a signal which is already taken 'OFF' or to release a route after passage of a train.
8	SIGNAL LAMPFAILURE /POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp/point failure
9	EMERGENCY POINT OPERATION	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone track circuit failed.
10	BUTTON HELD ACKNOWLEDGEMENT PUSH BUTTON	WHITE WITH RED DOT	To be pressed for silencing button held buzzer in case of any push button remains pressed after the button is released.
11	UP TRAIN ARRIVED ACK PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section LLGM-BLMK.
12	DN TRAIN ARRIVED ACK PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section RUL-LLGM.
13	CRANK HANDLE BUTTON	BLUE	CH-1 for points 21 A/B, 23 A/B. CH-2 for points 22 A/B, 24 A/B.

1.7 Power failure indication /Buzzer and power acknowledgement:

Para No.4.3 in general portion of this SWR to be follow.

1.7.1 LED SIGNAL FAILURE INDICATION (RED SIGNAL LAMP MUTING BUTTON: RED WITH WHITE DOT):

Whenever LED signal becomes blank, a miniature flashing red light indication appears along with an audio buzzer indicates signal lamp failure. The SM on duty shall press the signal lamp/point failure Ack. Button, there by the buzzer stops but the red indication lamp becomes steady which continues till either LED signal is replaced /rectified or signal assumes other aspect.

1.8 POINT FAILURE INDICATION (RED)/POINT FAILURE BUZZER/POINTS FAILURE MUTING BUTTON (RED WITH WHITE DOT):

Whenever there is failure of point due to non-setting, point failure indication flashing appears near the point button along with the point failure buzzer. The buzzer stops when the point failure acknowledgement button is pressed, but the flashing light above the ACK button shall continue to glow. The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light above the ACK button will disappear.

1.9 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.

2.0 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 concerned signal button. After this, first the emergency route release button (White with Red Dot) positioned on the top of the panel to be pressed after breaking seal and subsequently the concerned signal button is to be pressed. A white light will be lit indicating that the timer is working. After a lapse of 120 seconds the white light along with the yellow strip of light will disappear suggesting that 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 release by rectifying the fault. It is to be ensured that after every emergency route release operation S&T staff shall seal the emergency route release button.

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

3. 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. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned

point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

Each emergency point operation is recorded in emergency point operation counter by registering the next higher number. SM on duty shall ensure sealing of emergency point operation button by S&T staff after completion of every such operation.

4.0 BUTTON HELD ACKNOWLEDGEMENT (WHITE WITH RED DOT):

All push buttons are self restoring type. A button held acknowledgement push button along with a white light is positioned at the top of the panel. When any point, route or signal button gets stuck up 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 indication of each point; route or signal will continue to glow until the pressed button is normalized. SM on duty shall try to find out the pressed button for normalization or otherwise inform the S&T maintenance staff to rectify.

5.0 OVER LAP TIME RELEASE (WHITE LIGHT):

Separate indications (white light) for each overlap is provided near the starter signal to indicate the free or locked condition of the overlap. This indication light will glow when overlap is locked by any Home signal route and there will be no light when the overlap is free. The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time lapse of 120 sec the white flashing light will disappear indicating concerned over lap is free.

6.0 TRACK CIRCUIT:

Entire yard is track circuited from Home signal to Advanced starter on either direction. The following track circuits are provided in this yard. 1AT, 12AXT, 12AT, 21AT, 21BT, L₁T₁, L₁T₂, L₁T₃, L₂T₁, L₂T₂, L₂T₃, L₃T₁, L₃T₂, L₃T₃, 22AT, 22BT, 24BT, 11AT, 2T₁, 2T₂ and 2AT.

Indications for the above track circuits are available on Panel at SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

7. AXLE COUNTER:

Entire block section between LLGM-BLMK & LLGM-RUL is provided with digital axle counter.

For section LLGM-RUL:

A pair of digital axle counter is provided between LLGM-RUL one just beyond UP advanced starter signal no. 11 of LLGM and another beyond UP Home signal of RUL on 1T track circuit portion for last vehicle verification.

For section LLGM-BLMK:

A pair of digital axle counter is provided between LLGM-BLMK one just beyond DN advanced starter signal no. 12 of LLGM and another beyond DN Home signal of BLMK on 2T track circuit portion for last vehicle verification.

The position of the block section whether 'clear' or 'occupied' is reflected on the axle counter reset box provided in the Station Master's office which shows 'GREEN' when the block section

is clear and 'RED' when block section is occupied. Whenever a train enters into the block section "Block section clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication disappears and 'GREEN' indication appears. If after complete arrival of the train 'RED' indication does not change to 'GREEN' it should be assumed as Block instrument failure for the particular section and necessary action as per GR 14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, advanced starter signal cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.

A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting is to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section.

A pair of Analog axle counter is provided between UP Home signal S-1 and DN LSS S-12 one just beyond DN Advanced starter signal no. S-12 of LLGM and another just beyond UP Home signal no. S-1 of LLGM vide CRS observation no. 1760 dated 24.2.2015.

The position of Analog axle counter zone 12AXT whether clear or occupied is reflected on the panel as well as on the Analog axle counter reset box provided in SM's office which shows 'Green' when 12AXT is clear and 'Red' when occupied.

After clearance of 12AXT by train, the 'Red' indication disappears and 'Green' indication appears. If after complete arrival of train, 'Red' indication does not change to 'Green' for 12AXT zone, SM/LLGM will reset the same in the reset box kept with SM/LLGM after ensuring that last train passed the section has arrived at the receiving station completely with exchange of private number with SM/BLMK. Every reset operation will be incremented in the counter provided on reset box.

NOTE:

Before taking off reception and dispatch signals for UP or DN directions the SM on duty shall ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication.

8. STATION MASTER'S PANEL CONTROL KEY:

The panel is fitted with Station Master's key to prevent any unauthorized operation of the panel. The Station Master on duty is the only authorized person to operate the panel and the panel key must always remain in his custody vide SR 3.36.02 and 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 cancellation button without ASM's key also. However the provisions of SR 3.36.02 shall be followed while replacing signals also.

9. (A) CRANK HANDLES:

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 (Blue) and group button (White with Black dot) is provided at the top of the panel board. This button has two indications viz., WHITE and RED. The White 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.

For extracting CH key from RKT, SM has to press relevant crank handle push button and group TRANS button simultaneously. The white light besides the CH button starts flashing. After extraction of CH key from RKT at location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group cannot be operated from the panel. After completion of point operation, the CH key will be retransmitted to the station electrically by inserting the CH key in RKT provided in location box and turned. The white flashing indication appears on the Panel board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group restore button (White with Black dot).

Crank handle control for operation of points:

SL No	CRANK HANDLE	CONTROL POINTS
1	CH-1	21 A/B, 23 A/B
2	CH-2	22 A/B, 24 A/B

(B) EMERGENCY CRANK HANDLE OPERATION: Procedures are described in Para No.4.1.1 of general portion of SWR.

9.1 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 and route button. As soon as the required points are set to the required position, the concerned signal for the route will clear and a Yellow strip of light will appear on the route confirming that the route is set and locked. The signal 'OFF' indication will appear on the panel.

9.2 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 relevant point button and group button one at a time in the desired position or by operating signal and route button.

To take 'OFF' UP advanced starter signal no.11, UP LV section between LLGM-RUL should be clear and Line clear must be obtained from the concerned Block section in advance. Then the concerned advanced starter signal button shall be pressed along with the concerned route button for two or three seconds and released. This will clear the Up advanced starter signal and a yellow strip of light will appear on the panel.

To take 'OFF' DN advanced starter signal no.12, DN LV section between LLGM-BLMK should be clear and Line clear must be obtained from the concerned Block section in rear. Then the concerned advanced starter signal button shall be pressed along with the concerned route button for two or three seconds and released. This will clear the DN advanced starter signal and a yellow strip of light will appear on the panel.

To take 'OFF' the starter signal, the concerned signal button is pressed and at the same time common route button to be pressed for two or three seconds and released. This will clear the starter signal and a yellow strip of light will appear on the route from the concerned starter to advanced starter.

9.3 TAKING OFF CALLING ON SIGNAL:

Miniature color 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 and Miniature Yellow light when

taken "OFF". A calling-on signal, will be 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.

To take "OFF" UP Calling-on signal C-1, the train must come to a stop at the foot of the Home signal, occupying the track circuit 1AT in rear of the Home signal. When a train occupies 1AT track circuit a RED light strip will appear on the Panel. The SM shall initiate C-1 route by pressing C-1GN button and 12A-UN button. The SM shall also initiate S-3 or C-3 by pressing S-3GN/C-3GN button S-3 (A-C)/C-3(A-C) (Red with White dot) shall be pressed (as the case may be) simultaneously along with the concerned route button for 2 to 3 seconds and then released along with concerned route button. Then after lapse of 120 seconds time delay, Calling-on signal C-1 is taken off duly proving off aspect of S-3/C-3 signal due to presence of long tunnel in rear of S-3 signal.

To take off DN calling-on signal C-2, the train must come to a stop at the foot of the Home signal, occupying the track circuit 2AT in rear of the Home signal. After the route is set, the Calling On signal button C-2(A-C) (Red with White dot) shall be pressed (as the case may be) simultaneously along with the concerned route button for 2 to 3 seconds and then released. After a lapse of 120 seconds, the Calling-on signal clears i.e. a Yellow light glows at the concerned Calling-on signal on the panel.

10. RELEASE/ CANCELLATION OF ROUTE:

Normally when a train is received or dispatched on any route, the route illumination will disappear automatically after passage of the train suggesting that the route is released.

NOTE:-UP and DN advanced starters and Calling on signals are to be manually cancelled after the passage of the train to cancel the route.

11. REPLACEMENT OF SIGNALS TO ON:

Signals are replaced to 'ON' automatically by the occupation of the first track in advance of 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 signal cancellation button (RED) is to be pressed simultaneously.

12. INTERLOCKING OF SIGNALS/POINTS:

All running line points are fitted with point machines which have in built locking and are electrically detected by the relevant Home signals and starters.

12.1 Advanced starter signals are interlocked with respective Block instrument in LINE CLEAR position.

12.2 The Block instruments cannot be made to normal unless the respective Home is put back to 'ON' aspect and the respective block section monitored by axle counter is clear of trains.

12.3 Signals once taken OFF can be put back to ON in case of emergency by pressing the concerned signal button in conjunction with signal cancellation button even when the panel is locked up with Station Master's key.

13. PILOTING OF TRAINS IN TO THE STATION YARD:

Whenever Home signal becomes defective, trains will be piloted 'IN' in terms of SR 3.69.3(a) &(c). The SM on duty shall nominate a clear line and shall set the nominated route correctly from the panel or shall advise the TPM on duty at station to set the nominate route with the help of crank handle during failure of points. The TPM shall set the facing and trailing points

and clamp and padlock the same under the supervision of SM on duty at station in both the cases.

Then the SM on duty shall then hand over the written authority (T/369(3b)) to the TPM for “piloting IN” the train. While going towards home signal, the TPM shall check that the points have been correctly set, clamped and padlocked. After the train has been brought to a dead stop at the foot of the home signal the TPM shall hand over the PILOT memo to the Loco Pilot on board the engine and display proceed hand signal to pass the defective home signal.

NOTE:

1. The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for admission of a train.
2. The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.
3. The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

13.1 PILOTING OF TRAINS OUT OF STATION YARD:

When starter signal has become defective, the SM on duty shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the outgoing train with the help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under supervision of SM on duty in both the cases. He shall also advise the gateman to close the level crossing gate/gates on the route for dispatch of a train.

The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the train. Thereafter, he shall display proceed hand signal at the foot of the starter signal vide subsidiary rule 3.70.01.

In case advanced starter signal becomes defective BWM 3.33 will be followed.

NOTE:

- (1) The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for dispatching of a train.
- (2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.
- (3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

10. SHUNTING:

For shunting SH-4 is provided in the yard for shunting in DN direction. The particular route on which it is intended to do shunting is to be set by operating the desired points individually from the panel or by pressing the shunt signal button and required route button simultaneously for 2-3 seconds. When the route is set and locked correctly white strip of lights will appear on the route and concerned shunt signal shall display ‘OFF’ aspect.

11. VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAINS INTO THE 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 passage of any train or for any other movements.

The clearance of the route including overlap must be ensured by the Station Master on duty personally through Luminous indications of the track before any movement of trains are permitted on the concerned route subjected to the other conditions such as locking of points etc.

16. CRANK HANDLING EMERGENCY OPERATION OF POINTS:

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary to satisfy SM on duty that the said vehicle has cleared point zone track circuits by observing the track indications on either side of the cross over.

17. EMERGENCY OPERATIONS:

The following are the instructions for emergency operations.

17.1 CANCELLATION BUTTON AND COUNTERS:

17.1.1 For the purpose of the emergency operations there is an emergency Route cancellation button (provided at the top of the panel) and also there is a counter for counting emergency operations involving the concurrent operation of the emergency route cancellation button. The Station Master on duty must press the emergency route button along with concerned signal button for which emergency route releases is desired. A yellow indication will appear below the signal indicating that the timer has started operating and after lapse of 120 seconds the desired route will be released provided all other conditions are favorable for the route release.

17.1.2 The counter registers the number of such emergency operations performed for such emergency cancellation and the Station Master on duty shall specify the cause for such usage giving the particulars of cause and the time of operation as related to a particular train etc. in the train signal register. The detailed operation instructions are as follows:

17.2 EMERGENCY OPERATIONS CANCELLATION THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHAT EVER 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 ON position.
- b) Operation as detailed in Para 3.0 to be followed.

18.0 LOCKING OF RELAY ROOM:

The relay room shall be locked with two independent locks which can be opened only after both the locks opened with the respective keys. The key of one lock shall be kept with the Station Master on duty in his custody and the key of other lock with Maintainer. Whenever required for maintenance, the key in the custody of Station Master shall be given to the Maintainer. After completion of the work the Maintainer be properly recorded in relay room register maintained at the station and duly signed by the Station Master and the Maintainer concerned as per OM 13.16. In addition, the Station Master shall also observe SR 3.51.05.

19.0 MAINTANANCE OF S&T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

- 19.1 Regular maintenance of S&T installations and adherence to the schedules of maintenance is also mandatory. Schedules of testing of points, track circuits, point machines, level crossing gates, the associated interlocking apparatus i.e., cables and finally the interlocking functional tests is a must for the safe and satisfactory working of those installations at this Station.
- 19.2 The tests, checks and replacements etc. including overhauling shall confirm to the schedule of maintenance as indicated in the signal engineering manual as also in the current and extent instruction / circulars on the subject.

20. PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF A SIGNAL AND INTERLOCKING INSTALLATIONS:

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master on duty through a memo to the Sectional Maintainer and the Signal Engineer of the Section and others as per G& SR 3.51.04 and 3.68.04 and document all such transactions.

20.1 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

Before declaring a point as defective the setting of point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the Buttons the Panel in term of SR 3.68.04(c).

20.2 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 rectification. Thereafter the Station Master 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 gear in terms of SR 3.64.04 (c) and (d).

21. PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:

Whenever any normal maintenance or special works for heavy renewals etc., are involved, these works should be pre-planned by the signal & Telecommunication field staff and the Inspector of the section should give to the Station Master in writing "Advance Intimation" about this planned work in terms of GR 15.08.01.

22. EMERGENCIES:

Notwithstanding anything contained in the aforesaid Paras, when equipment is found to be defective and unsafe for passage of trains, the Signal and Telecom. Staff shall at once suspend the working of such equipment and the associated installation and issue a "Suspension Memo" explaining the seriousness of the defect or damage to the interlocking installation to the Station Master and obtain SM's acknowledgement. After this, the usual practice of issuing disconnection memo and reconnection memo can follow and the Station Master must promptly act on such messages and take adequate precautions treating the S&T installations as defective and pass trains over the affected interlocking gears according to extant instructions as contain in GR & SR 3.77.

23.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF CRANK HANDLE:

- 23.1 When crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back to RKT.
- 23.2 The cases of failure of Motor Operated Points should be promptly reported to the Concerned Signal maintainer /Signal Inspector for immediate rectification.
- 23.3 Whenever an emergency Crank handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty; will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the concerned Points will be treated as defective till the Emergency Crank Handle is returned back to the Station Master on duty.
- 23.4 Before parting with the emergency crank handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure Signals are put back to ON position. The Points for the affected lines shall be treated as Non-interlocked. The Station Master on duty is responsible for introduction of Non-interlocked working and the trains will be piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.
- 23.5 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded.

24.0 SUSPENSION OF LAST STOP SIGNALS:

- 24.1 When the Block Instrument is suspended with its handle in 'TRAIN GOING TO' position for whatever reason, the concerned Last Stop Signals controlled by the Block Instrument must be treated as suspended and trains shall be worked on PLCT.
- 24.2 The Station Master on duty shall not grant LINE CLEAR unless he has ensured that the lamps of fixed signals which apply to the trains are glowing. If the Signal Lights are not glowing the Station Master on duty shall before giving LINE CLEAR shall initiate action in accordance with the procedure prescribed in GR 3.68 to 3.71 and relevant SR's vide GR 3.49(4).

25. NORMALISATION OF THE BLOCK SECTION AXLE COUNTER AND BLOCK WORKING BY RESETTING FEATURE:

- 25.1 Axle counters are provided between BLMK-LLGM and RUL-LLGM Single line section for Block proving.
- 25.2 The occupation and clearance of the axle counter section are indicated on panel by 'Red' and 'Green' lights.

- 25.3 If any Block proving Axle counter section fails, the Last stop signal at the rear station cannot be taken 'OFF' and Block instrument at advance station cannot be turned to "Line Closed" position after arrival of a train and in such case, resetting of last vehicle checking device is to be resorted to in either section.
- 25.4 Even after completion of reset operation, LVCD Axle counter will show clear only if next train is piloted out.
- 25.5 No train should be allowed on signal to leave a station in any particular direction unless:-
Track clear indication is available for the relevant axle counter track circuited portion and Last stop signal is not taken 'OFF'.
- 25.6 Reset arrangements are provided in the Reset Box in the SM's office for Sections BLMK-LLGM and RUL-LLGM. The key for the Reset Box should normally be kept with SM. And for every such operation of the resetting the Axle Counter, the SM on duty shall record giving details of the date of use, train number, time, and number registered on the counter and reasons for resetting and initial each such entry.

26.0 RESETTING OF LVV DIGITAL AXLE COUNTER:

- i) Whenever after complete arrival of train, the LVV axle counter continue to show 'RED' on the panel board, the on duty SS/SM at both ends of the section shall resort to reset the axle counter. For this purpose SS/SM at receiving end shall first verify that Block section is clear of trains. If the failure has occurred after arrival of train, SS/SM shall obtain signature from the guard of stopping train on the train intact register (vide GR &SR 4.17, 4.17.01) or by exchanging signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting the LVV axle counter. SS/SM of receiving end shall inform the failure of axle counter to on duty SS/SM of dispatching end for UP/DN section.
- ii) SS/SM at receiving end then sends an operating person to verify that the last vehicle is clear of Block section.
- iii) On exchanging private number the SS/SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation LVV axle counter will reset and associated counter will change to next higher number at both ends.
- iv) SS/SM at both ends shall record the counter number so changed due to reset of axle counter in the reset register and also in the Train signal register mentioning the purpose of reset. After the reset operation is completed preparatory reset indication will appear on reset box at both ends which suggests that the reset operation is successfully completed and the first train has to be piloted out. On arrival of the piloted train the axle counter track cct zone of the section shows clear and normal working shall be resumed. Even after arrival of piloted train, LVV axle counter zone does not show clear indication, S&T staff to be informed for getting rectified the failure of axle counter.
- v) It is mandatory that every reset operation of LVV axle counter first train after reset process shall have to be piloted out.

27.0 WORKING OF AUTOMATIC FIRE DETECTION AND ALARM SYSTEM:

- In case of any alarm-Zone number on the LCD display can be seen.
- Note down the zone No. and panel display name, by referring display chart.
- Then open the key pad and press the "OFF" button and enter the code 1111 (1 digit four times).
- Automatically it will get reset.
- Once you find the zone number rush to that particular area where the detector gives alarm.
- The movement the detection detects any smoke particles, the RED LED will blink along with the alarm.
- Once you reach the area where the detector is giving the alarm, check whether the alarm is due to the fire or for any other reason.
- To alert the people in case of emergency press "*" sign of the n̄e which is present inside the key pad together for few seconds. This will enable you to hear the panel alarm.
- To reset the panel press "OFF" button and enter the code 1111 (1 digit four times).
- If the power fails on this will enable us to see the red indicator on the panel.
- In case of failure in power and if the battery is fully charged, the panel can function effectively as long as the charge in the battery is present.

AUTO DIALLING:

If you hear alarm from the panel, this system will dial the Railway Auto telephones as assigned to the all concerned.

APPENDIX 'C'

ANTI COLLISION DEVICE [RAKSHA KAVACH]:

-NIL-

APPENDIX 'D'
DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT

The following staff are concerned with the movement of the trains whose duties are given below:

1. STATION MASTER (IN CHARGE):

- i) He is responsible for trains passing during his shift.
- ii) He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him.
- iii) He shall keep all Rule books, Registers, Files and documents neat and up to date.
- iv) He shall ensure that all equipment, apparatus, and instruments including signaling and interlocking gears and fittings are kept clean and oiled by S&T officials.
- v) His special attention is drawn to Chapter-II of G&SR and GR 5.01 to 5.08 with relevant SRs and O.M. Chapter-2. He shall follow the instructions laid down in SR.3.68.01 (c) and (d) and SR 14.07.01 and B.W.M.2.09 (e).
- vi) He shall promptly attend to accidents and report them.
- vii) He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

2. STATION MASTER:

- i) He is responsible for trains passing during his shift.
- ii) He shall promptly bring to the notice of SM incharge all irregularities and accidents in course of his shift duties.
- iii) During the absence of SM I/C, the duties of the Station Master will devolve on him.
- iv) He shall follow SR 3.68.01(c) and (d) SR 14.07.I and OM Chapter-2.
- v) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.
- vi) As an assistant to SM I/C, he shall carry out the instructions given from time to time.

3. TRAFFIC POINTS MAN :

- i. He shall work under the orders SM on duty.
- ii. He shall couple and uncouple vehicles under the supervision of SM.
- iii. He shall watch and guard the packages and other Railway property lying in the Station premises.
- iv. He shall report any irregularities coming to his notice.
- v. He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.
- vi. He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.
- vii. He shall follow OM Chapter-2.

N.B: All staff while on duty should be in proper uniform and follow the rosters issued by Sr.DPO/WAT/E.Co.Rly. from time to time.

APPENDIX 'E'**ESSENTIAL EQUIPMENT:**

A list of essential equipment's is given below which shall be maintained in good Working order.

Sl. No	Description	Quantity
i)	Detonators	20
ii)	LED based Tri Colour flashing torch.	3(1 Spare)
iii)	Hand Signal Flags	3(1 Spare)
iv)	Safety chains with Pad locks	6
v)	Clamps with Padlocks	6
vi)	Skids	6
vii)	Wedges	2
viii)	Fire & Sand buckets	6
ix)	Fire Extinguishers	2
x)	Line blocking collars	6
xi)	Motor trolley on line board	2
xii)	Block suspension board	2

APPENDIX 'F'

WORKING OF D.K.STATIONS, HALTS, IBS AND OUTLYING SIDINGS:

--NIL--