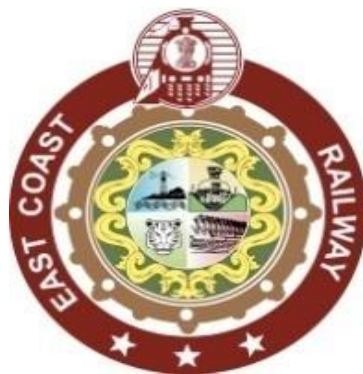




EAST COAST RAILWAY WALTAIR DIVISION



STATION WORKING RULES RAULI [RUL] STATION

EAST COAST RAILWAY

WALTAIR DIVISION

INDEX OF RAULI STATION

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EAST COAST RAILWAY

WALT AIR DIVISION

INDEX OF CORRECTION SLIPS

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**EAST COAST RAILWAY
WALTAIR DIVISION**

STATION WORKING RULES OF RAULI [RUL] STATION (B.G)

Date of Issue: _____

Date brought into Force: _____

NO:WTF/5/SWR/RUL

NOTE: The Station Working Rules must be read in conjunction with General and subsidiary Rules, Operating Manual and Block Working Manual. These rules do not in any way supersede any rules in the above Rule Books.

(1) STATION WORKING RULE DIAGRAM

- i) Station working diagram No: SI/WRD/23112 'A'
- ii) CSTE/E.Co.Rly/DRG No. SI/WRD/23112 'A'
- iii) Date up to which corrected:-

(2) DESCRIPTION OF THE STATION:

2.1 a) GENERAL (LOCATION):

i)	Name of the Station	RAULI (RUL)
ii)	Class of Station	'B'
iii)	Section	KORAPUT – RAYAGADA
iv)	Double/Single line	Single Line
v)	Route	'D' route
vi)	Electrified/Non electrified	Electrified
vii)	Gauge BG/MG/NG	BG
viii)	Railway	East Coast Railway
ix)	Situated at KM	KM 95.500
x)	From	Koraput
xi)	No. of Cabins	Centrally Operated Panel Board.
xii)	Standard of Interlocking	Standard II (R)

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

	Adjacent Block Station	Distance	Direction
A)	LLGM	16.500 KM	RGDA end
	TKRI	12.435 KM	KRPU end
B)	Provision of IBS	Nil	
C)	Automatic Signals	Nil	
D)	DK Station & Out Lying Siding	Nil	

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

Between station	The point from which Block section commences	The point at which Block section ends
RUL-LLGM	Down Advanced Starter No.12 of Rauli Station	Up Advanced Starter No.11 of LLGM Station
RUL-TKRI	UP Advanced Starter No.11 of RUL Station	DN Advanced Starter No.30 of TKRI Station.

2.4 GRADIENTS:**a) FROM THE CENTRE OF STATION BUILDING TOWARDS TKRI:**

CHAINAGE IN MTRS FROM CSB		STRECH IN MTRS	GRADE
FROM	TO		
00.000	725.00	725	1 in 400 Raising
725.00	5450.00	4725	1 in 100(c) Raising
5450	Into Section	--	1 in 200 Raising

b) FROM THE CENTRE OF STATION BUILDING TOWARDS LLGM:

CHAINAGE IN MTRS FROM CSB		STRECH	GRADE
FROM	TO	CH	
00.000	475.00	475	1 in 400 Falling
475.00	8000.00	7525	1 in 100(c) Falling
8000.00	Into Section	--	1 in 250 Falling

2.5 LAYOUT:**(A) Running lines in the main yard**

SL. No.	Name of the line	Electrified/Non Electrified.	Platforms /length
1	Line no. 1(1 ST Loop)	Electrified	Rail level (244x6.4)
2	Line No.2(Main Line)	Electrified	---
3	Line no. 3(2 ND Loop)	Electrified	

(B) Sidings: NIL**2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT AND HOLDING CAPACITY IN CSL:**

SL NO.	Running Lines	Name of the Line	CSL in Mts.	Direction of Movement
1	Line No.1	1 st loop	741(STR-STR)	Trains coming from TKRI and proceeding towards LLGM are DN trains & trains coming from LLGM and proceeding towards TKRI are UP trains.
2	Line No.2	Main Line	731(STR-STR)	
3	Line No.3	2 nd Loop	732(STR-STR)	

2.5.2 NON-RUNNING LINES:**-NIL-****2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:****(A) SPECIAL RESTRICTIONS [WRD Note No.9]:**

- (i) 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) For retaining gradient steeper than 1 in 400 (up to 1 in 260) within station yard. Correction slip-2006 of SOD (Revised 2004) Chapter-2, Para-2, Note (e).
 - (e) For above purpose, a station yard means-
 - (1) Station Yard will be taken to extend-
 - (i) On single line to a distance of 50 metres beyond stock rail joint of outer most points at either end of the station.
 - (2) There must be no change of grades within 30 metres of any points or crossings.

- (iii) 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:

- (i) UP Adv. Starter signal No.11 and DN Adv. Starter signal No.12 placed at less than 120M from outer most trailing point.
- (ii) Motor trollies shall not be allowed on “Following line clear” [SR15.25.03 (xiii)].
- (iii) Material trollies shall not be allowed in pushing into either end of the block section.

2.6. LEVEL CROSSINGS: NIL

(3) SYSTEM AND MEANS OF WORKING:

System of working in force	:	Absolute block system
Double Line / Single Line	:	Single Line
Block instruments	:	Token less block instruments
Co-operative/non-cooperative	:	Co-operative
Provision of Block telephone	:	Attached with block instruments.
Custody of keys of Block Instruments.	:	SM is responsible for operation of the Block instruments. The Station Master on duty is the only authorized person to operate the instruments and their keys shall be in the personal custody vide GR 5.08 and 14.12(a). Block instrument is provided with double locking. One key will be with SM and other key will be with S&T maintainer.

(4) SYSTEM OF SIGNALLING AND INTERLOCKING:

4.1

1.	Standard of Interlocking	Standard II (R)
2.	Type of signalling.	Multiple aspect colour light signals.(MACLS)
3.	Mode of the operating the signals.	Penal Interlocking
4.	Provision of calling-on signals.	<p>Calling-on signals are provided below Home signal (i.e. in both UP & DN lines) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b).</p> <p>To take off Calling-on signal the train must come to stop at the foot of the home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the Panel. The particular route on which the train is intended to be received shall be set by selecting and setting desired route through Panel by SS/SM on duty. After a lapse of 60 seconds, the Calling-on signal clears i.e. white light glows at the concerned Calling-on signal on the Panel.</p> <p>NOTE: SS/SM on duty to ensure that no through signals are given while receiving a train on Calling-on.</p>
5.	Provision of shunt signals	Shunt back signal SH-3 is provided towards RGDA end and SH-4 is provided at KRPU end for shunting purpose.
6.	Emergency cross over	NIL
7.	Track circuits	Entire yard is track circuited from Home signal to Advanced starter on either direction. The following track

		circuits are provided in this yard. L1T1,L2 T1, L1T2, L2T2, L1T3, L2T3, L3T1, L3T2,L3T3,1AT,1T,12AT,21T,23BT,24BT,22T,11AT,2T & 2AT.
8.	Axle counters	<p>Digital axle counter (SSDAC) for last vehicle verification between RUL-LLGM and RUL-TKRI Block sections.</p> <p><u>For section RUL-LLGM :</u> A pair of Digital axle counter is provided between RUL-LLGM one at just beyond DN advanced starter signal No.12 of RUL and another on 2T2 track circuit portion of LLGM for last vehicle verification.</p> <p><u>For section RUL-TKRI :</u> A pair of Digital axle counter is provided between RUL-TKRI one at just beyond UP advance starter signal No. 11 of RUL and another on 1T track circuit portion of TKRI for last vehicle verification.</p> <p>The position of the Block section whether clear or occupied is reflected on the axle counter reset box provided in the SM's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters in to 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 will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the '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.</p> <p>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 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.</p> <p><u>NOTE:</u> Before taking off reception and dispatch signals for UP or down directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/ Axle counter indication.</p>
9.	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

		<p>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 chapter-2, para-2.18 & 2.19 and Para No.4.7 of Appendix-‘B’.</p> <p>CH1 -- 21A/B, 23A/B CH2 -- 22A/B, 24A/B,</p>
10	Emergency Point operation	<p>Emergency point operation facility is provided to operate the point from the Panel in case of failure of point controlling track circuit/Axle Counter. For Emergency Point operation procedure laid down in Para No.5.2 of Appendix-‘B’ shall be followed. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.</p>
11	Block Instruments	<p>Daido type single line Token less Block Instruments are provided for block section RUL-LLGM & RUL-TKRI. Telephone attached to Block instruments connecting the adjoining block stations concerned.</p> <p>‘ON’ aspect of UP/DN Home & UP/DN Adv.str signals are proved in respective block instruments.</p> <p>Custody of block instrument keys: One key will be with SM on duty and the other with S&T maintainer.</p>
12	Emergency route release indication	<p>This panel interlocking is based on the principle of ‘DEAD APPROCH 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 is 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 DN) 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 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.</p>

13	Emergency crank handle release	Emergency crank handle release operation facility is provided to operate the point by using the crank handle in case of Route locked condition. For Emergency crank handle operation the procedure laid down in Para No.16 of Appendix-'B' shall be followed. Each operation of emergency crank handle operation shall be recorded in the station diary and in the register meant for this purpose.
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4.2 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF:-

Custody of Relay room key and procedure for its handover and taking over between SM and S&T staff has to follow the procedure as per JPO issued by COM and CSTE vide No. JPO/02/2012 dated 29.08.2012.

As per JPO/02/2012, 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 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 lock shall be provided on the door of Relay room by the Signal Maintainer/Signal supervisor of the 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 schedule 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 pertaining lock to S&T staff, after the entry is made in 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 closed 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 Key register.

When the Key of Operating Lock is returned by S&T staff to SM on duty, he shall 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 room, 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 registers 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 table testing, maintenance work inside relay room by Electrical and Engineering staff, during failures, E.I resetting

and inspection by Divisional and Headquarter officials, works required by 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 signalling gears under the charge of open line.

In case of emergencies such as fire, flood, earth quake 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 Maintainer/Supervisors and SS/SM on duty shall jointly decide the need for opening the Relay room and communicate later 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 that Relay room opening by unauthorized means or by unauthorized person or by any group-'D' staff, the signalling 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 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.

4.3 POWER SUPPLY:

- i) The station works on 230V single phase power supply. The normal power supply is from the auxiliary transformer connected to OHE traction distribution.
- ii) Standby power supply: 2 DG sets.
- iii) An Auto changeover switch is provided in the Station Master's Office with the two power supplies viz., AT and DG set for changing the switch position to the required supply manually. SM on duty shall start DG in case of failure of AT supply.
- iv) SM on duty shall maintain Log register for fuel consumption record of DG system.
- v) 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:-

- a) 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.
- b) 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.
- c) 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.
- d) Any of the Module fails, which calls for "Call S&T".
- e) Whenever there is a failure of power supply of AT, the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on AT and make an entry in station diary duly initiating action for rectification of failure, if any.

(5) TELECOMMUNICATIONS:

- 1) Telephone attached to Single Line Token Less Block instruments connected to adjacent block stations.
- 2) Hot line communication is provided to adjacent block stations on either side.
- 3) Telephone is provided to UP & DN CH locations.
- 4) The station is connected to KRPU-RGDA control circuit.
- 5) The station is connected to KRPU-RGDA Traction Power Control circuit.
- 6) 25 Watts VHF Set is provided.

(6) SYSTEM OF TRAIN WORKING:**6.1 DUTIES OF TRAIN WORKING STAFF:**

The duties of train working operating staff are detailed in the Appendix D of this SWR.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

Following is the complement of operating staff at RUL

Staff in Each Shift	
SS/SM	1
TPM 'A'/TPM 'B'	1

Note: Staff deployed at the station shall follow the rosters issued by DPO/WAT from time to time.

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF THE LINE AND ZONES OF RESPONSIBILITY:

Station Master is solely responsible to ascertain clearance of line from Home up to Adv. Starter on concerned lines by indication on panel.

Sufficient Private Number books and identification number sheets in sealed covers shall always be kept in stock by SM under lock and key by maintaining register for this purpose.

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 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 CONDITIONS FOR GRANTING LINE CLEAR:

- a) The trains are worked under Absolute block system of working with Single line between RUL-TKRI and RUL-LLGM and MACLS signaling vide GR 8.03.
- b) Adequate distances for reception of trains at RUL.

CLEARING OF ADEQUATE DISTANCE				
LINE NO.	UP TRANS		DOWN TRAINS	
	FROM	TO	FROM	TO
LINE NO. 1 (1 st Loop)	STR No. 5.	The end of Sand Hump Or Advanced starter Signal No. 11	STR No. 10	Adv. starter Signal No. 12
LINE NO. 2 (Main Line)	Starter Signal No. 7.	Advanced starter Signal No. 11	Starter Signal No. 8.	Advanced starter Signal No. 12
LINE NO. 3 (2 nd Loop)	Starter No. 9.	Advanced starter Signal No. 11	Starter Signal No. 6	End of Sand hump or Advanced starter Signal No. 12

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

--NIL--

6.2.1.1 SETTING OF POINTS AGAINST BLOCK 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 etc., the points in rear should be immediately set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line vide GR 3.38(2). Lever/block collars placed on the concerned lever/button of the blocked line vide SR 5.04.01 and SR 3.51.06 shall be followed.

Safety Point Alarm Unit (SPAU):

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

1. On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line.
2. In case of 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.
3. 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.
4. On setting the points against the occupied line, the RED indication will disappear.
5. 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 to take necessary action.

If all the lines of a station happen to be blocked, when line clear has been granted to a train, the points should be set for the line occupied by a stabled load or a goods train in that order so that, in case of mishap, the chance of causalities are minimized [Refer SR.3.51.06 (b)]. In case of all the lines are occupied by Coaching train, points should be set for a loop line to negotiate with the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities.

6.2.1.2 RECEPTION OF TRAIN ON BLOCKED LINE:-

Whenever trains are to be admitted on blocked line it is necessary that the train is Piloted in by a written authority T/509 given by SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. Calling-On signal may be taken off. (Refer GR 5.09 & SRs thereto.)

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE: -Nil-

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE: -Nil-**6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STATER SIGNAL: -Nil-****6.2.1.6 ANY OTHER SPECIAL CONDITIONS SHOULD BE MENTIONED GIVING REFERENCE TO THE G&SR:-**

-Nil-

6.3 CONDITIONS FOR TAKING ‘OFF’ APPROACH SIGNALS:

Conditions for taking ‘OFF’ approach signals are governed by GR.3.40 (1) (b), 3.40(2) (b), 3.40(3) (b) and relevant SR’s thereto.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO ‘ON’:

Station Master should ensure that the signal is put back to ‘ON’ after passage of train as per GR 3.36(2) (b).

6.4 SIMULTANEOUS RECEPTION/DESPATCH, CROSSING AND PRECEDENCE OF TRAINS:

According to the existing inter locking at this station the simultaneous reception and dispatch of trains are permitted as stipulated below.

Reception of an UP train on line No. 1 (1 st loop) setting over lap to sand hump.	A N D	Reception of DN train on line No. 3 setting line to sand hump. OR Dispatch of another UP train from Line No. 2 or 3.
Reception of a DN train on line No. 3 (2nd loop) setting line to sand hump.		Dispatch of another DN train from Line No. 1 or 2. OR Reception of UP train on Line no. 1 setting line to sand hump.

6.5 COMPLETE ARRIVAL OF TRAINS:

Entire Block Section between RUL-TKRI and RUL-LLGM are provided with Digital Axle counters.

For section: RUL-TKRI

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

For section: RUL-LLGM:

A pair of digital axle counter is provided between RUL-LLGM one just beyond DN advanced starter signal no. 12 of RUL and another beyond DN Home signal 2T2 track circuit of LLGM 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.

If a train passes through the station without confirming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched.

In case of failure of Axle counter the SM 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 SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide GR 4.17 (1) that the train had arrived completely. In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until complete arrival Certificate is received from the station in advance supported by a private number.

Train passing on adjacent line shall be stopped and Guard & Loco pilot shall be issued with caution order to proceed cautiously and stop sort of any obstruction as per SR.4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03 (b) (vi).

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:

Dispatch of trains is governed by the provisions of GR. 3.42 and SRs 3.36 .04(b), 3.42.04; 3.42.01(a) and BWM 2.07(5)(a)(e)(f) & (g) and other relevant provisions of G & SR, BWM and SWR.

a) DESPATCH OF TRAINS FROM NON-SIGNALLED LINE:

Dispatch of trains from non-signalled line is governed by the provision of GR 5.11 and SR 5.11.01.

b) 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 LP in terms of GR 4.09 and SR thereto.

6.7 TRAINS RUNNING THROUGH:

In addition to the procedure detailed in paras "Reception and Dispatch of trains" rules laid down in GR 3.40, 4.17, 4.42 with relevant SRs 3.42.02 (a) (iii) and other relevant provisions of G&SR, BWM, OM shall be followed. (Refer GR 4.1, 4.11(2)).

6.8 WORKING IN CASE OF FAILURE:

Track Circuits	In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.
Axle Counters	If the axle counter fails between the block sections, resetting procedure should be adopted as per Para 26.0 of SWR (APP-B). If the axle counter indication does not appear 'GREEN' & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for their rectification.
Block Instruments	In the event of failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR (Refer SR 6.02.04 & 6.02.06).
Reception of a train on obstructed line	Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2)(a) or if calling signal cannot be taken off, trains are to be piloted as per GR 5.09(2)(C)(3)(4) (5) and SR 5.09.01.
Reception of a train on non-signaled line	NIL
Defective Signals	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c) shall be followed. 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 laid down in GR and the relevant SRs (Refer 3.57, 3.69, 3.49 (4), 3.68 to 3.77).
Defective Interlocking	When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping, padlocking of points for admission of train. [Refer SR 3.69.03(C) & 3.69.01].
Defective/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 2.19.
Defective IBS signal	NIL

Defective Points	Procedure prescribed in SR 3.68.01(e) and relevant SRs shall be followed.
Defective Axle Counters	Detailed procedure laid down in GR 3.68.01 (e) shall be followed.
Failure of Signals and Interlocking	SS/SM on duty shall be responsible and personally supervise the setting, clamping and pad locking of all required facing and trailing points for admission or dispatch of trains and procedure laid in GR 3.68 to 3.71 and SRs there to shall be followed.

6.9 PROVISIONS FOR WORKING OF MOTOR TROLRIES / MATERIAL TROLRIES:

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

Note: Trolleys, which are to be run on track circuited area shall be insulated as per SR 15.20.02.

(7) BLOCKING OF THE LINE:

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. 'Line Block' is to be activated on Panel by SM on duty. 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. [SR 3.36.03(d), 3.51.06, GR 5.23 and SR 5.23.01 shall be followed].

(8) SHUNTING:

8.1 GENERAL PRECAUTIONS :

The rules laid down in 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, 5.15(1)(B) and 5.1(2)(B) shall be followed.

All shunt movements shall be supervised by Guard/SM on duty or by a competent Railway servant deputed by SM on duty as the case may be. The authority for shunting shall be the taken off of shunt Signal or on form T/806. The limit up to which shunting is permitted and the line involved must write on the shunting authority

8.2 SHUNTING IN THE FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is strictly prohibited.

8.3 PROHIBITION OF SHUNTING - SPECIAL FEATURES:

- Hand shunting is prohibited at both ends of the yard.
- Fly shunting is prohibited at both ends of the yard.

8.4 SHUNTING ON SINGLE LINE:

- Within Station section: Governed by GR 8.10.
- Within last stop signal and opposite first stop signal: Governed by GR 8.12.
- 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.
- During failure of block instrument: Block track messages shall be exchanged between station master at either end of such section which is intended to obstructed supported by private number. Both the station masters shall fix line block labels on block instruments and shall continue shunting.

8.5 SHUNTING ON DOUBL LINE: Not Applicable

8.6 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD / GOODS SIDING:

-NIL-

8.6.1 SHUNTING OUTSIDE STATION SECTION:

- a. Shunting shall not be permitted in block section unless it is blocked back.
- b. When line clear is been given, no shunting shall be permitted in the block section rear vide GR. 8.05[2].
- c. The line outside the station section and up to the Home Signal shall not be obstructed unless a Railway servant specially appointed in his behalf by the SS/SM who is in-charge of the operations, and unless;
- d. The block section into which the shunting is to take place is clear of an approaching train and all relevant and necessary signals are kept "ON" position.

8.6.2 SHUNTING WITHIN STATION SECTION:

If the necessary signals are kept at "ON", shunting may be carried within the station section vide GR 8.05 [2].

(9) ABNORMAL CONDITION:-

a) RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITIONS:

- i) During partial interruption/failure of electrical communication instruments SR 6.02.06 shall be followed.
- ii) The authority to proceed in the occupied block section in case of obstruction of line or accident etc is T/A-602 and SR 6.02.05 shall be followed.
- iii) Trains delayed in the block section: GR 6.04 and relevant SRs shall be followed.
- iv) Failure/ passing of IBS signed in ON position: Nil.
- v) Failure of Axle Counter Block/BPAC : As per Appendix-'B'.
- vi) Failure of MTRC: Nil.

b) PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE:-

- (i) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points is mentioned in Appendix-'B' of this SWR.
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 TRACK CIRCUIT/AXLE COUNTER FAILURE AND EMERGENCY ROUTE RELEASE:

The detailed Procedure for emergency operation of points in case of failure of Point zone Track Circuit is mentioned in Appendix-'B' of this SWR.

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 IS INITIATED:-

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

d) REPORTING OF FAILURE OF POINTS, TRACK CIRCUITS/AXLE COUNTER AND INTERLOCKING:-

- (i) 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.
- (ii) The entries in failure register to be done with message to the section controller.

9.1 TOTAL FAILURE OF COMMUNICATION:

- a) In the event of total failure of communication on Single Line, trains shall run on the authority to proceed without line clear in terms of SR 6.02.04.
- b) During partial interruption of communication the rules laid in SR 6.02.06 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

--NIL--

9.3 DESPATCH 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 6.02.04.
- 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 signals lights of repeater signal No.5 for UP direction and signal No.10 for DN direction of Line No.1 are earmarked 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:

- (i) During thick, foggy or tempestuous weather impairing visibility of the Signals the SM on duty shall initiate action to depute Fog signal man with detonators vide GR 3.61 in order to indicate the location of the station approach signals to the Loco pilot of an approaching train.
- (ii) The fog signal man shall proceed to the 1st stop signal of the station and place one detonator at a distance of 270M from the 1st approaching stop signal towards the approaching train and another detonator at a distance of 10M from the 1st one and he shall stand 45M away from the detonator.
- (iii) The fog signal man shall be permanent employee, no temporary or casual labour shall be deployed as fog signal man.
- (iv) The assurance of fog signal man available at the station (including engineering branch if available) shall be obtained in the fog signal register every year in the month of "OCTOBER".
- (v) Details of supply of detonators available stock, use and testing etc., shall be maintained in the fog signal register of the station as per GR 3.64 and SRs there to.

Note: Names of fog signal man available at the station shall be exhibited in SM's office.

LIST OF APPENDICES:

APPENDIX-A	:	WORKING OF LEVEL CROSSING GATES
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	:	LIST OF ESSENTIAL EQUIPMENT PROVIDED AT THE STATION.
APPENDIX-F	:	RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS.
APPENDIX-G	:	RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

APPENDIX 'A'

WORKING OF LEVEL CROSSING GATES

--NIL--

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

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

1.1 DESCRIIPTION 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 'white' 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.1 at LLGM end.
2	22 A/B	Black	Cross over point between Main line and line no.3 at

			TKRI end.
3	23 A/B	Black	Cross over point between Main Line and line no.3 at LLGM end.
4	24A/B	Black	Cross-over Point between Main line and line no.1 at TKRI 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 coloured push buttons on the panel near that stop signals on the panel. These are operated in conjunction with Route button (White coloured) 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 for Line No.1 to 3.
2	S-1GN	Red	Button for UP Home signal for Line No.1 to 3.
3	C-2	Red with white dot	Button for DN calling 'ON' signal for Line No.1to 3.
4	S-2 GN	Red	Button for DN Home signal for Line No.1to 3
5	SH-3 GN	Yellow	Button for Shunt Signal for line no.1to 3.
6	SH-4 GN	Yellow	Button for Shunt Signal for Line No.1 to 3.
7	S-5 GN	Red	Button for UP L-1 starter.
8	S-6 GN	Red	Button for DN L-3 starter.
9	S-7 GN	Red	Button for UP L-2 (Main Line) starter.
10	S-8 GN	Red	Button for DN L-2 (Main Line) starter.
11	S-9 GN	Red	Button for UP L-3 starter.
12	S-10 GN	Red	Button for DN L-1 starter.
13	S-11	Red	Button for UP Advanced starter.
14	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 side of the track. The ON aspect indications of stop signals are RED and OFF aspect indications 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 signal, UP & DN Calling on signal and UP & DN shunt signal of line No.1 (1 st loop).
2	L1/2 -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 and DN Home signals, Calling-On signals and shunt signals of line No. 2.
4	L3/1- UN	White with black dot.	Common route button for DN Home signal, UP & DN calling on signal and UP & DN shunt signal of line No.3.
5	L3/2- UN	White with black dot.	Common route button for UP & DN Home signal for line No.3 set to Main line.
6	12/A-UN	White	Route button for DN Starter No.6, 8 & 10.
7	12/UN	White	Route button for DN advance Starter.
8	11/UN	White	Route button for UP advance Starter.
9	11/A-UN	White	Route button for UP Starter No.5, 7 & 9.

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:

SL NO.	Button No	Colour	Description
1	SM's EMERGENCY POINT OPERATION KEY	---	This key is to be inserted and operated in the event of Emergency point operation.
2	SM's PANEL KEY	---	To lock the control panel to prevent unauthorized operation.
3	GROUP TRANS PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to initiate slot for crank handle operation along with concerned crank handle.
4	GROUP RESTORE PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to withdraw/Normalize the control of slot of crank handle operation along with concerned crank handle.
5	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate NORMAL setting of point along with concerned point push button.
6	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate REVERSE setting of point along with concerned pint push button.
7	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT	To be pressed for emergency route release.
8	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for cancelling a signal which is already taken OFF or to release a route after passage of a train.
9	SIGNAL/POINT FAILURE ACK.	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp/point failure.

10	EMERGENCY POINT OPERATION	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone track circuit failed.
11	BUTTON HELD ACK. 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 releases.
12	UP TRAIN ARRIVED ACK. PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section LLGM-RUL.
13	DN TRAIN ARRIVED ACK. PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section TKRI-RUL.
14	CH-1	Blue	Point No.21 A/B, 23 A/B
15	CH-2	Blue	Point No.22 A/B, 24 A/B

1.7 **Power failure indication /Buzzer and power acknowledgement:-**

[A] POWER SUPPLY:

- The station works on 230V single phase power supply. The normal power supply is from the auxiliary transformer connected to OHE traction distribution.
- Standby power supply: 2 DG sets.
- An Auto changeover switch is provided in the Station Master's Office with the two power supplies viz., AT and DG set for changing the switch position to the required supply manually. SM on duty shall start DG in case of failure of AT supply.
- SM on duty shall maintain Log register for fuel consumption record of DG system.
- 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:-

- 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.
- 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.
- 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.
- Any of the Module fails, which calls for "Call S&T".
- Whenever there is a failure of power supply of AT, the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on AT and make an entry in station diary duly initiating action for rectification of failure, if any.

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 white 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 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.

L1T1,L2 T1, L1T2, L2T2, L1T3, L2T3, L3T1, L3T2,L3T3,1AT,1T,12AT,21T,23BT,24BT,22T,11AT,2T & 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:

Digital axle counter (SSDAC) for last vehicle verification between RUL-LLGM and RUL-TKRI Block sections. Refer Para No.4.1 item No.8 general portion of the SWR.

8. STATION MASTER'S PANEL CONTROL KEY:

The panel is fitted with Station Master's lock up 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 SM's key also. However the provisions of SR 3.36.02 shall be followed while replacing signals also.

9. 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 light 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 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 release 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

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 TKRI-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 white strip of light will appear on the panel.

To take 'OFF' DN advanced starter signal No.12, DN LV section between RUL-LLGM 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 white 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 white strip of light will appear on the route from the concerned starter to advanced starter.

9.3 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 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" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home 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 the point push button and group button individually or by signal and route buttons 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 'C-1(A-C)/ 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 60 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 calling on signals, UP and DN advanced starters 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 can be admitted by taking off calling-on signal. When both home and calling-on failed, then the 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 super vision 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 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.

14. **SHUNTING:**

For shunting SH3 & SH-4 are provided in the yard for shunting in desired 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.

15. **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. **EMERGENCY CRANK HANDLE RELEASE:**

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.

The Emergency Crank Handle Register is to be maintained in the following proforma by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded:

- 1) Date:
- 2) Point Number, which failed or required to be tested.
- 3) Time failure
- 4) Disconnection memo number received from S&T staff.
- 5) Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over:
- 6) Time Emergency Crank handle is sent out:

- 7) Individual Point numbers and line number nominated for admission of dispatch for which points are set, clamped and padlocked:
- 8) Train number to be admitted or dispatched.
- 9) Signature of the Station Master on duty to ensure correct setting, clamping and padlocking of the points.
- 10) Date and Time fault rectified.
- 11) Time of emergency Crank handle received back by SM on duty.
- 12) Signature and Designation of the Signal Official who rectified the fault.

IMPORTANT NOTE:

When performing shunting operations in the sidings it must be clearly noted that the siding Points are interlocked with the system in the NORMAL position of the Points and in REVERSED position they are not interlocked. The official responsible for shunting operation must clamp the points at the both facing and trailing before permitting any movement.

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 favourable 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:

18.0 LOCKING OF RELAY ROOM:

Procedure to be followed as per Para No.4.2 in general portion of the SWR.

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 the 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 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 ON Aspect of UP & DN Home signals and Advance starters are interlocked with respective Block Instruments. Block Instruments cannot be made normal unless the respective home signals are in normal position.

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

- 25.1 Digital Axle counters are provided on both sides between RUL-LLGM and RUL- TKRI Single line section for Block proving.
- 25.2 The occupation and clearance of the axle counter section are indicated on panel and reset 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 restored 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:-
Section clear indication is available for the relevant axle counter track circuited portion and Last stop signal is taken 'OFF'.
- 25.6 Reset arrangements are provided in the Reset Box in the SM's office for Sections. RUL-LLGM and RUL-TKRI. 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. CORRECTING TIME IN STATION CLOCK:

The station Master shall set the time in his clock according to the time signal given by the section controller on duty at 16.00 Hrs every day according to GR and SR 4.01.01 and 4.01.02.

27. TELECOMMUNICATIONS:

Refer Para No.5 of general portion of the SWR.

28. LAST VEHICLE CHECKING DEVICE:

Axle counters are provided between RUL-TKRI and RUL-LLGM Single line section for block proving of Last Vehicle Checking device.

The occupation and clearance of the axle counter section are indicated on panel by 'Red' and 'Green' lights.

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 both the station's.

Even after completion of reset operation, LVCD Axle counter will show clear only if next train is passed. The next train is to be piloted.

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'.

A resetting arrangement for the resumption of the track circuit by means of axle counter under failure condition at either end station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the SM at the receiving station through exchange of Private Number.

Reset arrangements are provided in the SM's room for sections RUL-TKRI 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, number registered on the counter and reasons for resetting and initial each such entry.

29. RESETTING OF LVV DIGITAL AXLE COUNTER:

After complete arrival of train, if the Last vehicle axle counter of the section does not clear or Last vehicle axle counter section free indication (Green) does not appear in the panel, the receiving station SM shall apprise the sending station SM through telephone for resetting giving details of last train that has arrived complete at his station and the block section is clear.

The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not and, if arrived fully shall so intimate authenticated by exchanging Private Number with the sending station.

The status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (GREEN) and power on indications (WHITE) are provided in the reset box.

The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows:-

- i.) On being advised by SM-RUL, SM-TKRI/LLGM inserts the key in the Reset Box, turns right and presses both the key and the Push Button (Red) simultaneously with the SM-RUL. The Counter on the Reset Box at RUL and TKRI/LLGM registers the next higher number and after five seconds miniature green Preparatory Reset indication appears on the Reset Box both at RUL and TKRI/LLGM. The step by step procedure shall be followed as given.
- ii.) SM/TKRI /LLGM shall then insert SM's LV reset key, and turn right.
- iii.) Press LV reset button provided on the panel.
- iv.) Release SM's LV reset key and reset button.
- v.) Turn left the SM's LV reset key and remove it.
- vi.) The system obtains preparatory reset state and preparatory reset indication (Green) glows on the panel. The counter reading increases by one count after a gap of 5 seconds approximately
- vii.) The counter reading should be recorded
- viii.) One train is to the pilot in the section to make the system normal.
- ix.) The SM on duty shall record it in the Train Signal Register indicating the resetting operations in detail i.e. train number, time, Private Number exchanged with SM of sending station and giving reasons for the resetting operation.
- x.) If the axle counters functioning properly now, then Block Section cleared indication 'G' will appear on the panel and the concerned Block working will be normalized.
- xi.) If the LV axle counter section indication does not appear 'Green' and continues to show "RED" indication, the concerned Block section shall be suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

30. **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 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’

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

COMPLEMENT OF STAFF	STAFF IN EACH SHIFT
SS/SM	01
TRAFFIC POINTS MAN	01

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.
- vi) He shall follow the instructions laid down in SR.3.68.01 © and (d) and SR 14.07.01 and B.W.M.2.09 (e).
- vii) He shall promptly attend to accidents and report them.
- viii) He shall ensure that fire fighting equipments at the station such as fire extinguisher, fire buckets etc. are in good fettle and ready for use.
- ix) He must ensure that the essential safety equipments at his station are the same complete and in good condition. If there is any deficiency it should be made good without delay.
- x) He shall see that TSR, SM's Diary, Inspection Note Book, Reference Books and other station record is properly maintained and preserved for a minimum period as prescribed in this Operating Manual.
- xi) He shall ensure that all correction slips of Manuals and SWR are posted and changes are made in respective pages.
- xii) 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 in charge 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 14.07.1 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) He shall not consider himself relieved of duty unless he has completed transactions of trains for which he has given/obtained line clear till the complete arrival of such trains.
- vii) He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.
- viii) He shall keep the Station Master's control keys of block instruments/Control Panel in his

- personal custody whenever, he is required to leave his office even for a short duration.
- ix) He shall be responsible for correct issuance of caution order, whenever required.
 - x) 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 be in proper neat and clean uniform while on duty.
- iii. He shall always commence his duty equipped with hand signal lamps during night and flags during day.
- iv. He shall couple and uncouple vehicles under the supervision of SM.
- v. He shall watch and guard the packages and other Railway property lying in the Station premises.
- vi. He shall report any irregularities coming to his notice.
- vii. He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.
- viii. 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.
- ix. He shall not leave his duty unless properly relieved or authorized by his superiors.
- x. He shall follow OM Chapter-2.

NB: - All staff should be in uniform while on duty and follow their rosters issued by DPO/WAT from time to time.

APPENDIX 'E'.**LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION**

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	8
vi)	Skids	6
vii)	Wedges	4
viii)	Fire & Sand buckets	6
ix)	Fire Extinguishers	2
x)	Line blocking collars	2
xi)	Motor trolley on line board	2
xii)	Block suspension board	2

APPENDIX “F”

RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS.

--NIL--