East Coast Railway
Waltair Division

STATION WORKING RULES

OF

DARLIPUT (DPC)

East Coast Railway / Waltair Division

Station Working Rules of
DARLIPUT

Index of Correction Slips

Sl No	Correction Slip No	Date of issue	No. of Pages Replaced	Total No of Pages

East Coast Railway / Waltair Division

Station Working Rules of DARLIPUT (DPC)

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EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF DARLIPUT STATION (DPC) (BROAD GAUGE)

No.WTP/5/SWR/GPJ Date of Issue: _____
Date brought into force:_____

Ref: Railway Board's Letter No 2000/Safety (A&R) 19/36 Dated:27-10-2005

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

1.0 STATION WORKING RULE DIAGRAM

i) Station working diagram No: SI/WRD- SI/WRD/23086 Alt "**B**"

ii) CSTE/ECo.Rly/ DRG NO SI/WRD- SI/23086-Alt "B"

iii) Date upto which corrected

2. DESCRIPTION OF THE STATION:

2.1 a) GENERAL (LOCATION):

i)	Name of the Station	:	DARLIPUT
ii)	Class of Station	:	'B'
iii)	Section	:	Kottavalasa – Kirandul
iv)	Double/Single line	:	Single Line
v)	Electrified/non electrified	:	Electrified
vi)	Guage BG/MG/NG	:	BG
vii)	Railway	:	East Coast Railway
viii)	Situated at KM	:	KM 127.391
ix)	Reckoned From	:	Kottavalasa
x)	Operation of signals and points	:	SM's office Centrally operated full fledged Panel along with VDU
xi)	Classification of Route	:	'D' Class
xii	Standard of Inter Locking	:	Std III

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

	Adjacent Block Station	**Distance**	**Direction**
A)	GPJ	12.649 KM	East Side
	PFU	9.774 KM	West Side
B)	Provision of IBS	Nil	
C)	Automatic Signals	Nil	
D)	DK Station & Out Lying Siding	Nil	
E)	Passenger Halt	Nil	

DSTE/WAT **Sr.DOM (G)/ WAT**

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

Between Stations	The Point from which the "Block Section" Commences	The Point at which "Block Section" Ends
DPC-GPJ DN Direction	From DN advanced starter signal no. 12 of DPC	Up Advance starter 11 of GPJ
DPC-PFU UP Direction	From UP advanced starter signal no.11 of DPC	Dn Advance starter 12 of PFU
Station Limit	The portion of Railway land between UP & DN Distant Signal of the station is the Station Limit is the Station Limit.	
Station Section	The section of station limit between Up & DN Advance Staeters	

2.4 GRADIENTS :

From Center of the Station building

Section towards	Chainage in Meters		Stretch (m)	Gradient on falling or rising.
	From	To		
Towards GPJ End	0.000	692.42	692.42	1 in 500 falling
	692.42	966	274.42	1 in 100 raising
	966	1100	134	level
	1100	1748	648	1 in 100 falling
	1748	1897	149	level
	1897	2537	640	1 in 100 raising
	2537	Into section	-----	level
Towards PFU End	0.000	CH:510.540	510.540	1 in 500 falling
	CH: 510.540	CH: 848	338.540	level
	CH: 848	CH: 1090	242	1 in 100 raising
	CH: 1090	CH: 1212	122	level
	CH: 1212	CH: 1589	377	1 in 100 falling
	CH: 1589	CH: 1753	154	level
	CH: 1753	CH: 2461	704	1 in 100 raising
	CH: 2461	CH: 2583	122	level
	CH: 2583	Into section	-----	1 in 100 falling

2.5 LAY OUT:

A)

Sl no	Running/Non Running line	Electrified/Non Electrified
1	Route-1 (1st loop)	Electrified
2	Route-2 (Main line)	Electrified
3	Route-3 (2nd loop)	Electrified
4	Ballast siding	Electrified
5	Hot axle siding	Electrified

B) **HOT AXLE SIDING:**

Hot Axle Siding takes off from line no.3 at GPJ end of the yard and is isolated by derailing switches. The entrance points and derailing switches are operated individually by arc levers in succession. Hand plunger locks fitted at the entrance point unlocked by key 'M' released from RKT provided in location box through control no. 27 from panel. When control 27 is transmitted from panel S1/C1, S2/C2, SH3, SH4, S6 & S7 signals of line no.3 will be locked in their normal position.

C) **BALLAST SIDING:**

Ballast Siding takes off from line no.1 at GPJ end of the yard and is isolated by derailing switch. The entrance point and derailing switch are operated individually by arc levers in succession. Hand plunger locks fitted at the entrance point unlocked by key 'P' released from RKT provided in UP CH location box through control no.25 from panel. When control 25 is transmitted from panel S1/C1, S2/C2, SH3, SH4, S8 & S5 signals of line no1 will be locked in their normal position.

D) **PLATFORMS:**

One rail level passenger platform on line no1 is provided with a measurement of 244x6.10M.

2.5.1 RUNNING LINES / DIRECTION OF MOVEMENT AND HOLDING CAPACITY.

a) **DIRECTION OF TRAFFIC:-**

The trains coming from Gorapur end and proceed towards PFU are UP trains and the trains coming from Padua end and proceed towards GPJ are DN trains.

b) **HOLDING CAPACITIES:**

Sl	Running Lines	CSL	Electrified/Non Electrified
1	Line 1 (1st Loop)	756.0 M	Electrified
2	Line 2 (Main Line)	727.30 M	Electrified
3	line 3 (2nd loop)	727.00 M	Electrified

b) **Direction of Movements**: Trains coming from GPJ and proceeding towards PFU are JP trains. Trains coming from PFU and proceeding towards GPJ are DN trains.

2.5.2 NON RUNNING LINES AND THEIR CAPACITY IN CSR.

Hot Axle Siding	51 Meters	Electrified	From Glued joint to glued joint
Ballast Siding	235 Meters	Electrified	From Glued joint to Dead End

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT.

Nil

2.6 LEVEL CROSSINGS:

Nil

3.0 SYSTEM & MEANS OF WORKING

System of working	Absolute block system working 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), 14.09 to 14.11, 14.12, 14.13 and BWM Chapter-IV part I either direction.
Double Line / Single Line / Type of gauge	Single Line Broad Gauge
BLOCK INSTRUMENTS:	Single line Diado type Token less block instruments are provided for block sections DPC-GPJ and DPC-PFU vide GR 14.01(a) and the 'OFF' aspect of the last stop signal is the authority for the Loco Pilot of all trains to enter into the block section vide GR 14.08(b) (iv).
Co-operative/Non Co-operative	Co-operative
Provision of block telephone	Telephone attached to block instrument connecting the adjacent block stations concerned.
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:

1	Standard of Inter Locking	This Station is provided with Standard-III Electronic Interlocking.
2	Type of signaling	Multiple Aspect Colour Light Signals. The aspects and indications of the MACLS is governed by GR.3.08 (4) (b).
3	Mode of operation	The Station is provided with central Electronic Interlocking (EI) and having no end cabins. All signals and points are electrically operated from the central Panel / VDU provided at SM's Office
4	Method of Operation	Central Panel/VDU is provided at SM's office to electrically all signals and points
5	Provision of Calling "ON"	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 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 detailed procedure is given in Appendix-B)
6	Provision of Shunt signal	Shunt back signals SH- 3 (A/B/C) and SH- 4 (A/B/C) are provided at KTV and KRDL end respectively for back shunting purpose
7	Track Circuits	Track circuits are provided in the yard as 1AT, 1T, 12AT, 21AT, 21BT, 23BT, L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, 22AT, 22BT, 24BT, 11AT, 2T and 2AT. Axle counters are provided for DPC-GPJ BAXT and DPC-PFU BAXT. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel/VDU 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. All three Lines are berthing lines & track circuited. In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (05 Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited (i.e. 2T and 1T in Up and Down directions respectively).
8	Axel Counters	Entire Block Section between DPC- GPJ & DPC PFU is provided with High Availability Single Section Digital Axle Counters (HASSDACs). **For section: DPC-GPJ** :- (**HASSDAC) A pair of High Availability Single Section Digital Axle counter** is provided between DPC-GPJ just beyond DN advanced starter No.12 of DPC on 1T and another one on above Home signal No 2 on track circuit No 2T of GPJ **For section: DPC-PFU**:- (HASSDAC) A pair of High Availability Single Section digital axle counter is provided between DPC-PFU on just beyond DN advanced

		starter No.26 of PFU on track No 1T and another one on Home signal No 1 on 1T for proving UP LVV for section DPC-PFU. 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/IB Home 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 TMR 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 TMR & 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.
	Crank Handel	When any point fails to operate normally by the Route Setting operation through Panel/VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06. CH1 controls 21A/B, 23A/B and CH2 controls 22A/B and 24A/B. (The details of standby operation from VDU is given under Appendix-'B') These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles

<table>
<tr><td></td><td></td><td>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.
<table>
<tr><td>SL No</td><td>CRANK HANDLE</td><td>CONTROL POINTS</td></tr>
<tr><td>1</td><td>CH-1</td><td>21 A/B, 23 A/B</td></tr>
<tr><td>2</td><td>CH-2</td><td>22 A/B,24 A/B</td></tr>
</table>
</td></tr>
<tr><td>9</td><td>Emergency Point Operation</td><td>Emergency point operation facility is provided to operate the point from the Panel in case of failure of point controlling track circuit. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. (Detailed procedure for operation of emergency point operation is laid down in Para No.3.0 of Appendix-B)</td></tr>
<tr><td>10</td><td>Emergency Route Release</td><td>This panel interlocking is based on the principle of ‘DEAD APPROACH LOCKING’. As such, when a route is set and signal is taken off on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the</td></tr>
</table>

		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 Down) indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released. In case the route illumination (a white strip of lights) does not disappear, it suggests that the route is not released/cancelled. In such case the emergency cancellation of route has to be resorted to. The concerned S&T staff should be advised immediately to get the emergency route release button 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 TSR, station diary and the register meant for this purpose.
11	Block Instrument	Co-operative Single Line Section Token Less Diaod Block Instruments are provided for Line clear transaction.
12	Emergency gate Release	Not Applicable
13	Operation of Control Panel VDU	Central Panel/VDU is provided in the Station Master's office to electrically control all signals and points.
14	Method of operation	Two way position switch is provided on the control panel through which SS/SM on duty can select the mode of operation(Panel/VDU). The position of all points, signal and running lines are available in the panel/VDU. Remainder Block collars are provided for use on push button which shall be placed on the point button and route button prevent operation of the button in case of concerned line is blocked. The VDU is provided with SM's key user name and

		password which shall always remain with the personal memory of the Station Master on duty.

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/relay hubs/goomties/Gate goomties/cabin housing 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 and JPO issued by AM/Traffic & AM/Signal vide No. 2021/Sig/21/Safety Performance dated 10.06.2023. Relay room/ relay hubs/goomties/Gate goomties/cabin housing are provided with two independent locks. The key of one lock shall be in the personnel 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/ relay hubs/goomties/Gate goomties/cabin housing 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 2015 Para No.13.16 and in case of relay hubs/goomties/Gate goomties/cabin housing in the register meant for this purpose.

4.3 POWER SUPPLY:

Normal: AT Supply-230v, 50Hz

Stand by: - 1st standby power supply: Orissa State Electricity Board Supply.

2nd standby power supply; DG set.

CLS Auto Change Over panel with Auto change over switch is provided in the SM's room with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. Luminous indicator's are provided above the circuit breaker for each supply to indicate the availability of the supplies.

Normally the rotary switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, the on duty SM must ascertain the power is available on the other AT e.g if power block is to be given on the UP line, DN AT must be available and vice versa.

During the non-availability of both the AT supplies SM on duty shall keep the rotary change over switch towards the local supply to feed available local supply to the Installation.

In case of failure of one of the AT supply without any power block, on duty SM has to check whether the Miniature Circuit Breaker has tripped. (Three Miniature Circuit Breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes to DN). In case of failure of both AT supplies, the local supplies shall be utilized by operating the switch. If the Miniature Circuit Breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/GEN for prompt rectification.

For IPS system that provides power supply /back up to the signaling system of EI. Selection output is taken from CLS Auto change over Panel.

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 SM/SS 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 in one 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 both AT's and make an entry in station diary duly initiating action for rectification of failure, if any.

(C) **WORKING OF AUTOMATIC FIRE ALARM DETECTION SYSTEM:**

In case of any alarm in any particular area due to fire or dust-Zone number on the LCD display can be seen.
Note down the zone No. and panel display name, by referring display chart.
Once you find the zone number rush to that particular area where the detector gives alarm.
The moment the smoke detector 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 fire 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).
The control panel will get reset and siren muted.
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.

D. AUTO DIALLING:

If you hear alarm from the panel, this system will dial the telephone/mobile number you fed. The prerecorded messages will be heard on the phone. If you want to make two-way communications, press "6" on your mobile. You can have this communication for 50 seconds. If you want to talk more, press again "6" before completion of 50 seconds for another 50 seconds or you can acknowledge the receipt of call by pressing "2" on SSE/Signal mobile, in case number "2" is not pressed the system will dial again the same telephone number as per the programmed dial attempt and still if acknowledgement not come from 1stnumber then panel will dial 2nd number till the time acknowledgement comes it will keep

on dialing.

5.0 TELECOMMUNICATIONS:

1) Telephone attached to Token-less block instruments is connected to adjacent block stations on either side.
2) Telephone communication is provided between adjacent stations i.e., GPJ and PFU Stations.
3) The station is connected to OEC-KRPU control circuit.
4) The station is connected to OEC-KRPU traction power control circuit.
5) Telephone communication is provided between Station Master on duty to Up CH locations and to Dn CH Locations.
6) CUG phone provided.
7) 25 watts VHF set is provided for emergency communication.
8) Railway auto phone is provided at the station.

5.1 FAILURE OF COMMUNICATIONS:

i) In the event of partial failure of communications between the adjacent block stations, SR 6.02.06 shall be observed, for working the train.
ii) In the event of total failure of communications between the adjacent stations SR 6.02.04 shall be observed, for working the train.

6.0 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 at the station.

STAFF IN EACH SHIFT	
SS/SM	1 (ONE)
TPM ‘A’ TRAFFIC POINT MAN	1 (ONE)

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:

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.
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 the SWR thoroughly and understood the system of working in force at the station and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS/SM (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/SM (In-Charge) is responsible to see that all the staff are well conversant with the Station Working Rules of the Station 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 Class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

The SS/SM (In-Charge) is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-'C' staff and other for Group-'D' staff & duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS/SM (In-Charge).

Fresh assurance shall be obtained in the Assurance Register when:
He joins at the station as a new member.
There is any change in the Station Working Rules.
He resumes duty at the station after an absence of 15 consecutive days or more.

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 train in the section has arrived completely.
   ii) UP Home signal /calling-on signal No. 1A/B/C and/or C-1A/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 train in the section has arrived completely.
   ii) DN Home signal /calling-on signal No. 2A/B/C and/or C-2A/B/C is put back to 'ON' and
   iii) Line is clear up to UP advance starter signal No.11.

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 at either end 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 :-

A safety Point Alarm is provided on the panel Board with different indications:

1. On complete arrival of a train at the station, the SS/SM has to set the points immediately against the occupied line.
2. In case the SS/SM forgets to alter the points, after arrival of a train a time lag of 2 minutes, an audible buzzer will be heard from this instrument along with 'RED' indication of the line on which the train arrived.
3. The SS/SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the train has arrived.
4. On setting the points against the occupied line, the 'RED' indication will disappear.

If all the line of 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 SS/SM on duty in that order so that in case of mishap, the chances of casualties minimized. In case 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 precaution contained in SR 5.04.01 and SR 5.23.01Bllock collars to be placed on the concerned button of blocked Line. To block/unblock a particular line, right click on route button on concerned line, displays 'Block and 'Unblock' option on the menu. Select "Line Block" option. After selecting line block option, that particular line will be blocked and 'RED' color indication will be displayed on the line.

6.2.1.2 RECEPTION OF 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. [Refer GR 5.09 & SRs there to].

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

Not Applicable

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

Not Applicable

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

Not Applicable

6.2.1.6 ANY OTHER SPECIAL CONDITIONS SHOULD BE MENTIONED GIVING REFERENCE TO THE G&SR:

Special Restriction

Nil

Special Instruction

Nil

6.3 CONDITIONS FOR TAKING 'OFF' APPROACH SIGNALS:

a) Conditions for taking off approach signals are governed by GR 3.40(1) (b), 3.40(2) (b), 3.40(3) (b)

b) 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.

c) **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]

CLEARING OF ADEQUATE DISTANCE

LINE NO.	UP TRANS		DOWN TRAINS	
	FROM	TO		FROM
LINE NO. 1 (1st Loop)	Up starter Signal No.5 of DPC	Up advanced starter signal No.11DPC or up to the end of the Sand Hump.	DN starter Signal No.8 of DPC	DN advanced starter signal No.12 of DPC or up to the end of the overrun line
LINE NO. 2 (Main Line)	UP Main line starter signal No.9 of DPC	Up advanced starter signal No.11 DPC.	DN Main line starter signal No.10	DN advanced starter signal No.12 of DPC.
LINE NO. 3 (2nd Loop)	UP starter signal No.7 of DPC	UP Advanced starter signal No.11 DPC or up to the end of sand hump.	DN starter signal No.6	DN Advanced starter signal No.12 of DPC or up to the end of the overrun line.

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.

6.3.1 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/DESPATCH, CROSSING AND PRECEDENCE OF TRAINS:

The following simultaneous reception and dispatch facilities are provided at this station.

1.	Reception of an Up train on line No.1 setting overlap to Sand Hump.	AND	a) Reception of a DN train on line No.3 setting overlap to Overrun Line. OR b) Dispatch of another UP train either from line No.2 or 3.
2.	Reception of an Up train on line No. 3 setting overlap to sand hump.	AND	a) Reception of a DN train on line No.1 setting overlap to Over Run Line. OR b) Dispatch of another UP train either from line No.1 or 2.
3	Reception of a DN train on line No.1 setting overlap to Over Run Line.	AND	a) Reception of an UP train on line No.3 setting over lap to sand hump. OR b) Dispatch of another DN train either from line No.2 or 3.
4	Reception of a DN train on line No.3 setting overlap to Over Run Line.	AND	a) Reception of an UP train on line No.1 setting over lap to sand hump. OR b) Dispatch of another Dn train either from line No.1 or 2.

6.5 COMPLETE ARRIVAL OF TRAINS:

The entire block section between DPC-GPJ and DPC-PFU on both Up and Down Lines are monitored by (HASSDAC) High Availability Single Section Digital Axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated on Panel/VDU at SM's office. As soon as train enters in to that block section the RED indication appears on Panel/VDU. After whole train clears the block section.

GREEN indication appears on the Panel/VDU. This confirms the complete arrival of train and the SM on duty shall give 'Train out of Block Section' report on seeing the section clear indication GREEN on the Panel/VDU.

If a train passes through the station without conforming 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 with hold 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 SR 4.16.05 that the train arrived complete.

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.

6.6 A) DISPATCH OF TRAINS:

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/VDU. 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, Train entering section indication will appear on the panel. The SM will then send the train entering given 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)]

B) ISSUE OF CAUTION ORDERS

Whenever in consequent of the line being under repairs or for any other reasons special precautions are necessary, a caution order detailing the kilometre and speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Driver in terms of GR 4.09 and SRs thereto.

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 3.42, 4.17 4.42, & SR 4.42.02 (b) (i), (ii), (iii), c & (d)]

6.8 WORKING IN CASE OF FAILURE:

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

a) DEFECTIVE 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) DEFECTIVE POINTS

Procedure prescribed in GR3.77 and relevant SRs shall be followed.

c) DEFECTIVE AXLE COUNTERS

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 14.0 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 rectification.

d) FAILURE OF SIGNALS AND INTERLOCKING

In the event of failure of approach stop signals, GR 3.70 and SRs thereto shall be followed.

6.9 PROVISIONS FOR WORKING OF MOTOR TROLLIES / MATERIAL TROLLIES:

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM]

i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.

ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.

iii) In all other respects the Working of a light motor trolley shall confirm to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

iv) OCC keys of Token-less Block instrument is used in connection with working of push trolleys and motor trolleys to execute work in mid section as per DSO's memorandum No. WTP/2 dated 19.5.1983.

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

7.0 BLOCKING OF 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. 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]

a)	**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]
b)	**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 THE FACE OF AN APPROACHING TRAIN:

Not Applicable

8.3 PROHIBITION OF SHUNTING - SPECIAL FEATURES:

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

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

8.4 SHUNTING ON SINGLE LINE:

i) Within Station section: Governed by GR 8.10.

ii) Within 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 such section which is intended to be obstructed supported by private number. Both the station masters shall fix line block labels on respective block instruments and shall continue shunting provided by the block section is clear.

8.5 SHUNTING ON DOUBLE LINE:

Not Applicable

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

Not Applicable

9.0 ABNORMAL CONDITIONS:

a) **RULES TO BE OBSERVED IN THE EVENT OF FOLLOWING 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: Not applicable.

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.**

i) 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.

b) **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) **CERTIFICATIONS 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 FAILURE OF POINTS, TRACK CIRCUITS/AXLE COUNTERS 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 COMMUNICATIONS:

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 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR UNDER BLOCK TICKET TO ASSIST THE CRIPPLED TRAINS:

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions which are summarized as follows. [Refer SR 6.02.05]
After sending a train on Block ticket, a following train shall not be dispatched in the same direction unless:

i) The previous block ticket is collected & cancelled, or

ii) Necessary endorsement is given on the previous block ticket with the advice to wait at the site for a next train to follow, or

iii) The previous train has met with an accident or has been disabled, or

iv) The block ticket has been collected from the Loco Pilot of the previous train by the official in-charge at the site & kept in the personal custody & shall be kept until the arrival of the next train & such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.

a) SM will suspend the absolute block system of working and both SM's concerned should arrange for running of trains on the authority of Block Ticket.
b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which shall include.
c) Caution order: Existing speed restriction shall be indicated in the Caution Order portion. The speed restriction to 15Kmph during clear visibility and 10Kmph when visibility is obstructed shall be clearly indicated.
d) An authority to pass the stop signals at 'ON' position.
e) Before resumption of normal working a message between the SM's of the concerned station shall be exchanged with private number. [Refer SR 6.02.05(d) (VI)].
The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

10.0 VISIBILITY TEST OBJECT:

The signal lights of UP starter signal No.5 and DN starter signal No.8 of Line No.1 are ear marked to serve as visibility test object during day and night vide GR 3.61.2(b)(iii)

11.0 ESSENTIAL EQUIPMENT AT THE STATION

The detailed list of essential equipment to be maintained at the station in good working order vide O.M.20.01(11) is given in Appendix-E of the SWR.

12.0 FOG SIGNAL MEN 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:

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 initial with date as an indication having done so.

13.0 APPENDICES:

APPENDIX ‘A’	Working of level Crossing gates.
APPENDIX ‘B’	System of signalling and interlocking and Telecommunications
APPENDIX ‘C’	Anti Collision Device (Raksha Kavach).
APPENDIX ‘D’	Duties of Train Passing Staff in each shift.
APPENDIX ‘E’	List of Essential equipment provided at the .
APPENDIX ‘F’	Working of DK s, halts, IBH, IBS and outlying sidings.
APPENDIX ‘G’	Rules for working of trains in electrified sections.

CERTIFICATE

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING, AMENDING OR MODIFYING ANY GENERAL AND SUBSIDIARY RULES, BLOCK WORKING MANUAL AND ;OPERATING MANUAL. THESE RULES CANCEL ALL PREVIOUS STATION WORKING RULES.

DSTE/WAT **Sr.DOM (G)/ WAT**

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX 'A'
WORKING OF LEVEL CROSSING GATES
DARLIPUT STATION

Nil

APPENDIX-B

SYSTEM OF SIGNALLING AND INTERLOCKING AND TELECOMMUNICATIONS

Details of Signalling and Interlocking installations, Telecommunication instructions for working them normally and in emergencies etc., including the power supply arrangements.

1.0 BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATION:

This is a 'B' Class Station with Standard-III interlocking (with isolation) with route setting type panel. The points and signals etc are power operated from a composite miniature 'DOMINO TYPE' full-fledged central panel and VDU installed in the station master's office. This Station is equipped with multi aspect colour light signalling. The Diado type Token-less Single Line block instruments are provided in the SM panel room for section DPC-GPJ & DPC-PFU.

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. A Visual Display Unit (Computer) is provided in the SM's office as a standby option.

(The description and the function of Visual Display Unit is given in APPENDIX-'B1')

1.2 POINT 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 white 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 set 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 <u>DESCRIPTION OF POINT PUSH BUTTON</u>:

SL. NO.	POINT BUTTON NO.	COLOUR	DESCRIPTION
1	21 A/B	Black	Cross over point between Main line and line no.1 at GPJ end.
2	22 A/B	Black	Cross over point between Main line and line no.3 at PFU end.
3	23 A/B	Black	Cross over point between Main Line and line no.3 at GPJ end.
4	24 A/B	Black	Cross over point between Main line and line No.1 at PFU end.
5	27	Black	Control for Hot Axle Siding.
6	25	Black	Control for Ballast Siding.
7	Point Group button (Normal)	Black with Red dot	Common button for normal operation of points
8	Point Group button (Reverse)	Black with Red dot	Common button for reverse operation of points

1.2.8 **<u>DESCRIPTION OF POINT GROUP BUTTON</u>**:
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 <u>SIGNAL PUSH BUTTON</u>:
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 <u>DESCRIPTION OF SIGNAL BUTTONS:</u>

SL NO	BUTTON NO.	COLOUR	DESCRIPTION
1	C1	Red with white dot	UP calling 'ON' signal for Line No.1, 2 & 3.

2	S1	Red	UP Home signal for Line No.1, 2 & 3.
3	C2	Red with white dot	DN calling 'ON' signal for Line No.1, 2 & 3.
4	S2	Red	DN Home signal for Line No.1, 2 & 3.
5	SH3	Yellow	Shunt Signal for line no.1, 2 & 3.
6	SH4	Yellow	Shunt Signal for Line No.1, 2 & 3.
7	S5	Red	UP starter signal for line No1
8	S6	Red	DN starter signal for line No
9	S7	Red	UP starter signal for line No3
10	S8	Red	DN starter signal for line No
11	S9	Red	UP starter signal for line No2
12	S10	Red	DN starter signal for line No2
13	S11	Red	UP Advance starter.
14	S12	Red	DN Advance 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' advancestarter 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 & DN Home signals for line No 1 setting overlap on sand hump and Over Run Line respectively and common route for UP and DN calling on signal and for shunt movement for line No.1
2	L1/2 UN	White	Common route button for UP and DN Home signal for line No.1 setting overlap on Main line.
3	L-2 UN	White	Common route button for UP and DN Home signals, Calling-On signals and shunt signals for line No. 2 Main line.
4	L3/1 UN	White with Black dot	Common route button for UP and DN Home signals for line No. 3 setting overlap on sand hump and over run line respectively and common route button for UP & DN calling on signal for line No 3 and for shunt movment.

5	L3/2 UN	White	Common route button for UP and DN Home signal for line no. 3 setting overlap on Main line.
6	12A-UN	White	Common route button for DN starters 6,8,10
7	11A-UN	White	Common route button for UP starters 5, 7, 9
8	11UN	White	Route button for UP advanced starter no.11
9	12UN	White	Route button for DN advanced starter no.12

1.5 CRANK HANDLE PUSH BUTTONS

SL. NO.	BUTTON NO.	COLOUR	CONTROL POINTS
1	CH-1	Blue	To be pressed to extract Crank Handle Key for operation of point No 21A/B & 23A/B
2	CH-2	Blue	To be pressed to extract Crank Handle Key for operation of point No 22A/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	PANEL PC SWITCH	---	To give control of operation from panel to PC and vice versa
4	ACK FOR SYSTEM FAILURE	GREEN WITH RED DOT	To be pressed to silence system failure buzzer
5	GROUP TRANS PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to initiate slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C. Gate button.
6	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to withdraw/Normalize the control of slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C. Gate push button.
7	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate' NORMAL setting of point along with concerned point push button
8	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate' REVERSE' setting of point along with concerned point push button
9	EMERGENCY	WHITE	To be pressed for emergency Route Release

	ROUTE RELEASE PUSH BUTTON	WITH RED DOT	
10	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.
11	SIGNAL LAMPFAILURE /POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp/point failure
12	EMERGENCY POINT OPERATION	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone track circuit failed.
13	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.
14	UP BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section DPC-GPJ.
15	DN BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section DPC-PFU.

1.7 <u>Power failure indication /Buzzer and power acknowledgement:</u>

Power supply to the signaling installation is through integrated power supply system. The IPS is normally fed through AT supply. The 1st standby power supply is Orissa state Electricity Board supply and 2nd standby is Diesel Generator. The available Local/DG supply is fed to the IPS through auto change over switch provided in IPS.

In the event of failure of the local power supply the SM on duty shall start the Diesel Generator. The power supply of the DG set is fed to the auto change over switch provided in IPS. The IPS system is connected with battery for safe working during transition of power. Remote monitoring ASM console for IPS is provided at SM's office which will give the following instructions.

	Instructions	**Condition**	**LED indication**	**Remarks**
A	Run DG set	50% DOD	Red	Auto/visual alarm. Alarm shall be acknowledged by

				SM on duty.
B	Emergency start	60% DOD	Red	Auto/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 stated.
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.

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.

1.7.2 VHLC INDICATION:

A VHLC (Vital Hormonic Logic Controller) indication is provided on the top of the panel for indicating which system of VHLC is working. This EI unit is consisting of two VHLC systems called system' A' and system' B. These two systems status (ON/OFF) will be indicated separately on the panel. If the VHLC indication is ON 'GREEN' indication will appear and if OFF 'RED' indication appears. If any one of the 'ON' line system fails automatically OFF line system will change to ON line with a time delay of 180 seconds. A system failure buzzer is provided on the panel board to stop the VHLC unit buzzer. SM on duty has to press the system failure acknowledgement button provided on the top of the panel and intimate the same to ESM/SE/JE in charge for rectification of the failure. Whenever the system changes from A to B or B to A SM on duty has to release all crank handle, L C Gate controls and Route release for all signals.

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 Electronic 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.

3.0 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 registering the next higher number. SM on duty shall ensure sealing of emergency po 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:

Line No.1 to 3 are track circuited.
In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (7M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited. Indications for the above track circuits are available on Panel / VDU 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/VDU 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.

7.0 AXLE COUNTER:

Entire Block Section between DPC-GPJ and DPC-PFU are provided with Electronic Axle counters.

For SEC: DPC-GPJ:- (HASSDAC) A pair of High Availability Single Section Digital Axle counter is provided between DPC-GPJ on DN line, one just beyond DN advanced starter no. 12 of DPC and another one on 2T2 track circuit of GPJ.

FOR SEC: DPC-PFU: (HASSDAC) A pair of High Availability Single Section Digital Axle counter is provided between DPC-PFU on Up line one just beyond UP Advanced starter signal no.11 of DPC and another on 1T track circuit of PFU.

The position of the Block section whether cleared or occupied are reflected in the Panel/VDU provided in the Station Master'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 shall not come to OFF and the concerned instrument shall remain locked in last operated position.
A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number, then resetting to be complied with. (Details of resetting procedure given in APPENDIX-'B')

NOTE:
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. The indication of track will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

8.0 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 ASM's key also. However the provisions of SR 3.36.02 shall be followed while replacing signals also.

9.0 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 enroute. 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 DPC-PFU 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 DPC-GPJ 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 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 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" 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/VDU. 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/VDU. 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 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 calling on signals, UP and DN advanced starters are to be manually cancelled after the passage of the train to cancel the route.

11.0 REPLACEMENT OF SIGNALS TO ON:

Signals are replaced to 'ON' automatically by the operation 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.

12.0 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.

13.0 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:

The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for admission of a train.

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.

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.

14.0 SHUNTING

For back shunting SH3 & SH 4 are provided in the yard for shunting back to the station yard 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.

15.0 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.

16.0 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.

17.0 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 a double lock which can be opened only after both the keys are inserted and turned. One key of the lock shall be kept with the Station Master on duty in his custody and other 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 shall return the key to the Station Master. The details of transaction should 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 1.14. In addition, the Station Master shall also observe SR 3.51.05.

19.0 MAINTENANCE 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.

20.0 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 Signal 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).

21.0 PROCEDURE FOR CARRYING OUR PLANNED MAINTENANCE 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.

22.0 EMERGENCIES:

Not with standing anything contained in the afore said 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 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).

25.0 NORMALISATION OF THE BLOCK AXLE COUNTER AND BLOCK WORKING BY RESETTING FEATURE

25.1 Axle counters are provided on UP and DN lines between DPC-PFU and DPC-GPJ 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 can not be taken 'OFF' and Block instrument at advance station can not 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 passed. The next train is to be piloted.

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 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 at the receiving station and is certified in this respect by the SM at the receiving station through exchange of Private Number.

25.6 Reset arrangements are provided in the Reset Box in the SM's office for Sections DPC-PFU and DPC-GPJ. 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.

26.0 RESETTING OF LVV DIGITAL AXLE COUNTER:

After complete arrival of train, if the Lat vehicle axle counter of the section does not clear or Last vehicle axle counter section free indication(Green) does no 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.

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

A. On being advised by SM-DPC, SM-GPJ/PFU inserts the key in the Reset Box, turns right and presses both the key and the Push Button (Red) simultaneously with the SM-DPC. The Counter on the Reset Box at DPC and GPJ/PFU registers the next higher number and after five seconds miniature green Preparatory Reset indication appears on the Reset Box both at JDB and GPJ/PFU. The step by step procedure shall be followed as given in "B" to "I".
B. SM/DPC and GPJ/PFU shall then insert SM's LV reset key, and turn right.
C. Press LV reset button provided on the panel.
D. Release SM's LV reset key and reset button.
E. Turn left the SM's LV reset key and remove it.
F. 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.

G. The counter reading should be recorded.
H. One train is to be piloted in the section to make the system normal.
I. 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.
J. 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.
K. 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.

27.0 SIGNAL LIGHTS:

The station Master on duty at 00.00 hrs (2nd shift) must also ensure from panel board that all the signal lights are glowing properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the section controller on duty.

28.0 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.

29.0 TELECOMMUNICATIONS:

a) Telephone attached to Token less Block Instruments is connected to adjacent stations on either side.
b) Telephone communication is provided between adjacent stations i.e GPJ and PFU stations.
c) The station is connected to OEC-KRPU control Circuit.
d) The station is connected to OEC-KRPU traction power control circuit.
e) Telephone communication is provided between Station Master on duty to Up CH locations and to DN CH Locations.
f) 25w VHF set is provided at the station.
g) Railway Auto Phone is provided.

30 WORKING OF AUTOMATIC FIRE ALARM DETECTION SYSTEM:

1. In case of any alarm in any particular area due to fire or dust-Zone number on the LCD display can be seen.
2. Note down the zone No. and panel display name, by referring display chart.
3. Once you find the zone number rush to that particular area where the detector gives alarm.
4. The moment the smoke detector detects any smoke particles, the RED LED will blink along with the alarm.
5. 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.
6. 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.
7. To reset the panel press "OFF" button and enter the code 1111 (1 digit four times).
8. The control panel will get reset and siren muted.
9. 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 telephone/mobile number you fed. The pre-recorded messages will be heard on the phone. If you want to make two way communications, press "6" on your mobile. You can have this communication for 50 seconds. If you want to talk more, press again "6" before completion of 50 seconds for another 50 seconds or you can acknowledge the receipt of call by pressing "2" on SSE/Signal mobile, in case number "2" is not pressed the system will dial again the same telephone number as per the programmed dial attempt and still if acknowledgement not come from 1stnumber then panel will dial 2nd number till the time acknowledgement comes it will keep on dialling.

APPENDIX 'B1'

APPENDIX 'B1' TO STATION WORKING RULES OF DARLIPUT STATION

VISUAL DISPLAY UNIT (VDU)

1. SYSTEM OVERVIEW

The PC-based control cum indication panel (hereinafter referred as operator VDU) functions similar to that of the Conventional Control cum Indication Panel (here in after referred as CCIP) for the operation of Signals, Points, L.C Gates, Crank Handles and Siding Controls, etc. The SM of a station (hereinafter referred as operator) required to be familiar on the specific station's SWR (station working rules).

An operator VDU consists of CPU with a colour monitor, keyboard and pointing device (mouse). Through serial communication the exchange of control and indication messages takes place between VHLC and operator VDU. The Software is installed to display the Station Yard Mimic Panel diagram on the operator VDU and it allows access to all functions by clicking buttons. By clicking the button of the pointing device (mouse) the function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The operator VDU or CCIP may be used for controlling and monitoring the station, however, indications on the Station yard mimic diagram of operator VDU and CCIP will be dynamically updated.

2.0 CCIP / OPERATOR PC – MODE SELECTION

For the stations having both Operator PC and CCIP, the privilege has been given with the operator to control the station through operator PC or CCIP. Obviously, the station having only operator VDU or CCIP doesn't possess the selection feature.
The operator VDU is having controls to operate the field gears from the Mimic panel diagram. A Mimic panel diagram displayed on the operator VDU will be an exact replica of the CCIP and suits the yard plan as per SI plan.

2.1 SM KEY

SM KEY IN operation can be achieved through operator PC as follows:
Operator shall click on the **SM KEY** icon, which will enable the password window to appear. After the valid entry of user name and password the SM KEY IN operation will be enabled.

SM KEY OUT operation can be achieved through operator PC as follows:
Operator shall click on the SM KEY **icon, which will enable the password window to appear. After the valid entry of user name and password the SM KEY OUT operation will be enabled. This will lock all the controls in operator VDU except the Signal cancellation facility**

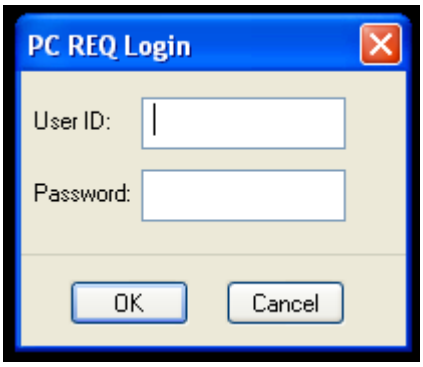
2.2 OPERATOR VDU / CCIP – MODE OF OPERATION

A two-position switch is provided on the CCIP along with the SM's Key. Selection of Panel or operator VDU is performed through this switch, which is denoted as **PANEL/ PC SWITCH**.

The operator can select Panel or PC mode of operation and certain procedures to be followed for transferring from one mode to another. The procedure to be followed is as mentioned below.

2.2.1 CCIP TO Operator VDU CHANGE OVER:

1. Ensure that SM's Key is in ON position.
2. Ensure that **PANEL/ PC SWITCH** is in CCIP mode.
3. Click the **PANEL/ PC SWITCH** provided on the operator VDU.
4. A password window will appear on the screen.
5. Enter the proper **USER NAME** and **PASSWORD** in the required text boxes followed by OK button.

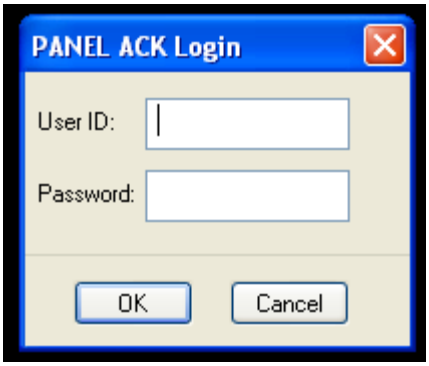


6. Now the operator PC indication will start flashing.
7. Change the **PANEL/ PC SWITCH** to PC mode in the conventional CCIP.
8. Now the PC indication will be steady and Panel indication will disappear.
9. Click the **SM KEY**. (A password window will appear on the screen)
10. Enter the proper **USER NAME** and **PASSWORD** in the required text boxes followed by OK button.

Now the overall control is transferred to operator VDU and the station operation can be performed through operator VDU.

2.2.2 OPERATOR VDU TO CCIP CHANGE OVER:

1. Turn the **PANEL/ PC SWITCH** to **CCIP** mode.
2. Now the CCIP indication will start flashing.
3. Click the **PANEL/ PC SWITCH** provided on the operator VDU.
4. A password window will appear on the screen.
5. Enter the proper **USER NAME** and **PASSWORD** in the required text boxes followed by OK button.



6. Now the CCIP indication will be steady and the operator PC indication will disappear.
Now the overall control is transferred to CCIP and the entire operation can be performed from the CCIP.

3.0 CONTROL(S) & INDICATION(S)

3.1 VHLC SYSTEM INDICATIONS:

In Panel / PC there are two system indications, Green indication mentioning the On-line system and the Red crossed indication mentioning the off-line system.

3.2 VDU FAILURE INDICATIONS:

In the screen whenever the communication fails and the VDU screen is not active all the signals, points and Tracks will appear in grey color and the Error message will be flashing in Bottom Right-corner of the screen.

And whenever the communication resumes the above Error message will disappear and the screen will be in active mode.

3.3 VDU ACTIVE INDICATIONS:

Whenever the VDU is in active condition a RBG sequence will be running in the top right corner of the screen. That is in a flashing sequence in the screen.

4.0 SIGNAL OPERATION:

In order to take-off a signal with the desired route the operator needs to click the mouse on the concerned signal button on the operator VDU. After clicking the Signal button, the concerned route button is to be clicked.

a) **SETTING A ROUTE**:

To set a route, the above mentioned operation has to be carried out; the route-initiated indication will appear over the route. And all the relevant points

Normal/ Reverse set indications will starts flashing if it is not available in the required position. After setting of point in the route required condition (flashing indication will be steady) a complete yellow route set indication will appear over the route. Also the point lock indication will appear through red indication. Finally a route lock yellow steady indication will appear on just below the signal. The signal will be taken-off now. The yellow route set indication will turn to red when the train occupies the concerned track circuit.

b) **CANCELLING A ROUTE/ EMERGENCY ROUTE RELEASE**:

To cancel a signal route when the route is set and the signal is taken-off, click on the signal button of the concerned signal & EGGN button, the signal will immediately go to ON aspect. Apply Route release for the concerned signal as followed in the CCIP, the concern signal route locked indication will start flashing for 120 sec, After the completion of 120 sec the locked route will be released and counter placed for the route release on CCIP will change to next higher digit number.

5.0 CALLING-ON SIGNAL OPERATION:

In order to take-off a calling-on signal with the desired route the operator needs to click the concerned signal button on the operator VDU. After clicking on the Signal button click on COGGN button then the concerned route button is to be clicked.

a) **SETTING A CALLING-ON ROUTE**:

The calling-on will be effective when calling-on Track occupied. To set a route, click one of the possible routes for the concerned signal; the route-initiated indication will appear over the route. And all the relevant points Normal/ Reverse set indications will starts flashing if it is not available in the required position. After setting of point in the route required condition (flashing indication will be steady) a complete yellow route set indication will appear over the route. Also the point lock indication will appear through red indication. Finally a route lock yellow steady indication will appear on just below the signal. The signal will be taken-off after 120-sec indicating a signal timer will flash and becomes steady once 120-sec completed. The yellow route set indication will turn to red when the train occupies the track circuit.

b) **CANCELLING A CALLING-ON ROUTE/ EMERGENCY ROUTE RELEASE**:

After passing of train then cancel a signal when the route is set. Apply the **EMERG ROUTE RELEASE BUTTON** and Apply Route release in the concerned signal. The concerned signal route locked indication will start flashing for 120 sec, after the completion of 120 sec the locked route will be released and counter placed for the Calling-on route release on CCIP will change to next higher digit number.

6.0 SHUNT SIGNAL OPERATION:

Shunt signal route set and cancel operation follows the same procedure as mentioned for the main signal.

7.0 POINT OPERATION:

To operate the point, the operator needs to click the concerned point's Normal/Reverse indications on the operator VDU, after clicking by the concerned Point button on the mouse.

a) **REVERSE TO NORMAL OPERATION**:

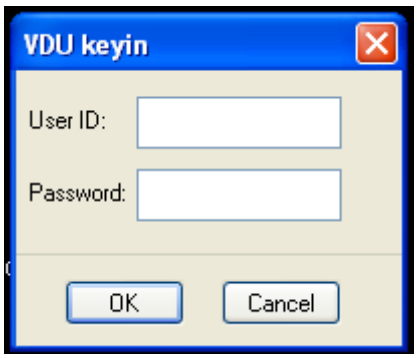
Click on the **NORMAL** group button (NWWR), a Normal flashing indication will appear, the indication will be steady after the point is set to Normal.

b) **NORMAL TO REVERSE OPERATION**:

Click on the **REVERSE** group button (RWWR), a Reverse flashing indication will appear, The indication will be steady after the point is set to Reverse.

c) **EMERGENCY NORMAL OPERATION**:

When the point zone track circuits / axle counters failed without any point lock condition through respective signal route(s), a point can be operated by the Emergency Point operation.
Before doing the emergency operation the emergency point operation key to be KEY IN by clicking the **KEY IN** button, after the completion of the emergency point operation, the key to be KEY OUT by clicking **KEY OUT** button.



Click on the **EMERGENCY POINT OPERATION** button and concerned Point button and then the **NORMAL** group button (NWWR), a Normal flashing indication will appear, the indication will be steady after the point is set to Normal. After the Emergency point operation the counter placed on CCIP will change to next higher digit number.

d) **EMERGENCY REVERSE OPERATION**:
When the Point zone track circuits/axle counters failed without any point lock condition through respective signal route(s), a point can be operated by the emergency point operation.

Before doing the emergency operation the emergency point operation key to

be KEY IN by clicking the **KEY IN** button, after the completion of the emergency point operation the key to be KEY OUT by clicking **KEY OUT** button.

Click on the **EMERGENCY POINT OPERATION** button and concerned Point button and then the **REVERSE** group button (RWWR), a Normal flashing indication will appear, the indication will be steady after the point is set to Normal. After the Emergency point operation the veeder counter placed on CCIP will change to next higher digit number.

8.0 CRANK HANDLE & SIDING CONTROL OPERATION:

To Transmit or Release control of the Crank Handle, click on the concerned Point button and Crank handle / Siding control button provided on the operator VDU.

For Transmitting the Crank Handle KEY to the field personnel, the operator has to click the concerned Point button and **Transmit control** button. After transmission, the KEY IN indication will start flashing; now the KEY can be extracted from the EKT. After extracting the key from the EKT, the key IN indication will disappear.

When the Manual point operation is over, after putting the KEY in the EKT, A KEY IN flashing indication will appear on the panel. Now the operator has to Release the control for the steady indication by clicking the concerned Point button and **Release control** button.

A Crank handle locked indication will appear, when the particular point is locked through respective possible signal route(s).

9.0 RESETTING OPERATION FOR 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.

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

L. On being advised by SM-DPC, SM-GPJ/PFU inserts the key in the Reset Box, turns right and presses both the key and the Push Button (Red) simultaneously with the SM-DPC. The Counter on the Reset Box at DPC and GPJ/PFU registers the next higher number and after five seconds miniature green Preparatory Reset indication appears on the Reset Box both at JDB and GPJ/PFU. The step by step procedure shall be followed as given in “B” to “I”.

M. SM/DPC and GPJ/PFU shall then insert SM's LV reset key, and turn right.
N. Press LV reset button provided on the panel.
O. Release SM's LV reset key and reset button.
P. Turn left the SM's LV reset key and remove it.
Q. 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.
R. The counter reading should be recorded.
S. One train is to be piloted in the section to make the system normal.
T. 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.
U. 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.
V. 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.

APPENDIX 'C'

ANTI COLLISION DEVICE [RAKSHA KAVACH]

Not applicable to this Station.

APPENDIX-'D'

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

1.0 STATION SUPERINTENDENT:

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

He shall conduct surprise night inspection and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

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

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

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

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

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

2.0 STATION MASTER:

He is responsible for trains passing during his shift. He shall promptly bring to the notice of Station Master all irregularities & accidents in course of his shift duties. During the absence of station master the duties of station master will devolve on him. He shall follow SR 3.08.01 (c) & (d), SR 14.07.01. HIS SPECIAL ATTENTION IS DRAWN TO CHAPTER-II of G&SR 2000 & GR 5.01 to 5.08 with relevant SRs. As an assistant to the station master, he shall carry out the instructions given to him by the station master. He should have thorough knowledge in PC operation, operations of points and signals to PC are to be given priority.

3.0 TRAFFIC POINTS MAN :

He shall work under the orders of Dy.SS/SM on duty. He shall couple and uncouple vehicles under the supervision of Dy.SS/SM/Guard. He shall operate ground lever/levers and clamp and pad lock the necessary points for shunting operations and during piloting of trains. He shall watch and guard the packages and Rly property lying in the station premises. He shall be thorough with the correct usage of displaying hand signals. He shall report to SM on duty any irregularities coming to his notice. He shall do loading and un loading of parcels, smalls and Guard boxes. He shall carry out any other duties entrusted to him.

5.0 SAFAIWALA

He shall attend to the sanitation of the Railway premises including SM Office, platforms, Staff Quarters, Latrines and cleaning of drainage's etc. He shall carry out any other work entrusted to him by the Station Master on duty.

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

APPENDIX 'E'

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ESSENTIAL EQUIPMENT

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

Sl.No	Description	Station
1	Detonators	20
2	Led based Tri colour flashing torch.	3 (1 Spare)
3	Hand Signal Flags	3 (1 Spare)
4	Safety chains with Pad locks	6
5	Clamps with Pad Locks	8
6	Skids	8
7	Wedges	4
8	Fire & Sand Buckets	6
9	Fire Extinguishers	2
10	Line Block collars (2 Power Block + 2 Engg Block)	4
11	Motor Trolley "ON" Line board	2
12	Block suspension board	2

APPENDIX "F"

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

NOT APPLICABLE.

APPENDIX "G"

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTION

DETAILS OF WORKING RULES OF 25 KV AC TRACTION EXISTING stands good.