EAST COAST RAILWAY
WALTAIR DIVISION

CABIN WORKING INSTRUCTIONS

Date of Issue:
Date brought into Force:

NOTE: Cabin working instructions of A Cabin of tie line must be read in conjunction with General and subsidiary Rules, Operating Manual and Block Working Manual. These rules do not in any way supersede any rules in the above Rule Books.

1.0 STATION WORKING RULES DIAGRAM:

(i) The Station Working Rule diagram no: SI/WRD/23039 Alt-I.
(ii) CSTE/East Coast Railway Signal Interlocking Plan No. SI/10418 Alt-I

2. DESCRIPTION OF STATION:

2.1 GENERAL (LOCATION).

a)	Name of the station	:	Tie line between KTGA - SPRD- 'A cabin'
b)	Class of station	:	Special class
c)	Section	:	KORAPUT-RAYAGADA
d)	Double line/Single line	:	Single line.
e)	Electrified/Electrified	:	Electrified.
f)	Gauge BG/MG/NG	:	BG
g)	Railway	:	East Coast Railway
h)	Route	:	'D'
i)	Situated at	:	Km-161.467 from KRPU and 331.269 from Raipur.
j)	Reckoned from	:	Koraput
k)	No. of cabins	:	Centrally operated panel.
l)	Standard of Interlocking	:	IIR

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

S.No	Adjacent Block Station	Distance	Direction
1.	KEUTGUDA	7.367	KRPU end
2.	SINGAPURA ROAD	3.965	VZM end
3.	SPRD 'B' cabin	2.193	THV end
4.	Provision of IBS	Nil	
5.	Automatic signal	Nil	
6.	DK station/Outlaying sidings	Nil	
7.	Passenger halt	Nil	

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

Between Stations	The point at which the block section commences	The point from which the Block Section ends
A Cabin - KTGA	UP advanced starter No. 15 of A/Cabin.	DN advanced starter of KTGA
A Cabin - SPRD	DN advanced starter No. 16 of A/Cabin.	UP advanced starter No. 18 of SPRD.
A Cabin-B Cabin	UP advanced starter No. 15 of A/Cabin	Starter Signal No. 38 of SPRD B-Cabin.

2.4 GRADIENTS:

a) From CCB towards KTGA end:

CHAINAGE		INTER DISTANCE	GRADIENT
FROM	TO		
161.4670	161.3294KM	0.137 KM	1 in 260 R
161.3294	158.595 KM	2.7344KM	1 in 100 (c)R
158.595 KM	158.077KM	0.518KM	1 in 200 R
158.077KM	156.987KM	1.09KM	Level
156.987KM	156.19KM	0.789KM	1 in 200 R
156.198KM	156.186KM	0.012KM	1 in 100 (c)R
156.186KM	Into section	-	Level

b) From CCB towards SPRD:

CHAINAGE		INTER DISTANCE	GRADIENT
FROM	TO		
161.4670	161.5390KM	0.720 KM	1 in 260 F
161.539KM	162.553KM	0.684 KM	1 in 100 F
162.553KM	163.20KM	0.647 KM	Level
163.20KM	Into section	-	1 in 823 R

2.5 LAYOUT:

a) This cabin is situated at KM 161.467 as reckoned from KRPU and at Km 331.269 from Raipur on KRPU-RGDA line. This is a junction cabin for controlling UP and DN trains on KR line and tie line. A 1 in 12 cross over is provided between KR line and tie line to facilitate movement of trains to and from the line. The cross over point is motor operated from panel of 'A' cabin. The tie line is terminated in to a Sand hump towards KTGA end.

b) No berthing line is provided and hence no train is booked to stop here either on tie line or on lines connected to other direction and no passenger platform is provided.

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

There is no berthing facility is provided at this cabin. However, trains can be admitted on to the Tie line from THV end by setting Point No 20 towards sand hump for reception/dispatch of trains from SPRD or KTGA over KR line. The CSL of the Tie line is 2070 Mtr.s.

DIRECTION OF TRAFFIC:

a) Trains coming from SPRD and THV and proceeding towards KTGA are UP trains.
b) Trains coming from KTGA and proceeding towards SPRD and THV are DN trains.
c) No berthing lines, provided and hence no holding capacity is specified.

2.6 Level Crossings: NIL

3.0 SYSTEM OF WORKING & MEANS OF COMMUNICATION:

System of Working in force	Absolute Block System of Working.
Double Line/Single Line	Single Line.
Block Instruments	Diode type token less block instruments are provided in between Tie line Block Hut A cabin-KTGA & Tie line Block Hut 'A' cabin-SPRD.
Inter Slotting Arrangement	Inter slot arrangement is provided for section Tie line SPRD A cabin-Tie line SPRD 'B' cabin through operation of panel buttons
Co-operative/Non Co-operative	Co-operative.
Block Telephone	Attached with Block Instruments.
Staff responsible for custody of key and operations.	SM on duty

4.0 SYSTEM OF SIGNALLING AND INTERLOCKING:

1.	Standard of Interlocking	Standard-II (R).
2.	Type of signaling	MACLS
3.	Mode of operating the signals	Panel Interlocking
4.	Provision of Calling-On signals	Miniature colour light Calling-on signal is provided below the Home signals in terms of GR.3.13 (1)(b), (2)(3)(4) & (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 calling on Signal is cleared after a lapse of 60 seconds provided other conditions are fulfilled. (The detailed procedure is given in Para 11 of Appendix-B)

5.	Provision of shunt signals	Independent shunt signals SH-4 is provided towards KTGA end.
6.	Track circuits	Main line and point zones are track circuited as 1AT, 1T, 11AT, 20AT, 15AT, 2T and 2AT When a signal is cleared the route indication 'Yellow' strip appears for the particular route set and 'Red' light appears as the train occupies the track circuit.
7.	Axle counters	High Availability Single Section Digital axle counter (HASSDAC) for last vehicle verification provided in between SPRD'A' Cabin- KTGA Block section. Single Section Digital Axle Counter (SSDAC) is provided in between provided in between SPRD'A' Cabin- SPRD Block section for last vehicle verification. Analog Axle Counter TLXT is provided on Tie-line between SPRD-A/Cabin & SPRD-B/Cabin. Indications for the above axle counters are available on Panel at SM's office. The occupation and clearance of the axle counter section is indicated on the Panel by Red and Green respectively. If the Axle counter zone shows occupation indication (Red) continuously on Panel after passage of train due to failure of the same, then SS/SM on duty shall initiate resetting procedure after physical verification. Refer Para No. 30 of Appendix-B
8.	Crank Handles	When any point fails to operate normally by the Route Setting operation through Panel, it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa. The procedure for use of crank handle for motor operated points shall be followed as per operating manual chapter-2, para-2.18 & 2.19 and Para No13.3 of Appendix 'B' of this SWR. CH2- 20 A/B
9.	Emergency Point operation	Emergency point operation facility is provided to operate the point from the Panel in case of failure of point controlling track circuit/Axle Counter. For emergency operation of point the procedure laid down in Para No.13.3 of Appendix-'B' shall be followed. Each operation of emergency point operation shall be recorded in the TSR, station diary and in the register meant for this purpose.
10.	Block Instruments	a) TLBI Instruments are provided for block sections SPRD A Cabin- SPRD & SPRD A Cabin- KTGA.

		b) Inter slotting arrangement are given between SPRD 'A' Cabin- SPRD 'B' Cabin for reception and dispatch of trains over Tie line. c) Telephone attached to Block instruments connecting the adjoining block stations concerned. d) 'ON' aspect of UP/DN Home & UP/DN Adv.str signals are proved in respective block instruments and Slots. e) Custody of block instrument keys: One key will be with SM on duty and the other with S&T maintainer.
11.	Emergency Route Release Operation.	This panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such, when a route is set and signal is taken off on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken off vide SR 3.36.02 (a), the concerned signal must be put back to danger by pressing the Signal cancellation button and the concerned signal button. Then the emergency route release button (white with red dot) positioned in the top of panel 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 station diary and in the train signal register.

12.	Emergency crank Handle Release Operation.	Emergency crank handle release operation facility is provided to operate the point by using the crank handle in case of Route locked condition. Procedure as per Para 13.3 and 23 to 24.5.1 of Appendix 'B' to be followed. Each operation of emergency crank handle operation shall be recorded in the station diary and in the register meant for this purpose.

4.1 CUSTODY OF RELAY ROOM KEY/RELAY HUBS/GOOMTIES/GATE GOOMTIES/CABIN HOUSING ETC. 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.

4.2 POWER SUPPLY:

Normal power supply to the S&T installation is drawn from local supply. Standby power supply is from Diesel Generator.

i. For IPS system which provides supply to El, a manual changeover switch is provided at SM's Office with the two power supplies viz, selected supply from CLS panel and DG supply for changing the switch to required supply position manually.
ii. Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency, changeover switch is changed to DG supply position by on duty SM.
iii. There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

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

a) 50% depth of discharge (DOD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
b) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition 1.
c) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC-DC converters continue working. Audio alarm continues till power supply is restored.
d) Any of the module fails, which calls for 'call S&T".

e) Whenever there is a failure of power supply in AT or Local 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 AT and Local and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

To acknowledge the indication on panel two push buttons are provided. Besides this the panel also has digital display of IPS battery voltage.

Whenever alarm appears on the Panel due to any fault in the IPS system or due to low battery voltage on duty shall acknowledge the alarm by pressing the push button provided on the panel. Pressing on the push button shall mute the buzzer but relevant indication will continue to show till the fault is rectified by S&T staff. After acknowledgement of the alarm on duty SM shall immediately inform S&T staff at station regarding the alarm.

5. TELECOMMUNICATIONS:

a) Telephone attached to Token less Block instrument connected to adjacent block stations SPRD and KTGA and Block token instrument connected to *A' Cabin.
b) Magneto phone connected to the adjacent block station SPRD, KTGA and 'B' Cabin.
c) The Cabin is connected to KRPU-RGDA control circuit.
d) The Cabin is connected to OEC-KRPU traction power control circuit.
e) 25w VHF set is provided at the station for emergency communication.
f) The Station is provided with CUG telephone

5.1 FAILURE OF COMMUNICATIONS:

a) In the event of partial failure of communications SR 6.02.06 shall be observed.
b) In the event of total failure of communications SR 6.02.04 shall be observed.

6.0 <u>SYSTEM OF TRAIN WORKING:</u>

6.1 DUTIES OF TRAIN WORKING STAFF:

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

<u>TRAIN WORKING STAFF IN EACH SHIFT</u>:

<u>STAFF IN EACH SHIFT:</u>

The following is the complement of Operating staff working in each shift.

SS/SM	1
TPM	1

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

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

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

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

6.1.3 ASSURANCE OF STAFF IN ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station shall, make a written declaration in the Assurance Register that they have read 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 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 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 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 SM (In-Charge).

Fresh assurance shall be obtained in the Assurance Register when:

1. He joins at the station as a new member.
2. There is any change in the Station Working Rules.
3. He resumes duty at the station after an absence of 15 consecutive days or more.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

a) The trains are worked under Absolute block system of single line working as per the conditions laid in GR.8.01 (1) (a) & (c), 8.01(2)(b), 8.03(2)(a)(b) & (c)(ii), GR 14.10 & BWM chapter V.

b) Line shall not be considered clear and line clear for an UP train shall not be given unless.
   i. The whole of the last preceding UP train has arrived complete at KTGA and LC has been obtained by SM/KTGA.
   ii. UP home signal No. 1 is put back to ON.

c) Line shall not be considered clear and line clear for a Down train shall not be given unless.
   i. The whole of the last preceding down train has arrived complete at SPRD and L/C has been obtained by SM/SPRD.
   ii. Down home signal No. 2 A/B put back to ON.

6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING:

a) The SM on duty shall ensure clearance of the line from home signal to the last stop signal in that particular direction and also section ahead up to the adjacent block station is clear.

b) He should obtain line clear from the adjacent block station and all the signals ahead is/are taken off. Since no berthing position is available.

6.2.2 SETTING OF POINTS AGAINST BLOCKED LINE:
No berthing of trains at the station.

6.2.3 RECEPTION OF TRAIN ON BLOCKED LINE:
The rules laid down in GR 5.09 and relevant SRS shall be followed.

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

SPECIAL RESTRICTIONS:

a) The Sand hump portion must not be used for stabling of vehicles or harboring an Engine with or without vehicles.
b) Motor trollies on following Line clear shall not be permitted between 'A' cabin and 'B' cabin.
c) Whenever any train is booked to pass between 'A' cabin and "B" cabins, no train shall be allowed to leave Singapura road and vice versa.
d) The Station Master on duty at both 'A' cabin and 'B' cabin of Tie line shall obtain permission from each other for granting Line clear for a train to pass over Tie line by exchanging Private Numbers, so that it should not be possible for both 'A' cabin and 'B' cabins to grant Line clear to Keutguda and Therubali at a time for trains booked to move over Tie line.
e) Movement of trains should be so regulated that there is no scope of 'Stalling or 'rolling back' in view of steep gradient.
f) Stabling of trains is not permitted on the Tie Line.

SPECIAL INSTRUCTIONS:

a) The sand hump shall not be used for stabling of vehicles or harboring an engine.
b) Due to steep gradients, holding of trains on tie lines is not permitted.
c) No electric locomotives with pantograph raised shall be allowed into unwired section.

6.2.5 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO ON:
Station Master should ensure that the signal is put back to "ON" after passage of train as per GR 3.36(2)(b)

6.3 SIMULTANEOUS RECEPTION DESPATCH, CROSSING AND PRECEDENCE OF TRAINS:

No Provision.

6.4 COMPLETE ARRIVAL OF TRAINS:

FOR SECTION: SPRD A CABIN-KTGA:

High Availability Single Section Digital axle counter (HASSDAC) for last vehicle verification provided in between SPRD'A' Cabin- KTGA Block section. One pair just beyond UP advanced starter signal No. 15 on 2T Track Circuit portion of

SPRD'A' Cabin and another beyond UP Home signal of KTGA on 1T1 Track Circuit portion for last vehicle verification.

FOR SECTION: SPRD A CABIN-SPRD:

Single Section Digital Axle Counter (SSDAC) is provided in between provided in between SPRD'A' Cabin- SPRD Block section for last vehicle verification. One just beyond DN advanced starter signal No. 16 on 1T Track Circuit portion of SPRD'A' Cabin and another beyond DN Home signal of SPRD on 3T Track Circuit portion for last vehicle verification

For section: SPRD A Cabin- SPRD B Cabin:
Analog Axle Counter TLXT is provided on Tie-line between SPRD-A/Cabin & SPRD-B/Cabin. One just beyond UP starter signal on Track Circuit portion of SPRD'A' Cabin and another beyond Starter signal No. 38 of SPRD 'B' cabin Track Circuit portion for last vehicle verification.
The position of the block section whether 'clear' or 'occupied' is reflected on the axle counter reset box provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when block section is occupied. Whenever a train enters into the block section "Block section clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

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

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

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

In case of failure of Axle counter the SM on duty shall obtain complete arrival certificate from the guard of the train in the complete arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide GR 4.17 (1) that the train had arrived completely. In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until complete arrival Certificate is received from the station in advance supported by a private number.

Train passing on adjacent line shall be stopped and Guard & Loco pilot shall be issued with caution order to proceed cautiously and stop sort of any

obstruction as per SR.4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03 (b) (vi).

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

6.5 DISPATCH OF TRAINS:
No train is booked to stop.

6.6 WORKING IN CASE OF FAILURE:

Track Circuits	In case failure of track circuits, the clearance of the concerned line should be ensured physically by the SM on duty before a train is piloted.
Axle Counters	If the axle counter fails between the block sections, resetting procedure should be adopted as per Para 6.1 of APP-B. If the axle counter indication does not appear 'GREEN & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for their rectification.
Block Instruments	In the event of failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR (Refer SR 6.02.03 & 6.02.06) and BWM 6.22.
Reception of a train on obstructed line	Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2)(a) or if calling signal cannot be taken off, trains are to be piloted as per GR 5.09(2)(C)(3)(4) (5) and SR 5.09.01.
Reception of a train on non-signaled line	Nil
Defective Signals	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71 and SR 3.68.01 (c) shall be followed. In case of disconnection of signal and interlocking for repairs and maintenance procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, station master on duty shall before giving line clear initiate action in accordance with the procedure laid down in GR and the relevant SRs (Refer 3.49 (4), 3.69, 3.70, 3.71, 3.74 & 3.76).
Defective Interlocking	When interlocking becomes defective the SS/SM on duty shall be responsible and personally supervise the setting, clamping and pad locking of points for admission or dispatch of trains and follow procedure laid in G&SR3.69.01 & 3.69.03(c).
Defective/Damaged Points	When any point fails to operate normally by the route setting operation or individually through 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 the use of crank handle shall be followed. Procedure prescribed in GR 3.77 and relevant SR shall be followed. **Note:** When any point indication is failed after operation from normal to reverse or reverse to normal, If It's indication flashing in VDU/Panel or else, the point has to be considered as failure and movements of trains over this point should be carefully by proper clamping and padlocking for that route. Information is to be given to S&T department to attend the failure by issuing written failure memo. After receiving fit certificate, proper testing is to be done then only movements over this point to be allowed.
Defective IBS signal	Nil

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

a) The section where Axle Counters are provided in Lieu of track Circuits, trolleys, Motor trolleys, Lorries etc., which are not insulated, shall not be allowed to run except on Line clear.

b) Motor trolleys shall be worked as per GR 15.25 and SR thereto, BWM 5.39, 5.40, 5.41 and circulars and orders issued from time to time.

c) Material Lorries shall be worked as per GR 15.27 and SRs thereto and in accordance with the provisions of Block Working Manual.

d) Tower Wagon/OHE cars shall be worked as per GR 17.08 and SR thereto and BWM 5.39.

(7) BLOCKING OF THE LINES:

-Not Applicable-

(8) SHUNTING:

Normally, No Shunting is permitted in this station as no berthing line is available. But, in case of emergency Engine is to be attached leading on falling side of the gradient. GR 5.20(b) is to be strictly followed.

GENERAL PRECAUTIONS :

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, to 5.23, 8.05, 8.06, 8.14 and 8.15 with relevant SRs and BWM 3.15, 5.36,5.37 & 5.38 shall be followed.

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

SHUNTING IN THE FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is strictly prohibited. Vide GR 8.09 & SR thereto.

PROHIBITION OF SHUNTING - SPECIAL FEATURES:

a) Hand shunting is prohibited at both ends of the yard.
b) Fly shunting is prohibited at both ends of the yard.
c) The over-run line, sand hump/slip siding/catch siding must not be used for stabling of vehicles or harbouring an engine with or without vehicles.
d) Shunting shall not be permitted at either end of the yard unless the engine is leading towards falling gradient.
e) SR 5.14.02, 5.23.1(b), 5.23.01(c) shall be followed before detaching the engine from the rack.

8.4 SHUNTING ON SINGLE LINE:

a) Within last stop signal and opposite first stop signal: Governed by GR 8.12.
b) 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.
c) During failure of block instrument on single line: Block back messages shall be exchanged between station masters 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.

9.0 ABNORMAL CONDITIONS:

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

i) During partial interruption of communications train shall be worked in accordance with SR 6.02.06.

ii) **The authority to proceed in the occupied block section in case of obstruction of line or accident etc.**The procedure laid down in SR 06.02.05 shall be followed.

iii) **Trains delayed in block section.**
The procedure laid down in GR 6.04 and SR there on shall be followed.

iv) **Failure of axle counter block / BPAC:**
The block section between JGPM-CCJS (VSP L-2), JGPM-GPT & JGPM-DVD are controlled by block proving Axle counters. When the block proving Axle counters (BPAC) fail to prove the clearance of the block section between JGPM and the station at other end no train shall be allowed into the concerned section unless the last train arrived complete at the station in advance and complete arrival confirmed by the station master on duty at the station in advance support by private number.
The procedure for resetting of Axle counters given in Appendix 'B' shall be followed for resuming normal working.
In bridge axle counter portion of 41AXT & 41AXT1 physical verification to be done and procedure for resetting to be followed as given in the appendix B.

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

i) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points is mentioned in Para No. 5.3 of Appendix-'B' of this SWR.

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

ii) **PROCEDURE FOR EMERGENCY OPERATION OF POINTS WITH POINT ZONE TRACK CIRCUIT/AXLE COUNTER FAILURE AND EMERGENCY ROUTE RELEASE:**

The detailed Procedure for emergency operation of points in case of failure of Point Zone track section is mentioned in Para No.5.2, 5.2.1 and 5.2.2 of Appendix-'B' of this SWR. Rules regarding locking of points and damaged points vide GR 3.39 and GR 3.77 to be followed.

iii) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL OPERATION IS INITIATED:-**

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

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

a) 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.

b) The entries in failure register to be done with message to the section controller.

14.1 TOTAL FAILURE OF COMMUNICATIONS:

In the event of total failure of communications SR 6.02.04 shall be observed for allowing trains.

14.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

Not Applicable

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

a) During total interruption of communications, while allowing the trains under authority to proceed without line clear, the relevant provisions under SR 6.02.04 shall be followed. The last stop signal shall not be taken "OFF" but an authority to pass the last stop signal at 'ON' in the prescribed Form T/B 602 shall be issued.

b) **ISSUE OF BLOCK TICKET (T/A 602):** Rules and regulations for working train on an obstructed line to assist the crippled train or an accident on the authority of block ticket (T/A-602) when communications are available shall be followed, in accordance with the provisions of SR 6.02.05.

15.0 VISIBILITY TEST OBJECT:

The V.T.O. Posts during day and illuminated at night erected a distance of 180 M. on both sides of A Cabin are earmarked to serve as Visibility test object in terms of GR 3.61(2)(b)(i).

16.0 ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

17.0 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG :

(i) During thick, foggy or tempestuous weather impairing visibility of the Signals the SM on duty shall initiate action to depute Fog signal man with detonators vide GR 3.61 in order to indicate the location of the station approach signals to the Loco pilot of an approaching train.

(ii) The fog signal man shall be proceeding to the 1st stop signal of the station and place one detonator at a distance of 270M from the 1st approaching stop signal towards the approaching train and another detonator at a distance of 10M from the 1st one and he shall stand 45M away from the detonator.

(iii) The fog signal man shall be permanent employee, no temporary or casual labour shall be deployed as fog signal man.

(iv) The assurance of fog signal man available at the station (including engineering branch if available) shall be obtained in the fog signal register every year in the month of "OCTOBER".

(v) Details of supply of detonators available stock, use and testing etc., shall be maintained in the fog signal register of the station as per GR 3.64 and SRs there to.

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

18.0 APPENDICES

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

APPENDIX-'A'

APPENDIX 'A' WORKING OF LEVEL CROSSING GATES

---NIL---

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX-B

SYSTEM OF SIGNALLING AND INTERLOCKING AND TELECOMMUNICATIONS 'A' CABIN OF TIE LINE BETWEEN KTGA AND SPRD

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

1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALATION:

This is a Special Class station with Standard-III interlocking (with isolation). The points and signals are power operated from a composite miniature full-fledged panel installed in the station master's office. This station is equipped with manually operated multi aspect colour light signaling.

1.1. DISCRIPTION OF PANEL:

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

1.2. When a point is set and locked correctly in normal position, a white steady strip indication on normal point zone appears suggesting that the point is in normal position.

1.3. When a point is set and locked correctly in reverse position, a white steady strip indication on reverse point zone appears suggesting that the point is in reverse position.

1.4. When the points of any route have been correctly set and relevant signal taken 'OFF' a 'RED' indication appears indicating that the concerned points are locked either in Normal or Reverse Position as the case may be and also in the event of failure of points, track circuits the 'RED indication appears. With the RED indication over point switch the point cannot be altered unless a specific course is taken.

1.5. When the points not set and locked either in Normal or Reverse correctly the Normal or Reverse indication will not be there but the 'RED' lock indication will start flashing till such time the point is housed properly in one of the positions. This RED lock indication will flash during operation of point.

1.6. OPERATION OF POINTS:

Points is operated to normal or reverse by pressing the point button 20WN. When the point is required to be set in reverse the concerned button is to be pressed in conjunction with common "OUN' button where by the Red indication will start flashing till the points are set to

reverse position and locked. Then the green indication will remain stable. The concerned point switch must remain in the last operated position till such time the particular movement is completed or otherwise cancelled. RED indication glows when point is locked after taking "OFF" signals for the said route or due to failure of track circuit over the point zone. In this position points cannot be operated unless recourse is taken for emergency operation.

1.7. Points are operated by Electric point machines which have got built lock up arrangements and detection.

2. In the event of the point could not be set in the desired position, the said point is to be checked by the Station Master on duty according to G&SR 3.68.01(c) and if there is a defect other than obstruction the point has to be considered as defective and action shall be taken for clamping and pad locking these points in the desired position by the Station Master on duty himself for all trains according to SR 3.69.03(c).

2.1 DESCRIPTION OF POINT SWITCHES (TWO POSITIONS):

SL. NO.	POINT BUTTON NO.	COLOUR	DESCRIPTION
1	20	Black	Cross over point between Main Line of Tie line 'A' cabin & tie line between A & B cabin.

3. SIGNAL BUTTONS:

Individual signal buttons are provided for each signal on the panel. These buttons are Red in color for Main signals. For taking off a signal, the signal button is to be pressed along with concerned Route button simultaneously.

DESCRIPTION OF SIGNAL BUTTONS

SL NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	C1	Red with white dot Red.	UP Calling On signal to KTGA.
2	S1	Red	UP Home signal lead to KTGA
3	C2	Red with white dot	DN calling on signal lead to SPRD or Tie line.
4	S2	Red	DN home signal leading to SPRD or tie line
5	S9	Red	Up starter from tie line to KTGA.
6	S11	Red	Up starter on tie line to KTGA
7	S15	Red	Up adv starter leading to KTGA.
8	S16	Red	DN adv starter cum DN distant of

9	SH4	Yellow	SPRD Shunt signal on KR line towards KTGA.

3.1 SIGNAL INDICATION:
The aspect of signal as obtained at any time is shown on the panel on the Signal indication (along side of the track).

4. ROUTE BUTTONS:
Route buttons are provided separately on each running line on the panel for indication of route (Viz. A, B, IIAT UN). Common route buttons are also provided for taking off starter (Viz 15AT UN). An individual route button is provided for taking off advance starters (viz. 15UN and 16 UN). For clearing the signal, it is necessary to operate the signal button and the concerned route button concurrently.

4.1 DESCRIPTIONS OF ROUTE BUTTONS:

SL NO.	BUTTON NO	COLOUR	DESCRIPTION
1	A-UN	GREY	Common route button for Da Home signal and Calling-On signal for Tie line.
2	B-UN	GREY	Common route button for Dn Home signal and Calling-On signal for SPRD.
3	11 AT UN	GREY	Common route button for UP home and calling on signal no.1 leading to signal no. 11 on KR line.
4	11 AT UN	GREY	Common route button for UP starter no. 9 and 11 no.
5	15-UN	GREY	Grey Route button for Up advanced starter No. 15.
6	16-UN	GREY	Grey Route button for Dn advanced starter No. 16.

4.2 TRAIN ARRIVAL INDICATION:
Train arrival indications are provided separately for UP and Down trains at the respective ends on the panel. As the trains arrives into the yard a "Green" indication illuminates. This illumination shall remain till the route is released. No audible indication is provided.

However this indication cannot be construed to indicate complete arrival of the train. (The procedure of confirming complete arrival is given in the item 6.6 of main SWR).

4.3 TRAINS ENTERING BLOCK SECTION INDICATION:

When a train is despatched under a due process of obtaining line clear on block instrument are by taking "OFF" last stop signal a train Entering Section indication a While Light appears on the panel at the respective ends. The white light shall remain illuminated till the concerned block instrument is normalised. In the event of failure of

block instrument/Advanced starter no such indication appears on the panel.

DESCRIPTION OF PANEL BUTTONS AND INDICATIONS ETC:
Apart from the above paras the following buttons indications are provided on the panel.

SL NO.	BUTTON NO	COLOUR	DESCRIPTION
1	GROUP (Trans)	White with Black dot	Common trans button for crank handle trans control
2	GROUP (Released)	White with Black dot	Common release button for crank handle release Blue control
3	CH-2	Blue	Crank handle for Point No 20.
4	Signal lamp failure Ack.	Red with White dot.	For acknowledging the signal lamp failure
5	Button held Ack.	White with Red dot	To be pressed to stop the buzzer in case of any button held.
6	Signal cancellation	Red	For cancellation of signal, this is a common Cancellation button to be pressed in conjunction with the intended signal button for which cancellation is required.
7	Emergency of point operation button.	Black with Red dot	For operation of points in the event of failure of Emergency of track circuit or point zone.
8	COGGN counter	--	Every initiation of Calling On signal will be counted by this counter.
9	--	Red	Emergency route cancellation button
10	EUYN counter	--	Every initiation of route cancellation will be registered by this counter.
11	'P' Ack	Red	Power acknowledgement button. The failure of power supply is indicated by a buzzer and a Red light over the "P" Ack button. When the "P" Ack button is pressed, the Buzzer is stops but Red Light, continues to glow till the power supply is restored

5.0 POWER FAILURE INDICATION BUZZER AND POWER ACKNOWLEDGEMENT:

Normal power supply is from AT supply. If AT supply fails, a Red indication appears on the panel along with an audible Buzzer. The SM shall change over the switch to generator supply.

When normal Auxiliary Transformer power supply is restored an audible Buzzer alarm rings and the RED light on the panel extinguished. The SM shall operate the change over switch and press the acknowledgement button to stop the audible Buzzer.

5.1 POINT FAILURE BUZZER/POINT FAILURE MUTTING BUTTON (BLACK):

Whenever there is failure of point due to non-setting, point failure indication "RED" appears on the panel besides audible alarm. The alarm stops when the point failure button is pressed, but the 'RED' indication remains to glow. The defective point can be identified by a flashing light indication at the concerned point switch. After the failure is rectified the 'RED' indication disappears.

5.2 LED SIGNAL FAILURE INDICATION (RED SIGNAL LAMP MUTTING BUTTON RED WITH WHITE DOT:

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

6. CALLING ON COUNTER:

The calling on signal counter provided on the panel, registers a consecutive higher number every time a "CALLING ON SIGNAL is taken off. The Station Master must record the last number registered on the counter while taking over/handing over duty.

6.1 EMERGENCY ROUTE RELEASE COUNTER:

This counter is provided to register the number of operations made for emergency cancellation of route or release of route. The Station Master on duty must record the last number registered on the counter while taking over/handing over charge.

6.2 EMERGENCY RELEASE INDICATION/EMERGENCY ROUTE RELEASE BUTTON (GREEN):

This panel interlocking is based on the principle of 'Dead approach locking. As such when a route is set and signal is taken off or the route, the route gets locked. Normally the route is released by the passage of the train on the route. But when it becomes necessary to alter the route after the signal has been taken off the concerned signal must be put back to danger by turning the relevant signal switch to "ON". Then the concerned route button and the emergency route release button after breaking seal are pressed simultaneously for two to three seconds and released. The emergency route release counter will register one high number for every such operation. After a time lapse of 120 seconds 'White' light indication appears at the emergency route release indication counter. The station master must again press the concerned route button for two to three seconds and

release thereby the white strip of lights along the route on the panel will disappear suggesting that the route is cancelled or released.

In the event of normal passage of train the route gets released by normalizing the concerned signal switch. In such case if 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 should be restored to. The concerned S&T staff should be advised immediately to get the emergency route release button sealed after rectification of fault if any.

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

7. STATION MASTER'S PANEL CONTROL KEY:

The panel is also fitted with Station Master's lock up key to prevent unauthorized operation of this panel. The SM on duty is the only authorized person to operate the panel and the panel key shall always remain in his personal custody vide SR 3.36.03 and GR 5.08.

The key locks the panel board either in operated position of points and signals or in normal position.

In case of emergency, signals can be put back to danger by operating concerned signal switch to "ON" position without releasing the panel lock however the provisions of SR 3.36.02 shall be followed while replacing the signals to "ON".

8. CRANK HANDLES:

When any point is not being operated normally by concerned point switch through panel it is inevitable to operate the point with crank handle, and clamping and padlocking both facing and trailing points shall be ensured by Station Master on duty personally. Crank handles are interlocked with signals and interlocking system. Normally the crank handle is held locked in the RKT instrument in location goomty provided at either end of the yard.

There are two crank handles one for each end. Two position thumb switches (blue in colour) provided at the bottom of the panel board. These switches have three indications, viz. White, Green 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 Green indication suggests that the crank handle key is free from extraction from RKT. This is called "Crank Handle Key free Indication.

The RED indication suggests that the 'crank handle key is extracted from RKT. This is called 'Key Out indication. The key out 'RED indication of the crank handle locks all reception and departure signals of the respective end in their normal position.

The crank handle is revitted to the key in RKT. The crank handle can be released from RKT at the goomty by operation of crank handle control switch to key out position by Station Master and by pressing "B" button which releases the crank handle.

The TPM after extracting the crank handle, (revitted to the RKT key) will operate the required points to the desired position, after the work is over the TPM shall transmit the key back to Station Master on duty through RKT. The Station Master on duty shall turn the crank handle control switch to key 'IN' position where by a 'White' light indication appears on the panel suggesting that the key in 'IN'.

The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for immediate rectification.

The procedure for use of crank handle for Motor operated pointed points shall be followed in terms of Operation Manual 20.06.

9. SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS:

For setting a route all the concerned points must be set by operation of relevant point switches one at a time in the desired position.

After the points are set in the required position the concerned signal switch is to be turned to 'OFF' position and the relevant route button is pressed simultaneously and released. This will clear signals for the concerned route and a white strip of light will appear on the entire route, suggesting that the route is set, locked and signal taken 'OFF.

10. SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:

For setting off particular route for departure of a train all the concerned points must be set by operation of relevant point switches one at a time in the desired position.

To take off advanced starter line clear must be obtained from adjacent station. That the concerned advanced starter signal switch is to be turned to "OFF" position and at the same time advanced starter route button to be pressed for two to three seconds and released. This will clear the advanced starter signal and a white strip of light will appear on the panel upto the foot of the home signal.

To take off the starter signal the concerned signal switch to be turned to "OFF" position and at the same time common route button to be pressed for two to three seconds and released. This will clear starter signal and a white strip of light will appear on the route frame the concerned starter to the advanced starter.

11. TAKING OFF CALLING ON SIGNALS:

Miniature colour light calling on signal is provided below the home signal in terms of GR 3.13(6)(b).

A calling on signal shows no light in the "ON" position. A calling on signal is taken "OFF" for reception of a train when the home signal above it cannot be taken "OFF" due to failure or any other reason:

To take off calling on signal the train must come to a stop at the foot of the home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit a RED strip light will appear on the panel. The particular route on which train is intended to be received shall be set by operating concerned point switches or by crank handling in the event of failure of operation of points through panel switches. After the route is set, the calling on signal switch "C1" or "C2" (Red with white dot) as the case may be to be tumed to "OFF" position and simultaneously the concerned route button should also be pressed for two to three seconds and released.

After a lapse of 120 seconds the calling on signals clears i.e. a white light glows at the concerned calling on signal on the panel. The calling ON counter will register a consecutive higher number for every such operation, which shall be recorded in diary & Train signal register.

12. RELEASE/CANCELLATION OF ROUTE:

Normally when a train is received on any route and despatched the route will remain illuminated "White". To cancel/release the route the concerned signal switch only should be normalised. Then the route illumination will disappear suggestion that the route is cancelled released.

12.1. REPLACEMENT OF SIGNALS TO “ON":

Signals are replaced to 'ON' automatically by the passage of a train past the signal. It will not be possible to reclear the signal again unless the process for clearing the signal is repeated again.

For replace of any signal to "ON" position manually the respective signal switch has to be turned to "ON" position.

12.2. INTERLOCKING OF SIGNAL POINTS:
All running line points are fitted with facing point locks in the point machines and plunger type locks for the derailing switches where separate point machines are provided and all the electrically detected by the relevant home signal and starters.

12.3. Advanced starters are interlocked with respective block instrument in sending position i.e. train going to position.

12.4. Home signal is interlocked with block instrument. The block instrument cannot be made normal unless the respective home signal is in Normal Position.

12.5. Signals once taken OFF can be put back to danger in case of emergency by turning the concerned signal switch even when the panel is locked up with Station Master's key.

12.6. PILOTING OF TRAINS:

In the event of failure of both home signal and calling ON signal simultaneously, it is inevitable to pilot the train "IN". For piloting the train, the setting of route must be ensured SM on duty personally and concerned points must be clamped and padlocked at both facing and trailing end.

Facing and corresponding trailing end of the all motor operated points must be clamped and padlocked while piloting "IN" or "OUT' and during non signaled move.

13. TRACK CIRCUITS:

The Station yard is provided with track circuits over Point Zones and running lines as also track circuit between Home and top points, including 5 rail length track circuits ahead of Home Signal for Calling on' Signals.

The track circuits between Home and top points will function as LVT and FVT for automatic replacement of Home/Advanced starter to normal position. These track circuits will also function for release/locking of the Block instruments.

13.1. The system of signaling between 'A' cabin and 'B' Cabin on tie line is through inter-slotting.

The line between 'A' cabin and 'B' Cabin is completely track circuited. The system of inter-locking is one train one slot system.

When a DN train has to be received and dispatched from 'A' cabin to 'B' cabin on he on duty SM at 'A' cabin will contact 'B' cabin on duty SM on magneto phone and inform about that fact and turn the request slot switch No.22 to off position.

On duty SM at 'B' cabin then in turn will obtain line clear from Therubali and take Advanced starter No 44 and starter No.38 and turn his slot switch No.54 ain home signal 1B or switch No.56 for calling ON signal CIB of 'A' cabin. 'A' SM will get slot indication and thereafter will take off his home signal 18 or s the case may be.

When an UP train has to be received and dispatched from 'B' cabin to Keutguda on tie line the on duty SM at 'B' cabin will contact 'A' cabin on fluty SM on magneto Telephone and inform him about that fact, and turn the request switch no. 53 to "OFF".

On duty SM at 'A' cabin will in turn obtain line clear from KTGA and take off Up advanced starter No 15 and starter signal No 9 and Its slot switch No.23 for Main home signal 31 B or switch No.25 for calling signal C31B of 'B' cabin. 'B' cabin SM will get slot indication and thereafter take off his home signal 31B or C31B as the case may be.

13.2. VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTIONOF TRAIN INTO STATION YARD:

In the Station Yard a route on the running line comprises of entrance, berthing and despatch portion of the yard and this portion of the yard should be clear of any obstruction for the passages of any train or for any other movement. The clearance of the route including over-lap must be ensured by the SM on duty personally through luminous indications of track circuits and Axle counter for all trains before any movement is permitted on the concerned route subject to the other conditions such as locking of the points etc.

13.3. CRANK HANDLE FOR EMERGENCY OPERATION OF POINTS:

Crank handle is inter locked with the signalling and inter locking system at this and the crank handle which is normally locked up in the RKT instrument at the East and West goomty can be taken out when the signals, given for the connected route, are in the normal position and the route is not locked for any reason. Even when the route is locked the crank handle can be extracted from the RKT through emergency operation by pressing crank handle button along with Group Trans button. The release can be affected by pressing the push button for its release and when this key is taken out the signals leading over the particular point in either direction cannot be taken off.

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

14 EMERGENCY OPERATIONS:

The following are the instructions for Emergency operations.

14.1 CANCELLATION BUTTON OR VEEDER COUNTER:

For the purpose of the emergencies operations there is an emergency Route cancellation and also there is a veeder 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 required. A yellow indication will appear below the signal indicating that the timer has started operation and after lapse of 120 seconds. The desired route will be released provided all other conditions are favourable for the route release.

14.2 The numbers on the veeder counter register the number of operations performed for such emergency cancellation and the Station Master on duty should 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:

14.3 CANCELLATION OF UNINTENDED LOCKING OF POINTS:

Whenever there is un intended locking of any points (indicated by RED indication lamp near the concerned point) such a locking has to be released (after the concerned signal are in the normal position) by concurrently pressing the Emergency Group cancellation button (provided at the counter of the panel) and the concerned signal button provided the track circuits are clear and are in working condition. This operation is counted on the veeder counter/counter as already pointer out.

14.4 CANCELLATION OF LOCKING OF ROUTE AND POINTS AFTER THE SINGAL HAS BEEN PUT BACK TO "ON":

OR

THE SIGNAL HAS GONE BACK TO ON EITHER AFTER THE MOVEMENT OF THE TRAIN IS CANCELLED:

OR

THE TRAIN HAS COME TO A STOP OUT SIDE THE STOP SIGNAL:

In case the route is set and the signal is taken off and if it is warranted that the signal has to be put back to ON and cancel the route.

a) Firstly the signal has to be put back to the ON position.
b) Emergency route cancellation operation must be initiated as detailed in para 6.2.

15. EMERGENCY OPERATIONS:

Cancellation of the locking of points not released after the passage of the train for any reason. If the locking of the route does not get released for any reason on 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 and signal buttons are in normal position.
b) Operation as detailed in para 8.1 to be followed.

16. INTERLOCKING OF SIGNALS:

16.1. All running line points are fitted with point machine and are electrically detected by the relevant Home signals and starters.

16.2 Advanced- starters are interlocked with respective Single line token block instrument in LINE CLEAR position.

16.3 Home signals are interlocked with respective Single line token block instrument. The Block instruments cannot be made to normal unless the respective Home signals are in Normal position.

16.4 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 Master's key.

17. LOCKING OF RELAY ROOM /RELAY HUBS/GOOMTIES/GATE GOOMTIES/CABIN HOUSING ETC. AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF:

17.1 Relay room key/relay hubs/goomties/Gate goomties/cabin housing at this is provided with double locks (Two independent locks) as 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, one key shall be kept with the Signal Maintainer of the section and the other with Station Master on duty. The Relay room key/relay hubs/goomties/Gate goomties/cabin housing cannot be opened unless both keys are used.

17.2 The Station Master shall ensure that the Relay room key/relay hubs/goomties/Gate goomties/cabin housing is given to maintenance staff under clear signature as and when required for their normal maintenance and special works and that the key should be returned by the staff immediately after completion of their work and the documentation should be made in the Relay Room Key register and concerned register meant for this purpose maintained at the according to SR 3.51.05.

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

18.1 The regular maintenance of S&T installations and adherence to the schedules of maintenance is also the mandatory schedules of testing of points, track circuits, signal lever 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.

18.2 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

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

Whenever there is a failure of points, track circuits, signals, Axle counters or any other interlocking gears at the, 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 along with others as per G& SR 3.51.04 and 3.68.04 and document all such transactions.

19.1 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

However, 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 switches on the Panel in term of SR 3.68.04(c).

19.2 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

It is only after receipt of this information the sectional maintainer (Electrical or Mechanical) 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 and it is only after the Station Master of duty has personally checked this defective gear and is satisfied that it 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).

20. PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:

However 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.

21. EMERGENCIES:

Notwithstanding anything contained in above said Para Nos. 14 and 14.1 and 14.2, when a gear is found to be defective and unsafe for passage of trains, the Signal and Telecom. Staff shall at once suspend the working of such gear 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 3.77 and SR thereto.

22. WORKING OF POINTS-POSITION OF POINTS:

The normal position of all points shown in the Working Rule Diagram No. SI/WRD 23039 Alt "I" and also in the mimic indication panel provided in the Station Masters office.

22.1 All crossover points and independent points on the running lines are worked by Electric Point Machines. The point machines have in-built locking and detection arrangements. These points are remotely controlled from the panel situated in the Station Master's office.

22.2 The operation and indication of the points and their route locking over them is already explained in earlier paras of Appendix-B.

23. PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL POINTS AND USE OF EMERGENCY CRANK HANDLE:

23.1 Whenever a Signal or a Point become defective, any movements over the Points on the running lines should be made after clamping and padlocking both the facing and trailing Points by Master on duty personally for all trains at.

23.2 In case of failure of Signal or a Point and in case the Point can not be operated form the Panel, the emergency Crank Handle which is interlocked with the system has to be extracted and the following procedure has to be observed.

23.3 The crank handle key can be extracted from concerned point crank handle RKT provided at location by pressing common trains button along with conceded crank handle button. After setting the point by crank handle the key will be inserted again into the concerned crank handle RKT and will be turned. Key indication will appear on panel and the SM has to press the common receive buttons along with concerned crank handle button for further normal operations

23.4 The case of failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification

23.4.1 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.

23.4.2 Emergency release of crank handle after the lapse of 120 sec., in case of emergency release of crank handle during any of the route remains locked.

23.5 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 of all the lines should be treated as Non-interlocked and 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.

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

1) Date
2) Point Number, which failed or required to be tested.
3) Time of failure:
4) Disconnection memo number received from S&T staff:
5) Signature of SM/Signal official to whom the Emergency Crank Handle is handed over.
6) Time Emergency Crank Handle is sent out.
7) Individual Point numbers, and Line number nominated for admission or dispatch for which Points are set, Clamped and Padlocked.
8) Train number to be admitted or dispatched
9) Signature of the SM on duty to ensure correct setting. Clamping and Padlocking of the points,
10) Date & Time fault rectified.
11) Time of Emergency Crank Handle is received back by SM on duty.
12) Signature and Designation of the Signal Official who rectified the fault.
13) Remarks.

24. INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:

24.1 INTERLOCKING WITH HOME SIGNALS:

All the UP and DOWN Home signals are Electrically interlocked with the respective Single Line token Block Instrument so that before the handle of the instrument can be turned from TRAIN COMING FROM position to LINE CLOSED position, all the switches controlling the Home Signals of UP or DOWN direction as the case may be must be in their NORMAL position.

24.2 The UP and DOWN Advanced Starter Signals are Electrically interlocked with the respective Single Line token Block Instrument so that these signals cannot be taken OFF until the Handle of the concerned Block Instrument is in TRAIN GOING TO position.

24.2 SUSPENSION OF LAST STOP SIGNALS:

When the Token Block Instrument is suspended with its handle in TRAIN GOING TO position for whatever reason the concerned Last Stop Signals controlled by the Single Line token Block Instrument must be treated as suspended and trains shall be Piloted Out.

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

1. Digital Axle Counters are provided for Block Sections between section as HASSDAC between SPRD A/Cab-KTGA, SSDAC in section between SPRD A-Cabin - SPRD & Analog type in between SPRD A-Cabin- SPRD B-Cabin.
2. The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light.
3. If any Block proving Axle Counter [LVCD] section fails, the Last Stop Signal Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position. In such case, resetting of last Vehicle Checking Device is to be resorted to in either Station.
4. No train shall be allowed on signal to leave a station in any particular section unless:
   Block Section clear indication is available for the relevant Axle Counter section portion and Last Stop Signal is taken OFF. [Refer Para No: 6.1 of appendix 'B' for procedure of resetting of LVCD Axle counter].

25.0 POWER SUPPLY ARRANGEMENT FOR SIGNALLING INSTALLATIONS:

Power signaling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

a) Normal supply from AT connected to OHE traction distribution [230V 50HZ].
b) Standby Power supply: ORISA Electricity Board Supply.
c) Normal power supply [Single-phase 230V-50 HZ] to the signalling and interlocking installation at the station is drawn from the traction power sources through ATs. Whenever traction power supply fails the SM on duty shall operate the manual changeover CLS Panel provided in the SM's office connecting the power supply from the healthy sources to the installation in case the knob is not in Auto mode.
d) The SM on duty however maintain the record of power failures either of the traction supply or local supply and he must promptly report the failure of any one or both the power sources immediately through the section controller and to the concerned Elect. Staff and S&T maintenance staff.
e) Manual change over CLS Panel is provided in the SM's office with the three power supplies viz., AT, local and DG for the changing the switch. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
f) **NOTE:** In case of failure of the AT supply without any power block the on duty SM has to check whether the circuit breaker has tripped [Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes UP].
g) In case of failure of AT supplies without any power block the local supply shall be utilized by operating the changeover switch. If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any means and a message shall be given to concerned SSE [Elect.] and SSE/PSI [OHE] for prompt rectification.
h) Whenever there is failure of power supply in one AT the SM on duty shall take prompt action to inform to all concerned for rectification.

i) The On-duty SM himself during each shift shall check & test the availability of power supply on both ATs and make an entry in the station dairy duly initiating for rectification of failure if any.
j) For IPS system that provides supply to EI, the output of selection supply from Auto CLS panel is taken.
k) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

26. WORKING OF INTEGRATED POWER SUPPLY [IPS, INDICATIONS & ACTION TO BE TAKEN BY SM ON DUTY:

Power supply to the signaling installation is fed through Integrated Power Supply System [IPS] installed in the S&T power supply room. For IPS system, 230V AC is taken from the selection output of the Auto change over CLS panel at SM's Office. There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

The IPS system is connected with battery as a backup power source for safe working during transition of power and in case no 230 AC supply is available due to any reason.

In the event of failures of all the sources of 230V 50HZ AC supply, the signaling system shall be fed by backup battery bank connected to IPS for a limited power of 8 to 10 hours. The health of the battery bank is monitored through one IPS Monitoring Panel provided in the SM's room which shall display the voltage of 110VDC battery bank provided as backup source of power supply. Depending up on the health of the battery bank and the system the following indications/alarm will appear on the remote monitoring panel. The indications/alarm, their implications and action to be taken by SM on duty is tabulated below:

S. NO.	Instruction	Health of Battery Bank/ Equipment.	Visual Indication	Audio Indication	Action to be taken by SM on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by SM on duty.
B	-	60% DOD	Red	Alarm	-do-
C	System shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to Work. Audio alarm will continue till power Supply is restored.
D	Call S&T staff.	Equipment fault.	Red	Alarm	Failure of any module will give the alarm in ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

On duty SM in each shift shall check and record the readings, indications, etc. in the station dairy duly initiating rectification of failures of IPS System, if any. In the event of failure of Remote monitoring ASM console due to any reason when both traction power and local power failed the SM on duty shall inform concerned Electrical staff immediately. In case ' call S&T staff ' or 'system shut down' indication appear on the remote monitoring panel of IPS and/ or mal functioning of the remote monitoring panel SM on duty shall inform the same to

concerned S&T staff immediately.

NOTE: [i] DOD indicates depth of discharge of battery bank of IPS
[ii] In case of failure of all AC supply sources, IPS battery bank can provide power supply maximum up to 3 to 4 hours before system shut down indication of IPS.

27 **WORKING OF AUTOMATIC FIRE DETECTION AND ALARM 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.

AUTO DIALLING:

If you hear alarm from the panel, this system will dial the Railway Auto 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 1st number then panel will dial 2nd number till the time acknowledgement comes it will keep on dialling.

28. TELECOMMUNICATIONS:

a) Telephone attached to Tokenless Block instrument connected to adjacent block stations KRPU and MVF and Block token instrument connected to 'B' Cabin.

b) Magneto phone connected to the adjacent block station KRPU, MVF and 'B' Cabin.
c) The Cabin is connected to KRPU-KRDL control circuit.
d) The Cabin is connected to OEC-KRPU traction power control circuit.
e) 25 watts VHF Set.

29. FAILURE OF COMMUNICATIONS - INSTRUMETS: FAILURE OF BLOCK

a) In the event of suspension / failure of Block token instrument line clear transaction shall be made on block telephone attached to Block token instrument exchanging identification number and supported by a Private number vide SR 6.02.06(1)(a).
b) In the event of suspension / failure of Block token instrument and Block telephone attached to Block token instrument line clear transaction shall be made on to Magneto phone exchanging identification number and supported by a Private number vide SR 6.02.06(1)(a).
c) In the event of suspension / failure of Block token instrument, telephone attached to Block token instrument and to magneto phone, line clear transaction shall be made on control telephone exchanging identification number and supported by a Private number vide SR 6.02.06(1)(a). (C).
d) In the event of. failure of Block all communications trains shall be worked in terms of SR 6.02.04.

30 NORMALISATION OF THE BLOCK AXLE COUNTER AND BLOCK WORKING BY RESETTING FEATURE:

Axle Counters have been provided on Block Section between KTGA-SPRD “A”-cabin, SPRD "A" Cabin – SPRD and SPRD “A” Cabin- SPRD- “B” cabin as last Vehicle checking device. The occupation and clearance of the axle counter section are indicated in the reset box provided in SM's office by 'Red' and 'Green' lights respectively. If Block proving Axle counter fails, the Last stop signal at the rear station cannot be taken "OFF" and Block instrument at receiving station cannot be turned to "Line Closed" position after arrival of a train and in such case, resetting of last vehicle checking device is to be resorted. After complete operation of resetting. LVCD axle counter will display 'Section clear indication only after the passage of next train which is to be piloted.

No train should be allowed on signal to leave a station in any particular direction unless: Track clear indication is available for the relevant axle counter track circuited portion and Last stop signal is not taken 'OFF'.A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMS at either end of the block section. A reset box with

digital counter is provided for resetting the axle counter of the LVCD. Its key shall be with SM. Each operation of resetting is registered in the counter. SM shall record the reason for resetting, date, time.

31. COMPLETE ARRIVAL OF TRAINS:

Axle Counters have been provided on Block Section between KTGA-SPRD “A”-cabin, SPRD "A" Cabin – SPRD and SPRD “A” Cabin- SPRD- “B” cabin as last Vehicle checking device. There is provision of HASSDAC in between section SPRD A Cabin and KTGA cabin. The occupation and clearance of the axle counter between section SPRD 'A' cabin and KTGA are indicated in the panel. SSDAC is provided in between section SPRD-A Cabin and SPRD. Analog axle counters are provided between A cabin and B cabin. These axle counters will control the Single line Token less block instruments of the KTGA-SPRD “A”-cabin, SPRD "A" Cabin – SPRD sections and inter slotting arrangement between SPRD-A Cabin & B-Cabin. The occupation and clearance of the axle counter section will be indicated in the panel by Red and Green light.

The entire block section between KTGA-SPRD “A”-cabin, SPRD "A" Cabin – SPRD and SPRD “A” Cabin- SPRD- “B” cabin are monitored by the axle counter system and the position of the block section whether ‘Occupied’ or ‘Clear’ is indicated on panel at SS / SM’s office. As soon as train enters in to that block section the RED indication appears on panel. After whole train clears the block section GREEN indication appears on the panel. This confirms the complete arrival of train and the SS/ SM on duty shall give ‘Train Out of Block Section’ report on seeing the section clear indication GREEN on the VDU/panel.

If a train passes through the station without confirming the last vehicle indicator, the SS/SM 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, track circuits the SS/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 SS/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. Train Passing on adjacent line shall be stopped and Guard and loco pilot shall be issued with caution Order to proceed cautiously and stop short 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 the event of motor trolley is delayed in the section the SS/SM on duty shall take action in terms of SR.15.25.03 (b)(vi).

In case the train arriving with last vehicle, the LV number is to be repeated

vide. BWM 2.07.5 (a)
A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of Axle counter. The resetting to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section. Details of resetting procedure is given in Para 6 of 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 indications.

32. RESETTING OF LVV DIGITAL AXLE COUNTER:

After complete arrival of train, if the Last vehicle axle counter of the section does not clear or Last vehicle axle counter section free indication (Green) does not appear in the panel. The receiving station SM shall appraise 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. In case failure of LVCD, Complete Arrival of trains is to be done by physical verification vide GR 14.10. And, if arrived fully shall so intimate authenticated by exchanging Private number with the sending station.

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

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

a) On being advised by SM- SPRD A Cabin SM-SPRD/SPRD B-CABIN/KTGA inserts the key in the Reset Box, turns right and presses both the key and the Push Button (Red) simultaneously with the SM-A Cabin. The Counter on the Reset Box at A Cabin and SPRD/SPRD B-CABIN/KTGA registers the next higher number and after five seconds miniature green Preparatory Reset indication appears on the Reset Box both at 'A' Cabin and SPRD/SPRD B-CABIN/KTGA. The step by step procedure shall be followed as given in "B" to "I".
b) SMA Cabin and SPRD/SPRD B-CABIN/KTGA 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.

EAST COAST RAILWAY

WALTAIR DIVISION

APPENDIX – C

'A' CABIN OF TIE LINE BETWEEN KTGA AND SPRD

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NOT APPLICABLE

APPENDIX 'D'

DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT

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

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

1. STATION SUPERINTENDENT/STATION MASTER (IN CHARGE):

i) He is responsible for trains passing during his shift.

ii) He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him.

iii) He shall keep all Rule books, Registers, Files and documents neat and up to date.

iv) He shall ensure that all equipment, apparatus, and instruments including signaling and interlocking gears and fittings are kept clean and oiled by S&T officials.

v) His special attention is drawn to Chapter-II of G&SR and GR 5.01 to 5.08 with relevant SRs and O.M. Chapter-2.

vi) He shall follow the instructions laid down in SR.3.68.01 (c) and (d) and SR 14.07.01 and B.W.M.2.09 (e).

vii) He shall promptly attend to accidents and report them.

viii) He shall ensure that firefighting equipment at the station such as fire extinguisher, fire buckets etc. are in good fettle and ready for use.

ix) He must ensure that the essential safety equipment at his station is the same complete and in good condition. If there is any deficiency it should be made good without delay.

x) He shall see that TSR, SM's Diary, Inspection Note Book, Reference Books and other station record is properly maintained and preserved for a minimum period as prescribed in the Operating Manual.

xi) He shall ensure that all correction slips of Manuals and SWR are posted and changes are made in respective pages.

xii) He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

2. STATION MASTER:

a) He is responsible for trains passing during his shift.

b) He shall promptly bring to the notice of SM in-charge all irregularities and accidents in course of his shift duties.

c) During the absence of SM, I/C, the duties of the Station Master will devolve on him.

d) He shall follow SR 3.68.01(c) and (d) SR 14.07.l and OM Chapter-2.

e) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.

f) He shall not consider himself relieved of duty unless he has completed transactions of trains for which he has given/obtained line clear till the complete arrival of such trains.

g) He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.

h) He shall keep the Station Master's control keys of Block Instruments/Control Panel in his personal custody whenever, he is required to leave his office even for a short duration.

i) He shall be responsible for correct issuance of caution order, whenever required.

j) As an assistant to SM, I/C, he shall carry out the instructions given from time to time.

3. <u>TRAFFIC POINTSMAN:</u>

i) He shall work under the orders SM on duty.

ii) He shall be in proper neat and clean uniform while on duty.

iii) He shall always commence his duty equipped with hand signal lamps during night and flags during day.

iv) He shall couple and uncouple vehicles under the supervision of SM.

v) He shall watch and guard the packages and other Railway property lying in the Station premises.

vi) He shall report any irregularities coming to his notice.

vii) He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.

viii) He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.

ix) He shall not leave his duty unless properly relieved or authorized by his superiors.

x) He shall follow OM Chapter-2.

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

APPENDIX 'E'

LIST OF ESSENTIAL EQUIPMENT PROVIDED AT THE STATION:

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

Sl. No	Description	Quantity
(i)	Detonators	10
(ii)	LED based Tri Colour flashing torch.	3(1 Spare)
(iii)	Hand Signal Flags	3(1 Spare)
(iv)	Clamps with Padlocks	4
(v)	Iron Skids	6
(vi)	Fire & Sand buckets	6
(vii)	Fire Extinguishers	2
(viii)	Line blocking collars & Power Block Collars	6+6
(ix)	Motor trolley on line board	2
(x)	Block suspension board	2
(xi)	First-Aid-Box	1
(xii)	Blanket	1

APPENDIX 'F'

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

--NIL--

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX – G

'A' CABIN OF THE TIE LINE BETWEEN KTGA & SPRD

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTION

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