

NO. 182

STATION WORKING RULES OF CUTTACK STATION

BG Station.

Date of issue: 26.02.13

Date brought into force: 27.02.13

NOTE:

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

1.0 STATION WORKING RULES DIAGRAM:

Station Working Rule Diagram No. SI/WRD/21112 ALT-A based on CSTE/East Coast Railway's Signal Interlocking Plan No. SI/21112 ALT-A shows the complete layout of the yard, siding, running lines with normal position of points, the signaling & interlocking arrangements, Gradients & Level Crossings within the station limit. This must be referred to for giving details of the point numbers and Signals etc. when reporting accidents.

2. DESCRIPTION OF STATION:

2.1 GENERAL (LOCATION):

Cuttack (Code: CTC) is a twelve lined 'B' Class Junction station on the Howrah – Visakhapatnam main line electrified (BG) Section of East Coast Railway. It is situated at a distance of 408.749 Km. from Howrah. Paradeep branch line takes off from this station at VSKP end. The Station is provided with Standard-III (R) interlocking and equipped with Central Panel of Route Relay Interlocking & Multi Aspect Colour Light Signals. The Central Panel is provided with Route Relay Interlocking installation of Siemens type based on two button operation, one at entrance and other at exit.

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

i BLOCK STATION ON EITHER SIDE AND THEIR DISTANCE:

Cuttack Station is situated between Kendrapara Road (Code: KNPR) in the North side at a distance of 4.079 Km. at Howrah end and Gopalpur Balikuda (Code: GBK) in the South side at a distance of 4.251 Km. at VSKP end and Kandarpur (Code: KDRP) at a distance of 16.445 Km. at Paradeep end.

ii IBH/IBS/OUTLYING SIDING/DK STATION:

The section between CTC and KDRP has been split into two block sections by providing axle counters and Intermediate Block Stop Signal at Km. 415.787 & 415.396 on UP & DN line respectively, which is controlled by axle counters and double line Lock & Block Instrument.

iii PASSENGER HALTS:

- a) Kathajori Passenger Halt (Code: KTJI) situated at Km. 410.5 from Howrah between CTC and GBK Station.
- b) Mattagajpur (Code: MTND) is situated at Km. 415.00 from HWH between CTC – KDRP Station.

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

Between Stations	The Point from which the 'Block Section' Commences.	The Point at which the 'Block Section' ends.
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CTC-KNPR (UP Direction)		UP Advanced Starter of KNPR.	Outermost facing point No. 103A of CTC.
CTC-KDRP (UP Direction)	a.	UP Advanced Starter Signal No. 27 of CTC.	400mtrs beyond IBH Signal No. 35 of CTC.
	b.	From IBS Signal No. 35 of CTC.	Outermost facing point No. 17A of KDRP.
CTC-KNPR (DN Direction)		DN Advanced Starter Signal No. 26 of CTC.	First facing point No. 18A of KNPR.
KDRP-CTC (DN Direction)	a.	From DN Advanced Starter signal No. 12 of KDRP.	400mtrs beyond DN IBS Signal No. 14 of KDRP.
	b.	From the DN IBS Signal No. 14 of KDRP.	Block Section Limit Board on DN line of CTC.
CTC-GBK (Single Line section)		UP Advanced Starter Signal No. 25 of CTC.	DN Advanced Starter Signal of GBK.

b) **STATION SECTION:**

Station Section	The Point from which the 'Station Section' Commences.	The Point at which the 'Station Section' ends
For single line	UP Advanced Starter Signal No. 25.	DN Advanced Starter Signal No. 26.
For double line		
DN Line	DN BSLB on DN Main Line of CTC-KDRP.	DN Advanced Starter Signal No. 26.
UP Line	Point No.103 at HWH end.	UP Advanced Starter Signal No. 27 of CTC.

c) **STATION LIMITS:**

		FROM	TO
DOUBLE LINE SECTION	UP Line	UP Inner Distant Signal.	UP Advanced Starter Signal No. 27.
	DN Line	DN Inner Distant Signal.	DN Advanced Starter Signal No. 26.
SINGLE LINE SECTION		DN Distant Signal.	DN Advanced Starter Signal No. 26.

2.4

GRADIENTS:

a)

KNPR END (UP & DN LINES):

From	To	
CSB	CH: 379.90 M	Level
CH: 379.90 M	CH:1006.50 M	1 in 400 'R'
CH:1006.50 M	CH:1422.00 M	1 in 150 'R'
CH:1422.00 M	Towards Block Section	Level

(b)

GBK END (VSKP LINES):

From	To	
CSB	CH: 203.0 M	Level
CH: 203.0 M	CH: 799.0 M	1 in 400 'R'
CH: 799.0 M	CH: 980.0 M	1 in 150 'R'
CH: 980.0 M	CH:1220.0 M	Level
CH:1220.0 M	CH:2394.0 M	1 in 200 'R'
CH:2394.0 M	Towards Block Section	Level

(c) **KDRP END (PARADEEP UP LINE):**

From	To	
CSB	CH: 178.0 M	Level
CH: 178.0 M	CH: 902.207 M	1 in 400 'R'
CH: 902.0 M	CH: 1025.0 M	1 in 164 'R'
CH:1025.0 M	CH: 1461.0 M	1 in 200 'R'
CH:1461.0 M	CH: 1690.0 M	Level
CH:1690.0 M	CH: 2576.0 M	1 in 194.94 'F'
CH:2576.0 M	CH: 2635.8 M	Level

(d) **KDRP END (PARADEEP DN LINE):**

From	To	
CSB	CH: 178.0 M	Level
CH: 178.0 M	CH: 902.207M	1 in 400 'R'
CH:902.207 M	CH:1025.0 M	1 in 164 'R'
CH:1025.0 M	CH:1134.0 M	Level
CH:1134.0 M	CH:1662.0 M	1 in 300 'R'
CH:1662.0 M	CH:1845.0 M	Level
CH:1845.0 M	CH:3125.0 M	1 in 250 'F'

2.5 **LAYOUT:**(a) **RUNNING LINE:**

Cuttack Station is consisting of 12 lines, (Ten running lines & Two non-running lines i.e. Goods Sidings No. 11 & 12) namely Common Loop Line (Line No. 1), DN Main Line (Line No. 2), UP Main Line (Line No. 3), Common Loop (Line No. 4, 5, 6 & 7), Common Goods Loop (Line No. 8, 9 & 10), Goods siding (Line No. 11 & 12) and eleven non running lines namely sick line (2 nos.), ART siding, Saloon siding, Oil siding (Oil siding-I & Oil siding-II), Old LPO Siding, DSC Siding, Tower Wagon siding, Two Shunting necks.

(b) **GOODS SIDING:**

Goods siding line No. 11 is a non-running line. It is taken off at CH: 135.285 m towards VSKP end. The siding is isolated from line No. 10 with provision of DS at either end. The entrance point is a non-interlocked hand point. In order to admit a train on goods siding from VSKP end, the non-interlocked point at CH: 135.285 m & the other two hand points pertaining to the siding are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The entrance point at HWH end to the siding is a motor operated point. SH33J & SH(5,7)A are controlling movement to the siding. Similarly, SH24A/B/C is controlling movement from the siding. The points and signals are operated from the panel board. The movement towards the siding is being controlled by hand signals in responsibility of Shunting Master.

(c) Goods siding line No. 12 is a non-running line. It is taken off at CH: 135.285 m towards VSKP end. It is isolated from line No. 11 with provision of a DS at VSKP end and terminated with Dead End CH: 662.0 m at HWH end. The entrance point is a non-interlocked hand point. In order to admit a train on goods siding from VSKP end, the non-interlocked point at CH: 135.285 m & the other three hand points pertaining to the siding are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The movement towards the siding is being controlled by hand signals in responsibility of Shunting Master.

(d) **SICK LINE NO.1:**

Sick line No. 1 is taken 'OFF' from Line No. 12 at VSKP end. It is isolated from line No. 12 with provision of a DS at VSKP end and terminated with a Dead End. The entrance point is a non-interlocked hand point. In order to admit a train on sick line No. 1, the non-interlocked point at CH: 135.285 m & the other four hand points pertaining to the

sick line are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The movement towards the sick line is being controlled by hand signals in responsibility of Shunting Master.

(e) **SICK LINE NO.2:**

Sick line No. 2 is taken 'OFF' from Line No. 12 at VSKP end. It is isolated from sick line No. 1 with provision of a DS at VSKP end and terminated with a Dead End. The entrance point is a non-interlocked hand point. In order to admit a train on sick line No. 2, the non-interlocked point at CH: 135.285 m & the other four hand points pertaining to the sick line are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The movement towards the sick line is being controlled by hand signals in responsibility of Shunting Master.

(f) **ART SIDING:**

Art siding is taken 'OFF' from Line No. 4 at HWH end and connected by a cross over No. 135 A/B. the other end is terminated at dead end. SH 33/SH16 is taken off with the cross over 135A/B for the movements into/out of the ART siding respectively.

(g) **SALOON SIDING:**

Saloon Siding is taken 'OFF' from line No. 1 at VSKP end and with one end terminated at dead end. The entrance point No.144 A/B and exit point No.142 A/B and shunt signal No. SH 31B, 32B, 30E, 36E and 44 are provided for to and from movements from this Siding. The points and signals are operated from the panel.

(h) **OIL SIDING:**

Oil siding No. 1 and 2 are taken 'OFF' from Line No. 10 at HWH end and terminated at dead ends respectively. Points No. 131 A/B and DS No. 133 and shunt signal No. SH:20 A/B, 22 A/B, 24 A/B, 5 A/B/C and 7 A/B/C are provided for To & From the sidings and operated from the panel for the movements.

(i) **OLD LPO & DSC SIDING:**

The Saloon siding at VSKP is extended to LPO siding No. 1 and DSC Siding and isolated by DS point No.140. The entrance point No. 142 and DS No. 140 are operated from the panel. The shunt signal No. SH: 39A and SH: 44 are also operated from the panel. One hand operated point is provided for the entry to LPO siding. Line No. 1 and DSC Siding and a stop Board is provided in rear of the hand operated entry point. Before entering to the LPO siding, train should be stopped at the stop board and after setting and clamping the point to the required route, the train should then proceed in to the siding.

(j) **TOWER WAGON SIDING:**

Tower wagon siding is taken off from Line No. 1 at HWH end with one end terminated at dead end. The entrance point No. 113B, DS 137, shunt signal No. SH-6B and SH-41 are provided for to & fro movements. These points and signals are operated from Panel.

(k) **SHUNTING NECK:**

Line No.1 at VSKP end is extended to shunting neck and the entrance point No. 112B and isolating point No. DS114 and shunting signals No. SH:9C, 39B and 32 A/B are operated from the panel for shunting.

(l) **SHUNTING NECK:**

Line No. 8 at VSKP end is extended to shunting neck and the points No. 124, 126, 128, & 130 and shunt signals No. 21C, 23C, 37C & 34 A/B/C are provided and operated from the panel for the shunting movements from Line No. 8, 9, 10 to shunting neck and shunt back signal movements from shunting neck to Line No. 8, 9, 10.

2.5.1 **RUNNING LINES, DIRECTION OF MOVEMENT & HOLDING CAPACITY IN CSL:** **DIRECTION OF TRAFFIC:**

The trains coming from KNPR are UP trains and the trains coming from GBK and KDRP are down trains.

HOLDING CAPACITIES OF RUNNING LINES:

	<u>Line No.</u>	<u>CSL</u>	
(i)	Line No.1 (Common Loop)	752 Meters (Starter to Starter)	Electrified
(ii)	Line No.2 (DN Main Line)	823 Meters (Starter to SH)	Electrified
(iii)	Line No.3 (UP Main Line)	845 Meters (Starter to SH)	Electrified
(iv)	Line No.4 (Common Loop)	735 Meters (Starter to Starter)	Electrified
(v)	Line No.5 (Common Loop)	715 Meters (Starter to Starter)	Electrified
(vi)	Line No.6 (Common Loop)	709 Meters (Starter to Starter)	Electrified
(vii)	Line No.7 (Common Loop)	741 Meters (Starter to Starter)	Electrified
(viii)	Line No.8 (Common Goods Loop)	701 Meters (Starter to Starter)	Electrified
(ix)	Line No.9 (Common Goods Loop)	691 Meters (Starter to Starter)	Electrified
(x)	Line No.10 (Common Goods Loop)	698 Meters (Starter to Starter)	Electrified

2.5.2 **NON-RUNNING LINES AND THEIR CAPACITIES:**

The following Non-running lines and sidings are provided:

(i)	Goods siding (Line No. 11)	CSL – 671 M	(From SH to SB)	Electrified
(ii)	Goods siding (Line No. 12)	CAL – 665 M	(From DS to DE)	Electrified
(iii)	Sick Line No. 1	CAL – 159 M	(From DS to DE)	Electrified
(iv)	Sick Line No. 2	CAL – 117 M	(From DS to DE)	Electrified
(v)	Old LPO siding	CAL – 230 M	(From FM to DE)	Non-Electrified
(vi)	DSC siding	CAL – 230 M	(From FM to DE)	Non-Electrified
(vii)	Shunting neck (at PRDP end)	CSL – 478 M	(From SH to SB)	Electrified
(viii)	Shunting neck (at GBK end)	CSL – 71.15 M	(From SH to DE)	Electrified
(ix)	Saloon siding (adjacent to L/1)	CSL – 89 M	(From SH to SH)	Electrified
(x)	ART siding (adjacent to L/4)	CSL – 77 M	(From DE to SH)	Electrified
(xi)	Oil Siding No. 1	CSL – 292 M	(From SB to SH)	Non-Electrified
(xii)	Oil Siding No. 2	CSL – 292 M	(From SB to SH)	Non-Electrified
(xiii)	Tower Wagon Siding	CSL – 30 M	(From SH to SB)	Non-Electrified

ANY SPECIAL FEATURE IN THE LAYOUT:

NIL

2.5.3 **SPECIAL RESTRICTION:**

- Shunting in face of an approaching train is prohibited.
- Hand Shunting is prohibited beyond the outermost facing points at both ends of the yard.
- Fly shunting is prohibited.
- The over run line/sand hump shall not be used for stabling of vehicles or harboring any engine with or without any vehicles.
- After granting Line clear for an UP train, the SM of CTC to take off the UP Home Signal & give one Private Number to SM on duty at KNPR to avoid detention of passenger carrying train over Mahanadi Bridge due to less space between UP Home Signal and Bridge abutment. In case failure of Home signal, condition for taking off Home signal to be complied for issuing Advance pilot memo by SM/KNPR.

(A.SENAPATI)
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(B.PANDA)
DOM/KUR

SPECIAL INSTRUCTION:

- (i) Plying of 'C' class ODC of 4.8 mtrs height or more is restricted on Bridge No. 550, Talandanda Canal between CTC-GBK vide CRS letter No. 40 dtd. 06.01.06.
- (ii) Signal No. 11 of KNPR station will function as UP Advanced Starter Signal of KNPR as well as UP Distant Signal of CTC station and the arrangement is such that the Signal will not display a less restrictive aspect than the "STOP" aspect unless line clear from CTC in UP direction is obtained and Green aspect shall not display unless UP Home Signal No. 1 of Cuttack is taken OFF.

2.6 LEVEL CROSSING:

- (a) There is a "Special" class manned interlocked level crossing gate No. 177 situated at Km. 408/5-7 (UP) & 408/8-6 (DN) towards KNPR end of the yard. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (b) There is a "A" class manned Engg. interlocked level crossing gate No. CP-1 situated at Km. 411/15-17 (UP) & 411/18-16 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (c) There is a "Special" class manned Engg. interlocked level crossing gate No. CP-2 situated at Km. 412/3-5 (UP) & 412/6-4 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (d) There is a "B1" class manned Engg. Non-interlocked level crossing gate No. CP-3 situated at Km. 412/15-17 (UP) & 412/18-16 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (e) There is a "C" class manned Engg. Non-interlocked level crossing gate No. CP-4 situated at Km. 412/33-35 (UP) & 412/36-34 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (f) There is a "B1" class manned Engg. Non-interlocked level crossing gate No. CP-5 situated at Km. 413/19-21 (UP) & 413/22-20 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (g) There is a "B1" class manned Engg. Non-interlocked level crossing gate No. CP-6 situated at Km. 415/1-3 (UP) & 415/4-2 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/RRI Cabin/CTC.
- (h) There is a "C" class manned Engg. Non-interlocked level crossing gate No. CP-7 situated at Km. 416/1-3 (UP) & 416/4-2 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/KDRP.
- (i) There is a "C" class manned Engg. Non-interlocked level crossing gate No. CP-8 situated at Km. 417/15-17 (UP) & 417/18-16 (DN) between CTC-KDRP. Telephone communication is provided between Gate Lodge and SM/KDRP.

3.0 SYSTEM AND MEANS OF WORKING:

Trains are worked under Absolute Block System in accordance with the provision of GR 1.02 (7), 1.02 (3), 1.02 (32), 3.11, 3.75, 8.01 (1) (a) (b) & (c), 8.01 (2) (b), 8.03 (1) (a), (b), (c) (ii) and (2) (a) (b) (c) (ii), 8.05 (2) & (3), 8.06, 8.14 and 14.01 to 14.14, and Block Working Manual Chapter-V & VI and Operating Manual.

Diado type Token Less Block Instrument (Co-operative type) are provided for working of trains between CTC-GBK and SGE Double Line Block Instrument (Non-co-operative type) is provided for working of trains between CTC-KDRP & CTC-KNPR which shall be operated by the Station Master on duty at RRI Cabin. Line Clear is granted/obtained through block phone attached with the Block Instrument. Telephone is provided at UP IBS post to established contact by the Loco Pilot with Station Master of CTC, in case of necessity.

Taking 'OFF' the Last Stop Signal is the authority for the Loco Pilot to 'proceed' into the concerned Block Section vide GR 14.08 (a) (b) (iv).

(Correction slip No. 1 Dated. _____)

(A.SENAPATI)
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(B.PANDA)
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Lock up key is provided for locking the Instruments to prevent unauthorized manipulation of the instruments. The key of the Block Instruments must be in the personal custody of the on duty Station Master of the RRI Cabin.

4.0 **SYSTEM OF SIGNALING AND INTERLOCKING:**

4.1 The station is provided with Standard-III (R) interlocking. All the signals and points are operated from the panel board.

Manually operated Multi Aspect Colour Light Signaling in accordance with General Rules No. 3.07 (4) (5) (6) and (7), 3.08 (4) (b) & (c) 3.09, 3.10, 3.11, 3.17, 3.19, 3.20, 3.24 (4) 3.27 (a) 3.32 (1) and (2) is provided to govern the movement of trains into and out of the yard. "Calling-on" Signals are provided below the Home and Starter Signal in terms of 3.13 (6) (b).

Shunt Signals are provided for controlling Shunting movement in Cuttack Station yard in accordance with GR 3.14.

TRACK CIRCUITS:

All running lines of Cuttack yard are track circuited. Only when any running line is clear, a miniature "WHITE" strip of lights illuminate on indication panel through out the line so initiated. However when a running line is occupied by any vehicle/train, a 'RED' strip of light illuminates through out the berthing line till such time it is cleared.

FAILURE OF TRACK CIRCUITS:

During failure of track circuit of a concerned line, the SS on duty at RRI Cabin shall intimate the same to the SS on duty at Platform for physical verification of clearance of line. Thereafter, SS on duty at PF shall physically verify the nominate line. If the line is clear and free from all obstructions, he shall give one assurance private number to SS on duty at RRI regarding clearance of the line. After obtaining assurance private number from SS on duty at PF, SS on duty at RRI Cabin shall arrange for reception of a train on the concerned line.

AXLE COUNTER:

The entire Block Section between CTC-KDRP including IB in both UP and DN direction, CTC-GBK and CTC-KNPR are monitored by axle counter system. Electronic axle counters along with associated entrance and exit trolly suppression track circuits are provided at both end of the Block section.

These pair of axle counters will monitor track and count the axles "IN" and axles "OUT" to indicate whether the respective sections are clear of trains or not.

The position of the Block section whether 'clear' or 'occupied' are reflected in the illuminated panel diagram provided in the Station Master office at RRI Cabin. It shows "GREEN" when block section is 'clear' and "RED" when 'occupied'.

Normally when there is no train in the block section the axle counter shows "GREEN". Whenever a train enters into Block section, Block section clear indication "GREEN" for the particular section disappears and "RED" indication appears. After the complete arrival of the train, if the "RED" indication does not change to "GREEN", it should be assumed as Block Instrument failure for the particular section and necessary action as per GR 14.13 is to be taken. The axle counters are interlocked with the respective Block Instruments for that section. The Block instruments are interlocked with respective Block section axle counters. Unless Block section clear indications appears on the panel, it will not be possible to grant "line clear" or normalized the Block Instruments.

CRANK HANDLE:

Crank Handles are provided in location huts located at either end of the yard nearer to the point zone for manually setting of the electric motor operated points in the event of failure/defects of the points. The crank Handle at the location huts are released by the operation of control push button by the SS on duty of the RRI Cabin.

CRANK HANDLE	CRANK POINTS
CH-1	104,110,112,114,140,142,144
CH-2	106,108
CH-3	116,120,122,118
CH-4	124,126,128,130,132,134
CH-5	101,111,113
CH-6	103,105,107,109,115,117,127,135
CH-7	119,121,123,125
CH-8	133,129,131
CH-9	102
CH-10	137

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are in Normal Position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'trans' push button (GSB) and concerned Crank Handle control push button simultaneously. When the keys are taken out no signal can be taken "OFF" over the particular route on the points nominated by that Crank Handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The failure of motor operated points must be ensured by physical checking at site that there is no obstruction. SM on duty at RRI Cabin shall personally ensure the clamping and padlocking of all facing points. An emergency Crank handle register shall be maintained by the SM on duty at the RRI Cabin as per Para 20.06 (d) of the Operating Manual. Correct setting clamping and padlocking of the points is the responsibility of SM on duty. (Details of use of Crank Handle are as per Appendix-'B').

TAKING 'OFF' CALLING-ON SIGNAL:

- (a) Miniature colour light calling on signal is provided below the Home and starter Signals in terms of GR 3.13 (6) (b). A Calling-on signal shows no light in the 'ON' position. A calling on signal is taken 'OFF' for reception/dispatch of a train when the Home/Starter signal above it cannot be taken 'OFF' due to failure of that signal or any track circuit failure in the route or any other reason or for a train to be admitted on blocked line.

To take 'OFF' Calling-on signal, the train must come to a stop at the foot of the Home Signal occupying the Calling-on signal track circuit in the rear of the signal. When a train occupies the track circuit, a 'RED' light strip will appear on the panel. The particular route on which the train is intended to be received shall be set by operating individually by the panel push button and group button or by signal and route button pressing or by crank handling in the event of failure of operation of point through panel. After the route is set, the Calling-on signal button shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the calling on signal clears i.e. Yellow light glows at the concerned calling on signal on the panel.

- (b) Calling-on signals are also provided below all UP Starter signals. When starter signal cannot be taken off due to failure of track circuit, failure of Block Instrument or failure of UP Advanced Starter, the Calling-on signal can be taken off for dispatch of train up to UP Advanced Starter Signal. Similarly, Calling-on signals can be taken off for dispatch

of DN trains up to DN Advanced Starter Signal if for any reason DN Starter Signal cannot be taken off.

To take off Calling-on signal provided below UP and DN Starter Signal, the route must be correctly set and SS on duty of RRI cabin must satisfy about the clearance of the route including fouling.

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

Route Relay Interlocking installation is manned by S&T maintenance staff round the clock. The Relay room should be kept locked with two separate locks. The arrangement should be such that one key is kept with the on duty SS at RRI Cabin & the other key with the Signal Maintainer. Whenever required the SS shall handover the key to the maintainer with proper acknowledgement in the basement/ relay room key register. The maintainer on receipt of the key from the SS may use the same and the key in his custody to open the basement/ relay room by inserting the keys one after another separately into the earmark locks. After completion of the work, the relay room is to be locked using both the keys separately and designated key should be handed over to the SS.

The details of transaction are to be properly recorded in the Basement/Relay Room Key Register maintained at the station and duly signed by the SS and maintainer respectively.

4.3 **POWER SUPPLY:**

[a] A changeover switch is provided in the RRI Cabin with the four power supplies viz. UP AT, DN AT, Local and DG sets for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply.

[b] Normally the switch will be kept towards UP AT or DN AT position. Whenever power block is to be given on the line, the on duty SS must ascertain that power is available on the other AT.
E.g.: If power block is to be given on the UP line, DN AT must be available and vice-versa.

[c] In case of failure of one of the AT supply without any power block, the on duty SS 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 DN and when tripped it goes up). In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.

If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any other mean and a message shall be given to the AEE and CTFO/PSI for prompt rectification.

[d] Whenever there is a failure of power supply in one AT the SS on duty at RRI cabin shall take prompt action to inform all concerned for the rectification.

The SS himself, during his daily check, shall test the availability of power supply on both ATs and make an entry in the station Diary duly initiating action for rectification of failure, if any.

[e] IPS (Integrated Power Supply) arrangement has been provided at the station to take care of the signaling system as well as to avoid blanking of signals in case of

power failure. One SM panel indicating the status of IPS is provided in the RRI Cabin having the following indicators.

- Start generator
- Emergency Start generator
- System shut down
- Call S&T staff.

In case of CESCO Power failure the IPS takes care of the signaling system approximate for 6 to 8hrs.

One Indication panel for monitoring of IPS voltage has been provided in RRI Cabin. The indication panel shall display the voltage of IPS as well as health of the IPS provided to operate signaling gears. Audio Visual alarm has been provided in the panel to guide on duty SS to take action in case of low voltage or no voltage or any defect in IPS is shown in the SM panel.

SM INDICATION PANEL FOR IPS:

An indication panel for IPS is provided at the Station Master room which gives Audio Visual indications depending on the condition of the IPS and IPS battery voltage. The different indications available in the panel are as mentioned below.

- | | |
|---------------------------|--------------------|
| • Call S&T | - Red indication |
| • Signal system shut down | - Red indication |
| • Emergency start DG | - Red indication |
| • Start DG | - Red indication |
| • Stop DG | - Green indication |

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 SM 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 SS shall immediately inform S&T staff at station regarding the alarm.

5.0 TELECOMMUNICATION:

The following Telecommunication facilities are available at the RRI Cabin:

- (i) Telephone attached to Daido Single Line Token Less Block Instrument with GBK and SGE Double line Lock & Block Instrument with KDRP & KNPR.
- (ii) Control Telephone provided for RQP-BRAG-RJGR-KIS-PRDP Section.
- (iii) Magneto Telephone are provided with Level Crossing Gates at [Km. 408/8-6 (DN) & Km. 408/5-7 (UP)], [Km. 411/15-17 (UP) & 411/18-16 (DN)], [Km. 412/3-5 (UP) & Km. 412/6-4 (DN)], [Km. 412/15-17 (UP) & Km. 412/(18-16 (DN)], [Km. 412/33-35 (UP) & Km. 412/36-34 (DN)], [Km. 413/19-21 (UP) & Km. 413/22-20 (DN)], [Km. 415/1-3 (UP) & Km. 415/4-2 (DN)].
- (iv) Telephone provided with SS on duty at platform.
- (v) Telephone provided to both end crank handle locations.
- (vi) Traction power control phone provided for section KUR-BHC.
- (vii) Railway Auto Telephone is provided at this station.
- (viii) VHF set is provided at this station.
- (ix) Telephones are provided between SM on duty at RRI Cabin and the IBS posts at Km. 415.787.
- (x) Telephone communications provided between SS/RRI & Goods siding Location box

NOTE

- a. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- b. VHF & Walkie-Talkie sets should not be used for unnecessary discussion with Loco Pilot/Guards and any other staff.

6.0 SYSTEM OF TRAIN WORKING:

The movement of train is controlled by the section controller on duty, whose orders must not be violated unless the said orders do not contravene any General Rules, Subsidiary Rules, Station Working Rules and Safe Working Principles of the Station. In the event of suspension of Control Phone, the SS will work independently through direct communication available with the Station Master of the adjoining Block Stations and ensure that the preference is given to more important trains; also no avoidable detention occurs to goods trains. The working of trains will be governed by the provision of General Rules 3.08, 3.11, 3.14, 3.17, 3.20, 3.30, 3.39, 3.40, 3.46, 3.47, 3.61, 4.16, 4.17, 8.01, 8.03, 8.05, 8.06, 8.14, 8.15, 14.01 to 14.14, 16.03 and Subsidiary Rules thereto, together with Chapter-V & Chapter-VI of Block Working Manual.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

The following are the complement of the train working staff at the station.

(i)	Station Superintendent (In-Charge) (Supervisory)	01
(ii)	Station Superintendent (On platform duty)	01 in each shift
(iii)	Station Superintendent (In RRI Cabin)	01 in each shift
(iv)	SM /ASM (in RRI Cabin)	01 in each shift
(v)	Shunting Master	01 in each shift
(vi)	Traffic Point Man	03 in each shift
(vii)	Traffic Gate man	01 in each shift

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

The complete yard is track circuited except non-running lines and depicted in RRI indication panel board. SS on duty in RRI Cabin is responsible for ascertaining clearance of Line by observing indication on the RRI panel. In the event of failure of panel, the clearance of line shall be ensured from Station Supdt. on duty at platform supported by a private number.

6.1.3 ASSURANCE OF STAFF IN THE ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station shall make a written declaration in the Assurance Register that they have read the SWR thoroughly and understood the system of working in force at the station and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS (In-Charge) is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS (In-Charge) is responsible to see that all the staff are well conversant with the Station Working Rules of the Station and their signature obtained in the Assurance Register after he is satisfied that they have thoroughly understood the Working Rules of the Station. In case of Class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

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

The declarations are to be renewed in the following cases:

- (i) Whenever any staff is away for a period of 15 days or over, before he is allowing to resume.
- (ii) If there is any change in rules, permanent or temporary, relating to the working of the station.

USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS (In-Charge), under lock and key by maintaining one register for this purpose.

6.2 CONDITION FOR GRANTING LINE CLEAR:

[A] For double line Section-

Before granting line clear to a train, the SM on duty shall ensure that-

- i) The whole of the last preceding train has arrived completely.
- ii) All necessary signals have been put back to 'ON' behind the said train.
- iii) The line is clear up to BSLB on DN Line for DN train & up to outermost facing point No. 103A on UP line for UP trains.

[B] For Single Line Section-

- i) The whole of the last preceding train has arrived completely.
- ii) All necessary signals have been put back to 'ON' behind the said train.
- iii) The line is clear up to UP Advanced Starter Signal No. 25 for DN trains

[C] All signal Lights pertaining to the train is burning properly.

If the light of the reception signal is found not burning, line clear shall not be granted for train till such time it is ensured that concerned Loco Pilot is notified of the fact in writing by the SM of the station to which such line clear is to be granted. [Ref GR 3.49 (4), 8.01 (1) (a), (b) (c), 8.01 (2) (b), 8.03 (2), (a), (b), (c) (ii), 8.03 (1) (a), (b) (c) (ii)]

NOTE:

Before granting 'Line Clear' to a DN train, the SM on duty at RRI cabin shall ensure closure of the L.C. Gates at Km. 412/18-16 (DN), 412/36-34 (DN), 413/22-20 (DN) & 415/4-2 (DN) from the gatemen on duties under exchange of Private Numbers separately.

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

NIL

6.2.1.1 SETTING OF POINTS AGAINST BLOCK LINE:

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train, the points in rear shall be set against the blocked line except when shunting or any other movement is required to be done on that line. [Refer SR 3.51.06 (a)].

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train. [Refer SR 3.51.06 (b)].

The above precautions shall be taken in addition to the observance of other precautions. [Refer SR 5.04.01 & SR 5.23.01].

A clear remark in 'RED' ink shall be made immediately in the train signal register indicating time and Number of running line blocked. [Refer SR 5.23.01 (a)].

Reminder collars must be placed on the concerned 'Route Buttons'.

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line it is necessary that the train is received by Calling-on signals provided below the Home Signal or piloted 'IN' on a written authority given by the SS on duty at platform and delivered by a competent railway servant to the Loco Pilot of the train. [Refer GR 5.09 & SRs thereto].

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALED LINE:

NIL

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALED LINE:

NIL

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

NIL

6.3 CONDITIONS FOR TAKING 'OFF' APPROACH SIGNALS:

- (i) Reception of train is governed by rules laid down in GR 3.36, 3.38, 3.40, 3.46 and 4.17 with relevant SRs 3.36.01, 3.36.04 (a) 3.40.01 to 3.40.03, 3.42.02 (a) (iv), 4.42.03 and other relevant provisions General and Subsidiary Rules, Block Working Manual, Operating Manual & Station Working Rules.
- (ii) All the points on the route are correctly set and locked and interlocked level crossing gate is closed.
- (iii) All non-isolated shunting operations on adjoining lines are suspended and shunting authorities have been withdrawn.
- (iv) For admission of coaching train, the platform Superintendent will nominate the line supported by a Private Number. The SS on duty in the RRI Cabin is responsible for operation of panel for reception/dispatch of trains.
- (v) To receive a train for which "Line Clear" is given, the SS on duty shall nominate a clear line in consultation with the section controller on duty (in case of coaching train, SS on duty at the platform shall also be consulted). He shall personally satisfy himself that the nominated line is clear and free from all obstructions by verifying the WHITE light track indication in the panel. He shall set the points of the nominated route by means of push button switches provided in the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

Unless the track circuit for the concerned line is clear even with the other conditions satisfied, the operation of panel button by the SS on duty will not permit the concerned Home Signal to be taken 'OFF'. After correct setting of points, the SS on duty shall operate the concerned push button on the panel for taking 'OFF' the reception signal. He shall then verify on the panel that the correct reception signal is taken 'OFF'. Alternatively point operation and signal lowering can be done by one operation by pressing signal button and route button.

If, for any reason, after taking 'OFF' signal it is required to put back the signal and alter the route, a time delay of two minutes shall be observed before the points can be altered as per SR 3.36.02.

CROSSING OF TRAIN:

In addition to the procedure mentioned under Para "Reception of trains", Rules laid down in SR 3.47.01 and SR 3.51.06 shall be followed.

The SS shall be very careful to see that unless the first incoming train has come to a stop by clearing fouling mark of the route on which the train is admitted shall not be interfered for admission of a second train in the adjacent line from the opposite direction.

6.3.1 RESPONSIBILITY OF SS FOR RESTORATION OF SIGNALS TO 'ON':

If a signal once taken 'OFF' for reception/dispatch of a train has to be put back to 'ON' in an emergency, the procedure laid down in GR 3.36.02 shall be followed. In case of reception of a train the point shall not be altered until the train has come to a stand outside Home Signal. In case of departure signal, before charging the route, the acknowledgement of the Loco Pilot shall be obtained in a memo.

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

(I)	Reception of an UP train on Line No. 1	Reception of a DN train (VSKP or PRDP end) on L4/L5/L6//L7/L8/L9/L10 OR Dispatch of an UP train (VSKP end) from L3 and UP Train (PRDP end) from L4/L5/L6/L7/L8/L9/L10
(II)	Reception of an UP train on Line No. 3	Reception of a DN train (VSKP end) on L1/L2 and Reception of a DN train (PRDP end) on L4/L5/L6/L7/L8/L9/L10 OR Dispatch of a DN train from L1/L2 (KNPR end) or UP Train (VSKP end) from L1 & UP train (PRDP end) from L4/L5/L6/L7/L-8/L9/L10.
(III)	Reception of an UP train on Line No. 4	Reception of a DN train (VSKP or PRDP end) on L1/L2/ L5/L6/L7/L8/L9/L10 OR Dispatch of an UP train (VSKP or PRDP end) from L1/L3/L5/ L6/L7/L8/L9/L10 and DN train (KNPR end) from L1/L2.
(IV)	Reception of an UP train on Line No. 5	Reception of a DN train (VSKP or PRDP end) on L1/L2/ L4/L7/L8/L9/L10 OR Dispatch of an UP train (VSKP or PRDP end) from L1/L3/L4/ L6/L7/L8/L9/L10 and DN train (KNPR end) from L1/L2.
(V)	Reception of an UP train on Line No. 6	Reception of a DN train (VSKP or PRDP end) on L1/L2/L4/L7/L8/L9/L10 OR Dispatch of an UP train (VSKP or PRDP end) from L1/L3/L4/L7/L8/L9/ L10 OR DN train (KNPR end) from L1/L2.
(VI)	Reception of an UP train on Line No. 7	Reception of a DN train (VSKP or PRDP end) on L1/L2/L4/L5/L6 and Dispatch of a DN train (KNPR end) from L1/L2. OR Dispatch of UP train (VSKP end) from L1/L3/L4/L5/L6
(VII)	Reception of an UP train on Line No. 8	Reception of a DN train ((VSKP end) on L1/L2/L4/L5/L6 and Dispatch of DN train (KNPR end) from L1/L2 OR Dispatch of an UP train (VSKP or PRDP end) from L1/L3/L4/L5/L6/L7.
(VIII)	Reception of an UP train on Line No. 9	Reception of a DN train (VSKP or PRDP end) on L1/L2/ L4/L5/L6/L7 and Dispatch of a DN train (KNPR end) from L1/L2. OR Dispatch of an UP train (VSKP or PRDP end) from L1/L3/L4/L5/L6/L7
(IX)	Reception of an UP train on Line No. 10	Reception of a DN train (VSKP or PRDP end) on L1/L2/L4/L5/L6/L7/L8/L9 and Dispatch of a DN train (KNPR end) from L1/L2/L4/L5/L6/L7/L8/L9 OR Dispatch of an UP train (VSKP or PRDP end) from L1/L3/L4/L5/L6/L7/L8/L9.

(X)	Reception of a DN train from VSKP on Line No. 1	Reception of an UP train (KNPR end) on L3/L4/L5/L6/L7/L8/L9/L10 and DN train (PRDP end) on L4/L5/L6/L7/L8/L9/L10 and Dispatch of a DN train from L2/L4 to L10. OR Dispatch of an UP train (PRDP end) from L3/L4/L5/L6/L7/L8/L9/L10.
(XI)	Reception of a DN train from VSKP on Line No. 2	Reception of an UP train (KNPR end) on L3 to L10 and Reception of a DN train (PRDP end) on L4/L5/L6/L7/L8/L9/L10 OR Dispatch of an UP train (PRDP end) from L3/L4/L5/L6/L7/L8/L9 /L10
(XII)	Reception of a DN train from VSKP on Line No. 4	Reception of an UP train (KNPR end) on L1/L5/L6/L7/L8/L9/L10 OR Dispatch of a DN train (KNPR end) from L1/L2/L5/L6/L7/L8/L9/L10 OR Dispatch of an UP train (PRDP end) from L7/L8/L9/L10
(XIII)	Reception of a DN train from VSKP on Line No. 5	Reception of an UP train (KNPR end) on L1/ L4/L7/L8/L9 /L10 and Dispatch of DN train (KNPR end) from L1/L2/L4/L6/L7/L8/L9/L10 OR Dispatch of an UP train (PRDP end) from L7/L8/L9 /L10
(XIV)	Reception of a DN train from VSKP on Line No. 6	Reception of an UP train (KNPR end) on L1/L4/L7/L8/L9/L10 and Dispatch on DN train (KNPR end) from L1/L2/L4 /L7/L8/L9/L10 OR Dispatch of an UP train (PRDP end) from L7/L8/L9/L10
(XV)	Reception of a DN train from VSKP on Line No. 7	Reception of an UP train (KNPR end) on L1/ L4/L5/L6/L9 /L10 OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L9 /L10
(XVI)	Reception of a DN train from VSKP on Line No. 8	Reception of an UP train (KNPR end) on L1/ L4/L5/L6/L10 OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L9 /L10
(XVII)	Reception of a DN train from VSKP on Line No. 9	Reception of an UP train (KNPR end) on L1/ L4/L5/L6/L10 OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L7/L8/L10
(XVIII)	Reception of a DN train from VSKP on Line No. 10	Reception of an UP train (KNPR end) on L1/L4/L5/L6. OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L7/L8/L9
(XIX)	Reception of a DN train from PRDP on Line No 1	Reception of an UP train (KNPR end) from on L4/L5/L6/L7/L8/L9/L10 OR Dispatch of a DN train (KNPR end) from L2/ L4 to L10 and Dispatch of an UP train (PRDP end) from L7/L8/L9/L10

(XX)	Reception of a DN train from PRDP on Line No. 2	Reception of an UP train (KNPR end) on L4/L5/L6/L7/L8/L9/L10 OR Dispatch of UP train (PRDP end) from L7/L8/L9/L10
(XXI)	Reception of a DN train from PRDP on Line No. 4	Reception of an UP train (KNPR end) on L1/L3/L5/L6/L7/L8/L9/L10 OR Dispatch of a DN train (KNPR end) from L1/ L2/ L5/L6/L7/L8/L9/L10 OR Dispatch of an UP train (VSKP end) from L1/L3, Dispatch of an UP train (PRDP end) from L7/L8/L9/L10 OR Reception of a DN train (VSKP end) on L1/L2.
(XXII)	Reception of a DN train from PRDP on Line No. 5	Reception of an UP train (KNPR end) on L1/L3/L4/L7/L8/L9/L10 and Dispatch of an UP train (PRDP end) from L7/L8/L9/L10 OR Dispatch of a DN train (KNPR end) from L1/ L2/ L4/L6/L7/L8/L9/L10 OR Reception of a DN train (VSKP end) on L1/L2
(XXIII)	Reception of a DN train from PRDP on Line No. 6	Reception of an UP train (KNPR end) on L1/ L3/L4 /L7/L8/L9/L10 or reception of a DN train (VSKP end) on L1/L2 and Dispatch of an UP train (PRDP end) from L7/L8/L9/L10 OR Dispatch of a DN train (KNPR end) from L1/ L2/L4/ L7/L8/L9/L10 OR Dispatch of an UP train to VSKP from L1/L3
(XXIV)	Reception of a DN train from PRDP on Line No. 7	Reception of an UP train (KNPR end) on L1/L3/L4/ L5/L6/L9/L10 OR Reception of a DN train (VSKP end) on L1/L2 OR Dispatch of an UP train (VSKP end) from L1/L3 and Dispatch of a DN train (KNPR end) from L1/L2/L4/L5/L9/L10
(XXV)	Reception of a DN train from PRDP on Line No. 8	Reception of an UP train (KNPR end) on L1/L3/L4/ L5/L6/L10 OR Reception of DN train (VSKP end) on L1/L2 OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L9/L10
(XXVI)	Reception of a DN train from PRDP on Line No. 9	Reception of an UP train (KNPR end) on L1/L3/L4/ L5/L6/L10 or Reception of DN train (VSKP end) on L1/L2 OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L7/L8/L10
(XXVII)	Reception of a DN train from PRDP on Line No. 10	Reception of an UP train (KNPR end) on L1/L3/L4/ L5/L6 or Reception of DN train (VSKP end) on L1/L2 OR Dispatch of a DN train (KNPR end) from L1/L2/ L4/L5/L6/L7/L8/L9

ADEQUATE DISTANCE (SIGNAL OVERLAP):

To take 'OFF' the Home Signals for admission of a train, the adequate distance as mentioned below shall be kept clear in terms of GR 3.40 and SRs thereto (Dispensation of CRS has been obtained).

CLEARANCE OF ADEQUATE DISTANCE(SIGNAL OVERLAP):

LINE NO.	FOR UP TRAINS		FOR DN TRAINS	
	FROM	TO	FROM	TO
Line No.1	UP Starter No. 9A/B	DS Point No. 114 "When Point No. 112 is Normal" OR up to UP Advanced Starter No. 25	Starter No. S-6	DS point No. 137 (when point No. 113 is Normal OR up to the edge of the L.C. Gate at Km. 408/8-6.
Line No.2			Starter No. S-8	Nearest edge of level crossing Gate at Km. 408/8-6, Keeping the Gate in open condition when 113N, 111N.
Line No.3	Starter No. 13 A/B	End of Over Run line when point No. 106 and 104 normal OR up to UP Advanced Starter No. 25		
Line No.4	Starter No.15 A/B	End of sand hump when point No.116 is Normal OR up to BJ of 108BT	Starter No. S-10	End of Over Run line when point No.135 and 115 are normal.
Line No.5	Starter No.17 A/B	End of Over Run Line when point No. 122 is Normal OR up to D/S 118 when Point No.122 is reversed.	Starter No. S-12	End of Over Run line when point No.117 is normal.
Line No.6	Starter No.29 A/B	DS point No.118.	Starter No. S-14	End of DS Point No.109 when point 119 and 117 are normal.
Line No.7	Starter No.19 A/B	End of 120BT (at VSKP end) when the point No. 124 is Normal & 120 is Normal.	Starter No. S-42	DS Point No.127 (Normal) when points No. 119 & 121 are normal.
Line No.8	Starter No.21 A/B	DS Point No.126 when point No.130 is Normal 124 is Normal & 128 is Normal.	Starter No. S-18	DS point No.127 when point No.121 is reversed and 119 normal.
Line No.9	Starter No.23 A/B	DS No.126 when point No.124N, 128N, 134R, 130N & 132N are Normal	Starter No. S-20	DS point 125 B when point No.123 is normal.
Line No.10	Starter No.37 A/B	The end of point No.128B when point No. 132(N) is Normal.	Starter No. S-22	Block joint No. 129T (South end) when point No. 123 is normal.

6.5 COMPLETE ARRIVAL OF TRAIN:

The entire block sections between CTC-KNPR, CTC-GBK & CTC-KDRP are monitored by axle counter system and the position of the block section whether clear or occupied are indicated in the panel. When the block section is clear, 'GREEN' indication appears in the panel. As soon as a train enters in to the block section, the GREEN indication disappears and 'RED' indication appears in the panel. As soon as the train clears the Block Section, the 'RED' indication disappears and 'GREEN' indication appears in the panel. This confirms the complete arrival of the train and the SM on duty shall give, "TRAIN OUT OF BLOCK SECTION" report on seeing the section clear (GREEN) indication on the panel.

If a train passes the Station without confirming the Last Vehicle Indicator then the SM on duty shall advise the Station in advance to stop the train to see the complete arrival of the train under exchange of private number and he need not withhold closing of Block Section in rear. After obtaining confirmation about the complete arrival of the said train under exchange of private number he may send another train into the block section.

In case of failure of Axle Counter between KNPR-CTC block section, the traffic gateman shall ensure that the train has arrived complete and shall give one private number to the SM on duty for the stopping train. For GBK-CTC or KDRP-CTC block section, the SM on duty shall depute a points man with private number book for checking the complete arrival of the train. The points man shall be responsible for watching the last vehicle indication of all trains and give one assurance private number to the SM through a nearby telephone available at the location box.

Train passing on adjacent lines shall be stopped and Guard & Loco Pilot shall be issued with Caution Order to proceed cautiously & stop short of any obstruction.

On occasion when a motor trolley following a train, the point shall not be altered until the following motor trolley is admitted on the same line. [Refer GR 4.17, 4.17 (3), 4.17.03 and SR thereto, SR 4.16.04 and SR 15.25.03 (b) (vi)].

6.6 **DESPATCH OF TRAINS:**

- A. Dispatch of train is governed by General Rules 3.38, 3.42 and SR 3.36.04, 3.42.02 (a) (iv), 3.42.03, 3.42.04 & other relevant provisions of GR, SR, BWM and SWR. For dispatch of a train, the SM on duty having obtained "Line Clear" for a train, shall intimate SS to set the outgoing route correctly then the SS shall set the route for out going train correctly and satisfy himself by observing visual indication on the control panel. (For coaching trains, the SS on duty at the platform shall advise the SS on duty at RRI Cabin to obtain "Line Clear" and take 'OFF' departure signal supported by a Private Number on completion of loading, unloading etc.)

Then SS on duty shall then take 'OFF' the departure signal. The Loco Pilot shall start the train on seeing the aspects of the Route Starter and Advanced Starter. The SM on duty shall watch the passage of train with last vehicle indicator. After the train passes the Advanced Starter complete, he shall send the "Train Entering Block section" report to the Station in Advance.

The DN Advanced Starter Signal of Cuttack is interlocked with the DN Home Signal of Kendrapara Road. Unless, DN Home Signal of KNPR is taken 'OFF' for the DN train, DN Advanced Starter Signal of Cuttack cannot be taken 'OFF'.

- B. The UP Advanced Starter Signal No. 27 of CTC shall be taken 'OFF' only when the 'Axle counter clear' indication between UP Advanced Starter and the IBH signal No. 35 is available on the Panel. A train may be allowed to proceed up to the IBH Signal No. 35 even when line clear has not been received from KDRP. The IBH Signal No. 35 shall be taken 'OFF' only when "line clear" has been received on the Block Instrument.

After the train passes the UP IBH Signal complete UP train entering section buzzer starts ringing, then he shall send the train entering block section signal to the station KDRP. If a train worked without Guard or Brake van the instruction laid down in Subsidiary Rules shall be followed. [Refer SR 4.23.02 & 4.25.02].

NOTE:

1. Before dispatching an UP train up to UP IB signal No. 35, the SM on duty shall ensure closure of the L.C. Gates at Km. 412/15-17, 412/33-35, 413/19-21 & 415/1-3 from the gatemen on duties under exchange of Private Numbers separately.

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

2. Before dispatching an UP train into CTC-KDRP block section, the SM on duty shall ensure closure of the L.C. Gates at Km. 416/1-3 and 417/15-17 from SM on duty at KDRP under exchange of Private Numbers separately.
3. The L.C. Gates at Km. 416/1-3 & 417/15-17 are having telephonic communication with SM/KDRP. Before dispatching an UP train into CTC-KDRP block section, SM/RRI/CTC shall advise SM/KDRP the number description, direction and expected time of passage of the train at the gate under exchange of private number.
 - i) Such advice shall be given before obtaining line clear.
 - ii) SM/KDRP shall in turn convey the same advice to the gateman, under exchange of private number.
 - iii) Gatemen shall close the gate and thereafter give his private number to the SM/KDRP.
 - iv) Only then shall SM/KDRP grant line clear to SM/RRI/CTC. [Refer SR 16.03.03 (c), (b)]
- 6.7 **TRAINS RUNNING THROUGH:**
 For run through trains, the signals should be taken 'OFF' as per the sequence and instructions laid in SR 3.42.02 (a) (iv). While the train passes RRI Cabin, the SM on duty shall observe/watch the condition of the train and exchange hand signal with the train Loco Pilot and Guard and take necessary action in accordance with the GR 4.42 (2) & SR 4.42.02 to 4.42.07.
 In case the view of the passing train is otherwise obstructed, the SM on duty shall depute one staff to exchange signal for the purpose at a place from where the view of the train can be seen.
 The SM on duty shall obtain "Line Clear" from the station in advance and shall advise SS on duty to take 'OFF' the reception and departure signal in time to avoid detention to the through train.
- 6.8 **WORKING IN CASE OF FAILURE:**
PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING FAILURE/
SUSPENSION OF INTERLOCKING/SIGNALS/POINTS:
 - (l) **SUSPENSION/FAILURE OF SIGNALS:**
 When signals become defective, the procedure laid down in GR 3.68 to 3.71 and SRs thereto shall be followed.
 - (a) **FAILURE OF TRACK CIRCUIT:**
 In the event of failure of track circuit of any line, the clearance of the line shall be ensured from SS on duty at Platform supported by a private number.
 - (b) **AXLE COUNTER:**
 In the event of failure of axle counter of concerned block section, SS on duty shall initiate resetting of axle counter after ensuring the complete arrival of the train by SM of either end SM/SS. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalizing the system of working. Details of operations involved in resetting of axle counter are given in Appendix-'B'.
 - (c) **BLOCK INSTRUMENT:**
 In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer GR 6.02.03, 6.02.04 and SR 6.02.06].
 During the failure of Block Instrument, the authority will be T/369(3b)/Paper Line Clear Ticket with identification number and Private Number issued from the station in advance written both in figure and words for double line and single line respectively.
 - (d) **RECEPTION OF TRAIN ON OBSTRUCTED LINE:**
 Whenever trains are to be admitted on an obstructed line it is necessary that the trains are piloted 'IN' on a written authority given by the SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. [Refer GR 5.09 & SRs thereto].
 - (e) **RECEPTION OF TRAIN ON NON-SIGNALED LINE:**
 NIL
 - (f) **DEFECTIVE SIGNAL:**

(Correction slip No. 1 Dated: _____)

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APPROACH SIGNAL:

In the event of suspension/failure of Home Signal/ Routing Signal, the Calling-on signal may be taken 'OFF' for reception of a train. If the Calling-on signal also becomes defective, the train shall be worked in accordance with GR 3.69 and SRs thereto. If the defective stop signal can not be kept at 'ON', SR 3.68.02 shall be followed. Before taking 'OFF' Calling-on Signal, the SS must ensure clearance of track between the Calling-on signal and next stop signal ahead in the direction of movement either by track circuit indication or from SS on duty at Platform supported by a private number in the event of failure of track circuit.

DEPARTURE SIGNAL:

In the event of Starter Signal becomes defective, Calling-on signal may be taken 'OFF' in accordance with GR 3.13 (6) (b) and GR 3.45 for dispatch of train and if the Calling-on signal is also defective, train shall be worked in accordance with GR 3.70 and SRs thereto. Before taking 'OFF' Calling-on signal below starter signal, the SS must ensure clearance of track between the calling on signal and the next stop signal ahead in the direction of movement either by track circuit indication or from SS on duty at Platform supported by a private number in the event of failure of track circuit.

In the event of Advanced Starter Signal becomes defective, "Paper Line Clear Ticket" will be given to the Loco Pilot to pass the last stop signal at 'ON' for single line section.

In the event of Advanced Starter Signal becomes defective, a Pilot Memo T/369 (3b) will be given to the Loco Pilot to pass the last stop signal at 'ON' for the double line section.

UP Advanced Starter is interlocked with Route Starter Signal. In case of failure of Advanced Starter/Block Instrument, the Starter Signal cannot be taken 'OFF' & in that case the Calling-on signal provided below starter signal can be taken 'OFF'.

PILOTING OF TRAIN IN TO STATION YARD:

Whenever Home Signal and Calling-on Signal provided below Home Signal can not be taken 'OFF' for reception of a train, the procedure laid down in SR 3.69.03 (a) & (c) shall be followed for piloting 'IN' the train. The SS, on duty at RRI Cabin shall allot a clear line for admission of incoming train. He shall depute Station Master of RRI Cabin to set, clamp and padlock both the trailing & Facing points of the nominated route if the points can not be set from the panel and to ensure the clearance of any obstruction including Level Crossing Gate on the route for admission of the train.

After satisfying about the correct setting clamping and padlocking of all the facing & trailing points concerned for the admission of the train on the route, the SM on duty at RRI Cabin shall hand over the written authority T/369 (3b) to the TPM for piloting the train from the defective Home Signal. After the train has been brought to a dead stop at the Home Signal, the TPM shall hand over the pilot memo to the Loco Pilot, board the engine and display the proceed hand signal to pass the defective Home Signal at 'ON' position.

NOTE:

1. The SM on duty shall personally supervise the correct setting ,clamping and padlocking of the facing points, if any and ensure clearance on the nominated route vide SR 3.69.03 (c).
2. The Key of padlock of the clamps put 'ON' to the points on the route for piloting In or piloting 'OUT' shall be in the personal custody of the SM on duty or any other authorized operating officials till such time the train/engine/vehicle has utilized the route or alternatively such movement is cancelled.

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3. The SM on duty should ensure closer of the Interlocked L.C. Gate before piloting 'IN' the train under exchange of Private Number with the gateman on duty.

PILOTING OF TRAINS OUT OF STATION YARD:

When the starter signal has become defective, the SS at operating panel shall take 'OFF' Calling-on signal for dispatch of train. When both starter signal and Calling-on signal cannot be taken 'OFF', then both the trailing and facing points for the dispatch of the train shall be clamped and padlocked after ascertaining the clearance of the route (both facing and trailing) and the Loco Pilot shall be given pilot memo T/369 (3b) to pass the defective starter at 'ON' position.

In case of Advanced Starter has become defective or Token Less Block Instrument is suspended for Single Line Section, such signal shall be passed on the authority of "Paper Line Clear Ticket".

For double line section the Advanced Starter Signal shall be passed on the authority T/369 (3b). The SM shall be deputed for supervising the correct setting clamping and padlocking of both the trailing and facing points and ensure clearance of any obstruction including Level Crossing Gate on the concerned route for dispatch of train vide SR 3.69.03 (c).

NOTE:

1. The SM on duty shall personally supervise the correct setting ,clamping and padlocking of the facing points ,if any ,and ensure clearance on the nominated route vide SR 3.69.03 (c).
2. The Key of padlock of the clamps put 'ON' to the points on the route for piloting In or piloting 'OUT' shall be in the personal custody of the SM on duty or any other authorized operating officials till such time the train/engine/vehicle has utilized the route or alternatively such movement is cancelled.
3. The SM on duty should ensure closer of the Interlocked L.C. Gate before piloting 'IN' the train under exchange of Private Number with the gateman on duty.

(g) **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Superintendent/Station Master irrespective of the position of the switches of point as laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01 (b)]

Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules thereto. [Refer GR 3.49 (4) and 3.68, 3.77]

(h) **DEFECTIVE INTERLOCKING:**

During failure/suspension of interlocking gears, all points concerned both facing and trailing must be clamped and padlocked for reception & dispatch of train. The SM on duty of RRI Cabin is responsible for ensuring correct setting and locking of points (both facing & trailing) before permitting any movement over them.

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

(i) **DEFECTIVE/DAMAGED POINT:**

In case of points controlled by RRI Cabin become defective, the procedure laid down in OM 20.06 should be followed for setting of the points by Crank Handle.

Crank Handles are provided in location box located at either end of the yard nearer to the point zone for manually setting of the electric motor operated points in the event of failure/defects of the points. The crank Handle at the location huts are released by the operation of control push button by the SS on duty of the RRI Cabin.

CRANK HANDLE	CRANK POINTS
CH-1	104,110,112,114,140,142,144
CH-2	106,108
CH-3	116,120,122,118
CH-4	124,126,128,130,132,134
CH-5	101,111,113
CH-6	103,105,107,109,115,117,127,135
CH-7	119,121,123,125
CH-8	133,129,131
CH-9	102
CH-10	137

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are in Normal Position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'trans' push button (GSB) and concerned Crank Handle control push button simultaneously. When the keys are taken out no signal can be taken "OFF" over the particular route on the points nominated by that Crank Handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The failure of motor operated points must be ensured by physical checking at site that there is no obstruction. SM on duty at RRI Cabin shall personally ensure the clamping and padlocking of all facing points. An emergency Crank handle register shall be maintained by the SM on duty at the RRI Cabin as per Para 20.06 (d) of the Operating Manual. Correct setting, clamping and padlocking of the points is the responsible of SM on duty. (Details of use of Crank Handle are as per Appendix-'B').

6.9 **PROVISION FOR WORKING OF TROLLEYS, MOTOR TROLLYES, MATERIAL TROLLYES AND TOWER WAGONS ETC.:**

Motor Trolleys & Material Trolleys, Tower Wagons shall be worked as per GR 15.25, 17.08 and SR thereto, Block Working Manual 5.39, 5.40, 5.41, 6.11, 6.12, 6.13, and Circulars and Orders issued from time to time.

7.0 **BLOCKING OF LINES:**

- (i) A clear remark in Red Ink shall be made immediately in the Train Signal Register indicating time and Number of Running Line blocked and record shall be made in SM's Diary by SS on duty.
- (ii) Loose vehicles stabled in the sidings and on running lines must be secured in accordance with GR 5.23 and SR thereto. It is the responsibility of the in-charge of the shunting operation to ensure that the loose vehicles in the siding and running lines are secured properly after the completion of the shunting operations.
- (iii) When a running line is obstructed, UP & DN facing points shall be set and precautions shall be taken by the SS on duty in accordance with SR 5.23.01.
- (iv) When a line is obstructed for any reason, magnetic RED button collars should be placed on relevant route button for the obstructed line on the operating panel and the obstructed line shall be protected by the SS on duty in accordance with SR 3.36.03 (b) and 5.04.01.

- (v) Except smalls loading and unloading of vehicles on Running line is prohibited unless permitted by DOM vide SR 5.19.01.

SECURING OF VEHICLES:

Rules laid down in GR 5.23 and SR 5.23.01 shall be followed. Special care should be taken to secure special type vehicles fitted with roller bearings while standing on running lines vide SR 5.23.01 (b).

USE OF REMINDER BLOCK COLLAR:

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, the reminder collars shall be used by the SS on duty on the push button concerned. [Refer SR 3.36.03 (b)].

ALTERATION OF POINTS TO A CLEAR LINE WHENEVER A RUNNING LINE IS BLOCKED:

- (a) When a running line is blocked by stable load, wagon, vehicles or by a train, which is to cross or to give precedence to another train or immediately after the arrival of a train at the station etc, the points at either end should immediately be set against the blocked line except when any shunting or any other movement is required to be done immediately in that direction on that line.
- (b) If all the lines at a station happen to be blocked, when "Line Clear" has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order, so that in case of any mishap, the chances of casualties are minimized. In case all the lines are occupied by passenger carrying trains, points should be set for a loop line to negotiate of which the speed of the incoming train would be reduced, which in turn would minimize the consequences/causalities. While doing so, points may be set for a loop occupied by a train, if any, whose engine is facing the direction of approach of the incoming train rather than for a loop occupied by a train whose passenger coach will incase, of collision, receive the impact.

8.0 **SHUNTING:**

8.1 **GENERAL PRECAUTIONS:**

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16 to 5.21, 8.09, 8.10, 8.12, 8.13 and 8.15 with relevant SRs shall be observed. All shunting movements shall be supervised by Shunting Master/Points man/Station Master/Guard of the train as per SR 5.13.03.

8.2 **SHUNTING IN THE FACE OF APPROACHING TRAIN:**

Shunting in the face of an approaching Train is prohibited.

8.3 **PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:**

- (i) Shunting in face of on approaching train is prohibited.
- (ii) Hand shunting is prohibited at both end of the yard.
- (iii) Fly shunting is prohibited.

8.4 **SHUNTING WITHIN STATION SECTION:**

If the necessary signals are kept at 'ON' shunting may be carried on within the station section provided the block section at that end is clear of approaching train.

8.5 **SHUNTING OUTSIDE STATION SECTION:**

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

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

Goods siding line No. 11 is a non-running line. It is taken off at CH: 135.285 m towards VSKP end. The siding is isolated from line No. 10 with provision of DS at either end. The entrance point is a non-interlocked hand point. In order to admit a train on goods siding from VSKP end, the non-interlocked point at CH: 135.285 m & the other two hand points pertaining to the siding are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The entrance point at HWH end to the siding is a motor operated point. SH33J & SH(5,7)A are controlling movement to the siding. Similarly, SH24A/B/C is controlling movement from the siding. The points and signals are operated from the panel board. The movement towards the siding is being controlled by hand signals in responsibility of Shunting Master.

Goods siding line No. 12 is a non-running line. It is taken off at CH: 135.285 m towards VSKP end. It is isolated from line No. 11 with provision of a DS at VSKP end and terminated with Dead End CH: 662.0 m at HWH end. The entrance point is a non-interlocked hand point. In order to admit a train on goods siding from VSKP end, the non-interlocked point at CH: 135.285 m & the other three hand points pertaining to the siding are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The movement towards the siding is being controlled by hand signals in responsibility of Shunting Master.

SICK LINE NO.1:

Sick line No. 1 is taken 'OFF' from Line No. 12 at VSKP end. It is isolated from line No. 12 with provision of a DS at VSKP end and terminated with a Dead End. The entrance point is a non-interlocked hand point. In order to admit a train on sick line No. 1, the non-interlocked point at CH: 135.285 m & the other four hand points pertaining to the sick line are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The movement towards the sick line is being controlled by hand signals in responsibility of Shunting Master.

SICK LINE NO.2:

Sick line No. 2 is taken 'OFF' from Line No. 12 at VSKP end. It is isolated from sick line No. 1 with provision of a DS at VSKP end and terminated with a Dead End. The entrance point is a non-interlocked hand point. In order to admit a train on sick line No. 2, the non-interlocked point at CH: 135.285 m & the other four hand points pertaining to the sick line are to be set correctly. The non-interlocked hand points are operated by arc levers at site. The movement towards the sick line is being controlled by hand signals in responsibility of Shunting Master.

Shunting in saloon siding, LPO siding and DSC siding, shunting neck No. 1 & No. 2 are controlled by shunt signals and points and signals are operated from the panel. Shunting in ART siding is controlled by shunt signal and point is operated from the panel. Shunting in oil siding No. 1 & No. 2 is controlled by shunt signals and points & signals are operated from the panel.

Shunt signals and back shunt signals are provided below starter and near the top point for controlling the shunt movement. Shunt signals are provided for shunt movement in the siding. For shunting on main line, Calling-on signal can be taken 'OFF' for onward movement and back shunt signal can be taken 'OFF' for coming back.

9.0(a) **ABNORMAL CONDITION:** (i) **PARTIAL FAILURE:**

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In the event of suspension of Lock and Block Instrument and during partial failure of other available means of communication, the procedures detailed below shall be followed for working of trains in different situations.

- a) Failure/Suspension of Block Instrument or Track Circuit or Axle counters-
'Line Clear' shall be obtained on the Telephone attached to the Block Instrument or station telephone exchanging ID number and supported by Private Number.
- b) Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments or station fixed telephones-
'Line Clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.
- c) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or Railway auto phone or BSNL phone.
'Line Clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.
- d) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or Telephone attached to the Block Instruments or Railway auto phone or BSNL phone or control phone.
'Line Clear' shall be obtained on the VHF sets by exchanging identification Number supported by a Private Number.

The authority to proceed for the Loco Pilot on double line territory is T/369 (3b) and Paper Line Clear Ticket for single line section bearing identification Number and Private Number received from the station in advance written both in figure and words. [Refer SR 6.02.06 & Chapter-V & VI of BWM]

ii. **THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT:**

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions which are summarized as follows. [Refer SR 6.02.05]

After sending a train on Block ticket, a following train shall not be dispatched in the same direction unless:

- a) The previous block ticket is collected & cancelled, or
 - b) Necessary endorsement is given on the previous block ticket with the advice to wait at the site for a next train to follow, or
 - c) The previous train has met with an accident or has been disabled, or
 - d) The block ticket has been collected from the Loco Pilot of the previous train by the official in-charge at the site & kept in the personal custody & shall be kept until the arrival of the next train & such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.
- (a) SM will suspend the absolute block system of working and both SM's concerned should arrange for running of trains on the authority of Block Ticket.
 - (b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which shall include.
 - i). Caution order: Existing speed restriction shall be indicated in the Caution Order portion. The speed restriction to 15 KMPH during clear visibility and 10 KMPH when visibility is obstructed shall be clearly indicated.
 - ii). An authority to pass the stop signals at 'ON' position.
 - (c) Before resumption of normal working a message between the SM's of the concerned station shall be exchanged with private number. [Refer SR 6.02.05 (d) (vi)].
The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

iii. **TRAINS DELAYED IN BLOCK SECTIONS:**

If a train carrying passenger does not arrive within 10 minutes OR if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto]

FAILURE OF AXLE COUNTER:

- (a) If any Block proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- (b) 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 taken OFF.
- (c) A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the SM on duty at the receiving station through exchange of Private Number.
- (d) Reset arrangements are provided in the operation cum indication panel in the SM's office for sections CTC-KDRP and CTC-KNPR with DLBI and CTC-GBK with TLBI. The UP & DN resetting key along with reset push button for all sections are provided on the Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.
- vi. **Procedure for emergency operation of points by Crank Handle:** The detailed procedure for emergency operation of points by Crank Handle of Motor operated points are given in Appendix-'B'.
- vii. Procedure for emergency operation of points with point zone axle counter / Track circuit failure & emergency route release. (Refer Appendix-'B')
- viii. **Certification of clearance of track before Calling-on signal, operation initiated:** Before taking 'OFF' Calling-on signal during failure of track circuits / Axle counter, the route & the clearance of the track over which train would pass to be verified SS on duty at Platform.
- ix. **Reporting failure of points, Track circuit / Axle counter and interlocking:** Whenever, there is a failure of points, track circuit / Axle counter or any other interlocking gear at the station, the failure should be reported by SS/SM on duty to the concerned signaling maintenance staff on duty responsible for attending to the and only after receipt of the written memo from signaling maintainer for rectification of the fault, SM should restore the normal working.

The entries in failure register to be done with message to SCR.

9.1.A TOTAL FAILURE OF COMMUNICATION (SINGLE LINE SECTION):

In the event of total interruption of communication occurring between CTC-GBK, Stations i.e. when line clear cannot be obtained by one of the following means stated in order of preference viz.

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

And actions shall be taken as per SR 6.02.04. The train which is to be dispatched to the affected section will be stopped and the Loco Pilot and Guard of the train shall be informed about the fact.

Before dispatching the light engine /main engine/motor trolley /Tower wagon/Trolley /Cycle trolley/Moped trolley, the SM on duty shall hand over a Authority for opening of communication during total failure interruption of communication on Single Line Section to the Loco Pilot /motorman/Guard/SM who is being sent to open communication which includes.

- (i) An authority to proceed without "Line Clear" in the prescribed form (T/B602).
- (ii) A Caution Order restricting to speed of the train to 15 KMPH by day when the view ahead is clear and 10 KMPH during night or when view ahead is obstructed in addition to other speed restrictions in force (T/B409).
- (iii) Paper Line Clear Ticket to pass the Last Stop Signal at 'ON' position.
- (iv) A "Line Clear" enquiry message (T/E602) asking "Line Clear" for the awaiting train (T/F 602).
- (v) A conditional "Line Clear" message for the light engine to return with or without a train attached, supported by a Private Number.

On arrival of the engine at the next station, the conditional "Line Clear" message and enquiry message shall be collected by the SM on duty who shall prepare conditional "Line Clear" ticket (T/G 602 or T/H 602) for engine to return either light or a train attached to it and conditional "Line Clear" reply message for the enquiry message, giving "Line Clear" for the train waiting at the other end shall be handed over to the Loco Pilot of the light engine. On return trip, the Loco Pilot will come on booked speed subject to any other speed restriction in force.

As soon as any one of the means of communication has been restored the conditional "Line Clear" working of train shall be cancelled when there is no train in the affected block section and messages shall be exchanged supported by Private Number. The section controller shall be informed.

9.1.B **TOTAL FAILURE OF COMMUNICATION BETWEEN CTC-KNPR & CTC-KDRP (DOUBLE LINE SECTION):**

In the event of total failure of communications between CTC-KDRP & CTC-KNPR i.e. when line clear cannot be obtained by any one of the following means stated in order of preference viz.

- (a) Block Instruments, Track Circuits or Axle counters,
- (b) Telephone attached to the Block Instruments,
- (c) Fixed telephones such as Railway auto phones & BSNL phones,
- (d) Control telephone, and
- (e) VHF sets.

The trains shall be worked in terms of GR 6.02.03 which is summarized in brief as follows:

- (i) Each train before being allowed to enter into the Block Section should be stopped and the Guard and Loco Pilot of the train apprised of the situation.
- (ii) The SM will hand over an authority for working of train during total interruption of communication to the Loco Pilot of each train which shall includes-
 - a) Authority to proceed without 'Line Clear'. [T/C 602]
 - b) Authority to pass the Last Stop Signal at its "ON" position.
 - c) A caution order restricting the speed to 25 KMPH by day when view ahead is clear and 10 KMPH by night or when view ahead is not clear.
- (iii) No train shall be allowed to enter the Block Section until there is a clear interval of 30 minutes between the train about to leave and the train, which has immediately proceeded.

- (iv) Fixed signals except the last stop signal may be taken "OFF" for the dispatch of the train and for the reception of the train at the next block station, reception signals may be taken only after the train has been brought to a stand out side it.
- (v) On arrival at the next block station the Loco Pilot shall hand over the authority to proceed with out line clear to the SM on duty who will preserve the same for further inspection.
- (vi) Before resuming normal working when any means of communication is established. SM of either end must satisfy that there is no train in the block section. [Refer SR 6.02.03].

9.2 **TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:**

During temporary single line working, when one line is clear and the other line is obstructed between CTC-KDRP & CTC-KNPR, the trains shall be worked as per the procedure which is summarized as follows: (the IBH between CTC -KDRP shall be treated as closed).

- (a) Before introducing single line working the SM on duty must satisfy that the line on which single line working will be introduced is clear and free from all obstructions.
- (b) The Lock and Block instrument will be suspended. The commutators of Lock & Block Instrument will be kept on "Train on line position".
- (c) SM proposing single line working must issue a message with
 - (i) The cause of introduction of single line working,
 - (ii) Line on which the single line will be introduced,
 - (iii) Source of information about the clearance of the line on which single line will be introduced,
 - (iv) Place of obstruction,
 - (v) Restriction of speed, If any,
 - (vi) Assurance about keeping the last stop signal at 'ON' position if the train runs on right lines and in case of wrong line all signals are to be kept at 'ON' position etc under the exchange of Private Number.
- (d) SS/SM on duty at the other end of the block section will acknowledge the message and confirm the same by a Private Number.
- (e) After obtaining line clear for the train from the Advance station the Loco Pilot must be given as-
- (i) Authority for Temporary Single Line (TSL) working on double line (T-D/602) indicating there in.
 - Caution order
 - The line on which single line working is introduced.
 - The kilo-meterages of obstruction.
 - Any other speed restriction, if any existing.
 - Endorsement to inform all Gang man and Gateman about the single line working (for the first train only).
 - The speed of the first train to be restricted to 25 KMPH subject to other speed restriction.
 - Authority to pass Signal in "ON" position
- (ii) The approach stop signals at the station in advance may be taken "OFF". In case a train proceeding on wrong line, the train shall be piloted out and at the receiving station, the train shall be piloted 'IN', on the authority of T/369 (3b).

On being ensured that the obstructed line is clear of all obstructions, the SS/SM will resume normal working after exchanging message with the SS/SM of the other concerned end supported by private number in consultation with the Section Controller on duty when there is no train in the block section.

A goods train or an engine may be allowed on wrong line by blocking back the section without introducing single line working. [Refer SR. 6.02.05 (g) (i)]

Whenever total interruption of all communication occurs during single line working on double line, the procedure detailed in GR should be followed. [Refer SR 6.02.02]

9.3 **THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT:**

Rules and Regulations for working of trains on an obstructed line in case of obstruction or accident on the authority of Block Ticket (T/A-602) when communications are available shall be followed in accordance with the provisions which is summarized as follows [Refer SR 6.02.05]

After sending a train on block tickets, a following train shall not be dispatched in the same direction unless:

- a) The previous Block Ticket is collected and cancelled or
- b) Necessary endorsement is given on the previous block ticket with the advise to wait at the site for a next train to follow or
- c) The previous train has met with an accident or has been disabled or
- d) The Block ticket has been cancelled from the Loco Pilot of the previous train by the official-in-charge at the site and kept in the personal custody & shall be kept until the arrival of the next train and such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.
- e) SM will suspend the Absolute Block System of Working and both SMs concerned should arrange for running of trains on the authority of Block Ticket.
- f) SM at the dispatching end will hand over to the Loco Pilot the block Ticket as the authority which shall includes:
 - i. Caution Order: Existing Speed Restriction/s shall be indicated in the Caution Order portion. The Speed Restriction to 15 KMPH during clear visibility and 10 KMPH when visibility is obstructed shall be clearly indicated.
 - ii. An authority to pass the Stop Signal at "ON" position.
- g) Before resumption of normal working a message between the SMs of the concerned stations shall be exchanged with private number. [Ref SR 6.02.05 (d) (vi)].
- h) The Block Ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstruction from Loco Pilot/Guard of the train and cancels it.

TRAINS DELAYED IN BLOCK SECTIONS

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto]

10.0 **VISIBILITY TEST OBJECT:**

Common Loop line No. 1 Starter Signals at both ends are nominated as VTO to enable the SS on duty to take action in terms of GR 3.61 and SRs thereto. The light of these signals shall be verified from the VTO platform earmarked for this purpose at the centre on platform No. 1 in between two starters by the SS on duty.

11.0 **ESSENTIAL EQUIPMENTS OF THE STATION:**

The list of the essential equipments is mentioned in Appendix-'E' which shall be kept ready on hand in good condition with necessary relief stock.

12.0 **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG:**
FOG SIGNALLING:

In case of thick, foggy, tempestuous weather or during dust storm impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of signal, the Station Superintendent on duty at Station shall arrange for signaling in

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terms of GR 3.61 and SR thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR 3.61 as a token of their knowledge in the Rules of Fog Signaling.

Fog signal men shall be detailed for duty at stations being recruited partly from the station traffic staff & partly from Engineering Gang man and must not be substitute or casual labour but the regular employees of the Railway.

STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

INSTRUCTIONS:

- a. This register contains the following parts.

Part – I	: Particulars of fog signal men posted at the station from time to time.
Part – II	: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
Part – III	: Periods of fogs, fog signalmen on duty and details of detonators used.
Part – IV	: Particulars of issue and testing of fog signals at the station.
- b. As soon as a man is posted to or detailed for duty at a station as a Fog Signaller, the Station Master must satisfy himself that the man is fully acquainted with and understands the rules relating to the placing of detonating (fog) signals at stations during thick or foggy weather. As an assurance of this, the Station Master shall take the signature or thumb impression of such men in the appropriate column of Part - I of this register.
- c. In-charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.
- d. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

APPENDICES

- | | |
|------------|---|
| APPENDIX-A | : WORKING OF LEVEL CROSSING GATES. |
| APPENDIX-B | : SYSTEM OF SIGNALLING AND INTERLOCKING, 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 EQUIPMENTS PROVIDED AT THE STATION. |
| APPENDIX-F | : RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS. |
| APPENDIX-G | : RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTION. |

1.0 WORKING OF 'SPECIAL' CLASS MANNED TRAFFIC INTERLOCKED LEVEL CROSSING GATE NO. 177 SITUATED AT KM. 408/5-7 (UP) & 408/8-6 (DN) TOWARDS KNPR END OF CUTTACK YARD:

1.1 GENERAL:

1.	Number of level crossing gate	:	177
2.	Traffic gate or Engineering	:	Traffic
3.	Under control of	:	SS/CTC
4.	Location at	:	Km. 408/5-7 (UP) & 408/8-6 (DN)
5.	At station	:	Cuttack
6.	In between station	:	-
7.	BG/MG/NG	:	BG
8.	Single line /Double line	:	Double Line
9.	Normal position	:	Open to road traffic.
10.	Interlocked/Non-interlocked	:	Interlocked
11.	Means of interlocking	:	EKT
12.	Provision of gate Signal	:	Not provided
13.	Signaling arrangement	:	Station Stop Signal
14.	Means of communication	:	Telephone with SM/RRI/CTC
15.	Width of Level crossing gate	:	8.00 m
16.	Type of Road	:	Others
17.	Name of Road	:	Municipality road.
18.	Metal led/Non metal led	:	Metalled
19.	Approach Road	:	Bituminous
20.	Width of the Road	:	8.00 m
21.	Angle of Road crossing.	:	-
22.	Road gradient	:	a) North East side : 1:20 b) South West side : 1:20
23.	Road alignment (Straight / Curve)	:	i) North East side : Straight ii) South West side : Straight
24.	Provision of height gauge	:	Provided
25.	Type of Barrier	:	Lifting
26.	Length of check Rail	:	11.00 m
27.	Road surface in between L-Xing gates	:	C.C. Block.
28.	Length of Rumbled strip/speed breaker	:	7.50 m
29.	Road signs	:	Yes
30.	Speed breakers indication boards	:	Yes
31.	TVU	:	146814, October - 2012
32.	Census next due on	:	October - 2015
33.	Demarcation for placement of detonators.	:	Available
34.	No. of gateman working	:	3
35.	Nearest Railway Medical Assistance	:	Cuttack
36.	Nearest Private medical Assistance	:	SCB Medical College, Cuttack
37.	List of equipment available Yes/No	:	Yes

1.2A EQUIPMENT TO BE AVAILABLE AT THE GATE:

Sl. No.	Items	Quantity
1.	LED tri-colour hand signal lamp	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	3 mounted on sticks
4.	Banner flag Red	3
5.	Posts for exhibiting Red banner flag	2
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy bar	1
10.	Mortar pan	1
11.	Spade/Fowrah	1
12.	Pick axe	1
13.	Tin case for flag	1
14.	Cane for oil	1
15.	Water pot/Bucket	1
16.	Canister for Muster roll	1
17.	Set of spare spectacles of gateman wearing glasses	1
18.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
19.	Basket	1
20.	Whistle	1
21.	Wall clock	1
22.	Small chain with padlock	2

B. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

- I) Gate Working Instructions in Hindi/English.
- II) Gate Working Instructions in local vernacular language.
- III) Gateman Rule Book in local vernacular language.
- IV) List for tools and books.
- V) Duty Roster.
- VI) Certificate for working as Gateman.
- VII) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- VIII) Accident Register.
- IX) Record of last census of road traffic at Level Crossing Gate.
- X) Public Complaint Book.
- XI) Inspection Book.

1.3 MODE OF OPERATION:**INTERLOCKING AND NORMAL WORKING:**

This gate is interlocked with all UP reception signals and DN dispatch signals. The interlocking is achieved by means of Electrical Key Transmission system. The normal position of the gate is open to Road Traffic. A two-lever GF is provided at the gate lodge. The key of the L.C. Gate remains in the winch when the gate is open condition. When it is necessary to close the gate for taking off signals or for shunting operation, the Station Master on duty shall inform the Gateman to close and lock the gate.

INTIMATION TO GATEMAN:

- Before taking off reception/departure/shunt signals, Station Master shall inform the gateman, the number, description and direction of the train.

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- The gateman shall close the gate and transfer the key to the Station Master. (the detail procedure is described below)
- The reception/departure/shunt signals will be taken "OFF".
- In order to ensure that road traffic is not held up for a long time, the Station Master must ensure that the train is ready for arrival/departure in all respects before the advises the gateman for closing the gate.
- When a train has to be piloted to and from the station yard, the staff deputed to pilot the trains shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

To take 'OFF' Reception/Dispatch signals for the incoming/out going trains or for shunting movement over the Level Crossing Gate, the SM on duty at RRI Cabin shall inform the Gateman to close the Gate across the road traffic. The Gateman shall clear the road traffic and close the Gate by operating winch and extract key 'P' from the winch. This key 'P' shall be inserted into GF lever No. 2 and turned. This will release GF-2 which when reversed, locks the booms of the Gate and releases GF-1 and key 'X'.

The Gateman on duty shall then reverse lever No. GF-1 and will insert key 'X' in the EKT instrument and turn. The SM on duty at RRI Cabin will press Level Crossing control button No. 139 and common button (GSB). L.C. Gate close indication will appear in the panel and concerned signal will release automatically.

After the passage of concerned train or completion of shunting, the SM on duty shall inform the Gateman and press L.C. Gate control button No.139 and Common GSRB button and keep it pressed till such time the Gateman extracts the Gate control key "X" from the EKT instrument. After getting the key 'X', the Gateman on duty will open the Gate by normalizing the levers.

Emergency gate release operation facility is also provided in the panel when the route gets locked due to some failure. For emergency release of gate, the SM on duty shall press signal cancellation button and then emergency gate release button and gate button No. 139. A red flashing (Gate lock) indication will appear and after a lapse of 120sec. Gate lock indication will disappear and a white light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate push button for gate button No. 139 and Group Trans button (GSRB) to release the key from EKT in gate Lodge. All such operation will be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

GF Lever No. 1 is provided at the gate lodge to put back the concerned signal to danger in case of emergency by pulling the Lever No. 1 to normal position.

The level crossing gate shall be so worked as to cause the least possible inconvenience to vehicular traffic consistent with safety according to SR 16.03.01 (a). To avoid the detention to the road traffic at the Level crossing gate, the signals should not be taken off too early in advance and L.C. Gate should not be kept closed for more than 10 minutes at a stretch according to SR 16.03.01(b).

1.4. **DUTIES OF GATEMAN:**

(1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) **POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gateman will stand in the manner indicated below:

- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- (ii) In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.

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- (iii) In nighttime, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

(3) ROUTINE DUTIES OF GATEMAN:

- (i) Gateman shall place red banner flag across the track during emergencies and obstruction on the track.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under an instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) If lifting barriers/gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (vii) Gateman shall report to the nearest SM, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (viii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (ix) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

(4) ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master to take appropriate action under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.

- (v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone to take appropriate action, under exchange of private number.

(5) ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- I. In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, in the 'ON' position.
- II. Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- III. If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

- a)
 - I. If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - II. Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - III. Gateman shall then proceed to protect the gate along with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night.
 - IV. Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - V. Thereafter, he shall 'proceed' on the other line, showing red hand signal, similarly place detonators as described in Para IV above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - VI. Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - VII. In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - VIII. Thereafter, he shall light up and fix the LED tri-colour hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

b) OTHER ACTION TO BE TAKEN BY GATEMAN:

- i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.5 FAILURE OF TELEPHONE COMMUNICATION:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) Station Master on duty shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- (ii) Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master which will enable them to take "OFF" reception/ departure signals.
- (iii) When sufficient time is not available because of greater frequency of train service, Station Master will issue written authority to the train Loco Pilot to pass the signal at "ON" position.
- (iv) In addition, Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
- (v) The train Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and ensure that gate is closed following GR 3.73 (2) (b).
- (vi) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (vii) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (viii) He should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- (ix) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

1.6 FAILURE OF LIFTING BARRIERS OR LEAF GATES:

- (i) Immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco Pilot of the approaching train.
- (v) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will intimate to the Station Master on duty shall issue caution order to the Loco Pilot of departing trains.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end. Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to repair the defect at the earliest.
- (vii) Normal working will resumed only after maintenance staff repair the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

1.7. FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:

- (i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- (ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.(in this gate emergency key is not available)

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- (iii) The record of the date and time of breaking the sealed cover of Emergency Key Box shall be recorded and signed with reasons.
- (iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest.
- (viii) Normal working will be resumed only after S & T staff repairs the winch/gate lever/key transmitter and issue reconnection/ fit memo for the same.

1.8. FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:

- (i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.
- (v) He shall also advise the Station Master at the dispatching end, under exchange of private number to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate lever/key transmitter to rectify the defect at the earliest
- (vii) Normal working will resumed only after S & T staff repair the winch/gate lever/key transmitter and issues reconnection/ fit memo for the same.

1.9. OBSTRUCTION AT THE GATE:

- If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (i) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
 - (ii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
 - (iv) Gateman shall then rush with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide GR 16.07.
 - (v) Thereafter he shall protect the gate from the other direction also.
 - (vi) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
 - (vii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
 - (viii) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

- (ix) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- (x) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xi) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

1.10 OBSTRUCTIONS ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 1.9 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

2.0 **WORKING OF 'A' CLASS MANNED MID-SECTION INTERLOCKED ENGINEERING LEVEL CROSSING GATE NO CP-1 SITUATED AT KM. 411/18-16 (DN) & 411/15-17 (UP) BETWEEN CTC AND KDRP:**

2.1 **GENERAL:**

- | | | |
|---|---|--|
| 1. Number of Level Crossing Gate | : | CP-1 |
| 2. Engineering or Traffic | : | Engineering |
| 3. Under control of | : | SSE / P.Way/GRKN |
| 4. Location at Km | : | Km. 411/18-16 (DN) & 411/15-17(UP) |
| 5. At station | : | - |
| 6. In between station | : | CTC-KDRP. |
| 7. BG/MG/NG | : | B.G. |
| 8. Single line /Double line | : | Double Line |
| 9. Normal position | : | Open. |
| 10. Interlocked/Non-interlocked | : | Interlocked |
| 11. Means of interlocking | : | Gate Stop Signal |
| 12. Provision of gate Signal | : | - |
| 13. Signaling arrangement | : | UP Gate Stop Signal cum UP Distant
UP L.C. Gate at Km. 412/3-5, DN Gate
Stop Signal cum DN Distant of CTC. |
| 14. Means of communication | : | Telephone with SM/RR/CTC |
| 15. Width of Level crossing gate | : | 7.50 m |
| 16. Type of Road | : | Others |
| 17. Name of Road | : | Durgapatna |
| 18. Metalled/Non Metalled | : | Metalled |
| 19. Approach Road | : | Metaled |
| 20. Width of the Road | : | 7.50 m |
| 21. Angle of road crossing (in case SKEW Gates) | : | ---- |
| 22. Road gradient (If any) | : | a) North/East side : 1:20
b) South/West side : 1:20 |
| 23. Road alignment (Straight/ Curve) | : | a) North/East side : Curve
b) South/West side : Curve |
| 24. Provision of height gauge | : | Yes |
| 25. Type of Barrier | : | Lifting |
| 26. Length of check Rail | : | 9.0 m |
| 27. Road surface in between L-Xing gates | : | C.C. Block |
| 28. Length of Rumbled strip/speed breaker | : | --- |
| 29. Road Signs | : | Yes |
| 30. Speed breakers indication boards | : | Yes |
| 31. TVU | : | 46920, August - 2012 |
| 32. Census next due on | : | August - 2015 |
| 33. Demarcation for placement of detonators. | : | Available |
| 34. No. of gateman working | : | 2 |
| 35. Nearest Railway Medical Assistance | : | Cuttack |
| 36. Nearest Private Medical Assistance | : | Cuttack |
| 37. List of equipment available Yes/No | : | Yes |

2.2 A. EQUIPMENTS TO BE AVAILABLE AT THE GATE:

Sl. No.	Items	Quantity/Numbers
1.	LED tri-colour hand signal lamp	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	3 mounted on sticks
4.	Banner flag Red	2
5.	Posts for exhibiting Red Banner Flag	2
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy bar	1
10.	Mortar pan	1
11.	Spade/Fowrah	1
12.	Rammer	1
13.	Pick axe	1
14.	Tin case for flag	1
15.	Cane for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with padlock	2

B. RECORDS TO BE KEPT AT GATE LODGE

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- I) Gate Working Instructions in Hindi/English.
- II) Gate Working Instructions in local vernacular language.
- III) Gateman Rule Book in local vernacular language.
- IV) List for tools and books.
- V) Duty Roster.
- VI) Certificate for working as Gateman.
- VII) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- VIII) Accident Register.
- IX) Record of last census of road traffic at level crossing gate.
- X) Public Complaint Book.
- XI) Inspection Book.
- XII) S&T Inspection Register.

2.3. MODE OF OPERATION:**NORMAL WORKING OF THE INTERLOCKED LEVEL CROSSING GATE:**

This gate is interlocked with independent Gate Stop Signals. The interlocking is achieved by mechanically Ground lever frame & closure of the L.C. Gate Boom. The normal position of the gate is open to road traffic. A five-lever ground frame is provided at the gate lodge. When it is necessary to close the gate for passage of a train, the SM on duty shall inform the Gateman to close and lock the gate.

The Gateman on duty shall then close the barriers of the L.C. Gate by operating winch. The key 'X' is to be extracted from the winch, and will be inserted in GF-2 and turned.

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This will release GF-2 which when reversed locks the boom and release key “Y”, 3GF and 4GF. Then key “Y” will be inserted in the EKT instrument and turned by the gateman on duty. The “key IN” contact of EKT controls 3GF and 4GF. For UP trains the gateman reverses 3GF and for DN trains the gateman reverses 4GF.

After passage of concerned train, the gateman on duty normalizes 3GF/4GF and extract key ‘Y’ from EKT. This key is inserted in GF-2 and normalizes GF-2 and extract key ‘X’. The gateman insert key ‘X’ in the winch and opens the gate for road traffic. In case of emergency, key “Y” will be obtained after signals 3GF and 4GF are put back to ‘ON’ and after a time delay of 120sec.

The level crossing gate shall be so worked as to cause the least possible inconvenience to vehicular traffic consistent with safety according to SR 16.03.01 (a). To avoid the detention to the road traffic at the Level Crossing Gate, the Gate Signals should not be taken ‘OFF’ too early in advance and L.C.Gate should not be kept closed for more than 10 minutes at a stretch according to SR 16.03.01 (b).

2.4. INTIMATION TO GATEMAN:

- i) SM shall advise the gateman through telephone, the number, description, direction and expected time of the passage of the train at the gate.
- ii) If the actually running time of the train from either end of the section is less than 10 minutes, SM will convey this advice to the gateman before obtaining /granting line clear.
- iii) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

2.5 DUTIES OF GATEMAN:

1) ALERTNESS:

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2) POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3) ROUTINE DUTIES OF GATEMAN:

- i) Gateman shall place red banner flag during emergencies and obstruction on the track.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie – talkie or in any other way.

- vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest SM, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:**

- In case gateman observes anything unusual with a passing train, he shall take following action.
- i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
 - vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

- a) The gateman shall protect the line as under:-
- i) If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - viii) Thereafter, he shall light up and fix the LED tri-colour hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- (b) OTHER ACTION TO BE TAKEN BY GATEMAN:**
- i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

2.6 FAILURE OF TELEPHONIC COMMUNICATION:

- When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:
- i) If the telephone fails at the gate connected with the Station at the dispatching end, station master shall then issue a caution order to the Loco Pilot of the departing train.
 - ii) Station master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
 - iii) In case the gate signal is 'ON', he should stop short of gate signal and follow the procedure laid under GR 3.73.
 - iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
 - v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
 - vi) Station master will also advise the gateman through gang man/patrolman/Loco Pilot of the first train that the telephone has become defective.
 - vii) Station master should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.

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- viii) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

2.7 FAILURE OF LIFTING BARRIERS OR LEAF GATES:

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leaf gates do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco Pilot of the approaching train.
- v) Station Master on duty shall issue caution order to the Loco Pilot of departing trains.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to repair the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

2.8 FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:

- i) If the gate key cannot be extracted from the winch, the gate leaves or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic. (In this gate the emergency key is not available)
- iii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- v) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest.
- vii) Normal working will be resumed only after S & T staff repairs the winch/gate leaves/key transmitter and issue reconnection/ fit memo for the same.

2.9 FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:

- i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

- v) He shall also advise the Station Master at the dispatching end, under exchange of private number to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest
- vii) Normal working will resumed only after S & T staff repair the winch/gate leaves/key transmitter and issues reconnection/ fit memo for the same.

2.10 DEFECTIVE GATE SIGNALS:

- i) The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
- ii) If gate signals can be taken "OFF" without closing the gate, or
- iii) The key can be extracted from the operating winch when the gate is in open condition, or
- iv) If the Gate or the Gate Signal or Distant Signal becomes defective in "OFF" position, the gateman will make all efforts to put it at "ON" position even by cutting signal wires, if necessary.
- v) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- vi) Thereafter, the gate must be treated as non interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- vii) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- viii) Station Master on duty will issue caution order to the Loco Pilot of a departing train.
- ix) He shall also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- x) Station Master shall advise S & T staff responsible for maintaining the gate signal to repair the same at the earliest
- xi) Normal working will be resumed after S & T staff rectifies the defective gate signal and issue reconnection/ fit memo for the same.

2.11 OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide GR 16.07.
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

- x) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

2.12 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 2.11 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

3.0 WORKING OF 'SPECIAL' CLASS MANNED MID-SECTION INTERLOCKED LEVEL CROSSING GATE NO. CP-2 SITUATED AT KM 412/3-5 (UP) AND KM. 412/6-4 (DN) BETWEEN CTC-KDRP:

3.1. GENERAL:

1.	Number of Level Crossing Gate	:	CP-2
2.	Engineering gate or Traffic Gate	:	Engineering
3.	Under the control	:	SSE/P-WAY/GRKN
4.	Location at Km	:	Km. 412/3-5 (UP) & 412/6-4 (DN)
5.	At Station	:	-
6.	In between station	:	CTC-KDRP.
7.	BG/MG/NG	:	BG
8.	Single line/ Double line	:	Double line
9.	Normal position	:	Open to road traffic.
10.	Interlocked/ Non Interlocked	:	Interlocked
11.	Means of Interlocking	:	Gate Stop Signal
12.	Provision of Gate Signal	:	-
13.	Signaling Arrangements	:	UP Gate Stop Signal, DN Gate Stop Signal
14.	Means of communication	:	Telephone with SM/RRI/CTC
15.	Width of the Level Crossing Gate	:	7.50 m
16.	Type of Road	:	Others
17.	Name of Road	:	Nayabazar.
18.	Metaled/Non metaled	:	Metaled
19.	Approach Road	:	Block Top
20.	Width of the Road	:	7.50 m
21.	Angle of road crossing (in case of SKEW Gates)	:	---
22.	Road gradient (If any)	:	i) North /East side : Level ii) South /West side: Level
23.	Road alignment (Straight/ Curve)	:	i) North /East side : Straight ii) South/ West side : Straight
24.	Provision of height gauge	:	Yes
25.	Type of Barrier	:	Lifting Barriers.
26.	Length of check Rail	:	11.0 m
27.	Road surface in between Level Crossing Gates	:	C.C Block
28.	Length of Rumble strip/speed breaker	:	7.00 m
29.	Road Signs	:	Available
30.	Speed breakers indication boards	:	Available
31.	TVU	:	113823, April - 2010
32.	Census next due on	:	April - 2013
33.	Demarcation for placement of detonators	:	Available
34.	No. of gateman working	:	3
35.	Nearest Rly. medical Assistance	:	Cuttack
36.	Nearest private Medical Assistance available (if any)	:	Cuttack
37.	List of equipment available Yes/No	:	Yes

3.2 A EQUIPMENT TO BE AVAILABLE AT THE GATE

Sl. No.	Items	Quantity
1.	LED Tri-colour hand signal lamp	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	3 mounted on sticks
4.	Banner flag Red	3
5.	Posts for exhibiting Red banner flag	2
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 In tin case
8.	Gate Lamps	2
9.	Tommy bar	1
10.	Mortar pan	1
11.	Spade/Fowrah	1
12.	Rammer	1
13.	Pick axe	1
14.	Tin case for flag	1
15.	Can for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with padlocks	2

B. RECORDS TO BE KEPT AT GATE LODGE

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi/English.
2. Gate Working, Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language.
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as Gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
8. Accident Register.
9. Record of last census of road traffic at Level Crossing Gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Inspection Register.

3.3. NORMAL WORKING:

This gate is interlocked with independent Gate Stop signals. The interlocking is achieved by mechanically Ground lever frame & closure of the L.C.Gate Boom. The normal position of the gate is open to road traffic. A five-lever ground frame is provided at the gate lodge. When it is necessary to close the gate for passage of a train, the SM on duty shall inform the Gateman to close and lock the gate.

The Gateman shall clear the road traffic and close the Gate by operating the winch. The Gateman will extract key 'M' from the winch. This key 'M' shall be inserted into G.F. lever

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DOM/KUR

No. 2 and turned. This will release GF-2 which when reversed, locks the booms of the Gate and releases GF-3 & GF-4 and key 'N'.

The Gateman on duty shall then reverse lever No. GF-3 or GF-4 and will insert key 'N' in the EKT instrument and turn. The "key IN" contact of EKT controls GF-3 and GF-4. For UP Gate Signal Gateman reverses GF-3 and for DN train GF-4.

After passage of concerned train, the gateman on duty shall normalize GF-3/GF-4 and will extract key 'N' from EKT. This key will be inserted in GF-2 and normalize GF-2 and extract key 'M'. The gateman will insert key 'M' in the winch and opens the gate for road traffic. In case of emergency key "N" will be obtained after signals 3GF and 4GF are put back to 'ON' and after a time delay of 120 sec.

The level crossing gate shall be so worked as to cause the least possible inconvenience to vehicular traffic consistent with safety according to SR 16.03.01 (a). To avoid the detention to the road traffic at the Level Crossing Gate, the Gate Signals should not be taken 'OFF' too early in advance and L.C.Gate should not be kept closed for more than 10 minutes at a stretch according to SR 16.03.01 (b).

3.4. **INTIMATION TO GATEMAN:**

- (i) SM shall advise the gateman through telephone, the number, description, direction and expected time of the passage of the train at the gate.
- (ii) If the actually running time of the train from either end of the section is less than 10 minutes, SM will convey this advice to the gateman before obtaining /granting line clear.
- (iii) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3.5 **DUTIES OF GATEMAN:**

1) **ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2) **POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gateman will stand in the manner indicated below:

- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

3) **ROUTINE DUTIES OF GATEMAN:**

- (i) Gateman shall place red banner flag during emergencies and obstruction on the track.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

- (vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (viii) Gateman shall report to the nearest SM, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:**

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - (v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
 - (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

- a) The gateman shall protect the line as under:-
- (i) If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - (vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - (vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - (viii) Thereafter, he shall light up and fix the LED tri-colour hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(b) OTHER ACTION TO BE TAKEN BY GATEMAN:

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

3.6 FAILURE OF TELEPHONIC COMMUNICATION:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) If the telephone fails at the gate connected with the Station at the dispatching end, station master shall then issue a caution order to the Loco Pilot of the departing train.
- (ii) Station master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- (iii) In case the gate signal is 'ON', he should stop short of gate signal and follow the procedure laid under GR 3.73.
- (iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station master will also advise the gateman through gang man/patrolman/Loco Pilot of the first train that the telephone has become defective.

- (vii) Station master should also advise S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- (viii) Normal working will be resumed only after S & T staff rectify the telephone and issue reconnection/ fit memo for the same.

3.7 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing trains.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to repair the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff repair the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

3.8 **FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:**

- (i) If the gate key cannot be extracted from the winch, the gate leaves or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- (ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic. (In this gate the emergency key is not available)
- (iii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iv) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (v) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest.
- (vii) Normal working will be resumed only after S & T staff repairs the winch/gate leaves/key transmitter and issue reconnection/ fit memo for the same.

3.9 **FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:**

- (i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.

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- (v) He shall also advise the Station Master at the dispatching end, under exchange of private number to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest
- (vii) Normal working will resumed only after S & T staff repair the winch/gate leaves/key transmitter and issues reconnection/ fit memo for the same.

3.10 **DEFECTIVE GATE SIGNALS:**

- (i) The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
- (ii) If gate signals can be taken "OFF" without closing the gate, or
- (iii) The key can be extracted from the operating winch when the gate is in open condition, or
- (iv) If the Gate or the Gate Signal or Distant Signal becomes defective in "OFF" position, the gateman will make all efforts to put it at "ON" position even by cutting signal wires, if necessary.
- (v) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- (vi) Thereafter, the gate must be treated as non interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (vii) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- (viii) Station Master on duty will issue caution order to the Loco Pilot of a departing train.
- (ix) He shall also advise the Station Master at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (x) Station Master shall advise S & T staff responsible for maintaining the gate signal to repair the same at the earliest
- (xi) Normal working will be resumed after S & T staff rectifies the defective gate signal and issue reconnection/ fit memo for the same.

3.11 **OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide GR 16.07.
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

- (x) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

3.12 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 3.11 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

4.0 **WORKING OF 'B1' CLASS MANNED MID-SECTION NON-INTERLOCKED LEVEL CROSSING GATE NO. CP-3 SITUATED AT KM. 412/15-17 (UP) & 412/18-16 (DN) BETWEEN CTC-KDRP**

4.1 **GENERAL:**

1	Number of level crossing gate	:	CP-3
2	Traffic gate or Engineering	:	Engineering
3	Under control of	:	SSE/P.WAY/GRKN
4	Location at	:	Km. 412/15-17(UP) & 412/18-16(DN)
5	At station	:	-
6	In between station	:	CTC-KDRP
7	BG/MG/NG	:	BG.
8	Single line /Double line	:	Double Line
9	Normal position	:	Closed to road traffic.
10	Interlocked/Non-interlocked	:	Non-Interlocked
11	Means of Interlocking	:	-
12	Provision of gate Signal	:	-
13	Signaling Arrangement	:	-
14	Means of communication	:	Telephone with SM/RRI/CTC.
15	Width of Level crossing gate	:	7.50 m
16	Type of Road	:	Others
17	Name of Road	:	Nuapada
18	Metal led/Non metal led	:	Metaled
19	Approach Road	:	Black Top
20	Width of the Road	:	7.50 m
21	Angle of Road crossing.	:	-
22	Road gradient (if any)	:	a) North/East side : 1:50 b) South/West side: 1:50
23	Road alignment (straight / curve)	:	i) North/East side : Straight ii) South/West side : Straight
24	Provision of height gauge	:	Yes
25	Type of Barrier	:	Lifting
26	Length of check Rail	:	9.00 m
27	Road surface in between L-Xing gates	:	C.C. Block.
28	Length of Rumbled strip/speed breaker	:	7.50 m
29	Road signs	:	Available
30	Speed breakers indication boards	:	Available
31	TVU	:	25551, August – 2012
32	Census next due on	:	August - 2015
33	Demarcation for placement of detonators.	:	Available
34	No. of gateman working	:	2
35	Nearest Railway Medical Assistance	:	Cuttack
36	Nearest Private medical Assistance	:	SCB Medical College, Cuttack
37	List of equipment available Yes/No	:	Yes

4.2. A EQUIPMENT TO BE AVAILABLE AT THE GATE:

Sl.No.	Items	Quantity/Number
1	LED tri-colour hand signal lamp	3
2	Hand signal flag Green	1 mounted on stick
3	Hand signal flag Red	3 mounted on sticks
4	Banner flag Red	3
5	Posts for exhibiting Red banner flag	2
6	Spare chains with padlocks	2 with stop mark
7	Detonators	10 in tin case
8	Gate lamps	2
9	Tommy bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Rammer	1
13	Pick axe	1
14	Tin case for flag	1
15	Cane for oil	1
16	Water pot/Bucket	1
17	Canister for Muster roll	1
18	Set of spare spectacles of gateman wearing glasses	1
19	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20	Basket	1
21	Whistle	1
22	Wall clock	1
23	Small chain with padlocks	2

B. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

- (i) Gate Working Instructions in Hindi/English.
- (ii) Gate Working Instructions in local vernacular language.
- (iii) Gateman Rule Book in local vernacular language.
- (iv) List for tools and books.
- (v) Duty Roster.
- (vi) Certificate for working as Gateman.
- (vii) Bio-data particulars of Gatemen including date of passing vision test, initial/refresher course, safety camp, etc.
- (viii) Accident Register.
- (ix) Record of last census of road traffic at Level Crossing Gate.
- (x) Public Complaint Book.
- (xi) Inspection Book.

4.3 A. MODE OF OPERATION:**NORMAL WORKING OF THE NON-INTERLOCKED LEVEL CROSSING GATE:**

The level crossing gate is normally kept closed against road traffic and it will be opened for passage of road traffic only when it is necessary and safe to do so. The Gateman on duty before opening the gate shall ensure that he has not exchanged any Private Number with the station or if he has exchanged Private Number with the station, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged Private Number with him for any movement immediately in the rear of that train or on the adjacent line (s). Before opening the gate, he shall display a banner flag across the track.

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- (B) **TRAIN ACTUATED WARNING DEVICE (TAWD) FOR PROVIDING ADVANCE WARNING TO THE ROAD USER TRAIN ACTUATED WARNING DEVICE (TAWD)** has been provide at the L.C. Gate for providing advance warning to the Road user about the approach of the Train toward the L.C. Gate.

The Train Actuated Warning Device (TAWD) works in combination of 3 units (1 pair) for one L.C. Gate. Unit 'B' (Decision Unit) is installed near the trackside at Level Crossing, along with two sets of Tx and Rx Coils and Unit 'A' & 'C' (Detection Units) are installed near the trackside along with one Set of Tx & Rx coils on either side of the L.C. Gate at a distant of 2 Kms. The Tx & Rx coils are mounted on the clamp of the rail at each location. The processing Unit at the decision-making Units located at the L.C. Gate i.e. [Unit 'C'] initiates the Warning Audio/Visual signals as soon as the first wheel count of the train approaching is obtained from the Remote Units.

The Signaling Scheme under different condition is as per the table indicated below:

STATUS	WARNING FOR ROAD USER	
	VISUAL	AUDIO
NO TRAIN	STEADY YELLOW	NO SOUND
TRAIN APPROACHING	STEADY RED	DING-DONG BELL
GATE CLOSED	STEADY RED	NO SOUND
TAWD DEFECTIVE/STAND BY MODE	NO LIGHT	NO SOUND

Indication Panel installed at the L.C. Gate also provide above indication for Train approaching, Equipment (TAWD) defective apart from the Low battery indication. One Acknowledge Button also provide for acknowledging the Buzzer when the train approach the Gate.

For the road user, Hooters on either side of the L.C. Gate are provided as the advance warning about the approach of a train toward the L.C. Gate.

4.4. **DUTIES OF GATEMAN:**

(1) **ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) **POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gateman will stand in the manner indicated below:

- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

(3) **ROUTINE DUTIES OF GATEMAN:**

- (i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.

- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (viii) Gateman shall report to the nearest SM, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN :**

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - (v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
 - (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-colour hand signal lamps and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place on detonator on the line.
 - (v) Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (vi) Thereafter he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - (vii) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - (viii) In case the gateman observes or hears train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - (ix) Thereafter, he shall light up LED tri-colour hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by light repeatedly.

(b) OTHER ACTION TO BE TAKEN BY GATEMAN:

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.5 EXCHANGE OF PRIVATE NUMBER:

- (i) The normal position of the level crossing gate is "Closed to Road Traffic".
- (ii) The Station Master before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master in assurance of gate being closed & locked against road traffic.
- (iii) The Station Master shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.

- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
- (1) He has not exchanged any private number with the station as per 4.5 (ii) above, or
 - (2) If he has exchanged private number with the Station Master, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line (s).

Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready by his hand to stop approaching train if any.

- (v) In case the Gateman is not responding on the telephone or incase the telephone becomes defective or private number is not received from the Gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand to stop approaching train if any.

4.6 **FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) Station master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advice the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gang man/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

4.7 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.

- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

4.8 **OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

4.9 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 4.8 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

5.0 WORKING OF 'C' CLASS MANNED MID-SECTION NON-INTERLOCKED LEVEL CROSSING GATE NO. CP-4 SITUATED AT KM. 412/33-35 (UP) & 412/36-34 (DN) BETWEEN CTC-KDRP

5.1 GENERAL:

1	Number of level crossing gate	:	CP-4
2	Traffic gate or Engineering	:	Engineering
3	Under control of	:	SSE/P.WAY/GRKN
4	Location at	:	Km. 412/33-35 (UP) & 412/36-34(DN)
5	At station	:	-
6	In between station	:	CTC-KDRP
7	BG/MG/NG	:	BG.
8	Single line /Double line	:	Double Line
9	Normal position	:	Closed to road traffic.
10	Interlocked/Non-interlocked	:	Non-Interlocked
11	Means of Interlocking	:	-
12	Provision of gate Signal	:	-
13	Signaling Arrangement	:	-
14	Means of communication	:	Telephone with SM/RRI/CTC.
15	Width of Level crossing gate	:	7.50 m
16	Type of Road	:	Others
17	Name of Road	:	Soratala Road.
18	Metal led/Non metal led	:	Metaled
19	Approach Road	:	Metaled
20	Width of the Road	:	5.50 m
21	Angle of Road crossing.	:	-
22	Road gradient (if any)	:	(a) North/ East side : 1:35 (b) South/ West side: 1:30
23	Road alignment (straight / curve)	:	i) North/ East side : Straight ii) South/ West side : Straight
24	Provision of height gauge	:	Yes
25	Type of Barrier	:	Lifting
26	Length of check Rail	:	9.50 m
27	Road surface in between L-Xing gates	:	C.C. Block.
28	Length of Rumbled strip/speed breaker	:	10.00 m
29	Road signs	:	Available
30	Speed breakers indication boards	:	Available
31	TVU	:	11711, August – 2012
32	Census next due on	:	August - 2015
33	Demarcation for placement of detonators.	:	Available
34	No. of gateman working	:	2
35	Nearest Railway Medical Assistance	:	Cuttack
36	Nearest Private medical Assistance	:	Cuttack
37	List of equipment available Yes/No	:	Yes

5.2. A EQUIPMENT TO BE AVAILABLE AT THE GATE:

Sl.No.	Items	Quantity/Number
1	LED tri-colour hand signal lamp	3
2	Hand signal flag Green	1 mounted on stick
3	Hand signal flag Red	3 mounted on sticks
4	Banner flag Red	3
5	Posts for exhibiting Red banner flag	2
6	Spare chains with padlocks	2 with stop mark
7	Detonators	10 in tin case
8	Gate lamps	2
9	Tommy bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Rammer	1
13	Pick axe	1
14	Tin case for flag	1
15	Cane for oil	1
16	Water pot/Bucket	1
17	Canister for Muster roll	1
18	Set of spare spectacles of gateman wearing glasses	1
19	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20	Basket	1
21	Whistle	1
22	Wall clock	1
23	Small chain with padlocks	2

B. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

- (i) Gate Working Instructions in Hindi/English.
- (ii) Gate Working Instructions in local vernacular language.
- (iii) Gateman Rule Book in local vernacular language.
- (iv) List for tools and books.
- (v) Duty Roster.
- (vi) Certificate for working as Gateman.
- (vii) Bio-data particulars of Gatemen including date of passing vision test, initial/refresher course, safety camp, etc.
- (viii) Accident Register.
- (ix) Record of last census of road traffic at Level Crossing Gate.
- (x) Public Complaint Book.
- (xi) Inspection Book.

5.3 MODE OF OPERATION:**NORMAL WORKING OF THE NON-INTERLOCKED LEVEL CROSSING GATE:**

The level crossing gate is normally kept closed against road traffic and it will be opened for passage of road traffic only when it is necessary and safe to do so. The Gateman on duty before opening the gate shall ensure that he has not exchanged any Private Number with the station or if he has exchanged Private Number with the station, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged Private Number with him for any movement immediately in the rear of that train or on the adjacent line (s). Before opening the gate, he shall display a banner flag across the track.

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5.4. DUTIES OF GATEMAN:**(1) ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

(3) ROUTINE DUTIES OF GATEMAN:

- (i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (viii) Gateman shall report to the nearest SM, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

- (xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN :**

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - (v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
 - (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-colour hand signal lamps and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place on detonator on the line.
 - (v) Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (vi) Thereafter he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - (vii) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

- (viii) In case the gateman observes or hears train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- (ix) Thereafter, he shall light up LED tri-colour hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by light repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

5.5 **EXCHANGE OF PRIVATE NUMBER:**

- (i) The normal position of the level crossing gate is "Closed to Road Traffic".
- (ii) The Station Master before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master in assurance of gate being closed & locked against road traffic.
- (iii) The Station Master shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the station as per 5.5 (ii) above, or
 - (2) If he has exchanged private number with the Station Master, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line (s).

Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready by his hand to stop approaching train if any.

- (v) In case the Gateman is not responding on the telephone or incase the telephone becomes defective or private number is not received from the Gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand to stop approaching train if any.

5.6 **FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

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- (i) Station master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gang man/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

5.7 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

5.8 **OBSTRUCTION AT THE GATE:**

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.
- (vi) Thereafter he shall protect the gate from the other direction also.

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- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

5.9 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 5.8 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

6.0 WORKING OF 'B1' CLASS MANNED MID-SECTION NON-INTERLOCKED LEVEL CROSSING GATE NO. CP-5 SITUATED AT KM. 413/19-21 (UP) & 413/22-20 (DN) BETWEEN CTC-KDRP

6.1 GENERAL:

1	Number of level crossing gate	:	CP-5
2	Traffic gate or Engineering	:	Engineering
3	Under control of	:	SSE/P.WAY/GRKN
4	Location at	:	Km. 413/19-21 (UP) & 413/22-20 (DN)
5	At station	:	-
6	In between station	:	CTC-KDRP
7	BG/MG/NG	:	BG.
8	Single line /Double line	:	Double Line
9	Normal position	:	Closed to road traffic.
10	Interlocked/Non-interlocked	:	Non-Interlocked
11	Means of Interlocking	:	-
12	Provision of gate Signal	:	-
13	Signaling Arrangement	:	-
14	Means of communication	:	Telephone with SM/RRI/CTC
15	Width of Level crossing gate	:	7.50 m
16	Type of Road	:	Others
17	Name of Road	:	Sartola Road.
18	Metal led/Non metal led	:	Non metalled
19	Approach Road	:	Black Top
20	Width of the Road	:	5.50 m
21	Angle of Road crossing.	:	-
22	Road gradient (if any)	:	(a) North/ East side : 1:30 (b) South/ West side: 1:30
23	Road alignment (Straight /Curve)	:	i) North/ East side : Straight ii) South/West side : Straight
24	Provision of height gauge	:	Yes
25	Type of Barrier	:	Lifting
26	Length of check Rail	:	9.50 m
27	Road surface in between L-Xing gates	:	C.C. Block.
28	Length of Rumbled strip/speed breaker	:	10.00 m
29	Road signs	:	Available
30	Speed breakers indication boards	:	Available
31	TVU	:	25092, September - 2010
32	Census next due on	:	September - 2013
33	Demarcation for placement of detonators.	:	Available
34	No. of gateman working	:	2
35	Nearest Railway Medical Assistance	:	Cuttack
36	Nearest Private medical Assistance	:	SCB Medical College, Cuttack
37	List of equipment available Yes/No	:	Yes

6.2. A EQUIPMENT TO BE AVAILABLE AT THE GATE:

Sl.No.	Items	Quantity/Number
1	LED tri-colour hand signal lamp	3
2	Hand signal flag Green	1 mounted on stick
3	Hand signal flag Red	3 mounted on sticks
4	Banner flag Red	3
5	Posts for exhibiting Red banner flag	2
6	Spare chains with padlocks	2 with stop mark
7	Detonators	10 in tin case
8	Gate lamps	2
9	Tommy bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Rammer	1
13	Pick axe	1
14	Tin case for flag	1
15	Cane for oil	1
16	Water pot/Bucket	1
17	Canister for Muster roll	1
18	Set of spare spectacles of gateman wearing glasses	1
19	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20	Basket	1
21	Whistle	1
22	Wall clock	1
23	Small chain with padlocks	2

B. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

- (i) Gate Working Instructions in Hindi/English.
- (ii) Gate Working Instructions in local vernacular language.
- (iii) Gateman Rule Book in local vernacular language.
- (iv) List for tools and books.
- (v) Duty Roster.
- (vi) Certificate for working as Gateman.
- (vii) Bio-data particulars of Gatemen including date of passing vision test, initial/refresher course, safety camp, etc.
- (viii) Accident Register.
- (ix) Record of last census of road traffic at Level Crossing Gate.
- (x) Public Complaint Book.
- (xi) Inspection Book.

6.3 MODE OF OPERATION:**NORMAL WORKING OF THE NON-INTERLOCKED LEVEL CROSSING GATE:**

The level crossing gate is normally kept closed against road traffic and it will be opened for passage of road traffic only when it is necessary and safe to do so. The Gateman on duty before opening the gate shall ensure that he has not exchanged any Private Number with the station or if he has exchanged Private Number with the station, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged Private Number with him for any movement immediately in the rear of that train or on the adjacent line (s). Before opening the gate, he shall display a banner flag across the track.

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6.4. DUTIES OF GATEMAN:**(1) ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

(3) ROUTINE DUTIES OF GATEMAN:

- (i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (viii) Gateman shall report to the nearest SM, Gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

- (xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

(4) ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN :

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - (v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
 - (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-colour hand signal lamps and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place on detonator on the line.
 - (v) Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (vi) Thereafter he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - (vii) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.

- (viii) In case the gateman observes or hears train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- (ix) Thereafter, he shall light up LED tri-colour hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by light repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

6.5 **EXCHANGE OF PRIVATE NUMBER:**

- (i) The normal position of the level crossing gate is "Closed to Road Traffic".
- (ii) The Station Master before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master in assurance of gate being closed & locked against road traffic.
- (iii) The Station Master shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the station as per 6.5 (ii) above, or
 - (2) If he has exchanged private number with the Station Master, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line (s).

Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready by his hand to stop approaching train if any.

- (v) In case the Gateman is not responding on the telephone or incase the telephone becomes defective or private number is not received from the Gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand to stop approaching train if any.

6.6 **FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

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- (i) Station master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gang man/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

6.7 FAILURE OF LIFTING BARRIERS OR LEAF GATES:

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

6.8 OBSTRUCTION AT THE GATE:

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-colour hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.

- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

6.9 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 6.8 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

7.0 WORKING OF 'B1' CLASS MANNED NON-INTERLOCKED LEVEL CROSSING GATE NO. CP-6 SITUATED AT KM. 415/1-3 (UP) AND 415/4-2 (DN) BETWEEN CTC-KDRP STATIONS.

7.1 BRIEF DESCRIPTION:

1.	No. of Level Crossing Gate	:	CP-6
2.	Engineering or Traffic gate	:	Engineering.
3.	Under control of station master or permanent way inspector.	:	SSE/P.Way/GRKN
4.	Location at Km.	:	Km. 415/1-3 (UP) & 415/4-2 (DN)
5.	At station	:	---
6.	In between station	:	KDRP-CTC
7.	BG/MG/NG	:	BG
8.	Single line/double line/multiple line	:	Double Line
9.	Normal position	:	Open to road traffic
10.	Interlocked/ Non-Interlocked	:	Non-Interlocked.
11.	Means of Interlocking	:	---
12.	Provision of gate signal at Km.	:	---
13.	Signaling arrangement	:	---
14.	Means of communication Telephone.	:	Telephone with SM/KDRP
15.	Width of the level crossing gate	:	7.50 m
16.	Type of road	:	Others
17.	Name of road	:	Matgajpur Road
18.	Metalled /Non-Metalled	:	Metalled
19.	Approach road	:	Metalled
20.	Width of the road	:	5.50 m
21.	Angle of road crossing (in case of the SKEW gates)	:	---
22.	Road gradients (if any)	:	[a] North/ East Side. Level
		:	[b] South/ West Side. Level
23.	Road alignment (Straight/Curve)	:	[a] North East Side : Straight
		:	[b] South West Side : Straight
24.	Provision of height gauges	:	Yes
25.	Type of barriers	:	Lifting
26.	Length of check rails	:	9.50 m
27.	Road surface in between level crossing gates.	:	C.C. Block
28.	Length of rumble strip/ speed breakers.	:	10.0 m
29.	Road signs	:	Yes
30.	Speed breakers indication board	:	Yes
31.	TVU	:	26640, September - 2010
32.	Census next due on	:	September - 2013
33.	Demarcation for placement of detonators.	:	Yes
34.	No. of gateman working	:	02 (Two)
35.	Nearest Railway Medical Assistance	:	Cuttack
36.	Nearest Private Medical Assistance available (if any)	:	S.C.B. Medical College/Cuttack
37.	List of equipment available (Yes/No)	:	Yes

7.2A **EQUIPEMENT TO BE AVAILABLE AT THE GATE:**

1.	Battery operated LED based flashing lamp	3
2.	Hand Signal Flag Green	1 mounted on stick
3.	Hand Signal Flag Red	3 mounted on sticks
4.	Banner Flag Red	3
5.	Posts for exhibiting red banner flag	2
6.	Spare Chains with Padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade/ Fowrah	1
12.	Rammer	1
13.	Pick Axe	1
14.	Tin Case for Flags	1
15.	Cane for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with pad lock	2

B RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- (i) Gate Working Instructions in Hindi/English.
- (ii) Gate Working Instructions in local vernacular language.
- (iii) Gateman Rule Book in local vernacular language.
- (iv) List for tools and books.
- (v) Duty Roster.
- (vi) Certificate for working as gateman.
- (vii) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- (viii) Accident Register.
- (ix) Record of last census of road traffic at Level Crossing gate.
- (x) Public Complaint Book.
- (xi) Inspection Book.

7.3 **MODE OF OPERATION:****NORMAL WORKING OF THE LEVEL CROSSING GATE (NON-INTERLOCKED):**

The level crossing gate is normally kept open against road traffic and is closed only when it is necessary. The Gateman on duty shall be alert entirely depending on the information of the Station Master to close the level crossing gate.

7.4 **DUTIES OF GATEMAN:**

- (1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.
- (2) **POSITION DURING PASSAGE OF TRAINS:**
During passage of trains, gateman will stand in the manner indicated below:
 - (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.

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(B.SAI RAJU)
DEN (E)/KUR

(B.PANDA)
DOM/KUR

- (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

(3) **ROUTINE DUTIES OF GATEMAN:**

- (i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on walkie – talkie or in any other way.
- (vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (viii) Gateman shall report to the nearest SM, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (x) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- (xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:**

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.

- (ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- (iii) If Loco Pilot/guard fails to take notice, gateman shall immediately inform the Station Master if connected on telephone, to take appropriate action, under exchange of private number.
- (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- (v) He shall endeavor to attract the attention of the Loco Pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated UP and DN motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

(a) The gateman shall protect the line as under:-

- i) If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, Battery operated LED based flashing lamps and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall light up and fix the Battery operated LED based flashing lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.

- ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

7.5 EXCHANGE OF PRIVATE NUMBER:

- a) The gate is having telephonic communication with SM/CTC.
 - i) Before dispatching an UP train, SM/CTC shall advise the gateman the number description, direction and expected time of the passage of the train at the gate under exchange of private number.
 - ii) Such advice shall be given before taking 'OFF' departure signals or giving an authority to proceed to the Loco Pilot.
 - iii) The gateman on receipt of the advice shall close the gate well in time and confirm the same under exchange of private number.
 - iv) Station Master will take 'OFF' the departure signals after getting the private number of the gateman.
 - v) The gateman shall be authorized to open the level crossing after complete passage of the train from the gate by observing tail board/tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.
- b)
 - i) Before dispatching a DN train, SM/KDRP shall advise SM/CTC the number description, direction and expected time of passage of the train at the gate under exchange of private number.
 - ii) Such advice shall be given before obtaining line clear.
 - iii) SM/CTC shall in turn convey the same advice to the gateman, under exchange of private number.
 - iv) Gateman shall close the gate and thereafter give his private number to the SM/CTC.
 - v) Only then shall the SM/CTC grant line clear to SM/KDRP. [Refer SR 16.03.03 (c) (a) & (b)]

7.6 FAILURE OF TELEPHONIC COMMUNICATION

- When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:
- i) Station Master at dispatching end shall issue caution order to the Loco Pilot before dispatching a train in the block section from his end.
 - ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
 - iii) The Loco Pilot should be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. If gate is closed, the Assistant Loco Pilot will give all right signal and if the gate is not closed the Assistant Loco Pilot must close the gate and then give all right signal. In the absence of the Assistant Loco Pilot, the Loco Pilot may take the assistance of Assistant Guard/Guard and shall stop clear of the level crossing to pick up the Asst. Loco Pilot who will reopen the gate for the passage of road traffic.
 - iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
 - v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.

- vi) The Station Master shall advise the gateman through trackman/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

7.7 FAILURE OF LIFTING BARRIERS OR LEAF GATES:

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) He should also advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

7.8 OBSTRUCTION AT THE GATE:

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, Battery operated LED based flashing lamp, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for the duties of gateman under Item No. 7.4 (5).
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.

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DOM/KUR

- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

7.9 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 7.8 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

SYSTEM OF SIGNALLING & INTERLOCKING & COMMUNICATION
ARRANGEMENTS AT THE STATION:

- 1.1 The power signaling and interlocking installations is as per the Signaling Plan No. SI/21112 ALT-A together with control tables, route section plans and wiring diagrams.

Based on the above Signaling Plan, the Station Working Rules Diagram attached to the Station Working Rule shows the following:-

The complete layout of the Station including the non-interlocked lines and sidings within the station limits. In addition to signaling features, the diagram indicates gradients, holding capacity of all individual lines, the position and number of lines, over run lines, special restrictions, track circuits, ground frames, cabins, goomties and aspect control of signals.

- 1.2 In this installation, where the points are power operated, the point remains in the last operating position. If the position of the points required to be changed, it shall be resorted individually by operating the concerned point button [WN] in conjunction with Point Group Button [WWN] to required position.
- 1.3 Charts given in the Appendix-"B" showing the operation of entrance and exit buttons for various routes governed by stop signals, calling on signals and shunt signals, slots, the designation of various signals etc.
- 1.4 The Station is of Standard-III (R) interlocked and equipped with Multi Aspect Colour Light Signals and power operated points with track circuit control over points and berthing tracks etc., centrally controlled from Route Relay Cabin through Siemens Type Route Relay installation based on the principles of entrance and exit to conform to Signaling and Interlocking Plan No. SI/21112 ALT-A.
- 1.5 Route Relay Cabin is controlling the movements of trains from/to HWH, VSKP & PRDP ends.

- 2.0 **SIEMENS DOMINO PANELS – OPERATING AND INDICATING FOR OPERATION OF THE POWER SIGNALING:**
Two panels viz. operating (control) panel and indication panel are installed in the RRI Cabin Cuttack.

- 2.1 **OPERATING (CONTROL) PANEL:**
The operating (control) panel is a small console, provided with various operating push buttons for signals, points, individual route section release, emergency operations and other miscellaneous buttons on a small layout to accord with the geographical position at site. Special illuminated indicator indicating power failures is provided on this panel. All the controlling push buttons are provided with indications and designation, number showing the corresponding number of the signal or route or points or any other field units as per the signaling and interlocking plan. The panel Station Master while operating the controlling buttons, switches, counters etc. on the operating panel for controlling the traffic movements or any other operation connected with power signaling installations in the yard should at the same time monitor the conditions of the traffic movements, condition of lines, position of the Block Instruments and condition of all other units on the indication panels.

2.2 INDICATION PANEL:

The indication panel shows in a domino form interlocked portion of Cuttack Station yard with connections with the geographical co-relation to the tracks, points, signals and various other controls as existing at site. This panel through various illuminating indications provided for the field functions, indicates the condition of a particular field gear at a given time in a miniature form so that the entire traffic operation in the yard as well as the position of power signaling and interlocking installations may be constantly monitored by the panel Station Master. Each track circuited line on the indication panel is represented by a separate and distinct colour on the face of the panel and is illuminated indicating the conditions of route setting, route releases, track clearance and occupancy of the track etc. Non track circuited lines are shown in black colour for maintaining visual contact but they are not illuminated.

2.3 POSITIONING OF CONTROLLING BUTTONS ON THE OPERATING PANEL:

The field function controlling buttons of points, signals, routes, slots etc., are located close to the position where the field function are represented on the operation panel. The common buttons such as emergency cancellation button, common point buttons and various counters (meant for counting emergency operations), signal power supply control buttons, signal and point intensity control buttons, are all housed on the top of the panel.. In order to avoid the difficulty of the operator in reaching two buttons "for any operation", some common buttons are multiplied on the operation panel at convenient places.

2.4 CRANK HANDLE RELEASE PUSH BUTTON:

To release any Crank Handle, concerned Crank Handle control button and Crank Handle Group Slot button [GSB] to be pressed simultaneously. Then the steady White light near the Crank Handle button starts flashing till such time the control released accepted by the field agency. At site Red indication appears when the key is extracted from Key Lever unit, a flashing Red indication will appear on the panel and White light extinguishes after completing the work when the key is inserted and turned in the Key Lock unit, the flashing Red light becomes steady and the White light starts flashing. After seeing the indication, SS/Panel Operator will draw the control by operating the concerned CH button in conjunction with Group Slot Cancellation Button [GSRB].

2.5 LAMP MUTING PUSH BUTTON:

Whenever any signal lamp is fused, a flashing indication appears on the panel in the concerned signal aspect with a buzzer. To stop the buzzer this button is to be operated.

- a) A white indication is provided on the panel to indicate closing of the level crossing gate.
- b) The level crossing key is electrically interlocked with the panel. The key extracted from the winch after closing the level crossing when inserted in the RKT for "key in contact" release the concerned signals.
- c) The track circuits are indicated on the panel with "WHITE" for clear and "RED" for occupation.
- d) Point indicators are provided for "Reverse" and "Normal" position of the points.
- e) A point failure indication is also provided with flashing light.
- f) In case of failure of motor operated points, the procedure detailed in Rule No. 20.06 of Operating Manual should be followed for setting of the points by Crank Handle.

2.6 SIGNALS AND THEIR INDICATIONS:

- a) Manually operated multiple aspect colour light signals are provided at this RRI installation. The indications of various aspects of signals provided in this yard are as follows:-

- i) **Red:**

Red indicates "Danger" aspect and signifies stop dead till the signal is taken 'OFF'.

- ii) **Single Yellow:**
Single Yellow indicates "Caution" aspect and signifies proceed cautiously preparing to stop dead at the next stop signal.
- iii) **Double Yellow:**
Double Yellow indicates "Attention" aspect and signifies proceed prepared to pass the next signal at a restricted speed.
- iv) **Green:**
Green indicates "Clear" aspect and signifies "Proceed".
- b) **Route Indicators:**
It takes the form of a row of luner white lights above the signals at junction points at various degrees from the vertical to the left or right as the case may be to indicate whether the turn out at the junction point is set to the right or to the left side of the Loco Pilot. In case of more than one such arm of route indicator on the same side, the top most reads to the first loop and the others for subsequent loops in regular order of sequence.

3.0 (a) **LIST OF COUNTERS WITH THEIR CODE AND FUNCTION:**

Any emergency operations such as full route release, sub-route release, emergency overlap release, emergency point operation etc., are registered in respective counters which are fixed on the top of the panel adjacent to the concerned emergency operation button. The following counters are provided.

Sl. No.	Description	Code	Remarks
1.	Emergency full-route release counters.	EUUYZ	The three button cancellation of any route which is set is registered in this counter.
2.	Emergency sub-route release counters.	EUYZ	Individual sub-route release in case of failure is registered in this counter.
3.	Emergency overlap release counters.	OYZ	Emergency release of any over lap in case of failure is registered in this counter.
4.	Emergency point operation counters.	EWZ	Emergency operation of points under track circuit failure operation is registered in this counter.
5.	Calling on signal counter.	COGGZ	Whenever a calling on signal is cleared the operation is registered in this counter.
6.	Emergency Gate release counter	ELXYZ	Emergency Gate release in case of failure registered in this counter.

In addition to the above, the following counters are also provided on the the Panel for Last Vehicle Verification of Axle Counter Reset and Reset Permission Granting Counter with adjacent stations Kendrapara Road, Kandarpur and Gopalpur Balikuda respectively.

Sl. No.	Description	Code	Remarks
1.	L.V.V. Reset Counter(For UP train from KNPR)		Permission received from KNPR for Axle Counter Reset is registered in this counter in case of failure.
2.	Reset permission Granting counter.(For DN train to KNPR)		Reset permission Granting counter to Kendrapara Road is registered in this counter in case of failure.
3.	L.V.V. Reset Counter.(For DN train from GBK)		Permission received from GBK for Axle Counter reset is registered in this counter in case of failure.
4.	Reset permission Granting Counter (For UP train to GBK)		Reset permission Granting Counter to Gopalpur Balikuda is registered in this counter in case of failure.

5.	L.V.V. Reset Counter (14 AXT) (For DN train from KDRP).		Permission received from KDRP for Axle Counter Reset is registered in this counter in case of failure of 14 AXT
6.	Reset permission Granting Counter (For UP IB KDRP-CTC)(35 AXT).		Reset permission Granting Counter to KDRP is registered in this counter in case of failure of UP IB 35 AXT
7.	Reset permission granting to KDRP for UP IB(12 AXT)		
8.	UP IB (KDRP-CTC) 27 AXT permission. received counter		

(b) **LIST OF OPERATING BUTTONS WITH THEIR CODE AND COLOUR:**

The operating buttons are distinctly coloured for easy identification. The following is the list of the important buttons with their designations in codes and colours: -

Sl. No.	Description	Code	Colour	Remarks
1.	Main signal button.	S.1 GN	Red	No. 1 indicates signal number.
2.	Shunt signal button.	SH.3 GN	Yellow	No. 3 Indicates shunt signal number.
3.	Route button.	25A-UN	Grey	No. 25 A indicates track circuit number.
4.	Buttons for panel intensity control	Ind. Lamps 1, 2, 3.	White	Three such buttons are provided.
5.	Points button without route section emergency release facility.	114 WN	Blue	No. 114 indicates the point number.
6.	Points button with route section (emergency) release facility.	116 WN	Blue with a White dot.	No. 116 indicates the number of points.
7.	Emergency full route release button (group).	EUUYN	Grey	Duplicate for easy access.
8.	Emergency route section release button (individual)	EUYN	Grey	Duplicate for easy access
9.	Common push button for points.	WWN	Blue	Duplicate for easy access
10.	Point emergency push button.	EWN	Blue	Duplicate for easy access
11.	Button for silencing buzzer for signals.	XYN	White	
12.	Button for silencing buzzer for points.	XYN	White	
13.	Emergency group button for putting back a signal to 'ON' position.	EGGN	Red	Duplicate for easy access.
14.	Calling-on signal group button.	COGN	Grey	For taking off a Calling-on signal this button is pressed along with the concerned signal button.
15.	Slot button (individual)	Slot-139	Green	No. 139 Indicates the slot number.

16.	Group slot button.	GSB	Green	For giving/canceling slot to ground frames/cabins etc. this has to be pressed along with individual slot buttons. Buttons are duplicated for easy access.
17.	Group slot cancellation button.	GSRB	Green	
18.	Emergency overlap release button.	OYN	Grey	
19.	Crank handle group button (individual).	CH 4	Blue	CH 4 indicates crank handle No. 4.
20.	Group crank handle release button.	GSRB	Blue	Duplicated for easy reach. These buttons are pressed along with the individual crank handle group button for releasing the crank handle and subsequent normalization.
21.	Group crank handle normal button	GSB	Blue	
22.	Siding point control button.	C 136	Green	C136 means siding control 136. This button is to be pressed along with GSB/GSRB.
23.	Level crossing control button	LX-139	Green	No.139 indicates the control No. This button is to be pressed along with GSB/GSRB.
24.	Power failure alarm suppression button. (M1, M2 & M3)		White	Button to be pressed to mute alarm bell due to power failure.
25.	UP train arrived Ack. Button. (Section Cuttack-Kendrapara Road).		Chocolate with white dot.	Button to be pressed for acknowledging UP train arrival buzzer.
26.	DN train arrived Ack. Button (Section Cuttack-Gopalpur Balikuda)		Chocolate with white dot.	Button to be pressed for acknowledging DN train arrival buzzer.
27.	DN. Train arrived Ack. Button (Section CTC-KDRP)		Chocolate with white dot.	Button to be pressed for acknowledging DN train arrival buzzer.
28.	Emergency Gate Release button	ELXN	Chocolate with red dot.	For emergency Gate release.
29.	LVCD Reset permission Granting Button to Kendrapara Road.		RED	Reset button to be pressed for granting permission to KNPR.
30.	LVCD Reset Permission Granting Button to GBK		RED	Reset button to be pressed for granting permission to GBK.
31.	LVCD Reset Permission Granting Button to KDRP.		RED	Reset button to be pressed for granting permission to KDRP.

The sequences/of button operations to be made for different operations on the panel is as under:-

SL. No.	Operation	Button used	Sequence of operation
1	To clear a Calling on Signal	GN & UN EGGN COGGN	First initiate the stop signal route by pressing GN & UN simultaneously, then press GN and EGGN to throw back the stop signal to "ON" [whether it is cleared or not] and then press GN & COGGN simultaneously, release COGGN keeping GN pressed and press UN.
2	To clear a MAIN SIGNAL	GN & UN	Press both buttons simultaneously.
3	To clear SHUNT SIGNAL	SH.GN & UN	Press both buttons simultaneously.
4.	To throw cleared signal to danger whether a Stop Signal or a Calling-on Signal or a Shunt Signal.	GN & EGGN	Press the concerned GN and EGGN simultaneously.
5	To cancel a route already set after replacing the cleared signal "ON" [whether it is a Stop Signal or Calling-on Signal or a Shunt Signal].	GN, EUUYN & UN	Press the GN & EUUYN simultaneously, release EUUYN keeping GN pressed and press UN. This is known as three button cancellation.

NOTE:

When the signal is approach locked or dead approach locked on pressing GN & EUUYN, a flashing dot indication below the concerned signal configuration appears. Wait till it become steady and then press GN & EUUYN, release EUUYN keeping GN pressed and press UN.

6	To release individual route section under emergency.	WN & EUYN	The key under the custody of SSE/Sig, SE/Sig,/RRI to be inserted and turned to "ON" position. Then WN and EUYN buttons are to be pressed simultaneously for emergency sub-route release.
7	Individual operation of points, tracks are clear.	WN & WWN	Press the point's button concerned and common points button together.
8	Individual operation of points, when points tracks fail.	WN & EWN	Break open the seal of EWN key box, insert & Turn the key and press both the buttons simultaneously. This operation by panel Station Master is registered in the EWN Counter Register.
9	To release a locked over lap in case of failure.	UN & OYN	The key under custody of the SSE/Sig, SE/Sig/RRI is to be inserted and turned to "ON" position. Then "UN" and "OYN" buttons to be pressed simultaneously for emergency over- lap release.
10	To Change the position of points after arrival of train.	WN WWN	Concerned Point Button [WN] and Group Point Button [WWN] to be pressed.

4.0

SPECIAL AND IMPORTANT NOTES:

- a] It is essential that only two push buttons concerned are pressed positively with deliberation and the buttons should be kept pressed for three to eight seconds.[as necessary]
- b] In order to avoid failure of any operation, when the two buttons concerned are pressed, it is essential that no other button is pressed.
- c] Whenever bi-directional movements are permitted over a berthing track, two buttons viz. one route button for movements in DN direction and one for UP direction are provided.
- d] The locking on the points in a set route cannot be released by cancellation of the individual route section with in which these points are located but by release of the entire route initiated which had commanded such flank protection/isolation.

In the power signaling installations, generally the complete route of a stop signal comprises of the route between the concerned signal and signal ahead and also the adequate distance [signal over lap]. The complete route of shunt signal or a calling on signal comprises of the route between the subject signal and signal ahead.

Normally the portion of the track between two consecutive stop signals or between two consecutive shunt signals or between a shunt signal and the stop signal ahead is termed as full-route which is made up of several individual route sections, each route section controlling the various field elements like track circuits, points, level crossing gates, flank protection etc., not only in its immediate jurisdiction but also within its ambit of control. The signal over lap locking/setting is released in an emergency operation through the berthing track control.

Normally each route section is designated after the most pre-eminent number of the points that fall within the immediate jurisdiction of the individual route section, so the numbers of the point button and individual route section are the same. Therefore the common point button coloured blue with a white dot on the top [along with the concerned group push button] should be operated either for individual operation of the points in the route section or for the release of individual route section in case of failures etc., under special emergency provisions.

In some cases, however, where there are more than one set of points or cross-overs in a particular individual route section, the route section is designated generally after the number of the pre-eminent set of points or cross-overs in that part of the route section zone. In all such cases the individual operation of the points and the release of the individual route section occur/with the operation of the common button [which is coloured blue with white dots]. The operation of all other individual points or cross-overs in that route section zone is dependent on the individual operation of the concerned point button [which are coloured blue without any white dot] together with the group button provided such an operation is only possible when the controlling route section is not engaged. This is applicable in the following cases:-

<u>POINT BUTTONS WITHOUT WHITE DOT.</u>	<u>POINT BUTTONS WITH WHITE DOT.</u>
108, 112B, 114, 118, 126, 127, 133, 134, 137, 140 Section/ Sections being free	101, 102A, 102B, 103, 104, 105, 106, 108, 109, 110, 111, 112A, 113, 115A, 116A, 117A, 119A, 120, 121A, 122A, 123A, 124B, 125A, 128A, 129A, 130, 131B, 132A, 135A, 142, 144B For operation of individual point and releasing of individual route setting.

In addition to the provision of the buttons on the operating panel for initiating a route setting and taking off a signal certain other illuminated white or coloured light indications and buttons as below are provided on the operation and indication panels to enable the panel Station Master to constantly watch the condition or state of various fields gears and to control the traffic movements in a direct and expeditious manner:-

5.0 **INDICATIONS:**

These indications are exhibited on the operation panel to indicate the condition or state of controls at any given line of field gears, ground frames, goomties, satellite cabin siding controls and shunting free indicator controls. These controls can be released by the Panel Station Master for controlling:-

- I) Rotary Key Transmission unit for siding operations.
- II) Crank Handle Transmission control for emergency motor point Crank handle control keys are clubbed into one group and the following are the indications exhibited on the operation panel.
 - a) A white steady light indication, on the control Panel i.e. Crank Handle not released.
 - b) Whenever a control is released from the RRI cabin to the field agencies, a flashing white light will appear till such time the said control release is accepted by the concerned field agencies and as soon as the control is accepted at the field site, a flashing Red light appears.
 - c) A steady Red light and a White flashing appears when the field agency returns the control after completion of work.
 - d) Station Master withdraws his control by operating the appropriate buttons. A White steady light appears again on the control panel indicating the withdrawn of the control.

III) **ELECTRIC POWER SUPPLY INDICATIONS:**

Signaling equipment for RRI interlocking and the ancillary field units are fed from the following source of power supply:-

Sl. No.	Source of Power	Description	Number of sources
1	Normal source of Power supply to S&T system	OSEB 3 Phase 400V-50Hz	One
2	1 st Standby Supply	25 KV Traction Supply through Auxiliary transforms single phase 220V-50Hz	Two nos. viz. UP AT and DN AT
3	2 nd Standby Supply DG Supply	Diesel Generator Supply DGs of 30 KVA 3 Phase 400V-50Hz	Two

A changeover switch is provided in SM's office (Panel Room) for selecting one or the two traction supplies - viz. UP AT and DN AT. Normally the switch will be kept towards DN AT position.

Whenever DN AT is not available or Power block is given on DN AT, the on duty SM must changeover the switch to UP AT side.

The availability of the normal power supply is indicated by a Stencil indicator 'M1' on the operating panel. When the normal supply fails, the traction supply is automatically switched on and stencil indicator 'M2' appears.

In the event of failure of power supply from both the above sources, the Station Master on duty should immediately advise his staff to start the D/Generator provided in the D/Generator Room in the RRI compound. After the D/Generator is started, the Station Master on duty should put "ON" the Main Switch provided in the Panel Room. Then the D/Generator supply will be extended to panel. The indication "M3" lits on the panel.

When the normal power supply or standby power supply is restored, the same will be switched over automatically. Whenever power is switched to standby supply a buzzer/indication appears. This should be acknowledged by the panel operator by pressing the Acknowledgement button and then put off the main switch and stop the D/Generator. The Station Master should intimate the Traction Power Controller and the Section Controller to arrange for early repairs.

Whenever there is a failure of power supply in one AT the SM shall change over the switch (provided in the SM's office RRI power supply board) to the other available AT and shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

IV) **INTENSITY OF PANEL LIGHT INDICATORS:**

These indicators provided at Operating Panel along side the panel illumination intensity control button 1, 2, & 3, show the accordance of the illumination brightness of the panel lights with the controlling buttons Nos. 1, 2, & 3. Only one button can be operated at a time.

V) **TRACK INDICATORS:**

Each track circuit is given a separate and distinguishable colour on the face of the indication panel and entire length of the track circuited portion of the track provided with recti-liner transparent filters and illuminated from behind to indicate the conditions of track circuited lines at any given movement [whether engaged and route set or occupied].

When once a route is set by pressing the entrance and exit buttons for signaled route, for the purpose of giving indications to the Panel Station Master about the occupancy of any or all of the track circuited section/sections, the route is split into four portions and the details of the four portions are as follows:-

- a) Approach track either in rear of the first stop signal or any other stop signal in the station yard.
- b) Entry portion of a route from the subject signal up to the fouling mark of the berthing track.
- c) The berthing track and
- d) The over lap [where provided].

In the first part of the route, whenever a vehicle or train occupies the approach track in rear of the first stop signal at the station, the concerned approach track indications show a RED flashing light with an audible buzzer ringing and this will continue till the Panel Station Master takes off the Home Signal. The approach track of a stop signal [other than the first stop signal] is normally lit WHITE when a route is set for a train movement leading to the above stop signal and this white strip of indication of the track [throughout the route section and berthing tracks en-route] change to RED one after the other progressively in the direction of the train movement as the train passes and finally the RED light extinguishes when the vehicle or train clears these various portions of the track circuits on the route.

In the second part of the route whenever a train is occupying the track circuited section i.e. at the entrance end at the track circuit indication shows RED light [changing from WHITE to RED] and as soon as a train or vehicle has cleared this portion of the route section/track circuited portion of the line, the RED light extinguishes on this portion of the track. This sequence of operation of track indications signifies the sectional route release for facilitating subsequent traffic movements.

In the third part of the route, whenever a train is on the berthing track, it continues to show the RED light [changing from White to Red] till berthing track is cleared of this train or vehicle.

In the fourth part of the route the over lap will continue to show WHITE light for period of 120 seconds after the berthing track is occupied by the train and when these lights extinguish, it shows the release of the over lap control [because by the time a train would have either come to a stop at the stop signal protecting the over lap or has passed past it]. The over lap WHITE light indication originally showing WHITE light at the time of route setting will change to RED if the over lap portion of the track circuit is occupied by the train.

In all the four parts of complete route the failure or occupation of any track circuit is indicated by a RED light.

VI) **POINT ENGAGED INDICATION:-**

At the apex of points, a small circular dot indicator is provided on the panel on the track portion itself. This indicator lights up whenever the point is locked in a particular position indicating that it is engaged. [Constituting either a part of the route section or an over lap set].

VII) **POINT INDICATION:**

At each point the Normal and Reverse indications of point positions are shown by a small strip light on the straight for the normal setting and on the cross over portion i.e., diagonally for the Reverse setting.

VIII) **APPROACH TRAIN INDICATION:**

At the approach of all three UP & DN directions of Cuttack Station yard, approach track indications are provided which shall show RED lights as soon as the train occupies the track in rear of the Home Signals from respective directions.

IX) **APPROACH LOCKING INDICATIONS:**

Approach locking indications are provided at all signals on the indication panel [other than those signals which have no points or level crossing gates etc., on their routes]. The expression "Approach locking connotes that the locking is effective on a signal route when once the subject signal is taken off and the train has come within a pre-determined distance from that signal. For signals which do not have approach track circuit in rear, dead approach locking connotes that the locking is effective on the signal when once the signal is taken off.

In case if it is necessary to cancel a signal that was once taken off, three button emergency operation cancellation should be resorted to. Whenever there is no train on the approach track the three button cancellation should be operated straight-away and at once. This operation is counted on the Veeder Counter.

But when there is a train on the approach track or if the signal is approach locked the approach locked indication [shown with a WHITE DOT light] flashes the moment the signal is put back to "ON" position and the cancellation is indicated by flashing. Then the route can be cancelled with the three button operations. This operation is also counted on Veeder Counter.

All the stop signals and Shunt Signals are provided with Dead Approach Locking.

X) **BLOCK RELEASE INDICATIONS (Train Arrival Indication) :**

There are three indications (White) provided on the operating panel:

- a) DN train arrived indication CTC-GBK.
- b) DN train arrived indication CTC-KDRP.
- c) UP train arrived indication CTC-KNPR.

Whenever a DN train clears Block section CTC-GBK and arrives at Cuttack, a DN train clears Block section CTC-KDRP and arrives at Cuttack, an UP train clears Block section CTC-KNPR and arrives at Cuttack, an alarm bell rings along with "White" visual indication. The buzzer is to be stopped by acknowledging the push button provided on the panel.

XI) **BUTTON STUCK UP INDICATION:**

When any of the Signal Buttons/Point Buttons or Route Buttons (GNCR, UNCR, WNCR) remains in the pressed position for more than 15 seconds, the Panel becomes inoperative and White light appears on the Panel with an audible indication (Buzzer).

If Signal Button (GN) remains in pressed position, a White light appears near GNCR or if a point Button (WN) remains in pressed position, a White light appears near UNCR. The visible audible indication will continue till such time the fault is rectified.

XII) **AUDIBLE INDICATIONS ON OPERATING PANEL :-**

a) **SIGNAL FAILURE BUZZER:**

Whenever, a signal becomes blank due to fusing of RED lamp, the signal failure buzzer starts ringing along with the display of stencil 'G' indication on the operating panel. The audible indication stops after the acknowledgement by SM by pressing the button XYN. However the visual stencil 'G' indication remains till the replacement of the fused signal lamp.

b) **POINT FAILURE BUZZER:**

In case of failure of a point, this buzzer sounds and continues till the buzzer muting button viz. WXYN is pressed for acknowledging the failure. A stencil "W" indication also appears and continues till the defect is rectified.

c) **GROUP BUTTON BUZZER:**

When one or more of the operating button/buttons remains/remain in the pressed down position for more than 15 seconds, this buzzer continues to buzz until the fault is rectified and all the buttons are put at normal position, the panel remains inoperative. So, it should be ensured by Panel Station Master that no operating button is pressed for more than 15 seconds

d) **POINT CHAIN GROUP BELL:**

In case of any failure of power operation of points through the chain group, this bell rings until it is acknowledged by pressing of the button below 'P' indicator. However, the flashing indicator "P" continues till the defect is rectified.

XIII. **SIGNAL SYMBOLS AND THEIR INDICATION ON INDICATION PANEL:**

Main Signals are symbolically represented by a small rectangular box with a stem [in black painted over the indicating panel] along the track lines corresponding to their position at site with provision of exhibiting two aspect viz., a steady Red light when the signals at the site shows a red aspect and a steady Green light when the signal at the site displays any aspect/aspects other than Red.

Junction indicators on the stop signals are indicated in a box at the top of the stop signal symbolically and provision for indicating a WHITE light in a slit whenever any junction/Route indicator of the signal concerned at the site lit.

Similarly Multi Lamp Route indicator on the stop signal is indicated in a box at the top of the stop signal symbolically and provision for indicating a WHITE light in a slit when ever the theater type signal indicator of the signal concerned at the site is lit.

In case of a shunt signal below a stop signal, the aspect of the same is shown in a hexagonal box [coloured black] with an aperture. When the shunt signal provided below a

Main signal is taken "OFF", it displays a WHITE light on a diagonal slit and no light when the signal is at "ON" position. Independent Shunt Signal displays a horizontal white slit in "ON" position and an angular white slit in "OFF" position.

In case of a Calling-on signal, it displays a WHITE DOT light on the stem with a circular box [coloured black] and no light when the signal is at "ON" position.

XIV. SPECIAL INSTRUCTIONS REGARDING SIGNAL LAMPS:

At this station, Triple pole lamps with two filaments viz. Main and Auxiliary are provided for all Main Signals. In the triple pole lamp of Signal, if the Main filament is fused, auxiliary filament will lit automatically. However a Buzzer will ring and an indication will appear on the indication panel when one of the Main filaments of the Signal lamps controlled by CTC RRI cabin fuses. The Station Master on duty on panel has to press the ACK (Acknowledgement) button provided on the operating panel for stopping the Buzzer.

However, indication will continue until the fused lamp is replaced. Sixteen numbers of such indicators are provided for twenty nine signals at Cuttack RRI Cabin for starters, Advanced Starters, Home/Routing Home Signals and Distant Signals.

The Station Master on duty shall inform the incidence of fusing of the Signal lamp main filament at RRI cabin to S&T maintenance staff (ESM/SE (Signal)) to attend the above. Reporting the fusing of main filament of Signal lamp should be promptly done by the Station Master on duty, so that Signal lamp is replaced by S&T staff in time before Auxiliary filament also fails which will other wise result detention of trains.

XV. The Station Master on duty at 00.00 hours must also ensure that all the Signal lights are burning properly. This fact must be recorded in the diary.

XVI. INDICATIONS IN CASE OF FAILURE OF SIGNAL ASPECT:-

In case of any off aspect lamp fuses at the site, the 'Green' indication flashes on the corresponding signal aspect indicating on the indication panel. If the 'Red' lamp fuses the 'RED' indication on the corresponding signal symbol flashes.

Magnetic button collars are provided and the same should be used on the operating panel on the concerned lines/points when the same are engaged/blocked as visual reminders in accordance with SR 5.04.01.

XVII. FAILURE OF POWER SUPPLY INDICATIONS:-

The failure of power supply to the Route Relay Installations is indicated by audio and visual indicators on the operating panel.

6. CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING STOP SIGNAL:

The push buttons chart for initiating Stop Signals and Calling-on Signals.

Sl. No.	Signal Route	From Signal	To Destination	BUTTONS OPERATED		REMARKS
				SIGNAL	ROUTE	
1	S-1A(L-10)	S-1	S-37	S-1	OV-37	Set to over run line
2	S-1B(L- 9)	S-1	S-23	S-1	OV- 23	
3	S-1C	S-1	S-33	S-1	OV1-33	Controlled by S-33
4	S-1C	S-1	S-33	S-1	OV2-33	Controlled by S-33

5	S-1C	S-1	S-33	S-1	OV3-33	Controlled by S-33
6	S-1C	S-1	S-33	S-1	OV4-33	Controlled by S-33
7	S-2A (L-1)	S-2	S-6	S-2	OV1-6	Set to over run line
8	S-2A (L-1)	S-2	S-6	S-2	OV2-6	Set to DN Main line
9	S-2B(L-2)	S-2	S-8	S-2	OV-8	
10	S-2C	S-2	S-28	S-2	OV1-28	Controlled by S-28
11	S-2C	S-2	S-28	S-2	OV2-28	Controlled by S-28
12	S-2C	S-2	S-28	S-2	OV3-28	Controlled by S-28
13	S-2C	S-2	S-28	S-2	OV4-28	Controlled by S-28
14	S-4A (L-1)	S-4	S-6	S-4	OV1-6	Set to over run line
15	S-4A (L-1)	S-4	S-6	S-4	OV2-6	Set to Main line
16	S-4B (L-2)	S-4	S-8	S-4	OV-8	
17	S-4C	S-4	S-28	S-4	OV1-28	Controlled by S-28
18	S-4C	S-4	S-28	S-4	OV2-28	Controlled by S-28
19	S-4C	S-4	S-28	S-4	OV3-28	Controlled by S-28
20	S-4C	S-4	S-28	S-4	OV4-28	Controlled by S-28
21	S-6(L-1)	S-6	S-26	S-6	26A	
22	S-8(L-2)	S-8	S-26	S-8	26A	
23	S-9A(L-1)	S-9	S-25	S-9	25A	Controlled by S-25
24	S-9B(L-1)	S-9	S-27	S-9	27A	Controlled by S-27
25	S-10(L-4)	S-10	S-26	S-10	26A	
26	S-12(L-5)	S-12	S-26	S-12	26A	
27	S-13A(L-3)	S-13	S-25	S-13	25A	Controlled by S-25
28	S-13B(L-3)	S-13	S-27	S-13	27A	Controlled by S-27
29	S-14(L-6)	S-14	S-26	S-14	26A	
30	S-15A(L-4)	S-15	S-25	S-15	25A	Controlled by S-25
31	S-15B(L-4)	S-15	S-27	S-15	27A	Controlled by S-27
32	S-17A(L-5)	S-17	S-25	S-17	25A	Controlled by S-25
33	S-17B(L-5)	S-17	S-27	S-17	27A	Controlled by S-27
34	S-18(L-8)	S-18	S-26	S-18	26A	
35	S-19A(L-7)	S-19	S-25	S-19	25A	Controlled by S-25
36	S-19B (L-7)	S-19	S-27	S-19	27A	Controlled by S-27
37	S-20 (L-9)	S-20	S-26	S-20	26A	
38	S-21A (L-8)	S-21	S-25	S-21	25A	Controlled by S-25
39	S-21B (L-8)	S-21	S-27	S-21	27A	Controlled by S-27
40	S-22 (L-10)	S-22	S-26	S-22	26A	
41	S-23A (L-9)	S-23	S-25	S-23	25A	Controlled by S-25
42	S-23B (L-9)	S-23	S-27	S-23	27A	Controlled by S-27
43	S-25	S-25	GBK UP H/S	S-25	UM	
44	S-26	S-26	KNPR DN H/S	S-26	DM	
45	S-27	S-27	UP IB No.35	S-27	27UN	
46	S-28A	S-28	S-10	S-28	OV1-10	Set to Sand Hump
47	S-28A	S-28	S-10	S-28	OV2-10	Set to UP Main Line
48	S-28B	S-28	S-12	S-28	OV1-12	Set to Over Run Line
49	S-28B	S-28	S-12	S-28	OV2-12	Set to UP Main Line
50	S-28C (L-6)	S-28	S-14	S-28	OV-14	
51	S-28D (L-7)	S-28	S-42	S-28	OV-42	
52	S-28E (L-8)	S-28	S-18	S-28	OV-18	

53	S-28F(L-9)	S-28	S-20	S-28	OV-20	
54	S-28G (L-10)	S-28	S-22	S-28	OV-22	
55	S-29A(L-6)	S-29	S-25	S-29	25A	Controlled by S-25
56	S-29B(L-6)	S-29	S-27	S-29	27A	Controlled by S-27
57	S-33F(L-1)	S-33	S-9	S-33	OV1-9	Set to over run line
58	S-33F(L-1)	S-33	S-9	S-33	OV2-9	Set to Main Line VSKP
59	S-33A(L-3)	S-33	S-13	S-33	OV1-13	Set to over run line
60	S-33A(L-3)	S-33	S-13	S-33	OV2-13	Set to VSKP Main line
61	S-33B(L-4)	S-33	S-15	S-33	OV1-15	Set to Sand Hump
62	S-33B(L-4)	S-33	S-15	S-33	OV2-15	Set to B/J of 108 BT
63	S-33C(L-5)	S-33	S-17	S-33	OV1-17	Set to Over Run Line
64	S-33C(L-5)	S-33	S-17	S-33	OV2-17	Set to D/S 118.
65	S-33D(L-6)	S-33	S-29	S-33	OV-29	Set to D/S 118
66	S-33E(L-7)	S-33	S-19	S-33	OV-19	Set to PRDP Main Line
67	S-33E(L-8)	S-33	S-21	S-33	OV-21	Set to DS 126
68	S-33E(L-9)	S-33	S-23	S-33	OV-23	Set to DS 126
69	S-33E(L-10)	S-33	S-37	S-33	OV-37	Set to 128 B open
70	S-37A	S-37	S-25	S-37	25A	Controlled by S-25
71	S-37B	S-37	S-27	S-37	27A	Controlled by S-27
72	S-42(L-7)	S-42	S-26	S-42	26A	

7. **CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING OF CALLING-ON-SIGNALS:**

Sl. No.	Signal Route	From Signal	To Destination	BUTTONS OPERATED		REMARKS
				SIGNAL	ROUTE	
73	C-1A(L-10)	C-1	S-37	S-1& COGGN	OV-37	Set to over run line
74	C-1B(L-9)	C-1	S-23	S-1& COGGN	OV-23	Set to DS 126
75	C-1C	C-1	S-33	S-1& COGGN	OV1-33	
76	C-1C	C-1	S-33	S-1& COGGN	OV2-33	
77	C-1C	C-1	S-33	S-1& COGGN	OV3-33	
78	C-1C	C-1	S-33	S-1& COGGN	OV4-33	
79	C-2A(L-1)	C-2	S-6	S-2& COGGN	OV1-6	Set to over run line
80	C-2A(L-1)	C-2	S-6	S-2& COGGN	OV2-6	Set to Dn Main line
81	C-2B(L-2)	C-2	S-8	S-2& COGGN	OV-8	
82	C-2C	C-2	S-28	S-2& COGGN	OV1-28	
83	C-2C	C-2	S-28	S-2& COGGN	OV2-28	
84	C-2C	C-2	S-28	S-2& COGGN	OV3-28	
85	C-2C	C-2	S-28	S-2& COGGN	OV4-28	
86	C-4A (L-1)	C-4	S-6	S-4& COGGN	OV1-6	Set to over run line
87	C-4A (L-1)	C-4	S-6	S-4& COGGN	OV2-6	Set to Main line
88	C-4B (L-2)	C-4	S-8	S-4& COGGN	OV-8	
89	C-4C	C-4	S-28	S-4 &COGGN	OV1-28	
90	C-4C	C-4	S-28	S-4 &COGGN	OV2-28	
91	C-4C	C-4	S-28	S-4 &COGGN	OV3-28	
92	C-4C	C-4	S-28	S-4 &COGGN	OV4-28	
93	C-6	C-6	S-26	S-6 &COGGN	26A	
94	C-8	C-8	S-26	S-8 &COGGN	26A	
95	C-9A	C-9	S-25	S-9 &COGGN	25A	

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(B.PANDA)
DOM/KUR

96	C-9B	C-9	S-27	S-9 & COGGN	27A	
97	C-10	C-10	S-26	S-10 & COGGN	26A	
98	C-12	C-12	S-26	S-12 & COGGN	26A	
99	C-13A	C-13	S-25	S-13 & COGGN	25A	
100	C-13B	C-13	S-27	S-13 & COGGN	27A	
101	C-14	C-14	S-26	S-14 & COGGN	26A	
102	C-15A	C-15	S-25	S-15 & COGGN	25A	
103	C-15B	C-15	S-27	S-15 & COGGN	27A	
104	C-17A	C-17	S-25	S-17 & COGGN	25A	
105	C-17B	C-17	S-27	S-17 & COGGN	27A	
106	C-18	C-18	S-26	S-18 & COGGN	26A	
107	C-19A	C-19	S-25	S-19 & COGGN	25A	
108	C-19B	C-19	S-27	S-19 & COGGN	27A	
109	C-20	C-20	S-26	S-20 & COGGN	26A	
110	C-21A	C-21	S-25	S-21 & COGGN	25A	
111	C-21B	C-21	S-27	S-21 & COGGN	27A	
112	C-22	C-22	S-26	S-22 & COGGN	26A	
123	C-23A	C-23	S-25	S-23 & COGGN	25A	
124.	C-23B	C-23	S-27	S-23 & COGGN	27A	
125	C-28A (L-4)	C-28	S-10	S-28 & COGGN	OV1-10	Set to Sand Hump
126	C-28A (L-4)	C-28	S-10	S-28 & COGGN	OV2-10	Set to Main Line
127	C-28B (L-5)	C-28	S-12	S-28 & COGGN	OV1-12	Set to Over Run Line
128	C-28B (L-5)	C-28	S-12	S-28 & COGGN	OV2-12	Set to Main Line
128	C-28C (L-6)	C-28	S-14	S-28 & COGGN	OV-14	
130	C-28D (L-7)	C-28	S-42	S-28 & COGGN	OV-42	
131	C-28D (L-8)	C-28	S-18	S-28 & COGGN	OV-18	
132	C-28D (L-9)	C-28	S-20	S-28 & COGGN	OV-20	
133	C-28D (L-10)	C-28	S-22	S-28 & COGGN	OV-22	
134.	C-29A	C-29	S-25	S-29 & COGGN	25A	
135	C-29B	C-29	S-27	S-29 & COGGN	27A	
136	C-33A (L-3)	C-33	S-13	S-33 & COGGN	OV1-13	Set to over run line
137	C-33A (L-3)	C-33	S-13	S-33 & COGGN	OV2-13	Set to VSKP Main Line
138	C-33B (L-4)	C-33	S-15	S-33 & COGGN	OV1-15	Set to Sand Hump
139	C-33B (L-4)	C-33	S-15	S-33 & COGGN	OV2-15	Set to B/J of 108 BT
140	C-33C (L-5)	C-33	S-17	S-33 & COGGN	OV1-17	Set to Over Run Line
141.	C-33C (L-5)	C-33	S-17	S-33 & COGGN	OV2-17	Set to D/S 108
142	C-33D (L-6)	C-33	S-29	S-33 & COGGN	OV – 29	
143	C-33E (L-7)	C-33	S-19	S-33 & COGGN	OV-19	
144	C-33E(L-8)	C-33	S-21	S-33 & COGGN	OV-21	
145	C-33E(L-9)	C-33	S-23	S-33 & COGGN	OV-23	
146	C-33E (L-10)	C-33	S-37	S-33 & COGGN	OV-37	
147	C-37A	C-37	S-25	S-37 & COGGN	25A	
148	C-37B	C-37	S-27	S-37 & COGGN	27A	
149	C-42	C-42	S-26	S-42 & COGGN	26A	

8. **CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING SHUNT SIGNAL:**

Sl. No.	Signal Route	From Signal	To Destination	BUTTONS OPERATED		REMARKS
				SIGNAL	ROUTE	
150	SH-3A	SH-3	SH-31	SH-3	L-1	
151	SH-3B	SH-3	SH-11	SH-3	L2	

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152	SH-3C	SH-3	S-33	SH-3	OV1-33	
153	SH-5A	SH-5	GS (L-11)S.B	SH-5	GS	
154	SH-5B	SH-5	S-37	SH-5	OV-37	
155	SH-5C	SH-5	S-23	SH-5	OV-23	
156	SH-6	SH-6	S-26	SH-6	26A	
157	SH-7A	SH-7	GS(L-11)S.B	SH-7	GS	
158	SH-7B	SH-7	S-37	SH-7	OV-37	
159	SH-7C	SH-7	S-23	SH-7	OV-23	
160	SH-8	SH-8	S-26	SH-8	26A	
161	SH-9A	SH-9	S-25	SH-9	25A	
162	SH-9B	SH-9	S-27	SH-9	27A	
163	SH-9C	SH-9	SN1	SH-9	SN1	
164	SH-10	SH-10	S-26	SH-10	26A	
165	SH-11A	SH-11	S-25	SH-11	25A	
166	SH-11B	SH-11	S-27	SH-11	27A	
167	SH-12	SH-12	S-26	SH-12	26A	
168	SH-13A	SH-13	S-25	SH-13	25A	
169	SH-13B	SH-13	S-27	SH-13	27A	
170	SH-14	SH-14	S-26	SH-14	26A	
171	SH-15A	SH-15	S-25	SH-15	25A	
172.	SH-15B	SH-15	S-27	SH-15	27A	
173	SH-16	SH-16	S-26	SH-16	26A	
174	SH-17A	SH-17	S-25	SH-17	25A	
175	SH-17B	SH-17	S-27	SH-17	27A	
176	SH-18	SH-18	S-26	SH-18	26A	
177	SH-19A	SH-19	S-25	SH-19	25A	
178	SH-19B	SH-19	S-27	SH-19	27A	
179	SH-20A	SH-20	OS-1	SH-20	OS-1	
180	SH-20B	SH-20	OS-2	SH-20	OS-2	
181	SH-20C	SH-20	S-26	SH-20	26A	
182	SH-21A	SH-21	S-25	SH-21	25A	
183	SH-21B	SH-21	S-27	SH-21	27A	
184	SH-21C	SH-21	SN	SH-21	SN	
185	SH-22A	SH-22	OS-1	SH-22	OS-1	
186	SH-22B	SH-22	OS-2	SH-22	OS-2	
187	SH-22C	SH-22	S-26	SH-22	26A	
188	SH-23A	SH-23	S-25	SH-23	25A	
189	SH-23B	SH-23	S-27	SH-23	27A	
190	SH-23C	SH-23	SN	SH-23	SN	
191	SH-24A	SH-24	OS-1	SH-24	OS-1	
192	SH-24B	SH-24	SH-OS-2	SH-24	OS-2	
193	SH-24C	SH-24	S-26	SH-24	26A	
194	SH-28A	SH-28	SH-10	SH-28	OV-10	
195	SH-28B	SH-28	SH-12	SH-28	OV-12	
196	SH-28C	SH-28	SH-14	SH-28	OV-14	
197	SH-28D	SH-28	SH-42	SH-28	OV-42	
198	SH-28E	SH-28	SH-18	SH-28	OV-18	
199	SH-28F	SH-28	SH-20	SH-28	OV-20	
200	SH-28G	SH-28	SH-22	SH-28	OV-22	
201	SH-29A	SH-29	S-25	SH-29	25A	
202	SH-29B	SH-29	S-27	SH-29	27A	
203	SH-30A	SH-30	SH-46	SH-30	9E-1	
204	SH-30B	SH-30	SH-8	SH-30	OV-8	
205	SH-30C	SH-30	SH-40	SH-30	L3	

206	SH-30D	SH-30	S-28	SH-30	OV1-28	
207	SH-30E	SH-30	SH-38	SH-30	SS	
208	SH-31A	SH-31	S-9	SH-31	OV1-9	
209	SH-31B	SH-31	SH-39	SH-31	SS	
210	SH-32A	SH-32	SH-46	SH-32	9E-1	
211	SH-32B	SH-32	SH-38	SH-32	SS	
212	SH-33A	SH-33	S-13	SH-33	OV1-13	
213	SH-33B	SH-33	S-15	SH-33	OV1-15	
214	SH-33C	SH-33	AS (ART Siding)	SH-33	AS	
215	SH-33D	SH-33	SH-17	SH-33	OV1-17	
216	SH-33E	SH-33	SH-29	SH-33	OV-29	
217	SH-33F	SH-33	SH-19	SH-33	OV-19	
218	SH-33G	SH-33	SH-21	SH-33	OV-21	
219	SH-33H	SH-33	SH-23	SH-33	OV-23	
220	SH-33I	SH-33	SH-37	SH-33	OV-37	
221	SH-33J	SH-33	GS (L-10)	SH-33	GS	
222	SH-34A	SH-34	SH-18	SH-34	OV-18	
223	SH-34B	SH-34	SH-20	SH-34	OV-20	
224	SH-34C	SH-34	S-22	SH-34	OV-22	
225	SH-36A	SH-36	SH-46	SH-36	9E-1	
226	SH-36B	SH-36	S-8	SH-36	OV-8	
227	SH-36C	SH-36	SH-40	SH-36	L3	
228	SH-36D	SH-36	S-28	SH-36	OV1-28	
229	SH-36E	SH-36	SH-38	SH-36	SS	
230	SH-36F	SH-36	SH-48	SH-36	48-UN	
231	SH-37A	SH-37	S-25	SH-37	25A	
232	SH-37B	SH-37	S-27	SH-37	27A	
233	SH-37C	SH-37	SN	SH-37	SN	
234	SH-38	SH-38	S-6	SH-38	OV1-6	
235	SH-39A	SH-39	SN-2(S.B.)	SH-39	SN-2	
236	SH-39B	SH-39	SN-1 (S.B.)	SH-39	SN-1	
237	SH-39C	SH-39	S-25	SH-39	25A	
238	SH-39D	SH-39	S-27	SH-39	27A	
239	SH-40	SH-40	S-26	SH-40	26A	
240	SH-42	SH-42	S-26	SH-42	26A	
241	SH-43	SH-43	S-27	S-43	27A-UN	
242	SH-44	SH-44	SH-38	SH-44	SS	
243	SH-46	SH-46	S-6	SH-46	OV1-6	
244	SH-48A	SH-48	SH42	SH-48	OV42	
245.	SH-48B	SH-48	SH-18	SH-48	OV-18	
246	SH-48C	SH-48	SH-20	SH-48	OV-20	
247	SH-48D	SH-48	SH-22	SH-48	OV-22	

9. **THE PUSH BUTTON CHART FOR SIDINGS, CRANK HANDLES AND LEVEL CROSSING GATES:**

Sl.No.	Description of control	Buttons operated
1.	Releasing control for opening level crossing gate at Km. 408/8-6 (DN) & 408/5-7 (UP)	139+Group Trans GSB
2.	Withdrawing control after closing level crossing gate at Km. 408/8-6 (DN) & 408/5-7 (UP)	139+Group Release GSRB
3.	Releasing control for Goods siding and sick lines	136+Group Trans GSB
4.	Withdrawing control for Goods siding and sick lines	136+Group Release GSRB
5.	Permission to release CH-1 key	CH-1+ GSB

(A.K.JENA)
DSTE/KUR

(B.PANDA)
DOM/KUR

6.	Withdrawal of control of CH-1 Key	CH-1 + GSRB
7.	Permission to release CH-2 key	CH-2 + GSB
8.	Withdrawal of control of CH-2 Key	CH-2 + GSRB
9.	Permission to release CH-3 key	CH-3 + GSB
10.	Withdrawal of control of CH-3 Key	CH-3 + GSRB
11.	Permission to release CH-4 key	CH-4 + GSB
12.	Withdrawal of control of CH-4 Key	CH-4 + GSRB
13.	Permission to release CH-5 key	CH-5 + GSB
14.	Withdrawal of control of CH-5 Key	CH-5 + GSRB
15.	Permission to release CH-6 key	CH-6 + GSB
16.	Withdrawal of control of CH-6 Key	CH-6 + GSRB
17.	Permission to release CH-7 key	CH-7 + GSB
18.	Withdrawal of control of CH-7 Key	CH-7 + GSRB
19.	Permission to release CH-8 key	CH-8 + GSB
20.	Withdrawal of control of CH-8 Key	CH-8 + GSRB
21.	Permission to release CH-9key	CH-9 + GSB
22.	Withdrawal of control of CH-9 key	CH9 + GSRB
23.	Permission to release CH-10 key	CH9 + GSB
24.	Withdrawal of control of CH-10 key	CH10 +GSRB

10. **OPERATION OF SIGNALS:**

All signals are directly operated from the Route Relay Interlocking cabin as shown in the Station Working Rules Diagram.

11. **STATION MASTER KEY FOR OPERATING PANEL:**

This key when inserted in the lock [provided on the Operating Panel] and turned right the panel becomes operative. The key when inserted in the lock and either turned to left or extracted out from the lock renders the panel inoperative except for putting back the signals to "ON" position in case of emergencies. When the SM's Key is inserted and turned to right a white indication lits by the side of SM's Key.

12. **DISTANT SIGNALS AND THEIR ASPECTS:**

The Distant signals work automatically, the aspects of these signals being controlled by the aspect of the respective Home Signals.

13. **EMERGENCY OPERATIONS AND THE COUNTERS:**

Operation of the following buttons is recorded on the respective counters provided on the operating panel.

- I) Emergency Point Button [EWN].
- II) Emergency Route Release Button [EUUYN].
- III) Emergency Route Section Release Button [EUYN].
- IV) Common button for "Calling on" Signal [COGGN].
- V) Emergency Overlap Release Button [OYN].

The Panel Station Master on duty should keep a proper record of all such operations. A Register with separate portions for each button should be maintained. Each time a button is operated the readings on the respective counter should be recorded in the register mentioning clearly therein the circumstances under which the emergency operation had to be resorted to. At the time of handing over charge the relived Panel Station Master should record and sign the last readings on the counters in the register and the Panel Station Master who takes over charge must verify, by physically check, the correctness of the readings recorded and counter sign the entry.

In case of failure of track circuit, the points can be set by operation of the emergency point button [EWN] and the point button concerned [after unlocking the EWN control lock]

provided the point concerned was not engaged earlier or not locked. This electrical lock [ignition type] is provided on the operating panel close to EWN button. This key should be kept in the personal custody of the cabin Station Master and no emergency operations should be carried out without his permission. The Panel Station Master on duty is responsible for all emergency operations explained above. The Panel Station Master is responsible for correct operation of the emergency buttons and records the operations in the register.

The Panel Station Master should not permit any unauthorized person to operate the control panel.

For every operation, the signal button at the entrance and the route button at the exit of the route have to be simultaneously pressed down for not less than 5 to 8 seconds for initiating the route setting, locking and taking off the signal.

Similarly for any individual point operation, the points button (WN) and the group point button (WWN) has to be pressed simultaneously.

The Panel Station Master on duty must ascertain as visual verification that the indication appearing on the indicating panel is in conformity with the operation of the buttons on the operating panel. The Panel Station Master must also ensure that not more than two buttons are operated simultaneously at any given time.

14. **APPROACHING LOCKING OF A ROUTE:**

Once a signal [either a stop signal or a shunt signal] is taken off, the route including signal overlap in case of main signal gets back locked and the set route cannot be altered or interfered with unless the signal concerned is put back to "ON" position and the route is cancelled by emergency three button operation. After the initiation of such emergency three button operation, the complete route gets cancelled provided there is no train on the approach track. If there is a train/vehicle on the approach track, the route gets approach locked and can be released only after the count down of 120 Seconds by the timer. [The approach locking distance being variable according to the aspect of the signal in rear and other important safety considerations such as maximum permissible sectional speed on the approaching line etc.]

The special cases of exceptions are the signal No. 6.30 where dead approaching locking is provided with a special conditional releases.

The shunt signal No. 3, 5, 6, 16, 11, 31, 32, have been provided with dead approaching locking [in the absence of by approach track circuit] and in such cases the route once set cannot be altered by emergency operation after a lapse of 120 seconds after putting back the signal to "ON" position. Every such three button emergency cancellation is countered on the veeder counter.

15. **EMERGENCY RELEASE OF INDIVIDUAL-ROUTE SECTION AND OVERLAPS:**

A complete route of signal comprises of one or more Route Sections [as also the overlap in case of a stop signal] and whenever any route section or overlap is not released by either passage of the train or by emergency cancellation of the entire route as already mentioned above, the emergency cancellation of the Route Section with the co-ordination of the SSE(Sig)/SE(Sig)/RRI on duty can be done and such cancellation is individually countered on the counter fitted on the panel.

16. **TAKING OFF CALLING ON SIGNALS:**

The "Calling-on" signals have been provided below the following stop signals at North end.

Sl.No.	Button No.	Signal No.	
1.	C 1	On UP Main Home Signal	(On UP main line)
2.	C 33	On UP routing Home Signal	(On UP main line)
3.	C 6	On DN Starter Signal	(On line No. 1)
4.	C 8	On DN Starter Signal	(On line No. 2)
5.	C 10	On DN Starter Signal	(On line No. 4)
6.	C 12	On DN Starter signal	(On line No. 5)
7.	C 14	On DN starter signal	(On line No. 6)
8.	C 18	On DN Starter signal	(On line No. 8)
9.	C 20	On DN Starter signal	(On line No. 9)
10.	C 22	On DN starter signal	(On line No.10)
11.	C 42	On DN starter signal	(On line No. 7)

The “Calling-on” signals have been provided below the following stop signals at South end.

Sl.No.	Button No.	Signal No.	
1.	C 2	On DN Main Home Signal	(on DN Main Line (VSKP end)
2.	C 4	On DN Branch Home signal	(on DN Branch Line (PRDP end)
3.	C 28	On DN routing Home signal	(on Line No. 6)
4.	C 9	On UP Starter Signal	(on line No. 1)
5.	C 13	On UP Starter Signal	(on line No. 3)
6.	C 15	On UP Starter Signal	(on line No. 4)
7.	C 17	On UP Starter Signal	(on line No. 5)
8.	C 19	On UP Starter Signal	(on line No. 7)
9.	C 21	On UP Starter Signal	(on line No. 8)
10.	C 23	On UP Starter Signal	(on line No. 9)
11.	C 29	On UP Starter Signal	(on line No. 6)
12.	C 37	On UP Starter Signal	(on line No. 10)

During the failure of the stop signal either due to failure of any track circuits on the route including the overlap or for any other causes the “Calling-on” signals may be taken off after the train has come to a stand at the stop signal, provided all the other conditions for taking off the stop signal have been fulfilled and the approach track immediately in rear of the said stop signal is occupied by the train. After initiating the “Calling-on” signal, the “Calling-on” signal indication shows a White flashing light for 120 seconds and after which it shows a steady White light. It is only when such a steady White light appears the “Calling-on” signal displays “OFF aspect”. Every such operation is registered on a counter provided on the operating panel.

17. **FAILURE OF CALLING-ON TRACK AND SPECIAL MEASURES FOR TAKING OFF A “CALLING-ON” SIGNAL:**

In case of failure of the Calling-on track, instead of taking off the “Calling-on” signal, the trains shall be piloted treating Calling-on signal as failure and S&T official shall be informed for rectification.

During the failure of track circuit, before taking off “Calling-on” signal, the clearance of the track on the entire route between stop signal to signal must be certified by the field Station Master to the Panel Station Master.

In all cases of Reception/Despatch of a train by taking off the “Calling-on” signal, necessary particulars including the train No. “Calling-on” signal No. and the No. Registered on the corresponding veeder counter should be recorded in a Register maintained for the purpose.

18. TAKING OFF THE SHUNT SIGNALS:

For taking off a shunt signal, the corresponding route button and the shunt signal button should be pressed simultaneously and released.

19. CLEARING OF STOP SIGNAL:

Whenever it is necessary to clear a stop signal, it is necessary to press the signal button and the exit button where after this route setting is initiated, the route is lined up and locking executed on all the route sections and the overlap thus holding the route ultimately proving the way and circuits for the signal clearance.

20. ORDINARY AND SPECIAL ALTERNATIVE OVER LAP OF STOP SIGNALS:

Some of the stop signals have been provided with more than one overlap [which is designated after the next stop signal ahead].

The details of these over laps are as follows:-

Sl. No.	Signal No.	Route No.	Move to	Over lap.	Point
1	S-1A, C-1A	1A	S-37	OV-37	132N,128N
2	S-1B, C-1B	1B	S-23	OV-23	134R,132N,130R, 124N,128N,126N
3	S-1C, C-1C	1C	S-33	OV1-33	105N, 107N, 109N
				OV2-33	105N, 107N, 109R
				OV3-33	105N, 107R
				OV4-33	105R
4	S-2A, C-2A	2A	S-6	OV1-6	113N
				OV2-6	113R, 111N, 101N
5	S-2B, C-2B	2B	S-8	OV-8	113N, 111N
7	S-2C, C-2C	2C for L-4	S-28	OV1-28	116R
8	S-2C, C-2C	2C for L-5 OR L-6	S-28	OV2-28	116N, 120N, 118R
9	S-2C, C-2C	2C for L-7	S-28	OV3-28	116N, 120R, 124N
10	S-2C, C-2D	2C for L-8 OR L-9 OR L-10	S-28	OV4-28	116N,120R, 124R.
11	S-4A, C-4A	4A	S-6	OV1-6	113N
				OV2-6	113R, 111N, 101N
12	S-4B, C-4B	4B	S-8	OV-8	113N
14	S-4C, C-4C	4C FOR L-4	S-28	OV1-28	116R
15	S-4C, C-4C	4C FOR L-5 OR L-6	S-28	OV2-28	116N, 120N, 118R.
16	S-4C, C-4C	4C FOR L-7	S-28	OV3-28	116N, 120R, 124N
17	S-4C, C-4C	4C FOR L-8 OR L-9 OR L-10	S-28	OV4-28	116N, 120R, 124R
18	S-28A, C-28A	28A (L-4)	S-10	OV1-10	135N, 115N
				OV2-10	135N, 115R, 111N, 109N, 107N, 105N, 101R, 113N
19	S-28B, C-28B	28B (L-5)	S-12	OV1-12	117N
				OV2-12	117R, 109R,107N, 105N, 101R
20	S-28C, C-28C	28D(L-6)	S-14	OV-14	119N, 117N, 109N
21	S-28D,C-28D	28D (L-7)	S-42	OV-42	119N, 121N, 127N
22	S-28D,C-28D	28D (L-8)	S-18	OV-18	121R, 127N
23	S-28D,C-28D	28D (L-9)	S-20	OV-20	123N, 125N
24	S-28D,C-28D	28D (L-10)	S-22	OV-22	123N
25	S-33A, C-3A	33A (L-3)	S-13	OV1-13	110N, 108N, 106N, 104N
				OV2-13	110N, 108N, 106N, 104R

26	S-33B, C-33B	33B (L-4)	S-15	OV1-15	116N
				OV2-15	116R
27	S-33C, C-33C	33C (L-5)	S-17	OV1-17	122N
				OV2-17	122R
28.	S-33D, C-33D	33D(L-6)	S-29	OV-29	122N
29.	S-33E, C-33E	33E(L-7)	S-19	OV-19	124N, 120N
30.	S-33E, C-33E	33E(L-8)	S-21	OV-21	130N, 124R, 128N, 126N
31.	S-33E, C-33E	33E(L-9)	S-23	OV-23	134R,132N,130R, 124N,128N,126N
32.	S-33E, C-33E	33E(L-10)	S-37	OV-37	132N,128N
33	S-33E, C-33E	33F(L-1)	S-9	OV1-9	142N,112N
				OV2-9	142N,112R,110N,104N

NOTE:

Whenever any route is initiated by pressing the entrance and exit buttons, OV will set automatically along with the route. OV 1 or OV 2 can be set either setting the route of the ahead signal or according to the lines of the points as the case may be.

Alternative overlaps have been provided for some signals affording to flexibility in the yard operations. When a route is initiated, the overlap [designated as OV] is automatically set over the route on which the train traverses. But when an alternate overlap has to be set, first the route ahead has to be set, first the route ahead has to be set by operation of entrance and exit buttons, then initiate the routes of the rear signal – after this operation the signal ahead may not be put back to “ON” and the route cancelled if required.

For these overlaps, it is not necessary to initiate the signal route for the advance section. The overlap will be set according to the lines of the points at the time of the initiation of the route and therefore the Panel Station Master has to be mindful of keeping of the points in the overlap in the desired position before initiating the route.

21. TIME RELEASE OF OVERLAP:

Any overlap, which is set for signaled route will be released after the train comes and stops at the berthing track to ensure that the train has come and stopped on berthing track, a time releaser 120 seconds is provided for the release of overlap. Accordingly counting of time space as soon as the train comes on the berthing track just in rear of the signal and after a lapse of 120 seconds the overlap is released automatically permitting other routes to be set on the portion of the overlap.

In case of failure of release of the overlap at the end 120 seconds due to any reason, emergency overlap release is affected by pressing the concerned route button and an overlap release button [OYN]. The overlap is released immediately and the operation is recorded in the emergency overlap counter [OYZ].

22. PUTTING BACK THE SIGNAL TO “ON” POSITION:

In exigencies, when a stop signal or a “Calling on” signal or a shunt signal has to be put back to “ON” before passage of the train, the signal button [GN] concerned and the emergency signal cancellation button [EGGN] should be pressed simultaneously.

23. LOCKING OF POINTS NORMAL AND SPECIAL CASES:

Normally the electric machine operated points can be set and locked provided the point zone track circuit is free and the subject point is not locked either by a route section or an overlap on flank protection arrangement.

The locking on the point is normally released immediately after the clearance of the route section or the overlap and the flank protection locking is released after the clearance of the controlling route section.

24. INDIVIDUAL OPERATION OF POINTS WHEN THE TRACK CIRCUIT/CIRCUITS IN THE POINT ZONE HAVE NOT FAILED:

Whenever an individual point/crossover is to be set the point button [WN] concerned and the point group button [WWN] should be simultaneously pressed and released. Such an operation will change the point/crossover from normal to reverse or from reverse to normal provided the track circuit/circuits in the point zone are not occupied.

Whenever any point cannot be operated to house either in normal or reverse position, a flashing indication appears on the point concerned on the indication panel. The point can be set to its original position by the operation of the point button [WN] concerned and the group point button [WWN].

25. INDIVIDUAL OPERATION OF POINTS IN CASE OF FAILURE OF TRACK CIRCUITS / TRACK CIRCUITS POINT ZONE:

In the event of failure of the track circuits controlling the points, the Panel Station Master should first personally or through field Assistant Station Master ensure that the track circuit concerned is not occupied by a train /vehicle and then for emergency operation of points the Panel Master should unlock the EWN lock on the operating panel by operating the EWN key [provided for the purpose], press the point button [WN] along with the emergency point button [EWN] and release the buttons. Each time point is thus operated, the same will be recorded on the "EWN" counter.

26. FAILURE OF THE POINTS DUE TO ANY OTHER CAUSES:

If any point fails before a route is lined up, the Panel Master should first try to set and reset the same point by individual operation to ascertain if the said point can be set in a particular position. If the said points cannot be set in any position, the Panel Master should not use the route concerned for normal signaled movement until the defect is rectified by Signal staff and certificate to this effect is obtained from SE [Sig], on duty. However, Crank handle operation may be done.

27. PADLOCKING AND CRANKING OF POINTS WITH CRANK HANDLE AND ITS CONTROLLING KEYS AND SPECIAL PRECAUTIONS:

For the use of Crank handle for motor operated points the instructions laid down in rule No. 20.06 of Operating Manual should be followed.

When the points are set by means of crank handle, the field Station Master on duty shall ensure that the entire route is correctly set, all the facing and Trailing points are clamped and padlocked. All the points on the route must be clamped and padlocked for any signaled movement.

The keys of the padlocks of all the clamped and locked points should be kept in the personal custody of the field Station Master before the pilot memo is handed over to the Loco Pilot.

When once the route is so set manually by the field Station Master and all the facing points on the route are clamped and padlocked, the same shall not be interfered with in any way until the movement over the points concerned is completed or any movement is cancelled, and such cancellation is authenticated by exchange of Private Number.

If any point has failed after setting of the route in Normal/Reverse position or both a White indication strip starts flashing depending upon the position at which the point had failed. In such case the route concerned shall be cancelled and shall not be used until the defect is rectified by signal staff.

28. RELEASING OF A SUB-ROUTE SECTION:

If any route section over a point zone is not released after passage of a train due to failure of track circuit or otherwise, the route section can be released by means of Emergency operation by SE (Sig) and the field Station Master.

29. FAILURE OF TRACKCIRCUITS & SIGNALS:

In the event of failure of track circuits over point zone, setting of the point will be done by Emergency operation after the SS on duty at Platform ensures that the points zone is clear of vehicles supported by a private number. In case of failure of track circuits, Calling-on signal where provided may be taken off. If there is no Calling-on signal or if the same is out of order, the train concerned should be piloted past the signal concerned up to next stop signal ahead after ensuring the clearance of the route and setting, clamping and padlocking the points on the route by the SM.

30. SIGNAL ASPECT:

The aspect control chart of the signals in Cuttack Station Yard accord with the aspect control chart as indicated in the Interlocking Plan No. SI/21112 ALT-A.

The failure of a Signal lamp of an aspect of a signal at site renders the signal to its next restrictive aspect. During failure of signal lamp the physical aspects of the signal at site and indications on indication panels are given below:-

Sl. No.	Aspect displayed before failure of signal lamp		Particulars of failure of lamp	Aspect displayed after failure of signal lamp	
	By signal at site	By signal symbol on indication panel.		By signal at site	By signal symbol on indication panel.
1.	Red	Red	Red lamp-main filament fused	Dim red	Flashing red
2.	Red	Red	Red lamp-both filaments fused	Blank. Signal in rear reverts back to ON position	Flashing red
3.	Yellow	Green	Yellow lamp main filaments fused	Dim yellow	Steady Green
4.	Yellow	Green	Yellow lamp both filaments fused	Red	Flashing Green with steady red
5.	Double Yellow	Green	One yellow lamp both filaments fused	Yellow	Flashing Green
6.	Double Yellow	Green	Both yellow lamps both filaments of both lamps fused	Red	Flashing Green with steady red
7.	Green	Green	Green lamp main filament or auxiliary filament fused	Double yellow in 4 aspect signals and yellow in 3 aspect signals	Flashing Green
8.	Green	Green	Green lamp both filaments fused	Yellow	Flashing Green.

SPECIAL NOTE:

- In the event of one or both filaments of 'Yellow' lamp in addition to the failure of both filaments of 'Green' lamp, the aspect assumed by the signal at site is 'RED'.
- A small flashing white light is lit near the main signal symbol, if the signal is put to danger and route cancellation is initiated when it is approach locked. This light remains flashing

for 120 seconds after which it becomes steady. Then the panel Station Master should commence three button emergency route cancellations.

- c) When a Calling-on signal below a stop signal is taken off, a White dot is lit below the stop signal.
- d) White oblique strip is lit above Green indication signal symbol whenever signal is taken "off" with route indicator for a diversion.

31. SIGNAL REPLACEMENT AND CANCELLATION OF A ROUTE ALREADY SET:

Once a signal is taken off, it should not be put back to "ON" position unless absolutely required. For this, the signal button concerned and the emergency signal group button EGGN should be pressed simultaneously. This operation will make the signal to assume danger aspect while the route is still held and the three button emergency route cancellation process must be gone through for canceling the route already set. Refer to the following para.

1. CANCELLATION OF A ROUTE:

If, after setting of the whole route and taking off the signal concerned, the route is to be altered, the signal concerned must first be put back to "ON". If there is a train on the approach track or the signal is provided with dead approach locking the subject route gets released only after countdown of 120 seconds after the signal is put back to "ON". Then route can be cancelled by three-button cancellation.

The countdown of 120 seconds time interval is indicated by flashing white light on the approach lock indicator provided at the foot of the corresponding signal symbol on the indication panel. After the interval 120 seconds a steady white light appears and the flashing light cease

The panel Station Master should press the signal button and the emergency Route Cancellation button EUUYN, keeping the signal button still pressed on, he should press the relevant route button. This operation will release the whole route and this will be indicated by extinguishing of the concern route lights on the panel. However, if the approach track of the signal is not free, the cancellation cannot be done immediately. In both cases, this cancellation operation is counted electrically on the digital counter. The transaction along with the time and reasons and the number registered on the counter should be recorded in a register specially kept for the purpose.

2. REPLACEMENT OF 'CALLING-ON SIGNAL TO 'ON' POSITION:

After taking off a Calling-on Signal, if the same is to be put back to "ON" position, the signal button concerned [GN] and the emergency signal group button [EGGN] should be pressed simultaneously; In this case, also the route that was originally set and locked by the process of clearance of the signal is to be cancelled in accordance with instructions contained in the route cancellation Para mentioned above.

32. ROUTE INDICATORS:

- (a) The Signal No. S33 on North end is provided with Theatre type (Malty Lamp) route indicator and is provided on the respective signal in the form of the rectangular box pattern fitted with a transparent sheet as affront cover plate. The theatre type route indicator will indicate the concerned route by means of illuminated Letter /Number (G or 1 or 2 or 3 or 4 or 5 or 6.....) as the case may be.
- (b) The signal No. S1 on North end and S2, S4, S9, S13, S15, S17, S19, S21, S23, S29, and S37 on South end are provided with directional type route indicators. Directional type route indicators are provided in the form of 5 lunar white lights above the respective signals at varying degrees from the vertical to the left or to the right side of the Loco Pilot. In case of more than one such route indicators on the same side the top most corresponds to the first loop and other for subsequent loops in the regular order of sequence.

33. FORMATS FOR VARIOUS EMERGENCY OPERATIONS:**a) FOR EMERGENCY SUB-SECTION ROUTE RELEASE:**

Date & Time	Route Section	Counter Numbers		Remarks	Signature	
		Before Release	After Release		On duty SS RRI	On duty SSE [Sig]/SE [Sig]/RRI

(b) FOR EMERGENCY OVERLAP RELEASE:

Date & Time	Overlap route button No.	Counter Numbers		Remarks	Signature	
		Before Release.	After Release.		On duty SS RRI	On duty SSE [Sig]/SE [Sig]/RRI

(c) FOR EMERGENCY POINT OPERATION:

Date & Sl. No.	Time of operation	Counter Numbers		Track circuit No. failed	Signature on duty SS RRI
		Before Operation	After Operation		

(d) FOR EMERGENCY FULL ROUTE CANCELLATION:

Date & Sl. No.	Time of operation	Counter Numbers		Route cancelled	Reason for cancellation	Signature on duty SS/RRI
		Before Operation	After Operation			

34. EMERGENCY CRANK HANDLE INTERLOCKING:

The points in Cuttack Station Yard are operated through electrical point machine provided at site. These are remotely controlled and operated from Route Relay Cabin normally.

Whenever there is a failure of a power operated point, cranking is done at site. For this purpose, it is necessary to open insert aperture with the help of the concerned and associated control key. Unless this aperture is opened by the operation of the controlling key, the emergency crank handle cannot be inserted in the motor and operated to set the points. This control key will remain held on the point motor while it is being operated by the emergency crank handle. After the point is set and the crank handle is removed, the control key can be extracted and in that process the crank handle inserting aperture gets closed and locked automatically.

The crank handle interlocking key is inserted in the crank handle interlocking box housed in the location/goomty and turned anti-clockwise when, it gets locked. This key cannot be extracted from the box unless the control for releasing the key is transmitted from the Route Relay Cabin. When the release control is transmitted from the Route Relay Cabin, a white indication appears just below the key. After obtaining the above indication, the RED button below the key must be pressed and the key must be turned clockwise and extracted simultaneously. Two controlling keys are provided in each box with individual indication and button below the respective key.

Inter locking has been provided between signals and emergency crank handle control keys in such a way that once the crank handle key of the concerned point is extracted, it is not possible to set the route and clear the signal/ signals reading over that point/points till such time the key is restored back to its box.

For the purpose of flexibility and quick reach, the emergency crank handle and crank handle keys have been provided in different groups at north and south end areas in the yard.

CRANK HANDLE	CRANK POINTS
CH-1	104,110,112,114,140,142,144
CH-2	106,108
CH-3	116,120,122,118
CH-4	124,126,128,130,132,134
CH-5	101,111,113
CH-6	103,105,107,109,115,117,127,135
CH-7	119,121,123,125
CH-8	133,129,131
CH-9	102
CH-10	137

One crank handle is kept in a pad locked box kept at each of the above places and the keys of this padlock after locking the crank handle shall remain in the personal custody of the Station Master RRI.

The crank Handle along with the concerned controlling key can be handled only by the concerned TPM on duty and the S&T maintenance staff as per the instruction of the Panel Station Master. It is the personal responsibility of the TPM/Panel Station Master to ensure that as soon as the required manual operation of the point/points in his zone are over, the crank handle is restored to the padlocked box and the box properly pad locked and that the crank handle control key is also returned to the respective crank handle interlocking box and transmitted to the Route Relay Cabin expeditiously.

It will be seen from the above table that, in all there are eight groupings covering all the power operated points in. Cuttack Station yard Control keys have special arrangements of configuration for each group and the point machines of the corresponding group have a matching configuration at the key hole permitting the entry of the key meant only for the particular set of points in that group.

Procedure of the emergency crank handle operation of points on South & North Zones is given below:-

The concerned TPM on duty shall exchange Private Number with the Panel Station Master from the respective zones (South/North) giving his identification. The Private Number shall be recorded in the crank handle register. The field Station Master should then advise the Panel Station Master to release the concerned crank handle controlling key. The Panel Station Master should release the control by pressing the concerned crank handle group button and the GSB button. The release of the control is indicated by flashing WHITE indication on the panel near the crank handle group button.

At site on the concerned crank handle interlocking box, the WHITE indication appears below the key. The TPM on duty should then press the RED button below that key and extract the key from the box. The extraction of the key is indicated on the Route Relay Panel by flashing RED indication.

The point/points is/are then operated with the help of the emergency crank handle taken out by the TPM on duty from the pad locked box in the Goomty/Location after opening the aperture in the point machine with the help of the controlling key by the TPM at site and set to the desired position, clamped and pad locked as desired by SS on duty at Panel.

Master and the keys of the pad lock shall be in the personal custody of the field SM after which the TPM shall restore the controlling key to its original place in the crank handle interlocking box (after locking the crank handle in its box) and turned clockwise.

Restoration of the controlling key back in its place is indicated by turning of the flashing RED indication into steady RED with flashing WHITE indication. The panel operator

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should then withdraw the released control by pressing the crank handle group button and the GSRB. The steady RED indication disappears and steady WHITE indication appears indicating the normal condition. The WHITE indication appears indicating the normal condition. The WHITE indication on the crank handle interlocking box at site also disappears.

When the control has been withdrawn, the field SM should advise the Panel Station Master communicating a Private Number assuring him that the desired point/points has been operated to the required position as advised by Panel Station Master, set correctly, clamped and padlocked in their proper position and the control is returned. The Private Number given by the field SM shall be recorded in the Crank Handle Register.

The Panel Station Master on duty after ensuring the correct setting of defective points shall verify from the visual indication available on the panel that all the points on the route are set to the desired position and shall take off the concerned signal for movement of train over the said point/points.

If the correct setting of the defective points in the desired position is not indicated on the panel, the train shall be piloted IN/OUT in terms of Subsidiary Rules No. 3.69.01, 3.69.02, 3.69.03, 3.70.01 and 3.70.02.

The route once set and locked for receiving or despatch a train shall not be interfered with unless the said movement is completed or cancelled and expressly so directed by the Panel Station Master.

Whenever the crank handle is required to be used by a Signal Official for maintenance work or for attending failure, the signal official must give Dis-connection memo (SI-4) to the Panel Station Master on duty. After making necessary entries in the Crank Handle Register, the Panel Station Master shall obtain the acknowledgement of the signal official in the Crank Handle Register and then release the concerned crank handle controlling key to the Signal Official.

The concerned point/points shall be treated as defective till the emergency crank handle controlling key is restored to its normal place and control is withdrawn by the Panel Station Master.

Before parting/releasing control with the emergency crank handle for maintenance work by signal official, the Panel Station Master shall ensure that the reception/departure signals for effected line/lines are at "ON" position. The points of the effected line should be treated as non-interlocked and the Panel Station Master should instruct the concerned field ASM for setting clamping and padlocking the facing and trailing points over which the train is to pass and such assurance is taken by the Panel Station Master from the field ASM supported by Private Number before piloting IN/OUT of trains over the affected points as per GR 3.69, 3.70, 5.09 and SRs thereto.

An emergency Crank Handle Register is to be maintained in the Route Relay Cabin with the following proforma by on duty Panel Station Master of Route Relay Cabin wherein the particulars of usages of the emergency crank handle must be recorded.

- I) Date.
- II) Point No. which failed or required to be tested.
- III) Time of failure.
- IV) Disconnection Memo No. received from S&T staff.
- V) Points controlling key No. released from Route Relay Cabin.
- VI) Private Number or signature of the official to whom the controlling key is released.
- VII) Time when release was given.
- VIII) Private Number/signature assuring correct setting, clamping and padlocking of the concerned points.
- IX) Date and time of fault rectified.
- X) Time when controlling key release withdrawn by Panel Station Master.

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- XI) Signature and designation of official who rectified the fault.
 xii) Remarks

When points become defective the, Panel Station Master must comply with GR 3.51, 3.77, 5.10 and SR thereto and he must notify all concerned promptly for speedy restoration.

When interlocking fails, all the effected points on a route, both facing and trailing points must be clamped and padlocked before allowing any movements over the affected points.

For use of Crank Handle for motor operated point refer to rule No. 20.06 of Operating Manual also.

35. BLOCK INSTRUMENTS PROVIDED FOR THE BLOCK SECTIONS:

This Route Relay Interlocking Cabin is equipped with the following types of Block Instruments to control movements of trains from and to adjacent Block Sections.

Sl. No	Section	Type of Block Instrument
1.	CTC-KNPR	Double line SGE Block Instrument.
2.	CTC-GBK	Daido Type Single line Token-less Block Instrument.
3.	CTC-KDRP	Double line SGE Block Instrument.

36. INTERLOCKING BETWEEN SIGNAL AND BLOCK INSTRUMENTS:

a) LAST STOP SIGNAL CONTROL:

- i) The block working of the section CTC-GBK is controlled with the provision of Token Less Block Instrument (Diado type) and the block working of the double line sections CTC-KNPR & CTC-KDRP are controlled by SGE Block Instruments provided at RRI cabin.
- ii) The Advanced starter signal is interlocked with the Token Less Block Instrument in such a way that Advanced Starter Signal cannot be taken off unless the Line Clear is obtained from the block station in advance and the handle of the Token-less Block Instrument is turned to "TGT" position.
- iii) The concerned Advanced Starter Signal aspect will be changed its "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced Starter Signal replacement track circuit provided ahead of the respective signal.
- iv) UP IBS-35 is controlled by SGE double line Block Instrument. This signal cannot be taken off unless line clear is obtained from KDRP.
- v) DN-IBS 14 is controlled by SGE Double Line Block Instrument. This signal can not be taken "OFF" unless Line Clear is obtained from CTC.

b) BLOCK RELEASE:

- i) The Block Instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block overlap ahead of the respective Home signal on either side of the Cuttack Station yard..
- ii) All the power signaling installations in Cuttack Station yard are centrally controlled from the Route Relay Cabin and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be vouched by the operating personnel in the centrally located Route Relay Cabin and in order to ensure complete arrival of the incoming train, Axle Counters are provided between CTC-GBK single line section and CTC-KNPR, CTC-KDRP double line sections at the end of the Block Overlap ahead of

the respective Home signal to ensure complete arrival of the incoming trains at Cuttack Station yard.

- iii) In the event of failure of Axle Counter block working of the section concerned is to be suspended, Station Master shall not normalise the commutator of the concerned Block Instrument to "Line Closed" position and shall not Despatch "Train out of block section" report to the station in rear until he is satisfied by seeing the Last Vehicle Indicator on the last vehicle of the incoming train (after arrival)of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train.
- iv) After satisfying as above, Station Master should obtain permission of Station Master in rear concerned as the case may be for resetting the Axle Counter. The button of the Axle Counter reset unit should be pressed and released the same after "Permission granted" indication in WHITE appears in the reset unit of rear station. At the same time "Permission Received" indication in WHITE appears on the reset unit concerned in Route Relay Cabin/Cuttack. Line clear Station Master in Route Relay Cabin should, then unlock and press SMs reset button on the reset unit concerned after which "Permission granted" indication on the reset unit of the station in rear and "Permission received" indication in Route Relay Cabin disappears and Axle Counters will be reset and "Axle Counter Section Clear" indication in Green appears on the reset unit at Route Relay Cabin. Also the counter of the reset unit registers next higher number which should be recorded in Train Signaling Register .Number of the resetting counter of LVCD (Axle counter) for each re-set should be recorded in a separate counter register by the SM/RRI in addition to recording in TSR. The line clear Station Master may then normalize the commutator of the block instrument to "Line Closed Position" and Dispatch "Train out of block section" report to the station in rear.

RESETTING OF LVV AXLE COUNTER SYSTEM FOR CTC-GBK SINGAL LINE SECTION:

PERMISSION GRANTING ACTION TO BE TAKEN BY THE SM ON DUTY AT GBK STATION AND RESETTING ACTION TO BE TAKEN BY THE SS ON DUTY AT CTC STATION:

1. As the section CTC-GBK is single line, thus irrespective of the direction of the train movement, in case of failure of the axle counter system, always Co-Operation permission will be granted by GBK station and Resetting operation will be done by CTC station only.
2. After complete arrival of the train vide SR 4.17.01, if the Axle Counter of the section does not clear or Axle Counter FREE indication (G) does not appear in the panel, concerned receiving end on duty SM shall inform the dispatching end station on duty SM through telephone giving details of last train that has arrived complete at his station and the block section is clear.
3. The receiving end station shall inform the sending station as to whether the last train that entered into the section has arrived or not and if arrived fully then he shall exchange private number with the sending station and ask for granting permission for resetting the Axle counter.
4. On getting advice from the CTC station for resetting, on duty SS at GBK station pushes the "Permission Granted" button and presses keeping it for some time.
5. An Indication Lamp provided in the panel for permission received shall lit up at CTC .On duty SS at CTC presses Permission Acknowledgement Button to acknowledge the same. Insert the reset Key & Turn. After normalizing the Key, Resetting will get initiated.
6. The RED indication does not change to "GREEN"
7. Veeder counter provided on the panel shows next higher number. The same may be recorded in the Reset Register.
8. The Dispatching stations will "PILOT OUT" the first train to the Block Section.
9. After complete arrival of the said train, the "GREEN" indication appears on the panel and RED indication disappears.

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10. Observe "GREEN" indication on the panel on either station.
11. Block Instrument can be normalized.

RESETTING OF LVV AXLE COUNTER SYSTEM FOR CTC-KNPR DN LINE ON DOUBLE LINE SECTION:

PERMISSION GRANTING ACTION TO BE TAKEN BY THE SS ON DUTY AT CTC STATION AND RESETTING ACTION TO BE TAKEN BY THE SS ON DUTY AT KNPR STATION:

1. As the section CTC-KNPR is provided with Analog Axle Counter on DN Line and Digital Axle Counter on UP line between CTC-KNPR, thus on DN line irrespective of the direction of the train movement, in case of failure of the axle counter system, always Co-Operation permission will be granted by CTC station and Resetting operation will be done by KNPR station only.
2. After complete arrival of the train vide SR 4.17.01, if the Axle Counter of the section does not clear or Axle Counter FREE indication (G) does not appear in the panel, concerned receiving end on duty SM shall inform the dispatching end station on duty SM through telephone giving details of last train that has arrived complete at his station and the block section is clear.
3. The receiving end station shall inform the sending station as to whether the last train that entered into the section has arrived or not and if arrived fully then he shall exchange private number with the sending station and ask for granting permission for resetting the Axle counter.
4. On getting advice from the KNPR station for resetting, on duty SS at CTC station pushes the "Permission Granted" button and presses keeping it for some time.
5. An Indication Lamp provided in the panel for permission received shall lit up at KNPR. On duty SS at KNPR presses Permission Acknowledgement Button to acknowledge the same. Insert the reset Key & Turn. After normalizing the Key, Resetting will get initiated.
6. The RED indication does not change to "GREEN"
7. Veeder counter provided on the panel shows next higher number. The same may be recorded in the Reset Register.
8. The Dispatching stations will "PILOT OUT" the first train to the Block Section.
9. After complete arrival of the said train, the "GREEN" indication appears on the panel and 'RED' indication disappears.
10. Observe "GREEN" indication on the panel on either station.
11. Block Instrument can be normalized.

DIGITAL AXLE COUNTER FOR LVV ON UP LINE BETWEEN CTC-KNPR:

- (i) UP LINE of the Block Section between KNPR-CTC are provided with Digital axle counter. A pair of Digital axle counter is provided between KNPR-CTC on UP line one just beyond UP Advanced Starter KNPR and another beyond the UP home signal at CTC.

The position of the UP line of the Block section whether cleared or occupied are reflected in the panel diagram provided in the Station Master's office which shows 'GREEN' when UP line the Block Section is clear and 'RED' when occupied. Whenever a train enters in UP line to the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR 14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal shall not come to OFF and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office at CTC. The CTC and KNPR stations after being assured by both the on duty SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number then resetting to be complied with.

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

- 13.1 Digital Axle Counters are provided on UP line of the Block Sections between KNPR-CTC.
- 13.2 The occupation and clearance of the axle counter section is indicated on the panel by 'RED' and 'GREEN' light.
- 13.3 If any Block proving Axle Counter section fails, the Last Stop Signal at the KNPR station cannot be taken 'OFF' and Block instrument at CTC Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- 13.5. No train should be allowed on signal to leave a station in any particular direction unless:- Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- 13.6. A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the CTC station and is certified in this respect by the SM on duty at the CTC station through exchange of Private Number.
- 13.7. Reset arrangements are provided in the operation panel in the SM's office for sections CTC-KNPR with DLBI. The UP resetting key along with reset push button for the section is provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.

13.8.A. RESETTING OF DIGITAL AXLE COUNTER WHEN FAILED (FOR UP LINE OF THE SECTION CTC-KNPR)

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (G) does not appear in the panel, The on duty SS of CTC station shall apprise on duty SM of the KNPR station through telephone for resetting giving details of last train that has arrived complete at his station and the block section is clear.

The CTC station shall inform the KNPR station as to whether the last train that entered into the section has arrived or not. And, if arrived fully shall so intimate authenticated by exchanging Private number with the KNPR station.

As digital Axle counters is provided as LVCD in UP Line of the Block section, resetting is to be done by both of KNPR and CTC individually. (No co-operation or permission is required from the other station).

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

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

- a. Insert SM's LV reset key, turn right
- b. Press LV reset button provided on the panel.
- c. Release SM's LV reset key and reset button.
- d. Turn left the SM's LV reset key and remove it.
- e. The system obtains preparatory reset state and preparatory reset indication (Green) glows on the panel.
- f. 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.

The SM on duty shall record in it in the Train Register and the resetting operation giving details of train number, time, Private Number exchanged with SM of sending station giving reasons for the resetting operation.

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.

If the 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.

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1.0 Station Superintendent (In-Charge):

- (i) He is responsible for the efficient discharge of duties by different members of staff at his Station. (General Rules 5.01).
- (ii) He shall ensure that the working of the Station is being carried out in strict accordance with the SWR, current rules, procedures and instructions.
- (iii) Providing prompt and courteous service with utmost safety and security of passengers and employees.
- (iv) Availability, helpfulness and good conduct of station porters.
- (v) He shall be responsible for general up-keep of the station.
- (vi) He shall be responsible for keeping the safety and operating literature including circulars, pamphlets, gazette etc. up to date and these must be explained to the staff working under him and got noted by them.
- (vii) He shall be responsible for maintaining Accident register and Accident charts and keeping these up to date.
- (viii) He shall promptly attend all accidents, assume charge of the site to and assist in relief measures ensuring prompt evacuation of injured & stranded passengers. He shall take note of all the information available and protect the clues/evidence, which may be helpful in the enquiry. He shall intimate the control office at regular interval for current information and ask for the required assistance i.e., Relief Train, Medical van etc. He shall investigate yard accidents, obtain statements of the staff responsible and submit his report with conclusions and joint note to the Divisional office.
- (ix) He shall ensure that fire fighting equipments at the station such as fire extinguisher, fire buckets etc. are in fine fettle and ready for use.
- (x) He must ensure that the essential Safety equipments at his station are the same, complete and, if there is any deficiency should be made good without delay.
- (xi) He shall conduct night and surprise inspections to check the alertness of staff and working of signals, and points and visibility of the signals.
- (xii) The Station Master in charge at a station shall inspect his station daily with a view to ensure efficient working of-
 - All public facilities including, fans and lights.
 - All equipments being in efficient working order. Deficiencies must be promptly rectified or recorded in Petty Repairs Book.
 - Safe and efficient working of trains.
 - RRI Cabin, SS (PF)'s office, yard and level crossing gate under his charge.
 - Reservation Enquiry, booking offices, Ticket Checking, catering and stalls etc.
 - Drinking Water availability.
- (xiii) He shall see that Train Signal Register, Station Diary, Inspection Note Book, reference books and other station records are properly maintained.
- (xiv) He shall satisfy himself that the staff employed under him at this station are thoroughly conversant with Station Working Rules and perform their duties correctly. He is responsible for maintaining SWR, other Rule Books and Assurance Register up to date.
- (xv) He is responsible for booking all Group-'C' and Group-'D' staff for PME and Refresher Course/Safety camp in their due time. His Special attention is drawn to Chapter-II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter-XXII of Operating Manual.
- (xvi) He shall see that law & order and discipline in the station area is maintained with the help of GRP and RPF and that all staff appears on duty properly are with proper uniform and in time.
- (xvii) He shall see that the Booking Office, Parcel Office, Reservation Office etc. are properly functioning and any public complaints in respect thereof are attended to and preliminary report of the public complaints are submitted to Sr. DCM/KUR. He shall ensure that the BWM 2.09 (e) is complied with daily. He is completely responsible for the total function of system at the station and ensures smooth flow of traffic with least possible detention.
- (xviii) SS (In-charge)'s special attention is drawn to the GR 5.01 to 5.23 where details are indicated. He shall see that all station earnings, periodical returns and statements etc. are sent in time by the staff responsible for them.

- (xix) He shall see that all records are properly maintained and inspect all transportation records daily and ensure that proper utilization of coaching stocks in coaching complex.
- (xx) He is responsible for the general supervision of the station in respect of safe and timely running of the trains to and from the station and for the supervision of commercial and operational work of the station yard.

1.1. **ASSURANCE REGISTER:**

All staff before taking up independent charge of their duties shall make a written declaration in the Assurance Register that they have read the Station Working Rules thoroughly and understood the system of working in force at the station and must sign such declaration.

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

The SS (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 obtained in two parts viz. one for Group-'C' and the other for Group-'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS (In-charge).

The declarations are to be renewed in the following cases:

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

1.2 **USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER:**

Sufficient Private Number Books and Identification Number sheets in sealed cover shall always be kept in stock by Station Superintendent (Panel) under lock and key. One Register shall be maintained with particulars of receipt brought into use, closed date sent back to office for renewal for this purpose.

1.3 **ACCIDENTS:**

Accidents shall be recorded, reported and immediate action shall be taken by the SS (In-charge) in accordance with the instructions laid down in the accident manual. Whenever SS (In-charge) receives report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident messages and report and follow up all safety principles without delay.

2. **STATION SUPERINTENDENT: (OUT DOOR)**

He shall perform duties detailed below and remain responsible for the efficient working of Station during his duty.

- (i) Maintenance of Caution Order and preparation of Caution Order for all trains during tenure of his duty hours.
- (ii) Nomination of line for admission of coaching trains and right time departure of all trains. He shall deal with all passenger amenities and complaints by travelling public.

- (iii) Prompt attendance on all coaching trains to ensure loading and unloading is completed in time and to avoid complaints of any kind from the travelling public.
- (iv) Eliminating detention to the coaching trains and goods trains at station and outside signals.
- (v) He shall see that shunting is supervised by an authorised person and is carried out as per rules.
- (vi) Ensure proper co-ordination with all departments for quick movement of trains within the yard and expeditious reception/dispatch there of to and from the yard and platform.
- (vii) Ensure prompt attention to vehicles marked sick and reduce detention to such damaged/defective vehicles to lesser duration.
- (viii) Ensure improvement of turn-round of wagons/vehicles and ensure that placement and drawing out of goods shed and other sidings are prompt.
- (ix) Maintain close liaison with the control office in all matters relating to train operation, balancing of Crew and Guard, yard clearance and coaching stock and fueling point.
- (x) He is responsible for over-all supervision in the station.
- (xi) See that functioning of the catering units.
- (xii) Ensure proper provision and function of other passenger amenities like drinking water, water cooler, lights, fans, waiting rooms/halls, retiring rooms, enquiry, reservation counters etc.
- (xiii) He shall ensure to SS on duty at Panel regarding clearance of the line supported by a private number during failure of track circuit.
- (xiv) He shall ensure alertness of all staff working at the station and maintain discipline law and order, cleanness in co-ordination with other departments.
- (xv) In the event of resorting to Calling-on signal operation, the Station Superintendent shall be responsible for ensuring clearance of the route from stop signal under which the Calling-on signal is fixed to the next stop signal ahead on the concerned route and also for suspending of shunting operation which may infringe the movement of a train authorized by the Calling-on signal.
- (xvi) Shunting movements will be supervised in case of emergency.
- (xvii) In the absence of Station Superintendent (In-Charge), the duties of Station Superintendent (In-Charge) will devolve on him.

3. **STATION MASTER (PANEL):**

- (i) He shall be responsible for obtaining and granting line clear to trains or for shunting movements, in case of emergency.
- (ii) He shall operate the control panel himself when on duty and shall not permit any unauthorized person to manipulate panel.
- (iii) He shall keep the control panel key in his personal custody whenever, he is required to leave his office even for a short duration.
- (iv) While coming on duty, he shall ensure that all points and signals are in good working order and all the registers, records, pertaining to train passage are completed in all respect before taking over the charge.
- (v) He shall personally ensure that conditions for taking 'off' the reception signals are fulfilled and the clearance of line is verified.
- (vi) He shall ensure from indications available in the panel that the signals are burning brightly and are giving correct indications.
- (vii) He shall ensure that all Shunting operations are carried out as per extant orders and GR 5.19 and SRs thereof.
- (viii) He shall inform the ESM/MSM in writing or through a written message, any failure of track/signals/ points/keys or panels etc. and shall invariably enter these failures in signal failure register.
- (ix) He shall allow shunting in between the arrival/departure of trains or during slack period as frequently as possible to the maximum extent.
- (x) He shall come on duty after taking complete rest and shall not perform his duty under the influence of drugs, or intoxicants.

- (xi) He shall keep his reference books up to date, posted with latest correction slips and shall keep himself fully conversant with the extant rules. He shall keep his books, readily available for inspection when asked to do so.
- (xii) He shall not absent himself from duty without prior permission of his superiors. He shall not leave his duty unless properly relieved by his relief and shall not exchange his duty without prior permission from his superiors.
- (xiii) 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.
- (xiv) He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.
- (xv) He shall ensure that proper indications of points, signals, track, circuits, crank handle, level crossing gate etc., are displayed at their proper places.
- (xvi) He shall keep a watch on the working of shunting staff.
- (xvii) He shall carry out the test in person about the working of reception signals daily when no train is due to arrive and no train is due to leave and record the results of the test in Station Diary vide SR 5.01.03 (c) (ii) and SR 5.01.03 (d).
- (xviii) He shall be responsible for protection of a running line when one is blocked by any means. He shall also be responsible for Transmitting crank handles and maintenance of corresponding registers including failure register, properly.
- (xix) In the event of failure of points / signals he shall take the assistance of additional SM (Panel)/ SS on duty at the platform for physical verification and for correct setting, clamping and padlocking of points before trains is piloted.
- (xx) He shall be responsible to ensure that all the staff discharge their duties properly and shall report all irregularities and unusual incidents to SS (In-charge) and all concerned promptly.
- (xxi) During failure of track circuit in running lines, he shall obtain one private number regarding clearance of the concerned line from SS on duty at PF.
- (xxii) His special attention is drawn to Chapter-II of G & SR and GR 5.01 to 5.08 with relevant Subsidiary Rules.
- (xxiii) He shall plan for reception/dispatch of trains in coordinating with SS (PF) on duty.

4. **STATION MASTER/ASSISTANT STATION MASTER:**

- (i) He shall assist the SS (Panel) for working "Line Clear" duties in accordance with General and Subsidiary Rules, Block Working Manual and Station Working Rules.
- (ii) He shall handle the Token Less Block Instrument himself when on duty and shall not permit any unauthorized person to manipulate or handle the block instrument & block telephone.
- (iii) He shall keep the block instrument key in his personal custody whenever, he is required to leave the panel room even for a short duration.
- (iv) He shall maintain TSR as per SR 14.07.01 (a), (b), (c) & (d) and other connected record/documents in good shape and ensure that all entries are completed and are up to date.
- (v) He shall inform the ESM/MSM through a written message, any failure of block working etc. and invariably enter these failures in signal failure register.
- (vi) In case of any accident, he shall inform promptly to the section Controller/SS (In-charge)/SS (Platform). He shall give all the information available with him in regard to the nature, places, cause and assistance etc. in respect of the accident.
- (vii) He shall communicate reasons for late start of outgoing trains and late arrival of incoming trains to control.
- (viii) He shall come on duty after taking complete rest and shall not perform his duty under the influence of liquor, drugs, or intoxicants.
- (ix) He shall keep his reference books up to date, posted with latest correction slips and shall keep himself fully conversant with the extant rules. He shall keep his books readily available for inspection when asked to do so.
- (x) He shall not absent himself from duty without prior permission of his superiors. He shall not leave his duty unless properly relieved by his relief and shall not exchange his duty without prior permission from his superiors.

- (xi) 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.
- (xii) He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.
- (xiii) In case of any abnormal working, he shall also perform the duties assigned to SS (Panel).
- (xiv) He shall advise the descriptions of the train to which he had granted line clear or obtained line clear to SS (Panel).
- (xv) He shall ensure closure of mid-section non-interlocked Level Crossing Gates before granting/obtaining "Line Clear". He is responsible for closure of the traffic L.C. Gate before taking 'OFF' reception/dispatch signals. He is also responsible for closure of the traffic L.C. Gate during failure of Station Stop Signal (s)/ Gate/ Gate Mechanism. He shall intimate to the gate man in advance to close the mid-section interlocked L.C. Gates in time.
- (xvi) He shall exchange alright signals with the Loco Pilot and Guard and ensure the complete arrival of the train before closing the block section.
- (xvii) He will be responsible for correct use of Crank Handles and associated with the Crank Handle controlling Keys.
- (xviii) During failure of track circuit of a concerned route, he shall apprise the SS on duty at platform and ensure clearance of the concerned line from SS on duty at Platform supported by a private number.
- (xix) In the event of failure of points/signals he shall take the assistance of SS on duty at the platform for physical verification.
- (xx) He shall be responsible to ensure that the staff under his control discharge their duties properly and shall report all irregularities and unusual incidents to Station Superintendent (In-charge)/ SS on duty at platform and all concerned promptly.
- (xxi) His special attention is drawn to Chapter-II of G & SR and GR 5.01 to 5.08 with relevant Subsidiary Rules thereto.
- (xxii) He shall maintain SM's diary, private number book, ID Cover, Block Ticket, Pilot Memo, Starting Order and Paper Line Clear Ticket etc.

5. **SHUNTING MASTER:**

- (i) He shall work under the direction of the Station Superintendent (Platform)/ SS/SM on duty at Panel on duty.
- (ii) He shall see that shunting is carried out in a proper and safe manner as per GR 5.13, 5.14 and 5.16 to 5.19, 8.09, 8.10, 8.12, 8.13 to 8.15 and relevant SRs thereto.
- (iii) In case of shunting on non-running lines, he shall ensure correct setting of points before displaying 'proceed' hand signal for the movement.
- (iv) In case of shunting in station yard during failure of either starter or shunt signal, the concerned points are to be correctly set, clamped and padlocked before displaying proceeding hand signal to the Loco Pilot/Guard/Station Master.
- (v) He shall have thorough knowledge of the yard and shall follow the Station Working Rules and safe working instructions issued from time to time.
- (vi) He shall couple/uncouple vehicles under the supervision of SM/Guard of the train.
- (vii) He shall do timely placement and drawn out of rakes to and from the platforms.
- (viii) He shall do prompt placement/drawn out to and from various sidings as per time scheduled.
- (ix) He shall see that no vehicle is left fouling the adjacent line and secure the vehicles in various sidings.
- (x) He shall protect the line in emergency, if required.
- (xi) He shall protect any damage/defect points and report to the SS (In-Charge)/SS (PF)/SM (Panel) on duty for further necessary action.
- (xii) He shall perform any other duties entrusted on him by his supervisors in the execution of railway work.

6. TRAFFIC POINTSMAN:

He shall work under the instructions of SS (In-charge)/SS (PF)/SM on duty and follow the GR 2.05 to 2.11 and other relevant rules laid down in G & SR. He shall remain responsible for:

- (i) Correct Setting and Locking and Crank Handling of points for reception/dispatch and shunting operation.
- (ii) Coupling and uncoupling vehicles.
- (iii) Protection of line in an emergency.
- (iv) Piloting and hand signaling of trains when necessary and handing over caution orders and / or any other line clear authorities to the Loco Pilots and Guards of the Trains.
- (v) Securing of vehicles as directed for protection of vehicles on a train.
- (vi) Being conversant with the layout of the yard and compliance of rules relating to shunting operations.
- (vii) Observing General Rules 5.13 to 5.21 and relevant Subsidiary Rules during shunting.
- (viii) Clearing and lighting of hand signal lamps, if required.
- (ix) Working as Fog Signal man as and when required.
- (x) Filling up the fire buckets with sand/water.
- (xi) Getting train intact Arrival Register (T/1410) signed by the guard/Loco Pilot as and when required.
- (xii) When necessary, they will work in the Goomties for observing and reporting the complete/incomplete arrival/departure of trains as per the order of the Station Superintendent on duty in case of failure of Axle Counter/Track Circuit.
- (xiii) Any other duties entrusted to him by the SS/SM/ASM on duty from time to time.

GENERAL

- 1. A set of Flags and Tri-colour hand signal lamps will be the part of essential equipment of the staff while on duty. He shall not leave the station except when required by the SM on duty or with his permission and shall comply with subsidiary Rules 4.42.02 (b) (i) & (d).
- 2. Staff working at the station must be able to distinguish up and down line clear tickets and educated in distinguishing other operational forms & documents, delivered to Loco Pilots and Guards.

A list of equipments is given below which shall be maintained in good working order.

1.	Detonators	-	50 Nos.
2.	Hand Signal Lamp	-	12 Nos.
3.	Hand Signal Flag	-	12 Sets.
4.	Skids	-	12 Nos.
5.	Safety Chains with Pad Locks	-	06 Nos.
6.	Clamps with Pad Locks	-	20 Nos.
7.	Fire and Sand Buckets	-	10 Nos.
8.	D.C.P.T. Fire extinguisher	-	04 Nos.
9.	First Aid Box	-	02 Nos. (1 with Outdoor SS)
10.	Stretcher	-	01 No.
11.	Red magnetic Collar	-	12 Nos.
12.	Power Block Collars	-	04 Nos.
13.	Motor Trolley on line Board	-	03 Nos.

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RULES FOR WORKING OF DK STATIONS HALTS, IBH, IBS, AND OUTLYING SIDINGS**1.1 MID-SECTION OUTLAYING SIDING:**

There is no mid-section siding on either end of block section

1.2. IBH, IBS/DK STATION:**INTERMEDIATE BLOCK POSTS OF CUTTACK-KANDARPUR SECTIONS:****1. DESCRIPTION:**

Intermediate Block Posts at Km. 415.787 on UP line and at Km. 415.396 on DN line of RCTC–KDRP section are provided bifurcating UP and DN lines by means of intermediate block signaling with electronic Axle counters and trains are Worked under Absolute Block System in accordance with General Rule No. 1.02 (1), 31 & 32, 3.11, 3.42, 3.75, 8.01 (1) (a), 8.01 (2) (a) (b).

2. SIGNAL DIAGRAM

Working Rule Diagram No. 21112 ALT-A to suit Multi Aspect Colour Light Signaling Plan No. SI-21112 ALT-A for CTC station shows the layout of Intermediate Block Signal, Distant and Inner signals with all signaling features and gradients etc.

3. TELEPHONIC COMMUNICATION:

Telephones fitted to intermediate Block Home Signal posts with sockets provided for communications to the SM/SS in rear i.e. SM/SS/KDRP in case of DN line and SM/SS/CTC in case of UP line. The telephone on intermediate Block Home signal post is provided with two press button. The right hand side button to be pressed by the Loco Pilot for calling the attention of the SM/SS of the station in rear and left hand side button is to be pressed for speaking and releasing for hearing.

4. THE FOLLOWING SIGNAL ARE PROVIDED FOR UP AND DN LINE:

- a) Home Signal.
- b) Inner Distant Signal.
- c) Distant Signal.

Legend boards with legend "Backing is not permitted beyond". These boards are provided 400 meters beyond UP and DN intermediate Block Home signal on KDRP-RCTC section.

5. DETAILS OF BLOCK SECTIONS ON CTC- KDRP SECTION:

The UP and DN Block section between CTC–KDRP are split into two portions, each constituting a separate block section by provision of intermediate Block signaling which are controlled and operated by block station in rear i.e. CTC in case of UP line and KDRP in case of DN line on CTC–KDRP Section vide GR 1.02 (31) and (32) .

6. INTERLOCKING OF SIGNALS:

- (a) The intermediate Block stop signals are interlocked with Lock and Block Instrument in such a way that the same can not be taken off unless line clear has been received from block section concerned in Advance of the intermediate Block Home Signal connected with the needle of the L&B instrument indicates line clear position .
- (b) The last stop signal i.e. Advanced Starters cannot be taken off unless the block station in advance of the signal controlled by Axle counters is clear and the Axle counter panel shows clear indication.

- 7. Track circuits are provided beyond Intermediate Block Home Signal and Advanced Starters in order to restore that signals to their normal position automatically when a train pass over there and the signal remain in operative until and unless line clear received for a subsequent train.

8. CLOSURE OF INTERMEDIATE BLOCK POST:

In the event of suspension of Lock and Block Instrument or failure/suspension of intermediate Block Home or failure of track circuit provided beyond Advanced Starter or Axle counter panel/mechanism, on UP or DN line, concerned section shall be suspended, then intermediate Block posts concerned shall be deemed to be closed and sections between the station on either side of the intermediate Block post concerned shall be treated as one Block section. [Refer to GR 3.70, 3.75 & 14.14]. The authority to pass the Advanced Starter and Intermediate Block Stop Signal concerned at 'ON' shall be issued by the SS/SM immediately in rear of such signal.

9. DESCRIPTION OF AXLE COUNTING SYSTEM AND PANELS PROVIDED AT CTC STATION AND SOUTH CABIN OF KDRP-CTC SECTION:

Electronic axle counters are provided on the UP line between UP Advanced Starter Signal No. 27 of Cuttack and the legend board provided 400 meters beyond the UP intermediate Block stop signals and they become effective i.e. actuated only on passage of wheels of an engine or vehicles on track circuit situated beyond the UP Advanced Starter. Similarly the electronic Axle counter at the exit becomes actuated only on passage of an engine or vehicles over track circuit situated at 400 meters beyond the UP intermediate Block Stop signal. Movement of insulated push trolleys does not actuate the axle counting system.

9.1 DESCRIPTION OF PANELS:**(a) INDICATION CUM RE SETTING PANEL IN CTC:**

This panel installed in CTC is provided with the following:-

i) UP TRAIN RUN AWAY BELL ACK PUSH BUTTON:

This is to be operated for acknowledging the passage of UP trains past UP Intermediate Block Stop Signal on UP line at 'ON' position

ii) UP TRAIN ENTERING LOCK AND BLOCK SECTION, PUSH BUTTON ACKNOWLEDGE:

This button is to be pressed for acknowledging the passage of UP trains past UP Intermediate Block stop signal on UP line release normal to stop the UP bell which will ring for second time as soon as the DLBI at KDRP turned to TOL position.

iii) RE-SET PUSH BUTTON:

This is to be operated by SM/CTC for re-setting the axle counting system between CTC and UP IBS at Km. 415.787 on the UP line.

iv) VEEDER COUNTER RE-SET:

This registers the next higher number every time the reset push button is operated for resetting the axle counting system on UP line & DN line. Released and incoming SM should jointly record the number on the counter and sign in the train signal register while taking over charge.

v) UP IB TRAIN ENTERING BELL:

This rings with the passage of every UP train past UP intermediate Block Stop Signal and operating track circuits beyond it indicating that the UP train has entered the block section between UP IBS and KDRP .

vi) DN BUZZER

This rings with the passage of every DN trains past DN IBS at ON and operates the track circuits beyond it indicating that the DN train has run away entered the block section and run away between DN IBS signal and CTC with the IBS signal at 'ON'

NOTE

The Buzzer/Bell is to be stopped every time by pushing the buzzer/bell muting push button/switch on the panel by the SM on duty.

(6) INDICATIONS:

The following luminous indications are displayed on the panel provided in the CTC:-

- i) UP train running away.
- ii) DN train running away.
- iii) UP Axle counting section occupied in 'RED'.
- iv) UP Axle counting section clear in 'GREEN'.
- v) UP Advanced starts track circuit occupied/failed in 'RED'.
- vi) UP IBS Signal Track circuit occupied /failed in 'RED'.
- vii) DN train entering Lock and Block section.
- viii) UP train entering Lock and Block section.
- ix) Re-set permission for re-setting UP axle counting system.
- x) UP IBS signal at 'ON' in 'RED'.
- xi) UP IBS signal off in 'GREEN'.
- xii) UP IB Distant signal 'ON' shows 'YELLOW'.
- xiii) UP IB Distant signal OFF shows 'GREEN'.

Note:-

- 1. DN Train running away indication appears only in case of a train passing DN IBS signal at ON when the section in rear is occupied.
- 2. UP train running away indication appears only in all cases of a train passing UP IBS at 'ON' position.
- 3. UP axle counting section occupied in 'RED' will appear when the section from UP Advanced starts to UP IBS signal is occupied by a train
- 4. UP axle counting section clear in 'GREEN' will appear when the section from UP Advanced starts to UP IBS signal is clear.
- 5. UP Advanced Starter track circuit when occupied /failed 'RED' indication will appear, when the track circuit is clear/working, no indication will be there.
- 6. UP IBS signal track circuit when occupied /failed 'RED' indication will appear when the track circuit in clear/ working no indication will appear.
- 7. DN train entering section indicator appears in all case of a DN train passing DN IBS signal track circuit.
- 8. UP train entering section indication appears in all cases of an UP train passing UP IBS signal track circuit.
- 9. Block handle free indication appears when a DN train arrives completely within the station section and Station Master normalizes the route lever. The block handle is then become free and the L&B instrument can be normalized.
- 10. Re-set permission granting for re-setting UP Axle counting system indication appears when the SS/SM grants permission by pressing concerned button on his panel.
- 11. Normal aspect of the UP IB Inner distant is 'YELLOW' and IB distant is 'DOUBLE YELLOW'. When IBS signal turns 'GREEN' the Distant and Inner Distant will be turned to 'GREEN' automatically.

9.2. PERMISSION-CUM-INDICATION-CUM-RESET ACKNOWLEDGEMENT PANEL IN THE STATION MASTERS OFFICE AT CTC STATION:

This panel installed in the station masters office is provided with the following:-

i) PERMISSION CUM RESET GRANTED BUTTON FOR UP LINE:

This is to be operated for granting permission to SS/SM KDRP for resetting axle counting system on UP line.

ii) ACKNOWLEDGEMENT BUTTONS FOR DN LINE:

This is to be operated after receipt of permission from SS/SM KDRP for the resetting axle counting system on DN line.

iii) AUDIBLE BUZZER AND BELL:

This will ring when UP/DN train runaway indication appears on the panel

iv) DN TRAIN RUNAWAY MUTING BUTTON:

This is to be operated for acknowledgement and stopping the ring in case of a DN train passing DN IBS at 'ON' position.

v) UP TRAIN RUN AWAY MUTING BUTTON:

This is to be operated for acknowledgement and stopping the ring of the buzzer in case of an up train passing up IBS signal in a position.

vi) STATION MASTERS CONTROL KEY:

This provided to control the panel operation and to be kept in the personnel custody of the station master on duty.

vii) VEEDER COUNTER:

This registers the next higher number every time permission-cum-re-setting button or acknowledgement button is operated for re setting axle counting system on UP or DN line respectively. Released and incoming SS/SM should jointly record the number on the counter and in sign the TSR while taking over charge.

9.2.1. THE FOLLOWING LUMINOUS INDICATIONS ARE DISPLAYED ON THE PANEL.

- i) UP train runaway.
- ii) DN train run away.
- iii) UP Axle counting section occupied in 'RED'.
- iv) UP Axle counting section clear in 'GREEN'.
- v) Permission granted to KDRP.
- vi) Permission Received from KDRP.

NOTES:

- 1. UP train running away indication appears in case of up train passing IBS at 'ON' position.
- 2. DN train running away indication appears only in case of DN train passing DN IBS in 'ON' position when the section in advance of the signal is occupied by a train.
- 3. UP axle counting section clear indication appears when no train in there in between UP Advanced Starts and UP IBS occupied.
- 4. Permission granted to KDRP indication appears when Permission-cum-re-set button is pressed for re-set button is pressed for re-setting axle counting system on DN line.
- 5. Permission received from KDRP and indication appears when acknowledgement button is pressed after permission is received from the SS/SM of CTC.

9.3 PROCEDURE TO BE FOLLOWED FOR RESETTING THE AXLE COUNTING SYSTEM ON UP LINE BETWEEN CUTTACK-KANDARPUR IN CASE OF ITS FAILURE.

- i) On occupation of UP Advanced Starter track circuit, UP axle counting section occupied indication will appear on the panel at CTC & KDRP. On clearance of the train over track circuit provided "Axle counting section clear" indication in "GREEN" will appear on the above panel. In the event of unequal count of axles or failure of Axle counting system, such green (Axle counting section clear) indication will not appear but continue to display "Axle counting section occupied" indication 'RED' indicating the failure/occupation of axle counting mechanism. In the event of such failure, intermediate Block Signaling and Lock and Block

working between CTC & KDRP on the double line shall be suspended and the Intermediate Block post shall be deemed as closed and the section between CTC & KDRP on either side of the Intermediate Block post shall be treated as one block section vide GR 14.14 until the axle counting system is reset in the following manner. The same procedure may be adopted for resetting the axle counting panel after passage of motor trolley/tower wagon.

NOTE:

The failure of axle counting system should be recorded in the train signal register at CTC-KDRP

ii) **PROCEDURE OF RESETTING AXLE COUNTING SYSTEM:**

On complete arrival of the train (after the passage of which the axle counting system failed) at the block station in advance i.e. KDRP the Station Masters CTC and KDRP must satisfy themselves under exchange of messages supported by Private Number that the Up line between a Cuttack and KDRP is clear of all obstruction.

iii) On being advised by Station Master/KDRP the SM/CTC should insert Station Masters control key and turn and press the "permission button" on His panel. The Veeder counter on the panel registers the next higher number and "Permission granted" indication appears on the SM's panel at CTC. Station Master/CTC should keep the permission button pressed for about 10-15 seconds. The Station Master/KDRP shall insert the SM's control key and turn and press the acknowledgement button on his panel as soon as he receives "Permission Receipt" indication. He shall keep the acknowledgement button pressed till "Section Clear" indication appears on his panel. The Veeder Counter in the Station Masters office at KDRP registers the next higher Number.

iv) The reading on the Veeder Counter on the Station Master's panel in the Station Master's office and on the panel be recorded in the Train Signal Register mentioning the reasons for the use briefly with timings for every operation.

v) A register showing the particulars of resetting operations as per the following perform should be maintained in the Station Master's office CTC in which the details of Re-setting operations should be recorded by the Station Master on duty.

vi) **PROFORMA:**

Date and time	Train No. last entered the block section	Private No. of the station ahead for complete arrival of the train under col. 2	Veeder Counter number before/after resetting operation is completed		Before/ After Re-setting	Train No. entering the block section immediately after the resetting operations	Signature of the Station Master on duty
1	2	3	4	5	6	7	8

vii) If there is any movement of non-insulated trolley/material trolley/motor trolley past the Intermediate Block Stop Signal at 'ON' position, "Train run away" indication will appear at the dispatching station and the system will fail.

viii) Even after adopting the procedure laid down in Para above, if the axle counter system is not reset, the Lock and Block Working and the Intermediate Block Signaling on the concerned line should be suspended treating the enter block section between CTC & KDRP on either side of Intermediate block post as one block section vide GR 3.75 (4) and 14.14.

10. **PROCEDURE TO BE FOLLOWED IN THE EVENT OF A TRAIN RUNNING AWAY (PASSING INTERMEDIATE BLOCK SIGNAL AT 'ON' POSITION):**

- i) Whenever a train passes the Intermediate Block Stop signal at 'ON' without being so authorised by the Station Master of rear station over telephone, the Station Master of the rear station on receipt of the audible/visual indication must inform the SS of the advance station about the entry of the train passing the Intermediate Block Stop Signal at "ON".
- ii) The Loco Pilot of the train on his arrival at the advance station must report the incident of his passing the Intermediate Block Stop Signal at 'ON' and also record in writing the reason for his doing so.
- iii) On receipt of written declaration from the Loco Pilot that the IBS telephone is defective, the Station Master of the advance station will inform the Station Master of the rear station about the matter and also the S&T staff for necessary rectification of the IBS telephone.
- iv) On receipt of the written declaration from the Loco Pilot of the "Run Away train" the IBS telephone is defective and after advising the S&T staff for necessary rectification the resetting should be done to normalize the system as per proper procedure on account of train passing the IBS at 'ON' the Block Instruments also should be normalized in the normal way since the "Run away train" has fully arrived at the advanced station. The Station Master at the advance station before resetting the axle counting system should ensure that the train had arrived intact by verifying the last vehicle indicator affixed in rear or the last vehicle of the train or by getting the complete arrival register signed by the Guard/ Loco Pilot.
- v) In case of failure of the Loco Pilot of the "Run Away train" to report the failure of telephone, the incident should be treated as a breach of Block Rule in terms of Rule No. 6.16 (a) (iv) and suitable action taken. In such case Intermediate Block Signaling and Lock and Block Instrument must not be resumed by Block Signal Inspector without permission of DSTE/ASTE.
- vi) While complying with the Instruction contained in GR 3.75 (3), when the Loco Pilot has pass an IBS Signal at 'ON' after waiting for 5 minutes at the signal, he shall proceed cautiously preparing to stop short of any obstruction at a speed not exceeding 15 KMPH when view ahead is clear and 8 KMPH when view ahead is not clear due to curve, obstruction, rain, fog or any other cause until he reaches the foot of the First Signal of the Block Station in advance obeying any gate stop signal in between the IBS Signal and the First Stop Signal of the Block Station in advance as per rules and even if the signal is 'OFF', the Loco Pilot shall continue to look out for any possible obstruction short of the same and will act upon its indication only after he has reached it. Before starting, the Loco Pilot shall sound one long whistle which may be repeated as necessary and shall then start his train on receipt of Guard's signal. Thereafter he shall exchange signals with the Guard.

RESETTING OF LVV AXLE COUNTER SYSTEM FOR SECTION UP IBS TO KDRP AND DN IBS TO CTC:

Permission granting action to be taken by the SS on duty at dispatching end station		Resetting action to be taken by the SS on duty at receiving end station
1		After complete arrival of the train vide SR 4.17.01, if the Axle Counter of the section does not clear or Axle Counter free indication (G) does not appear in the panel, he shall inform the station in rear through telephone giving details of last train that has arrived complete at his station and the block section is clear.
2		The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not and if arrived fully then he shall exchange private

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		number with the sending station and ask for granting permission for resetting the Axle counter.
3	On getting advice from the receiving station for resetting, the sending station pushes the "Permission Granted" button and presses keeping it for some time.	
4		An Indication Lamp provided in the panel for permission received shall lit up. Then press Permission Acknowledgement Button to acknowledge the same .Insert the reset Key & Turn. After normalizing the Key, Resetting will get initiated with an indication in panel, provided rear section IBS axle counter is clear.
5	The "RED" indication does not change to "GREEN".	
6		Veeder counter provided on the Block panel shows next higher number. The same may be recorded in the Reset Register.
7	The Dispatching station will "PILOT OUT" the first train to the concerned Block Section	
8		After complete arrival of the said train, the "GREEN" indication appears on the panel and "RED" indication disappears.
9	Observe "GREEN" indication on the panel on either station.	
10	Block Instrument can be normalized.	

RESETTING OF LVV AXLE COUNTER SYSTEM FOR SECTION CTC TO UP IBS AND KDRP TO DN IBS:

Permission granting action to be taken by the SS on duty at receiving end station		Resetting action to be taken by the SS on duty at dispatching end station
1		After complete arrival of the train over the IB section, if Axle Counter of the section does not clear OR Axle counter FREE indication (G) does not appear in the panel, he shall inform the station in rear through telephone giving details of last train that has arrived complete at his station and the block section is clear.
2		The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not and if arrived fully then he shall exchange private number with the sending station and ask for granting permission for resetting the Axle counter.
3	On getting advice from the receiving station for resetting, the sending station pushes the "Permission Granted" button and presses keeping it for some time.	

4		An indication lamp provided in the panel for permission received shall lit up. Then press Permission Acknowledgement Button to acknowledge the same. Insert the reset Key & Turn. After normalizing the Key, Resetting will get initiated with an indication in panel.
5	The "RED" indication does not change to "GREEN".	
6		Veeder counter provided on the Block panel shows next higher number. The same may be recorded in the Reset Register.
7	The dispatching stations will "PILOT OUT" the first train to the concerned IB Block Section.	
8		After complete arrival of the said train, the "GREEN" indication appears on the panel and "RED" indication disappears.
9	Observe "GREEN" indication on the panel on either station.	