

NO. 115

STATION WORKING RULES OF RADHAKISHOREPUR JUNCTION STATION

BG Station.

Date of Issue: 28.03.11

Date brought into force: 02.04.11

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. **STATION WORKING RULE DIAGRAM:**

The Station Working Rule diagram No. SI/WRD/21101 based on CSTE/East Coast Railway's Signal Interlocking Plan No. SI/21101 shows the complete lay out of the yard, siding, normal position of points, the Signalling and Interlocking arrangements & Gradients within the station limits. This must be referred to for giving details of the point number and signals when reporting accidents.

2. **DESCRIPTION OF STATION**

2.1. **GENERAL LOCATION**

RADHAKISHOREPUR JUNCTION (Code: RQP) is a four lined, 'B' class Junction station on Barang-Talcher Branch line electrified (BG) section of East Coast Railway with standard III (R) Interlocking and equipped with Central Panel/VDU and Multiple Aspect Colour Light signal. It is situated at a distance of 420.178Km from Howrah and 426.460Km. (via DN line f/RJGR). Double line working in between RQP-GHNH & RQP-RJGR directions and single line working in RQP-MZY direction is in force on Main Line and Branch Line. The station is worked under Absolute Block System of GR & SRs.

[Refer GR 8.01 (1) (a), (b), (c) 2 (b), 8.03 (1), (a), (b), (c) (ii) & (2) (a), (b), (c) (ii), 8.05 (2) (3) & 8.06, 8.09, 8.10, 8.12, 8.13, 8.14, 8.15.14.08 (a) (b) (iv), Chapter-III, V & VI of Block Working Manual and Chapter-XIV of GR & SRs thereto].

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

2.2.i. **BLOCK STATIONS ON EITHER SIDE AND THEIR DISTANCES:**

RADHAKISHOREPUR station is situated between GHANTIKAL NIDHIPUR (code-GHNH) at East end situated at a distance of 6.255 Km., RAJATHGARH (code-RJGR) at West end situated at a distance of Km.3.175 and MACHAPUR.(Code-MZY) in the West side at a distance 2.176 Km.

2.2.ii **IBH/IBS/OUT LYING SIDING/DK STATION:**

NIL

2.2.iii **PASSENGER HALT:-**

NIL

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' end
RQP-RJGR UP Direction	UP Advanced starter signal of RJGR station	UP Block section Limit Board of RQP station.
RQP-RJGR Dn Direction	DN Advanced starter signal No.16 of RQP station	Outermost facing point No.30 on DN Line of RJGR.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

RQP-GHNH UP Direction	UP Advanced starter signal No.17 of RQP station	Outermost facing point No.21A of GHNH.
RQP-GHNH Dn Direction	DN Advanced starter signal of GHNH station	Outermost facing point No.22A of RQP.
RQP-MZY Single line section	DN Advanced starter signal No.18 of RQP station	UP Advanced starter signal of MZY.

b. **STATION SECTION:-**

Station Section		The Point from which the 'Station Section' Commences	The Point at which the 'Station Section' end
For Double Line section.	UP Line	UP BSLB on UP line of RQP	UP Advanced Starter No. 17 of RQP.
	Dn Line	First facing point No.22A on DN line of RQP.	DN Advanced Starter No.16 of RQP.
For single line section		DN Advanced starter signal No.18 of RQP station	UP Advanced Starter of RQP.

c. **STATION LIMIT**(I) **FOR DOUBLE LINE****UP LINE**

From UP Advanced Starter of RJGR cum UP Distant Signal to UP Advanced starter signal No.17

DOWN LINE

From DN Inner Distant Signal to DN Advanced starter signal No.16.

(II) **FOR SINGLE LINE**

UP advanced starter signal of MZY cum Up distant of RQP to UP advanced starter signal No.17.

2.4 **GRADIENTS WITHIN STATION LIMITS:**a) **TOWARDS TLHR END: (DOWN LINES)**

From	To	Gradient
CSB	CH: 539.81M	1 in 400 'F'
CH: 539.81M	CH: 1073.21M	LEVEL
CH: 1073.21M	CH: 2165.61M	1 in 400 'R'
CH: 2165.61M	CH: 2233.58 M	LEVEL
CH: 2233.58M	CH: 2965.1M	1 in 400 'R'

b) **TOWARDS TLHR END: (UP LINES)**

From	To	Gradient
CSB	CH: 539.81M	1 in 400 'F'
CH: 539.81M	CH: 1128.0M	LEVEL
CH: 1128.0M	CH: 2311.486M	1 in 425 'R'
CH: 2311.486M	CH: 2965.1M	1 in 400 'R'

c) **TOWARDS HWH END: (FOR MZY LINES.)**

From	To	Gradient
CSB	CH: 1603.0M	LEVEL
CH: 1603.0M	CH: 1953.0M	1 in 414 'F'
CH: 1953.0M	Towards Block section	1 in 600 'F'

d) **TOWARDS BARANGA END: (DN LINES)**

From	To	Gradient
CSB	CH: 507.92M	1 in 400 'R'
CH: 507.92M	CH: 844.80M	1 in 150 'R'
CH: 844.80M	CH: 923.80M	LEVEL
CH: 923.80M	CH: 2156.80M	1 in 150 'F'
CH: 2156.80M	CH: 2512.80M	LEVEL
CH: 2512.80M	CH: 3961.0M	1 in 150 'F'

e) **TOWARDS BARANGA END: (UP LINES)**

From	To	Gradient
CSB	CH: 507.924M	1 in 400 'R'
CH: 507.924 M	CH: 844.80M	1 in 150 'R'
CH: 844.80M	CH: 923.80M	LEVEL
CH: 923.80M	CH: 2156.80M	1 in 150 'F'
CH: 2156.80M	CH: 2512.80M	LEVEL
CH: 2512.80M	CH: 3961.80M	1 in 150 'F'

2.5 **LAYOUT:**

The station is provided with four running lines in the Main yard [namely Common Loop(L-1), UP Main Line(L-2), DN Main Line(L-3), Common Loop Line(L-4)], and two non running lines i.e Hot Axle siding/Engg. Siding & Shunting neck.

a. **HOT AXLE SIDING/ENGG. SIDING: (ELECTRIFIED)**

The H.A. Siding/Engg. Siding at Baranga end of the yard with both side entry is taking off from Common Loop (Line No.1). The entrance points and corresponding derailing switch are coupled and operated by an arc lever at site. Both the entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked by Hot Axle siding/Engg. Siding key 'A' released by pressing the button No.30 in conjunction with trans button provided on Panel/VDU at SM's office. Reception signals (i.e. 1A, C-1A, 3A, C-3A, in UP direction and 2C, C2C, in DN direction) starter signal No.11 & 12 and shunt signal Nos. SH(5,7,13)A, SH12A/B/C and SH4D are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the H.A. Siding/Engg. Siding key is taken 'OUT' from the RKT provided at H.A. Siding/Engg. Siding location at site.

b. **SHUNTING NECK**

The Shunting Neck at HWH end of the yard with one side entry and is extended from CH: 993.860m with entrance point No.35A, which is motor operated from Panel/VDU at SM's office. Entrance to the Shunting Neck is controlled by Shunt Signals No. SH(8.10.12.14)C & Exit from the Shunting Neck is being controlled by Shunt Signals No. SH9A/B/C/D, operated from Panel/VDU at SM's office.

c. **PLAT FORMS**

- 1) Line No. 4 (Common Loop) : H.L.P.F.
- 2) Line No. 1(Common Loop) : H.L.P.F.

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

The trains coming from RJGR & MZY end are UP trains and the trains coming from GHNH end are DN trains.

b) **HOLDING CAPACITIES:**

Line No.1	Common Loop	783	Metres	(Electrified).	From starter to starter
Line No.2	UP Main	835.7	Metres	(Electrified).	From SH to Starter
Line No.3	DN Main	737.0	Metres	(Electrified).	From SB to Starter
Line No.4	Common Loop	692.0	Metres	(Electrified).	From starter to starter

2.5.2 **NON RUNNING LINES:**

1	Hot Axle Siding/Engg. Siding	82.0	Metres	(Electrified).	From GJ to GJ
2	Shunting Neck	222	Metres	(Electrified).	From SH to SB

2.5.3.a **ANY SPECIAL FEATURES IN THE LAYOUT:-**

The turn out of Hot Axle siding/Engg. Siding is 1 in 81/2 CS.

b. **SPECIAL RESTRICTIONS:**

- i) Shunting in the face of an approaching train is prohibited.
- ii) Hand shunting /fly shunting is prohibited at both ends of the yard.
- iii) The over run lines must not be used for stabling of vehicle or harboring an engine with or without vehicle. In the event of any accident or unavoidable circumstances they become obstructed, it ceases to be substitute for adequate distance for taking off the concerned loop line Home Signal and trains shall be passed as per SR.3.69.03.
- iv) DN trains running through over common loop (L-1) towards TLHR and UP train running through over common loop (L/4) towards GHNH are strictly prohibited. In case it is unavoidable to pass through the admitted train on the common loop it should be brought to stop of the respective starter signal before the same is taken 'OFF'.
- v) Due to existence of gradient steeper than 1 in 400 beyond 50m of outermost points of the station yard trains should not be drawn up to the last stop signal and held up on the steeper gradient in order to clear the reception line for giving permission to approach the following train.

c. **SPECIAL INSTRUCTIONS:**

- i. Whenever a non signal movement has taken place over a point operated by motor whether facing or trailing direction, SM on duty shall operate the points to normal and reverse setting for the purpose of setting the point. After clamping and padlocking of both the facing and trailing points and the indication is correctly available, further movement may be permitted over the points.
- ii. Movement of non-insulated push trolley is prohibited between RQP-MZY, RQP-RJGR and RQP-GHNH section vide SR 15.25.04(c).
- iii. In case of failure of Digital Axle Counters provided for monitoring Block Section at RQP-RJGR and RQP-GHNH, the resetting should only be initiated for normalising the Block Instrument after ensuring complete arrival of the train by physical verification of Last Vehicle by the SM on duty.
- iv. For every slot transmission between RQP-MZY for reception of trains, private numbers must be exchanged between SM/RQP and SM/MZY.
- v. SM on duty must ensure that before taking 'OFF' Calling-ON signal, DN train must be brought to a stop at the foot of the respective DN starter signal no.8, 12 & 14 and will also ensure clearance of track between DN starter and DN advanced starter in case of failure of track circuit between them.
- vi. The DN advanced starter signal no.16 of RQP will function as DN distant signal of RJGR as well as DN advanced starter signal of RQP and the arrangement shall be such that the signal shall not display a less restricted aspect than the 'STOP' aspect until Line Clear has been obtained from the station ahead (RJGR).
- vii. SM on duty must ensure the clearance of line from starter signal no.12A/B to DS point no.27 when point no.31 is 'NORMAL' before taking 'OFF' DN home signal for line no.1.

2.6 **LEVEL CROSSINGS:**

- i). There is a 'C' class mid-section Manned Non-Interlocked Level Crossing Gate is situated at Km. 421/9-11 between RQP-MZY. Telephone communication is provided between SM/MZY and the gate lodge.

3. **SYSTEM AND MEANS OF WORKING:**

Trains are worked under Absolute Block System by means of SGE Type Lock and Block Instrument between RQP-RJGR and RQP-GHNH and Inter Slot with continuous track circuit between RQP-MZY in terms of Chapter-XIV of General and Subsidiary Rules and Chapter-V & VI of Block Working Manual.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

Block Instruments shall be operated by SM on duty and the keys of the Block Instruments shall remain under the custody of the SM on duty. The Block Instruments for RQP-RJGR & RQP-GHNH section are non-co-operative type. [Refer Chapter-XIV of GR & SRs, Chapter-VI of Block Working Manual and GR 14.08 (a) & 14.08 (b) (iv)]. Line clear is granted/obtained through telephone attached with the Block Instrument.

4. **SYSTEM OF SIGNALLING AND INTERLOCKING:**

4.1 This Station is provided with Standard-III (R) interlocking with Multiple Aspect Colour Light Signaling having maximum equipment of signals. The aspects and indications of the MACLS is governed by GR 3.08 (4) (b).

The Station is provided with central Panel/VDU interlocking (Electronic Interlocking). All signals and points are electrical operated from the Central Panel/VDU provided at SM's Office. Calling-on signals are provided below Home signals (i.e. in both UP & DN directions) as per GR 3.13 (1) (b), (2) (3) (4) & (6) (b). Calling-on as well as Shunt Signals are also provided below the DN starter signals. Central Panel/VDU with miniature push buttons are provided in the Station Master's office to electrically control all signals, points, siding key etc. The control Panel/VDU is provided with SM's key which shall always remain in the personal custody of the Station Master on duty in terms of SR 3.36.03(a).

[a] **CRANK HANDLE**

When any point fails to operate normally by the route setting operation through Panel/VDU/VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06.

CRANK HANDLE

CONTROL POINTS

CH-1	-----	26. 31.
CH-2	-----	28. 33.
CH-3	-----	21. 29.
CH-4	-----	22. 24.
CH-5	-----	23. 25. 27. 35.

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 obtaining common 'TRANS' push button and concerned Crank Handle control push button simultaneously. When the keys are taken out no signal can be taken "OFF" over the particular route on the points nominated by 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 shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle as per Appendix-'B').

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

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

[b] **TAKING OFF CALLING-ON SIGNAL:**

Miniature Colour light Calling-On Signal is provided below the UP and DN Home Signals and DN Starter Signals in terms of SR.3.13 (6)(b). A Calling-on-signal shows no light when 'ON' and when taken 'OFF'; it shows miniature 'Yellow' light. When the Home Signal can not be taken 'OFF' for reception of a train, due to failure of Track circuit, the Calling-on Signal can be taken 'OFF'. To dispatch a DN train, when DN Starter can not be taken 'OFF' due to failure of track circuit or failure of DN starter Signal, the Calling-on Signal can be taken 'OFF'.

To take 'OFF' Calling-On Signal, the train must come to a stop at the foot of the Starter/Home Signal occupying the track circuit provided in rear of the signal. When a train occupies the track circuit, a 'RED' light strip will appear in the Panel/VDU. The particular route on which train is intended to be received or dispatched shall be set by operating the Panel/VDU push button and group button or by signal and route button or by crank handling in the event of failure of operation of points through Panel/VDU. After the route is set, the Calling-on Signal button shall be pressed simultaneously along with concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the Calling-on Signal clears i.e., a 'YELLOW' light glows at the concerned Calling-on Signal on the Panel/VDU. Every such operation has to be recorded by the on duty SM along with the reasons to do so.

NOTE:

SM on duty to ensure that no through signals are given while receiving/dispatching a train on Calling-on.

[c] **SHUNT SIGNALS**

Shunt signal No.SH-8(A-C), SH-12(A-C), & SH-14(A-C) below DN starter signal No. 8A/B, 12A/B & 14A/B are provided for shunting purposes.

Independent Shunt Signal No.4A/B/C/D, 5A/B/C/D, 7A/B/C/D, 9A/B/C/D 10(A-C) are provided for shunting purposes.

[d] **EMERGENCY CROSS OVER**

Emergency cross over is provided at each end of the yard.

[e] **L.C. GATE OPERATION**

There is no LC gate at RQP station.

[f] **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate the point from the Panel/VDU in case of failure of point controlling track circuit. A push button (Black with Red dot) is provided on the top of the Panel/VDU. If such operation is necessary, the SM on duty, after ensuring that SM's emergency point key is 'IN' and no vehicle is standing on the concerned point, shall press the emergency point operation button along with relevant point button simultaneously. Then retaining point button pressed emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be registered in the emergency point operation counter Register. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

[g] EMERGENCY ROUTE RELEASE COUNTER:

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

[h] EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):

The Panel/VDU interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route.

When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this first the emergency route release button (white with red dot) positioned in the top of Panel/VDU to be pressed and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A Yellow light will flash indicating that the timer is working. After 120 seconds, the Yellow light along with the Yellow strip of light will disappear suggesting the route has been released. In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to release the route and seal the emergency route release button.

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

TRACK CIRCUITS:

All the lines from DN Home signal up to DN Advanced Starters signal No.16 & 18 and UP Home Signals up to UP Advanced Starter signal No.17 including point zones are track circuited. In addition 5RL track circuit in advance of advanced starter signals and 7RL track circuits are provided in record of Home signal. The position of which is available in the illuminated Panel/VDU in the Station Masters Office.

Normally, the Panel/VDU is dark except for point and block section indication. The positions of running lines are indicated in the illuminated diagram in the Station Master's office. It shows "RED" when the line is occupied and "YELLOW" when the route is set and the signal is cleared. The position of points at either end are also indicated in the illuminated diagram. Whenever a signal is cleared, the route set indication "YELLOW" appears for the particular route set and as the train occupies the track circuit, the "YELLOW" indication disappears and "RED" indication appears.

The entire track between the section RQP-MZY station are provided with continuous track circuiting and there is an inter slotting arrangement which control the respective last stop signal.

AXLE COUNTER:

- i) Entire Block Section between RJGR-RQP and RQP-GHNH is monitored by Digital axle counters.

- (iii) FOR SEC: RJGR-RQP. A pair of electronic axle counter is provided between RJGR-RQP on UP line one just beyond UP advanced starter of RJGR and another just track circuit No.3T1 beyond the UP home signal at RQP. Similarly a pair of electronic axle counter is provided between RJGR-RQP on DN line one just beyond DN Advanced starter of RQP and another just 180m beyond Dn Home signal of RJGR.
- (iv) FOR SEC: RQP-GHNNH. A pair of electronic axle counter is provided between RQP-GHNNH on UP line one just beyond UP advanced starter RQP and another just 180m beyond the UP home signal at GHNNH. Similarly a pair of electronic axle counter is provided between RQP-GHNNH on DN line one just beyond DN Advanced starter of GHNNH and another just on the Track circuit No.2T1 of beyond DN Home signal of RQP.

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

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

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number then resetting to be complied with. (Details of resetting procedure given in APPENDIX-'B' of this SWR)

In case of failure of Axle Counter the re-setting of axle counter must be done as per the procedure given in Appendix-"B" of this SWR. In the event of failure of Axle Counter/ Track circuit the clearance of loop lines and concerned point zone and main lines will be ensured by physical check by the SM on duty and train shall be admitted as per GR.3.69 and SR there to.

NOTE:

Before taking off reception and despatch signals for UP and DN directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The track indicators/Axle counter indicators will exhibit Red Light when track is occupied and Yellow light when track is clear.

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

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 SM and the other key with the signal maintainer. Whenever required the SM shall hand over the key to the maintainer with proper acknowledgement in the basement/ relay room key register.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

The maintainer on receipt of the key from the SM 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 SM.

The details of transaction is to be properly recorded in the basement/relay room key register maintained at the station and duly signed by the SM and maintainer respectively.

4.3 **POWER SUPPLY :**

- i). A changeover switch is provided in the Station Master's Office with the three power supplies viz., Up AT, Down AT and Local, 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.
- ii) 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 SM must ascertain that power is available on the other AT.
Eg: If power block is to be given on the Up line; Dn AT must be available and vice-versa.
- iii) In case of failure of one of the AT supply without any power block, the on duty SM Supdt. has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes up.) 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.

- iv) IPS system has been provided to supply to power supply to signaling system.

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. An SM panel indicating the status of IPS is provided in the SM room having the following indicators.

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

In case of NESCO Power failure the IPS takes care of the signaling system approximate for 6 to 8hrs. However, the SM should start the DG set where "Start generator" indications appears on the ASM panel with buzzer. This will be acknowledged by pressing the ACK P.B. provided on the SM panel, But the LED indicator disappears after starting the DG.

One Indication panel for monitoring of IPS voltage has been provided in SM's Room. 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 SM to take action in case of low voltage or no voltage or any defect in IPS is shown in the SM panel. Details indications and alarm have been described in bellow.

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.

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

5 TELECOMMUNICATIONS:

- a) The station is connected to CTC-PRDP, BRAG-KIS (VIA-NQR), BRAG-KIS (VIA-CTC) Control Circuit.
- b) Telephone attached to Block Instrument for section RJGR-RQP, RQP-GHNH.
- c) Telephone is provided between Station Masters office and both end crank handle locations.
- d) Telephonic communication is provided between SM's office & Hot Axle siding/Engg. Siding Loc.
- e) VHF set is provided at this station.
- f) Magneto telephonic communication is provided between SM/RQP & M/MZY.

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 un-necessary discussion with Loco Pilot/Guards and any other staff.

6 SYSTEM OF TRAIN WORKING:

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual, Operating Manual and any other safe working instructions issued from time to time.

In the event of suspension of control working the Station Master on duty shall work independently in conjunction with the Station Master of adjoining Block Stations and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1 DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:

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

		<u>In each shift</u>
SS	1 (One)	in day shift.
Dy.SS/SM	1 (One)	in each Night shift
Traffic points man	1 (One)	in each shift

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Supdt's office (details duties are given in APPENDIX-'D').

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

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

6.1.3 ASSURANCE OF THE 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 is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are 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 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.

The declarations are to be renewed in the following cases:

- (i) Whenever there is any 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

6.1.4 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, under lock and key by maintaining one register for this purpose.

CONDITIONS FOR GRANTING LINE CLEAR:

(a) DOUBLE LINE:

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

- (i) The whole of the last preceding train has arrived complete.
- (ii) All necessary signals have been put back to 'ON' behind the said train.
- (iii) The line is clear upto BSLB on UP Line for UP Trains and up to Point No.22A on DN Line for DN trains.
- (iv) All signal lights pertaining to the train are burning properly.

(b) SINGLE LINE:

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

- (i) The whole of the last preceding train has arrived complete.
- (ii) All necessary signal have been put back to 'ON' behind the said train.
- (iii) The line is clear UP to DN advanced starter signal No.18 for UP trains.
- (iv) All signal lights pertaining to the train are burning properly.

NOTE:

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

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 the concerned Loco Pilot is notified of the fact in writing by the Station Master of the station to which such line clear is to be granted.

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

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].

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE

When ever trains are to be admitted on an obstructed line the Calling-on signal may be taken off. If the Calling-on signal failed then the SM on duty shall authorize the on duty TPM with from T/509, indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting, clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less than 45mts. from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE

Before receiving a train on non-signalled line, the SM shall ensure that

- a. The train is brought to a stand at the first stop signal.
- b. The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- c. All points over which the train has to pass are correctly set, the facing points and trailing points clamped and padlocked and
- d. The Loco Pilot is authorized to pass the approach stop signals at 'ON' through a written authority i.e.T/369(3b). [Refer GR 5.10].

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.

When ever a train is to be dispatched from a non-signalled line, a starting order on form T-511 shall be given to the Loco Pilot to start from the non-signalled line. Before handing over T/511, the SM shall depute his points man at the foot of the concerned point. The TPM on duty shall clamp and padlock the same after setting the point in the desired direction under the supervision of SM on duty then after handing over the authority he shall show the proceed hand signal to the Diver. [Refer SR.5.11.1].

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

NIL.

6.2.1.6 .a. For receiving UP & DN trains on common loop, the clearance of the over run line should be ensured.

6.3 CONDITIONS FOR TAKING “OFF” APPROACH SIGNALS:-

The reception of trains is governed by GR 3.36, 3.38, 3.40, 3.47, 4.17 & SR 3.42.02 (a) (iv), 3.42.03, 3.40.01, 3.40.02, 3.36.04 & other relevant Rules of General and Subsidiary Rules, Block Working Manual and Station Working Rules. The SM on duty shall nominate a clear line not only up to the Starter but also for an adequate distance beyond it for reception of train.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO “ON”

If in an emergency a reception signal has to be put back to 'ON' position when a train is approaching it, the route over which the train would pass shall not be altered until the train has come to a stand except to avert an accident. In case of departure signal, before changing the points or allowing any other movements, the Loco Pilot of the train must be advised. [Refer SR 3.36.02 (a) & (b)]

6.4 SIMULTANEOUS RECEPTION/ DESPATCH/ CROSSING /PRECEDANCE OF TRAINS:

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

a.	Reception of an UP train on Line No.1 (Common Loop) from RJGR end.	Dispatch of an UP train from Line No.2 or 4 OR Reception a DN train on Line No.4.
b.	Reception of an UP train on Line No.1 (Common Loop) from MZY.	Dispatch of an UP train from Line No. 2 or 4 OR Reception/dispatch of a DN train on Line No.3 or 4 to RJGR.
c.	Reception of an UP train on Line No.2 (UP Main) from RJGR end.	Reception /Dispatching of a DN train on Line No.4.
d.	Reception of an UP train on Line No.2 (UP Main) from MZY end.	Reception/Dispatching of a DN train on/from Line No. 3 or 4 to RJGR.
e.	Reception of an UP train on Line No.4 (Common loop) from RJGR end.	Dispatch of an UP train from Line No.1 or 2 OR Receiving of a DN train on Line No.1 or Reception of UP train on line No.1.
i.	Reception of a DN train on Line No. 1 (Common Loop).	Dispatch of a DN train on line No.3 or 4 OR reception of an UP train on Line No.4
j.	Reception of a DN train on Line. No.3 (DN Main)	Dispatch of a DN train from Line No. 1 to MZY OR Reception of an UP train on Line No.1 or 2.
k.	Reception of a DN train on Line No.4 (Common Loop).	Dispatch of a DN train from Line No.1 or 3 OR Reception of an UP Train on Line No.1 or 2.

ADEQUATE DISTANCE(SIGNAL OVERLAP):

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

(Correction slip No. 1 dated: 27.01.2014)

CLEARANCE OF ADEQUATE DISTANCE

FOR UP TRAINS:-		
Line Number	From	To
1. Common Loop	Foot of Starter signal No.11	Up to the end of the Over run line or Up to the UP Advanced starter signal No.17
2. UP Main	Foot of Starter signal No.15	Up to the UP Advanced starter signal No.17
4 Common Loop	Foot of Starter signal No.13	Up to the end of the over run line or Upto UP advanced starter signal No.17.
FOR DOWN TRAINS		
1. Common Loop	Foot of Starter signal No.12A/B	Up to DS Point No.27 when DS point No.27is normal & Point No.37 is normal OR up to the DN advanced starter signal No.18
3. DN Main	Foot of Starter signal No.14A/B	Up to the DN advanced starter signal No.16 or up to DN advanced starter signal No.18.
4. Common Loop	Foot of Starter signal No.8A/B	Up to the end of the Over Run Line OR up to the DN advanced starter signal No.16 or up to DN advanced starter signal No.18.

6.4.1 RECEPTION OF TRAINS:

Before admitting a train on any line, it must be ensured that the correct route setting indication for the respective line shows "YELLOW" indication. To receive a train for which line clear is given, the SM on duty shall nominate a clear line in consultation with the section controller on duty. He shall personally satisfy himself that the nominated line is clear and free from all obstructions by verifying the track indication in the Panel/VDU or by physical verification or the nominated route incase of failure of track circuit. He shall suspend all non isolated shunting and there after set the points of the nominated route by means of push button switches provided on the control Panel/VDU. He shall then verify from the visual indication available in the Panel/VDU that points are set to the desired route.

Unless the track circuit indication on the Panel/VDU of the concerned line is clear, even with the other conditions satisfied the operation of Panel/VDU button by the SM on duty will not permit the concerned Home Signal to be taken off. In such case the train can be admitted with Calling on signal provided below Home Signal. Unless the first track circuit in rear of Home signal does not show "RED" indication, Calling-on signal of the concerned route can not be taken off.

After correct setting of points the SM on duty shall operate the concerned push button on the control Panel/VDU for clearing the reception signal. He shall verify on the Panel/VDU that the correct reception signal is cleared. Alternatively point operation and signal clearing shall be done by one operation by pressing signal button and route button. If for any reason after a clearing a signal it is required to put back the signals and after the route in terms of SR 3.36.02 a time delay of 2 minutes shall be observed before the points can be altered. Immediately on arrival of the train the points should be set to a clear line and reminder magnetic collars be used by the SM on duty on the concerned push button.

UP Advanced Starter of MZY cum UP distant of RQP is controlled by UP Home Signal no.1A/B/C. Unless Up Home Signal No.1A/B/C is taken off and slot for Advanced Starter Signal is given, Advanced Starter Signal of MZY cannot be taken off. Giving slot for Advanced Starter of MZY, SM of RQP shall exchange Private Number to SM/MZY.

6.5 COMPLETE ARRIVAL OF TRAINS:

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

The entire block section between RQP-GHNH and RQP-RJGR on both UP and DN Lines are monitored by axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated in Panel/VDU board at SM office. As soon as train enters in to that block section the respective RED indication appears on control Panel/VDU. After whole train clears the block section GREEN indication appears on the control Panel/VDU. This confirms the complete arrival of train and the SM on duty shall give 'Train Out of Block Section' report on seeing the section clear indication GREEN on the control Panel/VDU.

The SM on duty shall ensure the complete arrival of the train between RQP-MZY on seeing the track indication from Central Panel/VDU.

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 vide GR 4.17(3). After obtaining confirmation about the complete arrival of the said train under exchange of private number he may send another train into the concerned block section.

Train passing on the adjacent line shall be stopped and Guard and Loco Pilot shall be issued with caution order to proceed cautiously and stop short of any obstruction as per SR 4.17.03 until complete arrival of the said train is received.

In case of failure of Axle counter in the SM on duty shall obtain Complete Arrival Certificate from the guard of the train in the Complete Arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

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

6.6 **DESPATCH OF TRAINS:**

To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy him by observing the visual indication on the Panel/VDU board. He shall suspend all non-isolated shunting. Then shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the route starter and Advanced Starter is the authority to proceed into the block section. [Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)].

Down Starter Signal No. 8A, 12A & 14A are controlled by Advanced Starter Signal No.16. Unless Advanced Starter Signal No.16 is taken off, the starter signal No.8A, 12A, 14A of the concerned line cannot be taken off. Similarly, DN Starter Signal No.8B, 12B & 14B are controlled by Advanced Starter Signal No.18. Unless Advanced Starter Signal No.18 is taken off, the starter signal No.8B, 12B, 14B of the concerned line cannot be taken off.

DN Advanced starter signal No.18 is controlled by DN Home signal of MZY. Unless DN Home signal No.9 is taken off & slot indication for Advanced starter is obtained, DN Advanced starter can not be taken off. Obtaining slot for DN Advanced starter signal no.18, SM on duty shall exchange Private Number with SM/MZY.

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the advanced starter complete, he shall send the train entering block section signal to the station in advance. If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. [Refer SR. 4.23.02 & 4.25.02].

NOTE: Before dispatching a DN train into RQP-MZY block section, the SM on duty shall ensure the closure of the L.C. Gate at Km 421/9-11 from SM/MZY under exchange of Private Number.

6.7 **TRAINS RUNNING THROUGH:**

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until any thing wrong is noticed on train.

For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train. [Refer GR 3.42, 4.17, 4.42 & 4.42.2]

He shall also depute his point man on duty to the other side for passing the train. The TPM on duty shall be responsible to observe/watch condition of the passing train and shall wave GREEN hand signal horizontally until any thing wrong is noticed on the train. If he notices any thing which is unsafe for the passing train then he shall at once show danger hand signal and report the same to the SM on duty.

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Refer GR 4.17, SR 4.17.02 and 4.17.03]

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

a. **TRACK CIRCUIT.**

In the event of failure of track circuit in the yard train shall be admitted into the yard after piloting 'IN'. Before piloting a train in to the yard the clearance of the track must be ensured by physical verification.

In the event of failure of track circuits in the advance of Advanced starter and in the rear of Home signals then Lock and Block working will be remained suspended with the concerned adjacent stations till its rectification and trains shall be piloted IN/OUT as case the may be.

b. **AXLE COUNTER**

In the event of failure of axle counter of concerned block section, initiation will be taken for resetting after ensuring the complete arrival of the train by either end of SM. 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(S)**

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 this period of time the authority will be T/369(3b) for double line section & paper line clear Ticket for single line section with identification number and Private Number issued from the station in advance written both in figures and words.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

d. RECEPTION OF TRAIN ON OBSTRUCTED LINE:

When ever trains are to be admitted on an obstructed line the Calling-on signal may be taken off. If the Calling-on signal failed then the SM on duty shall authorize the on duty TPM with from T/509, indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting, clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less than 45mts. from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand.

e. RECEPTION OF A TRAIN ON NON-SIGNALLED LINE

Before receiving a train on non-signalled line, the SM shall ensure that

- i) The train is brought to a stand at the first stop signal.
- ii) The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- iii) All points over which the train has to pass are correctly set & both, the facing and trailing end of the points are clamped and padlocked and
- iv) The Loco Pilot is authorized to pass the approach stop signals at 'ON' through a written authority i.e. T/369(3b). [Refer GR 5.10].

f. DEFECTIVE SIGNALS:

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c)].

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]

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 Master irrespective of the position of the switches point 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 there to. [Refer GR 3.49(4) and 3.68, 3.77]

h. DEFECTIVE INTERLOCKING

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

i. DEFECTIVE/DAMAGED POINTS

When any point fails to operate normally by the route setting operation or through the concerned point button through Panel/VDU, it is inevitable to operate the points with

crank handle. Station Master on duty shall personally ensure clamping and padlocking all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (white with black dot) is provided at the top of the Panel/VDU board. This button has two indications, viz., WHITE and RED. The WHITE indication suggests that the crank handle key is in its interlocked position of the Panel/VDU. This is called 'Crank Handle Key' 'IN' indication.

The Red indication suggests that the crank handle key is locked and not free for extract from RKT. This is called 'Crank handle key locked' indication. The Crank Handle is normally kept in a locked glass fronted wooden box in Panel/VDU room and the key is with SM on duty. This crank handle is DN to all points and is to be taken along with CH key for manual operation of point.

For extracting CH key from RKT SM has to press relevant CH button and group trans button simultaneously. The white light besides the CH button starter flashing. After extraction of CH key from RKT at Location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group are in operation from the Panel/VDU. After completion of point operation the CH key will be retransmitted to the station electrically by inserting the CH key in RKT at Location box and turned. The white flashing indication appears on the Panel/VDU board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group release button (white with black dot).

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

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.39, 5.40, 5.41, 6.11, 6.12, 6.13 of BWM]

- i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.
- ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.
- iii) In all other respects the Working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

7.0 BLOCKING OF THE LINES:

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement and the concerned berthing route button and group "TRANS" button is to be pressed to inactivate the concerned route button. A RED flashing indication appears near the route button on Panel/VDU. To activate the route button concerned route button along with the Group 'RELEASE' button is to be pressed. After route button is activated the flashing indication will disappear. And also reminders collars shall be placed on the concerned point push button controlling the blocked line.

A clear remark in 'RED' ink shall be made immediately in the Train Signal Register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

7.1. LOADING AND UNLOADING OF VEHICLES ON RUNNING LINES

Except small loading and unloading of vehicles on running lines is prohibited unless permitted by DOM vide SR 5.19.01.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

SECURING OF VEHICLES: -

As far as practicable, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SM on duty shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling. [Refer GR 5.23 & SR 5.23.01]

USE OF REMINDER BLOCK COLLARS :-

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

ALTERATION OF A 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 causalities 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. SHUNTING:

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual. [Refer GR 3.46, 3.52 to 3.65 5.13, 5.14, 5.16, 5.19, 5.20 to 5.23, 8.05(2), 8.06, 8.09, 8.10, 8.12 to 8.15]

The Guard/SM/Traffic Pointsman on duty is authorized to supervise shunting operation. Normally back shunt signals, caution aspect of starter signals and shunt signals below starter signals shall be used for shunting operations. The official supervising shunting shall ensure the correct setting, clamping and padlocking of points incase of non-signaling movements.

The SM on duty and the official supervising shunting shall co-operate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming/outgoing train is free from obstructions. The over-run line may be used as shunting neck.

NOTE

For any signal movement physical verification of the clearance of the cross over points shall be ensured by the Guard/SM on duty for supervising shunting operation.

8.1 PROHIBITION OF SHUNTING SPECIAL FEATURE IF ANY:

Hand/Fly shunting is prohibited at both ends of the yard. Shunting in the face of an approaching train is prohibited. Shunting is not permitted in the NRG end of the yard unless the engine is leading to wards the falling gradient

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

8.3 SHUNTING OUTSIDE THE STATION SECTION :**8.3(a) ON SINGLE LINE SECTION**

Shunting outside Advanced starter signal and upto the First stop signal of the opposite direction is permitted Vide Para 4.36(2) of Block Working Manual provided the Block section is clear and Home signal is kept at 'ON' position.

8.3(b) ON DOUBLE LINE SECTION

- (i) When line clear has been given no shunting shall be permitted in the Block section in rear.
- (ii) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back.
- (iii) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward vide GR 8.06(3).

SHUNTING WITHIN STATION SECTION

Shunting with in station section may be carried by keeping the necessary signals at 'ON' position.

8.4 SHUNTING IN THE SIDING

While shunting in the siding it should be authorized by issuing T/806 and clearly mentioning the limits up to which shunting is permitted as also the lines occupied in shunting. The relevant provision of GR 5.14 and SRs thereto shall be meticulously followed for shunting operations in siding.

a. HOT AXLE SIDING/ENGG. SIDING:(ELECTRIFIED)

The HA Siding/Engg. Siding at Baranga end of the yard with both side entry is taking off from Common Loop (Line No.1). The entrance points and corresponding derailing switch are coupled and operated by an arc lever at site. Both the entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked by Hot Axle siding/Engg. Siding key 'A' released by pressing the button No.30 in conjunction with trans button provided on Panel/VDU at SM's office. Reception signals (i.e. 1A, C-1A, 3A, C-3A, in UP direction and 2C. C2C. in DN direction) starter signal No.11 & 12 and shunt signal Nos. SH(5,7,13)A, SH12A/B/C and SH4D are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the H.A. Siding/Engg. Siding key is taken 'OUT' from the RKT provided at H.A. Siding/Engg. Siding location at site.

b. SHUNTING NECK

The Shunting Neck at HWH end of the yard with one side entry and is extended from CH: 993.860m with entrance point No.35A, which is motor operated from Panel/VDU at SM's office. Entrance to the Shunting Neck is controlled by Shunt Signals No. SH(8.10.12.14)C & Exit from the Shunting Neck is being controlled by Shunt Signals No. SH9A/B/C/D, operated from Panel/VDU at SM's office.

9.0(a) ABNORMAL CONDITION: -

- (i) During partial interruption/ failure of electrical instrument 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 exchanged 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 station to station fixed telephone 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 Station to station fixed telephone 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-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 is 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 15Kmph during clear visibility and 10Kmph 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]

(Correction slip No. 1 dated: 27.01.2014)

iv) Failure/Passing of Intermediate Block Stop Signal at ON:

____ NIL ____

v)**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/VDU in the SM's office for sections RQP-RJGR and RQP – GHNH with DLBI. The UP & DN resetting key along with reset push button for all sections are provided on the resetting Panel/VDU 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) Failure of MTRC:

-- Nil --

(b) ROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE:

- i) The detailed procedure for emergency operation of points by crank Handle of Motor operated points is given in para 6.8(i) of Main body.
- ii) Procedure for emergency operation of points with point zone Track circuit failure & emergency route release : (Pl. refer 1.8 & 1.9 of App-B)
- (c) Certification of clearance of track before Calling on signal, operation initiated: Before taking 'Off' Calling on signal during failure of track circuits, the route & the clearance of the track over which train would pass to be verified SM on duty. Calling-ON signals may be taken off for admission of a train into a Blocked Line vide GR 5.09 & SR thereto.

(d) Reporting failure of points, Track circuit and interlocking:

- i) Whenever there is a failure of points, Track Circuit or any other Interlocking gear at the Station, the same shall be reported by SM on duty through a memo to S & T staff on duty for attending the failure and acknowledgement taken. The failure shall be recorded in the Signal Failure register as well as in the Station Master's Diary with a message to the Section Controller.
- ii) S & T staff shall give a written memo after rectification of the fault with date and time. The cause of failure and other particulars should be filled up in the failure register. On receipt of the rectification memo from S & T staff the points shall be tested by operating Central Panel/VDU. Only when SM is satisfied of its proper function, he shall resume normal working (SR 3.51.04). Till the rectification, trains shall be worked as per GR 3.39, 3.51, 3.68 & 3.77 with relevant SRs. The points shall be clamped and padlocked (both facing and trailing) before allowing any movement over such points.

9.1 **TOTAL FAILURE OF COMMUNICATION: -
DOUBLE LINE SECTION:**

In the event of total failure of communications between RQP-RJGR & RQP-GHNN i.e. when line clear can not be obtained by (any one of the following) means stated in order of preference viz.

- A. Block Instruments, Axle counters.
 - B. Telephone attached to the Block Instruments.
 - C. Station to station fixed telephones wherever available.
 - D. Fixed telephones such as Railway auto phones & BSNL phones.
 - E. Control telephone.
 - F. VHF sets.
- (i) Each train before being allowed into the Block Section should be stopped and the Guard and Loco Pilot of the train apprised of the situation.
 - (ii) The SM on duty will hand over an authority for working of trains during total failure of communication on Double line section (T/C 602) which includes:
 - a) An authority to proceed without 'Line Clear'.
 - b) An authority to pass the Last Stop Signal at its "ON" position,
 - c) A caution order restricting the speed to 25KMPH by day when view ahead is clear and 10KMPH 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 and 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.

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].

SINGLE LINE SECTION

In the event of total failure of Communications between RQP-MZY trains shall be worked between these Sections in terms of SR 6.02.04, which is summarized in brief as follows.

- (i) The train which is to be dispatched to the effected section will be stopped and the Loco pilot and Guard of the Train shall be informed about the situation. To open communication of the affected Block Section, SM on duty may send any one of the modes of transport.

a) Light engine	d) Tower Wagon with Guard/ SM
b) Train Engine	e) Trolley with Guard/ SM.
c) Motor Trolley with Guard/ SM	f) Diesel Car/Rail Motor Car/Empty DMU/ Rake detraining passengers
- (ii) The train shall be brought to a stand and Loco pilot and Guard are to be apprised of the situation & then engine to be detached.
- (iii) An authority (T/B 602) for opening of communication during to the interruption of communication on single line section shall be given the Loco pilot which shall include.
 - [a] An authority to proceed without line clear on prescribed form.

- [b] A caution order restricting the speed of the train to 15 KMPH by day or when view ahead is clear and 10 KMPH during Night or when the view ahead is obstructed in addition to other speed restriction in force.
- [c] An authority to pass the last stop Signal at "ON" Position.
- [d] A line clear enquiry message asking line clear for the waiting train.
- [e] A conditional Line Clear Message for the light engine to return with or without a train attached supported by private number.

On arrival of the engine at the next station the conditional line clear message and enquiry message shall be collected by the S.M. on duty who shall prepare a conditional line clear ticket for engine to return either light or a train attached to it, and conditional line clear reply message for the enquiry message giving the line clear for the train waiting at other and shall be handed over to the Loco pilot of Light engine on return trip the Loco pilot will come on booked speed subject to any other speed restriction in force.

If there be an even flow of trains in both directions, enquiry and conditional line clear message for each succeeding train may be sent through the guard of preceding train.

If the Station master at one end has more than one train to dispatch in the same direction he may ask line clear not only for one train but also for following trains. It must be stated that these Later trains will be dispatched after the first train at an interval of 30 minutes. When dispatching, the second and subsequent trains particulars of last preceding train along with its departure time will be endorsed on the line Clear ticket and the train which will follow and a caution order restricting the speed to 25 KMPH over straight when view ahead in clear and 10 KMPH when view ahead is obstructed is to be issued while adopting this produce the guard and the Loco pilot should be instructed to keep a sharp look out and be prepared to stop short of any obstruction. Trains must continue to work on this system until any one of the means of communication is restored. As soon as any one of the means of communication has been restored, the conditional line clear working of trains shall be cancelled when there is no trains in the affected block section and message shall be exchanged supported by Private Number keeping section controller in formed.

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

During temporary single line working on one clear line when one line is obstructed either between RQP-RJGR or RQP-GHNN, trains shall be worked as per the procedure as detailed below. [Refer SR 6.02.01]

- a) Before introducing single line working the SM on duty must satisfy that the line on which single line will be introduced is clear and free from all obstructions.
- b) The Lock and Block instrument will be suspended.
- c) SM proposing single line working must issue a message with the cause of introduction of single line working, Line on which the single line will be introduced, Source of information about the clearance of the line on which single line will be introduced, Place of obstruction, restriction of speed, If any, last train arrived/left the station 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.
- d) SM of the other end 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 an authority (T/D 602) for temporary single line working on double line indicating there in.
- (i) The line on which single line is introduced.

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

- (ii) The kilo-meterages of obstruction.
- (iii) Any other speed restriction if any thing existing.
- iv) An authority to pass the last stop signal at its 'ON' position. 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).
- f) An endorsement will also be made in the Caution Order given to the Loco Pilot of the 1st train to inform all the gateman and gang men on the way about introduction of temporary single line working and specifying the road on which the train will run. This information shall be conveyed through the Loco Pilot of a subsequent train also, if necessary.
- g) The speed of the first train is to be restricted to 25 KMPH subject to other speed restriction.

On being ensured that the obstructed line is clear of all obstructions. SM will resume normal working after exchanging message with the SM of the other concerned end supported by private number in consultation with the SCR on duty. 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 6.02.01]

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

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 is summarized as follows. [Refer SR 6.02.05]

- (d) 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.
- (e) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which includes.
 - i). An authority to pass the signals at 'ON' position.
 - ii). CAUTION ORDER: existing speed restrictions shall be indicated in the Caution order. The speed restriction of 15KMPH in day when view ahead is clear and 10KMPH in night, when view ahead is not clear shall be indicated clearly.
- (f) Before resumption of normal working a message between the SM's of the concerned section shall be exchanged with private number. [Refer SR 6.02.05(d)(vi)].
The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

10. **VISIBILITY TEST OBJECT:**

The signal lights of Common Loop starter signals of Line No. 1 on either direction during day & night are the visibility test objects of UP and DN lines vide GR 3.61.2(b)(iii).

11. **ESSENTIAL EQUIPMENT AT THE STATION:**

(Details are given in Appendix-'E')

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

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

Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway.

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 Signalman, 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.

(Correction slip No. 1 dated: 27.01.2014)

APPENDICES

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

APPENDIX 'A' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION

Details of level crossing gates together with instructions to the operating staff about their normal working, their maintenance and their working in case of failures/emergencies with special provisions.

NIL

(S.MAJUMDAR)
DGM/S&T/RVNL

(T.LAHIRI)
DSTE/KUR

(M.N.KHAN)
Sr.DEN/EAST/KUR

(D.R.PAUL)
DOM/KUR

APPENDIX 'B'

APPENDIX 'B' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION

SYSTEM OF SIGNALLING, INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.

Details of Signaling and interlocking installations, instructions for working them in normal and emergencies.

This is a 'B' class station Standard-III (R) Interlocking (with isolations and is provided with route setting type Panel/VDU. The points and Signals etc. are power operated from composite miniature central Panel/VDU installed in the Station Master's Office. The Station is equipped with Multiple Aspect Colour Light Signaling.

1.1 DESCRIPTION OF PANEL/VDU:

The yard lay out is depicted on the Panel/VDU and the Panel/VDU is fixed parallel to the track so that when the Station Master faces the Panel/VDU, the yard drawing of the Panel/VDU corresponds to the actual layout. A Visual Display Unit (computer) is provided in the SM's office as a stand by option. (Description and function of Visual Display Unit is given in Appendix-'B1')

1.2 POINT PUSH BUTTON:

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

- 1.2.1 When a point is set and locked in Normal position, a 'Yellow' strip light on straight line indication appears suggesting that the point is in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a 'Yellow' strip light in reverse indication appears suggesting that the point is in REVERSE position.
- 1.2.3 When the points of any route have been correctly set and relevant signal is taken 'OFF', 'RED' indication appears near the points indicating that the concerned points are locked either in NORMAL or REVERSE.
- 1.2.4. When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the indication will start flashing till such time the point is housed and locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This indication will flash during point operation also.
- 1.2.5 All points over running lines are operated by electric point machines.
- 1.2.6 The cause for non setting of the point in the desired position shall be checked up by the Station Master on duty according to GR and SR 3.68.01 (c). If there is a defect other than an obstruction, this point shall be considered defective and action shall be taken for clamping and padlocking of these points in the desired position by the Station Master on duty himself for all trains according to SR 3.69.03 (c). In such case both ends of the point shall be clamped and padlocked.

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

1.2.7 DESCRIPTION OF POINT PUSH BUTTON**a) TLHR & HWH END POINTS:**

SL No	Button No.	Colour	Description
1.	21A/B WN	BLACK	Crossover point between Up and DN main lines RJGR.
2.	23A/B WN	BLACK	Crossover point between UP Main line from RJGR and Main line to MZY
3.	25A/B WN	BLACK	Crossover point between shunting neck & Main line for MZY.
4.	27 WN	BLACK	DS point on common loop (L-1) at MZY end.
5.	29A/B WN	BLACK	Crossover point between UP and DN main lines.
6.	31A/B WN	BLACK	Crossover point between UP main and Common Loop (Line No.1).
7.	33A/B WN	BLACK	Crossover point between DN main and Common Loop (Line No.4).
8.	35A/B WN	BLACK	Crossover point between shunting neck & Main line for MZY.

b) NRG END POINTS

SL. No.	Button No.	Colour	Description
1.	22 A/B WN	BLACK	Crossover point between Up and DN Main Lines
2.	24 A/B WN	BLACK	Crossover point between Up and DN Main Lines
3.	26 A/B WN	BLACK	Crossover point between UP Main and Common Loop Line(Line No.1)
4.	28 A/B WN	BLACK	Crossover point between DN Main and Common Loop Line(Line No.4)
5.	CONTROL 30	BLACK	Control on H.A. Siding/Engg. Siding.

1.2.8 DESCRIPTION OF POINT GROUP BUTTON:

These are two buttons at the top of Panel/VDU one for Normal and one for Reverse. These are coloured Black with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.3 SIGNAL PUSH BUTTON:

These are RED coloured push button on the Panel/VDU near the stop signals on the Panel/VDU. These are operated in conjunction with Route button (white coloured) to take 'OFF' the signals.

1.3.1 DESCRIPTION OF SIGNAL BUTTONS:

SL. No.	Button No.	Colour	Description
1.	C1	RED with WHITE Dot	Up Calling-on signal for Up Main and Common Loop lines for MZY end.
2.	S-1	RED	Up Home signal for Up Main and Common Loop Lines..
3.	S-2	RED	DN Home Signal for DN Main and Common Loop Lines.
4.	C2	RED with White dot.	DN Calling-on signal for DN Main and Common Loop Lines.
5.	C3	RED with WHITE Dot	Up Calling-on signal for Up Main and Common Loop lines RJGR end.
6.	3	RED	Up Home signal for Up Main and Common Loop Lines RJGR end.

8.	SH4	YELLOW	Shunt signal for UP & DN Main and Common Loop lines.
9.	SH5	YELLOW	Shunt signal for Up & DN Main and Common Loop lines.
10.	SH7	YELLOW	Shunt signal for UP & DN Main and Common Loop lines in MZY end.
11	S-8	RED	Common Loop Line (Line No.4) starter.
	C-8	RED with White dot.	Calling-on signal below DN starter signal No.8.
	SH-8	YELLOW	Shunt signal below DN starter signal No.8.
12.	SH-9	YELLOW	Shunt signal for UP Main and Common Loop lines from shunting neck.
13.	SH10	YELLOW	Shunt signal for DN Main line.
14.	S-11	RED	Common Loop Line (Line No.1) Starter.
15	S-12	RED	Common Loop Line (Line No.1) Starter.
	C-12	RED with White dot.	Calling-on signal below DN starter signal No.12.
	SH-12	YELLOW	Shunt signal below DN starter signal No.12.
16	S-13	RED	Common Loop Line (Line No.4) Starter.
17	S-14	RED	DN Main Line (Line No.3) Starter.
	C-14	RED with White dot.	Calling-on signal below DN starter signal No.14.
	SH-14	YELLOW	Shunt signal below DN starter signal No.14.
18	S-15	RED	UP Main Line (Line No.2) Starter.
19	S-16	RED	DN Advanced starter at RJGR end.
19	S-17	RED	UP Advanced starter
19	S-18	RED	DN Advanced starter at MZY end..
20	19(SLOT)	GREEN	Slot of RQP for MZY.

1.3.2 **SIGNAL INDICATIONS:**

The aspects of the signals as obtained at any time are shown on the Panel/VDU on the signal indication along side of the track.

1.4 **ROUTE BUTTONS:**

1.4.1 Route buttons are provided separately on each running line on the Panel/VDU for initiation of route. DN route buttons are also provided for taking off starters. An individual route button is provided for taking off Advanced Starter for clearing the signals, it is necessary to operate the signal buttons and the concerned route button simultaneously for taking "OFF" concerned signal.

1.4.2 **DESCRIPTION OF ROUTE BUTTONS:**

SL. No.	Button No.	Colour	Description
1.	L1-UN	WHITE	Route button for Up Home Signal & DN Home Signal for Common Loop Line set to Main Line for common loop line (L-1).
2.	L1-UN1	WHITE with BLACK DOT	Route button for Up/Dn Home set to sand hump/Over Run Line or route button for UP & DN Calling –on /Shunt signal for common loop line.
3.	L2-UN	WHITE	Route button for Up Home/Calling-On/Shunt Signal for Up main Line.

4.	L3-UN	WHITE	Route button for DN Home/DN Calling-on/shunt signal for DN main line
5.	L4-UN	WHITE	Route button for UP/DN Home Signal overlap set to Main Line for Common loop line No.4.
6.	L4-UN1	WHITE with BLACK DOT	Route button for Up/Dn Home set to Over Run Line at either end or route button for UP & DN Calling –on /Shunt signal for common loop line.
7.	16 UN	WHITE	Route button for DN advanced starter signal No.16(RJGR end)
8.	16AT- UN	WHITE	Common route button for DN main starter and common loop starter signal.
9.	17 UN	WHITE	Route button for UP advanced starter signal No.17
10.	17AT- UN	WHITE	Common route button for UP main starter and common loop starter signal.
11.	18 UN	WHITE	Route button for DN advanced starter signal No.18 (MZY end)
12.	18AT- UN	WHITE	Common route button for DN main starter and common loop starter signal.
13	SN-UN	WHITE	Route button for shunting to shunting neck line with shunt signal No.(8.10.12.14)-C.

CRANK HANDLE PUSH BUTTON

1.	CH-1	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 26 & 31 along with “TRANS” Push Button
2.	CH-2	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 28 & 33 along with “TRANS” Push Button.
3.	CH-3	BLUE	To be pressed to extract crank handle key for operation of point No. 21 & 29 along with “TRANS” push button.
4.	CH-4	BLUE	To be pressed to extract crank handle key for operation of point No. 22 & 24 along with “TRANS” push button.
5.	CH-5	BLUE	To be pressed to extract crank handle key for operation of point No. 23, 25, 27 & 35 along with “TRANS” push button.

MISCELLANEOUS PUSH BUTTONS

1	SM's Emergency Point Key.	---		This key is to be inserted and operated in the event of emergency point operation.
2	SM's Panel/VDU Key	---		To lock the Control Panel/VDU to prevent unauthorised operation.
3	Emergency Point operation Push Button	BLACK with RED DOT		To be pressed for emergency operation of points in association with SM's key when Point zone track circuits fails.
4	Point Group Normal Push Button	BLACK with RED DOT		To be pressed to initiate 'NORMAL' setting of point along with concerned point button.
5	Point Group Reverse Push Button	BLACK with RED DOT		To be pressed to initiate 'REVERSE' setting of point along with concerned point button.
6	Emergency Route Release Push Button	WHITE with RED DOT		To be pressed for emergency Route release.

7	Signal/Slot Cancellation Push Button	RED	To be pressed along with respective signal/Slot button for canceling a signal which is already taken 'OFF' OR to release the route after passage of a train.
8	Button Held Acknowledgement push button	WHITE with RED DOT	To be pressed to silent button held buzzer (In case of any Push Button remains pressed after the button is released.)
9	Signal Lamp Failure/Point Failure Acknowledgement Button	RED with WHITE DOT	To be pressed for acknowledging Signal lamp failure/Point failure buzzer.
10	Group Trans Push Button	WHITE with BLACK DOT	To be pressed to transmit slot or Crank Handle OR operation along with concerned Slot/Crank Handle Button
11	Group Release Push Button	WHITE with BLACK DOT	To be pressed to with draw/normalise a Slot OR Crank Handle operation along with concerned Slot OR Crank Handle Push Button.
12	Up Block Release Push Button (RJGR-RQP)	CHOCOLATE with WHITE DOT	To be pressed for releasing Up Block Instrument Handle / Commutator. (RJGR-RQP DLBI)
13	DN Block Release Push Button (GHNH-RQP)	CHOCOLATE with WHITE DOT.	To be pressed for releasing DN Block Instrument Handle / Commutator. (GHNH-RQP DLBI)
14.	Hot Axle siding/Engg. Siding control point push button	BLACK	To be pressed along with trans button for extracting key 'A' from RKT at siding location to operate Hot Axle siding/Engg. Siding points.
15.	SLOT-19 ROUTE BUTTON	GREEN	To be pressed along with slot No.19 for granting of slot once given to MZY.
15.	SLOT-19 ROUTE CANCELLATION BUTTON	GREEN WITH RED DOT	To be pressed along with slot No.19for cancellation of slot once given to MZY.
16	Power Acknowledgement Push Button	RED	To be pressed for acknowledging the Power Failure Buzzer.
17	Panel/VDU/PC switch		Required for selection of operation from PC or Panel/VDU.
18	System failure acknowledgement.	GREEN WITH RED DOT	To stop the system failure buzzer.

1.5 **POINT FAILURE INDICATION (RED) /POINT FAILURE BUZZER/POINT FAILURE MUTING BUTTON (RED WITH WHITE DOT):**

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

1.6. **FAILURE OF LED SIGNAL LAMP AND MUTING BUTTON.**

LED signal lamps have been used at this station. In case of failure signal lamps will be indicated by the appearance of 'RED' light on Panel/VDU and the flashing of the concerned signal aspect along with available buzzer. Which can be stopped by pressing the acknowledgement button. but the RED light will glow till replacing the LED lamp, rectifies the failure. For rectification of failure SM on duty should inform the ESM/JE/SE about the signal which has failed.

- | | |
|-----------------------------------|------------------------|
| 1. Up distant. | 7. Calling-on signals. |
| 2. Up Home & DN Advanced starter. | 8. Shunt signals. |
| 3. DN starters. | |
| 4. Up Starters. | |
| 5. DN Home & Up Advanced starter. | |
| 6. DN Inner distant. | |

1.7 **EMERGENCY ROUTE RELEASE COUNTER:**

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

1.8 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):**

The Panel/VDU interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this first the emergency route release button (white with red dot) positioned in the top of Panel/VDU to be pressed and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A Yellow light will lit indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released.

In case the route illumination (Yellow strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to get the emergency route release button sealed after rectification of fault if any.

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

1.9 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate the point from the Panel/VDU in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit/Axle Counter shall press the emergency point operation button along with relevant point button simultaneously. Then retaining point button pressed emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

1.10 **EMERGENCY GATE RELEASE OPERATION(CHOCOLATE WITH RED DOT):**

NIL

1.11 **BUTTON HELD ACKNOWLEDGE (WHITE WITH RED DOT):**

All push button are self-restoring type. A button held acknowledgement push button along with a white light is positioned at the top of the Panel/VDU. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light indication. The Station master shall stop the buzzer by pressing the button held acknowledgement button (white with Red dot). The buzzer will stop but the flashing white light will continue to glow until the pressed button is normalised. SM on duty shall try to find out the pressed button for normalisation or otherwise inform the maintenance staff to rectify.

1.12 **OVERLAP TIME RELEASE (YELLOW LIGHT):**

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

1.13 **TRACK CIRCUITS:**

Entire station section is track circuited except Hot axle siding, and shunting neck. In addition there are (short length) track circuits near Advanced starter Signals in both the directions and Home signal tracks are also provided. Calling-on signal (7 Rail length) track circuits are also provided in rear the Home signals in both directions. From last trailing point/fouling mark to Advanced Starter Signal are also track circuited in both directions. (i.e. 16AT, 17AT & 18AT in Up and DN directions respectively). Indications for the above track circuits are available on Panel/VDU at SM's office. Yellow light on Panel/VDU indicates route set and track clear and Red light indicates track occupied condition.

1.14 **AXLE COUNTER:**

- i) Entire Block Section between RJGR-RQP and RQP-GHNNH is monitored by digital axle counters. The Block section between RQP-MZY is monitored track circuits.
- ii) **FOR SEC:** RJGR-RQP. A pair of Digital axle counter is provided between RJGR-RQP on Up line one just beyond Up advanced starter of RJGR and another just track circuit No.3T1 beyond the Up home signal at RQP. Similarly a pair of Digital axle counter is provided between RJGR-RQP on DN line one just 180m beyond DN Advanced starter of RQP and another just beyond Dn Home signal of RJGR.
- (iii) **FOR SEC:** RQP-GHNNH. A pair of Digital axle counter is provided between RQP-GHNNH on Up line one just beyond Up advanced starter RQP and another just 180m beyond the Up home signal at GHNNH. Similarly a pair of digital axle counter is provided between RQP-GHNNH on DN line one just beyond DN Advanced starter of GHNNH and another just on the Track circuit No.2T2 of beyond Dn Home signal of RQP.

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

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

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

In case of failure of Axle Counter the re-setting of axle counter must be done as per the procedure given in Appendix-"B" under para 13.7A of this SWR. In the event of failure of Axle Counter/ Track circuit the clearance of loop lines and concerned point zone and main lines will be ensured by physical check by the SM on duty and train shall be admitted as per GR.3.69 and SR there to.

NOTE:

Before taking off reception and despatch signals for Up and DN directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The track indicators/Axle counter indicators will exhibit Red Light when track is occupied and Yellow light when track is clear. There will be no track indication when the route is not set.

2.0 **STATION MASTER's PANEL/VDU CONTROL KEY:**

The Panel/VDU is fitted with Station Master's lock up key to prevent any unauthorized operation of the Panel/VDU. The Station master on duty is the only authorised person to operate the Panel/VDU and the Panel/VDU key must always remain in his personal custody vide SR.3.36.03. The key locks the Panel/VDU board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and signal cancel button without releasing the Panel/VDU lock also. However, the provisions, of SR.3.36.02 shall be followed while replacing the signals to 'ON'.

2.1 **CRANK HANDLES:**

When any point fails to operate normally by the route setting operation or through the concerned point button through Panel/VDU, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and padlocking all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (white with black dot) is provided at the top of the Panel/VDU board. This button has two indications, viz., WHITE and RED. The WHITE indication suggests that the crank handle key is in its interlocked position of the Panel/VDU. This is called 'Crank Handle Key' 'IN' indication.

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

The Red indication suggests that the crank handle key is locked and not free for extract from RKT. This is called 'Crank handle key locked' indication. The Crank Handle is normally kept in a locked glass fronted wooden box in Panel/VDU room and the key is with SM on duty. This crank handle is DN to all points and is to be taken along with CH key for manual operation of point.

For extracting CH key from RKT, SM has to press relevant CH button and group trans button simultaneously. The white light besides the CH button starters flashing. After extraction of CH key from RKT at Location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group are in operation from the Panel/VDU. After completion of point operation the CH key will be retransmitted to the station. Electrically by inserting the CH key in RKT at Location box and turned the white flashing indication appears on the Panel/VDU board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group release button (white with black dot).

2.2. **SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS:**

For setting a route all the concerned points must be set by operation of relevant point button and group button one at a time in the desired position or by operating signal button and route Button. As soon as the required points are set to the required position, the concerned signal for the route will clear and a Yellow strip of light will appear on the entire route confirming that the Route is set and locked. The signal 'off' indication will appear on the Panel/VDU.

2.3. **SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:**

For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and group button one at a time in the desired position or by operating signal button and route button.

To take off advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned advance starter signal button shall be pressed along with the advanced starter route button for two to three seconds and released. This will clear the advanced starter signal and a Yellow strip of light will appear on the Panel/VDU.

To take off the starter signal the concerned signal button to be pressed and at the same time Common Route button to be pressed for two to three seconds and released. This will clear starter signal and a Yellow strip of light will appear on the route from the concerned starter to the advanced starter.

2.4. **TAKING OFF CALLING-ON SIGNAL:**

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR.3.13 (6)(b). A Calling-on signal shows no light in the 'ON' position. A Calling-on signal is taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

To take off Calling-on signal the train must come to a stop at the foot of the home signal, occupying the track circuit (1AT, 2AT and 3T as the case may be) in rear of the Home signal and to take off Calling-on signal C8, C12, C14 below starter signal Nos.S8, S12, S14 the train must come to a stop at the foot of the starter signal occupying track circuit (L4T3, L3T3, L1T3 as thwe case may be) in rear of the starter signal. When a train occupies the track circuit, a RED light strip will appear on the Panel/VDU. The particular

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

route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route button pressing or by crank handling in the event of failure of operation of points through Panel/VDU. After the route is set, the Calling-on signal button 'C1'/'C2' / 'C3'/'C8'/'C12'/'C14' (Red with white dot) (as the case may be), 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., a white light glows at the concerned Calling-on signal on the Panel/VDU.

Note:

SM on duty to ensure that no train can pass through while receiving on Calling-on signal.

2.5 **RELEASE/CANCELLATION OF ROUTE:**

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

NOTE:

Up and DN Calling-on signals and Up and DN Advanced starters are to be manually cancelled after the passage of the train to cancel the route.

2.6. **REPLACEMENT OF SIGNALS TO 'ON':**

Signals are replaced to 'ON' automatically by the passage of a train pass the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.

2.7 **INTERLOCKING OF SIGNALS/POINTS:**

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

2.7.1. Advanced starter is interlocked with respective Block Instrument in Line Clear Position.

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

2.9. Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the Panel/VDU is locked up with Station Master's key.

2.10 **PILOTING OF TRAINS IN TO STATION YARD.**

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. When both Home and Calling-on signal failed, trains can be piloted 'IN' in terms of SR 3.69(a) & (c). The SM on duty shall nominate a clear line and shall set the nominated route correctly from the Panel/VDU or shall advise the TPM on duty to set the nominated route correctly with the help of crank handle during failure of points. He shall clamp and padlock both facing and trailing end points in both cases under the supervision of SM on duty at station.

Then the SM on duty shall issue the written authority (T/369(3b)) to the TPM for "piloting IN" the train. While going to the Home signal the TPM will satisfy him self that the points have been correctly set, clamped and padlocked. After the train has 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 proceed hand signal to pass the defective Home signal.

NOTE:

- (1) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of both end for admission of the train.
- (2) The keys of padlocks used for on the points shall be kept in the personally custody of the SM on duty till such movement is either completed or alternatively cancelled.

PILOTING OF TRAINS - OUT OF STATION YARD :

When DN starter signal becomes defective then Down trains can be forwarded up to DN Advanced Starter Signal by taking off Calling-On signal provided below the starter signal. In case of failure of both Starter Signal & Calling-On signal then the Station Master shall set the points correctly from the Panel/VDU or advise the TPM to set the concerned points correctly for the outgoing train with help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under the supervision of SM on duty in both cases. The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the Train. There after he shall display proceed hand signal at the foot of the starter signal vide SR 3.70.01.

In case of failure of UP Starter Signals, the procedure detailed above shall be followed. In case of Advance starter signal becomes defective such signal shall be passed on the written authority on the form T/369(3b)/Paper Line Clear Ticket for double/single line. Proceed hand signal shall not be displayed vide SR 3.70.02. The TPM shall hand over the pilot memo in form T/369(3b)/Paper Line Clear Ticket to the Loco Pilot after the train stopped.

NOTE

1. The SM on duty shall personally supervise the correct setting clamping and padlocking of the facing points and ensure the clearance of any obstruction on the concerned route for dispatch of a train.
2. The keys of the padlock used for clamps on the points shall be kept in the personally custody of the SM on duty till such movement is either completed or alternatively cancelled.

2.10. SHUNTING:

Shunt signal No.SH-8(A-C), SH-12(A-C), & SH-14(A-C) provided below DN starter signal No. 8A/B, 12A/B & 14A/B, caution aspect of UP Starter Signals shall be used for shunting purposes.

Similarly, independent Back Shunt Signal No.4A/B/C/D, 5A/B/C/D, 7A/B/C/D and 10(A-C) are provided for shunting purposes.

1. For back shunting individual shunt signal No. 4A/B/C/D, 5A/B/C/D, 7A/B/C/D and 10(A-C) are provided at UP and DN side of the yard respectively for shunting back to the station yard in desired direction. The particular route on which it is intended to do shunting is to be set by operating the desired points individual from the point or by pressing the shunt signal button and the required route button simultaneously for 2-3 seconds. When the route is set and locked correctly Yellow strip of lights will appear on the route and the concerned shunt signal shall display 'OFF' aspect.

3.0 i) DESCRIPTION OF SIDING:**a. HOT AXLE SIDING/ENGG. SIDING:(ELECTRIFIED)**

The H.A. Siding/Engg. Siding at Baranga end of the yard with both side entry is taking off from Common Loop (Line No.1). The entrance points and corresponding derailing switch are coupled and operated by an arc lever at site. Both the entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked by Hot Axle siding/Engg. Siding key 'A' released by pressing the button No.30 in conjunction with trans button provided on Panel/VDU at SM's office. Reception signals (i.e. 1A, C-1A, 3A, C-3A, in UP direction and 2C. C2C. in DN direction) starter signal No.11 & 12 and shunt signal Nos. SH(5,7,13)A, SH12A/B/C and SH4D are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the H.A. Siding/Engg. Siding key is taken 'OUT' from the RKT provided at H.A. Siding/Engg. Siding location at site.

b. SHUNTING NECK

The Shunting Neck at HWH end of the yard with one side entry and is extended from CH: 993.860m with entrance point No.35A, which is motor operated from Panel/VDU at SM's office. Entrance to the Shunting Neck is controlled by Shunt Signals No. SH(8.10.12.14)C & Exit from the Shunting Neck is being controlled by Shunt Signals No. SH9A/B/C/D, operated from Panel/VDU at SM's office.

ii) LEVEL CROSSINGS:

There is a 'C' class mid-section Manned Non-Interlocked Level Crossing Gate is situated at Km.421/9-11 between RQP-MZY. Telephone communication is provided between SM/MZY and the gate lodge.

4.0. VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD:

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the Station master on duty personally through Luminous indications of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.,

4.1. CRANK HANDLING EMERGENCY OPERATION OF POINTS:

Crank handle operation is interlocked with the Signalling and interlocking system at this station. Key for Crank handles are normally locked inside the RKT instrument at the Location box, can be taken out only when all the signals leading are in the 'normal' position and the route is not blocked for whatever reasons. Crank handle can be released by operating Common 'TRANS' push button and control push button simultaneously. When this key is taken out, no signal over the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

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

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

4.3. INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:

When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN' 'THROUGH' or 'OUT' at the station shall be done with a lot of care and diligence. Station Master on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff be informed for attending to this.

5.0. EMERGENCY OPERATIONS:

The following are the instructions for emergency operations.

5.1. CANCELLATION BUTTON AND VEEDER COUNTER:

For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'Veeder counter' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the Panel/VDU). The Station Master on duty must press the emergency route cancellation button and the signal button in accordance with 1.9 of Appendix-'B' confirming to the section for which emergency route release is desired.

An indication will appear indicating that the timer has started operating and after a lapse of 120 seconds, the desired route will be release, provided all other conditions are favorable for route release.

5.2. The veeder counter registers the number of such emergency cancellation operations. Station Master on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc., in the train signal register as well as in a separate register meant for this purpose. The detailed operational instructions are as follows:

5.3. EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON:

If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations.

- a) Firstly, it must be ensured that the signal is in the normal position.
- b) Operation as detailed in Para 1.9 to be followed.

6.0. MAINTENANCE OF S & T INSTALLATION and ADHERENCE TO MAINTENANCE SCHEDULES:

6.1. Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

6.2. The tests, checks and replacements etc., shall confirm to the schedules of maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject.

7.0. PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF AN INTERLOCKING GEAR:

7.1. In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master to the sectional Maintainer, the signal inspector of the section and others through a memo as per GR and SR 3.51.04 and 3.68.04 and document all such transactions.

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

7.2. INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

Before declaring a signal as defective, the setting of the point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons.

7.3. RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

After receipt of this information, the sectional Maintainer shall attend to the failure after giving a Disconnection Memo. After rectification of the fault, the Sectional Maintainer shall give Reconnection Memo detailing the rectification. Thereafter the Station Master on duty shall personally check this defective apparatus. After satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR.3.68.04 © and (D).

8.0. PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom should preplan these works. Field staff and the Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

9.0 EMERGENCIES:

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

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

10.2 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back in RKT.

10.3 The cases of failure of motor operated points should be promptly reported to the concerned Signal maintainer/Signal Inspector for rectification.

10.4 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or attending to failure, the signal official will give a disconnection memo to the Station master on duty and after making necessary entries in the Emergency Crank Handle Register. The Station master on duty will obtain the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle. The points will be treated as defective until the Emergency Crank Handle is returned back to the Station Master on duty.

10.5 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the Station Master on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The Station Master on duty is responsible for introduction of non-interlocked working and the trains will be

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

piloted 'IN and 'OUT' duly clamping and padlocking both facing and tailing points over which the train is to pass, as per GR.3.69 and 3.70 with relevant SRs. The Station Master on duty will be personally responsible for setting and locking of points for reception and despatch of all trains.

10.6 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the Station Master on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.

11.0 **SUSPENSION OF LAST STOP SIGNALS:**

When the Block Instrument is suspended with its handle in 'TRAIN GOING TO' position for whatever reason, the concerned last stop signal controlled by the Block Instruments must be treated as suspended and trains shall be piloted 'OUT'.

11.1 The Station Master on duty shall not grant 'LINE Clear' unless he has ensured that the lamps of fixed signals which apply to the train are burning. If the signal lights can not be kept burning, the Station Master on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in GR.3.61 to 3.72 and relevant SRs vide GR.3.49(4).

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

12.1 Digital Axle Counters are provided on both Up and DN line Block Sections between RQP-RJGR and RQP-GHNH.

1.2 The occupation and clearance of the axle counter section are indicated on the Panel/VDU by 'RED' and 'GREEN' light.

12.3 If any Block proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.

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

12.5. 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.

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

12.7. Reset arrangements are provided in the operation cum indication Panel/VDU in the SM's office for sections RQP-RJGR, RQP-GHNH. The Up & Dn resetting key along with reset push button for either sections are provided on the resetting Panel/VDU 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.

12.7.A. RESETTING OF DIGITAL AXLE COUNTER WHEN FAILED(FOR SECTION RQP-RJGR and RQP-GHNNH)

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/VDU, the receiving station SM shall apprise the sending station SM through telephone for resetting and shall establish communication with the said station if resetting of equipment is considered necessary giving details of last train that has arrived complete at his station and the block section is clear.

Before resetting the receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not. If the train has arrived fully then he shall inform to the sending station about the complete arrival of the train by exchanging Private Number.

As digital Axle counters are provided as LVCD in Block section, resetting is to be done by both of sending end and receiving end 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(YELLOW) 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/VDU.
- 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/VDU.
- 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 it in the Train Signal Register the resetting operation, giving details of train number, time, Private Number exchanged with the SM on duty of sending giving reasons for the resetting operation .

If the axle counters functioning properly now, then Block Section cleared indication 'G' will appear on the Panel/VDU 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 ESM/JE(S)/SSE(S) for early rectification.

13.0 SIGNAL LIGHTS:

The Station Master on duty at 00.00 hours (2nd night shift) must also ensure from Panel/VDU board that all the signal lights are glowing properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

14.0 CORRECTING TIME IN STATION CLOCK:

The Station Master shall set the time in his clock according to the time signal given by the Section Controller on duty at 16.00 hours every day according to GandSR.4.01.01 and 4.01.02.

16.0 TELECOMMUNICATIONS:

- a) The station is connected to CTC-PRDP, BRAG-KIS (VIA-NQR), BRAG-KIS (VIA-CTC) Control Circuit.
- b) Telephone attached to Block Instrument for section RJGR-RQP, RQP-GHNNH.
- c) Telephone is provided between Station Masters office and both end crank handle locations.
- d) Telephonic communication is provided between SM's office & Hot Axle siding/Engg. Siding Loc.
- e) VHF set is provided at this station.
- f) Magneto telephonic communication is provided between SM/RQP & M/MZY.

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 un-necessary discussion with Loco Pilot/Guards and any other staff.

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

APPENDIX 'B1' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION VISUAL DISPLAY UNIT (VDU)

NOTE:

The stand by system (VDU) is also provided with the Conventional panel for the operation of Signals, Points, Crank Handles, Siding Controls and Resetting of all type of Axle counters.

1.0 SYSTEM OVERVIEW:

In addition to the panel, an operator console (VDU) consists of a CPU with a high resolution colour monitor, keyboard and pointing device (mouse) are provided. Both the serial ports in the CPU are connected to the Westrace CPU board for exchange of control and indication messages. The Software is installed to display the Station Yard Mimic Panel diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen by selecting a required operation clicking by the Left button of the pointing device (mouse) a function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The Computer (VDU) or panel any one may be used for controlling and monitoring the station, however indications on the Station yard mimic diagram of VDU and panel will be dynamically updated.

1.1 SELECTION OF CONTROL:

This VDU (Computer) is provided as a stand by of conventional panel for the operation of signals, points, crank handles, siding controls From the Mimic panel diagram. A Mimic panel diagram will be displayed on the VDU, which is an exact replica of operation cum indication panel and suits the yard plan as per SI plan 21101.

One two-position switch (Red colored) is provided on the conventional panel along with the SM's Key used for selection of Panel or VDU called PANEL/ PC Change over switch.

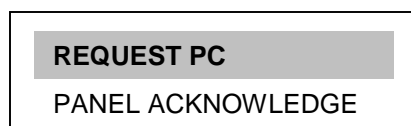
SM of the station can select any of the controls, for the selection of one control to another there are certain procedures to be followed for the control transfer. The procedure to be followed as mentioned below.

PANEL/ PC KEY AND PC CONTROL KEY

To prevent the unauthorized operation by other than on duty SM in VDU this facility is provided on VDU. On duty SM need to track the pointer to the "PC CONTROL KEY" icon and click the KEY OUT menu by the left button of the mouse, by this a Password window will appear. SM need to enter the password and press the OK Button provided on the Password window. This will lock all the controls in VDU except the Signal cancellation of All Cleared Signal routes. The PC CONTROL Key is nothing but a SM's KEY in the conventional panel.

1.2 CHANGE OVER FROM PANEL WORKING TO PC.

1. Ensure that SM's Key is in ON position.
2. Ensure that PANEL/ PC Change over switch is in PANEL mode.
3. Click the PANEL/ PC key provided in the left top corner of the VDU. (A pop-up menu will appear)

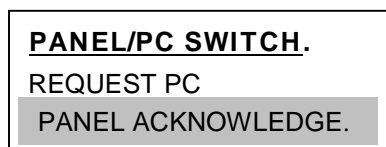


4. Click the first Menu – PC REQUEST. (A password required window will appear in the centre of the screen).
5. Enter the proper USER NAME and PASSWORD in the required text boxes by selecting with mouse, after entering so click the OK button.
6. Now both the PANEL and PC indications will start Flashing.
7. Change the PANEL/ PC change over switch to PC mode in the conventional panel.
8. Now the PC indication will steady and Panel indication will disappear.
9. Click the PC CONTROL KEY and click the KEY IN menu. (A password required window will appear in the centre of the screen).
15. Enter the USER NAME and PASSWORD and click the OK button.
Now the Over all control is transferred to VDU, The entire operation can be possible from the VDU.

CHANGE OVER FROM PC WORKING TO PANEL.

1. Turn the PANEL/ PC change over switch to PANEL mode.
2. Now both the PANEL and PC indications will start Flashing.
3. Click the PANEL/ PC key provided in the left top corner of the VDU. (A pop-up menu will appear)
4. Click the second Menu – PANEL ACKNOWLEDGE. (A password required window will appear in the centre of the screen).
5. Enter the proper USER NAME and PASSWORD in the required text boxes by selecting with mouse, after entering so click the OK button.
6. Now the PANEL indication will be steady and the PC indication will disappear.

Now the Over all control is transferred to PANEL, The entire operation can be possible from the PANEL.



OPERATIONAL PROCEDURE:

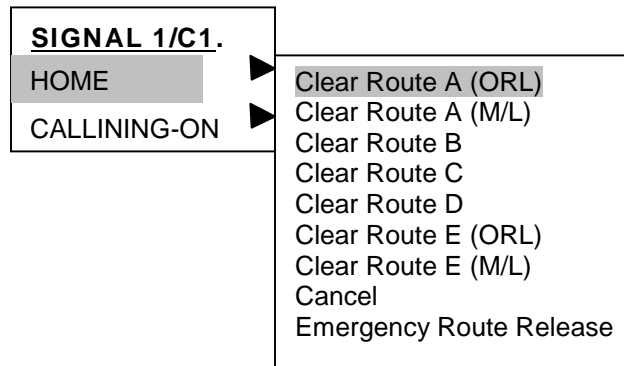
VDU INDICATIONS:

SSI INDICATIONS:

In Panel/ PC there are two system indication, Green indication mentioning the On-line system and the Red indication mentioning the off line system. In addition there are two indication mentioning status of communication and panel processor.

SIGNAL OPERATION:

To Take-Off a Signal with the desired route the SM needs to track the mouse pointer over the concerned Signal on the VDU, after clicking by the left button on the mouse a popup menu will appear as below:



(a) **SETTING A ROUTE:**

To set a route of a signal, click on a possible route of the signal, after done so the route initiated Red indication will appear on the replacement track of the signal. And all the relevant points Normal/ Reverse set indications will starts flashing if it is not available in the required position. After setting of point in the route required condition (Flashing indication will be steady) a complete yellow route set indication will appear from the Replacement Track of the signal to the last track of overlap of the route also the points will be locked (A Point locked can be ensured from the Red Steady indication will appear near the point). Finally a Route locked Yellow Steady indication will appear on the just bellow the signal. The signal will be Taken-Off now. The yellow route set indication will turn to red when the train occupies the track circuit.

CONDITIONS FOR SETTING A ROUTE:

The following condition to be ensured before setting the route by the SM .

1. All the Crank handles of the required route related points to be in Key in condition.
2. All the related Siding control keys to be in Key in condition.
3. All the related siding points should be in normal position (can be ensured from yellow steady indication at the siding point on the route)

(b) **CANCELING A ROUTE/ EMERGENCY ROUTE RELEASE:**

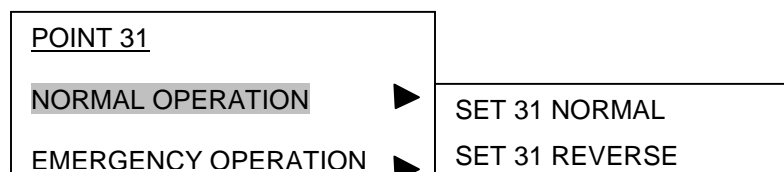
To cancel a signal route when the route is set and the signal in taken-off, click on the signal cancellation menu (Main/ Calling on) of the concerned signal, the signal will immediately go to ON aspect, after doing so click on the Route release menu the route locked indication will starts flashing for 120 sec, After the completion of 120 sec the locked route will be released and veeder counter provided for the route release in the conventional panel will change to next higher digit which should be recorded by SM .

SHUNT SIGNAL OPERATION:

To setting and Canceling the signal route for the shunt signal the same procedure shall be followed as explained in Signal Operation.

POINT OPERATION:

To Operate the Point the SM needs to track the mouse pointer to concerned point's Normal/Reverse indications on the VDU, after clicking by the left button on the mouse a popup menu will appear as below:



(a) **REVERSE TO NORMAL OPERATION:**

Track the pointer to NORMAL menu and click, a Normal flashing indication will appear, the indication will be steady after the point is set to Normal.

(b) **NORMAL TO REVERSE OPERATION:**

Track the pointer to REVERSE menu and click, a Reverse flashing indication will appear, The indication will be steady after the point is set to Reverse.

(c) **EMERGENCY NORMAL OPERATION:**

When the Point zone Track circuits failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation, the Key to be KEY OUT by clicking KEY OUT menu.

Track the pointer to EMERGENCY NORMAL menu and click, a Normal flashing indication will appear, the indication will be steady after the point is set to Normal.

After the Emergency point operation a specific veedor counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM .

(d) **EMERGENCY REVERSE OPERATION:**

When the Point zone Track circuits failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

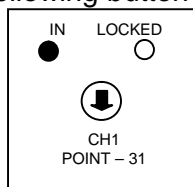
Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation the Key to be KEY OUT by clicking KEY OUT menu.

Track the pointer to EMERGENCY REVERSE menu and click, a Reverse flashing indication will appear, the indication will be steady after the point is set to Reverse.

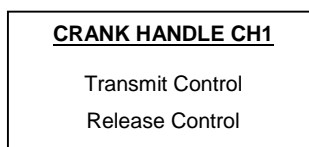
After the Emergency point operation a specific veeder counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM .

CRANK HANDLE & SIDING CONTROL OPERATION:

To Transmit or Release control of the Crank Handle, click on the crank handle/ Siding control button provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Crank Handle



For Transmitting the Crank Handle KEY to the field personnel SM has to click transmit control menu. After transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the RKT. After extracting the key from the RKT, the key IN indication will disappear.

When the Manual point operation is over, after putting the KEY in the RKT, A KEY IN flashing indication will appear on the panel, Now the SM has to Release the control for the Steady indication by clicking release control menu

A Crank handle locked indication will appear when the particular point has locked by any of the possible signal routes.

APPENDIX 'C' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION

ANTI COLISION DIVICE (RAKSHA KAVACH)

=== NIL ===

APPENDIX 'D' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION

(Operating and Commercial duty amalgamated)

1. STATION SUPERINTENDENT:

He is in-charge of the Station. He performed day shift duty for train passing duties in turn with his assistants. He is responsible for the efficient discharge of duties devolving upon all the staff employed at the station according to Manuals, SWRs and safe working instructions issued from time to time. He shall see that all signals, points, and whole machinery at the station are in proper working order. He shall report all defects to the concerned officials. 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. It is his personal responsibility to maintain the station working rules, other rule books and the Assurance Registers up to date. He shall see that all records of the station are properly maintained and due statements returns and other corresponding documents are up-to-date. He shall see that the staff are civil courteous and help full to all users of railway. He shall see that all station premises are kept neat & clean. He is responsible for booking off 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 GR and SR and GR 5.01 to 5.08 with relevant SRs, Chapter XXII of operating Manual. He shall follow the instructions laid down in SR 3.68.01(a), (c), (d) & (e) and SR14.07.01 Para 2.09(e) of Block Working Manual. He shall supervise the works of staff and conduct night inspections. Safety meetings and fire drills and report lapses of staff working under him. He shall also ensure that the safety equipments in the station as mentioned in the station working rules are supplied in full and they are good working order with necessary relief stock.

The SS's special attention is drawn to the GR 5.01 to 5.23 where details are indicated.

1.1.1 ASSURANCE REGISTER:

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

No Railway servant shall be entrusted with any duty involving the safety of the public unless the Station Supdt. 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 Station Supdt. 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 fully about their duties and responsibility.

The SS 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 Class-III staff and other for Class-IV staff. A duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS Incharge.

(D.NAYAK)
DOM/KUR

The declaration is 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 SHEETS:**

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by Station Supdt., under lock and key by maintaining one register for this purpose.

- 1.3 The SS shall test the working of the reception signals and emergency cross over daily during the day when there is no train due to arrive/leave the station and record the results in the SM's diary.

1.4. **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the Station Supdt., in accordance with the instructions laid down in the Accident Manual. Whenever the Station Supdt., 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 message and reports and follow up all safety principles without delay.

2. **Dy. SS/STATION MASTER:**

He shall work in 8 Hrs. train passing duties and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time. The Dy. SS/Station Master on duty shall record in the diary the condition of all the running lines, siding, the caution orders in force at the time of handing over charge. These entries shall be countersigned by the Dy. SS/Station Master coming on duty and taking over charge. The Dy. SS/SM on duty shall ensure the clearance/obstruction of the line by physical verification before taking/handing over the charge. The Station Master on duty who makes an entry in the train signal register shall continue till all the entries pertaining to the trains are completed vide SR.14.07.01. He shall promptly bring to the notice of SS all irregularities and accidents in course of his shift duties. During the absence of SS, the duty of SS will devolve on him. His special attention is drawn to chapter-II of G & SR 2000 and GR5.01 to 5.08 with relevant SRs as an assistant to SS, given to him by the SS.

3. **TRAFFIC POINTSMAN/TOKEN PORTER:**

He shall work under the instructions of SS/Dy.SS/SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR.

He shall be remain responsible for:

- (a) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation.
- (b) Coupling and un-coupling of vehicles.
- (c) Protection of line in an emergency
- (d) Piloting and hand signalling of trains of trains when necessary and handing over caution orders/or any other line clear authorities to the Loco Pilot and guards of the trains.
- (e) Attending off side to observe safe running of run through trains at stations and correct display of hand signals and ringing the station bell.
- (f) Securing of vehicles, as directed, protection of vehicles of a train.
- (g) Being conversant with the layout of the yard and compliance of rules relating to shunting operation.

- (h) Observing General Rules 5.13 to 5.21 and relevant subsidiary Rules during shunting.
- (i) Oiling of clamps and padlocks if necessary.
- (j) Loading and un-loading of parcels and luggage's, packages goods and guards boxes to and from the trains and watching the packages and other materials by properly stocking in the station premises.
- (k) Cleaning and Dusting of SM's office room furniture.
- (l) Working as fog signal man as and when required.
- (m) Filling up the fire buckets with sand.
- (n) Getting train interact arrival register (T/1410) signed by the Guard as and when required.
- (o) Any other duties entrusted to him by the SS/Dy.SS/SM on duty from time to time.

GENERAL

1. A set of flags and LED based battery operated flashing signal lamps will be part of the essential equipment of the staff while on duty. He shall not leave the station except when required by the SS/Dy.SS/SM on duty or with his permission and shall comply with subsidiary rules 4.42.02(b)(i) and (d).
2. Staff working at the station must be able to distinguish Up and Down lines and educated in distinguishing other operational forms and documents, delivered to Loco Pilots and Guards and must also know how and when to ring the station bell.

APPENDIX 'E' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION

A list of Essential Safety Equipment's which should be kept readily available in good working order with necessary relief stock.

Sl. No.	Description	Station
1.	Detonator Signals	12
2.	LED based battery operated flashing lamps	4
3.	Hand signal Flags	4 set
4.	Safety chain with Padlocks.	6
5.	Clamps with padlocks	12 (4 at station and 4 in each goomty)
6.	Skids	Iron skid – 4, Wooden skid - 4
7.	Fire and Sand Buckets.	4
8.	Reminder Collar	8
9.	Motor Trolley on line lable.	2
10.	Fire extinguisher	2 (DCPT).
11.	First Aid Box	1
12.	Stretcher	1
13.	Block Suspension Board	3
14.	Power Block Collar	2

(Correction slip No. 1 dated: 27.01.2014)

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

APPENDIX 'F' TO STATION WORKING RULES OF RADHAKISHOREPUR STATION

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:-**
There is no IBH or IBS or DK station on either end of block section
- 1.3. **HALT STATION:-**
A. NIL