

NO. 90

**STATION WORKING RULES OF BASANTAPUR STATION**

BG Station.

Date of Issue: 15.01.11

Date brought in force:16.01.11

**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/21069 based on CSTE/East Coast Railway's Signal Interlocking Plan No. SI/21069 ALT-'B' shows the complete lay out of the yard, normal position of points, the Signalling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the point numbers and signals when reporting accidents.

2. **DESCRIPTION OF STATION**

2.1. **LOCATION**

BASANTPUR (Code: BSTP) is a 'B' class three lined station on the Tomka - Banspani branch line, single line electrified (BG) section in Khurda Road division of East Coast Railway. It is situated at Km. 452.824 (from HWH via JKPR), Km 470.499 (from HWH via BSPX) and Km 71.366 from Banspani. The station is provided with standard III Interlocking and equipped with Central Panel/VDU and Multiple Aspect Colour Light signals. The station is worked under Absolute Block System of GR & SRs.

[Refer GR. 8.01(1) a, c, 2(b), 8.03(2), a, b, c (ii), 8.09, 8.10(1)(2), 8.12, 8.14, 8.15]

2.2. **BLOCK STATIONS.**

BASANTPUR (Code: BSTP) station is situated between Sitabinj (code-STBJ) at East end situated at a distance of 13.586 KM and Naranpur (code-NANR) at West end situated at a distance of 9.026KM

2.2.i. **IBH, IBS, OUTLAYING SIDINGS, DK STATIONS:**

NIL.

2.2.ii. **PASSENGER HALTS:**

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
BSTP-STBJ Single Line section	Up Advanced starter signal of BSTP station.	Down Advanced starter signal of STBJ station
BSTP-NANR Single Line section	DN Advanced starter signal of BSTP station	UP Advanced starter signal of NANR station.

b. **STATION SECTION:-**

Station Section	The Point from which the 'Station Section' Commences	The Point at which the 'Station Section' end
Single Line section	Up advanced starter no.15 of BASANTPUR	Down advanced starter No.16 of BASANTPUR

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c. **STATION LIMITS**

The station limit lies between the UP & DN distant signals.

2.4. **GRADIENTS:**a) **TOWARDS STBJ END:**

From	To	Gradient
CSB	CH. 844 M	1 in 1200 'R'
CH. 844 M	CH. 2824M	1 in 150 'R'

b) **TOWARDS NANR END:**

From	To	Gradient
CSB	CH. 1156 M	1 in 1200 'F'
CH. 1156 M	CH. 1395 M	Level
CH. 1395 M	CH. 2366 M	1 in 110 'R'
CH. 2366 M	CH. 3166 M	1 in 140 'R'

2.5. **LAYOUT:**

The station is provided with three running lines in the Main yard, namely Loop Line [Line No.1], Main Line [ Line No.2], Loop Line[Line No.3].

**PLAT FORMS**

- 1) Line No. 1 (Loop Line) : R.L.P.F.(425.0 X 6.1m)

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

The trains coming from NANR end are UP trains and the trains coming from STBJ end are Down trains.

2.5.2 **HOLDING CAPACITIES(CSL):**

Line No.1	Loop Line	CSL: 792m.	From Starter to Starter	Electrified
Line No.2	Main Line	CSL: 774m.	From Starter to Starter	Electrified
Line No.3	Loop Line	CSL: 792m.	From Starter to Starter	Electrified

2.5.3. **NON RUNNING LINES AND THEIR CAPACITIES IN (CSL):**

NIL

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

- i. Shunting in face of an approaching Train is prohibited.
- ii. Hand Shunting / Loose shunting / Fly Shunting is not permitted over the outer most facing point at both ends.
- iii. While performing shunting, engine shall be leading towards falling gradient i.e. towards STBJ end.
- iv. It is forbidden to obstruct the over-run line which is a substitute for the adequate distance for taking off home signal at anytime whether a train is expected or not. The over run line shall not be utilized for the purpose of stabling of vehicles or harboring an engine with or without vehicle. The over run line may however be utilized as a shunting neck.

c. **SPECIAL INSTRUCTIONS:**

- i) Entire station yard is track circuited. In case of failure of track circuit the clearance of the concerned line should be ensured physically before a train is piloted.

- ii) After any non-signalled movement has taken place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point/points to "NORMAL" or "REVERSE" settings for the purpose of testing the points and after ensuring correct indications of "NORMAL" or "REVERSE" setting of points, the facing and trailing points shall be clamped and padlocked thereafter further movement shall be permitted over the points.
- iii) Movement of non-insulated push trolley is prohibited between BSTP- NANR and BSTP- STBJ section vide SR 15.25.04(c).
- iv) In case of failure of Digital Axle Counters provided for monitoring Block Section at both end, 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 SM on duty.
- v) Station Master on duty must ensure the clearance of line from Starter Signal No.9 up to end of the overrun line when point no.22 is normal before taking 'off' UP Home Signal for line no.1.
- vi) Station Master on duty must ensure the clearance of line from Starter Signal No.7 up to end of the overrun line when point no.24 is normal before taking 'off' UP Home Signal for line no.3.
- vii) Station Master on duty must ensure the clearance of line from Starter Signal No.8 up to end of the overrun line when point no.23 is normal before taking 'off' DN Home Signal for line no.1.
- viii) Station Master on duty must ensure the clearance of line from Starter Signal No.10 up to end of the overrun line when point no.21 is normal before taking 'off' DN Home Signal for line no.3

## 2.6 **LEVEL CROSSINGS:**

-NIL-

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

Trains are worked under Absolute Block System with Token Less Block Instrument for the section BSTP- STBJ and BSTP- NANR.

The Block Instruments shall be operated by Station Master on duty and keys of the Block Instruments shall remain under personal custody of SM on duty. The authority to proceed for the Loco Pilot is taking 'OFF' of the last stop signal. [Refer Chapter XIV of GR & SRs, Chapter -IV of Block Working Manual and GR 14.08(b)(iv)]. Line clear is granted/obtained through phone attached with the Block Instrument.

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

- 4.1 This Station is provided with Standard-III interlocking with Multiple Aspect Colour Light Signalling 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 (EI) interlocking and having no end cabins. 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 & Down directions) as per GR.3.13 (1)(b), (2)(3)(4) & (6) (b). Central panel with miniature push buttons or VDU are provided in the Station Master's office to electrically control all signals, points, etc., The control panel 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 two-position switch is provided on the control panel through which SM on duty can select the mode of operation (i.e. from panel or VDU)  
(The details of stand by operation from VDU is given under APPENDIX-'B-1')

### 4.1.1. **CRANK HANDELS**

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

**CRANK HANDLE**

**CONTROL POINTS**

CH-1	-----	21. 23.
CH-2	-----	22. 24.

These crank handles are interlocked with the signalling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are in Normal Position and the route is not locked for whatever reasons. Crank Handle can be released by operating '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 SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. **If the Crank Handle is in locked condition and it is necessary to operate the concerned point by Crank Handle due to whatever reason then the concerned signal should be put back to "ON" position then Crank Handle Key can be taken out after two minutes by pressing common 'TRANS' push button and concerned Crank Handle control push button simultaneously.** An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle as per Appendix-'B').

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

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

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

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit, a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by operating 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 switch 'C1A/B/C'-'C2A/B/C' (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 yellow light glows at the concerned calling-on signal on the panel. Every such operation has to be recorded by the on duty SM along with the reasons to do so. Every such operation is registered in respective calling-on counters.

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**NOTE:**

No train can pass through while receiving on Calling-on signal.

4.1.3. **SHUNT SIGNALS**

Back shunt signals 3A/B/C and 4A/B/C are provided at NANR and STBJ end respectively for shunting purpose.

4.1.4. **EMERGENCY CROSS OVER**

NIL

4.1.5. **L.C. GATE OPERATION**

Details described in Appendix-'A'.

4.1.6. **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit and SM's emergency point key is 'IN' shall press emergency point operation button along with relevant point button simultaneously. Then retaining point button pressed emergency point operation 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. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

4.1.7. **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.

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

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

4.1.9. **TRACK CIRCUITS:**

Entire station section is track circuited. In addition track circuits in advance of Advanced starter Signals upto opposing Home signal in both the directions are also provided. For Calling-on signals 7RL track circuits are provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited (i.e. 15AT and 16AT in Up and Down directions respectively). Indications for the above track circuits are available on panel at SM's office. White light on panel indicates track clear and Red light indicates track occupied condition.

4.1.10. **AXLE COUNTER:**

- i) The entire Block Section between the stations BSTP- NANR & BSTP- STBJ are monitored by Digital Axle counter system. These Digital Axle Counter is provided for Last Vehicle check on Block Section as well as for dispatching a train in block station from either end of the station.

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These Digital Axle counter system counts the Axles 'IN' and same axles 'OUT' from the respective block sections which indicate whether the concerned sections monitored by digital axle counters is clear or occupied.

- ii) Fiberglass trolley wheels are to be provided for push trolleys in lieu of trolley suppression track circuits.

The position of the Block section whether cleared or occupied are reflected in the panel diagram provided in the Station Master's office which shows 'GREEN' when 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/Axle counter 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 Train has arrived complete with its Last Vehicle at the receiving station, by exchanging Private Number then resetting to be complied with.

(Details of resetting procedure given in APPENDIX-'B')

#### 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 & the other key with the Signal Maintainer. Whenever required the SM shall handover the key to the maintainer with proper acknowledgement in the basement/relay room key register. The maintainer on receipt of the key from the 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 change over switch is provided in the Station Master's office with the two power supplies viz., 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 in AT position.
- (iii) In case of failure of AT supply, 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.

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.

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

In case of AT/GRIDCO 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 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. **Detail** indications and alarm have been described below:.

#### **SM INDICATION PANEL FOR IPS.**

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

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

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

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

#### **STARTING DG AND MAINTENANCE OF DG LOG BOOK :**

After getting the indication of "Start Generator" the SM should start the Generator which is provided with self starting arrangement. The DG sets provided in the DG room one marked as DG1 & DG2. At a time only one of the DG sets is to be started and the handle of the change over switch (provided in the DG room) is to be operated accordingly in order to extend the power supply to the IPS.

Oil level indicators are provided in both the diesel tanks of the DG sets. The SM should maintain the DG Log book in the following format.

Date	Diesel Received	DG No.	Time		Starting level	Balance diesel on hand in Ltr	Signature of SM
			Started	Stopped			

When the on hand diesel balance falls below 20 Ltrs. Information should be given to Fault Control. In addition to this another GRIDCO power failure register is to be maintained in the following format.

		Power Failure Time	Power Resumption Time	Signature of SM

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## 5 **TELECOMMUNICATIONS:**

- a) The Station is connected to Khurda Road Control by a telephone on the JKPR-NYG Control Circuit.
- b) The Station is connected to JKPR-NYG traction control circuit.
- c) Telephone attached to Token Less Block Instruments at either direction.
- d) Railway auto Telephone is provided between both side adjacent stations.
- e) Telephone communication is provided between Station Master on duty and both end Crank Handle Locations.
- f) VHF set is provided at this station.

### **NOTE**

- i). For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- ii). 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, Operating Manual, Block working manual and any other safe working instructions issued from time to time.

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

### 6.1 **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.

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

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 Dy.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 Home signal 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 Dy. 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 Dy. 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

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Station. In case of class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

The Dy. Station Supdt., 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 Dy. Station Supdt..

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

#### 6.2 **CONDITIONS FOR GRANTING LINE CLEAR:**

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 inside the first facing point on both up and down directions.
- ii) The relevant approach signals have been put back to "ON" position behind the said train.
- iii) The Line is clear up to UP Advanced starter signal No.15 for DN trains and upto DN advanced starter signal No.16 for UP trains.
- iv) All Signal lights pertaining to the train are burning properly.

#### **NOTE:**

If the light of the reception signal is 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 DESPACTHING 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 at either end 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 in that order so that in case any mishap the chances of causalities are minimized.

In case all lines are occupied by passenger carrying trains points should be set for a loop line to negotiate the speed of the in coming 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 where a passenger coach will in case of collision receive the impact. [Ref: SR 3.51.06(b)]

##### 6.2.1.2 **RECEPTION OF A TRAIN ON BLOCKED LINE**

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken –off. If calling-on signal failed then the SM on duty shall authorize the on duty TPM with form 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 whose the train shall be brought to a stand.

6.2.1.3 **RECEPTION OF TRAIN ON NON-SIGNALLED LINE**

-NIL

6.2.1.4 **DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.**

-NIL

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

NIL.

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

b. All running lines are track circuited. In case of failure of track circuits, the clearance of the nominated line has to be ensured physically before piloting 'IN' a train.

**6.3 CONDITIONS FOR TAKING “OFF” APPROACH SIGNALS:-**

Reception of train is governed by GR's 3.38, 3.40, 3.47, 4.17 & SR 3.42.03, 3.36.02, 3.36.04 & other relevant provisions of GR and SR, BWM and SWR of the station.

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

If a signal once taken 'OFF' for reception/dispatch of a train, has to be, in an emergency put back to 'ON' In case of reception signal, the route over which the train would pass shall not be altered until after the train has come to stand unless the route has to be altered to avert an accident. In case of departure signal, before changing the points or allowing any other movements the "Authority to Proceed" if any, handed over to the Loco Pilot must be with drawn and the Loco Pilot of the train concerned shall be advised of the change in writing and his acknowledgement will be obtained in a memo. [Refer SR 3.36.02 (a) & (b)]

**6.4. SIMULTANEOUS RECEPTION/DESPACTH, CROSSING AND PRECEDANCE OF TRAINS:**

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

1.	While Receiving of an Up train on line No.3 (Loop Line) by setting the route to over run line.	Receiving of a Dn train on Line No. 1 OR dispatching an Up train from the Line No. 1 OR 2.
2.	While Receiving of an Up train on line No.1 (Loop Line) by setting the route to over run line.	Receiving of a Dn train on loop Line No. 3 OR dispatching an Up train from the Line No. 2 or 3.
3.	While Receiving of a Dn train on line No.3 (Loop Line) by setting the route to over run line.	Receiving of an UP train on Line No. 1 OR dispatching a Down train from the Line No. 1 or 2.
4.	While Receiving of a Dn train on line No. 1 (Loop Line) by setting the route to over run line.	Receiving of an UP train on Line No. 3 OR dispatching a Down train from the Line No. 2 or 3.

**ADEQUATE DISTANCE (Signal Over Lap):**

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

**CLEARANCE OF ADEQUATE DISTANCE**

<b>FOR UP TRAINS:-</b>		
Line Number	From	To
3. Loop Line	Loop Line Starter signal No. 7	Upto the end of the over run line when point No.24 is normal OR upto Up Advanced Starter Signal No.15 when overlap is set for Main Line.
2. Main line	Last trailing Point No.22A	Up to Up Advanced Starter Signal No.15.
1. Loop Line	Loop Line Starter signal No. 9	Upto the end of the over run line when point No.22 is normal OR upto Up Advanced Starter Signal No.15.
<b>FOR DOWN TRAINS</b>		
3. Loop Line	Loop Line Starter signal No. 10	Upto the end of the over run line when pint No.21 is normal OR upto DN Advanced Starter Signal No.16.
2. Main line	Last trailing Point No.21A	Up to DN Advanced Starter Signal No.16.
1. Loop Line	Loop Line Starter signal No. 8	Upto the end of the over run line when point No.23 is normal OR upto DN Advanced Starter Signal No.16.

**RECEPTION OF TRAINS:**

Before admitting a train on any line, it must be ensured that the correct route set indication for the respective line shows 'White' indication in the illuminated panel diagram. To receive a train for which line clear is given, the Station Master 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 seeing the panel indication or by physical verification of the nominated route in case of failure of track circuit.

He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

Unless the panel indication for the concerned line is 'Clear' even with other conditions satisfied, the operation of panel control button by the Station Master on duty will not permit the concerned Home signal to be taken "OFF". However, reception of trains will be possible in such case with "Calling-on signal" provided below Home signal unless the first track circuit in advance of home signal does not show Red indication.

The Station Master on duty shall then operate the concerned push button on control panel for taking "OFF" the reception signal. He shall then verify on the panel that the correct reception signal is taken "OFF".

**6.5 COMPLETE ARRIVAL OF TRAINS:**

The entire block section between BSTP-NANR and BSTP-STBJ are monitored by axle counter system and the position of the block section whether occupied or clear is indicated in panel board at SM office. As soon as train enters in to that block section. The RED indication appears on control panel. After whole train clears the block section GREEN indication appears on the control panel. 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.

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

In case of failure of Axle counter at either end of block section, the SM on duty shall obtain complete arrival certificate from the guard of the train in the complete arrival register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the last vehicle indicator vide SR 4.16.05 that the train arrived complete.

In case a train passes incomplete, action shall be taken as per SR.4.17.02. the "Train out of Block Section" report shall be withheld to the station in rear until complete arrival certificate is received from the station in advance supported by a private number.

Train passing on adjacent line shall be stopped and Guard and Loco Pilot shall be issued with caution Order to proceed cautiously and stop short of any obstruction as per SR. 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the 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 himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting and then

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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)]

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]

#### 6.7 **TRAINS RUNNING THROUGH:**

The procedure detailed in Para 6.4, 6.5 of this SWR 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 & SR 4.42.2]

The SM on duty shall depute his pointsman with hand signal to the other side of the passing train to observe the passing train. The TPM on duty at the other side shall wave Green hand signal horizontally until any thing wrong with the train is noticed. If the TPM on duty deputed at the other side notices anything is wrong with passing train then he shall at once change his Green had signal to the RED 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]

#### 6.8 **WORKING IN CASE OF FAILURE:**

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

##### i. **TRACK CIRCUIT**

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

##### ii. **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 SM on duty. After resetting the first train shall be piloted OUT to the concerned Block section for moralizing the system of working. Details of operation involved in resetting of axle counter is given in Appendix-'B'.

##### iii. **BLOCK INSTRUMENT**

In the event of partial/total failure of Block Instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR [Ref. SR 6.02.04 & 6.02.06]

##### iv. **RECEPTION OF A TRAIN ON BLOCKED LINE**

Whenever trains are to be admitted on an obstructed line the Calling-on signal may be taken –off. If calling-on signal failed then the SM on duty shall authorize the on duty TPM with form 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 point 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 45mts. From the point of obstruction to indicate to the Loco Pilot as to whose the train shall be brought to a stand.

v. **RECEPTION OF TRAIN ON NON-SIGNALLED LINE**

-NIL-

vi. **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]

vii. **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Superintendent/Station Master irrespective of the position of the switches 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]

viii. **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.

ix. **DEFECTIVE/DAMAGED POINTS**

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

**CRANK HANDLE**

**CONTROL POINTS**

CH-1	-----	21. 23.
CH-2	-----	22. 24.

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are in Normal Position and the route is not locked for whatever reasons. Crank Handle can be released by operating 'TRANS' push button and concerned Crank Handle control push button

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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.

SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. If the Crank Handle is in locked condition and it is necessary to operate the concerned point by Crank Handle due to whatever reason then the concerned signal should be put back to "ON" position then Crank Handle Key can be taken out after two minutes by pressing common 'TRANS' push button and concerned Crank Handle control push button simultaneously. 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 SS/SM on duty. (Details of use of Crank Handle as per Appendix-'B').

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

#### 6.9 **PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIALS LORRIES ETC"**

Motor trolleys are run in accordance with rules laid down in SR 15.25.07. Material lorries will work in accordance with SR 15.27.05 to 15.27.08.

#### 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 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]

#### **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. [Refer SR 3.36.03 (b)]

#### **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

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that order, so that in case of any mishap, the chances of casualties are minimized. In case all the lines are occupied by passenger carrying trains, points should be set for a loop line to negotiate of which the speed of the incoming train would be reduced, which in turn would minimize the consequences/causalities. While doing so, points may be set for a loop occupied by a train, if any, whose engine is facing the direction of approach of the incoming train rather than for a loop occupied by a train whose passenger coach will incase, of collision, receive the impact.

## 8. **SHUNTING :**

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual. [Refer GR 5.13, 5.14, 5.16, 5.19, 5.20 to 5.23, 8.09, 8.10, 8.12, 8.13, 8.14 & 8.15]

The Guard/SM on duty is authorized to supervise shunting operation. Normally back shunt signals and caution aspect of 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.

### 8.1 **SHUNTING IN THE FACE OF AN APPROACHING TRAIN :**

Shunting in the face of an approaching train is prohibited.

### 8.2.A **SHUNTING OUTSIDE HOME SIGNAL :**

The concerned section shall be blocked back for shunting out side Home signal provided the section is clear.

### B. **SHUNTING OUTSIDE STATION 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 **PROHIBITION OF SHUNTING SPECIAL FEATURE IF ANY:**

While performing shunting engine shall be leading towards falling gradient i.e. towards NANR end.

### 8.4. **SHUNTING IN THE SIDING**

NIL

### 9.0 **ABNORMAL CONDITION: -**

#### 9.1 **PARTIAL FAILURE: -**

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

A. Failure/Suspension of Block Instrument or Track Circuit or Axle counters- 'Line Clear' shall be obtained on the Telephone attached to the Block Instrument or station telephone where provided exchanging ID number and supported by Private Number.

B. Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments.

'Line Clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.

C. Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or Railway auto phone or BSNL phone. 'Line Clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.

D. Failure/Suspension of Block Instrument or Track Circuit or Axle counters or Telephone attached to the Block Instruments or Railway auto phone or BSNL phone or control phone.  
'Line Clear' shall be obtained on the VHF sets by exchanging identification Number supported by a Private Number.

The authority to proceed for the Loco pilot of a train is a paper line clear ticket to pass the last stop signal at 'ON' position.

(ii) 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.

(e) 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.

(f) 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.

(g) 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) **FAILURE OF BPAC**

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- (a) If any Block proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- (b) No train should be allowed on signal to leave a station in any particular direction unless:-  
Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- (c) A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the SM on duty at the receiving station through exchange of Private Number.
- (d) Reset arrangements are provided in the operation cum indication panel in the SM's office for sections BSTP-NANR and STBJ-BSTP with TLBI. The Up & Dn resetting key along with reset push button for all sections are provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.
- (e) Procedure for emergency operation of points by crank Handle: The detailed procedure for emergency operation of points by crank Handle of Motor operated points is given in Appendix-B.
- (f) Procedure for emergency operation of points with point zone axle counter / Track circuit failure & emergency route release is given in Appendix-B.
- (g) Certification of clearance of track before calling on signal, operation initiated:  
Before taking 'Off' calling on signal during failure of track circuits / Axle counter, the route & the clearance of the track over which train would pass to be verified SM on duty.
- (h) Reporting failure of points, Track circuit / Axle counter and interlocking:-  
Whenever there is a failure of points, track circuit / Axle counter or any other interlocking gear at the station, the failure should be reported by SM on duty to the concerned signaling maintenance staff on duty responsible for attending to the and only after receipt of the written memo from signaling maintainer for rectification of the fault, SM should restore the normal working.
- The entries in failure register to be done with message to SCR.

## 9.2 **TOTAL FAILURE OF COMMUNICATION: -**

In the event of total failure of Communications either between BSTP-STBJ and BSTP-NANR Station as the case may be, 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 of 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
  - b) Train Engine
  - c) Motor Trolley with Guard/ SM
  - d) Tower Wagon with Guard/ SM
  - e) 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 is 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.

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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]

- 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 includes

(i) **CAUTION ORDER:**

The speed restriction to 15KMPH during clear visibility and 10kmph when visibility is obstructed shall be clearly indicated. The existing speed restricting shall be indicated.

- (ii) An authority (T/369(3b)) to pass the last stop signal at 'ON' position.

- c) 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 Line No.1 Loop line starters signals on either direction during day and night are the visibility test objects for Up and Down 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.

a) **INSTRUCTIONS:**

- 1. This register contains the following parts.

Part. - I: Particulars of fog signal men posted at the station from time to time.

Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.

Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.

Part – IV: Particulars of issue and testing of fog signals at the station.

- b) In charge of the station shall ensure that the information maintained in the register is kept upto date and is accurate in all respects.

- c) Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

**APPENDICES**

- APPENDIX-A : WORKING OF LEVEL CROSSING GATES
- APPENDIX-B : SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION AND 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 BASANTPUR STATION**

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## **APPENDIX 'B' TO STATION WORKING RULES OF BASANTAPUR STATION**

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

This is a 'B' class station Standard –III Interlocking (with isolations and is provided with Electronic interlocking system). The points and Signals etc. are power operated from composite miniature central panel or VDU installed in the Station Master's Office. The Station is equipped with Multiple Aspect Colour Light Signaling.

#### **1. DESCRIPTION OF PANEL:**

The yard layout is depicted on the panel. All the points and Signals of station are operated from the Control Panel located at the station. The Control panel consists of an inclined console on which there is a clear geographical representation of the entire track layout with signals and points. The track layout is subdivided according to the track circuits configuration with distinctive colours for each track circuit on the track line adjacent to each signal. There exists an exist Push Button at the center of the berthing of each route. The entrance Push Button (Signal Button) is coloured with 'RED' for running signals with the number of relevant signal printed just by the side of the button. The entrance Route Push Buttons are coloured with "WHITE". The signal buttons are to be operated in conjunction with Route buttons. All the various Push buttons on the panel are spring loaded and required Push buttons are pressed for operation. Common Route buttons for taking 'OFF' starters and individual Route buttons for taking of Advanced Starters are provided.

#### **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 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 board.

- 1.2.1 When a point is set and mechanically locked in Normal position, a steady 'WHITE' strip light on straight line indication appears on panel suggesting that the point is in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a steady 'WHITE' strip light in reverse indication appears on panel 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 by setting of route.
- 1.2.4. When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal or 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©. 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©. In such case both ends of the point shall be clamped and padlocked.

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### 1.2.7 **DESCRIPTION OF POINT PUSH BUTTON**

#### a) **NANR END POINTS:**

SL. No.	Button No.	Colour	Description
1.	21A/B WN	BLACK	Crossover point between Main Line and Line-3.
2.	23A/B WN	BLACK	Crossover point between Main Line and Line-1.

#### b) **STBJ END POINTS**

SL. No.	Button No.	Colour	Description
1.	24A/B WN	BLACK	Crossover point between Main Line and Line No.3.
2.	22A/B WN	BLACK	Crossover point between Main Line and Line No. 1.

### 1.2.8 **DESCRIPTION OF POINT GROUP BUTTON:**

These are two buttons at the top of panel one for reverse to Normal and other for normal to Reverse operation of point. 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.

#### **MAIN SIGNAL PUSH BUTTON:**

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

#### **SHUNT SIGNAL PUSH BUTTON:**

These are Yellow coloured buttons situated near shunt signals.

#### **CALLING-ON SIGNAL PUSH BUTTON:**

Red with White dot coloured buttons situated near Calling-on signal.

### **DESCRIPTION OF SIGNAL BUTTONS:**

SL. No.	Button No.	Colour	Description
1.	C1 A/B/C	RED with WHITE Dot	Up Calling-on signal for Line No.1, Main Line, Line No.3
2.	S-1 A/B/C	RED	Up Home signal for Line-1, Main Line, Line-3
3.	S-2 A/B/C	RED	Down Home Signals for Line-3, Main Line, Line-1
4.	C2 A/B/C	RED with White dot.	Down Calling-on signal for Line-3, Main Line, Line-1
5.	SH3 A/B/C	YELLOW	Shunt signal for Line-1, Main Line, Line-3
6.	SH4 A/B/C	YELLOW	Shunt signal for Line-3, Main Line, Line-1
7.	S-7	RED	UP Loop Line Starter (L-3).
8.	S-8	RED	DN Loop Line Starter (L-1).
9.	S-9	RED	UP Loop Line Starter (L-1).
10.	S-10	RED	DN Loop Line Starter (L-3).
11.	S-11	RED	UP Main Line Starter.
11.	S-12	RED	DN Main Line Starter.
12.	S-15	RED	UP Advanced Starter.
13.	S-16	RED	DN Advanced starter.

**1.3.2 SIGNAL INDICATIONS:**

The aspects of the signals as obtained from site at any time are shown on the panel 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 for initiation of route for Home signals. Common route buttons on either side are provided for taking off starters. Individual route button is provided for taking off Advanced Starter 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/Down Home Signal for Loop Line (L-1) set to Main Line.
2.	L1-UN1	WHITE with BLACK dot.	Route button for Up/Dn Home Signal set to over run line /Up Calling –on/ Dn Calling –on /Shunt signal Nos.3/4 for Loop Line (L-1).
3.	L2-UN	WHITE	Route button for Up/Down Home/Calling-on/shunt signal No.3/ Shunt Signal No 4 for main line (L-2).
4.	L3-UN	WHITE	Route button for Up/Down Home Signal for Loop Line (L-3) set to Main Line.
5.	L3-UN1	WHITE with BLACK dot.	Route button for Up/Dn Home Signal set to over run line /Up Calling –on/ Dn Calling –on /Shunt signal Nos.3/4 for Loop Line (L-3).
6.	15AT-UN	WHITE	Common route button for Up Loop Line-1 Starter Signal No. 7, Up Main Line Starter Signal No 11, Up Loop Line-2 Starter Signal No 9.
7.	16AT - UN	WHITE	Common route button for Down Loop Line-2 Starter Signal No. 8, Down Main Line Starter Signal No 12, Down Loop Line-1 Starter Signal No 10.
8.	15- UN	WHITE	Up Advanced starter route button
9.	16-UN	WHITE	Down Advanced starter route button.

**CRANK HANDLE PUSH BUTTON**

1.	CH-1	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 21 & 23 along with "GROUP TRANS" Push Button
2.	CH-2	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 22 & 24 along with "GROUP 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 KEY.		To lock the control panel to prevent unauthorized operation.
3.	GROUP TRANS BUTTON	WHITE WITH BLACK DOT.	To be pressed to transmit control for siding Crank Handle Or L.C. Gate operation along with concerned siding / Crank Handle / L.C. Gate Button .

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4	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT.	To be pressed to withdraw/Normalise the control of siding / Crank Handle/ L.C Gate operation along with concerned siding/ Crank Handle/L.C Gate push Button.
5	POINT NORMAL GROUP PUSH BUTTON	BLACK WITH RED DOT.	To be pressed to initiate "NORMAL" setting of point along with concerned point push button.
6	POINT REVERSE GROUP PUSH BUTTON	BLACK WITH RED DOT.	To be pressed to initiate "REVERSE" setting of point along with concerned point push button.
7	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT.	To be pressed for emergency Route Release.
8	SIGNAL CANCELLATION CAN-PUSH BUTTON	RED	To be pressed for canceling a signal which is already taken "OFF" or to release a Route after passage of train.
9	SIGNAL LAMP FAILURE/POINT LAMP FAILURE CK	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp failure/ point failure Buzzer.
10	EMERGENCY POINT OPERATION KEY	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone axle counter or track circuit failed.
11	POWER FAILURE ACK	RED	To be pressed for acknowledging power failure Buzzer.
12	BUTTON HELD ACKNOWLEDGEMENT PUSH BUTTON	WHITE WITH RED DOT.	To be pressed for silencing button Held Buzzer in case of any push button remains pressed after the button is released.
14	CH1 CONTROL PUSH BUTTON.	BLUE	To be pressed along with Group Trans Button for extracting keys from RKT to operate the respective points.
15	CH2 CONTROL PUSH BUTTON.	BLUE	To be pressed along with Group Trans Button for extracting keys from RKT to operate the respective points.
18	RESET PUSH BUTTON FOR LV AT NANR END	RED	To be pressed along with SM's reset key for initiating reset for axle counter for section BSTP – NANR.
19	RESET PUSH BUTTON FOR LV AT STBJ END	RED	To be pressed along with SM's reset key for initiating reset for axle counter for section BSTP – STBJ.
20	RESET KEY FOR LV AT NANR END		Reset key to be inserted on the panel for resetting the Axle counter for section BSTP – NANR
21	RESET KEY FOR LV AT STBJ END		Reset key to be inserted on the panel for resetting the Axle counter for section BSTP – STBJ.
22	PREP RESET		Green and flashing Yellow indication will appear on the panel after resetting.
23	UP TRAIN ARRIVAL ACK PUSH BUTTON	CHOCOLATE WITH WHITE	To be pressed for stopping the Up train arrival Ack buzzer for section NANR-BSTP.
24	DOWN TRAIN ARRIVAL ACK PUSH BUTTON	CHOCOLATE WITH WHITE	To be pressed for stopping the Down train arrival Ack buzzer for section BSTP-STBJ.
25	PANEL/PC SWITCH CHANGE OVER	RED	For selection of panel or VDU (PC) operation mode.

**1.5 VHLC INDICATION**

A Vital Harmon Logic Controller (VHLC) Indication is provided on the top of the panel for noting the failure of the VHLC of EI unit. This EI unit consists of two VHLC called system 'A' and system 'B'. These two systems status (ON/OFF) will be indicated separately on the panel. If the VHLC unit is ON, 'GREEN' indication will appear and if OFF 'RED' indication appears. If any one of the "ON" line system fails automatically "OFF" line system will change to 'ON' line with a gap of 120 seconds. A system failure buzzer is provided on the panel board. To stop the buzzer, SM on duty has to press the system failure acknowledgement button provided on the top of the panel and intimate the same to ESM/JE/SE in charge for rectification of failure.

**1.6 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.

**1.7 FAILURE OF SIGNAL LAMP AND MUTING BUTTON.**

LED signal lamps have been used at this station. Failure of lamp will be indicated by the appearance of 'RED' light on panel along with audible buzzer, which can be stopped by pressing the acknowledgement button. But the RED light will glow till replacing the bulb rectifies the failure. For rectification of failure SM on duty should inform the ESM/JE/SE about the Lamp which has failed.

**1.8 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.

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

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

When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this first the emergency route release button (white with red dot) positioned in the top of panel to be pressed and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white flashing light will lit indicating that the timer is working. After 120 seconds, the white flashing light along with the white strip of light will disappear suggesting the route has been released.

When route indication does not disappear after arrival/passage of the train for which signal is taken off the above procedure for emergency route release is to be followed.

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 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.

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

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit shall insert SM's emergency point operation key and shall press the emergency point operation button along with relevant point button simultaneously. Then retaining point button pressed emergency point button is 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. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

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

NIL

1.12 **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. 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.

1.13 **OVERLAP TIME RELEASE (WHITE LIGHT):**

Separate indications (White Light) for each overlap is provided near the starter signal to indicate the free or locked condition of 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.

1.14 **TRACK CIRCUITS:**

Entire station section is track circuited. In addition there are short length track circuits in advance of Advanced starter Signals/Home signal in both the directions. For Calling-on signals (91M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited (i.e. 15AT and 16AT in Up and Down directions respectively). Indications for the above track circuits are available on panel at SM's office. White light over track on the panel when route is set for any signal indicates track clear and Red light indicates track occupied condition.

**1.15 AXLE COUNTER:**

The entire Block Section between the stations BSTP-NANR & BSTP-STBJ are monitored by Digital Axle counter system. These Digital Axle Counters are provided for Last Vehicle check on either Block Sections as well as for dispatching a train in block section from either end of the section. These Digital Axle counter system counts the Axles 'IN' and counting axles 'OUT' in the respective block sections which indicate whether the concerned sections monitored by digital axle counters is clear or occupied.

Fiberglass trolley wheels are to be provided for push trolleys in lieu of trolley suppression track circuits.

A pair of electronic axle counter is provided between BSTP-STBJ on one just beyond Down advanced starter of BSTP and another just beyond Up advanced starter of BSTP for monitoring the block section.

Another pair of electronic axle counter is provided between BSTP-NANR on one just beyond Up advanced starter of NANR and another just beyond Down advanced starter of BSTP for monitoring the block section.

The position of the Block section whether cleared or occupied are reflected in the panel diagram provided in the Station Master's office which shows 'GREEN' when 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 Axle counter failure for the particular section and necessary action as per GR 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. [Refer GR 14.13]

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 Train has arrived complete with its Last Vehicle at the receiving station, by exchanging Private Number then resetting to be complied with.

**2.0 STATION MASTER'S PANEL CONTROL KEY:**

The panel is fitted with Station Master's lock up key to prevent any unauthorized operation of the panel. The Station master on duty is the only authorized person to operate the panel and the panel key must always remain in his personal custody vide SR.3.36.03 and GR.5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and signal cancel button without releasing the panel 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, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and padlocking all

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facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group trans button (white with black dot) is provided at the top of the panel board. This button has two indications, viz., WHITE and RED. The WHITE indication suggests that the crank handle key is in its interlocked position of the panel. This is called 'Crank Handle Key' 'IN' indication.

The 'Red' indication suggests that the crank handle key is locked and not free for 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 room and the key is with SM on duty. This crank handle is common 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 start 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 become in operative from the panel. After completion of point operation the CH key will be retransmitted to the station electrically by inserting and turning CH key in RKT at Location box. The white flashing indication appears on the panel board. The flashing will be stopped and steady indication will appear 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 once 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, on pressing of signal button and concerned route button white strips of light will appear on the entire route confirming that the Route is set and locked. The concerned signal for the route will clear and the signal 'OFF' indication will appear on the panel.

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 once 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 advanced 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 white strip of light will appear on the panel.

To take off the starter signal the concerned signal button simultaneously with common Route button to be pressed for two to three seconds and released. This will clear starter signal and a white strip of light will appear on the route 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 on blocked line.



To take off Calling-on signal the train must come to a stop at the foot of the home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the panel. The point on particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by pressing signal and route button or by crank handling in the event of failure of operation of points through panel. After the route is set, the Calling-on signal button 'C1'/'C2' (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. A flashing White light appears indicating that Calling-on timer is initiated and 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.

**Note:**

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 Down Calling-on signals and Up and Down 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 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 and detection assembly to ensure proper setting and locking of points 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 and Advanced Starter signals are 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 is locked up with Station Master's key.

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

Whenever Home signal becomes defective train can be admitted by taking off Calling-on Signal. When both Home & 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 nominate route correctly from the panel 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 the facing and trailing end points in both cases under the supervision of SM on duty at station.

Then the SM on duty shall hand over the written authority T/369(3b) to the TPM for piloting IN the train. While going to the Home signal the TPM will satisfy himself that the points have been correctly set clamped and padlocked. After the train has brought to a

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dead stop at the Home signal the TPM shall hand over the pilotmemo to the Loco Pilot board the engine and display proceed hand signal to pass the defective Home signal.

**NOTE:**

1. The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of both end points, for admission of train.
2. The keys of padlocks 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.

**B. PILOTING OF TRAINS - OUT OF STATION YARD :**

When starter signal has becomes defective the SM on duty shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the out going train with the help of crank handle. The TPM on duty shall clamp and padlock both facing and trailing end points under the supervision of SM on duty in both the cases. He shall also advise the gateman to close the level crossing gate/gates on the route for dispatch of a train. The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the train. There after he shall display proceed hand signal at the foot of the starter signal vide SR 3.70.01.

In case of advance starter signal becomes defective such signal shall be passed on the written authority on PLCT. proceed hand signal shall not be displayed vide SR 3.70.02. the TPM shall hand over the PLCT to the Loco Pilot after the train stopped.

**NOTE:**

1. The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points and ensure the clearance of any obstruction including level crossing gate on the concerned route for dispatch of a train.
2. The keys of padlocks 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.

**2.11. SHUNTING:**

1. For shunting, caution aspect of starter signals shall be used.
2. For back shunting individual shunt signal No.3 and 4 are provided at Bansapani and Tomka 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 individually from the Panel 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 White strip of lights will appear on the route and the concerned shunt signal shall display 'OFF' aspect.

**3.0. DESCRIPTION OF SIDING:**

NIL

**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

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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 locked for whatever reasons. Crank handle can be released by operating common 'Group TRANS' push button and crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

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 shunting 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.

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). The Station Master on duty must press the emergency route cancellation button and the signal button in accordance with 1.9 confirming to the section for which emergency route release is desired.

A flashing indication will appear indicating that the timer has started operating and after a lapse of 120 seconds, the desired route will be released, 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 **LOCKING OF RELAY ROOM:**

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 & the other key with the Signal Maintainer. Whenever required the SM shall handover the key to the maintainer with proper acknowledgement in the basement/relay room key register. The maintainer on receipt of the key from the 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.

#### 7.0 **MAINTENANCE OF S & T INSTALLATION and ADHERENCE TO MAINTENANCE SCHEDULES:**

- 7.1. Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, level crossing gates, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.
- 7.2. 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.

#### 8.0 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF AN INTERLOCKING GEAR:**

- 8.1. 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.

#### 8.2. **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.

#### 8.3. **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).

#### 9.0. **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  
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Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of GR and SR.15.08.01.

#### 10.0 **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.

#### 11.0 **PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF CRANK HANDLE:**

- 11.1 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.
- 11.2 The cases of failure of motor operated points should be promptly reported to the concerned Signal maintainer/Signal Inspector for rectification.
- 11.3 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.
- 11.4 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 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.
- 11.5 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the Station Master on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.

#### 12.0 **SUSPENSION OF LAST STOP SIGNALS:**

When the Block Instrument is suspended with its handle in "TRAIN GOING TO" for whatever reason, the concerned Last Stop Signal Controlled by the Block Instrument must be treated as suspended and trains shall be piloted "OUT".

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 General Rules 3.61 to 3.72 and relevant Subsidiary Rules vide General Rule 3.49 (4).

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The Station Master on duty shall not grant or ask "LINE CLEAR" if the axle counter section indicates section occupied and will treat the Block Instrument as suspended.

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

- 13.1 Axle Counters are provided for block sections between NANR-BSTP and BSTP-STBJ for last Vehicle checking.
- 13.2 The occupation and clearance of the axle counter section are indicated on the panel by 'RED' and 'GREEN' light.
- 13.3 If any Block proving Axle Counter section fails, the Last Stop Signal at the sending station cannot be taken 'OFF' and Block instrument at receiving Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- 13.4 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.
- 13.5. No train should be allowed on signal to leave a station in any particular direction unless:- Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- 13.6. A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition through co-operative feature of both the ASMs 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 ASM at the receiving station through exchange of Private Number.
- 13.7. Reset arrangements are provided in the operation cum indication panel in the SM's office for sections NANR-BSTP & BSTP-STBJ with TLBI. The Up & Dn resetting key along with reset push button for either sections are provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button shall be recorded giving details of date, train number, time, number registered on the counter and reasons for resetting and initial each such entry.

13.8. **RESETTING OF DIGITAL AXLE COUNTER WHEN FAILED(FOR SECTION NANR-BSTP and BSTP-STBJ)**

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (G) does not appear in the panel, The receiving station SM shall call the attention of the station in rear 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.

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

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(Flashing Green) and Reset initiated indications(YELLOW) are provided in the reset Panel.

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

- a. Insert SM's respective LV reset key, turn right.
- b. press respective LV reset button provided on the panel.
- c. Release SM's respective LV reset key and reset button.
- d. Turn left the SM's respective LV reset key and remove it.
- e. The system obtains preparatory reset state and reset initiated (YELLOW) and preparatory reset indication(Flashing GREEN) glows on the panel.
- 1) When the reset function in respective site is effective then preparatory reset indication will show "steady GREEN" and reset initiation indication will disappear.
- 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 shall record in the Train Register the resetting operation giving details of train number, time, Private Number exchanged with SM in rear, giving reasons for the resetting operation. If the axle counters functioning properly after the arrival of piloted train, then Block Section cleared indication 'Green' will appear on the panel and the concerned Block working will be normalized.

If the axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block section shall be suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

#### 14.0 **SIGNAL LIGHTS:**

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

#### 15.0 **SEALING OF EMERGENCY OPERATION BUTTONS ON PANEL:**

The buttons for the emergency operation of points and route release are provided with sealing arrangement. Before resorting to the emergency operation of any point or emergency route release the SM on duty has to break the seal on the concerned emergency operation button. After completion of emergency operation, on duty SM shall inform S&T staff for resealing the same. After receiving information from on duty SM, S&T staff shall reseal the button

#### 16.0 **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 GR and SR.4.01.01 and 4.01.02.

#### 17.0 **TELECOMMUNICATIONS:**

- a) The Station is connected to Khurda Road Control by a telephone on the JKPR-NYG Control Circuit.
- b) The Station is connected to JKPR-NYG traction control circuit.
- c) Telephone attached to Token Less Block Instruments at either direction.
- d) Railway auto Telephone is provided between both side adjacent stations.
- e) Telephone communication is provided between Station Master on duty and both end Crank Handle Locations.
- f) VHF set is provided at this station.

#### **NOTE**

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



## APPENDIX 'B1'

### APPENDIX 'B1' TO STATION WORKING RULES OF BASANTPUR STATION

#### VISUAL DISPLAY UNIT (VDU)

Note:

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

#### 1.0 SYSTEM OVERVIEW:

In addition to the panel, an operator console (VDU) consists of a Pentium-4 CPU with a high resolution 21" colour monitor, keyboard and pointing device (mouse) are provided. Both the serial ports (Com1 and Com2) in the CPU are connected to the VHLC 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, 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, 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 21069

One two-position switch (RED coloured) 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/ASM 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 ASM/SM in VDU this facility is provided on VDU. On duty SM/ASM 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. ASM/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.

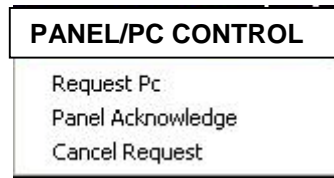


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**PANEL TO VDU (PC-COMPUTER) CHANGE OVER:**

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.

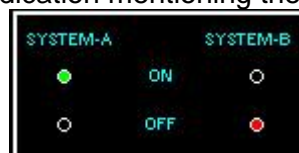
**VDU (PC-COMPUTER) TO PANEL CHANGE OVER:**

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.

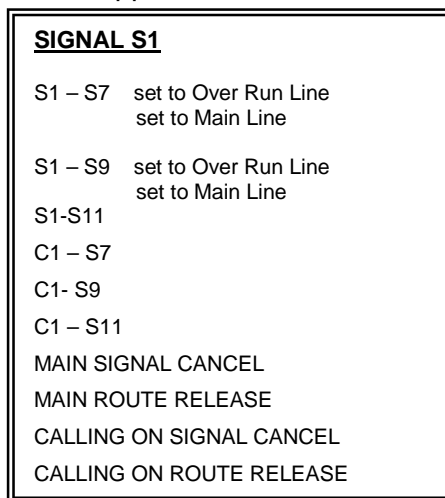
**OPERATIONAL PROCEDURE:****VDU INDICATIONS:****VHLC INDICATIONS:**

In Panel/ PC there are two system indication, Green indication mentioning the On-line system and the Red indication mentioning the sleep mode system.



**SIGNAL OPERATION:**

To Take-Off a Signal with the desired route the SM/ASM 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/ ASM.

1. All the Crank handles of the required route related points to be in Key in condition.

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

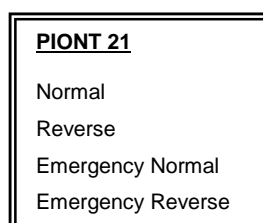
To cancel a signal route when the route is set and the signal in taken-off, click on the signal cancellation menu (Main/ Calling on) of the concerned signal, the signal will immediately go to ON aspect, after doing so click on the Route release menu the route locked indication will starts flashing for 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/ASM.

**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/ASM 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/ Axle counters 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 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/ASM.

- (d) **EMERGENCY REVERSE OPERATION:**  
When the Point zone Track circuits/ Axle counters failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

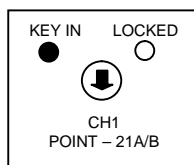
Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation the Key to be KEY OUT by clicking KEY OUT menu.

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.

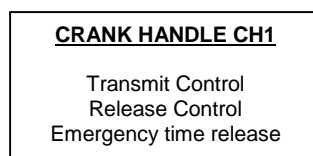
After the Emergency point operation a specific veeder counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM/ASM.

**CRANK HANDLE CONTROL OPERATION:**

To Transmit or Release control of the Crank Handle, click on the crank handle 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 /ASM has to click transmit control menu. After transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the EKT. After extracting the key from the EKT, the key IN indication will disappear.

When the Manual point operation is over, after putting the KEY in the EKT, A KEY IN flashing indication will appear on the panel, Now the SM/ ASM 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.

**LEVEL CROSSING GATE OPERATION:**

NIL

**EMERGENCY GATE OPERATION:**

NIL

**APPENDIX 'C' TO STATION WORKING RULES OF BASANTPUR STATION**

**ANTI COLISION DIVICE (RAKSHA KAVACH)**

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## **APPENDIX 'D' TO STATION WORKING RULES OF BASANTAPUR STATION**

### **DY. 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 rules, safe working instructions and Station Working Rules. 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 clear and tidy. 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(c) & (d) 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 Dy.SS special attention is drawn to the GR 5.01 to 5.23 where details are indicated.

### **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 Dy.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 Dy.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 fully about their duties and responsibility.

The Dy.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 Dy.SS In charge.

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

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

1.3 **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the Dy.Station Supdt., in accordance with the instructions laid down in the Accident Manual. Whenever the Dy. 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.

1.4 The Dy.SS shall test the working of the reception signals daily during the day when there is no train due to arrive/leave the station. He shall also test the working of points crossings etc. and record the result in the SM's diary.

1.5 **ASST. STATION MASTER/STATION MASTER:**

He shall work in train passing duties and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time. The ASM/Station Master on duty shall record in the diary the condition of all the running lines, the caution orders in force at the time of handing over charge. These entries shall be countersigned by the ASM/SM coming on duty and taking over charge that 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 Dy.SS all irregularities and accidents in course of his shift duties. During the absence of Dy.SS, the duty of Dy.SS will devolve on him. His special attention is drawn to chapter-II of GR & SR 2000 and GR5.01 to 5.08 with relevant SRs.

**TRAFFIC POINTSMAN:**

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

He shall remain responsible for:

- i) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation.
- ii) Coupling and un-coupling of vehicles.
- iii) Protection of line in an emergency
- iv) Piloting and hand signaling 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.
- v) Attending off side to observe safe running of run through trains at stations and correct display of hand signals and ringing the station bell.
- vi) Securing of vehicles, as directed, protection of vehicles of a train.
- vii) Being conversant with the layout of the yard and compliance of rules relating to shunting operation.
- viii) Observing General Rules 5.13 to 5.21 and relevant subsidiary Rules during shunting.
- ix) Cleaning and lighting up hand signal lamps if required. Oiling and cleaning of clamps and padlocks if required.
- x) 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.
- xi) Cleaning and Dusting of SM's office room furniture and equipments Office.

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- xii) Carrying messages cell books etc where a separate call boy messengers are not posted.
- xiii) Working as fog signal man as and when required.
- xiv) Filling up the fire buckets with sand/water.
- xv) Getting train interact arrival register (T/1410) signed by the Guard as and when required.
- xvi) Any other duties entrusted to him by the SM on duty from time to time.

**GENERAL**

- i) A set of flags and battery operated LED based flashing lamp will be part of the essential equipment of the staff while on duty. He shall not leave the station except when required by the SM on duty or with his permission and shall comply with subsidiary rules 4.42.02(b)(i) and (d).
- ii) Staff working at the station must be able to distinguish Up and Down line clear tickets 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 BASANTAPUR 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	20
2.	Battery operated led based flashing lamps	6
3.	Hand signal Flags	6 set (6 Red & 6 Green)
4.	Safety chain with Padlocks.	6
5.	Clamps with padlocks	12 (4 at station and 4 in each goomty)
6.	Skids	6
7.	Fire and Sand Buckets.	7
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	4

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**APPENDIX 'F' TO STATION WORKING RULES OF BASANTAPUR 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:-**  
There is no halt station on either end of block section.

(T.LAHIRI)  
DSTE/KUR

(D.R.PAUL)  
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