



EAST COAST RAILWAY

WALTAIR DIVISION

STATION WORKING RULES OF

GIDAM STATION

SI/WRD-23187

EAST COAST RAILYWAY

WALT AIR DIVISION

INDEX OF CORRECTION SLIPS

[illegible]

INDEX

<u>S No</u>	<u>DESCRIPTION</u>	<u>PAGE No</u>
1.	Station Working Rules -----	1-16
2.	Appendix-A -----	17
3.	Appendix-B -----	18-50
4.	Appendix-C -----	51
5.	Appendix-D -----	52-53
6.	Appendix-E -----	54
7.	Appendix-F -----	55
8.	Appendix-G -----	56

EAST COAST RAILWAY**WALTAIR DIVISION****STATION WORKING RULES OF GIDAM[GIZ][BROAD GAUGE]**

No.WTP/5/SWR/GIZDate of Issue:

Date brought in force:

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 rule in the above books.

(1) STATION WORKING RULE DIAGRAM:

- a) Station Working Rule Diagram No:- SI/WRD/23187 ALT-'A'
- b) CSTE/E.Co.Rly/DRG No:-SI-23187 ALT-'A'
- c) Date up to which corrected:

(2) DESCRIPTION OF STATION:**2.1. GENERAL LOCATION:**

a)	Name of the station	GIDAM (GIZ)
b)	Class of station	'B' class
c)	Section	Kottavalasa-Kirandul
d)	Double line/Single line/ Multiple Line	Double line
e)	Electrified/Non Electrified	Electrified
f)	Gauge BG/MG/NG	BG
g)	Railway	East Coast Railway
h)	Route	'E' Special
i)	Situated at	Km 394.810
j)	Reckoned from	Kottavalasa
k)	Operation	Centrally operated Visual Display Unit (VDU).
l)	Type of Interlocking	Standard II (R)

2.2. BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUT LYING SIDINGS:

S.No	Adjacent BlockStation	Distance	Direction
1.	DABPAL	10.988 KM	KTV end
2.	DANTEWARA	7.318 KM	KRDL end
3.	Provision of IBS	Nil	
4.	Automatic signal	Nil	
5.	DK station/Outlying sidings	Nil	
6.	Passenger halt	Nil	

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

Between Stations	The Point from which the Block section commences	The Point at which the 'Block Section' ends
DWZ-GIZ DN.	From DN advanced starter signal no. 26 of DWZ.	BSLB of GIZ.

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GIZ-DWZ UP.	From UP advanced starter signal no. 25 of GIZ.	Point No. 31A of DWZ.
GIZ-DPF DN.	From DNAdvanced starter signal no.26 of GIZ.	Point No. 32A of DPF.
DPF-GIZ UP.	From UP advanced starter signal no. 25 of DPF.	Point No. 31A of GIZ.

2.4. GRADIENTS:

Station Towards		Chainage		Inter Distance	Gradient
		From	To		
GIZ-DWZ	UP	0.000 F/CSB	516.00M	516.00M	1 in 407.366 Raising
		516.00M	1209.00M	693.00M	1 in 119.689 Falling
		1209.00M	1689.00M	480.00M	1 in 105.07 Falling
		1689.00M	2589.00M	900.00M	1 in 99.95 Falling
		2589.00M	2809.00M	220.00M	1 in 171.20 Falling
		2809.00M	3009.00M	200.00M	1 in 124.53 Falling
		3009.00M	3129.00M	120.00M	1 in 88.43 Falling
		3129.00M	3369.00M	240.00M	1 in 118.99 Falling
		3369.00M	4389.00M	1020.00M	1 in 766.34 Falling
		4389.00M	Into section	--	1 in 104.37 Falling
	DN	Chainage		Inter Distance	Gradient
		From	To		
		0.000 F/CSB	618.00M	618.00M	1 in 407.366 Raising
		618.00M	709.00M	91.00M	1 in 133.0 Falling
		709.00M	1449.00M	740.00M	1 in 112.84 Falling
		1449.00M	1689.00M	240.00M	1 in 100.89 Falling
		1689.00M	2589.00M	900.00M	1 in 102.20 Falling
		2589.00M	3369.00M	780.00M	1 in 122 Falling
		3369.00M	4389.00M	1020.00M	1 in 720 Falling
		4389.00M	Into section	--	1 in 100 Falling
GIZ-DPF	UP	Chainage		Inter Distance	Gradient
		From	To		
		0.000 F/CSB	781.70M	781.70M	1 in 407.366 Falling
		781.70M	1085.50M	303.80M	Level
		1085.50M	1676.00M	590.50M	1 in 350 Raising
		1676.00M	2216.00M	540.00M	1 in 125 Raising
		2216.00M	2366.00M	150.00M	Level
		2366.00M	2726.00M	360.00M	1 in 100 Falling
		2726.00M	2876.00M	150.00M	Level
		2876.00M	3476.00M	600.00M	1 in 135 Raising
		3476.00M	4046.00M	570.00M	1 in 140 Raising
		4046.00M	Into section	---	Level
	DN	Chainage		Inter Distance	Gradient
		From	To		
		0.000 F/CSB	781.70M	781.70M	1 in 407.366 Falling

		781.70M	1085.50M	303.80M	Level
		1085.50M	1676.00M	590.50M	1 in 350 Raising
		1676.00M	2216.00M	540.00M	1 in 125 Raising
		2216.00M	2366.00M	150.00M	Level
		2366.00M	2726.00M	360.00M	1 in 100 Falling
		2726.00M	2876.00M	150.00M	Level
		2876.00M	3476.00M	600.00M	1 in 135 Raising
		3476.00M	4046.00M	570.00M	1 in 140 Raising
		4046.00M	Into section	---	Level

2.5. LAY OUT:

A) RUNNING LINE IN THE MAIN YARD:

S No	Name of the Line	Electrified/Non Electrified	Platforms with Length
1.	Line No.1 (Common Loop)	Electrified	Medium Level (400.00M x 10.0M)
2.	Line No.2 (DN Main)	Electrified	--
3.	Line No.3 (UP Main)	Electrified	--
4.	Line No.4 (UP Loop)	Electrified	Medium Level (400.00M x 10.0M)

B) SIDINGS:

S No	Name of the Siding	Electrified/Non Electrified	Platforms with Length	Isolation from Running line
1.	Hot Axle Siding	Electrified	--	Isolated from Line No.1 by DS with Motor operated on both ends
2.	Sub Station Siding	Electrified	--	Isolated from Hot Axle Siding by HP.

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

S.No	Name of the Line	Holding Capacity in CSL	Direction of movements
1.	Line No.1 (Common Loop)	765M (From STR to STR)	a) Trains coming from DWZ and proceeding towards DPF are DN trains. b) Trains coming from DPF and proceeding towards DWZ are UP trains.
2.	Line No.2 (DN Main)	807M (From STR to SH)	
3.	Line No.3 (UP Main)	770M (From STR to SS)	
4.	Line No.4 (UP Loop)	750M (From STR to SS)	

2.5.2. NON RUNNING LINES AND THEIR CAPACITY IN CSL:

S.No	Name of the Line	Holding Capacity in CSL	Whether Electrified/Non Electrified
1.	Hot Axle Siding	60M (From GJ to GJ)	Electrified.
2.	Sub Station Siding	52.582M (From FM to DE)	Electrified.

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2.5.3. ANY SPECIAL FEATURES IN THE LAYOUT:

--NIL--

2.6. LEVEL CROSSINGS:

--NIL--

(3) SYSTEM AND MEANS OF WORKING:-

<i>System of Working in force</i>	Absolute Block System of Working.
<i>Double Line/Single Line</i>	Double Line.
<i>Block Instruments</i>	SGE type Lock and Block Instruments.
<i>Co-operative/Non Co-operative</i>	Non Co-operative.
<i>Block Telephone</i>	Attached with Block Instruments.
<i>Staff responsible for custody of key and operations.</i>	SM on duty

(4) SYSTEM OF SIGNALLING AND INTERLOCKING:

1.	<i>Standard of Interlocking</i>	Standard-II (R).
2.	<i>Type of signaling</i>	MACLS
3.	<i>Mode of operating the signals</i>	Electronic Interlocking
4.	<i>Provision of Calling-On signals</i>	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).
5.	<i>Provision of shunt signals</i>	Shunt back signals SH-3(A/B) and SH-4(A-D) are provided towards DPF end of the yard and towards DWZ end of the yard respectively. Shunt Signal SH15 is provided on Line No.2 towards DWZ end.
6.	<i>Emergency Cross over</i>	Nil
7.	<i>Track circuits</i>	The provision of track circuits is mentioned in Appendix-B Para No.12 of this SWR.
8.	<i>Axle counters</i>	Provided High Availability Single Section Digital axle counter (HASSDAC) for last vehicle verification between GIZ-DPF and GIZ-DWZ Block sections.
9.	<i>Crank Handles</i>	When any point fails to operate normally by the Route Setting operation through VDU, it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual chapter-2, para-2.18 & 2.19 and

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		Para No.4.7 of Appendix 'B' of this SWR.
10.	<i>Emergency Point operation</i>	Emergency point operation facility is provided to operate the point from the Panel in case of failure of point controlling track circuit/Axle Counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

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

Custody of Relay room key and procedure for its handover and taking over between SM and S&T staff has to follow the procedure as per JPO issued by COM and CSTE vide No. JPO/02/2012 dated 29.08.2012. Relay room is provided with two independent locks. The key of one lock shall be in the personnel custody of Station Master on duty and the key of other lock shall be in the custody of S&T Maintainer. In the event of necessity such as for attending failure, or regular maintenance, on being requisitioned by S&T maintainer, SM shall hand over the key to the Maintainer. On completion of the work, maintainer shall lock the relay room and shall return the key to SM. The particulars of such transactions shall be entered by the SM in the relay room key register vide OM 2015 para No.13.16.

4.2. POWER SUPPLY:

The power supply arrangement for this station is described in detailed in the Para No.27& 28 of APPENDIX-B.

(5) TELECOMMUNICATIONS:

- i) The station is connected to KRPU-KRDL control Circuit.
- ii) The station is connected to KRPU-KRDL traction power control circuit.
- iii) Railway Auto Telephone provided at the station is connected to Divisional Exchange at WAT through Exchange at JDB.
- iv) Telephones attached to Double line Lock and Block Instrument are connected to adjacent stations on either side.
- v) Hot Line communication is provided between GIZ-DPF and GIZ-DWZ stations.
- vi) Telephone communication is provided between Station Master on duty to UP CH locations and to DN CH Locations.
- vii) 25w VHF set is provided at the station for emergency communication.
- viii) The Station is provided with BSNL/CUG telephone.

5.1. FAILURE OF COMMUNICATION: -

- a) In the event of total failure of communications between the adjacent block stations SR 6.02.03 shall be observed for double line section for working the train.

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- b) In the event of partial interruption/failure of communications between the adjacent block stations SR 6.02.06 shall be observed for working the train.

(6) SYSTEM OF TRAIN WORKING:**6.1. DUTIES OF TRAIN WORKING STAFF:**

The following is the complement of Operating Staff provided at this station in each shift for train passing duty.

COMPLEMENT OF STAFF	STAFF IN EACH SHIFT
Station Master	1
Traffic Points Man	1

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

6.1.1. 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 first facing point and advanced starter signal in each direction. The private number book should be under the custody of SM on duty that is authorized to use it.

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

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

Fresh assurance shall be obtained in the Assurance Register when:

1. He joins at the station as a new member.

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

6.2. CONDITIONS FOR GRANTING LINE CLEAR:

- a) The trains are worked under Absolute block system of working with Double line between GIZ-DPF&GIZ-DWZ and MACLS signaling vide GR 8.03.
- b) Adequate distances for reception of trains in this station as follows.

Line No.	Up Trains		DN trains	
	From	To	From	To
Line No.1 (Common Loop)	Starter Signal No.17	The end of Sand Hump. OR Up to Advanced Starter Signal No.25.	Starter Signal No.12	The end of Over run line. OR Up to Advanced Starter Signal No.26
Line No.2 (DN Main)	--	--	Starter Signal No.14	Up to Advanced Starter Signal No.26
Line No.3 (UP Main)	Starter Signal No.13	Up to Advanced Starter Signal No.25	--	--
Line No.4 (UP Loop)	Starter Signal No.11	The end of Over run line OR Up to Advanced Starter Signal No.25.	--	--

6.2.1. ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING ORDESPACKING A TRAIN:-

--NIL--

6.2.1.1. SETTING OF POINTS AGAINST BLOCKED LINE:

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points in rear end should immediately 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)].

Safety Point Alarm Unit (SPA):

A safety Point Alarm is provided on the VDU table with different indications:

1. On complete arrival of a train at the station, the SM has to set the Points immediately against the occupied line.

2. In case the SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived.
3. The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.
4. On setting the points against the occupied line, the RED indication will disappear.

If all the lines of 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 stabled load or a goods train in that order so that, in case of mishap, the chance of casualties are minimized [Refer SR.3.51.06 (b)]. In case of all the lines are occupied by Coaching train, points should be set for a loop line to negotiate with the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities.

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

6.2.1.2. RECEPTION OF A TRAIN ON BLOCKED LINE:

Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2) (a) or if calling signal cannot be taken off, trains are to be piloted in on a written authority on Form T/509 given by SM on duty and delivered by a competent railway servant to the Loco Pilot of the train as per GR 5.09 (2)(C)(3)(4)(5) and SR 5.09.01.

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 COMMONSTARTER SIGNAL:

NIL

6.2.1.6. ANY SPECIAL CONDITIONS:

a) SPECIAL RESTRICTIONS:

1. Shunting in face of approaching train is prohibited on both ends due to falling gradient from block section to station section.
2. Engine to be attached towards falling gradient i.e towards station section at DWZ end.

b) SPECIAL INSTRUCTIONS:

1. Up Starter Signal No.11 is placed at a distance of 3M from the replacement track circuit glued joint in order to increase the CSL, as per Railway board's

Letter No.(i) 2012/sig/SEM-II/Misc, dated 10.10.12. (ii)
2012/safety/(A&R)/1915 dated 13.06.13.

2. Due to existence of gradient steeper than 1 in 400 beyond 50M of outer most points of this station the following stipulations are followed vide SOD revised 2004, Chapter-2, Note (E) of Item No.2.
 - i) While shunting towards UP Advanced Starter Signal No.25 a Live Engine to be attached towards falling side of the gradient and GR 5.20 to be strictly followed.
 - ii) Trains should not be drawn up to the last stop signal No.25 towards DWZ end and held up on the steep gradient in order to clear the reception line for giving permission to approach to the following train. No shunting beyond outermost points on the steep gradient side should be allowed unless a locomotive is attached at the lower end of the load from the point of view of gradient.

6.3. CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-

The SM on duty shall nominate a Clear line not only up to the station but also for an adequate distance beyond it for reception of trains.(Refer GR. 3.36, 3.40, 4.17 and SR 3.36.01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.47.01, 4.17.02 and Block Working manual)

6.3.1.RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON":

Station master should ensure that signal is put back to 'ON' after passage of the train as per GR 3.36 (2) (b).

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

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

1.	Reception of a DN train on Line No.1 (Common Loop) setting overlap to Overrun line.	AND	Dispatch of another DN train from Line No.2.
2.	Reception of an UP train on Line No.1 (Common Loop) setting overlap to Sand Hump.	AND	Dispatch of another UP train from Line No.3 or 4.
3.	Reception of an UP train on Line No.4 (UP Loop) setting overlap to Overrun line.	AND	Dispatch of another UP train from Line No.1 or 3.

6.5. COMPLETE ARRIVAL OF TRAINS:

The entire block section between GIZ-DPF and GIZ-DWZ on both UP and DN lines are provided with High Availability Single Section Digital Axle Counter.

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For Section GIZ-DPF:

A Pair of High Availability Single Section Digital axle counter is provided between GIZ-DPF one at just beyond DN advanced starter signal no.26 of GIZ and another on 2T2 track circuit of DPF for last vehicle verification. Another Pair of High Availability Single Section Digital Axle Counter is provided between DPF-GIZ one at just beyond UP Advanced starter Signal No.25 of DPF and another on 1T2 track circuit of GIZ for last vehicle verification.

For Section GIZ-DWZ:

A Pair of High Availability Single Section Digital axle counter is provided between GIZ-DWZ one at just beyond UP advanced starter signal no.25 of GIZ and another on 1T2 track circuit of DWZ for last vehicle verification. Another Pair of High Availability Single Section Digital Axle Counter is provided between DWZ-GIZ one at just beyond DN Advanced starter Signal No.26 of DWZ and another on 2T2 track circuit of GIZ for last vehicle verification.

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

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

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

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

6.6. DESPATCH OF TRAINS:

- a) Dispatch of trains is governed by the provisions of GR. 3.42 and SRs 3.36.04(b), 3.42.04; 3.42.01(a) and BWM 3.07(5)(a), (e), (f) & (g) and other relevant provisions of G & SR, BWM and SWR.

b) DESPATCH OF TRAINS FROM NON-SIGNALLED LINE:

Dispatch of trains from non-signalled line is governed by the provision of GR 5.11 and SR 5.11.01.

c) ISSUE OF CAUTION ORDERS:

Whenever in consequence of the line being under repairs or for any other reasons special precautions are necessary a Caution Order detailing the Kilometres and Speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Loco Pilot in terms of GR 4.09 and SR thereto.

6.7. TRAINS RUNNING THROUGH:

In addition to the procedure detailed in paras "Reception and Dispatch of trains" rules laid down in GR 3.40, 4.17, 4.42 with relevant SRs 3.42.02 (a) (iii) and other relevant provisions of G&SR, BWM, OM shall be followed. (Refer GR 4.1, 4.11(2)).

6.8. WORKING IN CASE OF FAILURE:

<i>Track Circuits</i>	In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.
<i>Axle Counters</i>	If the axle counter fails between the block sections, resetting procedure should be adopted as per Para 6.1 of SWR (APP-B). If the axle counter indication does not appear 'GREEN' & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for their rectification.
<i>Block Instruments</i>	In the event of failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR (Refer SR 6.02.03, 6.02.04 & 6.02.06).
<i>Reception of a train on obstructed line</i>	Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2)(a) or if calling signal cannot be taken off, trains are to be piloted as per GR 5.09(2)(C)(3)(4) (5) and SR 5.09.01.
<i>Reception of a train on non-signalled line</i>	NIL
<i>Defective Signals</i>	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c) shall be followed. In case of disconnection of signal and interlocking for repairs and maintenance procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, station master on duty shall before giving line clear initiate action in accordance

	with the procedure laid down in GR and the relevant SRs (Refer 3.57, 3.69, 3.49 (4), 3.68 to 3.77).
<i>Defective Interlocking</i>	When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping, padlocking of points for admission of train. [Refer SR 3.69.03 (c) & 3.69.01].
<i>Defective/Damaged Points</i>	The procedure detailed in Para No.4.1(4) of Appendix-B shall be followed.

6.9. PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIAL LORRIES ETC”:

Motor trollies shall be worked as per GR 15.25 and SR thereto, BWM 5.39, 5.40, 5.41, 6.11(1)(2), 6.12, 6.13, 6.14(2)(a) and circulars and orders issued from time to time.

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

Tower Wagon/OHE cars shall be worked as per GR 17.08 and SR thereto and BWM 4.39.

(7) 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. 'Line Block' is to be activated on VDU by SM on duty following procedure laid in para No.5.4.1 & 5.4.2 of Appendix-B. 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. [GR 5.23 and SR 5.23.01]

(8) SHUNTING:

8.1. GENERAL PRECAUTIONS:

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16 to 5.23, 8.05, 8.06, 8.14 and 8.15 with relevant SR's and OM 7.01, 7.07, 7.08, 5.15 (1) (B) and 5.1 (2) (B) shall be followed.

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

8.2. SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in face of an approaching train is prohibited on both ends vide GR 8.09.02 (ii) (a).

8.3. PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:

- i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.
- ii) Fly shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).
- iii) Shunting is not permitted in the yard unless the engine is leading towards the falling gradient within the Station Section.

8.4. SHUNTING ON SINGLE LINE:

Not Applicable

8.5. SHUNTING ON DOUBLE LINE:

a)	<i>Block back</i>	The procedure of Block Back given in BWM 5.15 (1) (b) shall be followed
b)	<i>Block Forward</i>	GR 8.05 and SRs there to shall be followed.
c)	<i>Up to IBS</i>	NIL
d)	<i>Beyond the IBS</i>	NIL
e)	<i>During failure of Block Instrument</i>	Shunting in the block section in advance/in rear shall not be preformed unless the section is clear of all obstructions and the block section is Blocked back/Blocked forward as the case may be. SM shall fin the line block collars on respective Block Instrument.

8.6. SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD:

- i) While performing shunting in the siding it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines occupied in shunting. The relevant provisions of GR 5.14 and SR thereto shall be meticulously followed.
- ii) As soon as the Key is extracted from RKT for shunting operation in the siding taking off from Line No.1 the reception and dispatch signals from and to Line No.1 are locked.

(9) ABNORMAL CONDITION:-

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

- i) During partial interruption/failure of electrical communication instruments SR 6.02.06 shall be followed.
- ii) The authority to proceed in the occupied block section in case of obstruction of line or accident etc is T/A-602 and SR 6.02.05 shall be followed.
- iii) Trains delayed in the block section: GR 6.04 and relevant SRs shall be followed.
- iv) Failure/ passing of IBS signed in ON position: NIL.
- v) Failure of Axle Counter Block/BPAC : As per Appendix-'B'.
- vi) Failure of MTRC: Not applicable.

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

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- (i) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points are mentioned in Para No.5.3, 5.3.1 and 5.3.2 of Appendix-'B' of this SWR.

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

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

Emergency point operation facility is provided to operate the point from the VDU in case of failure of point controlling track circuit.

For doing the Emergency Point Operation click on the Emergency Point operation icon provided on VDU. Now track the mouse pointer over the KEY IN option. By doing this a Password window appears. Enter the User name and Password. The user name is ECOR and the password of this station is GIZ. Then the red colour Emergency point key indication will be changed as Green colour indication. Now the Emergency point operation can be carried out by the following steps. Track the pointer to the corresponding Point which is intended to operate and then click the mouse button. After doing so, a pop-up menu will appear consisting point normal, point reverse, Emergency normal and Emergency reverse options. Normally Emergency normal and Emergency reverse options are in disable mode and these are in enable mode only when the Emergency point Key is in condition. By left click on Emergency normal or Emergency reverse as the case may be, point gets operated and flashing indication will appear the indication will be steady after the point is set to Normal or reverse as the case may be. After the completion of Emergency point operation, the key is to be KEY OUT by clicking KEY OUT menu. The user name and password is to be given for KEY OUT also.

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

Rules regarding locking of points and damaged points vide GR 3.39 and GR 3.77 to be followed.

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

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

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

- (i) Whenever there is a failure of points, Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working.
- (ii) The entries in failure register to be done with message to the section controller.

9.1. TOTAL FAILURE OF COMMUNICATION:

- a) In the event of total failure of communication on double line, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03.
- b) During partial interruption of communication the rules laid in SR 6.02.06 shall be followed.

9.2. TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

In the event Single line working on double line section when one line is obstructed the trains shall work as per the provision laid down in SR 6.02.01.

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

- i). In the event of total failure of communication, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03.
- ii). In the event of necessity to send a train to assist the crippled trains, SR 6.02.05 shall be followed.

(10) VISIBILITY TEST OBJECT:

The signals lights of DN Starter Signal No.12 and UP Starter Signal No.17 of Line No.1 are earmarked to serve as visibility test object during day and night 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:

- (i) During thick, foggy or tempestuous weather impairing visibility of the Signals the SM on duty shall initiate action to depute Fog signal man with detonators vide GR 3.61 in order to indicate the location of the station approach signals to the Loco pilot of an approaching train.
- (ii) The fog signal man shall proceed to the 1st stop signal of the station and place one detonator at a distance of 270M from the 1st approaching stop signal towards the approaching train and another detonator at a distance of 10M from the 1st one and he shall stand 45M away from the detonator.

- (iii) The fog signal man shall be permanent employee, no temporary or casual labour shall be deployed as fog signal man.
- (iv) The assurance of fog signal man available at the station (including engineering branch if available) shall be obtained in the fog signal register every year in the month of "OCTOBER".
- (v) Details of supply of detonators available stock, use and testing etc., shall be maintained in the fog signal register of the station as per GR 3.64 and SRs there to.

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

LIST OF APPENDICES:

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

APPENDIX 'A'

WORKING OF LEVEL CROSSING GATES AT GIDAM STATION

--NIL--

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APPENDIX 'B' TO STATION WORKING RULES OF GIDAM STATION

(Detail description of signalling and interlocking installations, instructions for working them normally and in emergencies etc. including power supply arrangements).

1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATIONS:

GIDAM is a Class 'B' station provided with Standard-II (R) Interlocking. The station is provided with Route setting type Electronic Interlocking between points, signals, track circuits and other signaling gears. The station is equipped with Multiple Aspect Colour Light Signaling. All points and signals are power operated through a central **Visual Display Unit (VDU)** installed in the SM's Office.

2. DESCRIPTION OF OPERATOR CONSOLE CUM VISUAL DISPLAY UNIT (VDU):

The Operator Console cum Visual Display Unit (VDU) in dual configuration is provided for operation of Signals, points, Crank handles and controls etc. A mimic yard diagram based on SI plan No. SI/23187 ALT-'A' shall be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the station mimic diagram of VDU will be dynamically updated.

3. SYSTEM OVERVIEW

The PC-based (**operator VDU**) for the operation of Signals, Points, Crank Handles and Siding Controls, etc., the SM of a station required to be familiar on the specific station's SWR (station working rules).

Operator VDUs consist of CPU with a color monitor, keyboard and pointing device (mouse). Through communication media the exchange of control and indication messages takes place with operator VDU. The Software is installed to display the Station Yard Mimic diagram on the operator VDU and it allows access to all functions by selecting menus with a click of mouse on the corresponding function icon. By selecting the menu, the function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The operator VDU is used for controlling and monitoring the station. However, indications on the Station yard mimic diagram of operator VDU will be dynamically updated.

3.1. DUAL VDUs – MODE OF SELECTION:

The privilege has been given to the operator for controlling the station through VDU-1 or VDU-2. The Detailed procedure for change over the VDU control from VDU-1 to VDU-2 and vice versa is given Para No. 4.2 in this Appendix.

4. CONTROL(S) & INDICATION(S):**4.1. ICONS AND INDICATIONS PROVIDED ON THE VDU:**

In addition to mimic yard diagram including signal, points, track circuit, Axle counters, L.C. gates, sidings as indicated in the WRD, various other ICONS and

APPENDIX-'B'

indications have been provided on the VDU. A brief description of the same are described below.

SN	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1.	PC SM KEY	Green Colour when key is 'IN'	Ensures operation of VDU by authorized person	Protected by pass word
2.	---	Emergency Route release – UP & DN	Flashing indication appears when Emergency route release operation is initiated.	For each operation concerned counter shall register one count higher.
3.	Emergency Point operation key	Green light when key is 'IN'. Yellow light indication appears showing request for Emergency point operation is acknowledged.	Ensures emergency point operation by authorized person	Protected by Pass word. For each operation concerned counter shall register one count higher.
4.	Point failure Ack. button	Red	Flashing indication appears when any point fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement, buzzer stops. After verification at site inform S&T staff immediately if failure persists.
5.	Signal failure Ack. button	Red	Flashing indication appears when any signal fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement, buzzer stops. Inform S&T staff immediately if failure persists.
6.	CH-1, CH-2, CH-3, CH-4, -----, buttons	Yellow lamp indicates 'KEY IN'. Red lamp indicates ' CH LOCKED'	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red	

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APPENDIX-'B'

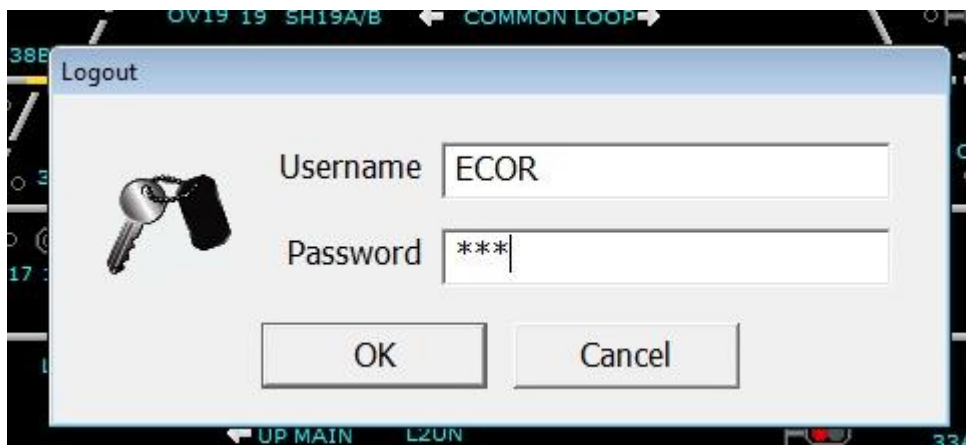
SN	ICONS	INDICATIONS	FUNCTIONS	REMARKS
			indication will glow.	
7.	SDG CNT-37, SDG CNT-39 buttons	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'SDG KEY LOCKED'	In normal condition yellow lamp will be lit. Whenever the Siding Control key is locked in route or otherwise red indication will glow.	
8.	'DN Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge it.	
9.	'UP Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge it.	
10.	DN Block release button	Yellow - Prepared for Block release.	On getting indication SM shall left click on the button icon which shall release Block Handle.	After complete arrival of train this will be activated
11.	UP Block release button	Yellow - Prepared for Block release.	On getting indication SM shall left click on the button icon which shall release Block Handle.	
12.	Line Block button	Red colour when blocked	SS/Dy. SS shall point the cursor on the icons provided on the berthing track and right click. One drop menu will appear indicating line blocked and un-blocked, SS/Dy. SS has to select the required menu.	When line block is selected the concerned button on the particular line turns to RED.

4.2. PC SM KEY:

To prevent the unauthorized operation by other than on-duty SM this facility is provided on VDU. On duty SM need to track the pointer to the "PC SMKEY" icon and by clicking the icon a drop down menu having the **KEY IN & KEY OUT** will appear.



By clicking the **KEY IN** menu using the left button of the mouse, a Password window will appear. SM need to enter the password and press the OK Button provided on the Password window. User Name and password for this station is ECOR and GIZ respectively.



Then PC SMKEY icon will turn to Green color. This will enable all the controls in VDU.



VDU Control Changeover Operations:

With Dual VDU concept, we can control either from A-VDU or B-VDU. VDU Changeover between two Systems can be done by the following ways.

1. When the A-VDU is active ONLINE, the SMKEY Status of B-VDU will be in KEYOUT Condition with Red Color
2. Whenever SM wants to change the control from A-VDU to B-VDU, he shall apply SMKEY IN at B-VDU. During this time A-VDU SMKEY will get KEYOUT and the

Color will turn to Red. Vice-versa,the same operation will be applicable to change the Control from B-VDU to A-VDU.

- 3.If ON-LINEVDU is failed, SM shall apply SMKEY IN at Standby VDU. Then the Standby VDU will come to ON-LINE.

The operator VDU is having controls to operate the field gears through the Mimic diagram. A Mimic panel diagram displayed on the operator VDU is an exact replica of yard that suits SI plan.

4.3. ELECTRONIC INTERLOCKING (E.I) SYSTEM INDICATIONS:

4.3.1. K5BMC System Failure Indications:

In PC there are two system failure indications such as ET FL & EI FL.During the failure a Red colour indication will start flashing as shown in the below figure.

a) ET LFL (Electronic Terminal Low Failure):

When any one of the ETPIO2 board fails, a red colour flashing indication appears on ET LFL.

b) ET HFL (Electronic Terminal High Failure):

Similarly when all the ETPIO2 boards of the K5BMC systemfail, it will be shown by the red flashing indication on ET HFL.

c) EI LFL (EI System Low Failure):

ET LINE2B status for two systems,Logic system Power Supply status, I/O Board & LINE2B Board Power Supply, OPC Converter Status & OPC Communication status for both the systems is monitored through EI LFL.

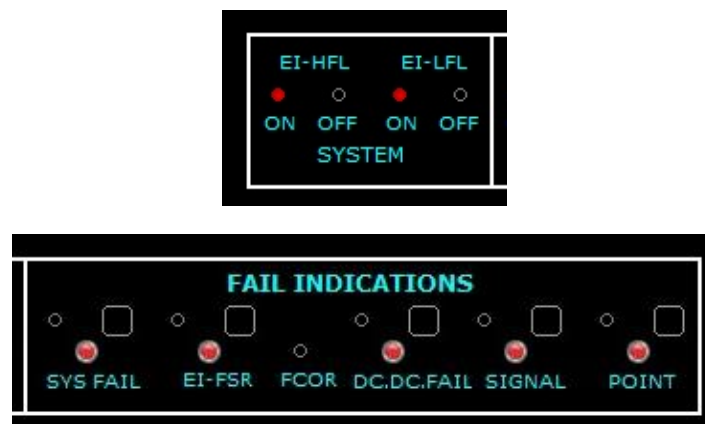
When any one of the above functions fail list will be displayed in EI LFL by a flashing red indication.

d) EIHFL (EI System High Failure):

ET LINE2B status for two systems, I/O Board & LINE2B Board Power Supply,OPC Communication status for both the systems & MTC Commutation status are monitored through EI HFL.

When any one of the above function fails it will be displayed in EI HFL by a flashing red indication.

OPC Communication Failure & ET LINE2B status failure indication will be displayed in EI HFL only when the healthy status is not available from both systems.



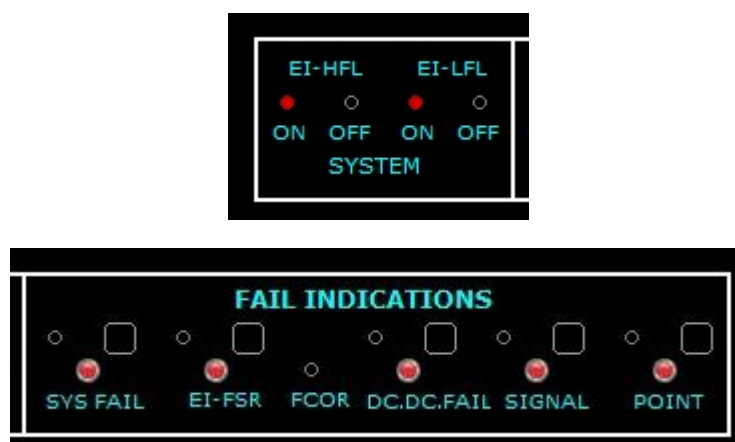
e) System failure Acknowledgement:

In the PC there is a Red colour button for acknowledging the system failure. Once the button is acknowledged, the buzzer will go off. The indication remains till the problem is rectified.



f) K5BMC System Healthy Indications:

When all the functions of K5BMC system is working properly without any failure, the System Healthy indication will be displayed by a steady green indication as shown in the below figure.

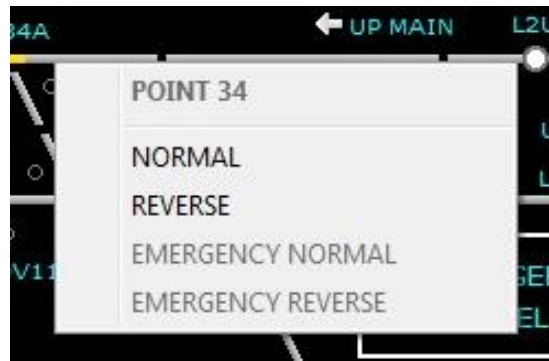


4.4. VDU ACTIVE INDICATIONS:

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

4.5. OPERATION AND INDICATION OF POINT:

To Operate the Point the SM needs to track the mouse pointer to concerned Point Button on the VDU, after clicking by the left button of the mouse a popup menu will appear as below:

**4.5.1. 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.

4.5.2. NORMAL TO REVERSE OPERATION:

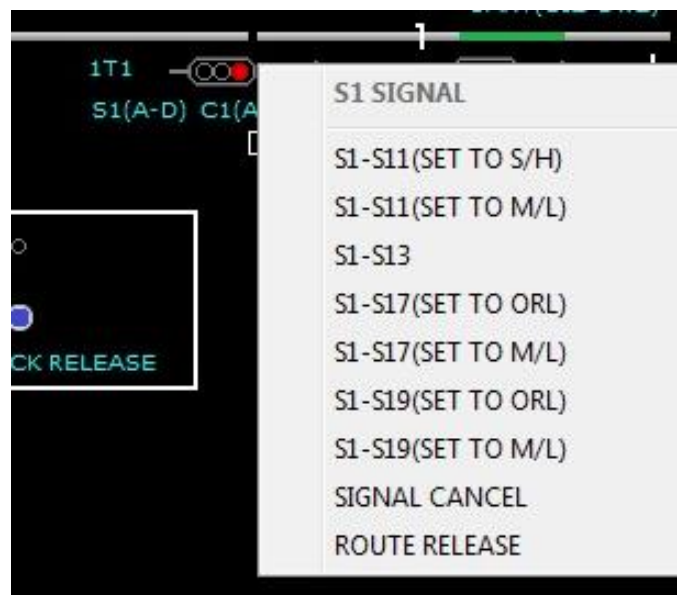
Track the pointer to **REVERSE** menu and click, a Reverse flashing indication will appear, the indication will be steady after the point is set to Reverse.

4.5.3. POINT INDICATIONS:

When the point is free a steady yellow strip of light will appear either in the normal portion of point zone (In case of cross over at both ends) or in the reverse portion of point zone depending up on the position of point, indicating that the point is set. When the point is operated from the normal to reverse the strip of light in the normal portion is disappears and starts flashing in the reverse portion and becomes steady when the point is set and detected. Similarly when the point is operated from the reverse to normal the strip of light in the reverse portion disappears and starts flashing in the normal portion and becomes steady when the point is set and detected. When the point is engaged in a route, a yellow indication will appear near the point and red indication appears in the point lock indication showing that the point is locked and cannot be operated.

4.6. SIGNAL OPERATION:

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



4.6.1. SETTING A ROUTE:

To set a route of a signal, click on a possible route of the signal, after doing, so a RED colour route initiation indication will be flashing and all the Normal/Reverse set indication of the Points in the route will start flashing if it is not available in required position. After setting of points in the route, overlap and isolation in required condition flashing indication will become steady and a complete yellow 'Route set' indication will appear over the route right from replacement track of the signal to the last track of overlap section of the route. Also the point lock indication will appear through Red indication near the point. Finally a route locked yellow steady indication will appear immediate to rear of the signal. Now the signal will be taken-off. The yellow route set indication will turn to red when the train occupies the concerned track circuit.



Conditions for setting a route:

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

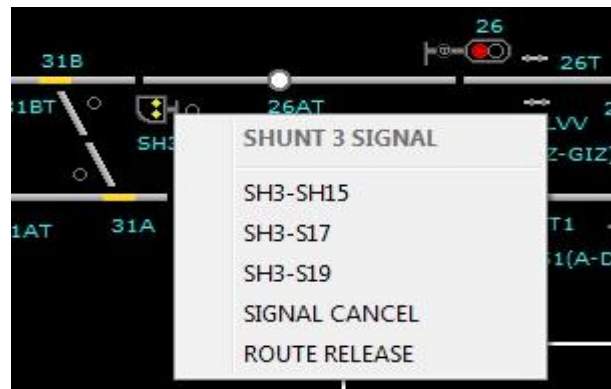
1. All the Crank handles of the required route related points to be in Key-IN condition.
2. All the related Siding control keys to be in Key-In condition.
3. If any Level Crossing gates are falling under the route that should be closed and locked (KEY IN).

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4.6.2. SHUNT SIGNAL OPERATION:

For setting and cancelling the signal route for the shunt signal the same procedure shall be followed as explained in section for Main signal operation. To Take-Off a Shunt Signal with the desired route the SM needs to track the mouse pointer over the concerned shunt Signal on the VDU, after clicking the left button on the mouse a popup menu will appear as below:

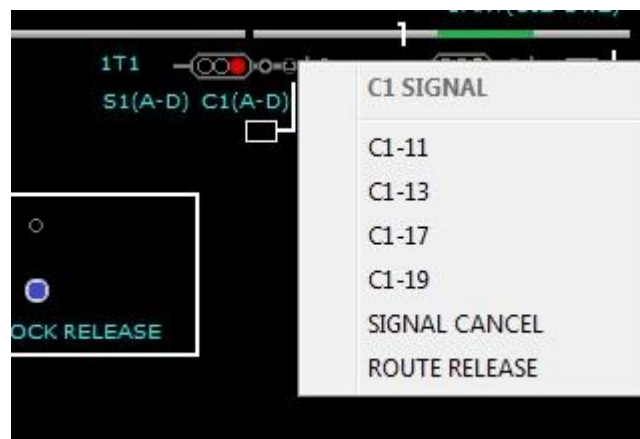


Then click the button of mouse on the required route on pop-up menu. After doing so, desired route will be initiated and the Shunt signal will be taken off.

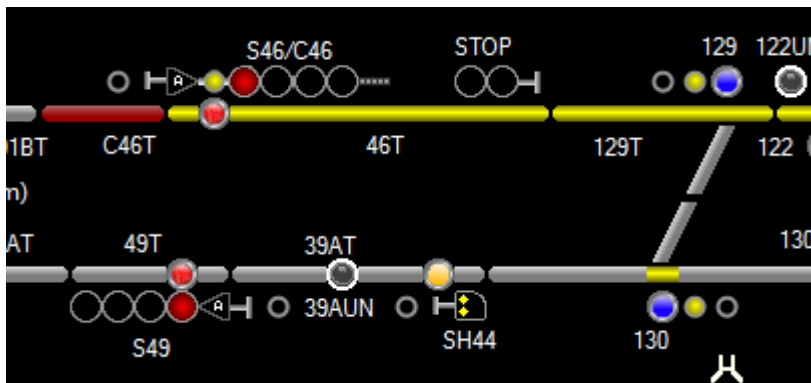
**4.6.3. CALLING ON SIGNAL OPERATION:**

Calling-on signal route set operation is similar to the same procedure as mentioned for the main signal. For calling-on Signal, route is set after a train occupies the approach track circuit in immediate rear of the stop signal. The calling on Signal is cleared after a lapse of 60 Seconds provided other conditions are fulfilled.

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 signal. When a train occupies the track circuit a RED light strip will appear on the VDU. The particular route on which train is intended to be received shall be set by tracking the pointer in VDU on to the signal below which the calling on signal is provided. Left click on the calling-on Signal which will appear a pop-up menu as follows.



Then the SM must drag the pointer and click over the required route as a result of which the calling-on signal will blink for 60 seconds. For all home signals the time delay is 60 seconds, the Calling-on signal clears i.e. a yellow light glows at the concerned calling-on signal on the VDU.



This action will be recorded in a respective counter of the counter box provided on SM's table. Every such operation shall be recorded by the SM on duty along with the reasons to do so. The calling-on signal route can be released after complete arrival of the train by Signal cancellation only.

4.7. CRANK HANDLE CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the Crank Handle is free. 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.

(ROHIT PUNIA)
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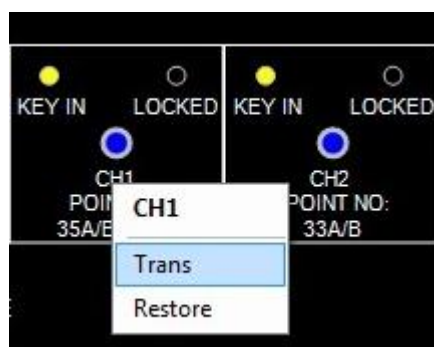
For Transmitting the Crank Handle KEY to the field personnel, SM /ASM has to transmit the control by clicking **TRANSMIT** on menu of the Crank Handle Button. After transmission, the KEY IN indication will start flashing; now the KEY can be extracted from the EKT. After extracting the key from the EKT, the key IN indication will disappear. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Crank Handle operation along with the latest counter number in a register.

When the Manual point operation is completed, after putting the KEY back in the EKT, corresponding Crank Handle KEY IN flashing indication will appear on the VDU. Now the operator has to Release the control for the steady indication, for that click on the Crank Handle and select the **RECEIVE** in the menu appeared.

A Crank handle locked indication (Red) will appear, when the particular point is locked through the signal route set over it or engaged on route setting in any other way.

4.8. SIDING CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicating that the Siding point is free. To Transmit or Release control of the Siding point, right click on the concerned Siding control button provided on the operator VDU.



For Transmitting the Siding control KEY to the field personnel, right click on the Siding control and select the **Trans** in the menu appeared. After transmission, the KEY IN indication will start flashing; now the KEY can be extracted from the EKT. After extracting the key from the EKT, the key IN indication will disappear.

APPENDIX-'B'

This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Crank Handle operation along with the latest counter number in a register.

When the Manual point operation is completed, after putting the KEY in the EKT, corresponding Siding control KEY IN flashing indication will appear on the VDU. Now the operator has to Release the control for the steady indication, for that right click on the Siding control and select the **Restore** in the menu appeared.

A Siding control locked indication (Red) will appear, when the particular point is locked through the signal route set over it or engaged on route setting in any other way.

4.9. OVERLAP TIME RELEASE:

A separate indication 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.

5. EMERGENCY OPERATIONS:

To carry out different emergency operations the following procedures are to be followed.

5.1. CANCELLING 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. Since all the Signals are having Dead approach, both the route locked indication near the signal and Emergency route release indication (UP or DN as the case may be) will start flashing. After the completion of 120 Seconds, route nomination and route locked flashing indication disappears and veeder counter provided for the route release provided in the counter box on the SM's table will change to next higher digit. This number should be recorded by the SM on duty who shall record the details of the Route cancellation along with the latest counter number in a register.

5.2. EMERGENCY POINT OPERATION:

When the point zone track circuits failed without any point lock condition through respective signal route(s), a point can be operated by the Emergency Point operation.

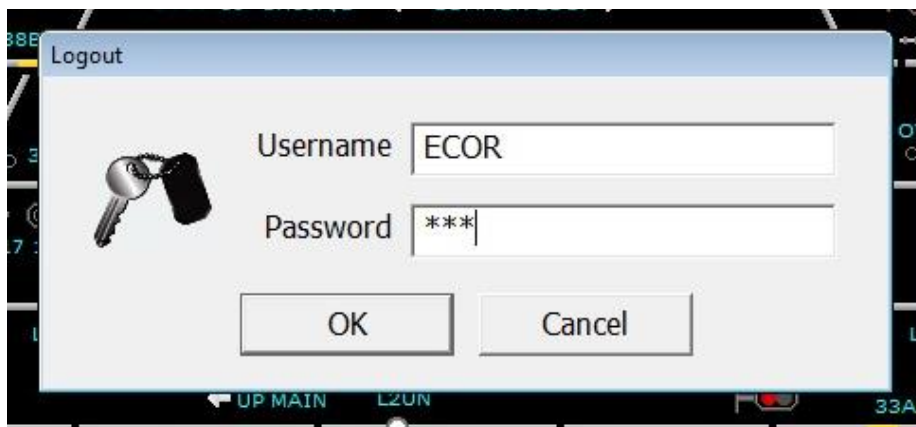
APPENDIX-'B'

Note: Before resorting to this operation SM on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction.

Before doing the emergency operation, SM on duty shall make the Emergency Point Operation Key is to be 'KEY IN'. To 'KEY IN' the Emergency Point Operation key click on the SM's Emergency point operation key a pop-up menu will be appears as follows.



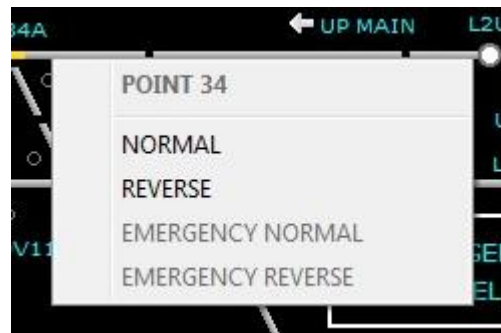
Click on the KEY IN in the menu appeared and shall provide User name and password for the same as follows.



The user name of this station is 'ECOR' and password of this station is GIZ. Then point operation can be done to either normal or reverse as per requirement.

5.2.1. EMERGENCY NORMAL OPERATION:

Track the pointer to the corresponding Point which is intended to operate and then click the mouse button. After doing so, a pop-up menu will appear as below.



Track the pointer to EMERGENCY NORMAL menu of the corresponding Point and click. After doing so point gets operated and Normal flashing indication will appear the indication will be steady after the point is set to Normal.

5.2.2. EMERGENCY REVERSE OPERATION:

Track the pointer to EMERGENCY REVERSE menu of the corresponding Point and click. After doing so point gets operated 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 will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SMon duty who shall record the details of the Emergency Point Operation along with the latest counter number in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT'. Same procedure as mentioned for KEY IN shall be followed for KEY OUT. To 'KEY OUT' the Emergency Point Operation key right click on the SM's Emergency point operation key a pop-up menu will be appears as shown in the Para No.5.2 above. Click on the KEY OUT in the menu appeared and shall provide User name and password. The user name of this station is 'ECOR' and password of this station is GIZ.

Note: The Emergency Point Normal and Emergency Point Reverse options are normally in disabled mode. These are enabled only when the Emergency Key is in position.

5.3. EMERGENCY CRANK HANDLE RELEASE OPERATION:

When a crank handle is locked due to route set earlier is not released or otherwise. To Transmit or Release control of the Crank Handle, SM on duty shall cancel the relevant signal first and then click on the crank handle control button icon provided like the following on the VDU. On clicking, the pop-up menu gives details of the possible commands on the Crank Handle.



For Transmitting the Crank Handle KEY to the field personnel SM on duty has to click on '**TRANSMIT**' menu. After transmission, both the 'KEY LOCKED' (Red) & 'KEY IN' indications will start to flash for 120 seconds. After 120 seconds the 'KEY LOCKED' indication will vanish & 'KEY IN' indication will continue to flash. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting the crank handle key in the RKT, flashing 'KEY IN' indication will appear on the VDU, now the SM on duty shall Release the control for the Steady indication by clicking '**RECEIVE**' menu.

This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Crank Handle Operation along with the latest counter number in a register.

5.3.1. EMERGENCY CRANK HANDLE RELEASE DURING FAILURE OF BOTH THE VDUs (ACTIVE & STANDBY):

When both the VDUs (Active & Stand by) provided for operation of signals & points in EI station cease to work at the same time due to power failure or what so ever the reason, the SM on duty shall turn the key (ECH) to right along with Push button provided in the key box fixed on the SM table. By resorting to this, timer is initiated and flashing indication will appear on the key box fixed on the SM table. Flashing indication will be steady after 120 seconds which results in release all the crank handles at a time. The SM on duty can set the required point/points through crank handles manually by extracting the key/keys from EKTs provided in the location boxes.

CRANK HANDLE CONTROLS FOR EMERGENCY OPERATION OF POINTS			
S No	CRANK HANDLE	CONTROL POINTS	PROVIDED IN
1.	CH1	31A/B	UP CH LOC-1, DPF End
2.	CH2	33A/B	UP CH LOC-1, DPF End
3.	CH3	35A/B	UP CH LOC-2, DPF End
4.	CH4	32A/B	DN CH LOC-1, DWZ End
5.	CH5	37A/B	H.A LOC-1, DPF End
6.	CH6	39A/B	H.A LOC-2, DPF End
7.	CH7	36A/B	DN CH LOC-2, DWZ End
8.	CH8	34A/B	DN CH LOC-1, DWZ End

(ROHIT PUNIA)
DSTE/CON/KRPU

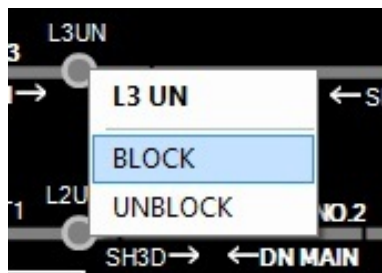
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5.3.2. EMERGENCY CRANK HANDLE RELEASE DURING FAILURE OF BOTH EI (ACTIVE & STANDBY) SYSTEMS:

When both the EI systems fails to operate due to power failure or whatever the reason, timer is initiated a flashing indication will appear on the Key box fixed on the SM table. Flashing indication will be steady after 120 seconds which results that releases the entire crank handles at a time and the SM on duty can set the required point/ points through crank handles manually by extracting the key/keys from EKTs provided in the location boxes. The signaling staff i.e., JE/SSE/Sig or ESM shall be intimated immediately regarding the failure for rectification of the same.

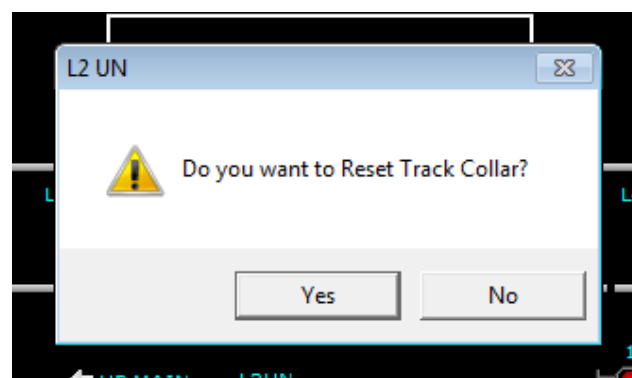
5.4. BLOCK AND UNBLOCK (REMINDER COLLAR) OPERATION:

Block option is used to block the Signal button, Point button and Route Button. Block Operation prohibits the setting of routes, releasing the route, Operation of points by the user. A typical Block & Unblock menu is shown below.

**5.4.1. BLOCK OPERATION:**

By placing the mouse pointer over any button and pressing the left mouse button, a popup menu with a list of available menu items will be displayed near the control symbol as shown above.

Select the "BLOCK" menu item from the list and press left mouse button or Enter key in the keyboard. A confirmation box appears as shown in below.



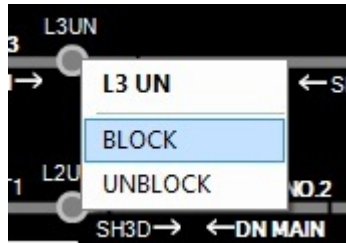
Now click YES option of the confirmation window and a RedColour Block indication will be displayed.

5.4.2. UNBLOCK OPERATION:

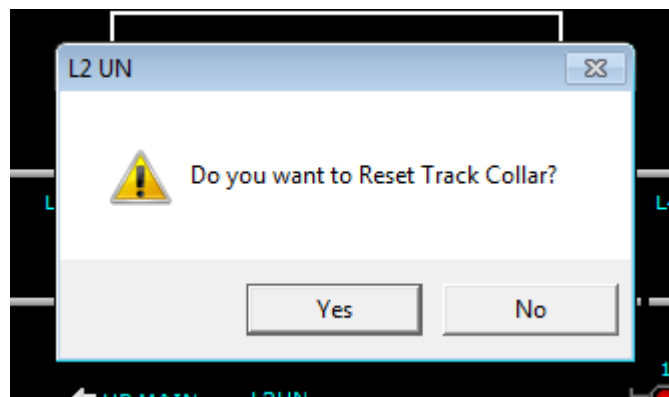
(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

To unblock a button, place the mouse pointer over the blocked button and press the left mouse button. A popup menu with a list of available menu items will be displayed near to the control symbol as shown in below. Select the "UNBLOCK" menu item from the list and press the left mouse button or Enter key in the keyboard.



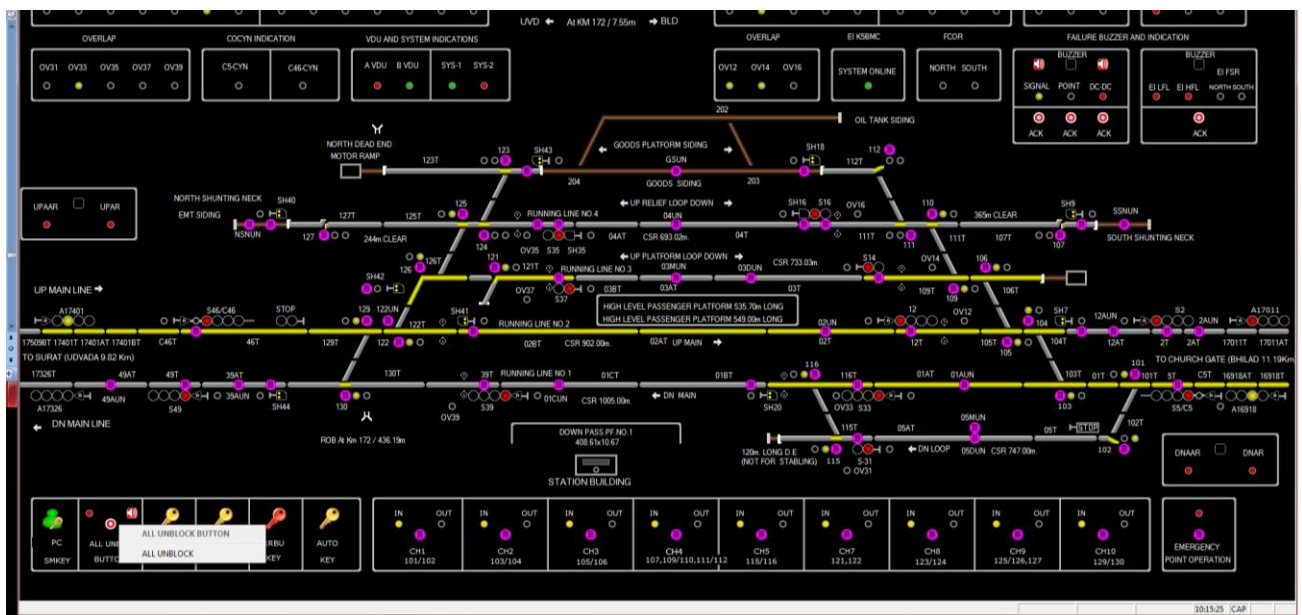
A confirmation message box as shown in below will be displayed to get the confirmation from the user. UNBLOCK command will be sent to EI system to unblock the button, when "Yes" buttons is clicked.



The Magenta Block indication will be removed after the button is unblocked by the EI system. If "No" is selected from the message box, then the unblocking will be cancelled. Once the button is unblocked, setting of all routes across the track is possible in both Directions.

5.4.3. ALL UNBLOCK OPERATION:

This operation allows user to unblock all block buttons in track layout. When all buttons gets block, it displays as shown below. To unblock the buttons, user should login/key in first.



6. DIGITAL AXLE COUNTER:

High Availability Digital Axle Counters are provided as a Last Vehicle Checking Device (LVCD) for Both UP and DN block section between DPF-GIZ and GIZ-DWZ.

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

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

In case of failure of Digital Axle Counter, the SM on duty should resort to resetting of the same along with the SM on duty of adjacent station after confirming that the whole of the train sent by sending station has been arrived at the receiving station. The resetting of the LVCD shall be initiated as mentioned below at both the stations after exchanging the Private Number. The SM on duty shall record the Error code that is displayed on the reset box, in the axle counter register before resorting to resetting to facilitate the S&T staff to know the reason for the failure.

A Reset Box is provided on SM's table for each LVCD section to reset the Axle Counter in case of failure of LVCD. Reset Box gives the status of the block

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

section i.e. Clear (GREEN), occupied (RED), preparatory reset (Miniature GREEN) and power on indications (WHITE). It also having the Reset Key, push button for resetting the LVCD and a counter is provided to record the operation.

6.1. RESETTING OPERATION FOR LVCD (DIGITAL AXLE COUNTER):

After complete arrival of train, if the LVCD of the section does not clear and Block section clear indication (Green) does not appear in the VDU, the receiving station SM shall apprise the sending station SM through telephone for resetting the Axle Counter giving the 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 the SM of sending station authenticated by exchanging Private number.

Then the SM on duty shall adopt the following resetting procedure at both the sending and receiving stations individually.

- a) On being advised by SM of GIDAM Station, SM of DPF/DWZ should perform the following step by step procedure from (b) to (i) for resetting the Digital Axle Counter.
- b) SM of GIDAM Station and DPF/DWZ Station shall then Insert SM's reset key, and turn right.
- c) Press simultaneously both the Push button and the Reset Key which are provided on the Reset Box for at least 5 seconds continuously at GIZ and DPF/DWZ station.
- d) Release SM's Reset Key and Push button.
- e) Turn the SM's Reset Key to left and remove it.
- f) The system goes to preparatory reset state and preparatory reset miniature indication (Green) glows on the Reset box. The counter reading incremented after a gap of 5 seconds approximately.
- g) The counter reading should be recorded in the concerned register by SM on duty.
- h) One train is to be piloted out in the section to make the system normal.
- i) The SM on duty shall record it in the Train Signal Register indicating the resetting operations in detail i.e. train number, time, Private Number exchanged with SM of sending station and giving reasons for the resetting operation.
- j) If the axle counter works properly, then Block Section cleared indication 'Green' will appear on the Reset box and the concerned Block working will be normalized after arrival of train which is piloted out.

APPENDIX-'B'

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

7. SIGNAL LAMP FAILURE INDICATION AND BUZZER ACKNOWLEDGMENT:

LED signal lamps have been used for all signals at this station. In case of failure of the same LED signal, will be indicated by showing 'RED' flashing light on VDU along with audible buzzer, which can be acknowledged and muted by pressing the 'SIGNAL FAILURE ACK' button icon. However the RED flashing light will continue to glow until the lamp is replaced by a new lamp. For rectification of failure SM on duty should inform the concerned S&T staff.

**8. POINT FAILURE INDICATION (RED), POINT FAILURE BUZZER AND POINT FAILURE ACKNOWLEDGEMENT:**

Whenever there is a failure of point due to non-setting, point failure indication flashing light appears near the point button icon along with point failure Buzzer. The buzzer stops when the point failure acknowledgement button icon is pressed, but the flashing light above the ACK button shall continue to glow. The flashing light at the concerned point zone shows the defective point. After the failure is rectified, the flashing light above the 'POINT FAILUR ACK' button will disappear.

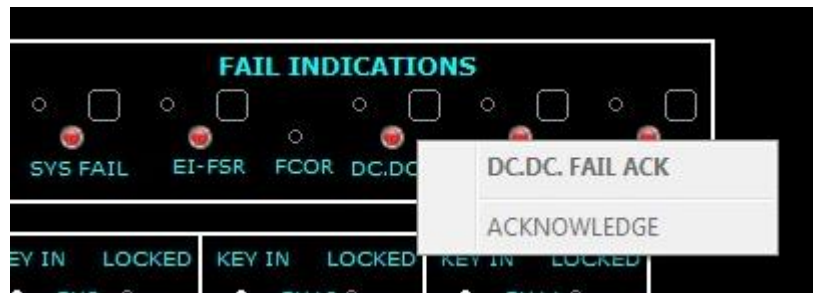
**9. POWER FAILURE INDICATION AND BUZZER ACKNOWLEDGEMENT:**

The DC-DC Converter failure indication will flash & relevant buzzer sounds whenever a power failure is noticed.

The power failure buzzer will be muted once the relevant acknowledgement button has pressed and the flashing indication is continued in the VDU till the problem is rectified.

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
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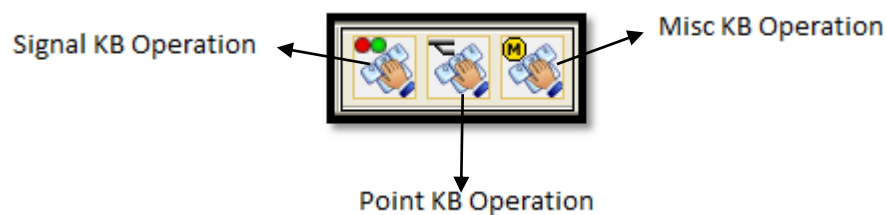


10. KEY BOARD OPERATIONS:

Essentially, "Keyboard Backup operation" is an alternative to the mouse operation. In the event of mouse absence or failure of mouse, the user is still able to operate the VDU using the Keyboard shortcut keys.

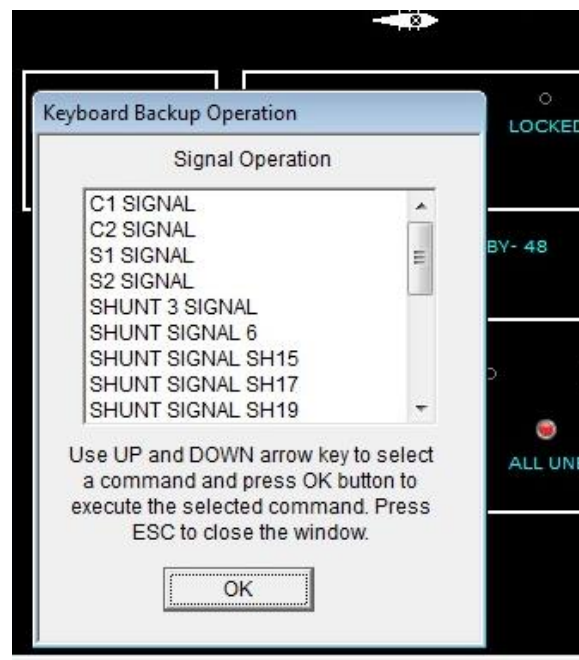
The "Keyboard backup" group has three buttons on the toolbar:-

1. Signal KB (Keyboard) operation.
2. Point KB operation.
3. Misc KB operation.



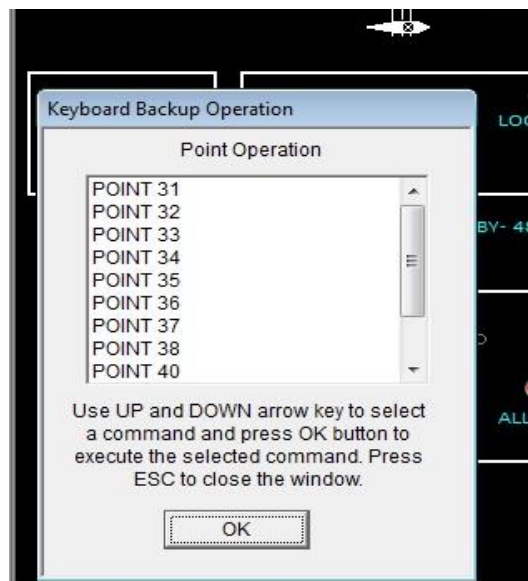
10.1. SIGNAL KEY BOARD OPERATION:

Alternatively signal commands can be accessed using the shortcut "Ctrl+S" from the keyboard. When the shortcut is pressed, a dialog box with all signal menus will appear as shown in below at the bottom left corner of the window. Using Up (↑) and Down(↓) arrow keys of the keyboard select the desired item and press "Enter" key on the keyboard. A popup menu with all possible control menu items will appear near to the control and the dialog box will be closed. Again using arrow keys select the desired command to be issued and press "Enter" key on the keyboard. After the command is selected, it will be sent to EI system and the popup menu will be disappeared.



10.2. POINT KEY BOARD OPERATION:

Alternatively, the point commands can be accessed using the shortcut "Ctrl+P". When the shortcut is pressed in the keyboard, a dialog box with a list of point commands will appear at the bottom left corner of the window as shown in below. Using Up (↑) and Down (↓) arrow keys of the keyboard, select the desired point command and press "Enter" key on the keyboard. A popup window with all possible menu items will appear near to the control and the dialog box will be disappeared. User by using "Up" and "Down" arrow keys select the desired command and press "Enter" key on the keyboard. After the command is selected, it will be sent to EI system and the popup menu will be disappeared.



10.3. MISCLLENEOUS KEY BOARD OPERATION:

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

Alternatively, the miscellaneous menus can be accessed by using the shortcut "Ctrl+M". When the shortcut is pressed on the keyboard, a dialog box with a list of miscellaneous commands will appear at the bottom left corner of the window as shown in below.



Using Up (↑) and Down(↓) arrow keys of the keyboard, select the desired miscellaneous command and press "Enter" key on the keyboard. A popup window with all possible menu items will appear near to the control and the dialog box will be disappeared. User by using "Up" and "Down" arrow keys select the desired command and press "Enter" key on the keyboard. After the command is selected, the command will be sent to EI system and the popup menu be disappeared.

11. COUNTERS:

The following counters are provided for recording the actions such as emergency point operation, emergency route release etc.

1. Emergency Route Release Counter.
2. Emergency Point Operation Counter.
3. Crank Handle Release Counter.
4. Up Calling on Counter.
5. DN Calling on Counter.

In addition to the above counters, a counter is provided on the Reset Box of each Block section LVCD. The increment in counter number for each and every such action should be recorded by the SM on duty who shall record the details of the Operation along with the latest counter number in a register.

12. TRACK CIRCUITS:

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX-'B'

Both UP & DN main lines, UP Loop & Common loop lines and all the point zones are track circuited as L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, 31AT, 31BT, 33AT, 33BT, 35T, 37BT, 36AT, 36BT, 34AT, 34BT, 32AT, 32BT.

Approach track circuits 1AT & 2AT of 5 Rail lengths for Calling on Signal are provided in rear of the Up and DN Home signals respectively. In addition there are short length track circuits 2T1 and 2T2 in advance of DN Home Signal and 1T1 & 1T2 in advance of UP Home Signal are also provided. Similarly there are 5 Rail length track circuits 26T and 25T beyond DN Advanced Starter Signal and UP Advanced starter signal for replacement of Last Stop Signal. From the last trailing point/fouling mark in either side of yard to Advanced Starter Signals are also track Circuited i.e 26AT and 25AT in DN and UP Directions respectively.

Indications for the above track circuits are available on VDU. Yellow Strip on VDU indicates Route is set and track is clear and Red strip indicates Track is in occupied condition.

On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light engine or tower wagon etc., indicating the occupancy/clearance 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 cross over by positively checking the entrance and exit track circuits are showing occupancy and clearance in accordance with the train movement.

13. RELEASE/CANCELLATION OF ROUTE:

Normally when a train is received on or dispatch from any route, the route illumination will disappear automatically after passage of the train suggesting that the route is released. When the route is not released automatically after passage of train over it or when on SM on duty intends to cancel the route set by him shall follow the procedure for cancellation of route described in Para No.5.1 of Appendix-B above. If the route is not released even after resorting to cancellation the SM on duty should inform the Signal Maintainer/JE/SSE for its rectification.

Note:UP & DN Calling on Signals and UP & DN Advanced Starter Signals are to be manually cancelled after the passage of the train to release the route. In both the cases after passage of train, cancel the signal to release the route.

14. REPLACEMENT OF SIGNALS TO 'ON':

Signals are replaced to 'ON' automatically by the passage of a train beyond the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the SM on duty shall follow the Para No.5.1 of Appendix-B.

15. PILOTING OF TRAINS IN TO STATION YARD:

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX-'B'

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.03(a) & (c)].

16. PILOTING OF TRAINS - OUT OF STATION YARD:

- i) In case starter Signal has become defective SR 3.70.1 shall be followed.
- ii) In case Advanced Starter Signal has become defective SR 3.70.2 & 3.70.3 shall be followed.

17. SHUNTING:

Shunt back signal SH-3(A/B) is provided towards DPF end of the yard. Shunt back Signal SH-4(A-D) is provided towards DWZ end of the yard. Shunt Signal SH15 is provided towards DPF endfor Line No.2. For taking OFF Shunt signals please refer Para No. 4.6.2 of APPENDIX-B.

18. 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 entrance, berthing and dispatch portion of the yard shall be kept 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 SM on duty personally through VDU indications and/or physical verification 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.

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

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.

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.

20. HOT AXLE SIDING AND SUB STATION SIDING:**20.1. WORKING OF HOT AXLE SIDING POINT NO.37A/B:**

Electrical operation of siding control point No.37 is carried out at site from the Siding point 37A/B location No.1. In Siding point 37A/B location No.1 there are two EKT's namely EKT-1 & EKT-2, three buttons for normal and reverse operation along with common button. Point indications for normal & reverse and point free indications are provided.Working of Electrical operation of Siding Pointsis as follows:

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX-'B'

1. To operate Siding point Key 'P' is required to be inserted in EKT-2.
2. Key 'P' can be extracted from EKT-1 only when SM extends permission from VDU. Extraction of Key 'P' from the EKT-1 will block all signaled movement on Line No.1.
3. Key 'P' when inserted in EKT-2, point free indication appears on the board. Point button and normal or reverse buttons are simultaneously pressed to set the point to normal or reverse as the case may be.
4. After setting of point to reverse key 'P' should be extracted from EKT-2 and kept in the custody of the staff deputed by SM for the operation. Removal of key will lock the point.
5. After completion of the movement key 'P' is to be inserted in EKT-2 & siding point 37A/B is to be operated to normal. After ensuring both the ends of 37A/B in normal, Key 'P' is extracted from EKT-2 & inserted in EKT-1 to enable SM to release the control 37. Key 'P' in EKT-1 resume signaling movement over 37A/B in normal position.
6. Crank handle control CH-5 is to be taken out for crank handling the point 37A/B in case of failure of electrical operation.
7. To extract the crank handle CH-5 from RKT provided in H.A Location-1, SM on duty should extend the control no.37 same as for electrical operation of siding point.

20.2. WORKING OF HOT AXLE SIDING POINT NO.39A/B:

Electrical operation of siding control point No.39 is carried out at site from the Siding point 39A/B location No.2. In Siding point 39A/B location No.2 there are the two EKT's namely EKT-1 & EKT-2, three buttons for normal and reverse operation along with common button. Point indications for normal & reverse and point lock/free indications are provided. Working of Electrical operation of Siding Points is as follows:

1. To operate Siding point Key 'Q' is required to be inserted in EKT-2.
2. Key 'Q' can be extracted from EKT-1 only when SM extends permission from VDU. Extraction of Key 'Q' from the EKT-1 will block all signaled movement on Line No.1.
3. Key 'Q' when inserted in EKT-2, point free indication appears on the board. Point button and normal or reverse buttons are simultaneously pressed to set the point to normal or reverse as the case may be.
4. After setting of point to reverse key 'Q' should be extracted from EKT-2 and kept in the custody of the staff deputed by SM for its operation. Removal of key will lock the point.
5. After completion of the movement key 'Q' is to be inserted in EKT-2 & siding point 39A/B is to be operated to normal. After ensuring both the ends of 39A/B in normal, Key 'Q' is extracted from EKT-2 & inserted in EKT-1 to enable SM to release the control 39. Key 'Q' in EKT-1 resume signaling movement over 39A/B in normal position.
6. Crank handle control CH-6 is to be taken out for crank handling the point 39A/B in case of failure of electrical operation.
7. To extract the crank handle CH-6 from RKT provided in H.A Location-2, SM on duty should extend the control no.39 same as for electrical operation of siding point.

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

20.3.SUB STATION SIDING:

Substation siding is isolated with Hot axle siding by DS point. The DS point is HP with Arc lever for operation of point.

21. RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

After receipt of the failure 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 (C) and (D).

22. PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

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

23. 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.

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

- a) When any point fails to operate normally by individually or Route Setting operation through VDU, the points can be operated by using the crank handle. Normally 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.
- b) In event of failure/defect of points trains may be received/dispatched on signals after manual operation of points by the emergency crank handles which are interlocked with the signals provided-

The station master deputed a responsible operating official with the crank handle to operate the defective point manually. The emergency crank handle is electrically transmitted to him by the Station Master on duty with instructions to

APPENDIX-'B'

set the defective point(s) to the desired position (viz., Normal or reverse) and clamp and padlocked the same. Both the ends of a cross over must be set in correspondence (viz., Normal or Reverse), the facing and trailing points must be clamped and padlocked. The operating official so deputed, after complying with such instructions should return the emergency crank handle by transmit electrically to station Master on duty.

- c) The station Master on duty should verify from the visual indication available on the VDU/other means that the points are set to the desired position as instructed by him (Normal or Reverse) and thereafter return the crank handle received by him to the respective location box.
- d) He should also verify from the operating official deputed to set the defective point(s) that the same is also clamped and padlocked, supported by a private number.
- e) The station master on duty after ensuring the correct setting of defective point(s) as required in above Paras (b), (c), (d) can take off the concerned signals for movement of the trains over the point(s).
- f) If even after complying with the instructions contained in paras (b) to (e) by station master on duty, the correct setting of the defective points to the desired position is not indicated in the visual indication provided, the train shall be piloted in and out in terms of SRs 3.69.01, 3.69.02, 3.69.02, 3.70.01 and 3.70.02.
- g) The cases of failure of motor point should be promptly reported to the concerned signal maintainer/signal SSE/JE for immediate rectification of the same.
- h) Whenever a Crank Handle key is required to be used by a Signal Official for maintenance 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 Crank Handle register, the Station Master on duty will obtain acknowledgement of the Signal Official in the Crank Handle Register and then handover to him the Crank Handle key for the Points concerned. All the Points will be treated as defective till the Crank Handle key is returned back to Station Master on duty.
- i) Whenever the emergency crank handle(s) is/are handed over to a Signal official for maintenance work or rectification of a failure, the points for the effected line should be treated as non-interlocked and 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 the Points over which the train is to pass, as per SRs 3.69.01, 3.69.02, 3.69.02, 3.70.01 and 3.70.02.
- j) The Crank Handle Register is to be maintained in the following pro-forma by the Station Master on duty wherein the particulars of usage of the Crank Handle must be recorded:

1. Date:

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

2. Point Number which failed or required to be tested:
3. Time failure:
4. Disconnection memo number received from S&T Staff:
5. Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over:
6. Time Emergency Crank Handle is sent out:
7. Signature/PN of the Operating official to ensure correct setting, Clamping and Padlocking of the Points:
8. Date and Time fault rectified.
9. Time of Emergency Crank Handle received back by SM on duty.
10. Signature and Designation of the Signal Official who rectified the fault.
11. Remarks.

25. INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:**25.1. INTERLOCKING WITH HOME SIGNALS:**

All the UP and DOWN HOME Signals are Electrically interlocked with the respective DLBI so that the handle of the DLBI Instrument cannot be turned from TRAIN ON LINE position to LINE CLOSED position of UP or DOWN Direction as the case may be unless the respective Home Signals is put back to NORMAL position and the respective Block Section monitored by Axle Counter is clear of trains.

25.2. INTERLOCKING WITH ADVANCED STARTER SIGNALS:

The UP Advanced Starter Signals No.25 is electrically interlocked with respective DLBI of section GIZ-DWZ so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

The DN advanced starter signal No.26 is electrically interlocked with respective DLBI of section GIZ-DPF so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in 'LINE CLEAR' position.

25.3. SUSPENSION OF LAST STOP SIGNALS:

When the DLBI instrument for section GIZ-DPF is suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be worked as per GR 14.25 & SR 3.70.02

When the DLBI instrument for section GIZ-DWZ is suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be worked as per GR 14.25 & SR 3.70.02.

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

1. Digital Axle Counters are provided on Up and Down Block Sections between DPF-GIZ and GIZ-DWZ.

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

2. The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light.
3. If any Block proving Axle Counter [LVCD] section fails, the Last Stop Signal 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 in either Section.
4. No train shall be allowed on signal to leave a station in any particular section unless:

Block Section clear indication is available for the relevant Axle Counter section portion and Last Stop Signal is taken OFF. [Refer Para No: 6.1 of appendix 'B' for procedure of resetting of LVCD Axle counter].

27. POWER SUPPLY ARRANGEMENT FOR SIGNALLING INSTALLATIONS:

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

- i). Normal supply from UP AT/ DN AT connected to OHE traction distribution [230V 50HZ].
- ii). Standby Power supply: Chhattisgarh State Electricity Board Supply.

Normal power supply [Single-phase 230V-50 HZ] to the signalling and interlocking installation at the station is drawn from the traction power sources through ATs. Whenever traction power supply fails the SM on duty shall operate the changeover switch provided in the SM's office connecting the power supply from the healthy sources to the installation in case the knob is not in Auto mode.

The SM on duty however maintain the record of power failures either of the traction supply or local supply and he must promptly report the failure of any one or both the power sources immediately through the section controller and to the concerned Elect. Staff and S&T maintenance staff.

- i). An Auto change over switch is provided in the SM's office with the three power supplies viz., UP AT, DN AT and local for the changing the switch automatically to the available supply. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
- ii). Normally the switch will be kept in Auto Mode. If the Switch kept towards UP AT/DN AT position, whenever power block is to be given on the line the on duty SM on duty must ascertain that power is available on the other AT and change over the switch to the desired position.

NOTE: If power block is to be given on the UP line DN AT must be available and vice versa.

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX-'B'

- iii). In case of failure of one of the AT supply without any power block the on duty SM has to check whether the circuit breaker has tripped [Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes UP].

In case of failure of both AT supplies without any power block the local supply shall be utilized by operating the changeover switch. If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any means and a message shall be given to concerned SSE [Elect.] and SSE/PSI [OHE] for prompt rectification.

- iv). Whenever there is failure of power supply in one AT the SM on duty shall take prompt action to inform to all concerned for rectification.

The on duty SM himself during each shift shall check & test the availability of power supply on both ATs and make an entry in the station dairy duly initiating for rectification of failure if any.

- v). For IPS system that provides supply to EI, a manual changeover switch is provided at SM's Office with the power supply viz; selected supply from CLS panel.
- vi). Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency, changeover switch is changed to middle position by on duty SM to cut off the power supply to IPS.
- vii). There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

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

Power supply to the signalling installation is fed through Integrated Power Supply System [IPS] installed in the S&T power supply room. For IPS system, a manual changeover switch is provided at SM's Office with the two power supply viz., selected supply from CLS panel and DG supply for changing the switch to required supply position. Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency changeover switch is changed to DG supply position. There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

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

In the event of failures of all the sources of 230V 50HZ AC supply, the signalling system shall be fed by backup battery bank connected to IPS for a limited power of 8 to 10 hours. The health of the battery bank is monitored through one IPS Monitoring Panel provided in the SM's room which shall display the voltage of 110VDC battery bank provided as backup source of power supply. Depending up on the health of the battery bank and the system the following

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX-'B'

indications/alarm will appear on the remote monitoring panel. The indications/alarm, their implications and action to be taken by SM on duty is tabulated below:

SN	Instruction	Health of Battery Bank/Equipment.	Visual Indication	Audio Indication	Action to be taken by SM on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by SM on duty.
B	-	60% DOD	Red	Alarm	-do-
C	System shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to Work. Audio alarm will continue till power Supply is restored.
D	Call S&T staff.	Equipment fault.	Red	Alarm	Failure of any module will give the alarm in ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

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

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

29. WORKING OF AUTOMATIC FIRE DETECTION AND ALARM SYSTEM:

- In case of any alarm in any particular area due to fire or dust-Zone number on the LCD display can be seen.
- Note down the zone No. and panel display name, by referring display chart.

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX-'B'

- Once you find the zone number rush to that particular area where the detector gives alarm.
- The moment the smoke detector detects any smoke particles, the RED LED will blink along with the alarm.
- Once you reach the area where the detector is giving the alarm, check whether the alarm is due to the fire or for any other reason.
- To alert the people in case of emergency press "*" sign of the fire which is present inside the key pad together for few seconds. This will enable you to hear the panel alarm.
- To reset the panel press "OFF" button and enter the code 1111 (1 digit four times).
- The control panel will get reset and siren muted.
- If the power fails on this will enable us to see the red indicator on the panel.
- In case of failure in power and if the battery is fully charged, the panel can function effectively as long as the charge in the battery is present.

AUTO DIALLING:

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

APPENDIX-'C'

APPENDIX 'C' TO STATION WORKING RULES OF GIDAMSTATION
ANTI COLLISION DEVICE [[RAKSHA KAVACH]:

-NIL-

(ROHIT PUNIA)
DSTE/CON/KRPU

(AMEESHA)
DOM(G)/WAT

APPENDIX 'D' TO STATION WORKING RULES OF GIDAM STATION

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

1. STATION MASTER (IN CHARGE):

- a) He is responsible for trains passing during his shift.
- b) He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him.
- c) He shall keep all Rule books, Registers, Files and documents neat and up to date.
- d) He shall ensure that all equipment, apparatus, and instruments including signaling and interlocking gears and fittings are kept clean and oiled by S&T officials.
- e) His special attention is drawn to Chapter-II of G&SR and GR 5.01 to 5.08 with relevant SRs and O.M. Chapter-2.
- f) He shall follow the instructions laid down in SR.3.68.01 (c) and (d) and SR 14.07.01 and B.W.M.2.09 (e).
- g) He shall promptly attend to accidents and report them.
- h) He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

2. STATION MASTER:

- a) He is responsible for trains passing during his shift.
- b) He shall promptly bring to the notice of SM in-charge all irregularities and accidents in course of his shift duties.
- c) During the absence of SM I/C, the duties of the Station Master will devolve on him.
- d) He shall follow SR 3.68.01(c) and (d) SR 14.07.I and OM Chapter-2.
- e) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.
- f) As an assistant to SM I/C, he shall carry out the instructions given from time to time.

3. TRAFFIC POINTSMAN:

APPENDIX-'D'

- a) He shall work under the orders SM on duty.
- b) He shall couple and uncouple vehicles under the supervision of SM.
- c) He shall watch and guard the packages and other Railway property lying in the Station premises.
- d) He shall report any irregularities coming to his notice.
- e) He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.
- f) He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.
- g) He shall follow OM Chapter-2.

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

APPENDIX-'E'**APPENDIX 'E' TO STATION WORKING RULES OF GIDAM STATION:****ESSENTIAL EQUIPMENT:**

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

Sl. No	Description	Quantity
(i)	Detonators	20
(ii)	LED based Tri Colour flashing torch.	3(1 Spare)
(iii)	Hand Signal Flags	3(1 Spare)
(iv)	Safety chains with Pad locks	8
(v)	Clamps with Padlocks	10
(vi)	Skids	8
(vii)	Wedges	4
(viii)	Fire & Sand buckets	6
(ix)	Fire Extinguishers	2
(x)	Line blocking collars	6
(xi)	Motor trolley on line board	2
(xii)	Block suspension board	2

APPENDIX-'F'

APPENDIX 'F' TO STATION WORKING RULES OF GIDAM

WORKING OF D.K.STATIONS, HALTS, IBS AND OUTLYING SIDINGS:

---NIL----

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APPENDIX- ‘G’

GIDAM STATION

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS:

DETAILS OF WORKING RULES OF 25KV AC TRACTION.