

EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF GOPALAPATNAM STATION
(BROAD GAUGE)

No : WTF/5/SWR/GPT

Date of Issue: _____
Date brought into force: _____**NOTE:-**

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

1. STATION WORKING RULE DIAGRAM**1.1**

- i]** Station working Rule diagram No.SI/WRD/23103 ALT 'B'
ii] CSTE/E.Co.Rly/DRG No.SI- 23103 ALT 'B'
iii] Date up to which corrected :

2. DESCRIPTION OF THE STATION:

Gopalapatnam [GPT] is a 'B' class junction station of the Visakhapatnam-Howrah and Visakhapatnam-Chennai double line electrified BG section of East Coast Railway on 'B' Route. It is situated of KM. 871.823 from HWH and provided with Electronic Interlocking.

2.1 GENERAL (LOCATION)

i]	Name of the Station :	GOPALAPATNAM
ii]	Class of Station :	'B'
iii]	Section:	HOWRAH-CHENNAI
iv]	Double / Single line	Double line towards SCMN, VSKP and DVD. Single line towards JGPM, SCMN (Bye pass) and ELS Bock Hut. Unidirectional line towards MYD 'A' cabin and MYD 'D' cabin.
v]	Electrified /Non-electrified	Electrified
vi]	Gauge BG/MG/NG	BG
vii]	Railway	East Coast Railway
viii]	Route	'B'.
ix]	Situated at KM	872.232 KM
x]	From	HOWRAH
xi]	No. of Cabins	NIL.

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

a]	Adjacent Block Station	Distance	Direction
i]	Simhachalam North RRI	2.729 km	HWH END
ii]	Visakhapatnam	6.191 km	VSKP END
iii]	'A' Cabin WAT MYD(Reception yard)	510.27 km	WAT MYD END
iv]	ELS and Reception yard (Block hut) of WMY.	1.912 km	WAT MYD END
v]	Simhachalam North RRI on by pass single line.	2.22 km	SCMN END
vi]	Jaggayyapalem	4.308 km	VSKP STEEL PLANT END

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vii]	Duvvada	10.809 km	CHENNAI END
viii]	'D' Cabin WAT MYD (S.C.Rly Goods Despatch line)	3.844 km	WAT MYD END
b]	Provision of IBS: Between GPT and DUVVADA on both UP & DN directions at Km.766/7-9 and at Km.765.932.		
c]	Automatic Signals: GPT-VSKP UP and DN lines.		
d]	D K Stations / Outlaying: Mrippalem is the passenger halt existing between Gopalapatnam and Visakhapatnam stations at Km 874/13-19.		

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 "Block Section" Ends
1	VSKP-GPT Double line Dn line	The rear block section commences at Down signal No GAS 60 of VSKP.	And terminates at Pt No 54A of GPT on down line.
	Up Line	The advance block section commences at Up Automatic signal No SA 31 of GPT.	And terminates at Up facing point No.101A on Up line at VSKP.
2	GPT-SCMN Double line- Dn line	The advance block section commences at Down last stop signal No 32 of GPT.	And terminates at Pt No.159 A of SCMN on down line.
	Up line	The rear block section commences at Up last stop signal No 63 of SCMN.	And terminates at Up facing point No. 79A on Up line at GPT.
3	GPT-DVD Double line- Dn line	The advance block section commences at Up IB Home Signal No 38 of GPT.	And terminates at Pt No.129 B of DVD on Up line.
	Up line	The rear block section commences at Dn IB Home signal No 56 of DVD.	And terminates at BSLB on Dn line at GPT.
4	GPT-SCMN [Bye pass line]	The block section commences from Up last stop signal 21 of GPT.	Terminates at Dn last stop signal No 71 of SCMN.
5	GPT-JGPM.	The block section commences from Up last stop signal 34 of GPT.	Terminates at Dn last stop signal of JGPM.
6	GPT-A/Cabin of WMY Reception yard (Unidirectional Up line)	The advance block section commences at Up last stop signal No.23 of GPT.	And terminates at BSLB board on Goods Reception Line of RYD A/Cabin.
7	GPT- D/Cabin of WMY S.C.Rly Goods Despatch line (Unidirectional Up line)	The rear block section commences at Dn last stop signal No 63 of 'D' cabin.	And terminates at Dn facing point No. 52 of GPT.

2.4 GRADIENTS.

	Line	From	To	Inter Distance	Gradient
GPT-VSKP	ALL LINES towards VSKP	000.000M	387.640M	387.640M	1 in 450 Raising
		387.640 M	587.640M	200.000M	1 in 400 Raising
		587.640 M	927.640M	340.000M	Level.
		927.640 M	1274.640M	347.000M	1 in 400 falling
		1274.640M	2697.690M	1423.050M	Level.
		2697.690 M	Into Section	----	1 in 1000 Falling

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	Emergency cross over line towards 'A' cabin	000.000 M 021.230 M	021.230 M In to Section	21.230 M ---	1 in 450 Raising 1 in 198 Raising
GPT-SCMN	UP & DN lines towards SCMN	000.000 M 098.030 M 280.000 M	098.030 M 280.000M Into section	98.030 M 181.970 M ----	1 in 450 Falling 1 in 800 raising 1 in 300 Raising
GPT-DVD	UP & DN lines towards Duvvada	000.000 M 263.230 M 598.730 M 1033.680 M 1286.140 M 1638.860 M 1680.360 M 1735.360 M 1736.060 M 1736.560M 1736.810 M 1737.610 M 1737.960 M 1738.360 M 1738.560 M	263.230 M 598.730 M 1033.680 M 1286.140 M 1638.860 M 1680.360 M 1735.360 M 1736.060 M 1736.560M 1736.810 M 1737.610 M 1737.960 M 1738.360 M 1738.560 M In to Section	263.230 M 335.500 M 434.950 M 252.460 M 352.72 M 041.50 M 000.55 M 000.700 M 000.500 M 000.25 M 000.800 M 000.350 M 000.400 M 000.200 M ---	1 in 450 Falling 1 in 150 Falling 1 in 260 Falling 1 in 260 Falling 1 In 423 Falling Level 1 in 200 Raising 1 in 350 Falling 1 in 200 Falling Level 1 in 250 Falling Level 1 in 250 falling Level 1 in 300 falling Level
IBS SECTION GPT-DVD	IBS SECTION. Up line between GPT-DVD	From section KM 769.262 KM768.718 KM768.147 KM 767.618 KM 767.265 KM 766.639 KM 765.718 KM 764.718	KM 769.262 KM 768.718 KM 768.147 KM 767.618 KM 767.265 KM 766.639 KM 765.718 KM 764.718 In to section	--- 000.544 M 000.571 M 000.529 M 000.353 M 000.626 M 000.921 M 1000 M ---	Level 1 in 250 Falling Level 1 in 250 Falling Level 1 in 300 Falling Level 1 in 263 Falling Level 1 in 200 Falling Level 1 in 260 Falling Level
	IBS SECTION. Dn line between GPT-DVD	From section KM 764.615 KM 765.147 KM 765.647 KM 766.250	KM 764.615 KM765.147 KM 765.647 KM766.250 In to section	--- 0.532 M 0.500 M 0.603 M ---	1 in 200 Raising. 1 in 390 Raising. 1 in 200 Raising. Level 1 in 250 Falling.
GPT-JGPM	Towards JGPM	598.730 M 1033.680 M 1284.140 M 1664.970 M 1784.730 M 2265.230 M 3493.730 M	1033.680 M 1284.140 M 1664.970 M 1784.730 M 2265.230 M 3493.730 M 4137.23 M	434.950 M 250.460 M 380.830 M 119.760 M 0480.500 M 1228.500 M 653.500 M	1 In 260 Falling. 1 in 260 Falling. 1 in 454 Falling 1 in 400 Falling 1 in 173 Falling Level. 1 in 150 Raising
GPT-SCMN	By pass line to SCMN	From section 1290.67 M	1290.67 M 1705.00 M	----- 414.33 M	1 in 150 Falling. Level.
GPT-ELS 'B'HUT	Line between GPT-ELS BLOCK HUT	From ELS 971.000 M 1689.000 M 1720.000 M	971.000 M 1689.000 M 1720.000 M In to yard	971.000 M 718.000 M 031.000 M ---	Level 1 In 200 Falling. Level 1 In 260 Falling.

2.5 LAYOUT:

Gopalapatnam is a junction Station for various train movements of diverging/converging routes connecting Waltair Marshalling yard, VSKP coaching yard, VSKP Goods yard SCMN and DVD. No Berthing facility is available at this station.

The following routes diverge or converge at GPT junction cabin

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- (i) E.CO.Rly double line between HWH-VSKP and S.C.Rly double line between CHENNAI-VSKP converging at this station.
- (ii) S.C.Rly Up goods dispatch line between 'D' cabin of WMY and GPT converge/diverge at this station.
- (iii) S.C.Rly Dn goods line from DVD diverge for Dn goods trains to go to reception yard of WMY.
- (iv) GPT-JGPM steel plant line takes off from this cabin with access to all routes.
- (v) ELS Block Hut (WMY) – GPT line joins GPT-JGPM Steel plant line at DVD end of the yard.
- (vi) SCMN-GPT bye pass line joins S.C.Railway double line at the DVD end of the yard with access to GPT-JGPM steel plant line.
- (vii) Reception yard of WMY connected to S.C.Rly Up line at GPT through Emergency cross over.

2.5.1 NUMBER OF RUNNING LINES :-

All the lines are running lines and there is no berthing facility for any line.

2.5.2 [A] NON RUNNING LINES AND THEIR CAPACITY IN CSR

NIL

[B]. PLATFORMS :

NIL

[C]. DESCRIPTION OF SIDINGS :

NIL

2.5.3 (a) ANY SPECIAL FEATURES IN THE LAYOUT:

NIL

2.6 LEVEL CROSSINGS:

Details of LC gates are given in Appendix 'A' of this station Working Rules.

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3.0 SYSTEM AND MEANS OF WORKING:-**a) SYSTEM OF WORKING FOR DOUBLE LINE (EXCEPT GPT AND VSKP RRI SECTION) AND UNI DIRECTIONAL SECTION:-**

Trains are worked under Absolute Block system in accordance with provision of G&SR Chapter VIII Rule 8.01(1) (a) and (b)8.01(2) (b)& 8.03(1)(a). (ii), chapter XIV Rule 14'01 to 14.11 and 14.13 and Block working Manual chapter V.

b) SYSTEM OF WORKING FOR DOUBLE LINE UNDER AUTOMATIC BLOCK SYSTEM FOR GPT AND VSKP RRI SECTION.

Trains are worked under Automatic Block system in accordance with GR 9.01(1) (a) (b)(c), i, ii, 9.01(2),9.02(1)(2)(3)(4)(5) and SRs there to 9.09, 9.10(1)(2), 9.11(1)(2) and SRs there to 9.12 and SRs there to 9.14 and SRs there to and 9.15 and Block Working Manual Chapter No VI.

c) TYPE OF INSTRUMENTS

SGE type Lock and Block instruments are provided for section

- (i) Gopalapatnam and Simhachalam North RRI.
- (ii) Gopalapatnam and Duvvada stations.
- (iii) Gopalapatnam and 'A' cabin of MYD Dn direction (Uni-Directional and S.C.Rly reception line)
- (iv) Gopalapatnam and 'D' cabin of MYD Up direction (Uni-Directional and S.E.Rly dispatch line)

The Block Instruments shall be operated by Station Master on duty and keys of the Block Instruments shall remain under personal custody of SS on duty and other instructions in terms of G&SR 14.12(1)(a) BWM 5.05 shall be followed. The Block Instruments are of non co-operative. The authority for the loco pilot to proceed in to Block section is taking 'OFF' of the last stop signal.

d) SYSTEM OF WORKING FOR SINGLE LINE SECTION

Trains are worked under Absolute Block system in accordance with provision of G&SR Chapter VIII Rule 8.01(a) (c) 8.01(2) (b)& 8.03(2)(a)(b)(c)(ii),chapter XIV Rule 14'01 to 14.11 and 14.13 and Block working Manual chapter-IV Part11

e) TYPE OF INSTRUMENTS

- i) Daido type Token less Single line Block instrument is provided for section Gopalapatnam and Jaggayyapalem cabin.
- ii) Daido type Token less Single line Block instrument is provided for section Gopalapatnam and Simhachalam North RRI for By- pass line.

The Block Instruments shall be operated by Station Master on duty and keys of the Block Instruments shall remain under personal custody of SS on duty and other instructions in terms of G&SR Chapter XIV and BWM Chapter-IV part II shall be followed. The Block Instruments are of co-operative type. The authority for the loco pilot to proceed in to Block section is taking 'OFF' of the last stop signal.

f) AUTHORITY TO PROCEED UNDER AUTOMATIC BLOCK SYSTEM.

Under **Automatic Block** system OFF aspect of signal No SA-31 is the authority to proceed in to the Block section vide GR 9.01, 9.02 and 9.14 and SRs there to and Block working Chapter NoVI.

g) INTER SLOT WORKING

- i) Inter Slot working is provided for single line working between Gopalapatnam and Block hut of MYD (ELS), The inter Slotting is co-operative.
- ii) Dispatch of train from MYD through Emergency crossover connected to SCR Dn line controlled through slot from GPT .The Slotting arrangement is non cooperative and controlled through the VDU at GPT.The VDU is provided with VDU lock up key.(details of

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working are given in Appendix 'B'.)

h) AUTHORITY TO PROCEED UNDER THE SYSTEM

The authority to proceed into the block section shall be taking OFF last stop signal vide G&SR 14.08(b)(iv) between ELS Block hut and GPT RRI cabin.

The system of working trains on Emergency crossover from 'A' cabin is paper line clear ticket.(details of working are given in Appendix 'B')

4.0 SYSTEM OF SIGNALLING AND INTERLOCKING:

[a]The station is provided with standard IIR. Electronic Interlocking system with Manually operated Multi-Aspect Colour light signaling in accordance with General Rules No. 3.07 [4], [5], [6], & [7], 3.08 [4][b] & [c],3.09, 3.10, 3.17, 3.19, 3.20, 3.24 [4], 327 [a], 3.32 [1] & [2] to govern the movement of trains Into and out of the yard. All the points & signals are power operated from VDU.

[b] "Calling on" signals In accordance with General Rule No. 3.13 [1] [b],3.13 [2], [3], [4], [6][b] are provided below the stop signal.

4.1 ELECTRONIC INTERLOCKING VDU:

This station is provided with Standard IIR Electronic Interlocking with Multiple aspect Colour light signaling having maximum equipment of Signals. The aspects and indications of the MACLS is governed by GR3.08 (4) (b).

All signals and points are electrically operated from the VDU provided at SM'S Office. Calling – on signals are provided below Home signals (i.e. in both UP & DN directions)as per GR.3.13 (1)(b),(2)(3)(4) & (6) (b).VDU is provided in the station Master's Room for electrically control all signals, points, Gate Key etc. The VDU is provided with SM'S key user name and pass word which shall always remain with the personal memory of the Station Master on duty. A mouse and key board is provided through which SM on duty can operate points , signals, gate key etc. Two VDUs are provided one for operation and one for stand by.

(The details of operation from VDU is given under Appendix-"B")

(a). CRANK HANDLE

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 SS/SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals.When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06.

<u>CRANK HANDLE</u>		<u>CONTROL POINTS</u>
CH-1	----	51.57.69.
CH-2	----	53.59.67.
CH-3	----	55
CH-4	----	71.
CH-5	----	52.73.
CH-6	----	54.58.
CH-7	----	56.79.
CH-8	----	81

These crank handles keys are interlocked with the signaling and interlocking system at this station and normally locked with the RKT instrument at the respective Crank Handle's Locations/goomties. Crank handle keys can be taken out only when all signals are not taken 'OFF' and the route is not locked for any reason. Crank Handle key can be released by pressing common 'TRANS' icon button and concerned Crank handle control icon button simultaneously. When the keys are taken out no signal can be taken 'OFF' over the particular route on the points nominated by the crank handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The crank handles are kept inside a box in lock condition in the custody of SS/SM. When ever it is required to operate point manually by crank handle, the crank handle is to be handed over to concerned staff by SS/SM with crank handle and in conjunction with crank handle key the point motor is to be operated.

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

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

(b). TAKING OFF CALLING-ON SIGNAL:

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

Before taking 'OFF' Calling on signal during failure of track circuit the route and clearance of the track over which the train will be admitted must be checked physically by SS/SM on duty

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the 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. Various options in terms of the total routes over which the signal will lead will appear on the menu. Then the SM must drag the pointer and click over the particular Calling on route amongst the various options displayed in the menu by the left button of the mouse as a result of which the Calling on signal will blink for 120 seconds.

After lapse of 120 seconds, Calling-on signal clears i.e. a white light glows at the concerned calling-on signal on the VDU. Every such operation has to be recorded by the on duty SM along with the reasons to do so. The calling-on signal route can be released after complete arrival of the train or by emergency cancellation..

c] IBS SIGNALS :-

Up IB Home signal is provided at Km766/6-7 and DN IB Home signal is provided at Km 766/2-4. These IB Home signals are controlled by the respective Line clear position of the DLBI of section GPT-DVD

d] SHUNT SIGNALS:-

No shunt signals are provided at this station.

(e) EMERGENCY CROSS OVER

One Emergency cross over (with derailing switch) 73 is provided to facilitate reception of Up goods traffic from 'A' cabin towards DVD or Steel plant. The 'A' cabin end of the crossover is controlled through Slot switch No 68 provided on VDU of Gopalapatnam. The movement is controlled by Signal No 8 and 18A/B.

One Emergency crossover point No 56 is provided at Visakhapatnam end of the yard to facilitate movement from Down line to Up line and vice-versa in case of emergency.

(f) L.C. GATE OPERATION

Details described in Appendix-'A'.

(g) EMERGENCY POINT OPERATION (BLACK WITH RED DOT):

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

Before doing the emergency operation, the Emergency Point Operation Key is to be made "KEY IN" by clicking the KEY IN menu. The user name and password is to be logged in. The user name is ECOR and the password of this station is GPT. On clicking the concerned point icon, a pop-up menu is displayed carrying four options: 1) Normal 2) Reverse 3) Emergency Normal 4) Emergency Reverse. For emergency operation of concerned point, drag the pointer to either

emergency normal or emergency reverse which ever is desired. A normal or reverse flashing indication will appear and the indication will be steady after the point is set to Normal or reverse, whichever is desired. 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. This action will be recorded in a counter. All such operations will be registered in the emergency point operation counter Register. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

(h) **EMERGENCY ROUTE RELEASE COUNTER:**

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

(i) **EMERGENCY ROUTE RELEASE INDICATION :**

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

When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), click on the concerned signal. After clicking by the left button on the mouse a pop-up menu will appear. Click on the cancellation menu (Main/Calling on) of the concerned signal, the signal will immediately go to ON aspect. After doing so click on the route release menu, the route locked indication will start flashing for 120 second. After completion of 120 seconds, the White light along with the White strip of light will disappear suggesting the route has been released. This action will be recorded in a counter. The counter will increment the number for each and every such action. In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to release the route.

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

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(j) TRACK CIRCUITS:

The entire yard is track circuited including approach tracks and is divided in to different track circuit zones. This is indicated in the VDU by different colors. Track circuit zones when occupied or failed will display a row of Red strip lights (not less than two) on the respective track circuit zones on the VDU. When the track is not occupied and the route is not initiated there shall be no lights on the VDU, this indicates the clearance of the line.

(k) AXLE COUNTER:**SECTION DVD-GPT(I.B.AXLE COUNTER)**

A pair of Digital Axle Counters is provided between DVD-GPT on DN line one just beyond DN Advance Starter of DVD and 400 Mtr. beyond DN IB Home signal between DVD-GPT with redundancy.

SECTION GPT-DVD (I.B.AXLE COUNTER)

A pair of Digital Axle Counters is provided between GPT-DVD on UP line one just beyond UP Advanced Starter of GPT station and 400 Mtr. beyond UP IB Home signal between GPT-DVD with redundancy.

SECTION GPT-JGPM (LVCD)

A pair of Digital axle counter is provided between GPT-JGPM with redundancy.

SECTION GPT – WMY ‘D’Cabin-GPT (LVCD)

A pair of Digital axle counter is provided between WMY ‘D’ cabin-GPT with redundancy.

SECTION GPT- WMY ‘A’ CABIN (LVCD)

A pair of Digital axle counter is provided between WMY ‘A’ cabin-GPT with redundancy.

SECTION GPT- DVD (LVCD)

A pair of Digital axle counter is provided between GPT - DVD on UP line one just beyond UP IB Home Signal no. 38 on track circuit No.38T1 of GPT station and another in 1T2 track circuit beyond the UP Home Signal at DVD station. Similarly a pair of Digital axle counter is provided between DVD-GPT on DN line one just beyond Down IB Home Signal no 56 of DVD and another in 1T2 track circuit beyond Dn Home signal 1A/B of GPT.

The position of the Block section whether cleared or occupied are reflected in the Reset box/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 No 8 of section GPT - JGPM shall not come to 'OFF' and the concerned instrument shall remain locked in last operated position for section GPT - JGPM and IB Home Signals shall not assume 'OFF' aspect and the concerned Block Instruments shall remain locked in last operated position for section GPT-DVD.

A resetting arrangement for resumption of the system, in case of failure of both Axle Counters, has been provided in the SS/SM office of the adjacent Block stations. After being assured by both the SS/SM that the last vehicle has arrived completely at the receiving station, the resetting procedure shall be initiated after exchanging Private Number vide G&SR 4.17& 4.17.01.

NOTE:

All LVCD and I.B Axle counters are provided with redundancy.

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

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

Double locking arrangement for Relay room is provided. Key of one lock remains with Signal maintainer of the section and the key of the other lock remains with the SM on duty. The relay room cannot be opened unless both the keys are used. 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 maintainer. On completion of the work, the maintainer shall lock the relay room and return the key to SM. The transaction shall be recorded in relay room key register by SM on duty vide O.M 1.14 & SR 3.51.05 and shall duly sign by SS/SM and maintainer respectively.

Whenever the key is taken by the maintainer for normal maintenance of work, the S&T staff shall give a remark in the register that they will not interfere with the safe passage of train. The SM on duty shall ensure that this remark is given by the S& T staff , otherwise the installation shall be treated as non-interlocked and the action taken in terms of GR 3.69, 3.70 and SRs thereto.

4.3 POWER SUPPLY:

(i) A changeover switch is provided in the Station Master's Office with the three power supplies viz., Up AT, Down AT and Local, for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the Supply.

(ii) Normally the switch will be kept towards Up AT or Dn AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT.

Eg: If power block is to be given on the Up line, Down AT must be available and vice-versa.

(iii) In case of failure of one of the AT supply without any power block, the on duty SM. has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes up.) In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.

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

(iv) For IPS system that provides to EI is also from manual change over switch.

(v) There is a remote monitoring SM box provided at the station to monitor the health of IPS.

4.4 REMOTE MONITORING ASM BOX:

(a) Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-

(b) 50% depth of discharge (DoD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.

(c) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition

(d) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC- DC converters continue working. Audio alarm continues till power supply is restored.

(e) Any of the module fails, which calls for 'call S&T'.

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

5. TELECOMMUNICATIONS:

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- a) The Station is connected to VSKP - PSA Main line Control Circuit.
- b) Telephone attached to SGE type Lock and Block Instruments for sections
 - I) Gopalapatnam -Simhachalan North RRI.
 - II) Gopalapatnam -Duvvada.
 - III) Gopalapatnam -Marshalling yard(WMY) 'D' cabin.
 - IV) Gopalapatnam - Marshalling yard(WMY) 'A' cabin.
- c) Telephone attached to Tokenless Block Instruments for sections.
 - i) Gopalapatnam -Simhachalan North RRI.
 - II) Gopalapatnam -Jaggayyapalem.
- d) Magneto telephones are provided for working between
 - i) Gopalapatnam - Marshalling yard(WMY) 'A' cabin.
 - ii) Gopalapatnam - Marshalling yard(WMY) 'B' cabin.
 - iii) Gopalapatnam - Marshalling yard(WMY) ELS Block hut
- e) Magneto telephone communication is provided with adjacent stations
 - i) Gopalapatnam -Simhachalan North RRI.
 - ii) Gopalapatnam -Duvvada.
 - iii) Gopalapatnam -Marshalling yard(WMY) 'D' cabin.
- f) Magneto telephone communication is provided with the following Interlocked L.C. Gates.
 - i) Gopalapatnam-L.C Gate at km 871/9 between GPT-SCMN.
 - ii) Gopalapatnam -L.C Gate at km 874/11-13 between GPT-VSKP.
 - iii) Gopalapatnam -L.C Gate at km 875/13-15 between GPT-VSKP.
- g) Magneto telephone communication is provided between
 - i).Gopalapatnam - Crank handle location No. 1 & 3 at VSKP end.
 - ii) Gopalapatnam - Crank handle location No. 2 & 4 at DVD end.
 - iii) Gopalapatnam –KAPM goomty towards DVD end.
- h) Railway Auto telephone is provided at the station.
- i) BSNL Telephone is provided at this cabin.
- j) The station is connected to OEC - KRPU traction power control circuit.
- k) VHF set is provided at the station.

6. **SYSTEM OF TRAIN WORKING:**

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

In the event of suspension of control working the SS/SM on duty shall work independently in conjunction with the SS/SM of adjoining Block Stations and shall be responsible to ensure that there is no undue delay to train operation in general. He shall ensure that preference is given to important trains and at the same time no undue detention occurs to the other trains Vide OM 2.14 and 2.24

6.1 **DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:**

COMPLEMENT OF STAFF:		STAFF IN EACH SHIFT:	
S.M.R(Station Manager)	1	S.M.R(General shift)	1
Station Superintendent/SM	9	Station Superintendent/SM	2
Sr, TGK	4	Sr, TGK	1
TPM – 'A'/TPM-'B'	9	TPM – 'A'/TPM-'B'	1
SCLM	1	SCLM	1(day shift)

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

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

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

USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SMR under locked condition. A register shall be maintained for this purpose.

6.1.3 ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:

Any staff before taking of independent charge of duties connected to train working or any staff who is away from his duty for the period of 15 days or more shall sign in the assurance register as token of having understood the contents. However in the event of any corrections or modification in the SWR is involved the assurance of all staff who ever is entrusted the work of train passing duty shall be obtained a fresh in the assurance register by the in charge of the station before they are allowed to work vide SR-5.01.02.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

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

- (i) The whole of the last preceding train has arrived completely.
- (ii) All necessary signals have been put back to 'ON' behind the said train.
- (iii) All signal lights pertaining to the train are burning properly.
[Ref GR.8.01 (1) (a) (b) and 8.01(2) (b) and 8.03 (1) (a) (b) & c (ii) SR 3.42.05 & SR 3.68.05]
- iv) All intervening manned level crossing are closed against road traffic.
- v) Adequate distance to be kept clear.

b) DOUBLE LINE SECTION VSKP-GPT UNDER AUTOMATIC BLOCK SYSTEM:

Under Automatic Block system for section VSKP-GPT Trains shall work in accordance with GR 9.01(1) (a) (b)(c), i, ii, 9.01(2),9.02(1)(2)(3)(4)(5) and SRs there to 9.09, 9.10(1)(2), 9.11(1)(2) and SRs there to 9.12 and SRs there to 9.14 and SRs there to and 9.15 and Block Working Manual Chapter No VI.

c)SINGLE LINE SECTION AND INTERSLOTTING SYSTEM:

Trains are worked under the Absolute block system and the conditions laid down in G&SR 8.01(a)(c) and 8.01(2)(b) and 8.03(2)(a)(b)(c)(ii) must be complied before the line clear is granted, to the station in rear. The station master on duty shall also ensure the concerned Home signal displays ON aspect on the VDU.

d)ADEQUATE DISTANCE TO BE KEPT CLEAR FOR GRANTING LINE CLEAR

<u>To station</u>	<u>Direction of trains</u>	<u>Up to the point where line is to be kept clear.</u>
'D' cabin WMY	Up goods train to S.C.Rly or Dn goods trains to S.E.Rly.(uni-direction).	Crossover Pt 52 at 'D' cabin end.
Simhachalam North	Up trains.	L.C.at KM:871/9.
Duvvada	Down trains.	BSLB.

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ELS Block hut	Up trains	Dn advanced starter signal No 25.
Jaggayyapalem	Dn trains	Up advanced starter signal No 34.
Simhachalam North	Dn trains (over By pass)	Dn advanced starter signal No 21.

NOTE:

(a) If the light of the reception signal is found not burning, line clear shall not be granted for train till such time it is ensured that the concerned loco pilot is notified of the fact in writing by the Station Master of the station to which such line clear is to be granted. vide G&SR 3.49(4) and 3.68 TO3.71)

(b) CRS vide his No 599 dated 19-10-92 has given sanction to grant Line clear with Level crossing gate at Km 871/9 in open condition since the Level crossing gate is protected by signal No14 as communicated by Dy.CSTE(C-HQ)VSKP under his letter No SPS/S&T/LRC/pt II/2144 dated 26-10-92.

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

Due to non-availability of berthing lines all the Home signals are interlocked with concerned Last stop signals except S17 and S5 which are released by SA31 leading to VSKP since AUTO block section is existing between VSKP-GPT.

Before piloting IN a train or receiving a train on calling on signal line clear shall be obtained from concerned section in advance except for S5 and S 17.

Note;- While sanctioning condonation for retention of 1 in 150 grade in yard limits between Kottapalem and Gopalapatnam, Executive Director-Civil Engineering Railway Board has stipulated that as train shall be booked to stop within station yard vide his letter No 89/CELO/SL/8 dt March 92.

6.2.1.1 SETTING OF POINTS AGAINST BLOCKED LINE:

Setting of points against blocked line does not arise at this station since trains will run through only due to non availability of berthing facility.

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE:

In case of reception of a train on obstructed line the SM shall send the written permission in the form T/509 referred in 5.09.01[a] and shall enclose the reason for such admission, the line number and the nature of obstruction on that. The setting and locking of points shall be done as per SR 3.69.03. A stop hand signal shall be exhibited by SM personally at a distance of not less than 45 M from the point of obstruction to indicate the loco pilot as to when the train shall be brought to a stand.

However the SM, whenever possible, shall intimate the loco pilot through the SM of station in rear and also by taking off Calling ON signal.[Refer 5.09[1] & [2].

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

- NIL-

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

- NIL-

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6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:**-NIL-****6.2.1.6 ANY SPECIAL CONDITIONS:****A) SPECIAL RESTRICTIONS**

- (I) No train shall be booked to stop at this station due to no berthing track is available.
- (II) Before taking off Home signal /Calling On signal, Line clear should be obtained from advance block station.
- (III) Reception signal for a DN train from DVD/JGPM to VSKP shall not be taken off unless the train from VSKP to SCMN is stopped at the home signal.
- (IV) Unless a line is kept clear at B cabin for receiving a train arriving from DVD the SS/SM GPT shall not grant line clear to DVD for DN Goods train.

(B) SPECIAL INSTRUCTIONS

- (i) Placement of Auto signal No.A-6 on the RH side of the track is also permitted by COM/BBS to have proper standard implantation.
- (ii) Vide CRS's letter No. R/12019/14/2006-SEC/980 dt. 01.11.06, the By pass line between GPT-SCMN is authorized for public carriage of passenger traffic at a maximum sectional speed of 50 KMPH.

6.3 CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.36, 3.38, 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].
In view of no berthing track the OFF aspect of the Home signal is interlocked with the OFF aspect of the last stop signal of the concerned route.

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

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

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

According to the existing interlocking at the station, the following simultaneous reception and Despatch of trains is permitted.

A	While passing a train from Visakhapatnam to SCMN	Simultaneously another train can pass from "D' cabin to Duvvada OR Jaggayyapalem
B	While passing a train from Visakhapatnam or 'D' cabin to Duvvada	Simultaneously another train can pass from Jaggayyapalem to ELS Block Hut OR 'A' cabin.
C	While passing a train from DVD to SCMN on By pass line.	Simultaneously, another train can pass from JGPM to ELS 'B Hut" OR 'A' cabin AND Another train can pass from SCMN to VSKP on HWH-VSKP line. AND Another train can pass from 'D' cabin to SCMN.

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D	While passing a train from JGPM to SCMN on By pass line.	Simultaneously, another train can pass from 'D' cabin or VSKP to SCMN on HWH DN main line.
E	While passing a train from MYD 'A' cabin to DVD.	Simultaneously, another train can pass from from 'B Hut' to JGPM. AND Another train can pass from 'D' Cabin/VSKP to SCMN simultaneously.
F	While passing a train from DVD to VSKP/'D' cabin.	Simultaneously, another train can pass from 'A' cabin/ 'B Hut' to JGPM. AND Another train can pass from VSKP to SCMN on HWH main line. AND Another train can pass from SCMN to VSKP on UP line.

6.5 COMPLETE ARRIVAL OF TRAINS:

The entire block section between GPT-DVD on both Up, Down lines and GPT- JGPM are monitored by axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated on resetting panel/VDU at SS/SM's office. The sections between GPT-VSKP, GPT- SCMN on both UP & DN lines and Bye pass lines are provided with Track circuits. As soon as train enters in to the block section the RED indication appears on VDU. After whole train clears the block section GREEN indication appears on the VDU. This confirms the complete arrival of train and the SS/ SM on duty shall give 'Train Out of Block Section' report on seeing the section clear indication GREEN on the VDU/Panel.

A last vehicle verification goomty is provided near point No.53B at DVD end of the yard and manned by TPM who will ascertain complete arrival of the trains. Telephone communication is provided between goomty and the SM/E.I building. He shall ascertain that the train has passed complete with Last vehicle between ELS 'B' Hut, between DVD and SCMN via by pass line. Before taking off reception signals for the trains passing on line , which is physically not visible the SM on duty shall inform the TPM about the train numbers, direction of train, instruct him by supporting private number to verify last vehicle indicators of the train. The TPM on receipt of information shall watch the train and after satisfying himself that the train has arrived with LV as per GR 4.16 (i) (a) and (h) shall give train complete arrival PN to SS/SM GPT E.I.The SM,after receipt of PN shall close that particular block section.

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

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

In case a train passes incomplete, action shall be taken as per SR.4.17.02, "Train out of Block Section" report shall be withheld to the station in rear until Complete Arrival Certificate is received from the station in advance supported by a private number. Train passing on adjacent line shall be stopped and Guard and loco pilot shall be issued with caution Order to proceed cautiously and stop short of any obstruction as per SR. 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SS/SM on duty shall take action in terms of SR.15.25.03(b)(vi).

6.6 DESPATCH OF TRAINS:

To dispatch a train, the Station master on duty after obtaining line clear for that train, shall set the

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route for the outgoing train correctly and satisfy him self by observing the Indication on the VDU.He shall suspend all non-isolated shunting and the SM will ensure that the Level crossing Gate is closed against road traffic and then shall take "OFF" the concerned signals. The 'OFF' aspect of the advanced starter is the authority to proceed into the block section. As soon as the train passes the advanced starter signal. Train entering section indication will appear on the VDU .The SM will then send the train entering given section signal to the station in advance. [Refer GR 3.38, 3.42, SR 3.42.02(a)(iv),3.42.03 3.42.04 and BWM 2.07.5(a)]

Despatch of trains under **Automatic Block system** between section Gopalapatnam and Visakhapatnam shall be governed in accordance with the provisions contained in G&SR Para Nos 9.01(1) (a) (b)(c), i, ii, 9.01(2), 9.02(1)(2)(3)(4)(5) and SRs there to 9.09, 9.10(1)(2), 9.11(1)(2) and SRs there to 9.12 and SRs there to 9.14 and SRs there to and 9.15 and Block Working Manual Chapter No VI

For taking OFF Signal No 12(SEMI AUTO SIGNAL) the following procedure shall be adopted.

- i)To work signal No as manual stop signal click signal Icon No SA 31 and route icon No 31 A.
- ii)To work signal No as semiautomatic signal click King Switch icon provided on VDU and Route icon 31A.

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the advanced starter completely, he shall send the train entering block section signal to the station in advance. If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. The interlocked level crossing gate shall remain closed against road traffic for dispatch of trains. [ReferSR.4.23.02 & 4.25.02]. Due to no Berthing facility all trains are booked to run through the station.

6.7 TRAINS RUNNING THROUGH:

- a.) The provision of GR 3.40, 4.17, 4.42 with relevant SRs and SR 3.42.02(a)(iv) and other relevant provision of BWM shall be observed.
- b.) The sequence for taking 'OFF' signals for run through trains is governed by SR 3.42.02 (a).
- c.) In every case in which trains are permitted to run through on a non isolated line, all shunting shall be stopped and no vehicle unattached to an engine or not properly secured in accordance with rule 5.23 may be kept standing on a connected line which is not isolated from through line vide SR 4.11(2).
- d.) The SS/SM on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Ref GR 3.42, 4.17 4.42,& SR 4.42.02 (b) (i) ,(ii), (iii),c & (d)].

6.8 WORKING IN CASE OF FAILURE:

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

A. TRACK CIRCUITS:

In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.

B. AXLE COUNTER:

If the axle counter fails between the block sections, resetting procedure will be adopted as per 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/SSE (signal) for rectification.

C. BLOCK INSTRUMENTS:

In the event of partial/total failure of block instrument the concerned block instrument shall be

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suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 & 6.02.06)

During this period of time the authority will be T/369(3b) or PLCT (as the case may be) with identification number and Private Number issued from the station in advance written both in figure and words.

D. RECEPTION OF A TRAIN ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line it is necessary that the train are piloted IN on a written authority given by the SS/SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train or by taking off the calling on signal. [Refer GR 5.09 & SRs there to].

E. RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

-NIL-

F. DEFECTIVE SIGNALS:

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if the signals cannot be taken 'OFF', the setting of points on the route to which it applies shall be inspected by the SS/SM on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c)].

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

G. DEFECTIVE POINTS/DAMAGED POINTS:

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 SS/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 shall be followed as per operating manual para-20.06. An emergency Crank handle register shall be maintained by the SS/SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting clamping and padlocking of the points devolve on the SS/SM on duty. (Details of use of Crank Handle as per Appendix -'B'). The cases of the failures of the motor point should be promptly reported to the concerned signal maintainer/signal inspector for immediate rectification.

H. DEFECTIVE INTERLOCKING:

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

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

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM]

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

7.0 BLOCKING OF THE LINES:

When a running line is block by stabled load, wagon, vehicle or by a train which is to cross or give

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precedence to another train or immediately after arrival of a train at the station the points at either end on single line section should be immediately set against the block line except when shunting or any other movement is required to be done immediately in that direction on that line.

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

A. SECURING OF VEHICLES: -

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

NOTE

Special care should be taken to secure special type vehicles fitted with roller bearing while standing in siding or in running lines. [Refer GR 5.23 & SR 5.23.01]

8.0 SHUNTING

No shunting is permitted at this station.

NOTE: Points both facing and trailing are to be clamped and padlocked for all non-signaled movements. Further it must be ensured that the Entrance and Exit track circuit are clear as also the intervening track of the cross over is clear of any obstruction and certified so by the operating official (who is responsible for shunting supervision) before the SS/S.M on Duty resumes normal working either for reception or dispatch of trains in to the station yard or through the station yard.

9.0 ABNORMAL CONDITION:-

a.) The rules to be observed in the event of abnormal conditions.

i) During partial interruption /failure of electrical communications instrument.

During partial interruption of communications train shall be worked in accordance with BWM 5.16 & 5.23 and SR 6.02.06.

ii) The authority to proceed in the occupied block section in case of obstruction of line or accident etc. Rules and regulations for working of trains on obstructed line in case of obstructions or accident on the authority of Block Ticket T/A 602 when communications are available shall be followed in accordance with the provisions of SR 6.02.02 and 06.02.05.

iii) Trains delayed in Block Section: The rules laid down in GR 6.04 shall be observed.

b.) REPORTING FAILURE OF POINTS, TRACK CIRCUITS AND INTERLOCKING.

Whenever there is a failure of points, track circuits/axle counters or any other interlocking gear at the station the failure should be reported by SS/SM on duty to the concerned signal maintenance staff on duty responsible for attending the failure and only after the receipt of the written memo from the signal maintenance staff for rectification of the fault SS/SM on duty should restore the normal working after testing for its normal function SR 3.51.04 & SR 3.77.01 shall be followed. 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 all communications, trains shall be worked in accordance with provisions of SR 6.02.05.

b.) During partial interruption of communications the rules laid down in SR 6.02.03 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION :

During Temporary Single Line working on one clear line when one line is obstructed either

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between GPT-VSKP, GPT-SCMN and GPT-DVD train shall be worked as per the procedure.

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

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

10. VISIBILITY TEST OBJECT:

The signal lights of signal No.SA31 [VSKP end] and DN Advanced starter No.32 [HWH end] are the visibility test object vide GR 3.61.2(b)(iii)

11. ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

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

FOG SIGNALLING:-

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

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

12.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

12.2 INSTRUCTIONS:

This register contains the following parts.

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

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

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

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

In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

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13.**APPENDICES**

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

CERTIFICATE :

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING AMENDING OR MODIFYING ANY GENERAL RULES AND SUBSIDIARY RULES. BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES CANCEL ALL PREVIOUS STATION WORKING RULES OF GOPALAPATNAM STATION.

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APPENDIX 'A'
WORKING OF LEVEL CROSSING GATES

1.0 WORKING RULES FOR "SPL" CLASS LEVEL CROSSING GATE SITUATED AT KM 875/11-13 BETWEEN GOPALAPATNAM AND VISAKHAPATNAM.

1. GENERAL:

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

Following details shall be maintained at all manned level crossing gates:

1. Number of Level Crossing Gate :	493
2. Engineering or Traffic Gate :	<u>Engineering 'SPL' Class</u>
3. Under control of Station Master / SSE/P:	<u>SSE/P/VSKP</u>
4. Location at KM:	<u>875/11-13</u>
5. At Station:	---
6. In between stations:	<u>GPT-VSKP.</u>
7. BG / MG / NG :	<u>BG</u>
8. Single line / Double line / Multiple line:	<u>Double Line</u>
9. Normal Position:	<u>Open to road Traffic</u>
10. Interlocked / Non-Interlocked:	<u>Inter locked with Gate Signals.</u>
11. Means of Interlocking	<u>RKT/Key Transmission</u>
12. Provision of Gate signal at Kms.	
(i) Up Line :	
(ii) Dn Line:	
13. Signalling arrangements:	<u>MACLS</u>
14. Means of Communication – Telephone / Bell etc.:	<u>Telephone connection with GPT Station</u>
15. Width of level crossing gate:	<u>9.5 M.</u>
16. Type of road (NH / SH / Others):	<u>Others.</u>
17. Name of Road:	<u>Municipal Road.</u>
18. Metaled / non-metaled:	<u>Metaled.</u>
19. Approach road:	<u>Metaled.</u>
20. Width of the road :	<u>9.5 M</u>
21. Angle of road crossing (in case of the skew gates):	<u>45 Degree.</u>
22. Road gradient (if any)	
(i) North / East side :	<u>1 in 30</u>
(ii) South / West side:	<u>1 in 40.</u>
23. Road alignment (straight/curve)	
(i) North / East side :	<u>Straight .</u>
(ii) South / West side:	<u>Straight</u>
24. Provision of height gauges:	<u>Provided</u>
25. Type of Barriers:	<u>Coupled Lifting type.</u>
26. Length of Check rails :	<u>11.50 M</u>
27. Road surface in between L-Xing gates:	<u>Level.</u>
28. Length of Rumble strip / speed breakers:	<u>9.5 M.</u>
29. Road signs:	<u>Provided</u>
30. Speed breaker indication board:	<u>Provided</u>
31. TVU:	<u>216150 on 1.12.2011.</u>
32. Census next due on :	<u>01.12.2014</u>
33. Demarcation for placement of Detonators:	<u>Provided</u>
34. No. of Gatemen working:	<u>3 Three</u>
35. Nearest Railway Medical Assistance Railway Hospital:	<u>Marripalem</u>
36. Nearest Private Medical Assistance available (if any):	<u>Marripalem</u>

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37. List of equipment available Yes / No:

Yes**1.2 EQUIPMENT:**

<u>Items</u>	<u>Quantity / Numbers</u>
1. Hand Signal Lamp Tri Colour	3 (5 on Quadruple / Line or twin single line)
2. Hand Signal Flag Green	1 Mounted on stocks
3. Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4. Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5. Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate lamps	2
9. Tommy Bar	1
10. Mortar Pan	1
11. Spade / Powrah	1
12. Rammer	1 (In case of asphalted road this may not be provided)
13. Pick Axe	1 (In case of asphalted road this may not be provided)
14. Tin case for flags	1
15. Can for oil	1
16. Water port / Bucket	1
17. Canister for Muster Roll	1
18. Set of spare spectacles of gateman wearing glasses	1
19. Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20. Basket	1
21. Whistle	1
22. Wall Clock	1
23. A small size chain for use in case of failure of gate boom/ lock.	1

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.

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6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection book.
12. S&T register in case of Interlocked Engineering gate.

1.4 MODE OF OPERATION:

- (a) The level crossing gate is normally open to road traffic.
- (b) Barrier-1 & Barrier-2 switches are provided for individual operation of Barriers if required.
- (c) Red and Green buttons are provided on panel for closing and opening of LC gate respectively.
- (d) Push button RED pressed till the gate is closed and locked.
- (e) Key 'Q' is extracted from RKT-2 After the gate is closed and locked,
- (f) Key 'Q' thus extracted from RKT-2 is inserted in RKT-1 and transmitted to LC gate panel to take 'OFF' the concerned Gate signal No: GSA-2,GSA-3 etc.
- (g) For opening of the gate, Gate man first normalize the switch of gate signal and then press the push button provided on panel board and press the switch provided on RKT-1 and extract the Key-'Q' from RKT-1.
- (h) Inserted the Key-'Q' in RKT-2 and transmit to electrical lifting barrier Panel for release the gate lock. Keep press push button Green on the electrical lifting barrier panel till gate is opened.

WORKING OF SLIDING BOOM BARRIER INCASE OF BREAKAGE OF ELECTRICAL LIFTING BARRIER AT INTERLOCKED 'SPL' CLASS LC GATE AT KM:875/11-13.

- a) Sliding boom barrier of West side (DN line side) will be rolled across the Road till the locking end of the barrier rests on lock post. Inserting and turning the Key-1(Which is chained with sliding Barrier),releases the lock plunger then by sliding the lock plunger sliding barrier gets locked and releases the Key No.2.
- b) Similarly sliding barrier of East side (UP line side) will be rolled across the road till the locking end of the barrier rest on lock post. Inserting the key-2 (Which is released from West side barrier), releases the lock plunger then by sliding the lock plunger sliding barrier gets locked, releases the Key No.3.
- c) Key No.3 inserted in sliding barrier Key (SBK) RKT No.3 and turned which releases the gate signal panel.

1.4.1 Brief Description

This is a "SPL" Class interlocked level crossing gate situated between GPT-VSKP stations. The gate is controlled by an RKT which is transmitted to gate panel and provided with coupled lifting type barriers operated electrically from the gate lodge. The gate crosses UP and DN lines of HWH-VSKP section. This gate falls in the VSKP-GPT Auto section and controls the semi Automatic Gate signal Nos GSA 3 on Up line and GSA 2 on Dn line.

- 1.4.2** The gate is provided with Manually operated Multi Aspect Colour Light signals with necessary "G" marker. A push button on the miniature panel is provided for operation of signals. The signals are interlocked with the gate through this panel.

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DESCRIPTION OF SWITCHES

Switch No.	Functions.
GSA 2	Switch for DN SEMI Auto gate signal No. GSA 2 of Down line
GSA 3.	Switch for UP SEMI Auto gate signal No. GSA 3 of UP line

- 1.4.3** The gate shall normally to be kept open for road traffic during day and night and will be closed as and when required for passage of trains. Whenever it is required to be closed against road traffic the Station Master on duty at E.I Cabin shall advise the gateman on duty to close the gate. The gateman will clear road traffic, close the gate by Push button switch and take off the signals as explained below.
- The level crossing gate is normally open to road traffic.
 - Barrier-1 & Barrier-2 switches are provided for individual operation of Barriers if required.
 - Red and Green buttons are provided on panel for closing and opening of LC gate respectively.
 - Push button RED pressed till the gate is closed and locked.
 - Key 'Q' is extracted from RKT-2 After the gate is closed and locked,
 - Key 'Q' thus extracted from RKT-2 is inserted in RKT-1 and transmitted to LC gate panel to take 'OFF' the concerned Gate signal No: GSA-2,GSA-3 etc.
 - For opening of the gate, Gate man first normalize the switch of gate signal and then press the push button provided on panel board and press the switch provided on RKT-1 and extract the Key-'Q' from RKT-1.
 - Inserted the Key-'Q' in RKT-2 and transmit to electrical lifting barrier Panel for release the gate lock. Keep press push button Green on the electrical lifting barrier panel till gate is opened.

Approach locking, Back locking and approach warning provided.

After the passage of the train the gateman shall inform the Station Master that the train has passed safe with last vehicle indication. Then the Gate man normalizes the signals and releases the key from the RKT . Thereafter the gateman shall open the gate for road traffic.

When the level crossing gate is opened for road traffic, the gateman on duty in order to show "DANGER HAND SIGNAL" to an approaching train shall at night keep his "HAND SIGNAL LAMP" turned to show "RED" and in day keep the "RED" hand signal flag furled in his hand throughout the period when the level crossing gate is opened to the road traffic in terms of SR 6.03.07.

1.4.4 EMERGENCY OPERATION:-

In the event of failure of RKT and the gate could not be operated, the Station Master shall immediately intimate failure to the ESM/MSM/SE (Signals) for rectification. Till such time the failure is rectified by ESM/MSM/SE(Signals), the gate shall be treated as non-interlocked and all trains passing over the gate shall be piloted "IN" or "OUT". The Station Master on duty shall ensure from the gateman that the gate is closed against road traffic and take an assurance Private Number from the gateman in token of closing the gate before sending pilot memo for piloting the train. However the TPM who pilot the train shall, while going to pilot, physically verify the closer and locking of the gate. In the event of failure of barriers, the gate man shall close the level crossing gate, close with chains and pad lock and shall then confirm the Station Master at RRI supported by Private Number, in both the above cases, TPM who pilots, while going, shall verify closing and locking of level crossing gate.

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1.4.5 FAILURE OF COMUNICATION:-

In case of failure of Telephonic communication between the gateman and the Station Master on duty RRI Cabin shall send manuscript message in duplicate to the gateman on duty advising him to close the gate and transmit the key . On receiving the advise the gateman shall close the gate and acknowledge the same and return one copy to the Station Master on duty. The gateman shall immediately transmit the key to the Station Master on duty through RKT. The gateman on duty should be alert watchful and responsible for the safe passage of trains.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

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

2. POSITION DURING PASSAGE OF TRAINS:

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

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

3. ROUTING DUTIES OF GATEMAN:

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
- vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.

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

4. **ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:**

In case gateman observes any thing unusual with a passing train, he shall take following action:

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

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- v) He shall endeavour to attract the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, on telephone, to take appropriate action, under exchange of private number.

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

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

The gateman shall protect the line as under:-

- a) **On double line section:**
 - i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed in haste exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction mobilizing any assistance locally available and warn the loco pilot of any approaching train.

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- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

b) **On single line section:**

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction mobilizing any assistance locally available and warn the loco pilot of any approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- OTHER ACTION TO BE TAKEN BY GATEMAN**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.

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

1.6 ENGINEERING ITEMS:

Please see para 916,918,916 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings

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7. SPECIAL INSTRUCTIONS FOR DIFFERENT TYPES OF LEVEL CROSSINGS

Instructions for different types of manned level crossing gates are given in Annexures as follows:

Annexure-I	Engineering level crossing Gate, Inter locked with gate signals, provided with telephone, with normal position 'Open to road traffic'.
Annexure – II	Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Open to road traffic'.
Annexure – III	Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Closed to road traffic'.
Annexure – IV	Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Open to road traffic'.
Annexure – V	Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Closed to road traffic'.
Annexure – VI	Engineering Level Crossing Gate, non-interlocked, not provided with telephone, with normal position 'Closed to road traffic'.

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ANNEXURE-I**WORKING INSTRUCTIONS FOR "SPL" CLASS LEVEL CROSSING GATE SITUATED AT KM 875/11-13 BETWEEN GOPALAPATNAM AND VISAKHAPATNAM.****1. Mode of Operation:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

- (a) The level crossing gate is normally open to road traffic.
- (b) Barrier-1 & Barrier-2 switches are provided for individual operation of Barriers if required.
- (c) Red and Green buttons are provided on panel for closing and opening of LC gate respectively.
- (d) Push button RED pressed till the gate is closed and locked.
- (e) Key 'Q' is extracted from RKT-2 After the gate is closed and locked,
- (f) Key 'Q' thus extracted from RKT-2 is inserted in RKT-1 and transmitted to LC gate panel to take 'OFF' the concerned Gate signal No: GSA-2,GSA-3 etc.
- (g) For opening of the gate, gateman first normalize the switch of gate signal and then press the push button provided on panel board and press the switch provided on RKT-1 and extract the Key-'Q' from RKT-1.
- (h) Inserted the Key-'Q' in RKT-2 and transmit to electrical lifting barrier Panel for release the gate lock. Keep press push button Green on the electrical lifting barrier panel till gate is opened.

WORKING OF SLIDING BOOM BARRIER INCASE OF BREAKAGE OF ELECTRICAL LIFTING BARRIER AT INTERLOCKED 'SPL' CLASS LC GATE AT KM:875/11-13 .

- a) Sliding boom barrier of West side (DN line side) will be rolled across the Road till the locking end of the barrier rests on lock post. Inserting and turning the Key-1(Which is chained with sliding Barrier),releases the lock plunger then by sliding the lock plunger sliding barrier gets locked and releases the Key No.2.
- b) Similarly sliding barrier of East side (UP line side) will be rolled across the road till the locking end of the barrier rest on lock post. Inserting the key-2 (Which is released from West side barrier), releases the lock plunger then by sliding the lock plunger sliding barrier gets locked, releases the Key No.3.
- c) Key No.3 inserted in sliding barrier Key (SBK) RKT No.3 and turned which releases the gate signal panel.

Approach locking, Back locking and approach warning provided.

2. Intimation to the gateman

- i) Immediately after departure of the train, SS/SM shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.

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- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman, as soon as he receives train entering section advice from the dispatch station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. Failure of Telephonic Communication:

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

- i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the loco pilot of the departing train.
- ii) SS/SM shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the despatching end, under exchange of private number that the telephone at the gate has failed.
- v) The SS/SM at the despatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM will also advise the gateman through Gangman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

4. Failure of Lifting Barriers:

- i) When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.

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- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number; to similarly issue a caution order to the loco pilot before despatching a train in the block section.
- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repairs the lifting barriers and issue reconnection / fit memo for the same.

5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.

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- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advise the SS/SM at the despatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before despatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. Defective Gate Signals:

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

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- ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

8. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the loco pilot, owner and relay these details to the SS/SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers / leaf gates are not fouling the track.
- viii) The Station Master shall also inform the SS/SM at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the SS/SM accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, of the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

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9. Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

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Appendix 'A'

**WORKING RULES OF "A" CLASS INTERLOCKED LEVEL CROSSING GATE
SITUATED AT KM 874/11-13 BETWEEN GOPALAPATNAM-VISAKHAPATNAM .****1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

1.	Number of Level Crossing Gate :	ML 492.
2.	Engineering or Traffic Gate:	<u>Engineering</u>
3.	Under control of Station Master / SSE/P	<u>SSE/P/VSKP</u>
4.	Location at KM :	<u>874/11-13</u>
5.	At Station:	---
6.	In between stations :	<u>GPT-VSKP</u>
7.	BG / MG / NG :	<u>BG</u>
8.	Single line / Double line / Multiple line :	<u>Multiple Line</u>
9.	Normal Position:	<u>Open to road Traffic</u>
10.	Interlocked / Non-Interlocked :	<u>Inter locked with Gate signals.</u>
11.	Means of Interlocking:	<u>RKT</u>
12.	Provision of Gate signal at Kms.	
	(i) Up Line :	
	(ii) Dn Line :	
13.	Signalling arrangements:	<u>MACLS</u>
14.	Means of Communication – Telephone / Bell etc.:	<u>Telephone connection with Gopalapatnam station</u>
15.	Width of level crossing gate :	<u>8.5 M.</u>
16.	Type of road (NH / SH / Others) :	<u>Others</u>
17.	Name of Road:	<u>Municipal.</u>
18.	Metaled / non-metaled :	<u>Metaled</u>
19.	Approach road :	<u>Metaled</u>
20.	Width of the road :	<u>8.5M.</u>
21.	Angle of road crossing (in case of the skew gates):	<u>90 degree</u>
22.	Road gradient (if any)	
	(i) North / East side :	<u>1 in 40</u>
	(ii) South / West side :	<u>1 in 30</u>
23.	Road alignment (straight/curve)	
	(i) North / East side:	<u>Straight.</u>
	(ii) South / West side:	<u>Straight.</u>
24.	Provision of height gauges :	<u>Provided</u>
25.	Type of Barriers :	<u>Coupled Lifting type.</u>
26.	Length of Check rails:	<u>10.5 M..</u>
27.	Road surface in between L-Xing gates:	<u>Level</u>
28.	Length of Rumble strip / speed breakers:	<u>8.5 M</u>
29.	Road signs :	<u>Provided</u>
30.	Speed breaker indication board:	<u>Provided</u>
31.	TVU :	<u>37560 on 23.10.2011.</u>
32.	Census next due on :	<u>23.10.2014.</u>

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33. Demarcation for placement of Detonators: Provided
 34. No. of Gatemen working: 3 Three
 35. Nearest Railway Medical Assistance: Railway Hospital Marrisalem
 36. Nearest Private Medical Assistance available (if any): Private clinic at Marrisalem
 37. List of equipment available Yes / No : Yes

1.2 EQUIPMENT:

<u>Items</u>	<u>Quantity / Numbers</u>
1. Hand Signal Lamp Tri Colour	3 (5 on Quadruple / Line or twin single line)
2. Hand Signal Flag Green	1 Mounted on stocks
3. Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4. Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5. Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6. Spare chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate lamps	2
9. Tommy Bar	1
10. Mortar Pan	1
11. Spade / Fowrah	1
12. Rammer	1 (In case of asphalted road this may not be provided)
13. Pick Axe	1 (In case of asphalted road this may not be provided)
14. Tin case for flags	1
15. Can for oil	1
16. Water port / Bucket	1
17. Canister for Muster Roll	1
18. Set of spare spectacles of gateman wearing glasses	1
19. Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20. Basket	1
21. Whistle	1
22. Wall Clock	1
23. A small size chain for use in case of failure of gate boom/lock	1

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.

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9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Register in case of Interlocked Engineering Gate.

1.4 MODE OF OPERATION:

The Gateman on duty shall ensure clearance of road traffic close and lock the gate thereafter transmit the key to the station master on duty as per the following procedure.

- (a) The level crossing gate is normally open to road traffic.
- (b) Barrier-1 & Barrier-2 switches are provided for individual operation of Barriers if required.
- (c) Red and Green buttons are provided on panel for closing and opening of LC gate respectively.
- (d) Push button RED pressed till the gate is closed and locked.
- (e) Key 'Q' is extracted from RKT-2 After the gate is closed and locked,
- (f) Key 'Q' thus extracted from RKT-2 is inserted in RKT-1 and transmitted to LC gate panel to take 'OFF' the concerned Gate signal No: GSA-1 GSA-4.
- (g) For opening of the gate, gate Man first normalize the switch of gate signal and then press the push button provided on panel board and press the switch provided on RKT-1 and extract the Key-'Q' from RKT-1.
- (h) Inserted the Key-'Q' in RKT-2 and transmit to electrical lifting barrier Panel for release the gate lock. Keep press push button Green on the electrical lifting barrier panel till gate is opened.

1.4.1 BRIEF DESCRIPTION:-

This is a " A" Class level crossing gate situated within station section at KM 874/11-13 interlocked with Semi Automatic Gate signals.

1.4.2 INTERLOCKING

The gate is provided with Manually operated Multi Aspect Colour Light signals with necessary "G" marker. A push button on the miniature panel is provided for operation of signals. The signals are interlocked with the gate through this panel.

DESCRIPTION OF SWITCHES:-

<u>Switch No.</u>	<u>Functions.</u>
GSA 4	Switch for DN SEMI Auto gate signal No. GSA 4 of Down line.
GSA 1.	Switch for UP SEMI Auto gate signal No. GSA 1 of UP line.
D 3.	Switch for DN S.C.R Despatch gate signal No.3S of SCR dispatch line

1.4.3 The gate shall normally be kept opened for road traffic during day and night and will be closed as and when required for passage of trains. Whenever it is required to be closed against road traffic the Station Master on duty at GPT E.I. cabin shall advise the gateman on duty.

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The gateman will clear road traffic and close the gate by operating the winch and operate the winch and take off the signals as explained below.

- a) The level crossing gate is normally open to road traffic.
- b) Barrier-1 & Barrier-2 switches are provided for individual operation of Barriers if required.
- c) Red and Green buttons are provided on panel for closing and opening of LC gate respectively.
- d) Push button RED pressed till the gate is closed and locked.
- e) Key 'Q' is extracted from RKT-2 After the gate is closed and locked,
- f) Key 'Q' thus extracted from RKT-2 is inserted in RKT-1 and transmitted to LC gate panel to take 'OFF' the concerned Gate signal No: GSA-1 GSA-4.
- g) For opening of the gate, gate Man first normalize the switch of gate signal and then press the push button provided on panel board and press the switch provided on RKT-1 and extract the Key-'Q' from RKT-1.
- h) Inserted the Key-'Q' in RKT-2 and transmit to electrical lifting barrier Panel for release the gate lock. Keep press push button Green on the electrical lifting barrier panel till gate is opened.

Approach locking, back locking and approach warning provided.

After passage of the train "the gateman shall inform the Station Master that the train has passed safely with the last vehicle indication.

The Gate man after normalizing the concerned signals, takeout the key from the RKT at the gate and open the gate. Thereafter the gateman shall open the gate.

When the level crossing gate *is* opened for road traffic, the gateman on duty in order to show "DANGER SIGNAL" to an approaching train must at night keep his "HAND SIGNAL LAMP" turned to show "RED" and in day "RED" Hand Signal Flag furled in his hand throughout the period when the level crossing gate is opened to road traffic in terms of SR 16.03.07.

1.4.5 EMERGENCY OPERATION:-

In the event of failure of RKT and the gate could not be operated, the Station Master shall immediately intimate failure to the ESM/MSM/SE(Signals)for rectification. Till such time the failure is rectified by ESM/MSM/SE(Signals), the gate shall be treated as non-interlocked and all trains passing over the gate shall be piloted "IN" or "OUT".

The Station Master on duty shall ensure from the gateman that the gate is closed against road traffic and take an assurance Private Number from the gateman in token of closing the gate before sending pilot memo for piloting the train- However, the TPM who pilots the train shall, while going to pilot, physicality verify the closer and locking of the gate. In the event of failure of barriers the gate man shall close the level crossing with chains and pad lock and shall then confirm the Station Master at E.I. supported by Private Number.

In the both above cases TPM who pilots while going, shall verify closing and locking of the gate.

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1.4.6 FAILURE OF TELEPHONE COMMUNICATION

In case of failure of Telephonic communication between the gateman and the RRI Cabin, the Station Master on duty shall send manuscript message in duplicate to the gateman on duty advising him to close the gate and transmit the key. On receiving the advise the gateman shall close the gate and acknowledge the same on one copy and return the other to the Station Master on duty. The gateman shall immediately transmit the key to the Station Master on duty through RKT. The gateman on duty should be alert watchful and responsible for the safe passage of trains.

After the fault is rectified by S&T staff, the Station Master on duty shall obtain a written memo from them and record the transactions.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

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

2. POSITION DURING PASSAGE OF TRAINS:

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

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

3. ROUTING DUTIES OF GATEMAN:

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

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

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the loco pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

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- iii) If loco pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

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

The gateman shall protect the line as under:-

- a) **On double line section:**
 - i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed in haste exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

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- vi) Having returned to the gate, he must then take steps to remove the obstruction mobilizing any assistance locally available and warn the loco pilot of any approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- b) **On single line section:**
- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction mobilizing any assistance locally available and warn the loco pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- c) **Other action to be taken by Gateman:**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

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- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the loco pilot, owner and relay these details to the nearest Station Master or SSE/P regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

6. ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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7. SPECIAL INSTRUCTIONS FOR DIFFERENT TYPES OF LEVEL CROSSINGS:

Instructions for different types of manned Level Crossing Gates are given in Annexures as follows:

Annexure – I	Engineering Level Crossing Gate, Interlocked with gate signals, provided with telephone, with normal position 'Open to road traffic'.
Annexure – II	Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Open to road traffic'.
Annexure – III	Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Closed to road traffic'.
Annexure – IV	Engineering Level Crossing Gate, non-Interlocked, provided with telephone, with normal position 'Open to road traffic'.
Annexure – V	Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Closed to road traffic'.
Annexure – VI	Engineering Level Crossing Gate, non-interlocked, not provided with telephone, with normal position 'Closed to road traffic'.

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ANNEXURE – I**WORKING INSTRUCTIONS OF "A" CLASS INTERLOCKED LEVEL CROSSING GATE SITUATED AT KM 874/11-13 BETWEEN GOPALAPATNAM-VISAKHAPATNAM .****1. Mode of Operation:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate

- (a) The level crossing gate is normally open to road traffic.
- (b) Barrier-1 & Barrier-2 switches are provided for individual operation of Barriers if required.
- (c) Red and Green buttons are provided on panel for closing and opening of LC gate respectively.
- (d) Push button RED pressed till the gate is closed and locked.
- (e) Key 'Q' is extracted from RKT-2 After the gate is closed and locked,
- (f) Key 'Q' thus extracted from RKT-2 is inserted in RKT-1 and transmitted to LC gate panel to take 'OFF' the concerned Gate signal No: GSA-1 GSA-4.
- (g) For opening of the gate, gate Man first normalize the switch of gate signal and then press the push button provided on panel board and press the switch provided on RKT-1 and extract the Key-'Q' from RKT-1.
- (h) Inserted the Key-'Q' in RKT-2 and transmit to electrical lifting barrier Panel for release the gate lock. Keep press push button Green on the electrical lifting barrier panel till gate is opened.

2. Intimation to the gateman

- i) Immediately after departure of the train, SS/SM shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman, as soon as he receives train entering section advice from the dispatching station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. FAILURE OF TELEPHONIC COMMUNICATION:

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

- i) If the telephone falls at the gate connected with the station at the despatching end, SS/SM shall issue a caution order to the loco pilot of the departing train.
- ii) SS/SM shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.

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- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- v) The SS/SM at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM will also advise the gateman through Gangman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

4. Failure of Lifting Barriers :

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

5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.

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- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. Failure of the Gate Key with the gate in open condition:

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

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- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. Defective Gate Signals:

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

8. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.

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- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the loco pilot, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The SS/SM shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to Loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection / fit memo for the same.

9. Obstruction on the track near Level crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gate man, the gate man and SM will adopt the procedure given under item No. 8 above. If the obstruction fouls the level crossing gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

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APPENDIX-'A'
WORKING OF LEVEL CROSSING GATES

1.0 WORKING RULES OF "A" CLASS INTERLOCKED LEVEL CROSSING GATE SITUATED AT KM 871/9 BETWEEN GOPALAPATNAM-SIMHACHALAM NORTH STATIONS.

1. GENERAL:

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

Following details shall be maintained at all manned level crossing gates:

1.	Number of Level Crossing Gate :	491
2.	Engineering or Traffic Gate:	<u>Engineering</u>
3.	Under control of Station Master / SSE/P:	<u>SSE/P/VSKP.</u>
4.	Location at KM:	<u>871/9</u>
5.	AtStation :	Gopalapatnam
6.	In between stations:	<u>GPT -SCMN</u>
7.	BG / MG / NG:	<u>BG</u>
8.	Single line / Double line / Multiple line:	<u>Double Line</u>
9.	Normal Position :	<u>Open to road Traffic</u>
10.	Interlocked / Non-Interlocked:	<u>Inter locked</u>
11.	Means of Interlocking:	<u>Inter locked with station signals</u>
12.	Provision of Gate signal at Kms. (i) Up Line : Provided. ii) Dn Line : Provided.	
13.	Signalling arrangements :	<u>RKT Transmission.</u>
14.	Means of Communication – Telephone / Bell etc:	<u>Telephone connection with Gopalapatnam station</u>
15.	Width of level crossing gate :	<u>6.80 M</u>
16.	Type of road (NH / SH / Others) :	<u>Others</u>
17.	Name of Road :	<u>Municipal Raod</u>
18.	Metaled / non-metaled :	<u>Metaled</u>
19.	Approach road:	<u>Metaled</u>
20.	Width of the road :	<u>6.80M</u>
21.	Angle of road crossing (in case of the skew gates):	<u>90 degree</u>
22.	Road gradient (if any): (i) North / East side: (ii) South / West side :	<u>1 in 30.</u> <u>1 in 20</u>
23.	Road alignment (straight/curve) (i) North / East side : (ii) South / West side:	<u>Straight</u> <u>Straight</u>
24.	Provision of height gauges :	<u>Provided.</u>
25.	Type of Barriers:	<u>Coupled Lifting type</u>
26.	Length of Check rails :	<u>8.80 M</u>
27.	Road surface in between L-Xing gates:	<u>Level</u>
28.	Length of Rumble strip / speed breakers :	<u>6.8 M.</u>
29.	Road signs:	<u>Provided</u>
30.	Speed breaker indication board:	<u>Provided</u>
31.	TVU	<u>43092 on 22.11. 2011</u>
32.	Census next due on :	<u>22.11. 2014</u>
33.	Demarcation for placement of Detonators:	<u>Provided</u>
34.	No. of Gatemen working:	<u>3 [Three]</u>
35.	Nearest Railway Medical Assistance:	<u>Railway Hospital Marrisonem</u>
36.	Nearest Private Medical Assistance available (if any):	<u>Private clinic at Gopalapatnam.</u>

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37. List of equipment available Yes / No:

Yes**1.2 EQUIPMENT:**

	<u>Items</u>	<u>Quantity / Numbers</u>
1.	Hand Signal Lamp Tri Colour	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	1 Mounted on stocks
3.	Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade / Fowrah	1
12.	Rammer	1 (In case of asphalted road this may not be provided)
13.	Pick Axe	1 (In case of asphalted road this may not be provided)
14.	Tin case for flags	1
15.	Can for oil	1
16.	Water port / Bucket	1
17.	Canister for Muster Roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall Clock	1
23.	A small size chain for use in case of failure of gate boom/ lock.	1

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

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

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1.4 MODE OF OPERATION:

Gateman on duty shall ensure clearance of road traffic close and lock the gate thereafter transmit the key to the station master on duty as per the following procedure.

- (a) The level crossing gate is normally open to road traffic.
- (b) After the gate is closed and locked, Key 'X' is extracted from EKT-1, inserted in EKT-2 and transmitted to panel in conjunction with switch GS (Gate Slot) reversed releases concerned UP/ DN signals.
- (c) After getting key in indication on VDU SM on duty acknowledges by Clicking LC receive icon on VDU and takes off concerned signals.
- (d) After passage of the train the Gateman shall inform that the train has passed safely ,to the Station master.
- (e) For opening SM transmits control No.74, Key 'X' is extracted from EKT-2, inserted in EKT-1.

1.4.2 INTERLOCKING:

This is an "A" Class interlocked level crossing gate located at KM 871/9 between GPT and SCMN stations across the Up and Down lines. The gate is provided with coupled lifting barriers operated by electrical motor from gate lodge. The interlocking of this gate is achieved through EKT and transmission of gate control No 74 through EKT to GPT station.

1.4.5 NORMAL WORKING:-

The gate shall normally be kept open to road traffic during day and night and will be closed for passage of trains as and when required. Whenever it is required to be closed against road traffic, the Station Master on duty at Gopalapatnam E.I. shall advise the gateman on duty the expected time of departure of train with train number and direction and route on which it is approaching, He shall then acknowledge the same to Station Master on duty as an assurance that the gate shall be closed and locked in time, and shall transmit the key through EKT to take off the signals after clearance of road traffic if any by operating the gate as explained in para No. 1.4. After the passage the train the SM on duty shall transmit back the gate control i.e. key which is locked in RKT get released and the gateman shall open the gate for road traffic.

1.4.6 FAILURE OF COMMUNICATION:

In case of telephonic communication failure between the gateman and the Station Master on duty at Gopalapatnam, the gateman on duty should be alert, watchful and responsible for the safe passage of the train as it approaches the signal under such circumstances Station Master on duty at GPT shall inform Station Master on duty at SCMN R.R.I. about the failure of communications and both shall issue caution orders to trains proceeding into section.

1.4.7 FAILURE OF INTERLOCKING:

In case the interlocking of gate/gate signal becoming defective the gateman on duty shall pass the trains over the level crossing by showing proceed hand signal provided the gate is closed and locked against road traffic in terms of GR 16.06. in event of failure of gate barriers, gate shall be closed with chains and pad locked and then shall pass the train by showing the proceed hand signal in terms of SR 16.06.04.

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The Gateman shall inform the Station Master on duty regarding the failure of gate. On receiving the information of gate failure the Station Master on duty shall Immediately inform the concerned ESM/MSM/ SSE (Signals) /SE(Signals) and SSE(P-Way)/SE(P-Way) for immediate rectification and on rectification shall obtain a written memo.

1.5 **DUTIES OF GATEMAN:**

1. **ALERTNESS:**

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

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

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

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

3. **ROUTING DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
- vii) If lifting barriers gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest SS/SM, Gang mate or SSE/P any defect in his gate or apparatus pertaining to it, as soon as possible.

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

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

In case gateman observes any thing unusual with a passing train, he shall take following action:

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

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- v) He shall endeavour to attract the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master, on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

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

The gateman shall protect the line as under:-

- a) **On double line section:**
 - i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed in haste exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction mobilizing any assistance locally available and warn the loco pilot of the approaching train.

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- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

b)

ON SINGLE LINE SECTION:

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction mobilizing any assistance locally available and warn the loco pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

c) **Other action to be taken by Gateman:**

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

1.6

ENGINEERING ITEMS:

Please see para 916,918,919 of IRPWW for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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SPECIAL INSTRUCTIONS FOR DIFFERENT TYPES OF LEVEL CROSSINGS:

Instructions for different types of manned level crossing gates are given in Annexures as follows:

- | | | |
|------|----------------|--|
| i) | Annexure – I | Engineering Level Crossing Gate, Interlocked with gate signals, provided with telephone, with normal position 'Open to road traffic'. |
| ii) | Annexure – II | Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Open to road traffic'. |
| iii) | Annexure – III | Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Closed to road traffic'. |
| iv) | Annexure – IV | Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Open to road traffic'. |
| v) | Annexure – V | Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Closed to road traffic'. |
| vi) | Annexure – VI | Engineering Level Crossing Gate, non-interlocked, not provided with telephone, with normal position 'Closed to road traffic'. |

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ANNEXURE -II**WORKING INSTRUCTIONS OF "A" CLASS INTERLOCKED LEVEL CROSSING GATE SITUATED AT KM 871/9 BETWEEN GOPALAPATNAM-SIMHACHALAM NORTH STATIONS.****1. Mode of Operation:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

- (a) The level crossing gate is normally open to road traffic.
- (b) After the gate is closed and locked, Key 'X' is extracted from EKT-1, inserted in EKT-2 and transmitted to panel in conjunction with switch GS (Gate Slot) reversed releases concerned UP/ DN signals.
- (c) After getting key in indication on VDU SM on duty acknowledges by Clicking LC receive icon on VDU and takes off concerned signals.
- (d) After passage of the train the Gateman shall inform that the train has passed safely, to the Station master.
- (e) For opening SM transmits control No.74, Key 'X' is extracted from EKT-2, inserted in EKT-1

WORKING OF SLIDING BOOM BARRIER INCASE OF BREAKAGE OF ELECTRICAL LIFTING BARRIER AT INTERLOCKED 'SPL' CLASS LC GATE AT KM:875/11-13 .

- a) Sliding boom barrier of West side (DN line side) will be rolled across the Road till the locking end of the barrier rests on lock post. Inserting and turning the Key-1(Which is chained with sliding Barrier),releases the lock plunger then by sliding the lock plunger sliding barrier gets locked and releases the Key No.2.
- b) Similarly sliding barrier of East side (UP line side) will be rolled across the road till the locking end of the barrier rest on lock post. Inserting the key-2 (Which is released from West side barrier), releases the lock plunger then by sliding the lock plunger sliding barrier gets locked, releases the Key No.3.
- c) Key No.3 inserted in sliding barrier Key (SBK) RKT No.3 and turned which releases the gate signal panel.
- d) For opening of sliding boom the SM/GPT E.I transmitted electrical control-74 to extract SBK from RKT No, 3.SBK key inserted in lock No. 3 at UP side sliding boom will be rolled across the road till the clearance of road.
- e) Key No.2 inserted in lock No.2 at DN side sliding boom lock post, releases the lock plunger and Key No.1. sliding boom will be rolled across the road till Clearance of road.
- f) Switch SB 'GS' is provided in Gate lodge to put back concerned signal to danger in case of emergency.

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2. Intimation to the gateman

- i) Immediately after departure of the train, SM/SS shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman, as soon as he receives train entering section advice from the dispatching station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. Failure of Telephonic Communication:

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

- i) If the telephone falls at the gate connected with the station at the despatching end, SS/SM shall issue a caution order to the Loco pilot of the departing train.
- ii) SS/SM shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- v) The SS/SM at the dispatching end shall then issue a caution order to the Loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM will also advise the gateman through Gangman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectifies the telephone and issue reconnection/fit memo for the same.

4. FAILURE OF LIFTING BARRIERS:

- i) When the gate cannot be closed due to failure of lifting barriers gate, the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.

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- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco pilot of the approaching train.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco pilot before despatching a train in the block section.
- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repairs the lifting barriers and issue reconnection / fit memo for the same.

5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates should be adopted.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the key transmitter then gateman must immediately inform the SS/SM on duty on telephone.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.

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- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advise the SS/SM at the despatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. Defective Gate Signals:

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

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8. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SS/SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master shall also inform the SS/SM at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the SS/SM accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers gates to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectifies the defective lifting barriers and issue reconnection / fit memo for the same.

9. Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

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APPENDIX 'B'**APPENDIX 'B' TO STATION WORKING RULES OF GOPALAPATNAM 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:**

This is a 'B' class station provided with Standard –IIR interlocking. The station is provided with Route setting type Electronic Interlocking between points, signals, track circuits and other signalling gears. The Station is equipped with Multiple Aspect Colour Light Signalling. All points and Signals etc. are power operated through a **Visual Display Unit (VDU)** with a stand by installed in the SS/ SM's Office.

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

The operation of Signals, Points, L.C.Gates, Crank Handles, Siding Controls, Resetting of all type of Axle counters and other controls etc a VDU (Vedio Display Unit) is provided along with a stand by. A Mimic yard diagram based on SI plan No. SI/ 23103 ALT 'B' will be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the Station yard mimic diagram of VDU will be dynamically updated.

2.1 SYSTEM OVERVIEW:

An Operator Console consisting of a VDU (a high-resolution 41" colour monitor and Pentium-4 CPU), with keyboard and pointing device (mouse) connected with a computer (CPU) is provided. The CPU is connected to the Electronic Interlocking (E.I) equipment to exchange control and indication messages. The system is programmed to display the Station Yard Mimic VDU diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen. A function (clearance of Signal or cancellation, Route release, Point operation, Gate release etc.) can be executed through selecting the required operation by clicking the Left button of the pointing device (mouse) on the desired function.

The Computer (VDU) to be used for controlling and monitoring the station, However indications on the Station yard mimic diagram of VDU will be dynamically updated .

2.2 An additional VDU connected with a computer is provided as stand by arrangement in case of failure of the working operator console the system shall switch over to the stand by VDU automatically.

2.2.3 ICONS AND INDICATIONS PROVIDED ON THE VDU

In addition to mimic yard diagram including signal, points, track circuits, Axle counters,L.C.gates, sidings as indicated in the WRD,various other ICONS and indications have been provided on the VDU.A brief description of the same are described below.

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Sl.No.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1	SS/SM's Key	Yellow light when Key is 'IN'.	Ensure 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.	
3	---	Emergency gate release.	Flashing indication appears when Emergency gate release operation is initiated.	
4	Emergency point operation key.	Yellow light when key is 'IN'.	Ensures emergency point operation by authorized person.	For each operation concerned counter shall register one count higher.
5	---	System indication central-ON/OFF.	Indicates system 'A' or 'B' is in working mode	
6	Point failure Ack. Button.	Yellow.	Flashing indication appears when any point fails. SS/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.
7	Signal failure Ack. button	Yellow	Flashing indication appears when any point fails. SS/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.
8	CH-1,CH-2,CH-3----- 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 locked in route or otherwise red indication will glow.	
9	DN Reset key and button (DVD end)	Yellow-Power on Green-prep reset	SS/SM has to follow 'Key In' procedure followed by left click on the button icon to reset LVCD Axle counter.	This operation is required for Resetting of LVCD axle counter of concerned section. For each operation concerned counter shall register one count higher.
10	UP Reset key and button (DVD end)	Yellow-Power on Green-prep reset	''	''

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Electronic interlocking equipment (E.I) at the center can work in either of the two modes i.e, system-'A' or system-'B'. On the VDU (Computer) there are two system indications in which Green indication mentioned

Sl.No.	ICONS	INDICATIONS	FUNCTIONS	REMARKS
11	DN Reset key and button (JGPM end)	Yellow-Power on Green-prep reset		
12	UP Reset key and button(JGPM end)	Yellow-Power on Green-prep reset		
13	DN Reset key and button (D CABIN end)	Yellow-Power on Green-prep reset		
14	DN Reset key and button (B-HUT end)	Yellow-Power on Green-prep reset		
15	UP Reset key and button (B-HUT end)	Yellow-Power on Green-prep reset		
16	UP Block release button.	Yellow-for block release	On getting indication SS/SM shall left click on the button icon which shall release block handle.	After complete arrival of train this will be activated.
17	DN Block release button.	Yellow-for block release	„	„
18	L.C.Gate control-74 button	Yellow lamp indicates gate free. Red lamp indicates gate locked	SS/SM shall right click on the button icon to select menu to transmit/Receive/emergency operation of gate as required.	In case of emergency operation 'Emergency gate release' indication will appear. For each operation concerned counter shall register one count higher.
19	Siding control -68	Yellow lamp indicates 'Key In'. Red lamp indicates 'Siding locked'	SS/SM shall right click on the button icon to select menu to transmit/Receive operation of 'Sdg' key.	

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SI.No	ICONS	INDICATIONS	FUNCTIONS	REMARKS
20	COUNTER	-	As and when required SS/SM shall point the cursor on the counter icon and right click on it. A drop down menu will appear indicating all the counters available in the system's/SM shall select the required counter on the menu and can read the latest counter reading.	
21	Line block button	Red when block	SS/SM shall point the cursor on the icons provided on the berthing track and right click. One drop menu will appear indicating line block and un-blocked, SS/SM has to select the required menu.	When line block is selected the concerned berthing portion of track will appear as thick Red line.
22	Up IB axle counter reset key and button (DVD end)	Yellow-Power on Green-prep. Reset.	SS/SM has to follow 'Key in' procedure followed by left click on the button icon to reset IB axle counter.	For each such operation, concerned counter shall register one count higher.
23	Permission received from Alarm ack. Button.	Yellow permission received	- To acknowledge SS/SM has to left click on the acknowledgement button.	---
24	Permission granted from Alarm ack. Button.	Yellow permission granted.	- To grant permission for resetting, SS/SM has to left click on the permission granting button.	----
25	UP train run away in IB section muting button (section GPT-DVD)	Yellow - acknowledged.	- On getting Alarm/Buzzer, SS/SM has to left click on the button icon to acknowledge the incident.	----

3.0 **OPERATIONAL PROCEDURE THROUGH VDU AND INDICATIONS.**

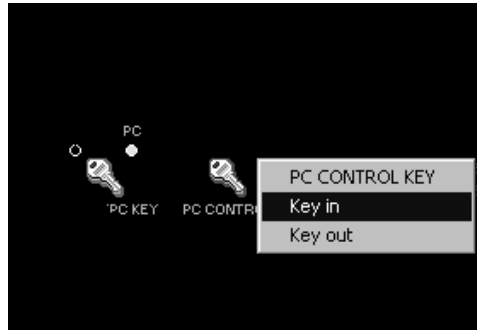
In addition to the mimic yard diagram various other indications will be available on the VDU. The implications of different indications provided and the operational procedure for different functions shall be strictly followed as per the following description..

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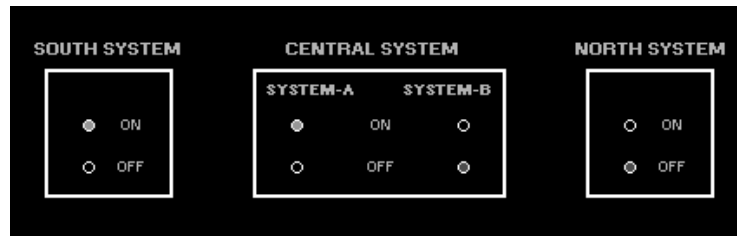


Enter the USER NAME and PASSWORD and click the OK button. Now the OP VDU is ready for use & the entire yard can be controlled from the VDU. Similarly select the KEY OUT when the Station Master to Prevent the Unauthorized Operation with User name and password.



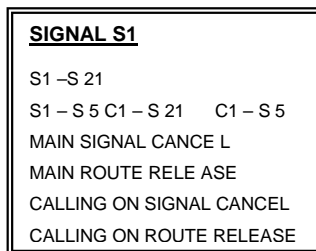
4.1 ELECTRONIC INTERLOCKING (EI) SYSTEM INDICATIONS.

In PC there are two system indications. Green indication mentioning the On- line system and the Red indication mentioning that the system is in power off condition. At this station only central system is provided.



4.2 SIGNAL OPERATION

4.2.1 To Take-Off a Signal on the desired route the SS/SM on duty needs to track the mouse pointer over the concerned Signal on the VDU, after clicking by the left button of the mouse a pop-up menu will appear as below:



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SS/SM on duty will select the route as per the requirement by moving the mouse pointer on the appropriate menu & left clicking on the menu. It will set the route and clear the signal provided all the conditions required to clear the signal is satisfied. Similarly by following the similar procedure operation of other signals can be done.

4.2.2 SETTING A ROUTE

To set a route of a signal, click on a possible route of the signal, after doing so the route gets initiated & Red-flashing indication will appear on the replacement track of the signal. Point operation is initiated as per the requirement of the desired route and Normal/ Reverse set indications will starts flashing if favorable point detection is not available. After setting of points in the route, overlap & isolation Flashing indication will be replaced by steady indication and a complete yellow 'Route set' indication will appear from the replacement track of the signal to the last track of overlap section of the route. Also the points lock indication will appear. A Point locked can be ensured from the Red Steady indication will appear near the point. Finally a Route locked Yellow Steady indication will appear on the immediate rear of the signal. Now the signal will be Taken-off. The yellow route set indication will turn to red when different track circuit portion within the route is occupied during passage of a train.

4.2.3 CONDITIONS FOR SETTING A ROUTE:

The following conditions to be ensured before setting the route by the SM/ASM.

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

All the related siding control keys to be in Key IN condition.

If any Level crossing gates are falling under the route that should be closed (Key IN) and GF of the L.C.Gate to be in reverse position (can be ensured from the Yellow steady indication just near the L.C.Gate control).

All the related siding points should be in Normal position (can be ensured from the Yellow steady indication at the siding point on the route).

4.2.4 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. After clicking by the left button on the mouse a pop-up menu will appear. Click on the cancellation menu (Main/ Calling on) of the concerned signal, the signal will immediately go to 'ON' aspect, after doing so click on the Route release menu the route locked indication will starts flashing for 120 sec & the Emergency Route Release Indication (RTRELUPKE or DNKE as the case may be) will flash for the entire time interval. After the completion of 120 sec, the locked route will be released and veeder counter provided for the route release in the conventional Panel will change to next higher number which should be recorded by the SS/SM. Signal cancellation is possible from the VDU even if the SM KEY in conventional Panel or PC Control Key is in out condition.

4.2.5 SHUNT SIGNAL OPERATION:

NO SHUNT SIGNALS ARE PROVIDED IN THIS STATION.

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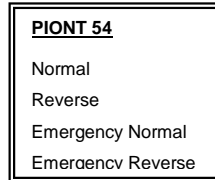
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4.2.6 CALLING ON SIGNAL OPERATION:

The same procedure as main signal has to be followed as explained above. To set the signal route for CALLING ON signals SS/SM on duty shall select the desired route and left click on the same after a train occupies the approach track circuit in immediate rear of the stop signal. The signal is cleared after a lapse of 120 seconds provided other conditions are fulfilled.

4.3 POINT OPERATION

To Operate the Point the SS/S.M needs to track the mouse pointer to concerned point's Normal/Reverse indications on the VDU, after clicking by the left button on the mouse a pop-up menu will appear as below:



4.3.1 REVERSE TO NORMAL OPERATION:

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

4.3.2 NORMAL TO REVERSE OPERATION:

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

4.3.3 POINT INDICATIONS

When the point is free a steady strip of light will appear in the point zone (In case of cross-over at both ends) indicating the point is in normal/reverse condition. When the point is operated the same strip of light starts flashing till the point is set and becomes steady when the point is set and detected. When the point is engaged in a route a Red light will appear near the point indicating that the point is locked and cannot be operated now.

4.3.4 EMERGENCY OPERATION OF POINTS:

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

Note: Before resorting to this operation SS/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.

4.3.5 EMERGENCY NORMAL OPERATION

Before doing the emergency operation the Emergency Point Operation Key is to be made "KEY IN" by clicking the 'KEY IN' menu. The user name and password is to be logged in. The user name of this station is 'ECOR' and password of this station is GPT. Track the pointer to 'EMERGENCY NORMAL' menu and click. A Normal flashing indication will appear and the indication will be steady after the point is set to Normal.

After the completion of the Emergency point operation a specific veeder counter will change to its next higher number and this number should be recorded in the register provided for this purpose by the SS/S.M on duty.

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After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password is to be given for "KEY OUT" also.

4.3.6 EMERGENCY REVERSE OPERATION :

Before doing the emergency operation an Emergency Point Operation Key is to be made 'KEY IN' by clicking the 'KEY IN' menu. The user name and password is to be logged in. The user name of this station is 'ECOR' and password of this station is PSA. Emergency reverse menu to be clicked. Track the pointer to 'EMERGENCY REVERSE' menu and click. A Reverse flashing indication will appear and the indication will be steady after the point is set to reverse.

After the completion of the Emergency point operation a specific veeder counter provided in the Domino Panel will change to its next higher number and this number should be recorded in the register provided for this purpose by the SS/S.M on duty..

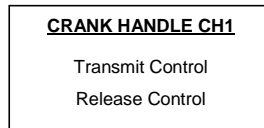
After the completion of the Emergency point operation, the Key to be 'KEY OUT' by clicking 'KEY OUT' menu. The user name and password is to be given for 'KEY OUT' also.

4.4 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 Receive control of the Crank Handle, click on the crank handle control button icon provided like the following on VDU.



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



To Transmit the Crank Handle KEY to the field personnel SS/SM on duty has to click transmit control menu. After transmission the 'KEY IN' indication will starts flashing, now the KEY can be extracted from the RKT at site. After extracting the key from the RKT, the 'KEY IN' indication will disappear.

When the Manual point operation is over, after putting the Siding control key in the RKT, 'KEY IN' flashing indication will appear on the VDU, Now the SS/SM on duty has to Release the control for the Steady indication by clicking release control menu.

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

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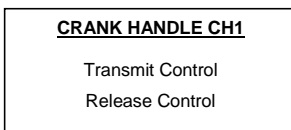
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4.4.1 CRANK HANDLE OPERATION (IN ROUTE LOCKED CONDITION):

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, SS/S.M 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 appearing pop-up menu gives details of the possible commands on the Crank Handle



For Transmitting the Crank Handle KEY to the field personnel SS/SM on duty has to click transmit control menu. After transmission the 'KEY LOCKED' (Red) indication will start to flash for 120 seconds & 'KEY IN' remains steady. After a lapse of 120 seconds the 'KEY LOCKED' indication will vanish & 'KEY IN' indication will start 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 emergency crank handle key in the RKT, flashing 'KEY IN' indication will appear on the Panel, Now the SS/SM on duty shall Release the control for the Steady indication by clicking 'RELEASE CONTROL' menu. After the completion of the Emergency point operation a specific veeder counter provided in the Domino Panel will change to its next higher number and this number should be recorded in the register provided for this purpose by the SS/S.M on duty..

4.5 LEVEL CROSSING GATE OPERATION:

To Transmit or Release control of the Level crossing gate, click on the Level crossing control button icon provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Level crossing gate.

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<u>LEVEL CROSSING 74</u>
Transmit Control
Release Control
Emergency Gate Release

Normally no indication will be available on the VDU indicating that the gate control key is out and gate is open. When it is required to close the gate SS/SM on duty shall intimate the gate man to close the gate. Upon instructed by the SS/SM on duty the gate man shall close and lock the gate and after reversing the concerned slot lever he shall transmit the gate control key to station by inserting and rotating the key in the RKT. A flashing yellow indication will appear on the VDU seeing which SS/SM on duty receive the control by clicking on the L.C. Gate control button icon and select 'Receive'. The flashing indication shall become steady.

When the key is required to be transmitted to the Gate man, SS/S.M on duty has to transmit the control by clicking, after transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the RKT. When the gate has been closed, locked & slot lever is in reverse position, After putting the key in the RKT, A KEY IN flashing indication will appear on the VDU. Now the SS/SM has to release the control for the steady indication.

The locked indication will appear when the LC Gate has locked by initiation of any of the possible signal routes.

4.5.1 EMERGENCY GATE OPERATION:

L.C. Gate control can be released and the gate can be opened by this operation when LC gate control remains in locked condition due to setting of any of the signal routes over it or otherwise. For releasing the gate by the Emergency operation the SS/SM on duty has to cancel the signal by signal cancellation control of the relevant signal. Then he has to click the Emergency Gate release control in the Gate pop-up menu.

Now the 'LOCKED' (Red) indication will flash for 120 seconds & after the time has elapsed the 'LOCKED' (Red) indication will vanish. Now the SS/SM on duty shall transmit the 'GATE CONTROL' in this condition and 'KEY IN' indication starts flashing. Now the KEY can be extracted from the RKT at Gate Lodge and gate can be opened. This action will be recorded in a counter provided in Panel. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/S.M manually in a register.

The counter will increment the number for each and every such action and also, this number should be recorded by the SS/S.M on duty who shall record the details of the Emergency Gate Operation along with the latest counter no. in a register.

4.5.2 LINE BLOCK AND UNBLOCK (REMINDER COLLAR):

When SM on duty requires demarcating a berthing/stabling line as BLOCKED / FREE line he shall adopt the following procedure:

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4.5.3 LINE BLOCK:

To set the 'LINE BLOCK', the SS/Dy.SS on duty shall select 'concerned track circuit number which is given at top left side of mimic plan' using the left mouse button, after selecting the line block that particular line will be blocked for all possible track circuit section on that particular line. The '**TRACK BLOCK** yellow colour indication will be displayed after the successful application of such a blocking process on the VDU.

**4.5.4 LINE UNBLOCK:**

To release the set block of any particular line, SS/Dy.SS should select 'TRACK CIRCUIT No. UNBLOCK' Command Using the Left Mouse Button. After selecting The 'Track circuit--- UNBLOCK' that particular line will be available for the train movement leading to the all possible track circuit section" .

5.0 RESETTING OPERATION FOR AXLE COUNTER IN I.B. SECTION:

Analog Axle counters are provided in IBH section between (GPT-DVD). The occupation and clearance of the I.B. Axle counter section are indicated on the VDU by RED & GREEN Indications. When after arrival of the train the axle counter does not show clear indication and the section occupation continued to glow, SS/SM on duty shall initiate re-setting procedure for the I.B. Axle counter monitoring the I.B. Section before initiating resetting procedure, SS/SM on duty shall ensure that the train which has left arrived completely at receiving station and I.B. section is clear [free] trains . If the track indication of that particular I.B. section is showing 'Red" then the following actions are to be performed by the SS/SM on duty at GPT/DVD.

Resetting of Analog Axle Counter shall be carried out at Dispatch end, but before that permission shall be obtained from the receiving station.

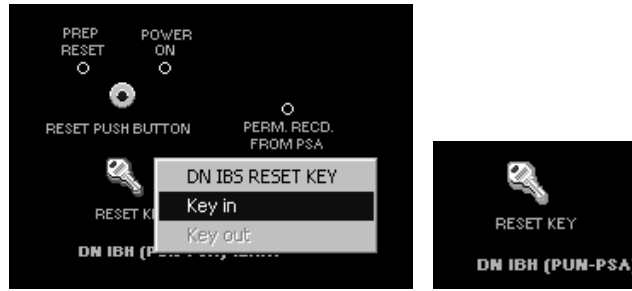
After getting the permission from receiving station "**Perm. Recd from DVD/GPT**" indication will appear above the Ack button icon



- On duty SS/SM at GPT need to track the pointer to the " **Axle Counter Reset key** " icon and click left button of the mouse and select "**KEY IN**" option.
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After performing 'Key in operation' SS/SM on duty move the Curser pointer near to the Axle Counter Reset push button icon, and click left button of the mouse and select "Reset". In VDU . Concerned counter will change to the next higher number. After completion of reset operation first train shall be piloted out. On clearing of the piloted train over I.B.S. Axle counter zone, axle counter will get reset and Axle counter zone clear indication will appear on VDU



The Piloting out is mandatory for completion of I.B. Axle counter reset operation.
 Number changed for resetting shall be recorded in the TSR and in the register provided for this purpose.

6.1 SIGNAL INDICATION:

The aspects of the signals as obtained at any time are shown on the VDU on the signal indication along side of the track. The aspect indications of signals are as per the aspect conditions at site on VDU.

6.2 POINT FAILURE INDICATION (RED)/POINT FAILURE BUZZER/POINTS FAILURE MUTING ICON (RED WITH WHITE DOT)

Whenever there is failure of point due to non-setting point failure indication flashing appears near the point along with the point failure buzzer. The buzzer stops when the point failure acknowledgement icon is clicked, but the flashing light shall continue to glow. The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light will disappear.

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6.3 EMERGENCY ROUTE RELEASE COUNTER

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

6.3 EMERGENCY GATE RELEASE OPERATION(CHOCOLATE WITH RED DOT)

Emergency gate release operation facility is provided in the VDU when the route gets locked due to some failure. For emergency release of gate, the SM on duty shall operate the pop up menu process as given in Appendix 'B1' in this SWR. A red flashing (Gate Lock) indication will appear and after a lapse of 120 sec Gate Lock indication will disappear and white light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate the gate key process to release the key from RKT in gate lodge. All such operation shall be registered in the emergency gate operation counter. All such emergency operation shall be recorded in the station diary and in the register meant for it.

6.4 OVER LAP TIME RELEASE(WHITE LIGHT)

Separate indications(white light) for each overlap is provided near the starter signal to indicate the free or locked condition of the overlap. This indication light will glow when overlap is locked by any Home signal route and there will be no light when the 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 lapse of 120 sec the white flashing light will disappear indicating concerned over lap is free.

6.7 TRACK CIRCUIT

All the running lines are track circuited. In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (91M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced

Starter Signals are also track circuited. Indications for the above track circuits are available on VDU at SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on VDU at SM's office. When a signal is cleared the route indication ' White' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

6.8 AXLE COUNTER:

- (i) Digital Axle Counters have been provided in the IB section between GPT- DVD for station for monitoring clearance / occupancy of the IB section.
- (ii) Digital axle counters are also provided between GPT-DVD on both Up and Dn lines, GPT-JGPM sections and at MYD 'D'-GPT for monitoring clearance / occupancy of the Block section for verification of Last vehicle(LVCD)

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SECTION DVD-GPT(I.B.AXLE COUNTER)

A pair of Digital Axle Counters is provided between DVD-GPT on DN line one just beyond DN Advance Starter of DVD and 400 Mtr. beyond DN IB Home signal between DVD-GPT with redundancy.

SECTION GPT-DVD (I.B.AXLE COUNTER)

A pair of Digital Axle Counters is provided between GPT-DVD on UP line one just beyond UP Advance Starter of GPT station and 400 Mtr. beyond UP IB Home signal between GPT-DVD with redundancy.

SECTION GPT-JGPM (LVCD)

A pair of Digital axle counter is provided between GPT-JGPM with redundancy.

SECTION MYD 'D' CABIN-GPT(LVCD)

A pair of Digital axle counter is provided between MYD'D' CABIN-GPT with redundancy.

SECTION MYD 'A' CABIN-GPT(LVCD)

A pair of Digital axle counter is provided between MYD'D' CABIN-GPT with redundancy.

SECTION GPT - DVD (LVCD)

A pair of Digital axle counter with redundancy is provided between GPT - DVD on UP line one just beyond UP IB Home Signal no. 23 of GPT station and another in 1T2 track circuit beyond the UP Home Signal at DVD station. Similarly a pair of Digital axle counter is provided between DVD - GPT on DN line one just beyond Down IB Home Signal no 56 of DVD and another in . 19T track circuit beyond Dn Home signal of GPT.

The position of the Block section whether cleared or occupied are reflected in the 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 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 No 8 of section GPT - JGPM shall not come to 'OFF' and the concerned instrument shall remain locked in last operated position for section GPT – JGPM and IB Home Signals shall not assume 'OFF' aspect and the concerned Block Instruments shall remain locked in last operated position for section GPT-DVD.

A resetting arrangement for resumption of the system, in case of failure of both the Axle Counter, has been provided in the SS/SM office of the adjacent Block stations. After being assured by both the SS/SM that the last vehicle has arrived completely at the receiving station, the resetting procedure shall be initiated after exchanging Private Number vide G&SR 4.17, 4.17.01.

NOTE:

Redundancy of all LVCD Axle counters are provided. Before taking off reception and dispatch signals for Up and Down directions the SM on duty should ensure that the entire route including overlap portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track circuit/Axle counter will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

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7.0 STATION MASTER'S VDU CONTROL KEY

The VDU is provided with Station Master's lock up key to prevent any unauthorized operation of the VDU. The Station Master on duty is the only authorized person to operate the VDU. The key locks the VDU and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and signal cancellation button without ASM's key also. However the provisions of SR 3.36.02 shall be followed while replacing signals also.

7.1 CRANK HANDLES

When any point fails to operate normally by the route setting operation or through the concerned point button through VDU. It is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and padlocking all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The crank handles can be released through pop up menu and is explained in Appendix 'B' in this SWR. The White indication suggests that the crank handle key is in its interlocked position of the VDU. This is called "Crank Handle Key 'IN' indication.

The Red indication suggests that the crank handle key is locked and not free for extract from RKT. This is called 'Crank handle key locked' indication. The crank handle is normally kept in a locked box fitted min panel room and the key is with SM on duty. This crank handle is common to all points and is to be taken along with CH key for manual operation of point. For extracting CH key from RKT SM has to click the crank handle operation pop up menu

Relevant crank handle push button and group TRANS button simultaneously. The light white light besides the CH button starts flashing. After extraction of CH key from RKT at location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group can not be operated from the VDU. After completion of point operation the CH key will be retransmitted to the station electrically by inserting the CH key in RKT in location box and turned. The white flashing indication appears on the Panel board. The flashing will be stopped and steady indication appears on clicking concerned CH icon and group release icon (White with Black dot).

7.2 SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS.

For setting a route all the concerned points must be set by operation of points individually or by route setting method through pop up menu as mentioned in Appendix 'B1' in this SWR. As soon as the required points are set to the required position, the concerned signal for the route will clear and a white strip of light will appear on the route confirming that the route is set and locked. The signal 'OFF' indication will appear on the VDU.

7.3 SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS.

For setting a particular route for departure of a train, all the concerned points must be set by operation of pop up menu as mentioned in Appendix 'B' of this SWR in the desired position or by operating signal and route button.

To take 'OFF' an advanced starter, LV section should be clear and Line clear must be obtained from the concerned Block section in advance. To take 'OFF' the UP advanced starter towards DVD, concerned IB axle counter must be clear. The Up IB signal can be taken 'OFF' only when the UP LV section is clear and also line clear has been obtained from DVD station in advance.

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7.4 TAKING OFF CALLING ON SIGNAL

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

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit a RED light strip will appear on the VDU. The particular route on which train is intended to be received shall be set by operating the pop up menu. After a lapse of 120 seconds, the Calling-on signal clears i.e a White light glows at the concerned Calling-on signal on the VDU.

NOTE:

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

7.5 REPLACEMENT OF SIGNALS TO ON

Signals are replaced to 'ON' automatically by the operation of the first track in advance of the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually , the respective signal pop up menu operation provided in VDU shall be done.

7.6 INTERLOCKING OF SIGNALS/POINTS

All running line points are fitted with point machines which have in built locking and are electrically detected by the relevant Home signals and starters.

7.6.1 Dn Advanced starter and Up IBH signals are interlocked with respective Block instrument in line clear position.

7.6.2 The Block instruments cannot be made to normal unless the respective Home Signal is put back to 'ON' and the respective block section monitored by axle counter is clear of trains.

7.6.3 Signals once taken OFF can be put back to ON in case of emergency by the respective signal pop up menu operation provided in VDU even when the VDU is locked up with Station Master's key.

8.0 PILOTING OF TRAINS IN TO THE STATION YARD

When ever Home signal becomes defective, trains can be admitted by taking off calling-on signal. When both home and calling-on failed, then the trains will be piloted 'IN' in terms of SR 3.69.3(a)&(c).

The SM on duty shall nominate a clear line and shall set the nominated route correctly from the VDU or shall advise the TPM on duty at station to set the nominate route with the help of crank handle during failure of points. The TPM shall set the facing and trailing points and clamp and padlock the same under the super vision of SM on duty at station in both the cases.

Then the SM on duty shall then hand over the written authority (T/3693(b) to the TPM for "piloting IN" the train. While going towards home signal, the TPM shall check that the points have been correctly set, clamped and padlocked. After the train has been brought

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to a dead stop at the foot of the home signal the TPM shall hand over the PILOT memo to the loco pilot board the engine and display proceed hand signal to pass the defective home signal.

After the train has brought to a dead stop at the home signal the TPM shall hand over the pilot memo to the loco pilot, board the engine and display proceed hand signal to pass the defective signal.

NOTE:

- (1) The station master on duty shall personally supervise the correct setting ,clamping and padlocking of both end points for admission of a train.
- (2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled
- (3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

8.1 PILOTING OF TRAINS OUT OF STATION YARD:

When starter signal has become defective ,the SM on duty shall set the points correctly from the VDU or advise the TPM to set the concerned points correctly for the outgoing train with the help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under supervision of SM on duty in both the cases. He shall also advise the gateman to close the level crossing gate/gates on the route for dispatch of a train.

The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the loco pilot of the train. Thereafter , he shall display proceed hand signal at the foot of the starter signal vide subsidiary rule 3.70.01.

Incase advanced starter signal becomes defective such signal shall be passed on the written authority on the form T/369(3b). proceed hand signal shall not be displayed vide subsidiary rule 3.70.02. the TPM shall hand over the pilot memo in form T/369(3b) to the loco pilot after the train stopped along with the paper line clear ticket..

NOTE:

- (1) The station master on duty shall personally supervise the correct setting ,clamping and padlocking of both end points for admission of a train.
- (2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.
- (3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

9.0 DESCRIPTION OF LEVEL CROSSINGS

- (i) There is a mid section 'A' class interlocked level crossing gate situated at Km 871/9 (ML 491) between Gopalapatnam and Simhachalam North stations in the station section of GPT RRI between Up Home and Dn advanced starter signals) directly operated by means of a winch from Gate Lodge.
Electrical control No 74 is provided from the VDU of GPT station for the control over the L.C.Gate.
Telephone communication is provided between the Gate lodge and the SS's office of GPT .

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- (ii) There is a mid section.'A ' class interlocked level crossing gate situated at Km 874/11-13(ML492) normally open to road traffic between GPT and Visakhapatnam RRI stations & directly operated from by means of a winch from Gate Lodge. Telephone communication is provided between the Gate lodge and the SS's office of GPT..
- (iii) There is a mid section 'A' class interlocked level crossing gate situated at Km 875/11-13(ML493) between Gopalapatnam and Visakhapatnam RRI stations & directly operated by means of a winch from Gate Lodge. Telephone communication is provided between the Gate lodge and the SS's office of GPT .

10.0 VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAINS INTO THE YARD

In the station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passage of any train or for any other movements.

The clearance of the route including overlap must be ensured by the Station Master on duty personally through Luminous indications of the track before any movement of trains are permitted on the concerned route subjected to the other conditions such as locking of points etc.

11.0 CRANK HANDLING EMERGENCY OPERATION OF POINTS

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating pop up menu as mentioned in Appendix 'B' of this SWR. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard.. This key can be electrically transmitted at both ends of the yard.

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.

11.1 INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES.

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

12.0 EMERGENCY OPERATIONS

The following are the instructions for emergency operations.

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12.1 CANCELLATION AND VEEDER COUNTERS

For the purpose of the emergency operations there is an emergency Route cancellation Pop up menu(provided in VDU) and also there is a veeder counter for counting emergency operations involving the concurrent operation of the emergency route cancellation operation. A yellow indication will appear below the signal indicating that the timer has started operating and after lapse of 120 seconds the desired route will be released provided all other conditions are favorable for the route release.

The veeder counter registers the number of such emergency operations performed for such emergency cancellation and the Station Master on duty shall specify the cause for such usage giving the particulars of cause and the time of operation as related to a particular train etc. in the train signal register. The detailed operation instructions are as follows:

12.2 EMERGENCY OPERATIONS CANCELLATION THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHAT EVER REASON:

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

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

13.0 LOCKING OF RELAY ROOM:

The Relay room should be kept locked with a double lock.(Two independent locks) as necessary vide OM 1.14, which can be opened only after both keys are used. one key of the lock shall be kept with the Signal Maintainer of the section and the key of the other lock with Station Master on duty. When ever required, the key in the custody of the Station Master shall be given to the maintainer, after completion of the work, the maintainer will return the key to the Station Master.

The details of the transaction should be properly recorded in the relevant register at the station duly signed by Station Master on duty and the maintainer concerned

14.0 MAINTENANCE OF S&T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

- i) Regular maintenance of S&T installations and adherence to the schedules of maintenance is also the mandatory schedules of testing of points, track circuits, point machines, level crossing gates, the associated interlocking apparatus i.e., cables and finally the interlocking functional tests is a must for the safe and satisfactory working of those installations at this Station.
- ii) The tests, checks and replacements etc. including overhauling shall confirm to the schedule of maintenance as indicated in the signal engineering manual as also in the current and extent instruction / circulars on the subject.

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

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master on duty through a memo to the Sectional Maintainer and the Signal Engineer of the Section and others as per G& SR 3.51.04 and 3.68.04 and document all such transactions.

15.1 INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:

Before declaring a Signal as defective the setting of point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the Buttons the Panel in term of SR 3.68.04(c).

15.2 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

After receipt of this information, the sectional maintainer shall attend to the failure after giving a disconnection memo. After rectification of the fault the sectional maintainer shall give a reconnection memo detailing rectification. Thereafter the Station Master of duty shall personally check the 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 gear in terms of SR 3.64.04 (c) and (d).

16.0 PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:

Whenever any normal maintenance or special works for heavy renewals etc., are involved, these works should be pre-planned by the signal & Telecommunication field staff and the Inspector of the section should give to the Station Master in writing "Advance Intimation" about this planned work in terms of GR 15.08.01.

17.0 EMERGENCIES:

Notwithstanding anything contained in the aforesaid Paras, when an equipment is found to be defective and unsafe for passage of trains, the Signal and Telecom. Staff shall at once suspend the working of such equipment and the associated installation and issue a "Suspension Memo" explaining the seriousness of the defect or damage to the interlocking installation to the Station Master and obtain SM's acknowledgement. After this, the usual practice of issuing disconnection memo and reconnection memo can follow and the Station Master must promptly act on such messages and take adequate precautions treating the S&T installations as defective and pass trains over the affected interlocking gears according to extant instructions as contain in GR & SR 3.77.

18.0 PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF CRANK HANDLE.

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

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- 18.2** The cases of failure of Motor Operated Points should be promptly reported to the concerned Signal maintainer /Signal Inspector for immediate rectification.

Whenever an emergency Crank handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty ;will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the concerned Points will be treated as defective till the Emergency Crank Handle is returned back to the Station Master on duty.

will Before parting with the emergency crank handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty ensure that the reception and departure Signals are put back to ON position. The Points for the affected lines shall be treated as Non-interlocked. The Station Master on duty is responsible for introduction of Non-interlocked working and the trains will piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.

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

19.0 SUSPENSION OF LAST STOP SIGNALS

- 19.1** When the Block Instrument is suspended with its handle in 'TRAIN GOING TO' position for whatever reason, the concerned Last Stop Signals controlled by the Block Instrument must be treated as suspended and trains shall be Piloted Out.

- 19.2** The Station Master of duty shall not grant LINE CLEAR unless he has ensured that the lamps of fixed signals which apply to the trains are burning. If the Signal Lights cannot kept burning the Station Master on duty shall before giving LINE CLEAR shall initiate action in accordance with the procedure prescribed in GR 3.61 to 3.72 and relevant SR's vide GR 3.49(4).

19.3 NORMALISATION OF THE BLOCK AXLE COUNTER AND OF BLOCK WORKING BY RESETTING FEATURE.

- 19.4** Axle counters are provided on UP and DN lines between GPT-DVD Double line section working of IB section and Block section given in Appendix-F.

- 19.5** The occupation and clearance of the axle counter section are indicated on panel by 'Red' and 'Green' lights.

- 19.6** If any Block proving Axle counter section fails, the Last stop signal at the rear station can not be taken 'OFF' and Block instrument at advance station can not 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.

- 19.7** Even after completion of reset operation, LVCD Axle counter will show clear only if next train is passed. The next train is to be piloted.

- 19.8** No train should be allowed on signal to leave a station in any particular direction unless:-

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track clear indication is available for the relevant axle counter track circuited portion and Last stop signal is not taken 'OFF'.

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

20.0 RESETTING OF LV DIGITAL AXLE COUNTER WHEN FAILED

After complete arrival of the train, if the Axle counter of the section does not clear or Axle counter section free indication (G) does not appear on the panel the receiving station SM shall appraise the sending station SM through telephone for resetting giving details of last train that has arrived complete at his station and the Block section is clear.

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

As Digital Axle counters are provided as LVCD in Block section, resetting is to be done by both of sending and receiving end individually (no cooperation or permission is required from the other station)

The status of the section LVCD i.e Clear (Green), occupied (Red), Preparatory reset (Green) are provided in the reset box/VDU.

The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows. Insert SM's LV reset key turn right Press LV reset button provided on the panel/VDU Release SM's LV reset key and reset button Turn left the SM's LV reset key and remove it.

The Axle counting system obtains preparatory reset state and preparatory reset indication (Green) glows on the panel.

The counter reading increases by one count after a gap of 5 seconds approximately.

The counter reading should be recorded. One train is to be piloted in the section to make the system normal. The SM on duty shall record in nit in train signal register the resetting operation giving details of train number, time, Private Number exchanged with SM of sending station giving reasons for the resetting operation.

If the Axle counters functioning properly now, then the Block section Clear (Green) indication will appear on the panel and the concerned Block working will be normalized.

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

21.0 CORRECTING TIME IN STATION CLOCK

The station Master shall set the time in his clock according to the time signal given by the section controller on duty at 16.00 Hrs every day according to GR and SR 4.01.01 and 4.01.02.

23.0 POWER SUPPLY:

- (i) A changeover switch is provided in the Station Master's Office with the three power Supplies viz., Up AT, Down. AT and Local, for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the Supply.

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- (ii) Normally the switch will be kept towards Up AT or Dn AT position. Whenever power block is to be given on the line, the on duty SM must ascertain that power is available on the other AT.

Eg: If power block is to be given on the Up line, Down AT must be available and vice-versa.

- (iii) In case of failure of one of the AT supply without any power block, the on duty SM. has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes up.) In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.

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

- (iv) For IPS system that provides to EI is also from manual change over switch.
- (v) There is a remote monitoring SM box provided at the station to monitor the health of IPS.

23.1 REMOTE MONITORING ASM BOX:

- (a) Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-
- (b) 50% depth of discharge (DOD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
- © 60% DOD, which warns for emergency. The alarm for this condition is same as for condition 1
- (d) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC- DC converters continue working. Audio alarm continues till power supply is restored.
- (e) Any of the module fails, which calls for 'call S&T'.
- (f) Whenever there is a failure of power supply in one AT the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

24.0. TELECOMMUNICATIONS:

- a) The Station is connected to VSKP - PSA Main line Control Circuit.
- b) Telephone attached to SGE type Lock and Block Instruments for sections
- I) Gopalapatnam -Simhachalan North RRI.
- II) Gopalapatnam -Duvvada.
- III) Gopalapatnam -Marshalling yard(WMY) 'D' cabin.
- IV) Gopalapatnam - Marshalling yard(WMY) 'A' cabin.
- c) Telephone attached to Tokenless Block Instruments for sections.
- i) Gopalapatnam -Simhachalan North RRI.
- II) Gopalapatnam -Jaggayyapalem.
- d) Magneto telephones are provided for working between
- i) Gopalapatnam - Marshalling yard(WMY) 'A' cabin.
- ii) Gopalapatnam - Marshalling yard(WMY) 'B' cabin.

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- iii) Gopalapatnam - Marshalling yard(WMY) ELS Block hut
- e) Magneto telephone communication is provided with adjacent stations
 - i) Gopalapatnam -Simhachalan North RRI.
 - ii) Gopalapatnam -Duvvada.
 - iii) Gopalapatnam -Marshalling yard(WMY) 'D' cabin.
- f) Magneto telephone communication is provided with the following Interlocked L.C. Gates.
 - i) Gopalapatnam-L.C Gate at km 871/9 between GPT-SCMN.
 - ii) Gopalapatnam -L.C Gate at km 874/11-13 between GPT-VSKP.
 - iii) Gopalapatnam -L.C Gate at km 875/13-15 between GPT-VSKP.
- g) Magneto telephone communication is provided between
 - i).Gopalapatnam - Crank handle location No. 1 & 3 at VSKP end.
 - ii) Gopalapatnam - Crank handle location No. 2 & 4 at DVD end.
 - iii) Gopalapatnam –KAPM goomty towards DVD end.
- h) Railway Auto telephone is provided at the station.
 - i) BSNL Telephone is provided at this cabin.
 - j) The station is connected to OEC - KRPU traction power control circuit.
 - k) VHF set is provided at the station.

NOTE

1. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
2. VHF & Walkie-talkie sets should not be used for unnecessary discussion with loco pilot, Guards and any other staff.

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APPENDIX ‘C’ TO STATION WORKING RULES OF GOPALAPATNAM

1.0 Rules for Working of Anti-collision Device (Raksha Kavach)

No Anti-collision Device provided at the Station.

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APPENDIX-'D' TO STATION WORKING RULES OF GOPALAPATNAM STATION

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

1. CHIEF STATION MANAGER (SUPERVISORY)

He is In-charge of Gopalapatnam station. He shall go through the Station Working Rules and Working Rule Diagram and get himself conversant with the detailed working of station and VDU, Points and signals etc. He is also responsible to explain to the staff, the Station Working Rules along with connected rules of G&SR and other manuals as well as circulars/instructions issued from time to time and obtain their assurances. He is responsible to observe Chapter II and V of G & SR and other relevant rules of Chapter XX of Operating Manual. He shall also responsible to see that

- a) Staff on duty is in proper uniform.
- b) The staff are civil and helpful to all rail users and passengers
- c) All staff shall follow the rosters issued by DPO|WAT from time to time.
- d) He shall conduct inspection at station and bring out lapses of staff if any to the notice of higher authorities
- e) All safety records are maintained properly and identify the lapses if any and take an appropriate action as a correcting measure,
- f) All rules prescribed in G.SR, Block working manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concern and any irregularities noticed are reported promptly to the authorities concerned
- g) All accidents are promptly reported, attended to and a comprehensive report along with details i.e sketches, statements of staff involved and fixing responsibility is sent to SR.DSO/SR.DOM within 48 hours of occurrence.
- h) Station premises are kept clean and tidy
- i) All equipment apparatus and instruments including signal and interlocking gears and fittings are kept clean and failures are promptly reported to staff concern for repairs, notice and action.
- j) The BWM 2.09(e) is complied with daily. He is completely responsible for the total function of system at the station and ensure smooth flow of traffic with least possible detention.

2. STATION MASTER (VDU)

He is responsible for operation of VDU for reception/dispatch of trains and for shunting operations etc. He is also responsible to authorize the respective end SM for granting line clear to trains. He shall maintain Train Signal Register properly. He shall be responsible for protection of a running line when one is blocked by any means. He shall also be responsible for transmitting crank handles and maintenance of corresponding registers including signal failure register properly.

In general he is responsible to ensure safe passage of trains without undue detention. In the event of failure of points/signals he shall depute concerned SM for physical ensuring of correct setting, clamping and pad locking of points before train is piloted. He shall be responsible to ensure that all the staff discharges their duties properly and shall report all irregularities and unusual incidents to Station Manager and all concerned promptly.

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3. STATION MASTER [LINE CLEAR]

- (i) He shall work for trains passing duties as per the roster prescribed by Sr. DPO/WAT.
- (ii) He shall co-ordinate with the working and responsibilities of Station Manager.
- (iii) He shall take suitable action in case of failure, obstructions and other emergencies as required under rules in vogue.
- (iv) He shall maintain the Caution Order Register and is responsible to issue correct Divisional Caution Orders. In absence of SS he shall prepare caution order for all trains.
- (v) During piloting ‘IN and ‘OUT’ of trains carrying passengers, he is responsible for correct setting, locking and clamping of points in the absence of SS.
- (vi) Obtaining and granting Line Clear in accordance with General & Subsidiary Rules, Block working Manual and Station Working Rules of the Gopalapatnam Station.
- (vii) He should operate lock and block/Daido type Tokenless Block Instrument as the case may be installed in the SM office.
- (viii) He should maintain all train passing and safe working records such as Station Master's diary. Train Signaling Register, Block Ticket, Pilot Memo, Starting Order, Paper Line Clear Tickets etc.

4. POINTS MAN : -

They shall work according to the orders given by the Station Master VDU and Station Master line clear on duty.

They are responsible for coupling and uncoupling of wagons, setting points [where necessary] detaching and attaching vehicles and controlling the vehicles and relaying hand signals given by the Shunting master/Jamadar/Guard /the person supervise shunting operations. During shunting operations they are also responsible for securing loose vehicles in the siding and on running lines. He shall crank handle the points and clamp them under the supervisions of SM on duty and they will work as Engine Pilot man as and when required and piloting 'IN' and 'OUT' of trains in case of signal failures. In case of incomplete passage of train he shall promptly report to the Station Master VDU as well as Station Master Line clear.

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5. GATE KEEPER:-

He shall work under the orders of Station Master on duty. He shall have thorough knowledge of rules GR 16.01 to 16.11 and SRs there to. He shall keep channel for wheel flange always clean. He shall close the gate against road traffic in time without causing detentions to trains. He must ensure that the gate shall be worked so as to cause the least possible inconvenience to road users. He shall observe any irregularities on all passing trains while passing through the gate and report immediately to the SM on duty on noticing any obstruction on line. He shall at once try to remove it or if unable to do so, takes steps to protect the gate vide G.R.16.07. He shall clean the gate lamps and hand signal lamps of the gate and fill them with K.oil. It is his personnel responsibilities to maintain the gate equipment in working order and report any deficiencies to the Station Master on duty and get it replaced. He shall make available the complain book on demand by the road users and inspecting official. He shall carry out any other instructions given to him by the SM on duty.

6. TRAFFIC POINTS MAN AT LAST VEHICLE VERIFICATION GOOMTY

The traffic points man shall work at the last vehicle verification goomty at Duvvada end of yard on 8 hours shift under the control of station master on duty. He is responsible to observe last vehicle indicators of such train in terms of GR 4.16 and shall report the complete arrival of the train authenticated by private Number to the Station Master on duty Gopalapatnam for trains running on lines entrusted to him for last vehicle verification.

In addition for out going trains the traffic points man at the last vehicle verification goomtys shall after verifying him self that the last vehicle of the train with last vehicle indicator has passed the last stop signal and the train is running in a safe and proper order shall advise the Station Master on duty supported by Private Number in case of failure of track circuits in the panel. He shall crank handle the points, clamp and padlock the points under the supervision of Station Master on duty and pilot the trains IN and OUT during failure where required. He shall keep the goomty clean and neat and keep the safety equipment in working order. He shall be thorough with safe working rules and correct knowledge of display of hand signals. He shall report, any irregularities coming to his notice. He shall not allow any unauthorized persons to the goomty and shall not permit any unauthorized interference with signal equipment. He shall not leave the goomty except with the permission of station.

7.SAFAIWALA: -

He shall attend to the sanitation of the Railway Premises including SMR and SM's Office, Platforms, Staff Quarters, and Latrines and cleaning of drainages etc. He shall carry out any other work entrusted to him by the Station Master on duty.

NOTE: - All staff on duty are to neatly uniformed and should be in possession of their hand signals. They shall not leave their work spot unless they are relieved by a reliever.

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APPENDIX ‘E’ TO STATION WORKING RULES OF GOPALAPATNAM
ESSENTIAL EQUIPMENT

Sl.No	Description	Station	Goomty
1	Detonators	12	
2	Hand Signal lamps	6(2 Spare)	1
3	Hand Signal Flags	6(2 Spare)	1
4	Clamps with Padlocks	25	6
5	Safety chains with Pad locks	4	--
6	Fire & Sand buckets	5	--
7	Fire Extinguishers ((DCPT)	4	--
8	First Aid Box	1	--
9	Stretcher	1	--
10	Blanket	1	--

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APPENDIX 'F' TO STATION WORKING RULES OF GOPALAPATNAM**Rules for working of DK Station, Halts, IBH, IBS and out lying sidings.****1.1 Working of DK station , IBS , IBH & Out Lying Siding****RULES FOR WORKING INTERMEDIATE BLOCK SIGNALLING BETWEEN GOPALAPATNAM AND DUVVADA STATIONS.**

The block section between Gopalapatnam and Duvvada has been split into two block sections by providing Intermediate Block Stop signals at KM 765.932[controlled by Duvvada station] for DN line and, on up line at KM 766/5-7 [controlled by Gopalapatnam]. Intermediate Block stop signals are controlled through double line lock and block instruments at the respective receiving ends.

- a] The Block working for section between Gopalapatnam and Duvvada on UP and Down lines is controlled by the provision of Double line Lock and Block Instruments (SGE type) and are provided at Gopalapatnam station and at Duvvada Station. The Down Advanced starter signal No. S 55 of Duvvada and UP Advanced Starter signal No. S 36 of Gopalapatnam are controlled by the clearance of IB section through respective IB section monitoring axle counters and the IB Home signal are controlled in turn through the line clear position of respective Double line lock and block instruments at the receiving stations.
- b] Trains between intermediate block signal to respective Home signal of Station in advance in both the sides are worked by means of SGE type lock block instrument vide 4.09, 5.07, 14.01 to 14.14 of the G & SR and chapter V of BWM.
- c] Last stop signal to the intermediate block stop signal in both the sides are controlled by Electronic Axle counter and are worked under absolute block system in terms of G & SR 14.01, 14.13. Indications on VDU provided at Gopalapatnam and on panel at Duvvada stations.

1 INDICATIONS PROVIDED ON VDU FOR I.B. SECTION.

The indications of signals, IB and Block sections in both up and down directions are shown in the following table:

SECTION:DVD-GPT RRI

SN	Signal Aspect [S-55]	IB Section Indication [55A XT]	IB Home Aspect [S-56]	Block Section Indication	Remarks.
1	Green	While Illuminated	-	-	Advance starter No:55 is taken off to dispatch a train up to IB Home.
2	Red	Red	-	-	IB Section is occupied.

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3	-	-	Green	While illuminated.	IB Home taken off for train up to home of GPT
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

IB SECTION :GPT-DVD

SN	Signal Aspect [S-36]	IB Section Indication [36 AXT]	IB Home Aspect [S-38]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: 36 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of DVD.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

i] **Buzzer/Bell:**

One audio buzzer is provided in the SS room at GPT to detect Train Entering section for out going trains. After train passes the intermediate block stop signal, the buzzer/bell will start ringing at GPT station. On hearing the buzzer/bell the SS/SM must acknowledge the same by pressing on train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the SS/SM of the station in advance who shall turn commutator of the Double Line Lock and Block Instrument from the Line Clear position to 'Train On Line position' and acknowledge train entering section following the procedures laid down vide Block Working Manual.

- ii] In the event of failure of I.B. track circuit [i.e. track clear indication not available] which shall not permit taking 'OFF' last stop signal, it should be ensured by SS/SM on duty at the dispatching station through exchange of private number with the SS/SM of the receiving station that the last train that passed the last stop signal of his station has fully arrived at receiving station, before allowing the next train to enter in to the section, such permission to the next train shall be granted and the section GPT-DVD shall be shall be treated as single section.

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- iii] By issuing the pilot memo when normalization of the system is not possible. In such case, line clear has to be taken on lock and block instrument. Trains are to be dispatched from the station only after obtaining line clear till such time track circuits are last stop signal is restored to normal.

2. NORMALIZATION OF THE TRACK CIRCUIT AND OF BLOCK WORKING BY RESETTING FEATURE:

- i] No train should be allowed to leave station in any particular direction unless I.B. track clear indication is available for the relevant track circuited portion of I.B. section and last stop signal can not be taken off and provision stipulated in Para.iii to be followed.
- ii] A Resetting arrangement for the resumption of I.B. Axle counter under failure condition through co-operative features of both the SS/SM on duty at either end station of the Block section is provided, which should only be resorted to after the train that was lastly sent arrives fully at the receiving station and is certified in this respect by the SS/SM at the receiving station through exchange of private number.
- iii] For monitoring of I.B. section working & re-setting of I.B. Axle counters, Track Indications and Re-setting arrangements are provided with buttons on the VDU at GPT station and Panel/VDU at Duvvada stations. Counters are also provided for the purpose of recording the re-settings for the I.B. Axle Counters in case of failures in IB section. The Re-setting button and permission granting button on the Resetting VDU/Panel shall at both the stations should normally be kept sealed by the S&T staff and SS/SM will inform the Maintainer for resealing the same whenever the seal has been broken.
- iv] The SS/SM on duty at both the station shall maintain a separate register for use of resetting at IB Axle Counters wherein every operation of the resetting button shall be recorded giving details of date of use, train, number, time, number registered in the counter on VDU/Panel and reasons for resetting and initial each such entry.
- v] The procedure for resetting of the I.B. Axle counters in terms of clause.II above shall be as followed:

SECTION ; - DUVVADA-GOPALAPATNAM ON DOWN LINE:

	DISPATCHING STATION [DUVVADA]		RECEIVING STATION [GOPALAPATNAM]
	SS/SM on duty shall call the attention of SS/SM of GPT station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at GPT after verifying that the said dispatched train arrives fully, shall exchange private number with SS/SM on duty at DVD and gives permission to re-set by clicking the 'Permission Granting' icon

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			provided on the VDU.
2	<p>On getting re-set permission on Panel SS/SM on duty shall acknowledge by pressing on 'Permission received from GPT acknowledgement button'. For each such operation the reset counter provided in Panel shall increase by one digit.</p> <p>SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.</p>	2	SS/SM on duty at GPT shall continue to click the 'Permission Granting' icon.
3	SS/SM on duty then shall re-set the I.B. Axle counter by pressing on 'DN Re-set' button, which will reset the Axle Counter.	3	SS/SM shall also click 'Re-set' icon provided on the VDU at GPT station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on Panel.	4	The SS/SM on duty at GPT shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/SM of DVD station giving reasons for the re-setting operation.
	DISPATCHING STATION [GOPALAPATNAM]		RECEIVING STATION [DUVVADA]
1	SS/SM on duty shall call the attention of SS/SM of DVD station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at DVD after verifying that the said dispatched train arrives fully, shall exchange private number with SS/SM on duty at GPT RRI and gives permission to re-set by pressing the 'Permission Grant' push button [To GPT] provided on the Panel.
2	<p>On getting re-set permission on VDU/Panel SS/SM on duty shall acknowledge by clicking 'Permission received from DVD' acknowledgement icon. For each such operation the reset counter provided in Operating Panel shall increase by one digit.</p> <p>SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.</p>	2	SS/SM on duty at DVD shall continue to click the 'Permission Granting' button'.

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3	SS/SM on duty then shall re-set the I.B. Axle counter by turning 'DN Re-set Key' and press the 'Re-set icon' on the VDU, which will reset the Axle Counter.	3	SS/SM DVD shall also press 'Re-set' button provided on Panel at DVD station simultaneously at the same time for re-setting of I.B. Axle counter.
4	On completion of re-setting process I.B. section clear indication will appear on re-set panel.	4	The SS/SM on duty at DVD shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/ SM of GPT RRI station giving reasons for the re-setting operation.

3. DISPATCH OF TRAINS:

Dispatch of trains is governed by the provision of G & SR 3.42, 3.70 and Block working manual rules.

From GOPALAPATNAM. Towards DUVVADA

Train will be dispatched in accordance with the General Rules 3.42, 3.70., 3.75, 4.35 and 8.01 and subsidiary Rules thereto.

GOPALAPATNAM TO IBS ON UP AND DOWN LINES:

The SS/SM on duty shall ensure that the portion of line between Advanced Starter and 400 Mtrs beyond IBS at their respective ends is clear of obstruction and indication to this effect is available in the VDU / Panel and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is with drawn and kept in his custody.

Advise the Station Master at the station in advance, of the train No. and description of such intended train to be dispatched and shall take his assent supported by Private Number and shall then set and lock the route and take off the Starter and Advanced Starter.

IBS SIGNAL TO THE STATION IN ADVANCE:

The SS/SM on duty shall obtain line clear over lock & Block instruments from the station in advance to dispatch a train past the IBS signal at the respective ends and shall take off the IBS signal by means of taking of signal No.36 of Gopalapatnam.

After the train passes the intermediate Block Stop signal of Gopalapatnam a buzzer will ring in the VDU/Panel. On hearing the buzzer/bell the SS/SM must acknowledge the same by clicking train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the SS/SM of the station in advance who in turn will turn commutator of the Double line Lock

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and Block Instrument from the line clear position to Train On Line position and acknowledge train entering section. After dispatch of a train from Gopalapatnam into the Block section between Gopalapatnam and intermediate Block Post in case when the intermediate stop signal is not taken 'off' but the buzzer has started ringing, this may be either due to the train passing intermediate Block stop signal at 'ON' position or due to failure of the track circuit in advance of that intermediate Block Signal and shall exchange Private Number with the SS/SM of the advance station indicating the occurrence and the number of the train. On getting the information from the SS/SM supported by Private Number, the SS/SM on duty at Gopalapatnam in turn will inform SCR on duty about this.

The procedure must be rigidly followed irrespective of the fact whether line clear for train has been received from station in advance or not and this must be recorded in the Train Register and SS/SM's diary book of both the Stations.

(i) Dispatch of trains towards Duvvada in case of failure of the Up LSS signal at Gopalapatnam Station due to failure of "Axle Counter" device or otherwise. If the failure of the LSS of GPT due to the failure of axle counting device or the indication lamp (repeated by indication lamp) showing 'Red' light either due to power failure or due to any other causes, the re-setting "Push Button" provided with Veeder counter at the SS/SM office for resorting the normal function of the signal, should be operated accordingly to the following instruction whenever the LSS of GPT is found defective by the Station Master and the following procedure shall be adopted.

On receipt of this information, the SS/ SM on duty after ensuring that all trains which had left his Block Station had arrived complete and intact at Duvvada station (by exchange Private Number with the SS/ SM DVD confirming this), shall press the resetting button of the axle counter. When the resetting is successful, it shall be indicated by a green light in the resetting panel provided in the SS/SM office at GPT. The use of this resetting button is registered on the veeder Counter and the SS/SM should record this giving the details of the occasion with timings in the Veeder Counter register kept in the station.

If it is not possible to restore normal working of the counter by use of the resetting button, the ESM-in-charge of the section shall be served with a written memo to attend the defective signal and rectify the same. The ESM-in-charge of the section on being served with a memo by the SS/SM, shall attend the failure and rectify the fault. The ESM after ensuring that all S&T gears relating to defective signal have been attended to and are in working order except the axle counter which needs re-setting shall establish communication with SS/SM concerned and ask him to reset the axle counter by pressing the reset push button. Where after the SS/SM on duty, after ensuring that all the trains which had left his Block Station had arrived complete and intact at Duvvada (by exchanging of P.N with **SS/SM DVD** confirming this) shall press the resetting button provided in the Panel at GPT RRI station and resume the normal working.

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4. ACTION TO BE TAKEN IN CASE OF FAILURE OF INTERMEDIATE BLOCK STOP SIGNAL:

During the failure of Intermediate block stop signal GR 3.75 and SRs thereto shall be followed.

4.1 INDICATION CUM RESETTING PROVISION IN THE PANEL AT GOPALAPATNAM:

The VDU Provided for following light indications:

- a) Two green indications for the track- circuited portion by Axle Counter, which remain normally lit to indicate that the track is clear. These lamps extinguish no sooner the train passes the last stop signal and their place two red indication are lit to indicate that the track is occupied.
- b) Two red indications for the last stop signal replacement track circuit which remain lit so long this track- circuit is occupied or in under failure condition.
- c) Two red indication ahead of the IBS Signal, which are lit if the train passes the side signal in "ON" Position. These indications continue to glow till such time the lock and block working is resumed through emergence re-setting feature.
- d) Two red indications just ahead of IBS Signal for the IBS signals replacement track circuit. These indications normally remain dark and are lit either during occupation by a train or during failure of this track circuit.
- e) Two red indications for the block section for receiving trains. These indications shall normally remain no indications and shall be lit only when the incoming train passes the IBS signal. It remains lit till such time train arrives fully and Block Instrument is normalized.

f] For resetting of I.B. Axle counter please refer Para No 2 of Appendix 'F' of this SWR. Every Case of re-setting shall be entered in a register in the following proforma.

Date and time	Train No. Last entered the block section	Private No. of station ahead for Complete Arrival of the train Under Col.2	Veeder Counter No Before resetting operation completed	Train No. Entering Block section Immediately after the resetting operation	Remarks	Signature of SS/Dy. SS
1	2	3	4	5	6	7

If resetting is not possible under item as mentioned above, the system should be treated as failed and train will work treating the entire section up to the Block Station immediately ahead of the IBS Post as one block section as per GR 3.75(4).

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RUNNING OF MOTOR TROLLYS ON IBS ZONE:

- (a) i) While allowing motor trolley/4 wheeler tower wagon/material trolley etc., entire section between Gopalapatnam-Duvvada shall be treated as one block section and shall be issued **T-369 [3b]** for passing IBS at "ON" position.
- ii) After the complete arrival of the said Motor Trolley/4 wheeler tower wagon/material trolley etc., at the station ahead, Station Master at adjacent station shall exchange Private Number in token of complete arrival and then shall resume normal working by resetting the Axle Counter as stated in the SWR.
- iii) Motor Trolleys shall not be allowed on following line clear.

NOTE:-Backing of train on the portion of line after passing the intermediate Block Stop signal normally shall not be allowed, however, if it becomes inevitable to back, such backing may be done with great caution as mentioned in SR 3.75.04.

5. SIGNAL POST TELEPHONE:

A telephone socket (RE Type portable telephone kept with loco pilots) with a RED Press button at the bottom is provided at the foot of each IB signal and is meant for loco pilot to contact the SS/SM in rear by pressing the RED button. The loco pilot of the train encountering the IB signal at 'ON' position shall contact the station in rear to find out the occupancy or otherwise of the block section ahead.

6. NORMAL POWER SUPPLY TO IBS GOOMTY AT KM 766/7 Km**7.**

Normal power supply to the Signalling and Interlocking installation at the IBS goomty is drawn from the traction power sources (230V-50 HZ, AT1 and AT2) with auto-change over arrangement in IB Goomty through a panel. When ever any traction power supplies fails, the auto-change over unit will automatically connected to the other available AT supply.

1.2 Working of Halts (Flag Station)

Marripalem passenger halt is situated between Gopalapatnam and Visakhapatnam stations.

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