

MAJOR ACHIEVEMENTS : SIGNAL & TELECOM
(APRIL 22 TO SEPTEMBER 2022)

- 1.1 Commissioning of Biswan, Ramaipur, and Parsendi(Ramaipur end) Stations in connection with path doubling work have been done by CON organization on date 11.04.2022 with provision of Double Distant in PSN- RMAR- BVN block section. Std -IIR interlocking with Kyosan make Electronic Interlocking. Provision of HASSDAC (GGTRONICS make) along with BPAC with UFSBI (WEBFILL Make) has been done in PSN- RMAR- BVN block section. Details of Asset after commissioning of stations are as under -

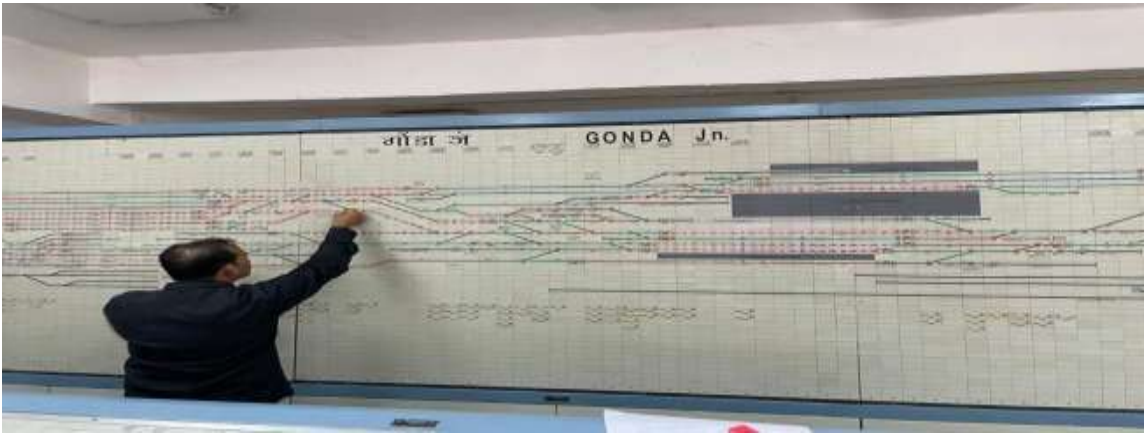
S.No.	Item	PSN	RMAR	BVN
1	Means of Operation	Interlocking with dual VDU(earlier domino panel	Interlocking with dual VDU(earlier domino panel	Interlocking with dual VDU(earlier domino panel
2	VDU	02	02	02
3	RE suitability	RE fit	RE fit	RE fit
4	Standard of Interlocking	Std.-II(R) Class-B	Std.-II(R) Class-B	Std.-II(R) Class-B
5	No. Of Routes	33 routes	25 routes	52 routes
6	No. of points	14 EPM	8 EPM	18 EPM
7	No. of Track circuits	28 No. with modification	24 No. with modification	37 No. with modification
8	Main signals	13 Nos. with LED lit aspects	12 Nos. with LED lit aspects	12 Nos. with LED lit aspects
9	Dependent Shunt signal	05 Nos. with LED lit aspects	05 Nos. with LED lit aspects	06 Nos. with LED lit aspects
10	Independent Shunt signal	2 Nos. with LED lit aspects	2 Nos. with LED lit aspects	2 Nos. with LED lit aspects
11	Calling ON signal	02 Nos. with LED lit aspects	02 Nos. with LED lit aspects	02 Nos. with LED lit aspects
Modern signalling assets				
12	IPS details	Make:- HBL	Make:- HBL	Make:- HBL
13	EI Details	Make- Kyosan	Make- Kyosan	Make- Kyosan
14	Datalogger	Make :-Efftroncs	Make :-Efftroncs	Make :-Efftroncs
15	Relay	325 nos. of various types.	227 nos. of various types.	351 nos. of various types.
16	ELD	Make Anuvidyut	Make Anuvidyut	Make Anuvidyut





1.2 Commissioning of Gonda Junction with Integra make RRI (Metal to Metal)

On dated 08/06/2022 Construction team of NER and Division Team of LJN(NE Railway) commissioned Gonda station with Integra makes RRI (metal to metal). This has been done in 48 hrs NI and 7hrs testing block with 707 routes incorporating all modern traffic tools like RRI domino panel with indication panel, preset, COA, FOIS, shunt signal, calling ON signals from all sides, emergency point operation and emergency route cancellation and Route Setting Type Relay Route Interlocking with domino panel and indication panel.



Modern signalling assets provided

Block Instrument UFSBI Type :- 02 Nos.[GD-SUBR & GD-BRCK)

HASSDAC:- 03 no[GD-SUBR, GD-GDK & GD-BRCK]

IPS details:- Make – HBL (6 set)

RRI Details:- Make- INTEGRA (METAL TO METAL).

Data logger:- Make – Efftronics

Relay:- 15524 nos. of various types

ELD:- 08 Nos.(Reliance Make)

COA :- 01 Set.

Benefits, after commissioning –

1. 1 No. passenger line and 3 running line increased to facilitate traffic movement.
2. Traffic facility increased as extra 03 Nos. goods lines provided.
3. Traffic facility increase due to more cross-over.
4. 02 Nos. non-running examination lines and 01 no. running examination line provided.
5. GD NI started on 06.06.22 & after successful completion of NI, Gonda Junction station has been commissioned on 08.06.22 at 18.00hrs. With total route testing of 707 route, Insertion of new points - 150 and Track circuiting of- 181 tracks routes.

Comparative details of assets prior to commissioning and after commissioning are as under:

Assets/Infrastructures	At present	After commissioning
Means of Operation	PI	RRI (Integra make metal to metal)
RE suitability	RE fit	RE fit
Standard of Interlocking	Std.-III	Std.-II(R)
Class of station	Class-B	Class-B
No. of route	317 routes	707 routes
Nos. of EPM	98 nos.	150 nos.
Nos. of track circuit	95 nos. with RE Modification	181 Nos. with RE Modification
No. of Main signals	40 Nos. with LED aspect	70 Nos. with LED aspects
Dependent shunt signal	29 Nos. with LED aspect	51 Nos. with LED aspects
Independent shunt signal	28 Nos. with LED aspect	33 Nos. with LED aspects
C/On signal	04 Nos. with LED aspect	14 Nos. with LED aspects
Sliding Boom Barrier	02 nos	04 nos.
HASSDAC	01 no.	03 nos.
DG Set	04 nos.	02 nos. each of 82 KVA
Block instrument UFSBI Type	01 no.	02 nos.
Running line	06 nos.	09 nos.
Goods Line	03 nos.	06 nos.
Passenger line	Nil	01 (line no.23)
Main line	03 nos.(UP/DN/IIIrd)	04 nos.(UP/DN/IIIrd & SUBR main line)
Non running examination line	Nil	02 nos. (line no.20 & 21)
Running examination line	Nil	01 (line no.22)

1.3 Provision of Tower wagon siding has been done at Phardhan station on 11.07.22.CEL make MSDAC has been provided in track circuit 202BT.Logic alteration has been done accordingly in Medha EI. Shunt signal S33 and point no. 205 X have been installed under execution of same work.



- 1.4 PCEE/NER/GKP's inspection of RE modification work has been conducted successfully in BNKJ(Ex.)-MLN section on date 29.08.22.
- 1.5 PCEE/NER/GKP's inspection of RE modification work has been conducted successfully in SOT(Ex.)-PPW section on date 12.09.22.56 nos. track relays and 56 nos. track feed battery charger have been replaced by ACI track relay and potential free Track feed battery charger respectively at PRZ,PPW& BNY station under execution of RE modification work. BPAC with UFSBI(Deltron make) & HASSDAC (CEL make) has been provided in BNY-PPW & PPW-GIR section on date 04.08.22 & 05.08.22 respectively by RE organization under RE modification work.
- 1.6 HASSDAC (GGTRONICSmake) has been provided in MOTG-BRCK section in UP & DN line for Dual detection with provision of dual media.
- 1.7 Provision of Parametric Maintenance Free Earthing arrangement in Relay Room has been done at RMAR,BVN,JTB,SWA,KLD, CRV, MND,ORW, BST, GOVR, TH, GAU,GDK,SUJ,CM,BMJ,UB,CIH,PRZ stations & IBS TH-GOVR ,IBS TH-GAU,IBS SWA-MHH,IBS MHH-KLD.
- 1.8 Class 'A' protection device has been provided at at JEA,PJ,CM ,LIR SWA,JTB, MHH,TH,GAU,BV,GDK,MIR,CLJ,SUJ,JLD,GHT,CKG,BUR,JBR,KLD,CRV,MND, ORW,BST,GOVR stations.
- 1.9 Replacement of Datalogger (which has completed their codal life) with local PC(for monitoring by station maintenance staff) has been done at LKNR,, SNC, MSW, KEA, JLHI , MOTG,BRCK,CLJ ,MIR & SUJ stations
- 1.10 Logic alteration has been done in circuit of Signal S-30,S-26,S-32 in Medha EI at ASH station to remove proving of LC gate 5Spl from signal clearing circuit.
- 1.11 CEL make MSDAC has been provided in Line no. 1 for dual detection at BST station.
- 1.12** Interlocked LC gate 57C(BVN),73Spl(STP),91Spl(STP),92B2(STP & 239C(LKNR) has been closed against road traffic.
- 1.13 Slider boom barrier has been commissioned at 03 nos. LC gate [158A(ITE), 261A(GD) & 1A B(GD)].
- 1.14 Electric barrier has been commissioned at 05 nos. LC gate.[262Spl(GD),1A B(GD),65C(RMAR),56Spl(BVN) & 58Spl(BVN).
- 1.15 Provision of Automatic Fire Detection & Alarm System has been done at 21 stations[JTB,MHH,KLD,CRV.MND,ORW,GOVR,TH,GAU,BV,BVN,RMAR,GD,MIR, CLJ, SUJ,JLD,GHT,CKG,BUR,JBR].
- 1.16 Provision of Earth Leakage Detector(ELD)of Reliance make has been done at all 10 IBS to monitor the health of cable.

- 1.17 Provision of Auto fuse change over system of RT Vision/Reliance make has been done at 10 IBS & 07 stations(BHA,ASH,LC,DAL,MBP,BKT,AA) to avoid failures of fuse.
- 1.18 BPAC with UFSBI(Deltron make) & HASSDAC (GGTRONICS make) has been provided in GD-SUBR section & HASSDAC(CEL make) has been provided in GD-GDK section by CON during GD /RRI work.
- 1.19 CEL make MSDAC has been provided for tower wagon siding in series of track circuit 01 AT at BVN station.
- 1.20 Bifurcation of track circuit 202T in to 20T & 204T have been done at BV station on 26.04.22.
- 1.21 Bifurcation of track circuits of berthing track circuit for line no. 1,3,4,5 has been done by CON unit at GD yard.
- 1.22 Laying of standby power cable from CLS Panel to IPS has been done at 29 stations.[JTB,SWA,KLD,MHH,MND,ORW,BST,GOVR,TH, GAU, BV,BHA, BVN, RMAR,TSF,SDAM,MBP,BKT,AA,GD,HA,LMP,GK,PD,BNKJ,MLN, PRZ,BNY, PPW].
- 1.23 Contact of HPR & DPR have been done in parallel at 29 stations , 05 IBS & 04 LC gate [CLJ, MIR,SUJ,JLD,GHT,BUW,BUR, JBR,CKG,GDK,BNKJ, STP, ASH, LJM,BHA,KMP,GTNR,BNZ,TKUR,PSN,RMAR,SYU,MMB,PPE,TSF, SDAM, BKT, AA, BVN stations, IBS GDK-MIR,MIR-CLJ,SUJ-JLD ,BUW-BUR & JBR-BBK and LC gate 311 Spl, 303 Spl, 286 Spl, 269 B-1].
- 1.24 RTU of Efftronics make has been provided at GD/West & GD/East cabin. With this total 02 nos. of RTU have been provided . RTU of Efftronics make has been provided at LC gat no. 170B-1(SWA-MHH) & 177B1(KLD-MHH)
- 1.25 27 nos. High thrust point machine have been provided under provision of Thick web switch has been provided PATI,GDK,RMAR,BVNBV,GD station by Engg. Department with coordination of S & T Department during year 2022-23.
- 1.26 Bifurcation of circuits having relay contacts more than 45 nos. of Metal to Carbon relays has been done at GDK & BUW station.
- 1.27 Replacement of over aged IPS of 2000 specification (HBL make) at CLJ & MIR station has been done by Statcon make IPS.
- 1.28 Track Detection System Monitoring through Data logger has been done at 05 stations.

- 1.29 Epoxy/insulation paint coating on Glued joints have been done at 68 Stations in Division.
- 1.30 Provision of HURL siding has been done at JEA station by providing HPKL on point no.506 & 509.
- 1.31 140 nos. RDSO joints have been replaced by glued joint during the month at GKP,GKC,GD,CLJ,SUJ,MIR, JEA,GIR,JLD,LJN ,BVN & RMAR station.
- 1.32 Solenoid boom locking arrangement has been replaced by motorized boom locking at 2A,5A(ASH) & 8Spl.7 Spl,12 Spl,14Spl(MBP).
- 1.33 Plastic cover has been provided on signals units at all BG station to avoid entrance of water during monsoon.
- 1.34 Spare power cable has been provided between power distribution board to last relay rack at 13stations & 05 IBS [JEA, LIR, DMG, JBR,BUR, BUW,GHT, CKG,JLD,SUJ,CLJ GDK, MIR stations & IBS JBR-BBK,IBS BUR-BUW, IBS SUJ-JLD,IBS GDK-MIR & MIR -CLJ.]
- 1.35 11.05 Km defective signalling cable have been replaced at BNZ station & MOTG-BRCK section.
- 1.36 Total of 1059 nos.300AH/200AH/80AH/2V cells have been renewed in the division circuits to improve reliability of power supply of the signalling.
- 1.37 67 nos. EPMs have been replaced by new EPM at GD,GKP,BUW stations to improve reliability in point machine.
- 1.38 Replacement of 86 nos. ground connection of EPM at GKP,GKC,DMG,MUR & GD,LJN,BUW,GDK stations have been done to improve reliability in point machine.
- 1.39 To ensure compliance of instruction given by PCSTE Sir, one 6 core jumper cable across the Z Bond(parallel to TRD Bond) has been provided in track circuits at SUBR,GD(Main line),BRCK,MOTG,JLHI,GADM,BGAN,GKC, MIM,PJ,DMG, BVN,MMB, KMP,BKT,TKUR, PD,GKP/W,BMJ,CIH,PRZ,SDDN & ANDN stations.
- 1.40 Total 740 nos. PPTC fuses have been provided at TF & TR end at GD, station.985 nos. PPTC Fuses have been provided at 24Volt external circuit at different stations[GKP-280NOS.,GKC-300 NOS.,DMG-80 NOS.,PJ-10 NOS.,ANDN-50 NOS,BMJ- 90 NOS.,LIR-15 NOS,SDDN-40 NOS,SOT -40 NOS.,PRZ-80 NOS.]

- 1.41 Provision of fuse in negative path of Auto fuse changeover system has been done at CLJ,MIR,SUJ,JLD,JBR,BUR ,SDDN,GKC stations as per directive issued by HQ. Reliance make Fuse auto change over has been commissioned 07 stations at BHA,ASH-AA section with provision of of fuse in negative path of Auto fuse changeover system.
- 1.42 Segregation of common fuse of internal circuit has been done at CLJ,CKG,GHT,JLD,BUR,BUW & JBR stations, so that blowing off one fuse should not cause failures of many gears .
- 1.43 Push type door lock sensor magnetic proximity switch has been provided at ASH station.
- 1.44 Provision of two SM's Key in parallel in Panel has been done at SYU,MMB,PPE,TSF,SDAM stations.
- 1.45 Provision of Bit Charts of Display Unit of Data Logger for verification & validation of relays has been done at DAL,BNZ,GTNR,TKUR,PSN,RMAR,JTB,SWA ,MHH,KLD, CRV ,MND, ORW,BST,GOVR,TH,GAU,BV,MBP,BKT,AA,BVN,SYU,MMB, IBS SWA-MHH, IBS MHH-KLD,IBS TH-GOVR & IBS TH-GAU.
- 1.46 Calling on circuit alteration has been done at ASH,STP,RMAR,BVN ,GD,TSF & PPE stations to prevent failure of Calling ON signal in case of failure of 1st track circuit after Home Signal.
- 1.47 IPS input has been wired with Datalogger/RTU JBR,BUR,IBS GDK-MIR,IBS MIR-CLJ,IBS SUJ-JLD ,IBS BUW-BUR & IBS JBR -BBK to monitor power supply.