WINDOWS BASED LOCOMOTIVE DIAGNOSTIC SYSTEM ARC/WLDS/V1.0 USER MANUAL



May 2018

RELEASE 1.0



Advanced Rail Controls Private Limited Bangalore-560092

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IMPORTANT NOTICE

This is a sophisticated microprocessor-based equipment and can be serviced only by trained skilled personnel. Opening the equipment by any unauthorized person will make the warranty null and void.

1.0 Introduction

The Windows based Locomotive Diagnostic System (WLDS) is used in 3-Phase Locomotive. Earlier, Indian Railways were using DOS based Diagnostic Tool and we supplied closely 150 systems to CLW and Zonal Railways. Further, we developed Windows based Diagnostic system which is suitable for MICAS S2 control system of 3-phase locomotive and does not need any upgradation or modification of the locomotive firmware or application software. This is the unique feature and is very safe as the existing proven software itself will be working in the locomotive.

Windows based Diagnostic System (WLDS) consisting of:

- (a) Diagnostic Laptop
- (b) Diagnostic tool
- (c) MVB Signal Converter
- (d) Cables and connectors
- (e) Laptop chargers to work in Locomotives and Electronic Labs of Electric Loco Sheds

1.1 Scope of supply

SL.No.	ltem name	Unit	Quantity /unit
1	Diagnostic Laptop, Model No:	Set	One
	Tough book CF-54 pre- loaded with		
	Windows-10 , Diagnostic software		
	and Anti- Virus software		
2	AC Laptop adapter with 3 pin	Set	One
	power chord on input side and DC		
	jack female, USB type-B connector		
	on output side		
3	DC Laptop adapter with Hand lamp	Set	One
	socket input side and DC jack		
	female, USB type-B connector on		
	output side		
4	Diagnostic tool	No.	One
5	MVB Signal converter with	No.	One
	0.5Metre duly crimped with		
	Gimota 9 pin Sub-D Male		
	connector		
6	MVB Long cable (5 x 2 x 0.5mm2)	No.	One
	6.5Metre length duly crimped with		
	10 pin circular Female wire wrap		

	connector on one side and Sub-D 9 pin Male connector on other end		
7	RJ-45 Male crimped cable of 1metre length	No.	One
8	Carry bag	No.	One
9	USB Flash drive 8GB	No.	One

2.0 Diagnostic Laptop

Panasonic make Toughbook model No. CF-54 Diagnostic Laptop supplied to run the Diagnostic software on Windows-10 Operating System. This model is a semi-rugged in durability. It has a 14" HD display with Intel graphics. There 3 USB ports and 1 Ethernet port are available. Diagnostic software is pre-loaded. For LDS operation execution, please see clause no.4.0



2.1 Diagnostic tool

The equipment is built around an ARM controller. The MVB interface module connects the controller through parallel bus and the loco VCU through MVB Electrical. The equipment can accept either 110V DC supply from locomotive battery or domestic power supply at 230V AC 50Hz through an adapter. The MVB Interface module is a detachable external device, miniature size, and has an Ethernet interface with the Laptop. Faster Data communication is possible with laptop through Ethernet. The MVB Interface Module provides connectivity to the loco VCU through MVB electrical. MVB signal Converter box provides MVB connection between stub line of MVB bus coupler card VCU rack and WLDS tool.



WLDS tool has USB TYPE -B Female connector for powering ON the device and has Ethernet connector for data communication between WLDS and Laptop.



On the other side WLDS tool has Sub-D 9 pin Female connector for MVB communication.



WLDS provides LED status indication for several operation.



LED Indication No.	LED Colour	Function	LED Status
L1	Yellow	MVB Write	Blinks Continuously during MVB write operation
L2	Yellow	MVB Read	Glows Continuously when MVB connected
L3	Yellow	MVB Read	Glows Continuously when MVB connected
L4	Green	MVB Lifesign	Blinks Continuously when Power is ON
L5	Blue	MCU_1.2V power indication	Glows Continuously when power is ON
L6	Orange	MCU_3.3V power indication	Glows Continuously when power is ON
L7	Yellow	MCU_5V power indication	Glows Continuously when power is ON
L8	Green	MCU Lifesign	Blinks Continuously when power is ON
L9	Red	MCU Error	Glows only when Error in the tool

2.2 MVB Signal Converter

MVB Signal Converter box provides MVB connection between Stub line of MVB Bus coupler card of VCU rack and WLDS tool.

MVB Signal Converter box has 10 pin circular Panel mount connector on one side for connecting with WLDS MVB port through 10 core shielded cable.

On the other side it has Sub-D 9 pin Male wire wrap connector in line with MVB short cable,10 core shielded of approximate length 0.5metres which is to be connected to MVB stub line of the MVB Bus coupler card of VCU rack.



2.3 Cables and Connectors

Two individual cables are supplied along with the system. One is Ethernet cable crimped with RJ-45 Male connector on both the sides for data communication between Diagnostic laptop and WLDS tool. Approximate length of the cable is 0.9metres.

Other cable is MVB long cable, 10 core (5 x 2 x 0.5mm2) shield cable crimped with Sub-D 9 pin Male Gimoto wire wrap Connector on one side and 10 pin circular Female wire wrap connector on the other side. This cable connects the communication between WLDS tool and MVB Signal Converter side. Approximate length of the cable is 6.5metres.



2.4 Laptop Adapters

Two individual Laptop chargers are supplied, one which works with 230V AC/50Hz supply and other charger which will work with 110V DC Loco battery.

Both the chargers is having two output voltages Viz, 15.6V DC available on DC female jack to charge Laptop battery and 5V DC available on USB type-B Male connector to power ON WLDS tool.

AC adapter is having 3 pin plug with cable which needs to be plugged in Electric Loco shed electronics Lab or any other place where 230V AC supply is present.

DC adapter is having hand lamp socket needs to be connected to 110V Loco battery provided on assistant driver desk in the Locomotive.

Note: User must connect USB type -B Male connector coming from adapters to WLDS tool to power it ON.

Adapter for ELS Electronics labs



Adapter for Locomotive





3.0 WLDS Connection diagram when using in Electronic laboratory

3.1 WLDS Connection diagram when using in Locomotive



3.2 Interface Connection details

SI. No	Peripheral Details	Remarks
1	Laptop Model No. Tough book CF-54	Run the LDS software as
	Make: Panasonic	explained in the clause no.
	Operating System: Windows-10	
	Ethernet Port : 1	
	USB port : 2	
2	Laptop Adapter	This adapter must be used in the
	Input : 230V AC/50Hz	ELS Labs.
	Output : 15.6V DC/7A and 5V DC/3A	This adapter has two outputs
		Viz,
		1. Cable connected with
		DC jack female (15.6V
		DC) to be connected to
		Laptop for battery
		charger.
		2. Cable connected with
		USB type – B male (5V
		DC) to be connected to
		WLDS tool
2A (refer	Laptop Adapter	This adapter must be used in the
Clause 3.1)	Input : 110V DC	3-phase Locomotives.

	Output : 15.6V DC/7A and 5V DC/3A	This adapter has two outputs
		Viz,
		1. Cable connected with
		DC jack Female (15.6V
		DC) to be connected to
		Laptop for battery
		charger.
		2. Cable connected with
		USB type – B Male (5V
		DC) to be connected to WLDS tool
3	3 pin plug	This is the part of AC adapter
		needs to be connected to 3 pin
		AC sockets (230V/50Hz).
3A (refer	Hand lamp socket	This is the part of DC adapter
Clause 3.1)		needs to be connected to 110V
		Loco battery provided on
		assistant driver desk in the
		Locomotive.
4	Cable crimped with DC jack Female connector.	Needs to be connected to
	Voltage available: 15.6V DC	Laptop for charging purpose.
5	Cable crimped with USB type-B Male connector.	Needs to be connected to WLDS
	Voltage available: 5V DC	tool for powering the unit.
6	Ethernet Cable crimped with RJ-45 male connector	This cable needs to be
	at both the ends	connected between Laptop and
		WLDS tool for data
		communication.
7	Windows based LDS (WLDS) tool	WLDS has below mentioned
		connectors:
		Ethernet port : RJ-45 Female
		panel mount for connecting with
		Laptop.
		USB port : Type-B Female panel
		Adapter(AC/DC) to power ON
		Sub D 0 pin Eomolo Connector
		for connecting to VCII through
		MVB signal Converter
8	MV/B Long cable	Cable crimped with Sub-D 9 nin
	10 core shielded CLW approved cable duly	Male connector has to be
	crimped with Sub-D 9 pin Male connector on one	connected to WIDS side cable
	side and 10 pin circular Female connector on other	crimped with 10 pin circular
	side.	connector Female connector has
	Cable length : 6.5metre	to be connected to MVB signal
		converter end.
9	MVB Signal Converter	MVB Signal converter has below
	-	mentioned connector:
		10 pin circular connector Male
		panel mount for connecting with
		WLDS tool.
10	MVB short cable	Cable crimped with Sub-D 9 pin
	10 core shielded CLW approved cable duly	Male connector has to be
	crimped with Sub-D 9 pin Male connector on one	connected to MVB stub line
		provided on the MVB Bus

side and directly in-line with MVB signal converter	coupler card which is inserted on
on other side.	"W" slot of VCU rack.
Cable length : 0.5metre	

4.0 Step by step explanation of LDS software tool execution

1. Connection:

- Connect WLDS tool and set up as explained in clause 3.0 and 3.1.
- Once connection is done switch ON LDS hardware, run the LDS software in diagnostic laptop, and find Login form.
- 2. Login Form:

ADVANCED RAIL CONTROLS PROVIDING RAIL DOMAIN SOLUTIONS AN ISO BOOL 2015 COMPANY LOCOMOTIVE DIAGNOSTIC TOOL	×
â	
Login 72	%

Login form of LDS software

User id: admin

Password: arc_wlds

4	ADVANCED RAIL CONTROLS ROVIDING RAIL DOMAIN SOLUTIONS AN ISO SOLUTIONS LOCOMOTIVE DIAGNOSTIC TOOL	×
	1	
	â *	
	Login	
	Hardware is Connected 96	%

Once user entered the username and password and click on login button the hardware is connected.

3. Menu Screen:



In menu Screen options will be shown such as

- Communication Check
- Event Data Log (EDL)

- View EDL
- Signal View
- Download
- Settings



In case if the WLDS hardware is not connected with the laptop, the menu form will show as 'OFFLINE' as displayed above

4. Communication Check Form:



To check the connection user can click on communication check button.

LOCOMOTIVE DIAGNOSTIC TOOL	€_ ×
Communication Check Communication Check	
FLG1:OkFLG2:No ConnectionHBB1:No ConnectionHBB2:No ConnectionFBV1:OkFBV2:No ConnectionDDA1:No ConnectionDDA2:OkSTB1:No Connection	
Aborted by User	
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Comm check of particular processor if it is connected it will show 'ok' otherwise 'no connection'. In case user want to cancel the comm check once click on cancel it will show the message as Aborted by user

LOCOMOT	IVE DIAGN	OSTIC TOOL
Communication Check	Communication Check	
R61 R62	: Ok DIA : Ok ZBV	: 0k I : 0k
HBBI HBB2 FBV1 FBV2	: 0k 450 : 0k 450 : 0k NSC : 0k NSC	1 : 0k 2 : 0k 1 : 0k 2 : 0k
DDAI DDAS STBI STRI	: 0k SLC : 0k SLC : 0k BLR : 0k BLR	1 : 0k 5 : 0k 1 : 0k 2 : 0k
	BUR	3 :: Ok -
	Communication Chee	k Successful
		Copyright © 2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED

Comm check of all the processor if it is connected it will show 'ok' otherwise 'no connection'.

5. EDL Form:

When user click on EDL icon the EDL page will be displayed the options below such as



- Upload Project Version
- Upload EDL

• EDL Settings

Upload Project Version:

Browse for the FD file FDXXUK.ASC and FT file FTXXUK.ASC

If we add FD and FT file and click on upload then project version will be saved.

Clicking on upload button generates the xml form of file browsed, which will be Saved.

In EDL View, the Project Version will be displayed if the xml file is previously created.

Project/Version_Upload FD File C:\LDS\Back.goudData\PV\PV51\FD51UK.ASC FT File C:\LDS\Back.goudData\PV\PV51\FT51UK.ASC Toformation Uplaod Tuplaod Toformation () () () () () () () () () () () () ()		LOCOMOTIVE DIAGNOSTIC TOOL
Convrickt © 2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED	Project/Vernion_Upload	FD File C:\LDS\Back.good Data\PY\PYS1\FDS1UK.ASC FI File C:\LDS\Back.good Data\PY\PYS1\FTS1UK.ASC Upland Upland Upland Upland C:\LDS\Back.good Data\PY\PYS1\FTS1UK.ASC

Upload EDL:

Click on Upload EDL Button to upload EDL (Loco Fault)

LOCOMOTIVE DIAGNOSTIC TOOL	↑ ← _ ×
EDL Upload	
Upload EDL	

When user clicks on upload EDL button the EDL (Loco Fault) will be extracted from the processor.

	LOCOMOTIVE DIAGNOSTIC TOOL	↑ ← _ X
- EDL Upload	Cancel	
	Loco Number Current Refer Last Referent	
	Number of DDS to be transmitted 0058 / 0058	
	Copyright © 2019 ADVANCED RAIL CONTR	OLS PRIVATE LIMITED

To save EDL the following window will be displayed where user can save the file in specific folder and click on View EDL to view Loco Fault

	LOCOMOTIVE DIAGNOSTIC TOOL	↑ ← _ ×
EDL Upload		
	Upload EDL	
	No EDL Present	
	Copyright © 2019 ADVANCED RAIL CONTR	OLS PRIVATE LIMITED

If EDL is not present when user clicks on upload EDL then it will display the message as 'No EDL present'.

EDL Settings:

When user clicks on EDL Settings button the page will be displayed and following options will be shown:



- Delete Data Keep Reference Number
- Delete Data and Delete Reference Number
- Read Data from Start

And if user clicks on the following option button the particular process will be done accordingly.

- Delete Data Keep Reference Number: Loco Fault will be deleted and reference number will not be zero (start from old reference number).
- Delete Data and Delete Reference Number: Loco Fault will be deleted and reference will set to zero.
- Read Data from Start: Loco Fault will start from the Beginning.

6. View EDL:

	LOCOMOTIVE DIA	GNOSTIC TOOL	_ ×
Menu	© Open	×	
	 ← → ✓ ↑ • « LDS > EDL > ✓ ♂ Organize ▼ New folder ■ Removable Disk ((^ Name 	Search EDL	
Cor	Allowance BHEL_DDU_1.0_F BHEL_DDU_1.29 LDS LDS_12JUNE2022 LDS_Screenshot	29-05-23 10:26 AM File fol 29-05-23 10:26 AM File fol 20-04-18 11:44 AM AA File 04-05-18 11:25 AM AA File 02-05-18 11:23 AM AA File 02-05-18 4:55 PM AA File	
	File name:ch502_20042018114521.aa 🗸 🗸	Dpen Cancel Settings	ATE LIMITED

When user click on view EDL icon, dialogue box will be displayed to select the files after selecting the file the EDL information will be displayed as shown below.

Number :	31028			Refresh Export	Fiber Hitist Merge EDL	Beowse E
SI No.	40 Date	Text	Time(ms)	EDI. Ref. (Click to view Back(fround Data)	EDI Information (Chrk to sizer EDI Instruction)	Counter
1	11/10/2018	11.46.12	100	402	FLG2 0006-Liferim from HBR1 mining	1
2	11/10/2018	11.46.12	100	400	FLG2 0004 Likeian from STR1 minning	1
3	11/10/2018	114612	400	500	FL02:0034,Subsystem 07 & 08 off	1
4	11/10/2018	11.46:12	400	501	FLG2.0033-Subrystem 06 & 08 off	1
5	11/10/2018	11:46:12	400	502	FLG2:0032-Subsystem 06 & 07 off	1
6	11/10/2018	11:46:12	400	503	FLG2.0030-Processor STB1 & HBB1 off	1
7	11/10/2018	11:55:52	600	504	FLG20117-Power Off MCE	1
8	11/10/2018	12:21:40	200	505	STB2.0013-Scar. oil cooler MCB open	1
9	11/10/2018	12:21:40	200	506	STB2 0012-Transformer pump 2 MCB open	1
10	11/10/2018	12:21:40	200	507	STB2:0011-Convert 2 pump or fan MCB open	1
11	11/10/2018	12:21:40	200	508	STB20010-MR scav. blower MCB open	1
12	11/10/2018	12:21:40	200	509	STB2.0009-TM 2 blower MCB open	1
13	11/10/2018	12:21:40	200	510	STB2 0008-MR blower MCB open	1
14	11/10/2018	12:21:40	200	511	STB2:0007-Oil cooler blower MCB open	1
15	11/10/2018	12:21:40	300	512	HBB2 0005-MCB of compressor 2 open	1
16	11/10/2018	12:21:40	300	513	STB2.0003-Speedometer failed	1
17	11/10/2018	12:21:45	200	514	STB2.0006-Fire detect. equipment failed	1
18	11/10/2018	12:21:50	100	515	FLG2.0091-Power on of MCE	1
19	11/10/2018	12:21:50	100	516	FLG2 0089-Lifesign from ZBV1 missing	1
20	11/10/2018	12:21:50	100	517	FLG2:0022-Brake electronics failed	1
21	11/10/2018	12:21:50	100	518	FLG2 0020-Emergency brake vigilance	1

Once EDL information is displayed and in that EDL information page user can check the information of particular reference number by clicking reference number

DL					
Number: 310 st Version : 40	128	Refresh	Export Filter	Hithit Merge EI	L Browse
ference Number :	498 Date-Time	: 11/10/2018 11:46:12 DDS Information : FLG2:0006	Lifesign from HBB1 missing		Export
Word Number	Byte Number	Signal Description	Value	Dim.	Signal Name
	0	Cab 1 activated	0		FLGM_UM
1	1	Cab 2 activated	0		FLGM_UM
1	2	Command Panto up	0		FLGM_UM
1	3	Command Panto down	1		FLGM_UM
1	4	Status VCB closed	0		FLGM_UM
1	5	Word UMF1, Bit6	0		FLG1 UM.
1	6	Emergency stop pressed	0		FLGM_UM
1	7	Status Pressure swtch EmergBrk	1		FLGM_UM
1	8	Status Driving forward	0		FLGM_UM
1	9	Status Driving reverse	0		FLGM_UM
1	10	Status Hotel load on	0		FLGM_UM
1	11	Status Start/running interlock	1		FLGM_UM
1	12	Status const speed ctrl active	0		FLGM UM.
1	13	TE limit switch ctrl active	0		FLGM_UM
1	14	Bogie 1 brake cyl pressure switch	0		FLGM_UM
1	15	Bogie 2 brake cyl pressure switch	0		FLGM_UM
2	0	Status Harmonic filter On	0		FLGM UM
2	1	Status Filter adapt contc On	0		FLGM_UM
2	2	Status Filter discharge contc On	0		FLGM_UM
0	2	Cuper WCD alors adverters	0		TLOW IDA

User can view background data of that particular reference no as shown above.

Number : 310)28			Refresh	Export	Filter	Hitlast	Merge EDL	. Browse
ference Number :	498 Date-Tir	ne : 11/10/2018 1	1:46:12 DDS Informat	tion : FLG2:0006-Lifesi	gn from HBB1 mis	ising			Export
Word Number	Byte Number		Signal Description		Valu	e	Di	m.	Signal Name
1	0					×			FLGM_UM
1	1		From Date: 15/06/2023	To Date:	22/06/2023				FLGM_UM
1	2				-				FLGM_UM
1	3		From Time: 12:00:00 44	A 🔄 To Time	11:59:59 PM				FLGM_UM
1	4		1100.0070		11.00.007100				FLGM UM
1	5								FLG1 UM.
1	6		Processor Name: AL		~				FLGM_UM
1	7								FLGM_UM
1	8		DDS Information: AU		~				FLGM UM
1	9								FLGM_UM
1	10								FLGM_UM
1	11			Submit	Reset				FLGM UM
1	12								FLGM UM
1	13		TE limit switch ctrl active		()			FLGM UM
1	14		Bogie 1 brake cyl pressure s	witch	()			FLGM_UM
1	15		Bogie 2 brake cyl pressure s	witch	()			FLGM_UM
2	0		Status Harmonic filter Or	1	()			FLGM UM
2	1		Status Filter adapt contc C	'n	0)			FLGM UM.
2	2		Status Filter discharge conto	On	0)			FLGM UM
0	2		Change MCD along where he						ELCAL IDA

<u>Filter:</u> If user clicks on Filter button one popup window will be shown where user can select from date and to date, time, processor name, and EDL information.

t version :	21					
SI No.	Date	Time	Time(ms)	EDL Ref (Click to view BackGround Data)	EDL Information (Click to view EDL Instruction)	Counter
1	07/11/2018	11:22:54	400	342	FLG20003-Lifesign from SLG2 missing	1
2	07/11/2018	11:22:54	400	343	FLG20002-Lifesign from SLG1 missing	1
3	07/11/2018	11:22:54	700	344	FLG2:0034-Subsystem 07 & 08 off	1
4	07/11/2018	11:22:54	700	345	FLG2:0033-Subsystem 06 & 08 off	1
5	07/11/2018	11:22:54	700	346	FLG2.0032-Subsystem 06 & 07 off	1
6	07/11/2018	11:22:54	700	347	FLG2:0030-Processor STB1 & HBB1 off	1
7	07/11/2018	11:22:54	700	348	FLG2:0026-Subsystem 02 & 03 off	1
8	07/11/2018	11:22:55	300	349	HBB2:0005-MCB of compressor 2 open	1
9	07/11/2018	11:22:55	800	350	FLG2.0022-Brake electronics failed	1
10	07/11/2018	11:23:02	500	351	FLG2.0018-Emergency stop - shutdown	1
11	07/11/2018	11:23:04	700	352	FLG2.0117-Power off of MCE	1
12	07/11/2018	11:23:07	400	353	FLG2:0118-BPCS switch got stuck	1
13	07/11/2018	11:25:45	300	354	STB2:0004-Earth fault auxiliary circuits	1
14	07/11/2018	11:32:02	100	355	FLG2:0024-MCE off - pan was down 10 min	1

And click on submit button all details will be displayed as shown as above

Number : 31028	Refresh Export	Filter Exit Hitlist Merge EDL Brows
rt Version : 21		
SI No.	EDL Information	No. of Occurrences
	FLG2.0003-Lifesign from SLG2 missing	1
2	FLG2.0002-Lifesign from SLG1 missing	1
3	FLG2:0034-Subsystem 07 & 08 off	1
4	FLG2:0033-Subsystem 06 & 08 off	1
5	FLG2:0032-Subsystem 06 & 07 off	1
6	FLG2:0030-Processor STB1 & HBB1 off	1
7	FLG2:0026-Subsystem 02 & 03 off	1
8	HBB2:0005-MCB of compressor 2 open	1
9	FLG2:0022-Brake electronics failed	1
10	FLG2.0018-Emergency stop - shutdown	1
11	FLG2.0117-Power off of MCE	1
12	FLG20118-BPCS switch got stuck	1
13	STB2:0004-Earth fault auxiliary circuits	1
14	FLG2.0024-MCE off - pan was down 10 min	1
15	FLG2.0091-Power on of MCE	1
16	FLG2.0089-Lifesign from ZBV1 missing	1
17	FLG2:0012-Lifesign from BUR3 missing	1
18	FLG2:0011-Lifesign from BUR2 missing	1
19	FLG2.0010-Lifesign from BUR1 missing	1
20	FLG2.0008-Lifesign from DDA1 missing	1
21	FLG2.0006-Lifesign from HBB1 missing	1

<u>Hitlist</u>: -If user click on hit list button the no. of times EDL has been occurred can be checked and if user wants to go back to the previous page just click on refresh button or Exit Hitlist Button.

Number: 310	28				Refresh	۱.	Export	Filter	Hitist Merge	EDL Browse
Open						×	kGround	EDL Information (C	ick to view EDL Instruction)	Counter
> † 📑 >	This PC > Local Disk	(C) > LDS > EDL	V Ö Search El	DL		<i>P</i>		FI G20003.1	Residen forces ST (22 minutes	1
				Dec		~		FLG20003-L	design from SLO2 mining	1
organize + rvew to	ider	~		811		•		FLG20034	Subevetem 07 & 08 off	1
LDS_Screenshot, '	* Name		Date modified	Type		s^-		FLG20033	Subsystem 06 & 08 off	1
LDS_Screenshots			29-05-23 10:26 AM	File folder				FL G2 0032	Sub-rustern DK & D7 off	1
NEW LDS SCREE	_ch502_2004	2018114521.aa	20-04-18 11:44 AM	AA File				FLG20030.Pv	ocessor STB1 & HBB1 off	1
OneDrive - Persor	_ch502_2004	2018114521_copy.aa	04-05-18 11:25 AM	AA File				FLG20026	Subeuten 02 & 03 off	1
		335.aa	02-05-18 11:23 AM	AA File				HRR2-0005-M	CB of compressor 2 open	1
This PC		510.aa	02-05-18-4:55 PM	AA File				FLG20022	Brake electronics failed	1
Desktop		721.aa	05-11-18 11:57 AM	AA File				FL G2 0018-Fr	memency ston - shutdown	1
Documents		905.88	05-11-18 11:59 AM	AAFile				FLG2011	7. Pomer off of MCE	1
Downloads		1/20.88	05-11-18-12:37 PM	AA.hite		~		FLG2:0118	BPCS ewitch ant etucle	1
h hAusia						-		STR2-0004-F	arth fault auxiliary circuits	1
File	Daure:	(756.aa" "_02052018112335	.aa" "_02052 ~ aa			~		FI G2:0024-MC	E off - non war down 10 min	1
			Ωp	en	Cancel			FLG2005	1-Power on of MCE	1
16	09/11/2018	04:11:11	400		35	7		FLG20089.1	fesian from 7BV1 missing	1
17	09/11/2018	04:11:11	400		35	8		FLG2:0012-L	fesian from RIIR 3 missing	1
18	09/11/2018	04:11:11	400		35	0		FLG2:0011-Li	fecian from BITR2 missing	1
19	09/11/2018	04:11:11	400		36	0		FLG2:0010-L	ferian from BUR1 missing	1
20	09/11/2018	04:11:11	400		36	1		FLG20008-L	ferion from DDA1 missing	1
21	09/11/2018	04:11:11	400		26	5		FLG2:0006-L	ferian from HBR1 missing	1

<u>Merge:</u> - If user clicks on merge button the pop-up window will be displayed where user can merge 2 or more EDL files and by clicking on open the EDL information of merge files will be displayed. Also, Files with same Loco Fault can be Merged to a single Fault file.

Browse EDL: - If user click browse button can select the different loco fault file.



• 4. Signal View:

When user clicks on signal view icon the dialogue box will displayed where user need to select the Loco Processor Signal file from the folder after that signal view menu page will be displayed.



Where various options are there such as

- Signal View
- Create SignalView File
- Offline Graphical Analyser
- Signal View Setting.

Create SignalView File:

To create signalview file user should click on create signalview file the page will be displayed where various signals list will be shown in which up to 16 signals can be selected.

aeate sign	Search	by Signal Name		۹ ۲			Total Sign	nals Selea	ted : 5		Save Sigr file	naView
Proc Name 🔽	Group Name 🖂	Signal Name 🤍	Data Type 🗸	Telegram Address 🗸	Signal Type ~	^	Processor Name	Group Name	Signal Name	Data Type	Telegram Address	Signa Type
BUR1	73	7303-XUUZ1	A	NA	R		BUR1	84-TEMP	8401-pRUTem	p A	NA	Ρ
BUR1	73	7304-M52-4Stuk.0f	В	Save SignalVie	w File		0001	CONTRACT.	T1-IZMAX	U	NA	Ρ
BUR1	73	7304-M52-4StukOn	В						T2-FreqN0k	U	NA	Р
BUR1	73	7304-M52-5Stuk.0f	В						7302-8D8UR1-0	N B	NA	R
BUR1	73	7304-M52-5StukOn	В	SignaView	File Name	Lifesi	gn		7304-MUeberTe	mp B	NA	R
BUR1	73	7304-MGG-SNUZ	В									
BUR1	73	7304-MGG-StFreq	В			9	Save	Cancel				
BUR1	73	7304-MGG-StlzMax	В									
BUR1	73	7304-MGG-StNetz	В	NA	R							
BUR1	73	7304-MGG-StUzMax	В	NA	R							
BUR1	73	7304-MSt-TestAID	В	NA	R							
BUR1	73	7304-MUeberTemp	В	NA	R							
BUR1	73	7304-MW/R1-Imax	В	NA	R							
BUR1	73	7304-MWR1-Stoe	В	NA	R	\mathbf{v}						

Or even particular signal can be searched by filter option provided in that after selecting the signals from the list then click on the save signalview button the pop window will be displayed where the file can be saved.

Even if user want to delete the signals by selecting the particular signal and then click on Delete Selected Signal button the particular signal will be deleted.



Signal View:

To check the status of a signal user should click on Signal View button where created file will be shown, in that user can select any signal it starts loading,

E LO	осом	OTIVE	DIAGNO	DSTIC T	OOL				Time Out: 1 29-05-2023 12
al View • Tabl	le	🔵 Graph	🔵 Table - Graph	h				Export	Save Chart
Processor_Name		Group_Name	Signal_	Name	Data_Type	Т	elegram_Address	Signal	Туре
FLG2		AMSB	0101-X4	AngTrans	А		NA		F
!MVB		FLG2_G	01-XA	ngTrans	А		100		F
FLG2		53	5305	5-WTE	A		NA	I	R
				Sendin	g Signal				
				Sendin	g Signal				
Ceyboard Skorieuts				Sendin	g Signal	Legends		1	Protoco
eyheard Skortcuts 1 - Change Signal Type	Ctul+Enter-Force	Ctał+U - UnForce	Ctrl+R - UnForce All	Sendin; Fi0-Reset	g Signal	Legends G - Signed Int	OC - Unsigned Int		Protocol

Once it is loaded the Signal View page is displayed where we user can view Signal View table as shown below.

						Export	Save Chart
rocessor Name	Group Name	Signal Name	Data Type	Telegram Address	Signal Type	Status	Uait
DDA2	DDA2	05-XMVBLifeSig	U	1800	F	2031	G
STB2	STB2	05-XMVBLifeSig	U	1600	F	2029	G

Even user can view graph and table graph, the graph can be seen of particular signal as shown below.



The graph of particular signal selected.

Processor Name DDA2 STB2	Group Name DDA2 STB2	Signal Namo 05 XMVBL#eSig 05-XMVBL#eSig	Data Type U U	Telegram Address 1800 1600	Signal Type F F	Status 2877 2875	Unit G
DDA2 STB2	DDA2 STB2	05-XMVBLifeSig 05-XMVBLifeSig	U U	1800 1600	F	2877 2875	G
STB2	STB2	05-XMVBLifeSig	U	1600	F	2875	G
3000							
3000 2500 2000 1500 1000 500						— 0042_0043_05-XM — 5T12_5T12_05-XM	NBLIK-Sig /BLIK-Sig
2000 2000 2000 1500 1000 500						— 0.042 0042 05-XM — 5T12 5T12 05-XM	NBL/IeSig /BUIeSig

The both table and graph can be viewed as shown above page. Even user has two options in this page such as export and save chart.

 Table 	🔘 Grash	O'Table - Graph				Export	Save Char
rocessor Name	Group Name	Signal Name	Data Type	Telegram Address	Signal Type	Status	Unit
DDA2	DDA2	05-XMVBLifeSig	U	1800	F	2031	C
STB2	STB2	05-XMVBLifeSig	U	1600	F	2029	C
	Cogenise * * Quick ac Device Device Device Picture Docum Discure Docum Discure Docum Construction Docum Discure Docum Construction Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure Discure	New folder	Date modified No items match your se	Type arch	Gii • O Sza		
	Files	gerne: exporttable					
	Save as	type: Excel Documents ("als)			~		
				- Co	Court		

If user wants to export the table just click on export button pop up window will be displayed where table can be saved in specific folder.

Aaw Table	O Grash	O Table - Graph				Export Save cha
4000	💀 Seve As					×
	$\leftrightarrow \rightarrow - \uparrow$	> This PC > Local Disk (C) > LDS	> WAG9HEX > IDL ~ ♂	Search IDL		م.
ą.	Organise - N	ew folder				0
2000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	This PC Deaktop Downloads Music Pictures Videos Local Disk (C	0 Name ^	Data mo dified No items match your search.	Type	Size	 DBA2_COA2_CF>XMvBLMeSig STB2_STB2_C6>XMvBLMeSig
	File pame	savegraph				~
	Save as type	Ping Image (.png)				~

If user wants to save the graph just click on save chart button pop up window will be displayed where graph can be saved in specific folder.

Table	Grade	O Table - Gri	uchi					Export	Save Cha
rocessor Name	Group Name	Sig	nal Name	Data Type	Telegram Address	Signal Typ	•	Status	Uait
DDA2	DDA2	05-X3	AfVBLifeSig	U	1800	F		11747	G
STB2	STB2	05-X	AfVBL ifeSia	T	1690	F		11746	G
		💀 Seve As						×	
			his PC + Local Disk (C)		~ B	Search Local Disk	(6)	0	
							1		
Information		Organice New fok	le .				111 .	0	
	unwant in save this file?	This PC	Name		Date modified	Турн	Size	<u>^</u>	
		Decktop	Dell		5/4/2017 1:35 45/	File folder			
Y		Documents	📑 Intel		9/4/2017 140 AM	File folder			
	Tes No	Downloads	LOS		10/6/2017 11:00 AM	Filefolder			
		h Musc	PerfLogs		10/6/2017 2:12 PM	Filefolder			
		Pictures	Program Files		9/28/3017-4055 PM	File folder			
		Videos	Program Files (180)		10/5/2017 10/05 AM	Hitefolder			
		tecal Disk (C)	USPath		Q(6/001110-51.0M	File folder			
		Local Dick (D.) M	- V3P 801		Star 2017 11:23 PM	riveriorizer		- × *	
								-	
		File game: #600	riddəta					~	
		Save as type All fi	les (",")					· · ·	
							-		
		A Hide Folders				Save	Cano	el	

And one more option provided in Signal View page is to save protocol on any folder pop up dialogue box is shown on click of protocol start button the protocol will be saved and even user can stop it by clicking on stop button.

Offline Graphical Analyser:

E L	OCON	IOTIVE	DIAGNO	STIC	TOOL	(_
naMiew Menu						
		🕑 Open				×
		← → • ↑ 🗖	> This PC > Desktop	ٽ ~	Search Desktop	Q
	Signal V	Organize 🔻 New	folder			
		💻 This PC	^ Name		Date modified	Туре
		Desktop	webex_msteams		29-05-23 12:34 PM	File folder
		Lifesign	📄 recorddata		19-11-18 1:01 PM	XML Docu
		webex_mstear	r Lifesign		29-05-23 12:35 PM	File folder
		🖆 Documents				
Of	fline Gra	Downloads	v <			>
	Analys	F	ile <u>n</u> ame: recorddata	~	xml	~
	.				<u>O</u> pen C	ancel
ange C:\LDS\Loco\W	AG9HEXVMV					
			Ca	pyright © 2019 A	DVANCED RAIL CONTROL	LS PRIVATE LIN

When user click on Offline Graphical Analyser button, a pop-up dialogue box will be shown and user has to select the recorded file, then the details of the file will be shown in a form of bar graph, line graph and table.



When user click on bar graph the graph can be seen of the signal selected.



When user selects on line graph the line graph can be seen of the signal selected.



In the line graph, even user can use the filter option to select the signals.

	OMOTIVE DIAGNOSTIC TOOL	★ € _
ph view O Bar Graph	O Line Graph O Table	Save Print Fil
Time	DDA2 DDA2 05-XMVBLifeSig	STB2 STB2 05-XMVBLifeSig
9/10/2017 05:00:01	11709	11709
/10/2017 05:00:01	11711	11710
/10/2017 05:00:01	11715	11713
/10/2017 05:00:01	11715	11713
/10/2017 05:00:01	11717	11715
/10/2017 05:00:01	11717	11716
/10/2017 05:00:01	11719	11717
/10/2017 05:00:01	11721	11719
/10/2017 05:00:01	11721	11719
/10/2017 05:00:02	11723	11721
/10/2017 05:00:02	11723	11722
/10/2017 05:00:02	11725	11723
9/10/2017 05:00:02	11725	11724
9/10/2017 05:00:02	11727	11726
9/10/2017 05:00:02	11729	11727
9/10/2017 05:00:02	11729	11728
/10/2017 05:00:02	11731	11730
/10/2017 05:00:02	11731	11730
/10/2017 05:00:02	11733	11732
/10/2017 05:00:02	11735	11733
/10/2017 05:00:02	11735	11734
/10/2017 05:00:02	11739	11737
9/10/2017 05:00:02	11739	11738
0/10/2017 05:00:02	11741	11740
9/10/2017 05:00:03	11743	11741
9/10/2017 05:00:03	11743	11742
9/10/2017 05:00:03	11745	11744

When user clicks the table, the table will be displayed of the selected signals. And if user wants to save the table click on save pop up window will be displayed can save it in the specific folder and even can take printout of table.

Signal View Settings:



When user clicks on Signal View settings the options will be there such as

- Update Signal View Database,
- Modify SignalView File
- Delete SignalView File.

Update Signal View Database:

LOCOMOTIVE DIAGNOSTIC TO	OOL
Update Descriptor File Update Descriptor File	
Select All	
Information Database is Updated	
ST81.SGI ST82.SGI Update DataBase	

When user click on update Signal View, the above page appears and user needs to select the files and can select all the files by clicking select all check box or even can select any one file then click on Update Database Button then the file will get updated.

AE	2	LOCO	Μ	DTIV	E D	L	AGN	O S'	ΓΙC Τ Ο	DOL [®]	÷ _	
4odily Signa	Niew File Search b	y Signal Name		۹ ۲			Total Sign	als Sele	cted : 4		Save Sign file	naNiew
Proc Name 🖂	Group Name 🖂	Signal Name 🤍	Data Type 🖂	Telegram Address 🗸	Signal Type 🖂	^	Processor Name	Group Name	Signal Name	Data Type	Telegram Address	Signa Type
BUR1	84-TEMP	8401-pRUTemp	A	NA	Р		IMVB	FLG1_G	54-8SubS10-08	f B	75	R
BUR1	84-TEMP	8401-XUTEMP	Α	NA	R		DDA1	NIL	D010-Konsistenz	:2 B	NA	R
BUR1	NIL	0502-MMVBDisFat	В	NA	R		IMVB	FLG2_G	D54-BSubS10-0	ff B	3200	R
BUR1	NIL	0895-MConvTrig	В	NA	R		DDA1	NIL	D4610-AnzWa1B	≷1 B	NA	R
BUR1	NIL	0898-BNormalOper	B	NA.	R							
BUR1	NIL	852-4-0n	В	NA	R							
BUR1	NIL	852-5-0n	В	NA	R							
BUR1	NIL	WUUZV	Α	NA.	R							
BUR1	PBUS	0101"AE4	A	NA	F							
BUR1	PBUS	0101"AE5	Α	NA	F							
BUR1	PBUS	0101"AE6	A	NA.	F							
BUR1	PBUS	0101"AE7	A	NA	F							
BUR1	PBUS	0101"AE8	Α	NA	F							
BUR1	PBUS	0101"BE10	В	NA	F	~						
lote : Selec	t any signal a	nd press enter to save	in config file				Shift Row	Up	Shift Row Down	Delete Selected Signal	Delete Selected	All Signal

Modify SignalView File:

If user want to modify anything in the signalview file, user can click on the modify signalview file button. and then modification can be done by selecting and adding signals.

User can add or delete in the existing signalview file by clicking on save signalview file where old files will be replaced with the new signalview files.

LOCOM	OTIVE DIAGNOSTIC TOOL	↑ ← _ ×
Delete Signal/iew File		
	Delete SignalView File	
	10>0MVBileSig 19:ep2017 Imarch ang_trans asd bw1	
	Confirmation ×	
	Yes No	
	Delete	
	Copyright © 2019 ADVANCED RAIL CONTR	OLS PRIVATE LIMITED

To delete any signalview file user needs to click on Delete signalview File button then select file click which user wants to delete and click on delete button the file will get deleted.

4. Download:

	LOCOMOTIV	VE DIAGN	OSTIC TOOL	€ _ ×
- Download Menu				
	Download]	Download	
	Program		Download Data	
		J		
			Copyright © 2019 ADVANCED RAIL CONI	ROLS PRIVATE LIMITED

Click download button, user can see two options such as

- Download Program
- Download Data

Download Program:



On click Download Program button user will get the above page, where user need to select processor DL file then the above information will be displayed.

<u>Save</u>: - User can also save the file by just clicking on save button then the file will be saved. As well as user can also save the modified DL files.

<u>Download</u>: - By clicking on download Hex Files will be downloaded to the specified processor.



Download Data:

 $C {\sf lick}$ on download data Button the download Data page will be displayed where user can find options such as

- Read Project Version
- Edit system information
- Edit condition Data
- Show CPU Load
- Upload Condition Data
- Download Condition Data

Read Project Version:

Click on Read Project Version Button then below shown page will be displayed.

	LOCOMOT	TIVE DIAGN	OSTIC TOOL	↑ ← _ ×
- Read ProjectVers	ion			
		Read Project Version		
			Copyright © 2019 ADVANCED RAIL CONTR	OLS PRIVATE LIMITED

Now, click on Read Project Version then user Can get the information about the project version in DIA Card as shown Below

LOCOMOT	IVE DIAGNO	STIC TOOL	↑ ← _ ×
Read ProjectVersion			
	Read Project Version		
Project Name		WAP	
Project Version		21	
Project Date		11-04-14 26:55:58	
			OI C DERVITE I DUPER

Edit system information:

On click of edit system information edit system page will be displayed where user can find three options such as

- Check DB status
- Check date and time
- Set Vehicle Number

Check DB status:

	DTIVE DIAGNOSTIC TOOL	↑ ← _ ×
System Dete	Check DB Status	
	Click to Know DIA Storage Details	
	Set Date Time	
	Set Vehicle Number	
	Copyright © 2019 ADVANCED RAIL CO	ONTROLS PRIVATE LIMITED

On click of check DB status button the DB status page will be displayed, user can check the database of DIA and status can be viewed as shown Below



Check date and time:

Date Time	~
Old DateTime 29 / 05 / 2023 12 : 56 : 27	
New DateTime / / /	
Update	

On click of check date and time button the time date page will be displayed where old date and time will be displayed in that page.

	LOCOMO	OTIVE DIAGNOSTIC TOOL
Date Time		
	Old DateTime	30 / 05 / 2023 11 : 58 : 37 Information
		Date Time Updated Successfully
	New DateTime	OK 28 : 59 ✓ Today's Date
		Update
		Copyright © 2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED

User can set new date and time or the user can also select today date then the present date and time will be set and then click on update button, date and time will be updated.

Set Vehicle Number:

	E DIAGN	OSTIC TOOL	↑ ← _ X
- Loco Number			
Old Loco Number	31	021	
New Loco Number			
	Update		
		Copyright © 2018 ADVANCED RAIL CONTR	OLS PRIVATE LIMITED

On click of set vehicle no the loco number page will be displayed in that old loco no. will be displayed.

Loco Number
Old Loco Number a 02 Information Loco Number Updated Successfuly OCC 027 Update Created 2019 ADVANCED RAIL CONTROLS FRUMED LIMITED

And user can update the new loco no and then click update it will be updated.



Edit condition Data:

On click of edit condition data the edit condition page will be displayed and in that the following parameters can be edited such as

• FLG1-56--Energy KWh+

- FLG1-56--Energy MWh+
- FLG1-56--Energy GWh+
- FLG1-56--Energy KWh-
- FLG1-56--Energy MWh-
- FLG1-56--Energy GWh-
- FLG1-56-- Odometer_K
- FLG1-56--Odometer_M
- FLG1-56-- Odometer_G
- FLG1-21—21MLoc Number1
- FLG1-PA05_P0005-LockMUBfat
- FLG2-56--Energy KWh+
- FLG2-56--Energy MWh+
- FLG2-56--Energy GWh+
- FLG2-56--Energy KWh-
- FLG2-56--Energy MWh-
- FLG2-56--Energy GWh-
- FLG2-56-- Odometer_K
- FLG2-56--Odometer_M
- FLG2-56--Odometer_G
- FLG2-21—21MLoc Number1
- FLG2-PA05_P0005-LockMUBfat
- SLG1-90—9005B-FakDIARDM1

- SLG1-90—9005B-FakDIARDM2
- SLG1-90—9005B-FakDIARDM3
- SLG2-90—9005B-FakDIARDM1
- SLG2-90—9005B-FakDIARDM2
- SLG2-90—9005B-FakDIARDM3

	COMOTIVE D	IAGNOST	IC TOOL	↑ ← _ ×
	FLG1			
	Old 2121MLocNumber1	31028		
	New 2121MLocNumber1		Reset	
	Update			
Note : Only decimal values to be e	ntered	Copyright	© 2019 ADVANCED RAIL CONT	ROLS PRIVATE LIMITED

The above parameters can be updated in this page. once user click on any parameter the above page will be displayed.

	LOCOMOTIV	E DIA	GNOS	ГІС ТС	DOL	Time Out: 0
Condition Data Update		FLG1				
	Old 2121MLocNumbe	erl	31028	Information		
	New 2121MLocNumb	erl	31029	Update	ed Successfully	
		Update				ОК
Note : Only decimal v	lues to be entered		Серуті	ght © 2019 ADVANC	ED RAIL CONTRO	DLS PRIVATE LIMITED

Update loco no once user click on update button the message box will be displayed "updated successfully".

Show CPU Load:

	EXAMPLE 2 EXAMPLE 2 EXAMPLE 2 EXAMPLE 2				
- Show CPU Load		Start]		
			Copyright © 2019 ADVANCED RAIL CONTRO	OLS PRIVATE LIMITED	

On clicking Show CPU Load, the above page will be displayed, to start the CPU user has to click on start

	LOCOMOTIVE DIAGNOSTIC TOOL	↑ ← _ ×
Show CPU Load	Start	
	FLG1:OkFLG2:No ConnectionHBB1:No ConnectionHBE2:No ConnectionFBV1:OkFBV2:No Connection	
	Aborted by User	OLI S DRIVATE I IMITITI

CPU Load of particular processor if it is connected it will show 'ok' otherwise 'no connection'. In case user want to cancel the CPU Load once click on cancel it will show the message as 'Aborted by user'.

LOCOMOTIVE DIAGNOSTIC TOOL					
Show CPU Load		Stop	Checking		
0x14 FL01 0x20 FLG2 0x1C HBB1 0x28 HBB2 0x16 FBV1 0x22 FBV2 0x16 DDA1 0x2A DDA2 0x1A STB1 0x26 STB2 0x24 DIA	Min Act Max 9 04 04 04 % 1 No Connection 2 No Connection 2 No Connection 3 Requesting 3 No Connection 4 04 04 0% 4 No Connection 5 No Connection 5 No Connection 6 No Connection 7 No Connection 7 No Connection 7 No Connection 8 No Connection 7 No Connection 8 No Connection 8 No Connection 9 No Connection 9 No Connection	0x 0x 0x 0x 0x 0x 0x 0x 0x 0x 0x 0x 0x 0	18 ZBV1 : 40 ASC1 : 4A ASC2 : 3E NSC1 : 48 NSC2 : 3C SLG1 : 46 SLG2 : D0 BUR1 : D2 BUR2 : D4 BUR3 :	Min Act Max No Connection No Connection No Connection No Connection No Connection No Connection No Connection No Connection No Connection	
			Copyright © 2019	ADVANCED RAIL CONTR	OLS PRIVATE LIMITED

Here User can view or observe CPU usage of each processor.

Upload Condition Data:

On click of Upload Condition Data u, upload condition page will be displayed where user can find options such as

- Upload Condition Data
- View Upload Condition Data

LOCOMOTIVE DIAGNOSTIC TOOL					
- Upload Condition Data					
	Upload Condition Data		View Upload Condition Data		
			Copyright © 2019 ADVANCED RAIL C	ONTROLS PRIVATE LIMITED	

Upload Condition Data:

On clicking upload condition data the below page will be displayed.

С Сомот	IVE DIAGNOSTIC TOOL	↑ ← _ ×
Upload Condition Data		
	Upload Condition Data	
	Copyright © 2019 ADVANCED RAIL CONTI	COLS PRIVATE LIMITED

On clicking Upload condition data, processor condition data will be stored in upload condition data as shown below



View Upload Condition Data:

On clicking view upload condition data, user can view all saved processor condition data at one place as shown Below.

pload Condition Data	File Data	DIAGNOSI	
File Dir C:'LD\$\Condition\Upload	Info Date Time 29-05-202	3 01:22:08 Version V21	Loco No 31028
File Names	FLG1		
31028_19112018010134	EnergKWh+ 0	EnergMWh+ 0	EnergGWh+ 0
31028_19112018010306	EnergKWh- 0	EnergMWh-0	EnergGWh- 0
31028_19112018124616	OdometerK 0	OdometerM 0	OdometerG 0
31028_19112018125137	MUBfat 0	Loco Number 31029	
31028_19112018125425 31028 19112018125451	-FI C2		
31028_19112018125700	FLG2 EnergKWh+ 0	EnergMWh+ 0	EnergGWh+ 0
31028_19112018125901 31028_29052023012208	E I I I I I I I I I I I I I I I I I I I	Energht Math	Energy Will 0
	EnergK.wh- 0	Energivitivn- 0	EnergG wn- 0
	OdometerK 0	OdometerM 0	OdometerG 0
	MUBfat 0	Loco Number 31028	
	SLG1		
	DIARAMI 0	DIARAM2 0	DIARAM3 0
	SLG2		
	DIARAM1 0	DIARAM2 0	DIARAM3 0
File Name			
028_29052023012208			

Download Condition Data:

On click of Upload Condition Data u, upload condition page will be displayed where user can find options such as

- Download Condition Data
- Create Download Condition Data



Create Download Condition Data:

On Clicking Create Download Condition Data user can create a file and save the pre-defined data as shown Below.

User can add condition data parameters and save the file by giving a file name and click on save button to save the file.

	OMOTIVE DIAGNOST	
Create Download Condition Dat File Dir C:UDS:Condition/Download File Names + 30123_01052023562378 30123_01052023562379 30123_01052023562380 30123_01052023562381 SLNo	File Data FILG1 EnergKWh+ 1 EnergKWh- 4 EnergKWh- 4 Commeter 8 MUBfat FILG2 EnergKV Odometer 9 MUBfat 7 SILG1 DIARAM1 41 DIARAM2 42 SILC2	EnergGWh+ 3 EnergGWh- 6 OdometerG 10 EnergGWh+ 23 EnergGWh- 26 OdometerG 30 DIARAM3 43
	DIARAMI 51 DIARAM2 52	DIARAM3 53
File Name 30123_01052023562382	Save	
	Copyright	© 2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED

Download Condition Data:

User can also download all the saved condition data parameter at one place

	DMOTIVE DIAGNOS	TIC TOOL
Download Condition Data File Dir	File Data	
File Nemer	EnergKWh+ 1 EnergMWh+ 2	EnergGWh+ 3
30123 01052023562378	EnergKWh- 4 EnergMWh- 5	EnergGWh- 6
30123_01052023562379	OdometerK 8 OdometerM 9	OdometerG 10
30123_01052023562380	MUBfat 7 Loco Number 11	
SLNo	FLG2 EnergK1 Cownload Successfully Done	EnergGWh+ 23 EnergGWh- 26
	Odomete OK	OdometerG 30
	MUBfat 27 Loco Number 31	
	SLG1 DIARAMI 41 DIARAM2 42	DIARAM3 43
	SLG2 DIARAMI 51 DIARAM2 52	DIARAM3 53
File Name 30123_01052023562381	Download Successfully Done Dow	nload
	Соруз	ight © 2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED

6. Settings:

	E DIAGNOST	IC TOOL
LDS Settings Version Application Version 4.1.1.2 MVB Version 2.0.4 Software Version 4.4.6	User Manual User Manual Download	Software Update Software Update Update
Password Old Password New Password Confirm Passwore	Password	
	Copyright	t © 2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED

In settings user can change the password and can view the version of application and software and can download the user manual of LDS software in settings page.

LOCO	MOTIV	E DIAGNOSTI	C TOOL
Version Version Application Version 41.1.2 MVB Version 20.4		User Manual User Manual Download	Software Update
- Password	OI	ssword Changed	
	Ne Confirm Password	Change Password	
		Copyright *	2019 ADVANCED RAIL CONTROLS PRIVATE LIMITED

If user changes the password the message box will be displayed and if hardware is not found user can view it.

Save As				× TOOI
🗧 🔶 👻 🕇 📥 > Thi	s PC > Windows (C:) >	✓ Ö Search Windows	(C:)	
Organize 🔻 New folde	r		== -	0
This PC	Name	Date modified	Туре	∧ are Update
> 🧊 3D Objects	\$Recycle.Bin	14-Nov-17 1:01 AM	File folder	Software Update
> Desktop	Config.Msi	02-May-18 11:42	File folder	
Documents	DCRABBIT_10.70	14-Nov-17 12:59 A	File folder	Undate
Deverteede	Documents and Settings	10-Nov-17 7:45 AM	File folder	Opdate
Downloads	Intel	20-Jul-17 9:54 PM	File folder	
Music	Keil	11-Dec-17 6:52 AM	File folder	
Pictures	LDS	07-May-18 12:27 P	File folder	
Videos	OneDriveTemp	07-May-18 9:51 AM	File folder	
Lindows (C:)	PerfLogs	08-Feb-18 7:49 AM	File folder	
LENOVO (D:)	Program Files	04-Apr-18 6:09 AM	File folder	✓
× × × × ×	<			>
File name: LDSUs	erManual.pdf			~
Save as type: All file	s (*.*)			~
Hide Folders		Save	Cancel	

Click on download button in this page user manual will be downloaded and pop-up window will be displayed to save the download file in specific folder

• Spare items and accessories

SL.No.	Item name	UID NUMBER	Quantity /unit
1	Diagnostic Laptop, Model No:	2221140101	One
	Tough book CF-54		
2	AC Laptop adapter	2210101506	One
3	DC Laptop adapter	331013172U	One
4	Diagnostic tool	4415151038	One
5	MVB Signal converter	3310131031	One
6	MVB Long cable (5 x 2 x	1112101406/2212101451	
	0.5mm2) 6.5Mere length		
7	10 pin circular connector Female	1112151696	One
	wire wrap		
8	9 pin Sub-D connector Male wire	221215162M	Тwo
	wrap		
9	Pin Plug	2212152694	Eighteen
10	RJ-45 Male crimped cable (both	1112102154	One
	the sides)		
11	Hand lamp socket	221215122N	One

• Contact Details

For any warranty/service related queries, please contact

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