



User Manual

Prerequisites:-

1. CP2102 Serial Port Drivers must be installed before using the tool.

Step 1: Connect SiDia Tool to the System using USB Cable and Connect the OBD Cable to the Vehicle.

Step 2: Open the SiDia Diagnostic Application.



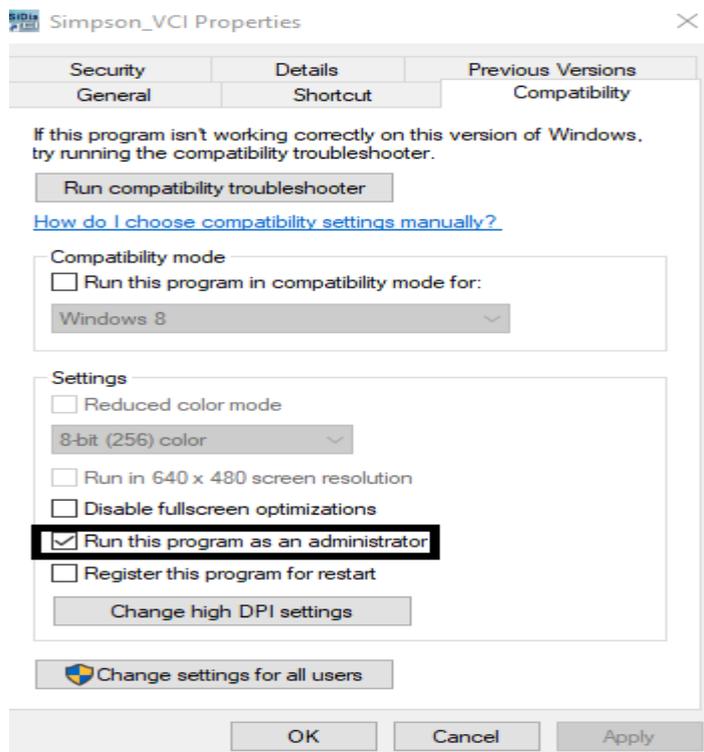
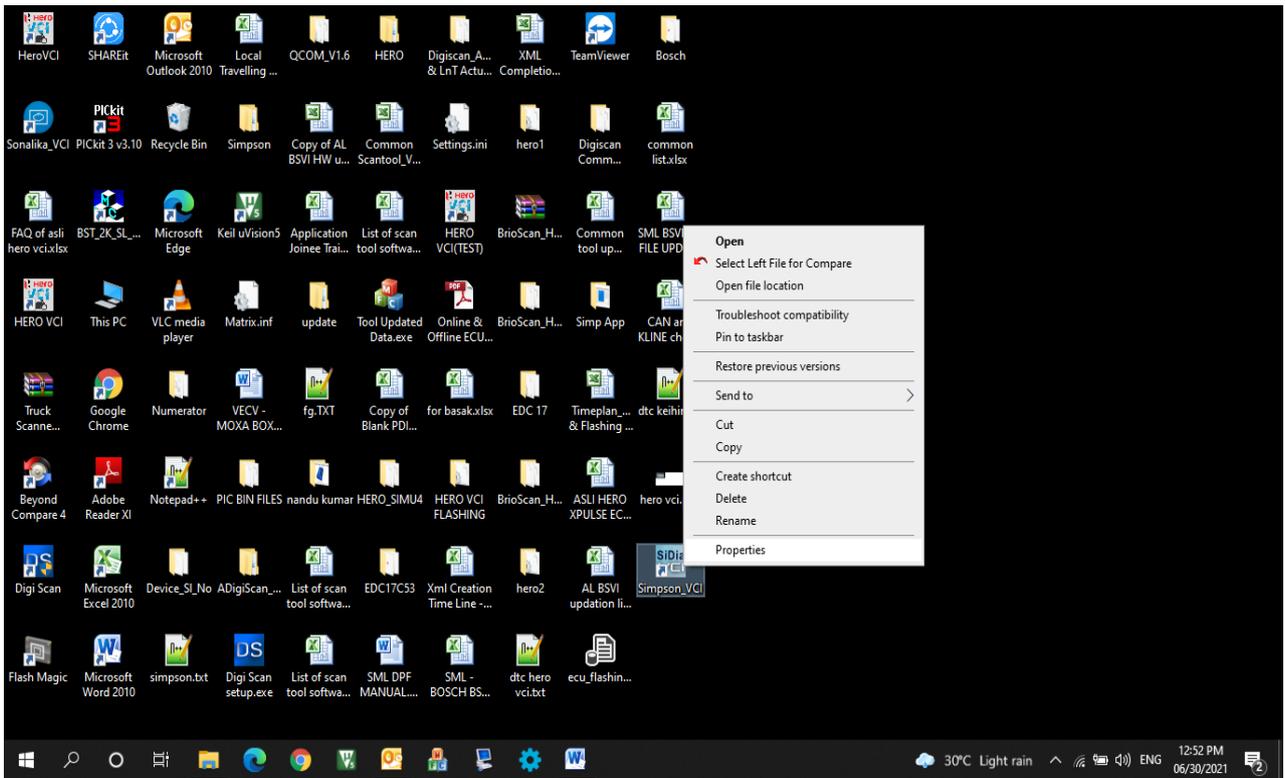
Step 3: Offline Mode to be used only if the User need to update the firmware or transfer the dataset without connecting to the ECU.

Step 4: Select the COM Port. Enter the Username & Password and Click on Login. If Username & Password is valid then 'Login Successful' message is popped up else 'Invalid Username or Password' message is displayed.

If the selected COM is not valid then 'Invalid COM Port. Please Select Correct COM Communication Port...!' message is displayed.

Note: 1. For the first time Login right click on the Simpson_VCI icon.

2. Go to the properties select compatibility options.
3. In compatibility options tick the box of **“Run this program as an administrator”**.
4. Click on Apply and then click OK.





Step 5: Select the ECU Type- Bosch MD1CS162 to start the communication with the ECU. If the Communication is established then ECU Details page is loaded. If the ECU is Not Connected/Ignition is Off then ‘Failed ECU Communication...! Please Turn ON Ignition and Try Again.’

Note: Please make sure the Ignition is turned ON before proceeding.

ECU Details:

Step 6: On successful connection, ECU Details page is loaded.





Live Data:

Step 7: Click on Live Data (Tab) to view the Vehicle Live (Read) Parameters. Select the Live Parameter Group from left pane.

The screenshot shows the SIDIA software interface. The top navigation bar includes 'Help', 'About Us', and window control buttons. Below this is a status bar with 'ECU Connected' and connection icons. The main menu includes 'ECU Details', 'Live Parameter', 'DTC', 'Adjustments', 'Actuator Test', 'Data Select', 'Graph Mode', 'Dataset Transfer', 'Flashing', 'Tool Update', 'Configure Users', and 'Logout'. The 'Live Parameter' section on the left has a sidebar with 'Engine Group', 'Pressure Group', 'Injection Group', and 'General Group'. The 'Engine Group' is selected. A table displays the following data:

Parameter Name	Range	Values	Unit
Engine Speed	0-2500	0.0	RPM
Accelerator Pedal Position	0-100	0.00000000	%
Battery Voltage	0-18	12.20	V
Engine Fuel Rate	0-50	0.00	l/h

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The screenshot shows the SIDIA software interface. The top navigation bar includes 'Help', 'About Us', and window control buttons. Below this is a status bar with 'ECU Connected' and connection icons. The main menu includes 'ECU Details', 'Live Parameter', 'DTC', 'Adjustments', 'Actuator Test', 'Data Select', 'Graph Mode', 'Dataset Transfer', 'Flashing', 'Tool Update', 'Configure Users', and 'Logout'. The 'Live Parameter' section on the left has a sidebar with 'Engine Group', 'Pressure Group', 'Injection Group', and 'General Group'. The 'Pressure Group' is selected. A table displays the following data:

Parameter Name	Range	Values	Unit
Boost Temperature	0-200	29.96	degC
Boost Pressure	0-2000	1500.0	mbar
Ambient Pressure	0-1500	908.0	mbar
Rail Pressure	0-1600	400.0	bar
Rail Pressure SetPoint	0-1600	400.0	bar
Engine Coolant Temperature	0-120	-15.04	degC
Engine Fuel Temperature	0-80	-0.04	degC

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Step 8: To record the Live Parameters Reading, click on Start Data Recording and select the path to create the log file and click Ok. The data is logged and saved in .csv format which can be viewed using Excel.



To Stop the Data logging click on Stop Data Recording as shown in the image below.





DTC:

Step 9: Select DTC Menu to Read DTC (Diagnostic Trouble Codes), Clear DTC, and View Cause & Remedial Actions for the logged errors.

Step 10: Click on Read DTC button to view the Errors/Trouble Codes in the Vehicle.

The screenshot shows the SIDIA software interface with the 'DTC' menu selected. On the left, there are buttons for 'Read DTC' and 'Clear DTC'. The main area displays a table of DTCs:

Pcodes	Status	Description	Cause and Remedy
P040612	Active	EGR Valve SRC High Limit Exceeded	Click Here
P012211	Active	Internal Fault Path Number: Short Circuit to GND of Accelerator Pedal Signal 1	Click Here
P022211	Active	Internal Fault Path Number: Short Circuit to GND of Accelerator Pedal Signal 2	Click Here
P019312	Active	Exceeding of the Maximum Rail Pressure Sensor Voltage	Click Here
P025113	Active	Check for Open Load Fault in the Metering Unit	Click Here
P000000	Active	No Description	Click Here
P018300	Active	SRC Max Error of the Fuel Temperature Sensor	Click Here
P011812	Active	SRC High for Engine Coolant Temperature(Down Stream)	Click Here
P011012	Active	SRC High for Charge Air Cooler Downstream Temperature	Click Here
P023712	Active	DFC: SRC High in Manifold Pressure Sensor Bank1	Click Here

Step 11: Click on Clear DTC button to Clear the DTC. On Successful Clearing attempt the application displays the pop up message as 'DTC Cleared Successfully'.

The screenshot shows the SIDIA software interface with the 'DTC' menu selected. A pop-up message 'DTC Cleared Successfully' is displayed over the table. The table content is identical to the previous screenshot:

Pcodes	Status	Description	Cause and Remedy
P040612	Active	EGR Valve SRC High Limit Exceeded	Click Here
P012211	Active	Internal Fault Path Number: Short Circuit to GND of Accelerator Pedal Signal 1	Click Here
P022211	Active	Internal Fault Path Number: Short Circuit to GND of Accelerator Pedal Signal 2	Click Here
P019312	Active	Exceeding of the Maximum Rail Pressure Sensor Voltage	Click Here
P025113	Active	Check for Open Load Fault in the Metering Unit	Click Here
P000000	Active	No Description	Click Here
P018300	Active	SRC Max Error of the Fuel Temperature Sensor	Click Here
P011812	Active	SRC High for Engine Coolant Temperature(Down Stream)	Click Here
P011012	Active	SRC High for Charge Air Cooler Downstream Temperature	Click Here
P023712	Active	DFC: SRC High in Manifold Pressure Sensor Bank1	Click Here



Click Ok and Select Read DTC to read back the current DTC Codes.

Note: If the previous DTC still exists then check the physical connections.

Step 12: Cause & Remedial Action for the Error can be viewed from the Cause & Remedies Column for the respective Error Code as shown in the image below. Double Click on the respective cell to view the Cause & Remedy for the selected P-Code.

The screenshot shows the SIDIA software interface with the 'DTC' menu selected. A table displays the following data:

Pcodes	Status	Description	Cause and Remedy
P040612	Active	EGR Valve SRC High Limit Exceeded	Click Here
P025113	Active	Check for Open Load Fault in the Metering Unit	Click Here
P019312	Active	Exceeding of the Maximum Rail Pressure Sensor Voltage	Click Here
P022211	Active	Internal Fa	Click Here
P012211	Active	Internal Fa	Click Here
P011012	Active	SRC High	Click Here
P011812	Active	SRC High	Click Here
P018300	Active	SRC Max E	Click Here
P000000	Active	No Descrip	Click Here
P023712	Active	DFC: SRC	Click Here

A pop-up window titled 'Causes' and 'Remedies' is displayed over the table, showing details for a selected P-code:

Causes	Remedies
Short Circuit to Battery	Check Wiring Harness for Short Circuit between Connector Pin and Battery/Sensor Supply
Sensor not Connected	Check Connector is Connected
Wiring Harness Problem	Replace the Sensor
Wrong Sensor	-

Adjustments:

Step 13: Select Adjustments Menu to write VIN, Injector Codes, Engine Serial No., List No., PRV Count Reset & PRV Duration Reset

VIN Reading/Writing:

To write VIN select the VIN option in left pane. On selection the application displays the present value if available.



Simpson Co.Ltd SIDIA

Help About Us

ECU Connected

ECU Details Live Parameter DTC Adjustments Actuator Test Data Select Graph Mode Dataset Transfer Flashing Tool Update Configure Users Logout

Adjustments

- VIN
- IQA
- Engine Serial Number
- List Number
- PRV Reset
- PRV Duraton Reset
- Engine Hrs. Reset

Parameter Description	Current Value	Write Value	Unit	Range
VIN	78965412365478963		--	17

Calibrate

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Simpson Co.Ltd SIDIA

Help About Us

ECU Connected

ECU Details Live Parameter DTC Adjustments Actuator Test Data Select Graph Mode Dataset Transfer Flashing Tool Update Configure Users Logout

Adjustments

- VIN
- IQA
- Engine Serial Number
- List Number
- PRV Reset
- PRV Duraton Reset
- Engine Hrs. Reset

Parameter Description	Current Value	Write Value	Unit	Range
VIN	78965412365478963	12345678909878908	--	17

Calibrate

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Click on respective Write Value Column to enter the value that needs to be written in the ECU. Enter the Data in the field and Click on Calibrate.

If the value is written successfully in the ECU then 'VIN Write Success' message is displayed else the respective Negative Response message will be displayed.



Adjustments

- VIN
- IQA
- Engine Serial Number
- List Number
- PRV Reset
- PRV Duraton Reset
- Engine Hrs. Reset

Parameter Description	Current Value	Write Value	Unit	Range
VIN			--	17

SIDia VCI
VIN Write Success
OK

Calibrate

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Reading/Writing Injector Codes:

Step 14: Select IQA option to read/write the Injector Data from/in the ECU. The current Injector Values available in ECU Memory is displayed in Current Value Column.

To write the Injector Codes enter the data in Write Value Column & click on Calibrate.

Adjustments

- VIN
- IQA
- Engine Serial Number
- List Number
- PRV Reset
- PRV Duraton Reset
- Engine Hrs. Reset

Parameter Description	Value	Write Value	Unit	Range
IQA1	82BZ7AB	8HA475C	--	7
IQA2	8HA475C		--	7
IQA3	82BZ7AB		--	7
IQA4	AAAAAAA		--	7

Calibrate

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On Successful Writing 'IQA Write Success pop up message is displayed else the respective Negative Response message will be displayed.

The screenshot shows the SIDIA software interface. The 'Adjustments' menu is open, and 'IQA' is selected. A table displays the following data:

Parameter Description	Value	Write Value	Unit	Range
IQA1	8HA475C		--	7
IQA2	8HA475C		--	7
IQA3	82BZ7AB		--	7
IQA4	*****		--	7

A pop-up message titled 'IQA Write Success' with an 'OK' button is overlaid on the table. The 'Calibrate' button is visible at the bottom right of the interface.

Reading/Writing Engine Serial No.:

Step 15: Select Engine Serial Number option to read/write the Engine Serial No. The current Engine No. is displayed in Current Value Column.

To write the Engine Serial Number enter the data in Write Value Column & click on Calibrate.

The screenshot shows the SIDIA software interface. The 'Adjustments' menu is open, and 'Engine Serial Number' is selected. A table displays the following data:

Parameter Description	Current Value	Write Value	Unit	Range
Engine Serial Number	12365	12345678UI898IO989OI89OI8	--	30

The 'Calibrate' button at the bottom right is highlighted with a red box.



On Successful Writing 'Engine Serial Number Write Success' pop up message is displayed else the respective Negative Response message will be displayed.

The screenshot shows the SIDIA software interface. The 'Adjustments' menu is open, and 'Engine Serial Number' is selected. The table below shows the current and write values for the engine serial number. A pop-up message 'Engine Serial Number Write Success' is displayed.

Parameter Description	Current Value	Write Value	Unit	Range
Engine Serial Number	12345678UI898IO989OI89OI8		--	30

Reading/Writing List Number.:

Step 16: Select List Number option to read/write the List Number. The current List No. is displayed in Current Value Column.

To write the List Number enter the data in Write Value Column & click on Calibrate.

The screenshot shows the SIDIA software interface. The 'Adjustments' menu is open, and 'List Number' is selected. The table below shows the current and write values for the list number. The 'Calibrate' button is highlighted with a red box.

Parameter Description	Current Value	Write Value	Unit	Range
List No	65535	1234	--	0-65535



On Successful Resetting ‘List Number Write Success’ pop up message is displayed else the respective Negative Response message will be displayed.

The screenshot shows the SIDIA software interface with the 'Adjustments' tab selected. A table displays the current value and range for 'List No. 1234'. A pop-up message 'List Number Write Success' is displayed in the center of the screen. The 'Calibrate' button is visible at the bottom right.

Parameter Description	Current Value	Write Value	Unit	Range
List No	1234		--	0-65535

PRV Count/Duration Reset:

Step 17: Select PRV Reset/PRV Duration Reset option to reset the PRV Count/PRV Duration. The current PRV Count/PRV Duration available in ECU Memory is displayed in Current Value Column.

To Reset the Count, click directly on Calibrate.

Note: PRV Count and PRV Duration can be reset only to 0.

The screenshot shows the SIDIA software interface with the 'Adjustments' tab selected. The 'PRV Reset' option is highlighted in the left-hand menu. The table shows the current value and range for 'PRV Reset' as 0. The 'Calibrate' button is highlighted with a red box at the bottom right.

Parameter Description	Current Value	Write Value	Unit	Range
PRV Reset	0	0	--	0



On Successful Resetting 'PRV Reset Success/PRV Duration Success pop up message is displayed else the respective Negative Response message will be displayed.

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Engine Hrs. Reset:

Step 18: Select Engine Hrs. Reset option to reset the Engine Hrs. The current Engine Hrs. Reset available in ECU Memory is displayed in Current Value Column.

To Reset the Count, click directly on Calibrate.

Note: Engine Hrs. Reset can be reset only to 0.

Parameter Description	Current Value	Write Value	Unit	Range
Engine Hrs. Reset	0	0	Sec	0

On Successful Resetting 'Engine Hrs Success pop up message is displayed else the respective Negative Response message will be displayed.

Parameter Description	Current Value	Write Value	Unit	Range
Engine Hrs. Reset	0	0	Sec	0



Actuator Test

Step 19: Select Test Actuators menu to perform EGR Actuation Check.

Enter the Data in the Input Value Text Box and click on start to run the Test.



If the Actuator is started successfully then 'Test Activated' pop up message is displayed and if the Test Preconditions are not met or receive any Negative Response from ECU then respective Negative Response pop up message is displayed.





The screenshot shows the SIDia software interface for EGR Actuation. The top navigation bar includes 'Simpson Co.Ltd', 'SIDia', and 'Help About Us'. The main menu has 'ECU Details', 'Live Parameter', 'DTC', 'Adjustments', 'Actuator Test', 'Data Select', 'Graph Mode', 'Dataset Transfer', 'Flashing', 'Tool Update', 'Configure Users', and 'Logout'. The 'ECU Connected' status is shown in green. The 'EGR Actuation' window displays 'Input Value' as 56 and 'EGR Position Read' as 142.76123046875. The 'Start' button is highlighted, and the 'Input Range: 5-95' is shown below.

Click on Stop button, to stop the test. Test Deactivated message is displayed on stopping the test.

The screenshot shows the SIDia software interface for EGR Actuation after the test has been stopped. The 'Input Value' is 56 and the 'EGR Position Read' is 142.8466796875. A 'Test Deactivated' dialog box is displayed over the 'Start' button, with 'OK' and 'Start' buttons. The 'Input Range: 5-95' is shown below.



Data Select:

Step 20: Data Select is used to view Read Parameters Data based on Custom Selection.

Note: Maximum 15 Parameters only can be selected.



To select the parameters double click on the parameter. The Selected parameter list is displayed in the Selected List box as shown in the image below.





After selection, click on Start Data Monitoring button to view the data.

Parameter Name	Range	Values	Unit
Engine Speed	0-2800	0.0	RPM
Accelerator Pedal Position	0-100	0.00000000	%
Battery Voltage	0-18	11.90	V
Engine Fuel Rate	0-50	0.00	l/h
Boost Temperature	0-200	109.96	degC
Boost Pressure	0-2000	1500.0	mbar
Ambient Pressure	0-1500	907.0	mbar
Rail Pressure	0-1600	400.0	bar
Rail Pressure SetPoint	0-1600	400.0	bar
Engine Fuel Temperature	0-80	-40.04	degC
Engine ON Time	-	0	Sec
Injection Quantity Set Point	-	0.00	mg/hub
Max Fuel Quantity	0-100	0.00	mg/hub
PRV Open Count	-	0	-
PRV Open Duration	-	0	-

To record the Parameters Reading, click on Start Data Recording and select the path to create the log file and click Ok. The data is logged and saved in .csv format which can be viewed using Excel.

Graph Mode:



Step 21: Select the Graph Mode Menu to view the parameters in Graphical Representation. Double Click on the parameter to select. Maximum only 3 parameters graphical representation can be viewed.

Click on Start Monitoring button to view the graph and Stop Monitoring to stop.

Note: Maximum 3 Parameters only can be selected.



Dataset Transfer:

Step 22: Select Dataset Transfer Menu to transfer the Dataset to VCI Memory. The Available files list will be showed in the grid as shown in the image below. If files are not available then the pop up message 'No Files Available' is displayed.

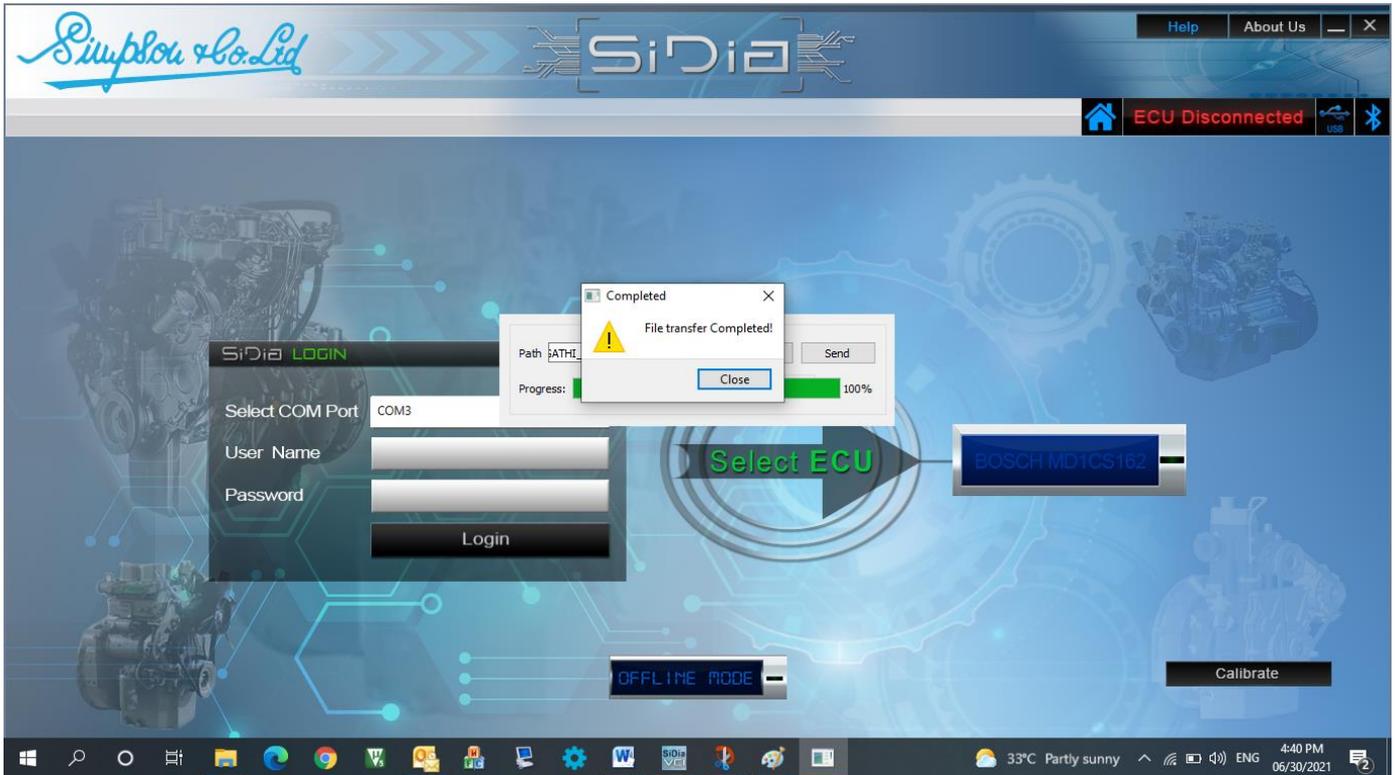


To Transfer the Dataset, click on Browse File.

Select the Dataset File from the system that is to be transferred. Click on Transfer File to start transferring.



The application is logged out automatically while the Dataset Transfer operation is performed. On Completion of Dataset Transfer the 'File Transfer Completed' message pop up is displayed.



Note: Once you enter Dataset Transfer or Flashing Menu, you cannot go to any other Menu. You need to logout the application and log in again to enter in Diagnostic Mode.

Flashing: Two types of flashing can be performed:

- 1) SD Card Flashing.
- 2) System Based Flashing.





1) SD Card Flashing.

Step 23: To Flash the ECU select the Flashing Menu. Then select “SD card flashing”

Available Files in SD Card will be displayed in the application. If the files are not available transfer the files first and then perform the Flashing operation.

Select the file from the list that needs to be flashed.



Step 24: Click on Start Flashing. Flashing Process is being displayed in the Flashing Status window.





Step 25: Once Flashing is completed 'Flashing Success' message is displayed and the application will log out.



2) System Based Flashing.

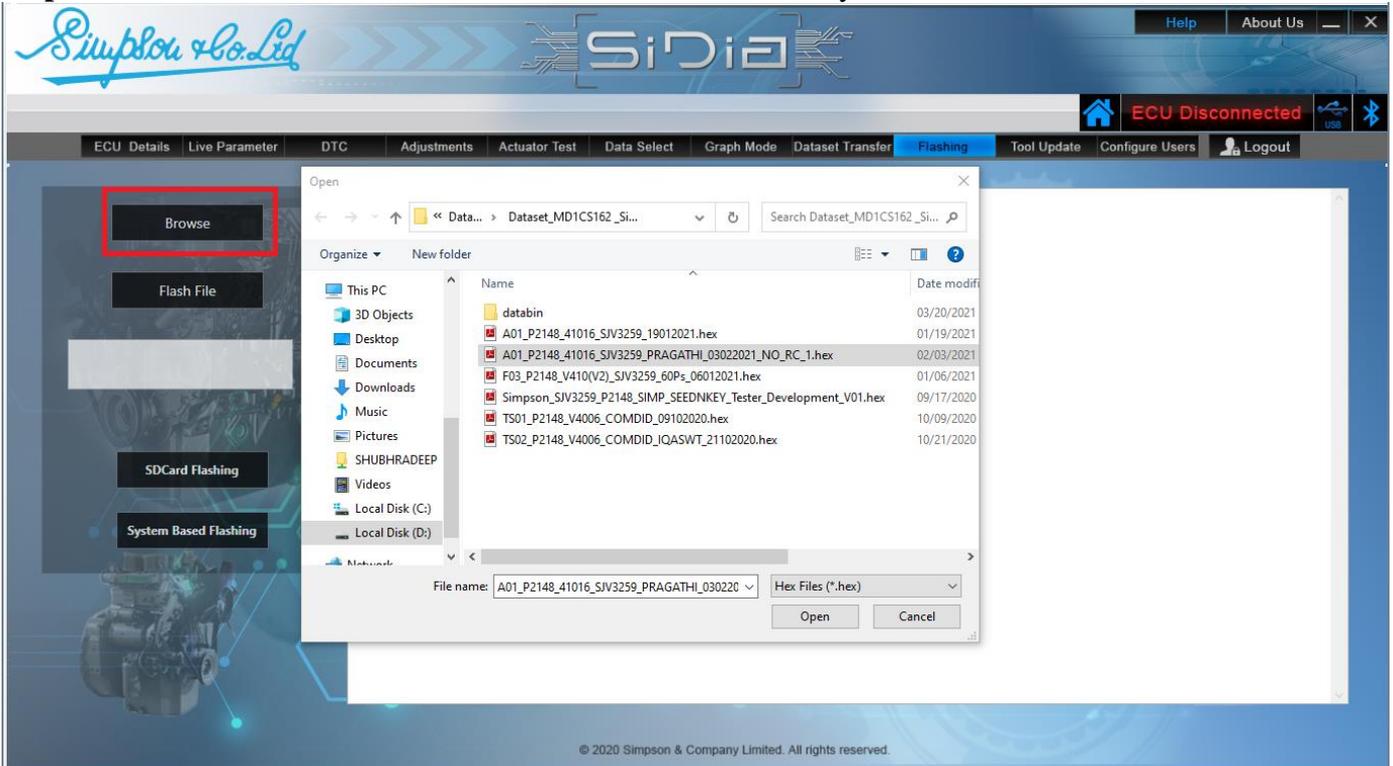
Step 26: To Flash the ECU select the Flashing Menu. Then select "System Based flashing".

Note: Before selecting the system based flashing, ensure that the dataset which you are going to flash that dataset should be available in your system. If not available kindly copy the dataset on your system.





Step 27: Click on Browse File. Select the Dataset File from the system.



Step 28: Click on a Flash File to start the flashing. Flashing Process is being displayed in the Flashing Status window.





Step 29: Once Flashing is completed “Flashing Success” message is displayed and the application will log out.

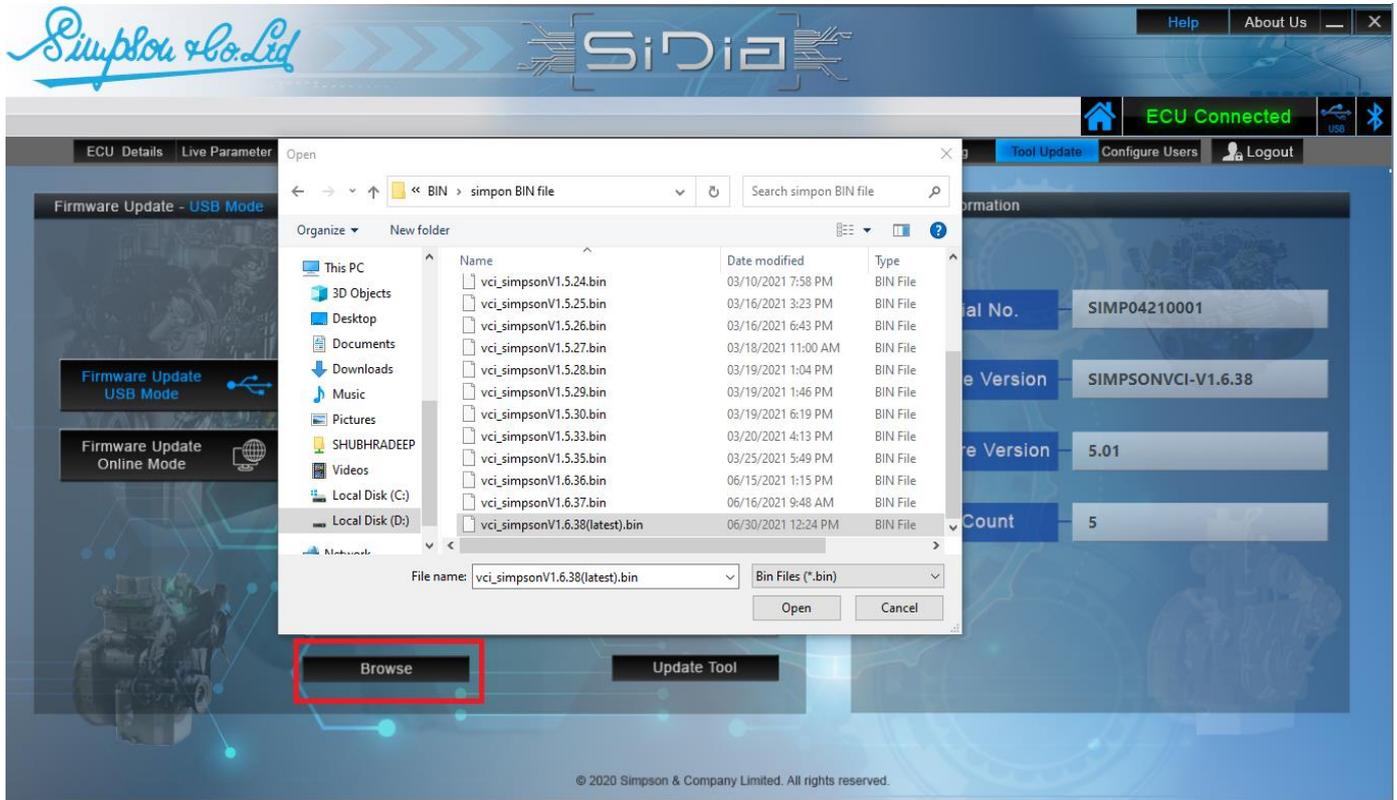


Tool Update: Select Tool Update Menu to Update the VCI tool.





Step 30: Click on Browse File. Select the .bin file from the system and click Open .



Step 31: Click on Update tool. Tool update is in progress and is being displayed in the Update tool window.





Step 32: Once Tool update is completed “RESET Success. Please Login Again” message is displayed and the application will log out.



Configure User:

Step 33: To create New User Login’s click on Configure User.





Step 34: Enter the Details in User Creation Menu as shown in the image below.

The screenshot shows the 'User Creation' form in the SIDia software. The form fields are: User Name (shubhra), Password (shubhra), Sequence ID (shubhra), and Date Created (06/02/2021). Below the form, three checkboxes are checked: Adjustments, Flashing, and Dataset Transfer. To the right, the 'User Maintenance' panel contains buttons for Create User, Modify User, Delete User, and Reset. At the bottom, a table lists existing users:

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes
User	User@123456	2	06/02/2021	No	No	No

Step 35: The Admin user has the rights to decide which user has to be given the Access for Adjustments or Flashing or Dataset Transfer. Selected Checkboxes Menu Access will be provided to the user. Click on Create User to add the login. “User Created Successfully” pop up message is displayed.

The screenshot shows the 'User Creation' form after a successful user creation. A pop-up message 'User Created Successfully' is displayed over the form. The checkboxes for Adjustments, Flashing, and Dataset Transfer are still checked. The table below now includes the newly created user 'shubhra':

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes
User	User@123456	2	06/02/2021	No	No	No
shubhra	shubhra	3	2021_06-30_19_05	No	Yes	Yes



User id with User@123456 password can only allow accessing the IQA writing,

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes
User	User@123456	2	06/02/2021	No	No	No
shubhra	shubhra	3	2021_06-30_19_05	No	Yes	Yes

Step 36: To Modify the existing User. First select the User from the grid which is to be modified as shown in the image below.

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes
User	User@123456	2	06/02/2021	No	No	No
shubhra	shubhra	3	2021_06-30_19_05	No	Yes	Yes



Modify the details and click on Modify User. “User Modified Successfully” pop up message is displayed.

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes
User	User@123456	2	06/02/2021	No	No	No
shubhra	shubhra	3	2021_06-30_19_26	No	Yes	Yes

Step 37: To Delete the existing User, first select the User.

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes
User	User@123456	2	06/02/2021	No	No	No
shubhra	shubhra	3	2021_06-30_19_26	No	Yes	Yes



Click on Delete User to delete. User Deleted Successfully pop up message will display.

The screenshot shows the Sidia VCI software interface. The top navigation bar includes 'Help', 'About Us', and 'Logout'. The main menu contains 'ECU Details', 'Live Parameter', 'DTC', 'Adjustments', 'Actuator Test', 'Data Select', 'Graph Mode', 'Dataset Transfer', 'Flashing', 'Tool Update', 'Configure Users', and 'Logout'. The 'Configure Users' section is active, displaying 'User Creation' and 'User Maintenance' panels. The 'User Maintenance' panel has buttons for 'Create User', 'Modify User', 'Delete User', and 'Reset'. A 'User Deleted Successfully' pop-up message is shown over the 'Delete User' button. Below the panels is a table with the following data:

UserName	Password	SequenceID	Date	Adjustments	Flashing	DatasetTransfer
Admin	*****	1	06/02/2021	Yes	Yes	Yes

At the bottom of the interface, there are checkboxes for 'Adjustments', 'Flashing', and 'Dataset Transfer'. The copyright notice at the bottom reads: © 2020 Simpson & Company Limited. All rights reserved.