

# DGC 202x

## Software Manual



## 1. External Hardware required for communication:-

Here 2 options for communication with device. Any option choose.

### 1.1. USB cable/Printer Cable



### 1.2. USB to RS485 Converter



## 2. Software Handalling

2.1. Starting application:- open “DGC xxx” application.

2.2. Selecting options are:

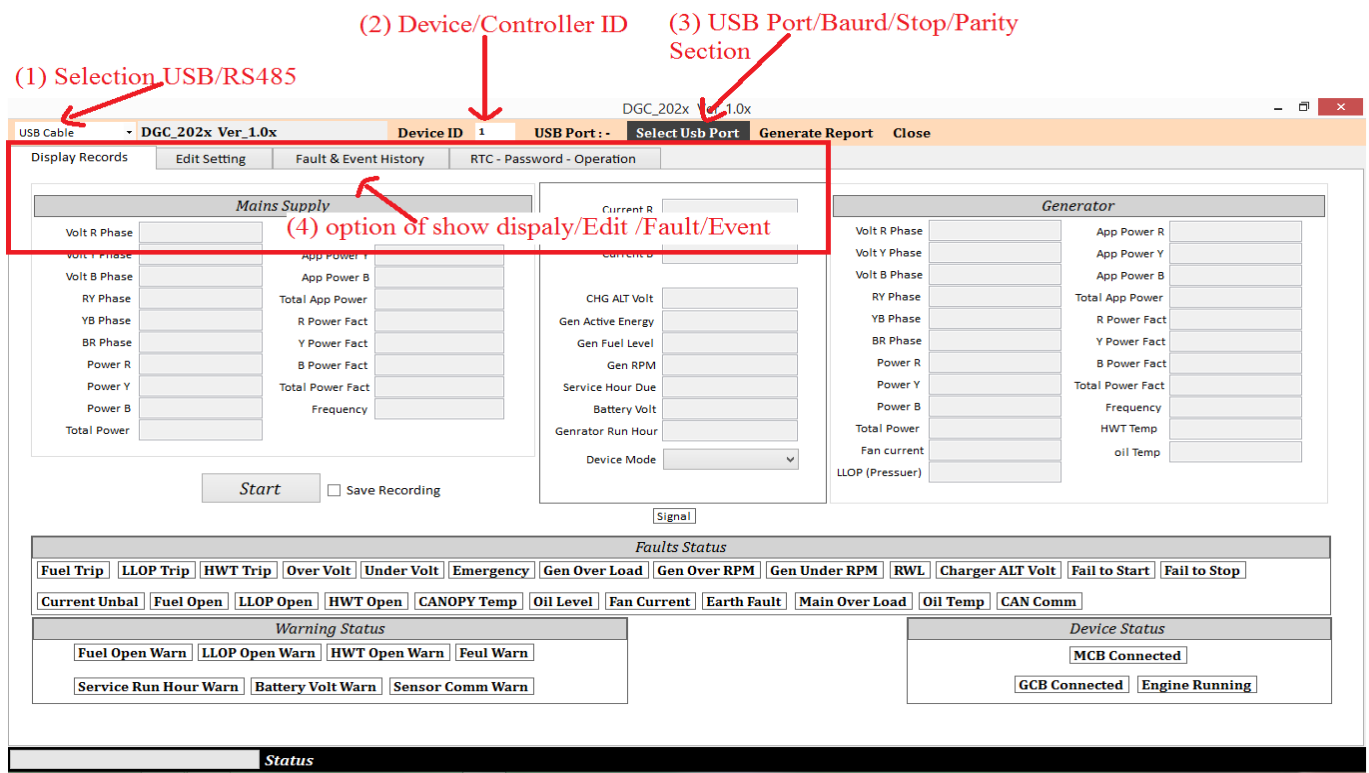
2.2.1. Selection USB/RS485:-

2.2.2. Device/Controller ID:-

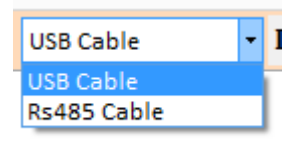
2.2.3. Usb, Baud rate, Parity, Stop bit change.

2.2.4. Option of show display/Edit/Fault/Event:-

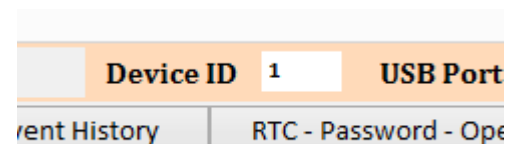
2.2.5 Generate reports



**2.2.1 Selection USB/RS485:-** this option through select communication protocol USB/RS485 (USB Default). If you use USB /Printer Cable for communication then select **USB Cable**. Or If you use RS485 converter then select **rs485 cable**. which is show in menu bar on Top.



**2.2.2 Device/Controller ID:-** Default Device Controller ID is 1. if you change this Controller/Device ID then set numeric Id in this option. which is show in menu bar on Top. (Note: Controller/Device ID is effect when you chose RS485 Option other wise no need to change.)



**2.2.3 USB, Baud rate, Parity, Stop bit change:-** this option for select cable number/Comport. which is through software can be communicate with device. this option show in top menu bar.

DGC-2021



If “NO USB” show in front of “USB Port” that means cable can not be connected in device/Laptop or other region occur.

**1.region:-** Cable/Converter is not connected properly.

**2.region:-** cable /Converter is not good condition. Then change cable or converter.

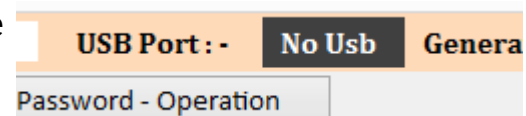
**3.region:-** Communication port will be assigned by the window. This can be checked in system settings menu. Go to Device Manager of the window. (Type device manager in search program window). Under Ports (COM & LPT) search for New Port number. Shall be displayed there use it. This checking has to done once for that particular USB Port.

**Note:-** During the connection if any error message like “NO Port” suggests that either the USB driver is not installed or wrong selection of the comm port. Please check the comm

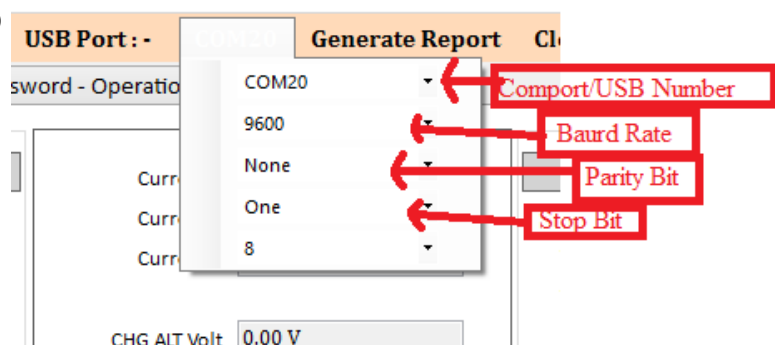
**port assigned to the device and select the right comm port else unplug the USB cable and re-plug it.**

Other wise usb port automatically show with Comport number like “COM3”,”COM45”,”COMxx”.

**Steps 1.** Click on Port in front of USB port. Like in this figure .



**Steps 2.** Select port number, Baurd rate, Parity, Stop bit. Mostly baud rate, Parity bit, Stop bit are used when rs485 Converter used otherwise for USB/Printer cable does not need change to select only comport select through you can communicate.



- . Baud Rate (Default 9600) Options are:-1200,4800,9600,19200.
- . Parity Rate (Default None) options are:- None, Even, Odd.
- . Stop Bit (Default One) options are:- One, Two.
- . Data Bit (default 8bit) options are:- 7bit, 8bit.

## 2.2.4. Option of show display/Edit/Fault/Event:- There options are

### 2.2.4.1 Display Records

### 2.2.4.2 Edit Setting

### 2.2.4.3 Fault & Event History

### 2.2.4.4 R.T.C.- Password- Operation

## 2.2.4.1 Display Records:- show all instance parameters /currently running parameters.

The screenshot displays a software interface for monitoring and controlling a system. At the top, there is a header bar with fields for 'USB Cable' (DGC-2021 1.13), 'Device ID' (1), 'USB Port' (COM20), and buttons for 'Generate Report' and 'Close'. Below this is a tabbed interface with 'Display Records' selected. The main area is divided into several sections:

- Mains Supply:** A table showing voltage (V), power (W), and power factor (PF) for R, Y, and B phases, along with total values and frequency (0.00 Hz).
- Generator:** A similar table for generator parameters.
- Current:** A section showing current (A) for R, Y, and B phases, along with other metrics like CHG ALT Volt, Gen Active Energy, Gen Fuel Level, Gen RPM, Service Hour Due, Battery Volt, and Generator Run Hour.
- Start/Stop/Recording:** A section with buttons for 'Start', 'Start/Stop', 'Recording save', and 'Signal'. The 'Start' button is highlighted in green, and 'Recording save' is highlighted in red.
- Faults Status:** A section with buttons for various fault conditions: Fuel Trip, LLOP Trip, HWT Trip, Over Volt, Under Volt, Emergency, Gen Over Load, Gen Over RPM, Gen Under RPM, RWL, Charger ALT Volt, Fail to Start, Fail to Stop, Current Unbal, Fuel Open, LLOP Open, HWT Open, CANOPY Temp, Oil Level, Fan Current, Earth Fault, Main Over Load, Oil Temp, and CAN Comm.
- Warning Status:** A section with buttons for various warning conditions: Fuel Open Warn, LLOP Open Warn, HWT Open Warn, Feul Warn, Service Run Hour Warn, Battery Volt Warn, and Sensor Comm Warn.
- Device Status:** A section with buttons for device status: MCB Connected, GCB Connected, and Engine Running.

The bottom of the interface shows a Windows taskbar with various icons and a system clock indicating 11:57 AM on 01-11-2021.

**Steps:1-** Click “Display Records” on Top Tab bar.

**Steps:2-** Click Start Button for show running value on screen. This Start Button convert in green colour that means running command activated.



Running parameters show continue with in 1 or 2 second interval.

All parameters fills like current, voltage, running hour, etc. If any fault/warning show then they convert into red colour.

If you Click Stop button then stop running command activate.

**Step3:-** Click on “Records Save” option for save running parameters in excel format. There are some steps for recording.

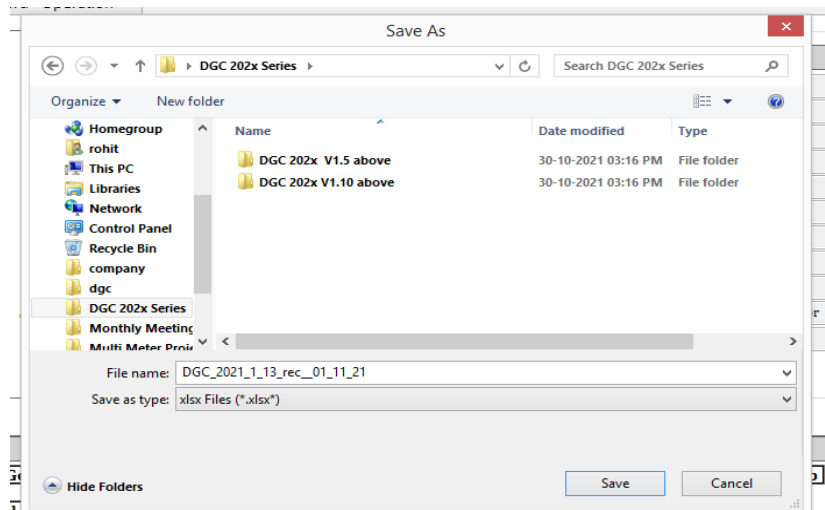
☐ Save Recording

### Step 3.1 Click Records Save

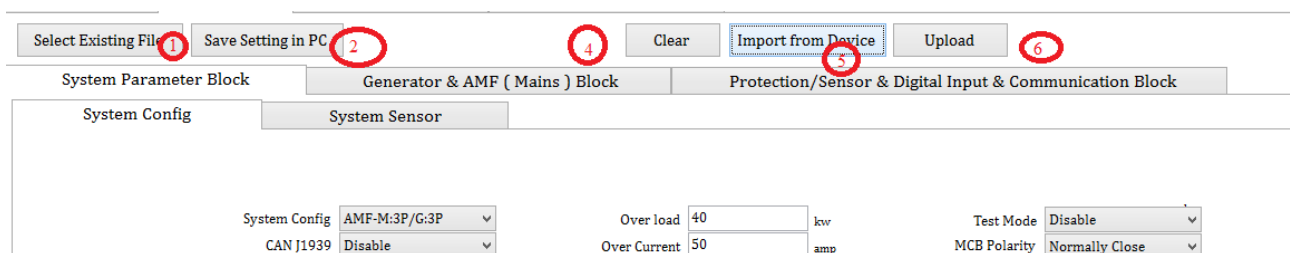
☒ Save Recording

**Step 3.2** then give file name with desire location. Then save it. Then automatically save in location. File save in Excel format (\*.xlsx).

Note: when Start button click please don't open file. After Stop button click then you can open file and check it.



**2.2.4.2 Edit Setting:-** this option through change parameters in device. System parameter block, Generator & AMF block, Protection and communication block.



**Step1.** Click Edit Setting Tab.

**Step2.** Here 5 options are available.

- Import from Device (5 number in Fig)
- Upload (6 number in Fig)
- Save Setting in PC (2 number in Fig)
- Select Existing File (1 number in Fig)
- Clear (4 number in Fig)

**a. Import from Device (5 number in Fig):-** This button through get all setting parameters from device.

The screenshot shows the 'DGC-2021 1.13' software window. At the top, there's a header bar with 'USB Cable' dropdown, 'DGC-2021 1.13', 'Device ID' dropdown (set to 1), 'USB Port' dropdown (set to COM20), and buttons for 'Generate Report' and 'Close'. Below this is a tabbed interface with 'Display Records', 'Edit Setting' (selected), 'Fault & Event History', and 'RTC - Password - Operation'. The 'Edit Setting' tab contains three main sections: 'System Parameter Block', 'Generator & AMF ( Mains ) Block', and 'Protection/Sensor & Digital Input & Communication Block'. The 'System Parameter Block' is further divided into 'System Config' and 'System Sensor'. The 'System Config' section has a list of parameters: 'System Config' (AMF-M:3P/G:3P), 'CAN J1939' (Disable), 'Solenoid Type' (Pull to Stop), 'Sensor Open' (Warning), 'CT Ratio' (1), 'Generator RPM' (1500), and 'User Contact' (None). The 'System Sensor' section has a list of parameters: 'Over load' (40 kv), 'Over Current' (50 amp), 'Over Load Delay' (5 sec), 'MPU/Chg Alt' (Disable), 'Pulses In a Rev' (120.0), 'RPM Source' (Gen Vol), 'Test Mode' (Disable), 'MCB Polarity' (Normally Close), 'Fan High Current' (6553.5 amp), 'Fan Low Current' (0.0 amp), and 'Fan Current Delay' (5 sec). The 'Import from Device' button is highlighted in the top bar. A status bar at the bottom shows 'Successfully Read Edit Setting from Device.' and a Windows taskbar with the date '01-11-2021' and time '02:13 PM'.

**b. Upload (6 number in Fig):-** Upload file in device. Which is displayed in screen.

**c. Save Setting in PC (2 number in Fig):-** this button through save file in (\*.bin format & \*.xlsx format).

**d. Select Existing File (1 number in Fig):-** this button through get save file which is (\*. bin format) file.

**e. Clear (4 number in Fig):-** clear all parameter in screen.

### 2.2.4.3 Fault & Event History:- this tab show all fault history and Event History

USB Cable: DGC-2021 1.13, Device ID: 1, USB Port: COM20, Generate Report, Close

Display Records, Edit Setting, Fault & Event History, RTC - Password - Operation

Sno	Fault	Recording Time
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Fault History

Present total Fault in device - 0

Sno	Event	Recording Time
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Event History

Present total Event in device - 0

Read sucsefully

Click “Fault History” for read all fault history in device.  
Click “Event History” for read all event history in device.

### 2.2.4.4 R.T.C.- Password- Operation:- change RTC, Password and Operation in device.

USB Cable: DGC-2021 1.13, Device ID: 1, USB Port: COM20, Generate Report, Close

Display Records, Edit Setting, Fault & Event History, RTC - Password - Operation

Clear of all input Box

**R.T.C. Change**

Date: 17-01-20, Time: 19:54:31

Device Read, Send System DateTime to Device

**Operation Mode**

Auto Mode, Manual Mode, Engine Start, Engine Stop, Reset

**Password Change**

Enter new Password, Update

Read sucsefully



**2.2.5 Generate reports:-** this button generate all reports in excel format (\*.xlsx).