

# **FORCE GAUGE FGV-□XY SERIES**

**Add-in software for Excel**

## **Toriemon USB Ver1.02**

### **INSTRUCTION MANUAL**



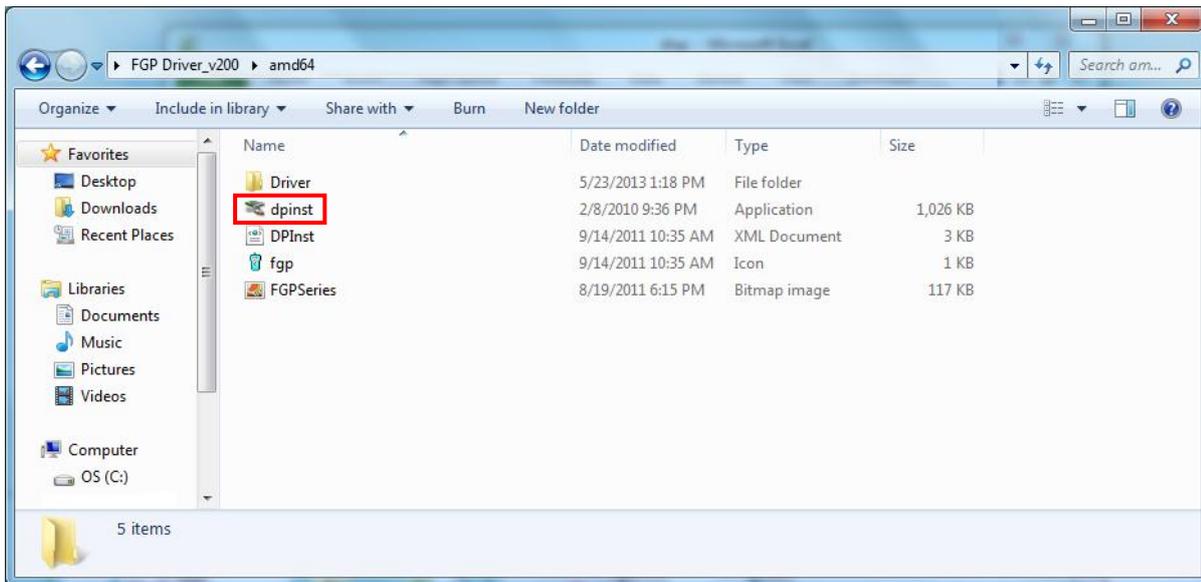
## (2) Installation of the USB Driver & ToriemonUSB ( for Windows 7 )

### ① Installation Driver

Double-click the "dpinst.exe" in the folder of "FGP Driver\_v200" , please start the installation of the driver software.

Please note that Installation software varies depending on the version of the Windows 7 .

- 64 bit : execute "dpinst.exe" in the folder of "amd64"
- 32 bit : execute "dpinst.exe" in the folder of "x86"

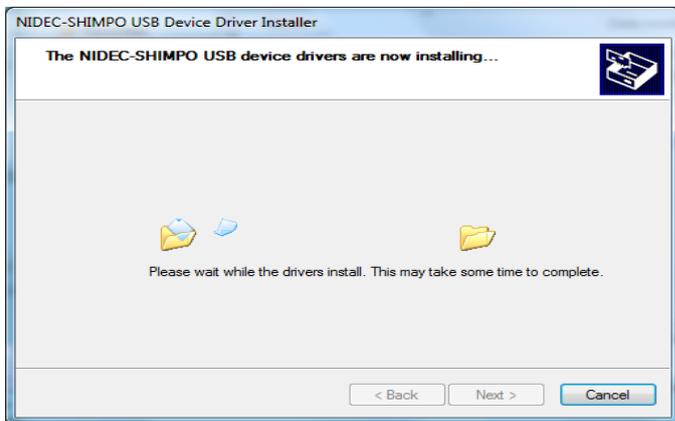


( in case of 64bit )

Click “dpinst.exe” and start installation.  
Please follow the direction as shown below.



Click the [Next>], and proceed to the next.



Finish by clicking the [Finish]

## ② Installation ToriemonUSB

### ● Installation package

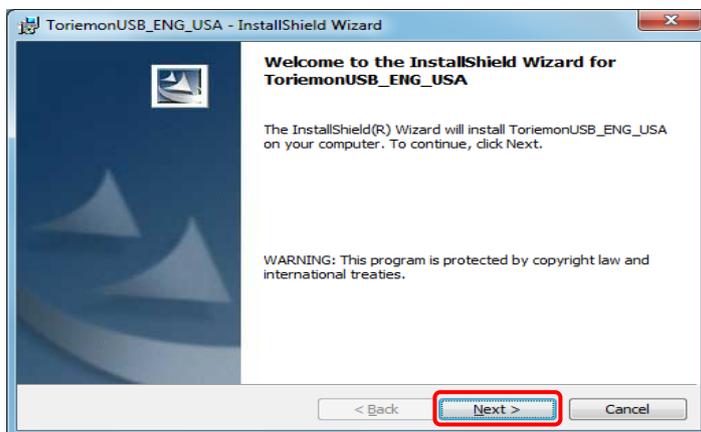
Double-click “ ToriemonUSB\_ENG\_USA\_v\*\*\*.msi ” in the folder and start installation.

※ \*\*\* shows its versions

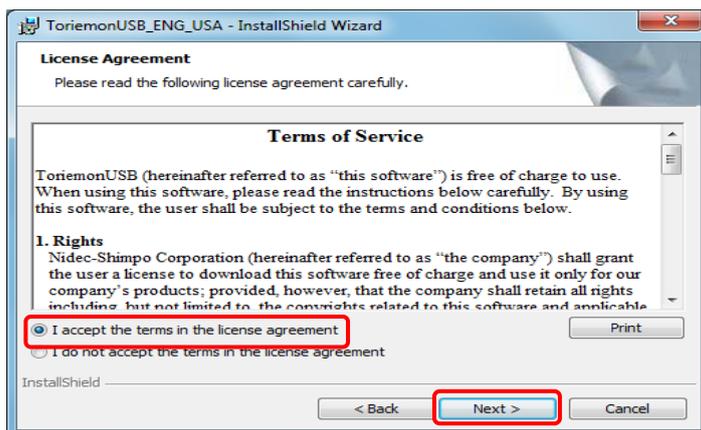


### ● Installation process

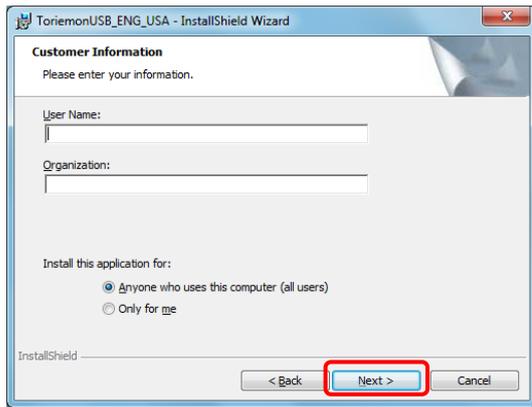
The screens shown below will appear. Follow the direction and perform installation



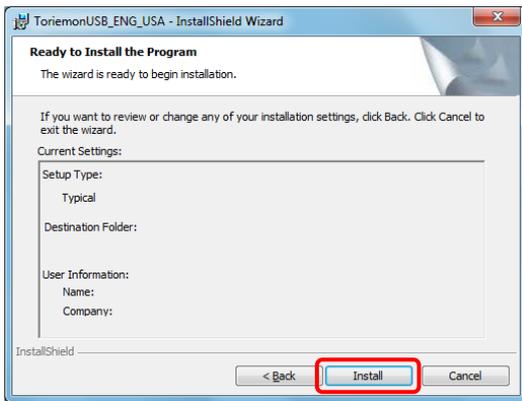
Click the [Next>], and proceed to the next.



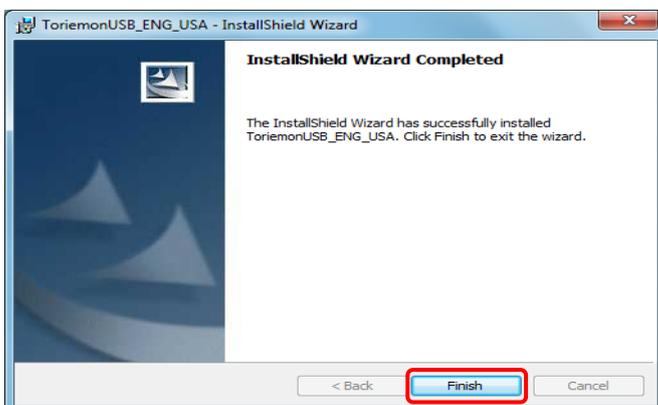
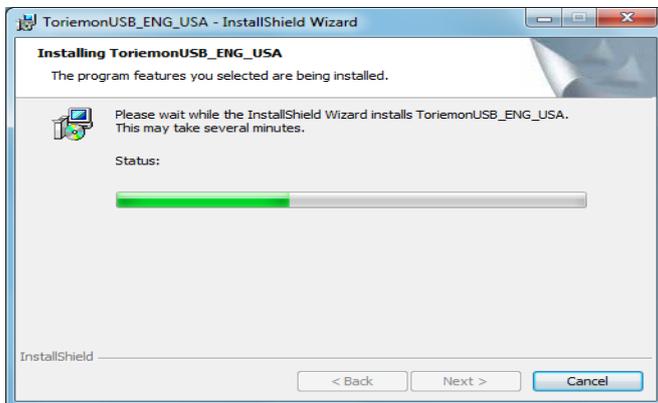
Please check the “ I accept the terms in the license agreement. ” only if you can agree to the license agreement.



Click the [Next>], and proceed to the next.



Click [Install] to start the installation.



Finish by clicking the [Finish]

### (3) Installation of the USB Driver & ToriemonUSB ( for Windows 2000 , XP)

#### ① Installation Driver

Please turn the force gauge on (press the "POWER" key and measuring value will be displayed on the LCD), then connect your PC and the force gage by USB cable.

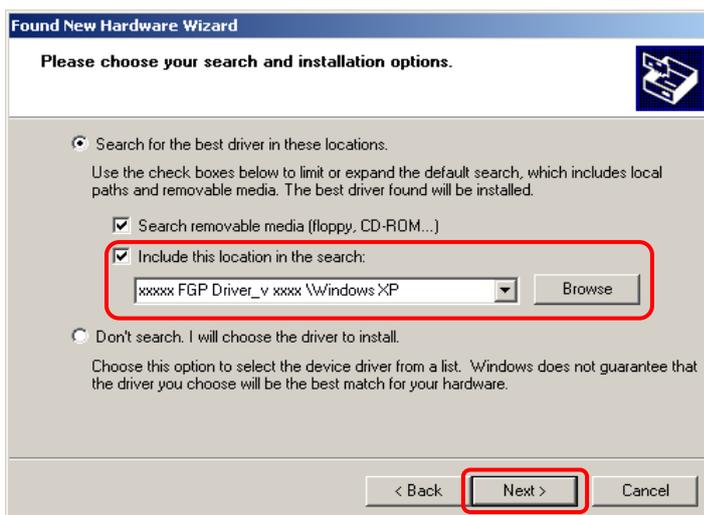
Shortly after that, following picture will be shown. Please check "Install from a list or specific location (Advanced)"

location (Advanced)", then click the "Next"

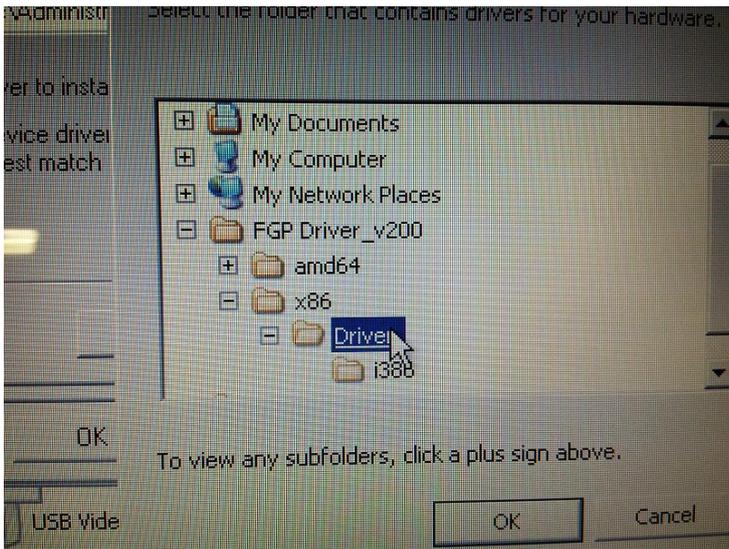


Following picture will be shown, then please select "Search for the best driver in these locations".

2.1. Then, the screen shown below appears. Click "Browse" and select the "driver" under the X86 folder as shown in the photo in the next page.



※ Please select “Driver” in the folder in “X86” under FGP Driver V.2.00



After that, go through the displayed dialog, then following picture is shown. Please click the “Finish”. Setting for Hard wear is done.



## ② Installation ToriemonUSB

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Please install in the same way as “2. Installation of the USB Driver & ToriemonUSB ( for Windows 7 )-(2) InstallationToriemonUSB”.

※ If the installation failed, please start from the beginning again.

#### (4) How to Start "ToriemonUSB"

After installation, please open the folder "ToriemonUSB\_ENG\_USA" and make sure there is "ToriemonUSB\_ENG\_USA.xla" as follows.

The location of the "ToriemonUSB\_ENG\_USA" folder is different in 64bit and 32bit of Windows7.

- 64 bit : execute "C: \Program Files(x86)\ToriemonUSB\_ENG\_USA"
- 32 bit : execute "C: \Program Files\ToriemonUSB\_ENG\_USA"

Please double click "ToriemonUSB\_ENG\_USA.xla" to start Excel.

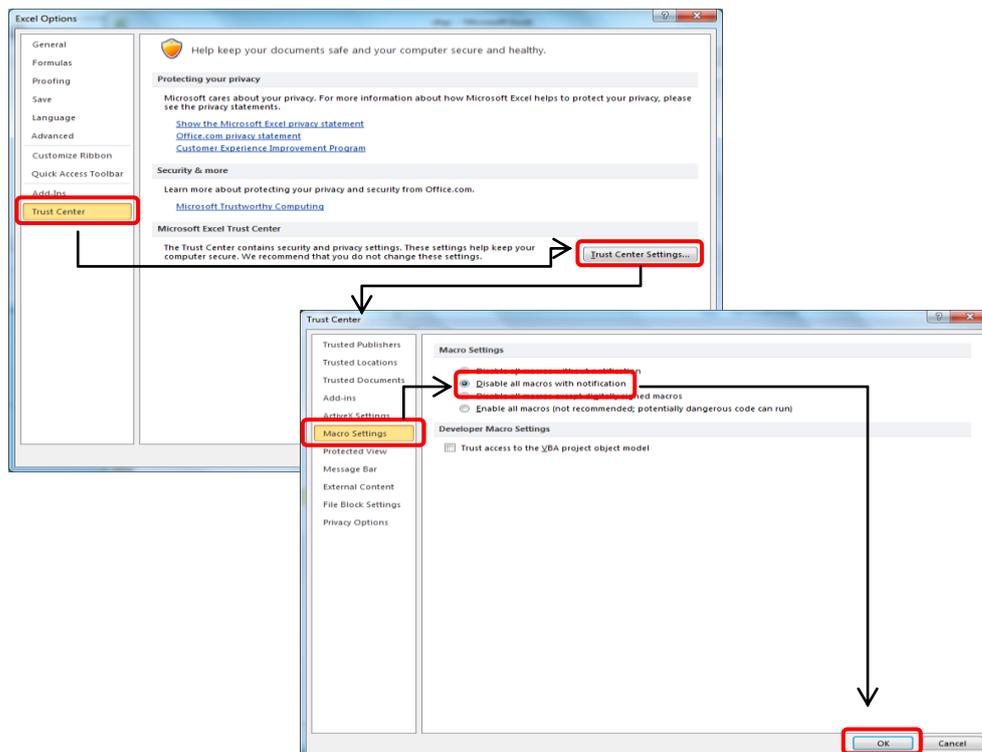
Please open a new bookfile.

#### ● Excel2007, 2010

##### ▪ Trust Center Settintgs

When you first use the ToriemonUSB, please perform the following settings.

- ① Open the "Options" from the "FILE" menu of Excel, and then click the "Trust Center Settintgs" button on the "Trust Center".
- ② Select "Disable all Macros with notification" in "Macro Settings".
- ③ Once finish Excel, then start Excel again.  
Select "Available Macro" on security window.

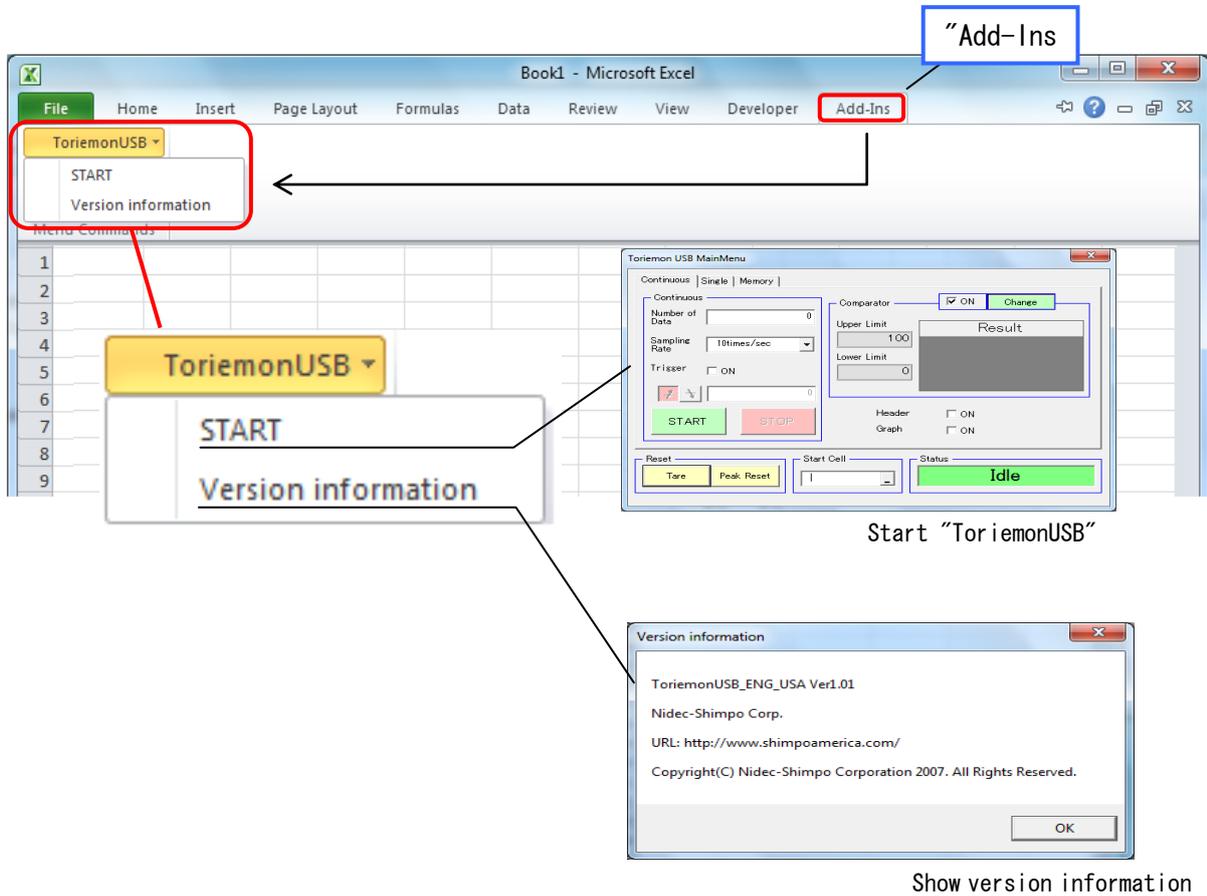


- Start "ToriemonUSB"

If you Click "Add-Ins" menu tab , "ToriemonUSB" menu appears.

Click "START" to start "ToriemonUSB"

Click "Version information" to see software version.



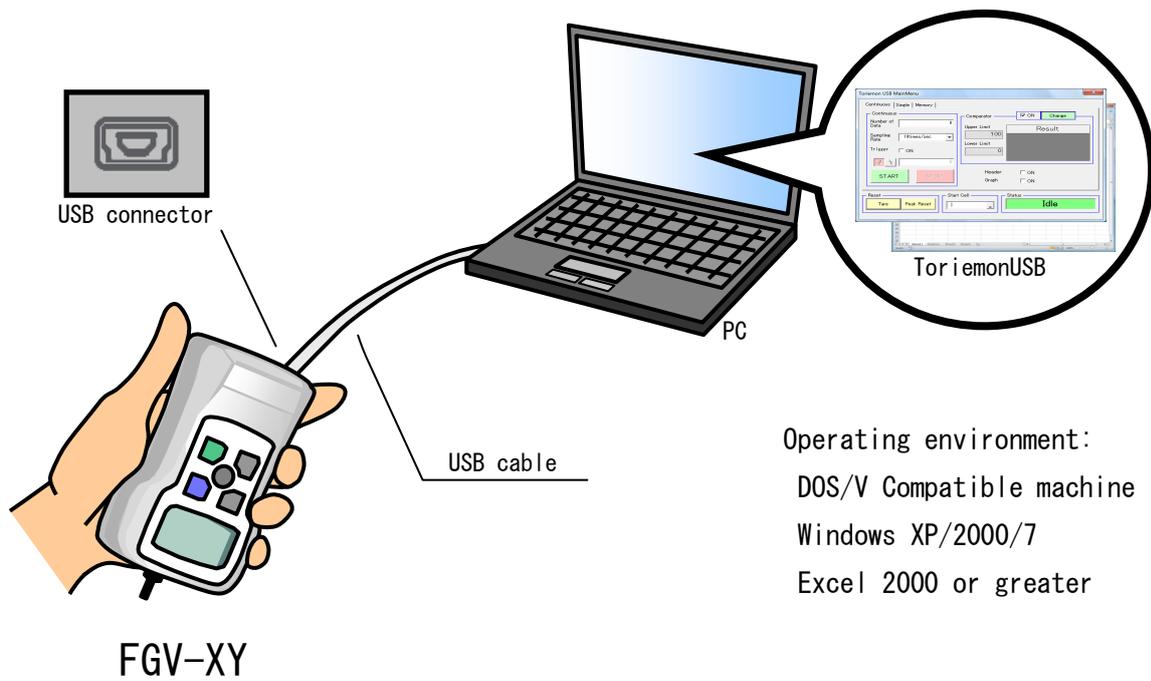
### ● Excel2000, 2003

In the Tool bar of Excel, please select "Tool" - "Macro" - "Security", and set middle level.

Once finish Excel, then start Excel again. Select "Available Macro" on security window.

After that, please make sure there is "toriemonUSB" on the menu.

### 3. Connection



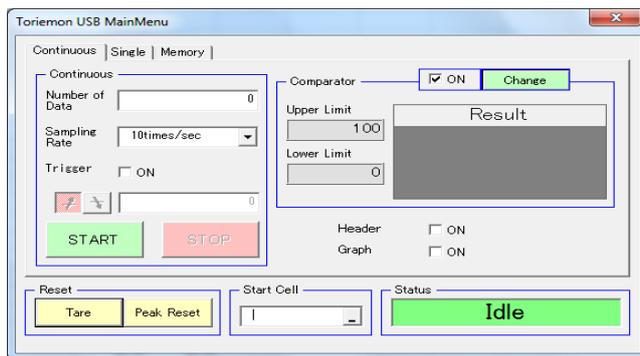
## 4. Windows and Features

### (1) Start-up

Turn the FGV-XY /HXY force gauge on, (press POWER), then connect to PC by USB. After the PC recognizes the connection, start "Toriemon USB" by clicking "START" of ToriemonUSB on menu bar.

### (2) Main Window

The following screen appears when Toriemon USB is started.



#### (A) Mode for data download

There are three different modes for downloading:

Continuous, Single, Memory (Memory is data sorted in the force gauge)

1. Continuous : allow you to download data continuously.  
Comparator (HI-LO) / Graph feature is available.
2. Single : allows you to download one data point and the peak value.  
Comparator is available.
3. Memory : allows you to download memory data which is in force gauge and

#### (B) Reset

1. Tare icon : Tare of the force value.
2. Peak reset icon : Reset the peak value.

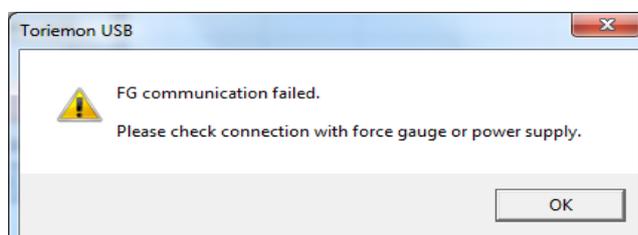
#### (C) Start Cell

Enter cell address. Or when you click a right button, present cell for Excel is shown.  
The cell which you choose is active when data is downloaded

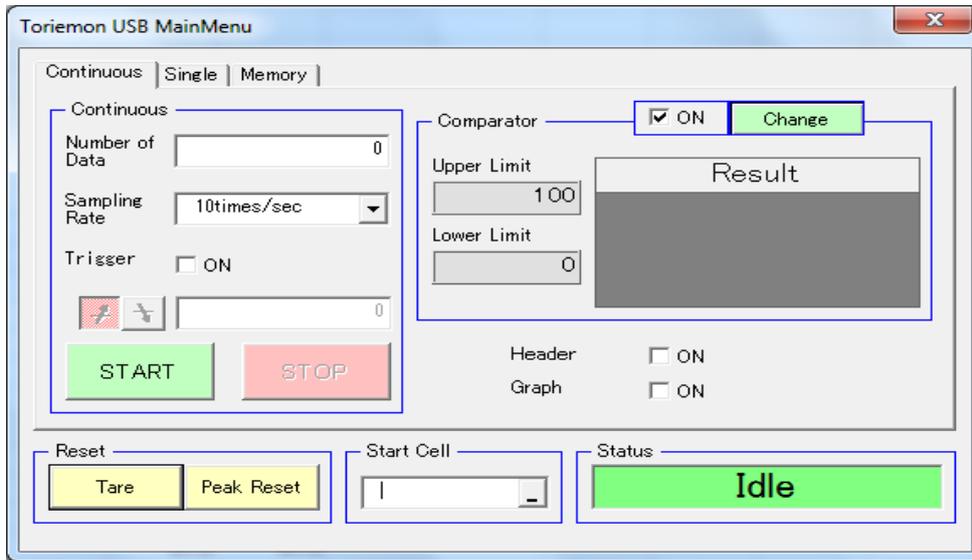
#### (D) Status

Show status of downloading

- ※ The following message appears if there is a problem with connection or if the FGV-XY force gauge is not turned on.



### (3) Continuous data download



#### (A) Continuous

##### 1. Captured Number :

Set the number of data (from 1 to 65,000 ) to be downloaded. Initial value is 0.  
You can collect up to 65,000 data points (maximum) while the number stays "0" .

##### 2. Captured Interval :

10, 20, 50, and 100 times / sec

You can choose from menu, Initial value is 10 times/sec.

##### 3. Data collection Trigger :

Click   to switch trigger modes.



: When the measuring data is more than trigger value, start downloading.



: When the measuring data is lower than trigger value, start downloading.

Value of trigger is from -9999 to +9999. Initial value is 0.

You can choose to turn on or off the trigger by checking the box.

##### 4. Start:

Start downloading continuous data.

Once "start" is clicked, all icons can not be used until you click "stop" .

##### 5. Stop:

Stop the data download (only available during "continuous" data download).

(B) Comparator (Hi and Lo limits)

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1. Check the box for comparator ON / OFF

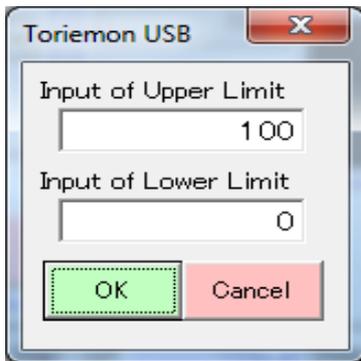
2. Upper/Lower limit:

Show upper/lower limit. Measurement range is from -9999 to 9999.

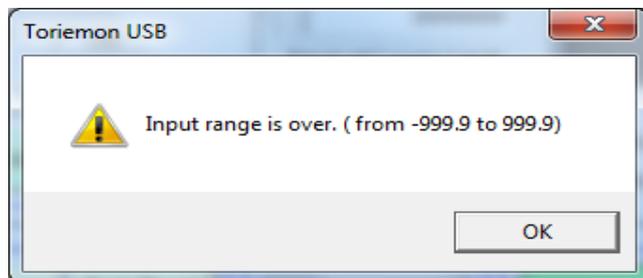
Initial value is 0, which means no limitation.

3. Change button:

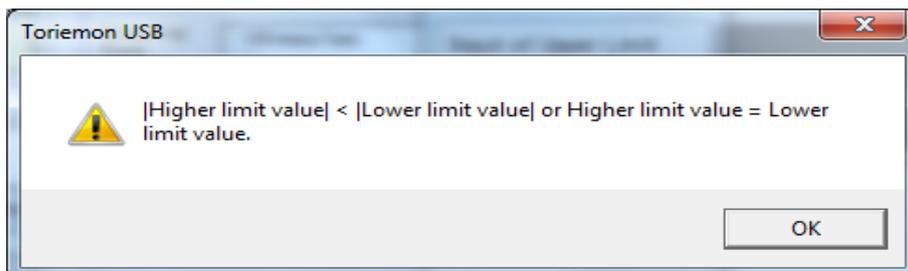
After input the value, click "OK" .



Even though input value is entered, if it is outside of the force display value, An warning indication will appear after clicking "OK" .



If lower limit is bigger than upper limit, a warning indication will appear after clicking "OK" .



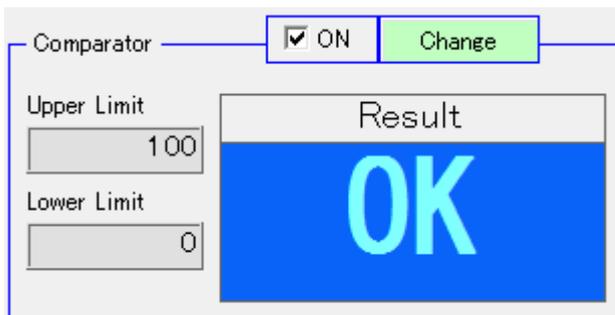
#### 4. JUDGMENT:

Just after you download data, a judgment for the upper / lower limit value is performed. The result is shown in the judgment window. If “OK” is displayed, the downloaded (data)

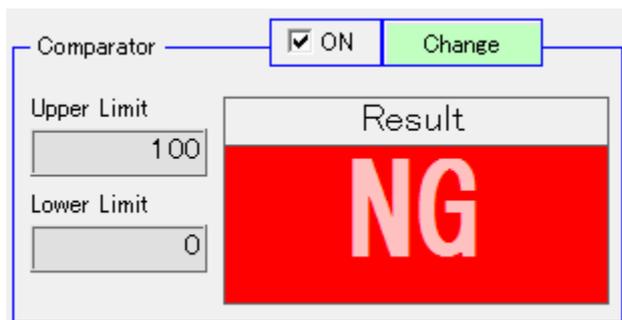
is

with in the previously set limits.

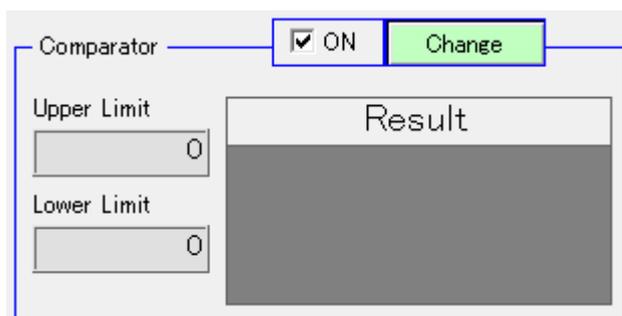
- The background and the font displays in blue as below :



- If the downloaded data is over the Upper limit : “NG” in red is displayed (downloaded data > Upper limit → the background / font is red)
- If the Max value is less than the Lower limit : “NG” in red is displayed (Upper limit < Lower limit → the background / font is red)



If judgment is not performed, nothing is displayed. (gray)



### (C) Other Data Displayed

#### 1. Header:

Select to collect data with or without a header in the Excel sheet output. The initial setting is OFF.

Each time after completion of a download, it turns OFF.

	A	B	C	D
1	Continuous Data	Adata(sign:~)	Bdata(sign:-)	
2		0	2	
3		0	1.8	
4		-0.1	9.7	0.1
5		-0.1	17.2	0.1
6		0	22.4	
7		0	29.9	
8		0	34.9	
9		-0.1	41.1	0.1
10		-0.1	44	0.1
11		0	39.7	
12		0	23.7	
13		0	7.7	
14		-0.1	2.5	0.1
15		-0.1		0.1
16		4.4	4.4	9.3
17		10	10	
18		20.8	20.8	0.9
19		25.8	25.8	0.5
20		27.7	27.7	0.4

#### 2. Graph:

Continuous data is translated in a new graph sheet when you check the GRAPH box.

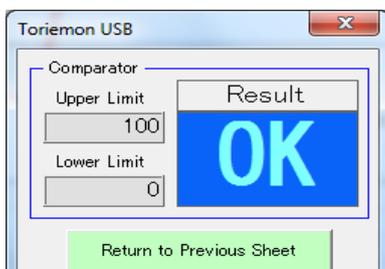
When downloading the continuous data with check box ON, another sheet (Graph1...) is added on the end of the sheets, and the graph is displayed. (see below)

When plotting a graph, the data download starts in cell "A1" of Graph1 with the header shown, regardless if the "Header" is ON or OFF.



After composing the graph, the following window will be shown.

Next, click a "Return to former sheet" to go back to view a previous worksheet.

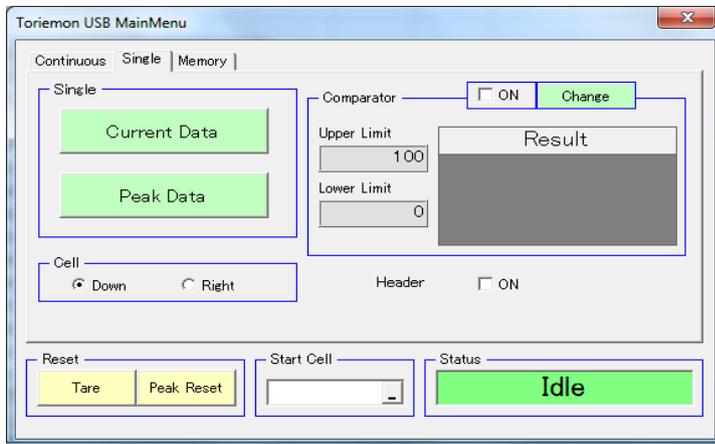




Judge is performed

Judge is not performed

#### (4) Single data download



##### (A) Single data download

###### 1. Current data button:

When you click "Current Data" button, you will download the single (one) data into a selected cell.

###### 2. Peak data button:

When click "Peak Data" button, you will download a  $\pm$  peak value.

After downloading this peak data, the data will be automatically reset.

###### 3. Cell:

The selection of the Data feed direction is available for the cell of a single data point.

##### (B) Comparator

###### 1. JUDGMENT:

Judgment will be performed at the same time as downloading the data.

The result is then shown on JUDGMENT. Judgment will not correspond to the Peak value.

OK : The measured data is within a limit. (Background/font: blue)

HIGH : The measured data is higher than upper limit. (Background/font: red)

LOW : The measured data is lower than lower limit. (Background/font: red)

BOTH : Upper limit < Lower limit: the measured data is higher than the upper limit

and lower than the lower limit. (Background/font: red)

Nothing : The "judgment" is not performed. (gray)

##### (C) Other

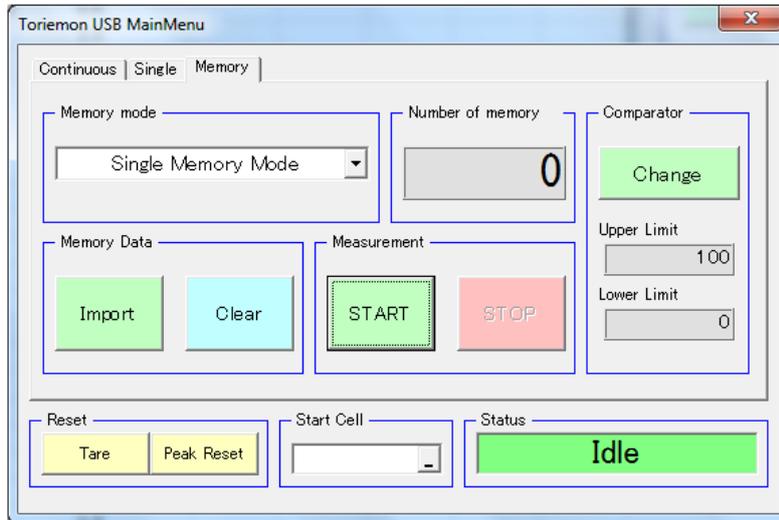
1. Header:

Select with or without of header output. Initial setting is OFF.

If Header is “ON” , “Current Data” will appear on the top (Single data point),  
 “+ Peak” / “-Peak” will appear on the top (Peak data).

After each completion of a download, it turns OFF.

**(5) Memory data download**



**(A) Memory Mode**

Select Single / Continuous / Standard mode by using the pull-down menu. By selecting, you can then

change the memory mode of the FGV-XY/HXY force gauge.

When running this software or changing the mode of downloading, the memory readout from the force gauge is then shown in the current memory mode.

**(B) Memory data**

1. “Import” button:

When clicking this button, data will be downloaded in the memory mode selected at the force gauge.

If there is no memory data available, the display will read “No memory data” .

Continuous memory data screen display

	A	B	C
1	Single Memory		
2	Unit	lb	
3	Number of data	5	
4	+MAX	53.3	
5	-MAX	0	
6	+MIN	16.7	
7	-MIN	0	
8	AVG	41.4	
9	DEV	13.27	
10	Upper Limit	100	
11	Lower Limit	0	
12	Data No.	Result	Load
13	1	0	16.7
14	2	0	41.7
15	3	0	42.5

Single memory data screen display

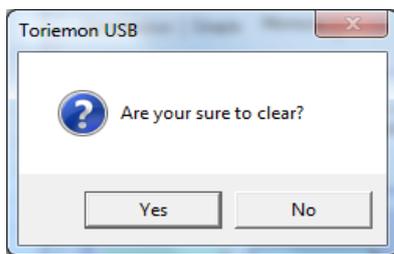
	A	B	C
1	Continuous Memory		
2	Unit	lb	
3	Number of data	5	
4	+MAX	29.6	
5	-MAX	0	
6	+MIN	16.8	
7	-MIN	0	
8	+Peak	31.6	
9	-Peak	0	
10	AVG	20.7	
11	DEV	5.06	
12	Upper Limit	100	
13	Lower Limit	0	
14	Data No.	Result	Load
15	1	0	16.9

Standard memory data screen display

	A	B	C	D	E	F	G	H
1	Standard Memory							
2	Unit	lb	Upper Limit	100	Lower Limit	0		
3	No.	+MAX	-MAX	+MIN	-MIN	+Peak	-Peak	Last_data
4	1	0	-0.2	0	-0.2	0	-0.2	-0.1
5	2	0	0	0	0	0	-0.1	-0.1
6	3	38.1	0	36.2	0	41	0	36.4
7	4	52.6	0	31.2	0	63.9	0	31.2
8	5	50.2	0	46	0	54.3	0	46
9								

2. “Clear” button:

If you click the “Clear” button, the following dialog will be displayed.



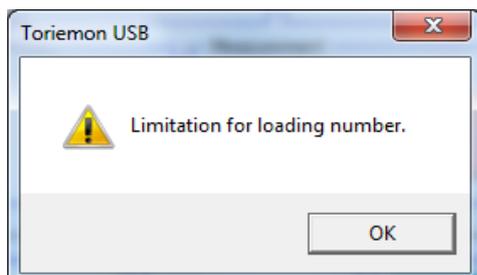
Click “Yes” , and the memory data will be cleared, from the mode selected on the force gauge.

(C) Number of memory data points

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The number of memory data points in the selected memory mode is shown.

When running this software or changing the data download mode, the number of the read outs in the memory mode of the force gauge is shown as a number.



#### (D) Measurement

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1. "START" button:

In the selected memory mode, start downloading the memory data from the force gauge.

In the case of Continuous/Standard memory mode, stop the data collection/measuring by clicking

STOP.

If the memory is full, "Limitation for loading number" is displayed.

Measuring cannot start.

2. "STOP" button:

When you click this button while measuring, stop measuring.

(Unavailable in single mode)

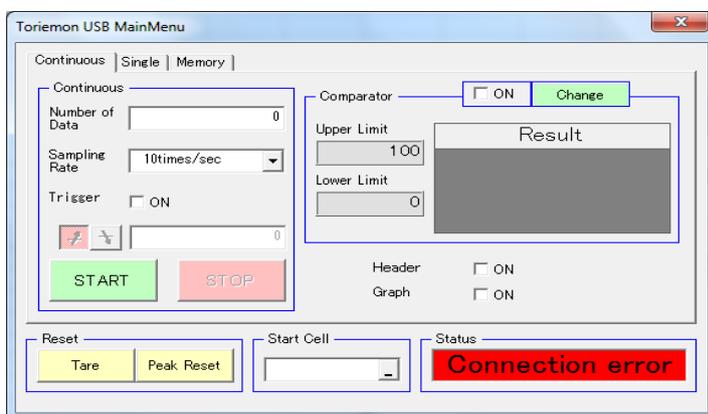
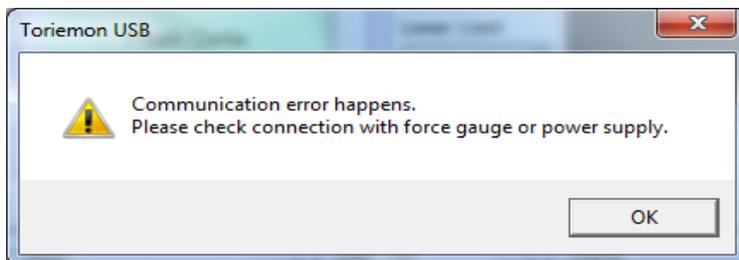
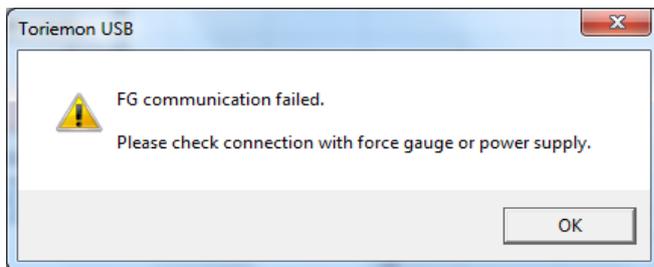
#### (E) Comparator

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Setting and showing the upper / lower limit value. (same as in section 4\_(3))

## (6) Communication Error

When the power supply of the force gauge is turned off, or while ToriemonUSB is in use, or the USB cable is detached, the following messages are displayed.



If the messages appear, check the connections or the power supply of the force gauge.

Note. Please operate again after the PC/computer recognizes the FGV-XY force gauge.

If the communication is not re-established, end or exit the ToriemonUSB program and disconnect

the

USB cable from the pc/computer. Return to the first procedure to re-establish communications. Afterwards, continue with your measurements.

## 5. Trouble Shooting

- Can not install "ToriemonUSB" and "FGP Driver".
  - If you can not install, please install while logged on as an administrator.
  
- Can not start "ToriemonUSB". ( Menu does not appear in Excel )
  - Please check the security settings for macros.
  - Depending on the version of Excel, tab menu that is displayed is different.  
Please refer to P10.
  
- Can not communicate
  - Please install the "ToriemonUSB" after performing the installation of "FGP driver".
  - Please check the connection of the USB cable.
  - Please confirm driver is installed.  
For information on installing the driver, it is possible to check from the "Device Manager". Please check that the "FGUSB" is displayed "USB (Universal Serial Bus) controller" in "Device Manager".
  - Uninstall the "FGP Driver" and "ToriemonUSB" when you do not solve the problem, please install again in the order of "FGP Driver" and "ToriemonUSB"