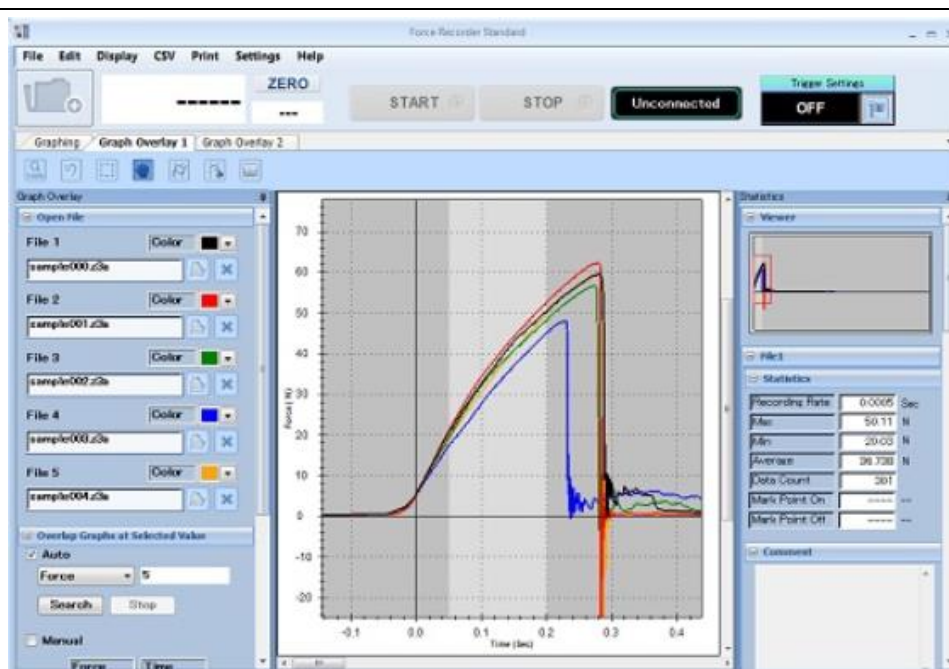# Force-Time Graphing Software
Force Recorder (Light/Standard)

- Data can be transmitted to plot the force-time graph easily.

- Graph can be drawn accurately and precisely due to the high sampling rate. (Mx. 2000Hz)

- Light ver. (simple graphing) and Standard ver. (with editing functions) are available.

- The software program comes on a CD.

Display image
*Image of Force Recorder Standard

Common functions of Force Recorder Light/Standard	
Graph scaling function	The graph can be zoomed in/out, or scroll to check the details.
Statistical calculation	Maxmimum/minimum/average values are automatically calculated.
Comment function	Comments can be inserted on the graph to record the test condition.
Print	Graph, statistics value and comment can be printed out as report format.
Saving in CSV Format	Recorded data can be saved as CSV format.
Preview export function	Graph image and statistic data can be exported to various format. (e.g. Word, Excel and PDF)
Force gauge setting	The setting of force gauge can be changed via software.

| Additional functions of Force Recorder Standard	
Graph overlay function	Graphs can be overlaid for easy comparison. (up to 5 graphs can be overlaid at once)
Trigger function	Recording can automatically start and stop according to force value, displacement, and external signals.
Add notes function	Comments can be placed anywhere on the graph.
Border line function	Lines can be drawn on the recorded graph at specific force/time as a judgement line.
Area select function	The statistics within the selected area are automatically calculated.

[Software Display]

Real-time value display
Force value of the connected force gauge is simultaneously displayed. Zero reset is also possible by the software.

Tabs
Multiple files can be opened, and the screen shows the clicked tab.

| Graphing | Graph Overlay 1 | Graph Overlay 2 |
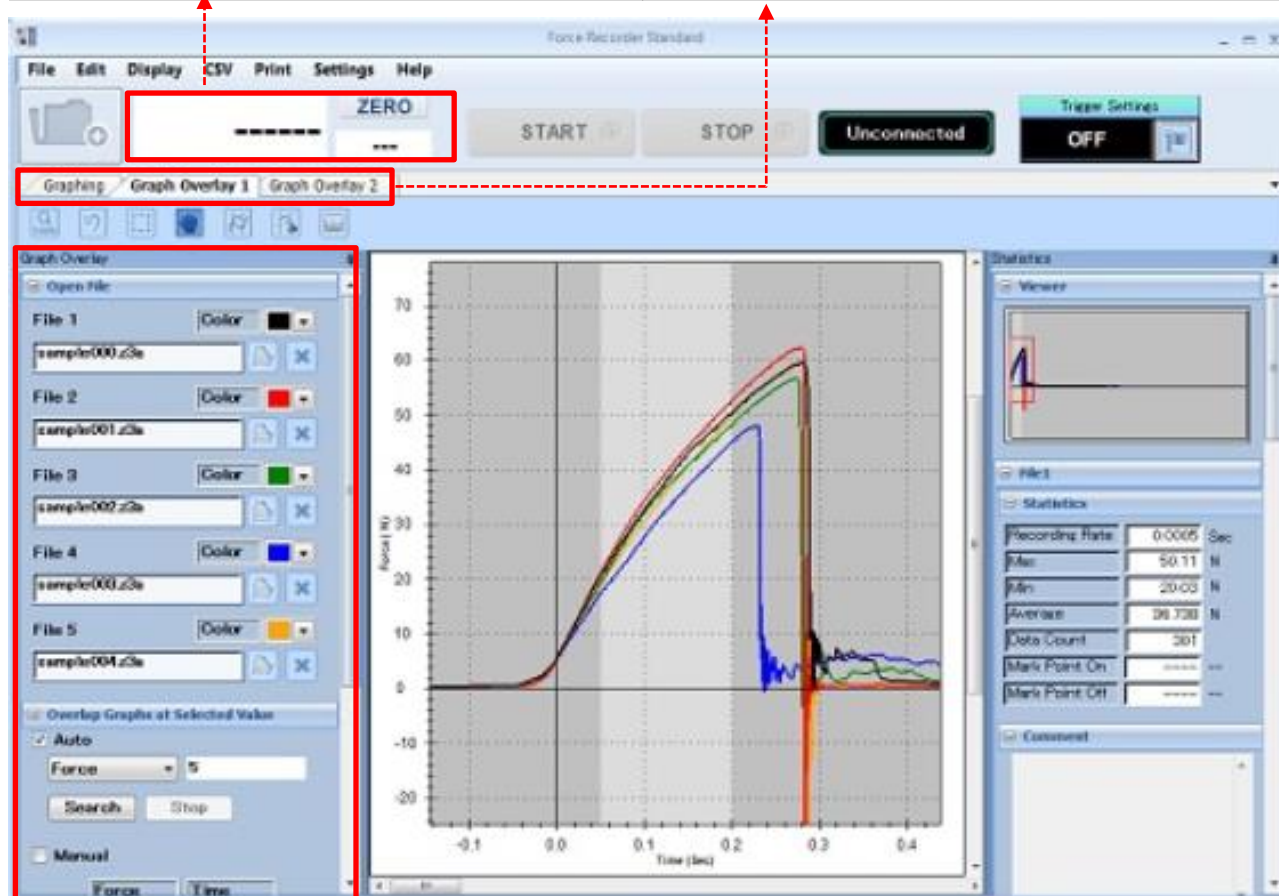
Graph overlay (Only for Standard ver.)
The graphs can be overlaid in Graph Overlay Tab.
File names and graph colors are listed, and reference points can be set for easy comparison of graphs.

*This is the image of Standard version. There is no overlay tab and trigger function in Light version.

Graph scaling function

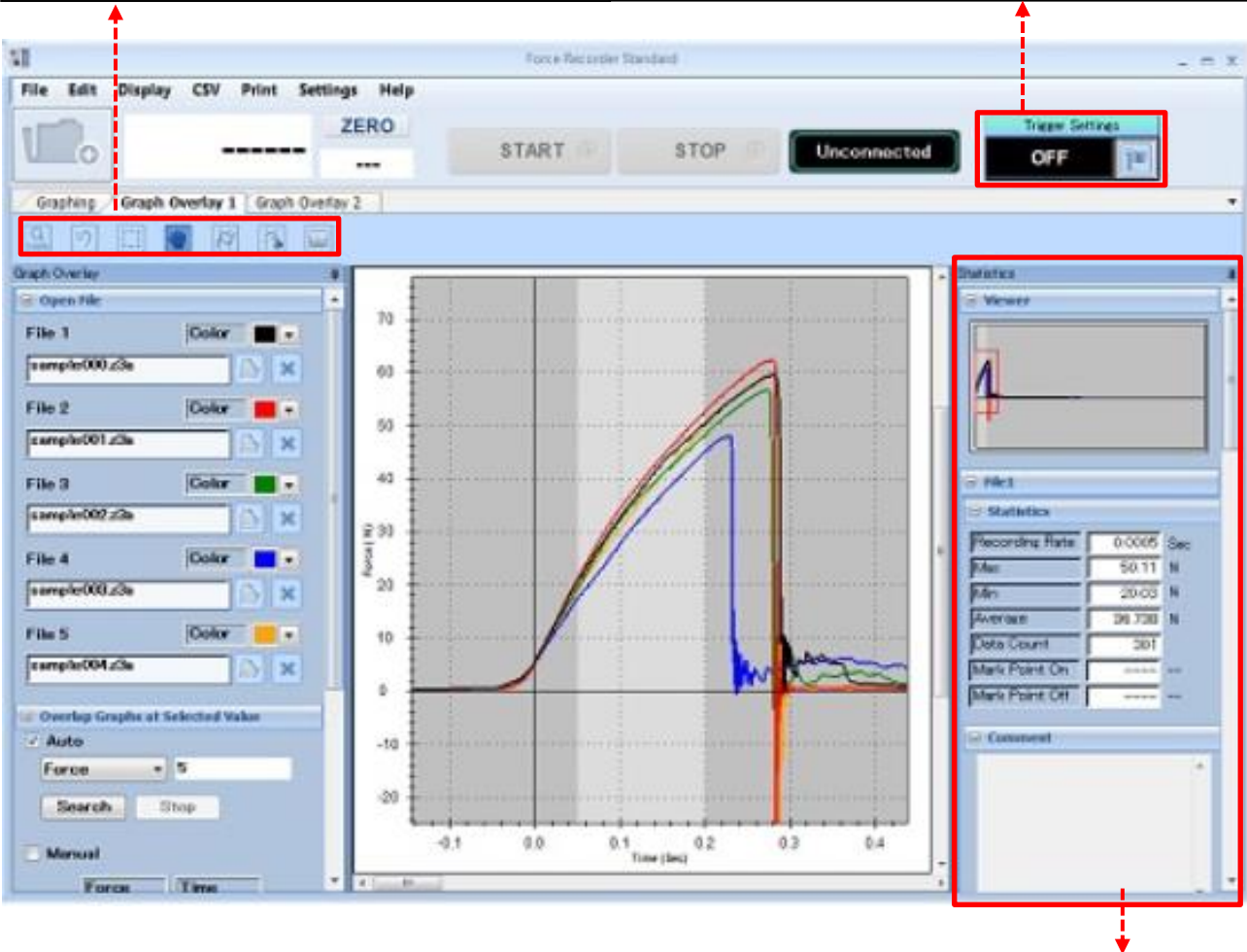The graph can be zoomed in/out and scrolled for analyzing.
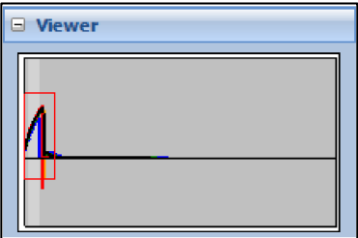
(Light Version)

(Standard Version)

Trigger function (Only for Standard ver.)

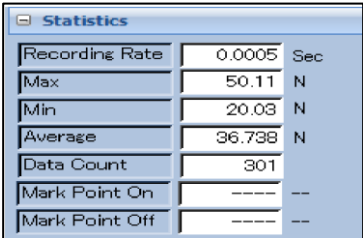Recording can automatically start and stop by the triggers such as force value, time etc.

[Graph viewer]

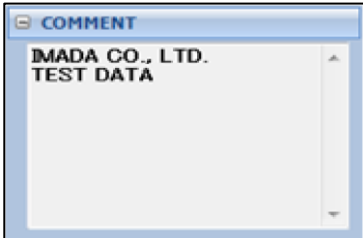It shows the whole graph and the selected area.

[Graph statistics]

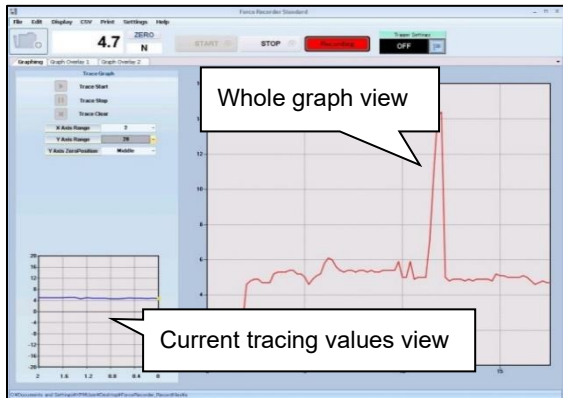The maximum/minimum/average values are automatically calculated.
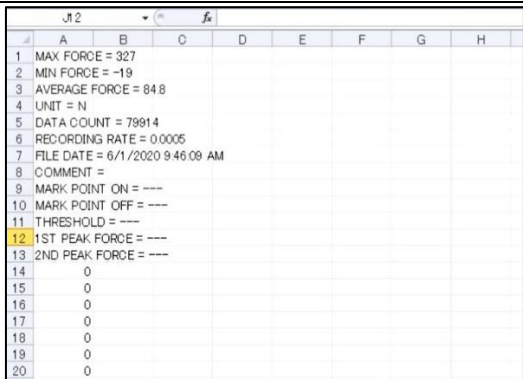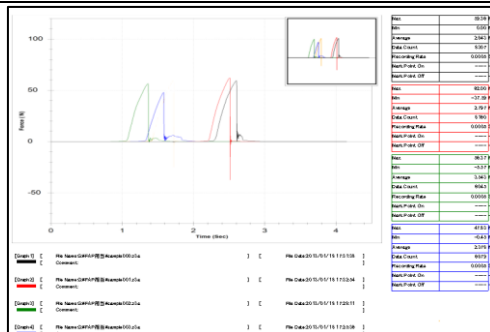
Statistics		
Recording Rate	0.0005	Sec
Max	50.11	N
Min	20.03	N
Average	36.738	N
Data Count	301	
Mark Point On	-----	--
Mark Point Off	-----	--

[Comment]

Comments can be inserted on the graph to record the test condition.

COMMENT
IMADA CO., LTD.
TEST DATA

* This is the image of Standard version. There is no overlay tab and trigger function in Light version.

[Main Functions]

Force-Time Graphing	Graph Edit *Only available in standard version
1. The recording can start/stop by simply click the buttons. **START** / **STOP** (START/STOP buttons) 2. Force transition can be viewed clearly by 2 different displays which show the whole graph and current tracing force values. Whole graph view Current tracing values view (Graph drawing monitor) 3. Recording can automatically start and stop by setting the trigger such as force value, time etc. (Trigger function) e.g. The software will start recoding when force reaches 1N, and stop after 10 sec. ***Only available in standard version.**	1. It is possible to cut out and save only the necessary area of a recorded graph. And the new statistical value is automatically calculated. (Area select function) 2. Comments can be added at a specific point on the graph. (Add notes function) 3. Border lines can be drawn on the graph with any force value and displacement/time. (Border line function) 3.Boarder line 2. Add notes 1.Area select (Screen after edited)

Viewing Graph	Print
1. The recorded graph can be zoomed in/out or scrolled easily to check the details. (Graph scaling function) 2. The graphs can be overlaid for easy comparison. (up to 5 graphs can be overlaid at once) ***Only available in standard version.**	1.The graph, statistical values (maximum/minimum/average), and comments can be printed in the report format. 2. The selected area of the graph can be enlarged and printed.

Output Functions	
Saving in CSV Format - Recorded graph data can be saved as CSV format. - It is also possible to add new data to an existing CSV file. 	**Preview export function** - Graph image and statistic data can be exported to Word, Excel and PDF format. - Graph images can be pasted into other files. * This is the preview image of Force Recorder Standard version.

* This is the preview image of Force Recorder Standard version.

Main Functions Comparison			
Version	**Light**	**Standard**	**Professional**
Feature	Graphing only	With editing functions	Force-displacement graphing
Graphing	Force-time	Force-time	Force-time Force- displacement
Data transferring speed (Max)	2000 data/sec	2000 data/sec	2000 data/sec
Recording data point (Max)	7.2 million	7.2 million	7.2 million
Displacement output	N/A	N/A	√
Graph overlaying function	N/A	√	√
Trigger function	N/A	√	√
Add notes function	N/A	√	√
Border line function	N/A	√	√
Area select function	N/A	√	√
Graph scaling	√	√	√
Statistical calculation	√	√	√
Comment function	√	√	√
Print	√	√	√
Saving in CSV Format	√	√	√
Preview export function (PDF/Word/Excel)	√	√	√
Force gauge setting	√	√	√
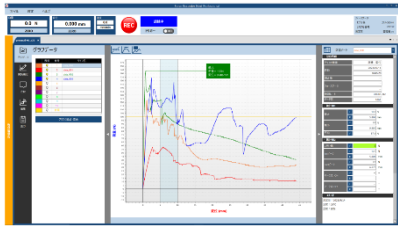
* For further information of Professional version, refer to Force Recorder Professional specification.

Operating Environment	
Model	Force Recorder (Light/Standard)
Operating environment	OS: Windows 8.1/10/11
Hardware	CPU: 1GHz or higher Memory: 2GB or more Hard disk: 10GB (Data storage area) more
Plat form	.NET Framework4.8 later
Image size	Resolution 1024*768 pixel more

[Compatible Devices]

For Force-Time graph		
Digital Force Gauge **ZTS/ZTA series**	Sensor Interchangeable Amplifier **eZT**	Desk Type Load Cell Amplifier **FA Plus2/eFA Plus2**

For Torque-Time graph	
Handy Type Torque Gauge **HTGS/HTGA series**	Screw Cap Torque Tester **DTXS/DTXA series**

Related Products	
Motorized Test Stand **MX/MX2/MH/MH2/EMX series**	Optional Cable **CB-528**
The motorized test stand can be operated by switch to perform measurement.	By combining with ZT series force gauge and test stand, it activates the motion control and overload stop functions.

Related Software
Downloadable Graphing Software*1: Force Recorder Next Standard / Professional

- Professional version is for force-time graphs and force-displacement graphs.
- Standard version is for force-time graphs.
- Test condition preset functions increase efficiency of recording and analyzing measurement results.
- Various data editing functions such as up to 10-graph overlaying enable analyzing measurement result.
- Annotation functions are useful for recording the details of measurement.
- The Print Command allows users to output of measurement data as PDF/Word, Excel, and images and drawing up reports easily
- Software program online-updating and additional function downloading are available on the user support site, IMADA Connected.

*1 To use this product, user & product registration on IMADA Connected is required and please note that only Next Series products are available for the product registration. An Internet connection is required in this process.

* Some specification such as operating environment is different from Downloadable version and CD version.

* Please refer to the individual specification sheets for details.

[Custom-made]

We can offer additional functions or modifying software to improve data management method and measurement efficiency according to your needs. Contact us for details.
Examples:

Function	Description
Pass/Fail Judgment	The software will judge the test result according to the set value.
Automatic Capture Functions	The software will automatically capture the needed graph based on the set values.
CSV Auto Save	The CSV file will be saved automatically after the measurement.
Trigger One-Touch Setting	The trigger function can be activated with ease.

[Cautions]

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and do not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- A force gauge (sold separately) is required to use this product.
- This product is protected by Universal Copyright Convention and Japanese Copyright Act.
- Returns are not acceptable. Check the specification, working conditions and operating environment before purchase.

SHRADDHA IMPEX
Authorized Distributor

Email: shraddhaimpex@gmail.com / sales@shraddhaimpex.net
Web: www.shraddhaimpex.net
Contact: +919819530352 / +918591279918

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