

Vision System FH Series

Simulation Software User's Guide



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# **Introduction**

The simulation software included on the Vision System FH Series software CD-ROM allows you to try out the operation of the Vision System FH/FZ5 series on a Windows PC. In addition to the sample images stored in the software, you can also operate with images you have taken with a digital camera or other images or images saved by FZ · FZ2 · FZ3 · FZ4 · FZ5 · FH series controllers.

(Please refer to "Supported Image Formats" in this manual for the image formats that can be used.)

# **Recommended Operating Environment**

■ Recommended Operating Environment

CPU :Intel Pentium Processor (SSE2 or higher)

OS :Windows 7 (32bit / 64bit),

:Windows 8 (32bit / 64bit)

.NET Framework :.NET Framework 3.5 or higher

Memory :At least 2 GB RAM

Available disk space :At least 2 GB

Browser :Microsoft Internet Explorer 6.0 or later

Display :XGA（1024×768）, True Color（32bit）

Network :10BASE-T (100BASE-TX recommended)

Optical drive :CD/DVD drive

# **Supported Image Formats**

The simulation software supports the following image file formats. Please use it after first saving to USB flash, or other memory and copying to a folder created in a specified location.

(For details on how to create folders, please see the chapter on "Using the simulation software" in this manual)

・File formats: bmp, jpg, ifz (format supported by FZ2・FZ3・FZ4・FZ5・FH controllers specifically for logging image functions), byr (format supported by FZ controller specifically for its logging image functions), bfz (a logging image file format supported in FH software version 5.50 or later, in which bitmap format image files are organized as folders within the image file) , jfz (a logging image file format supported in FH software version 5.60 or later, in which bitmap format image files are organized as folders within the image file)

・Color :256 colors (Monochrome) or 24bit (Color)

・File names :Half-width alphanumeric characters 3

# **Precautions for Correct Use**

This simulation software is software for the purpose of trying out FH/FZ5 controller functions on a personal computer. Please note that there are operations different from the actual FH/FZ5 series.

■ Operations that are not supported in simulation software

・ Image capture or measurement by connecting cameras

・ Using and checking the I/O monitor

・ Data output using the Result output processing item

・The use of a DI conditional branch as in input to the Conditional Branch processing item

・ Saving data in the Controller

■ Operation differences from Vision System FH/FZ5 series controllers

・ Measurement

→ Only measurement from a file image and not measurement through a camera connection can be done.

(For details on file image measurement, please refer to "Using the Simulation Software (Inspecting Images)" in this manual.)

・ Camera Image Input Settings

→ It is only possible to change the set values.

・ Saving data to the controller memory

→ When [Data Save] is used for saving Scene data, Scene group data, or [System] setting data, the data is saved in the following folder.

C:¥Documents and Settings¥<User name>¥My Documents¥OMRON FZ¥SettingData

# **Precautions for Correct Use**

■ Other Precautions

・ This simulation software allows you to set the "Operation Mode", but this function cannot be used with the models FZ5-6 □□ (-10) and L3 □□ (-10).

・ This simulation software can load scene data and system data created by FH/FZ 5 series controllers. Similarly, Scene data and System data created with this simulation software can be used in the FH/FZ5 series controllers.

→ However, since the "path name" on the FH/FZ5 series controller may be different in a setting (such as Logging setting and capture settings) that includes "path name", resetting may be necessary.

・ Due to the difference in memory capacity, you may not be able to load the data created with this simulation software to the FH/FZ5 series controller.

→ Consider the settings and scene content, reduce the amount of memory required and try loading again.

・ Similarly, due to the difference in memory capacity, scene data containing many registered image processing or conversion related processing units may load to the FH/FZ5 series controller, but during operation may cause a "NG (Insufficient memory)" condition and may not be able to measure correctly.

→ In this case also, consider the settings and scene content, reduce the amount of memory required and try loading again.

# **Starting the Simulation Software**

① Insert the CD-ROM in to the CD-ROM drive.

→ The Startup screen will be automatically displayed.

② Click on [Install simulation software].

→ The simulator software installer will start automatically. Follow the instructions on the screen to install.



※ When launching from CD-ROM, please read the "Readme" file.

※ If nothing starts after inserting the CD-ROM, start the initial screen using the following procedure. 1. Double-click "My Computer" on the desktop and double-click the icon of the displayed CD-ROM.

2. Double click "top.html".

3. The Startup screen will display.

※ Microsoft Visual C ++ 2008 Redistributable Package and Microsoft .NET Framework must be installed to start the simulation software

※ Make sure to install the FZ/FH/FJ Launcher before attempting to install the Simulation software.

# **Using the Simulation Software**

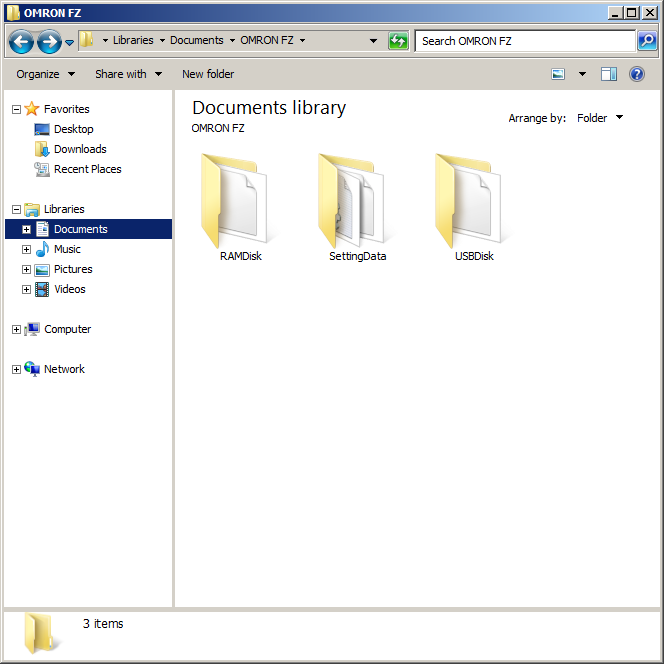
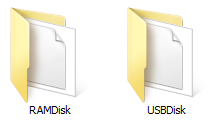
**■ Loading Inspection Images**

Specify the image you wish to inspect. To measure images saved from a digital camera etc. or images saved by the FZ, FZ2, FZ3, FZ4, FZ5, FH controller, store the images in any folder created in advance.

① When you start the simulation software, the "OMRON FZ" folder is automatically created in "My Documents".

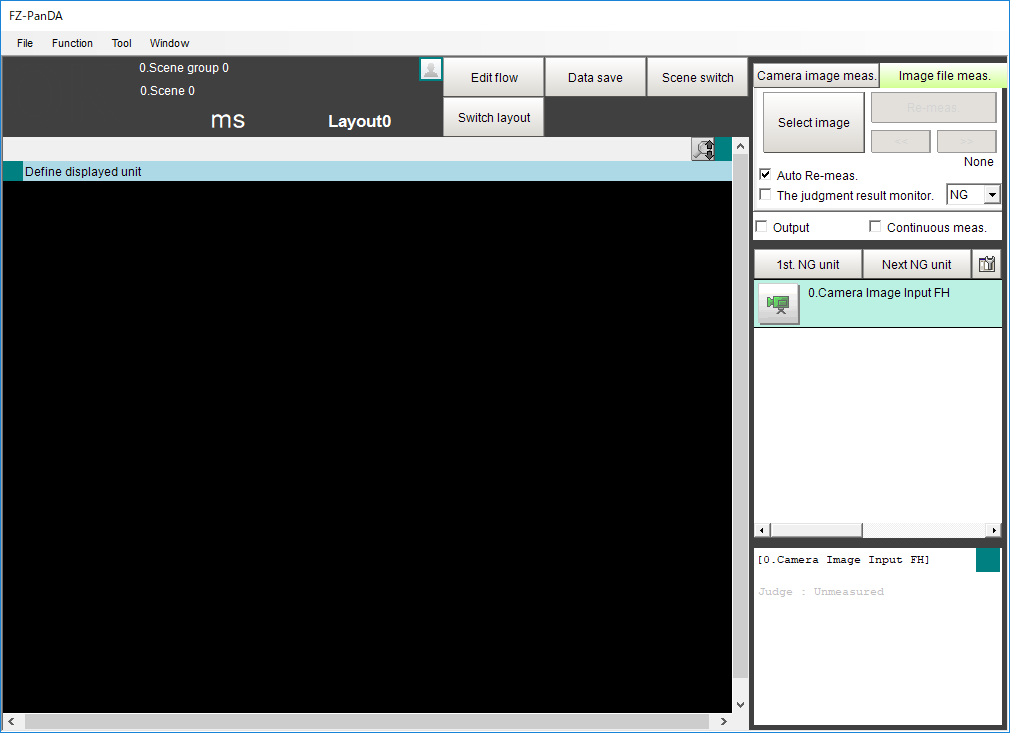
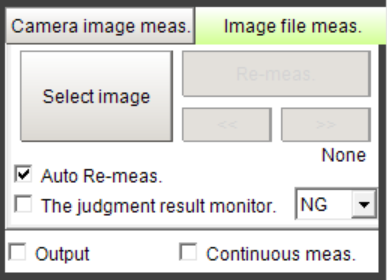
Store the image to be measured in the following two folders directly under "OMRON FZ". C:¥Documents and Settings¥<User name>¥My Documents¥OMRON FZ¥RAMDisk, or C:¥Documents and Settings¥<User name>¥My Documents¥OMRON FZ¥USBDisk

(For Windows versions after Windows7, it will be C:/Users/<User name>/Documents/OMRON FZ)

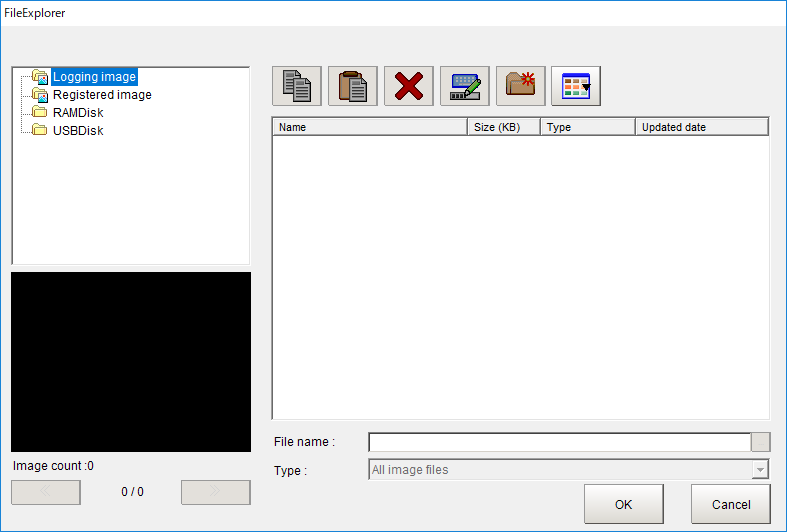


② Click the [Image file meas.] tab on the right side of the main screen.

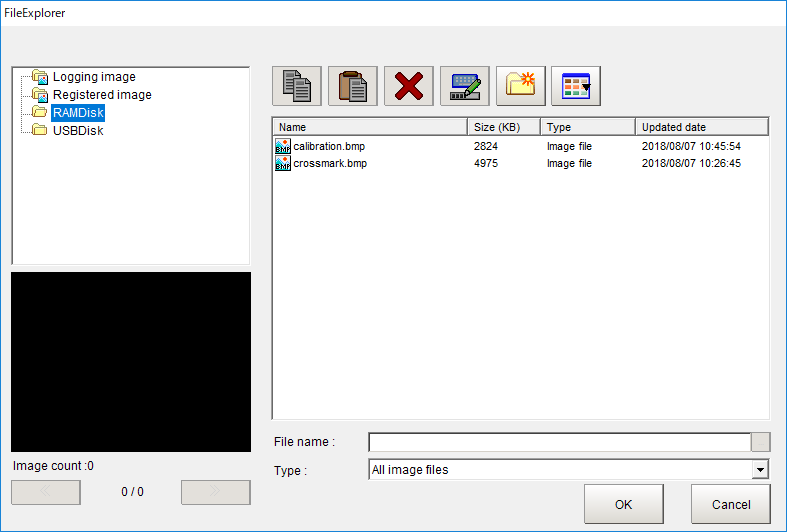
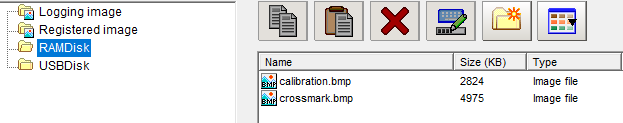
→ Click the [Select image] button.



③ FileExplorer is launched.

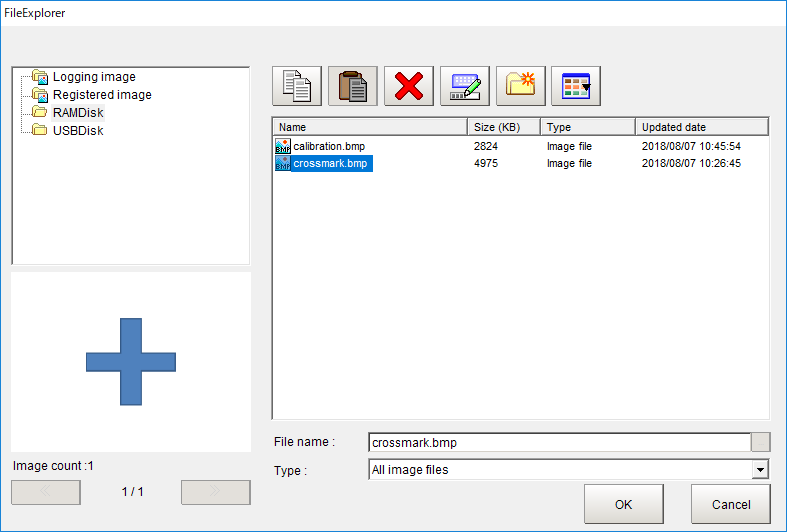


④ Click on any folder in the left window and select the image to measure.

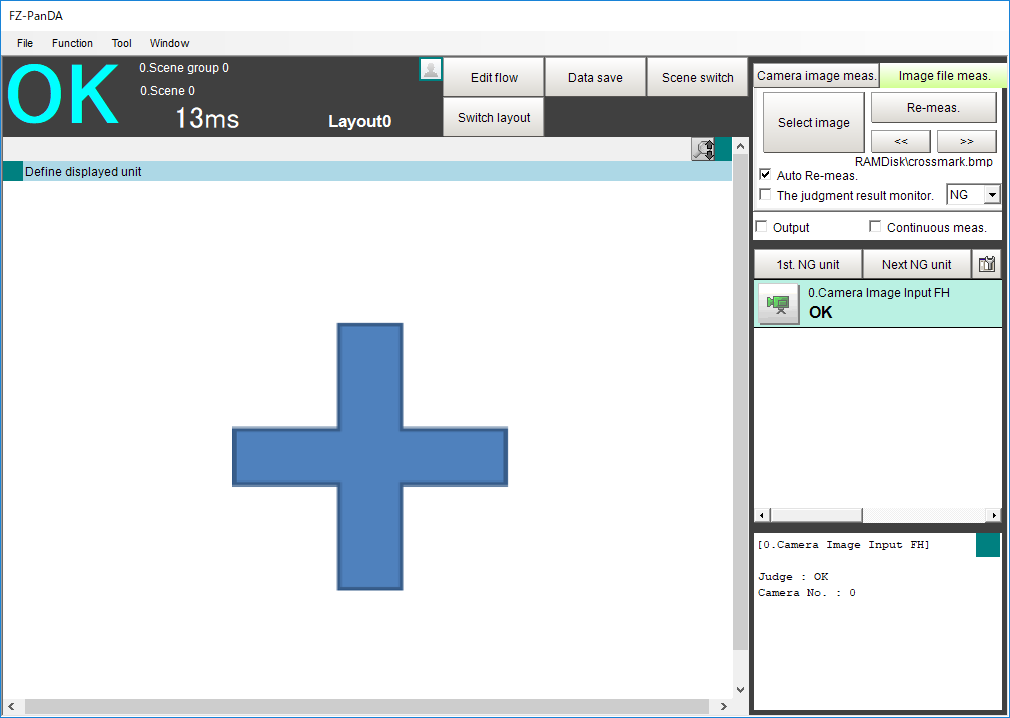


⑤ Confirm the file name and click [OK].

→ Returns to [Select image] screen.

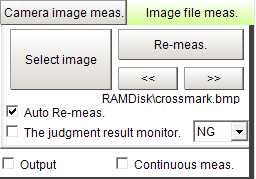
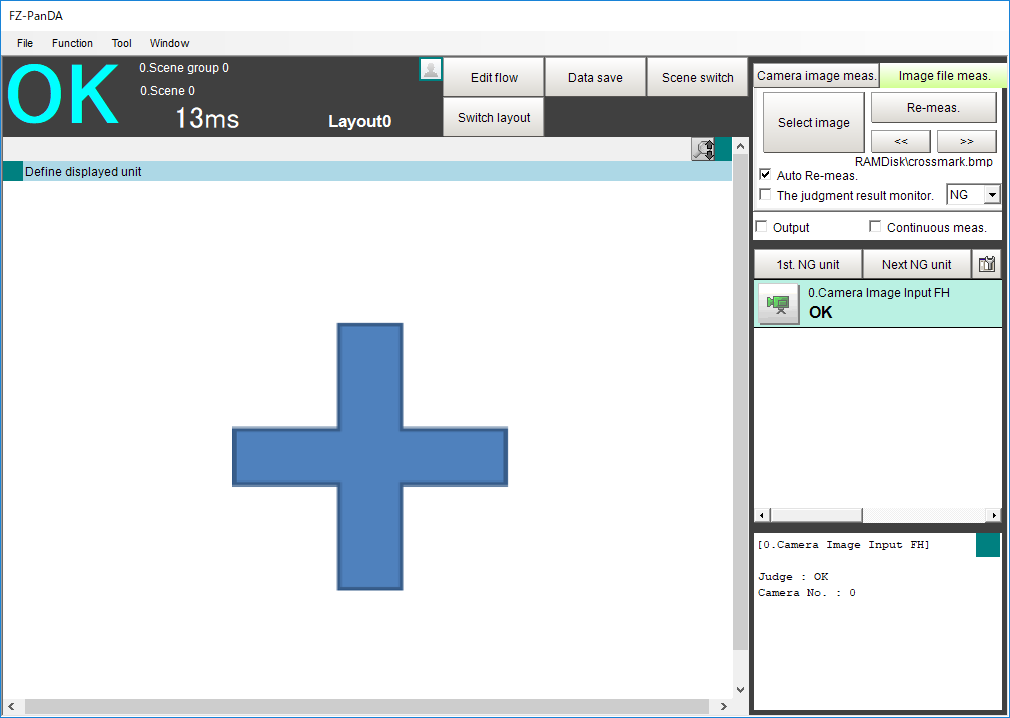


⑥ Click [OK]

→ The image is selected. Returns to the main screen

⑦ Click the [Re-meas.] button.

→ Measurement is started on selected image.

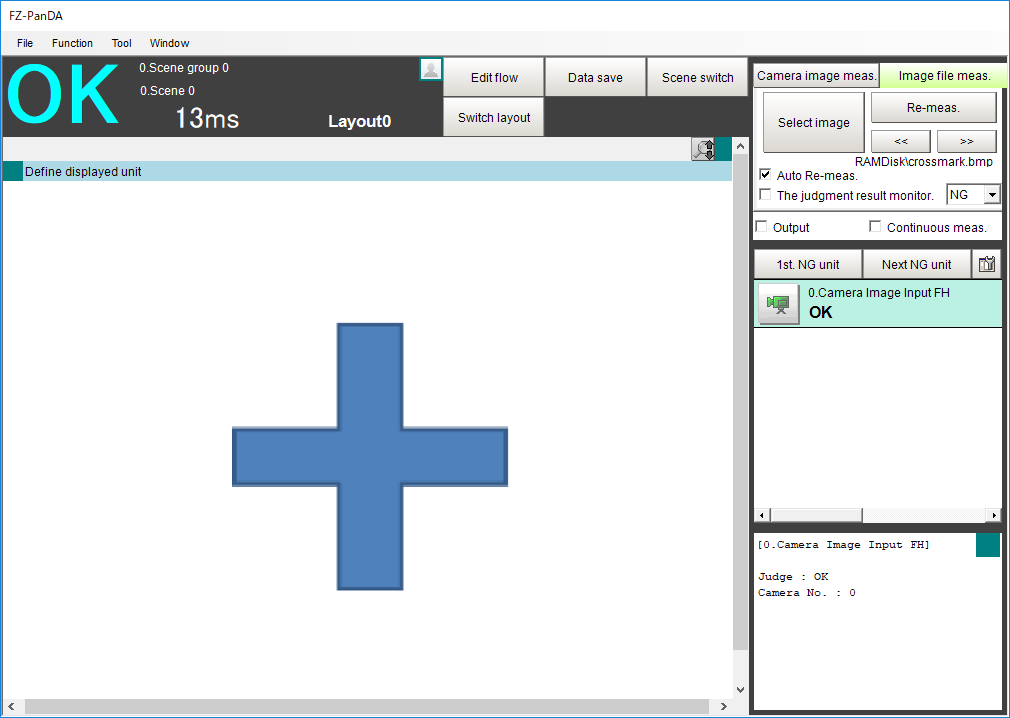


**■ Editing Scenes (Flow)**

Here, we will explain by using the [Search] measurement as an example. For detailed information on other Edit flow settings, measurement parameters etc., please refer to the User's Manual or Processing Item Function Reference Manual.

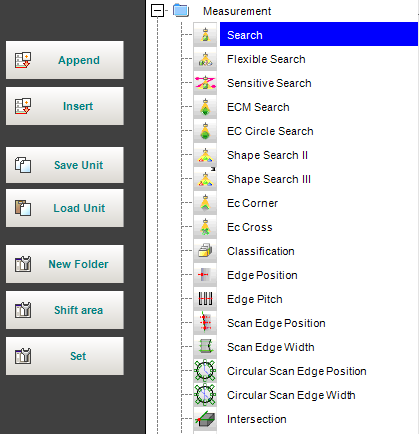
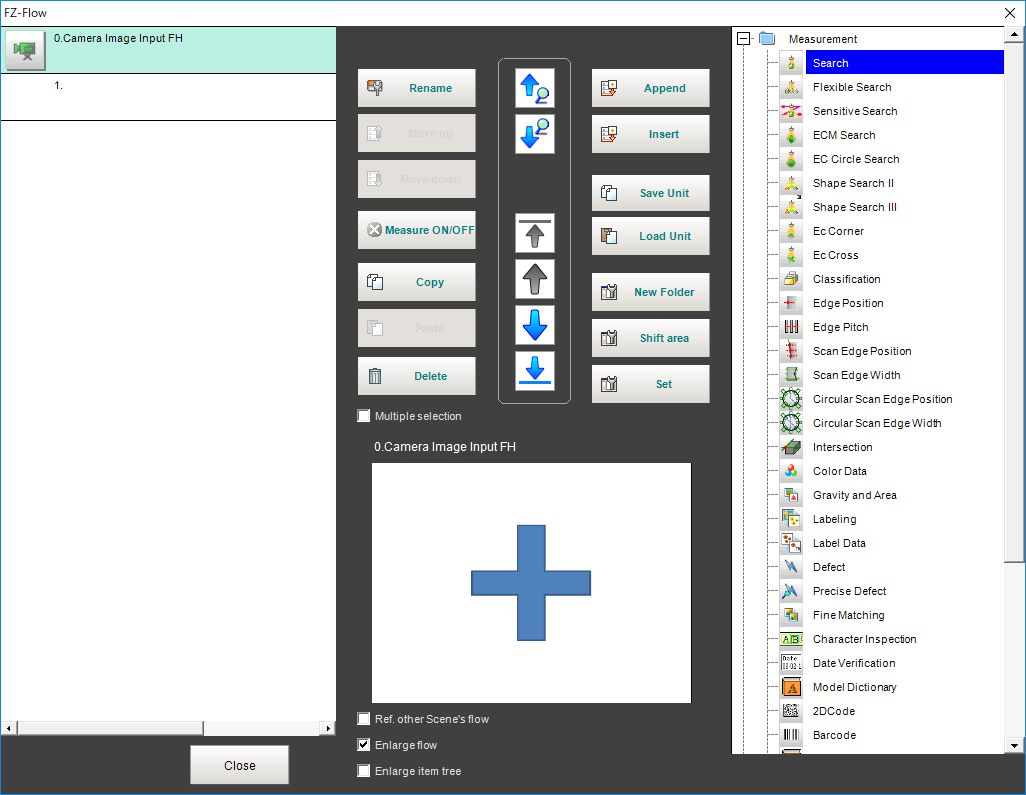
① Click the [Edit flow] button.

→ The [Flow] screen is displayed.



② From the Processing item tree menu on the right side of the [Flow] screen, select [Search]. Click [Append].

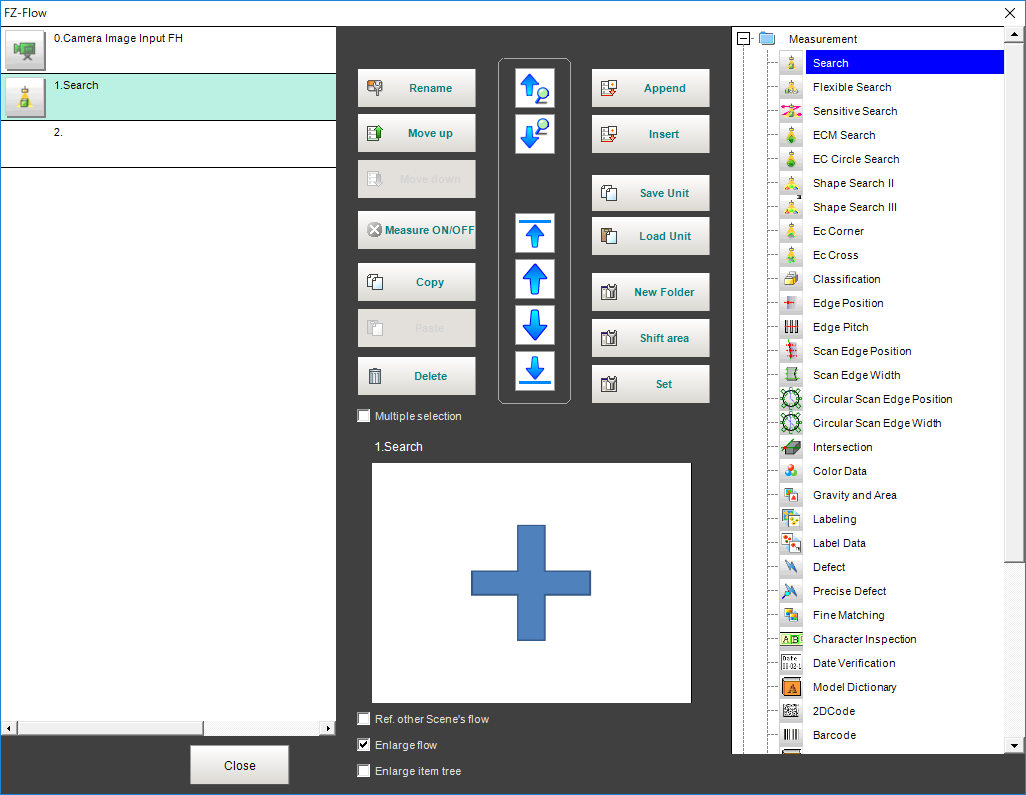
→ The selected processing item is added at the bottom of the unit list (Flow) on the left side of the screen.

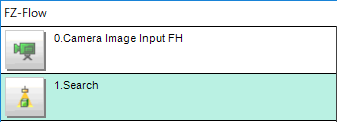


Repeat the above steps to add more processing items. Processing items can also be moved by clicking and dragging them. 11

③ In the Unit list (Flow), click on [Search].

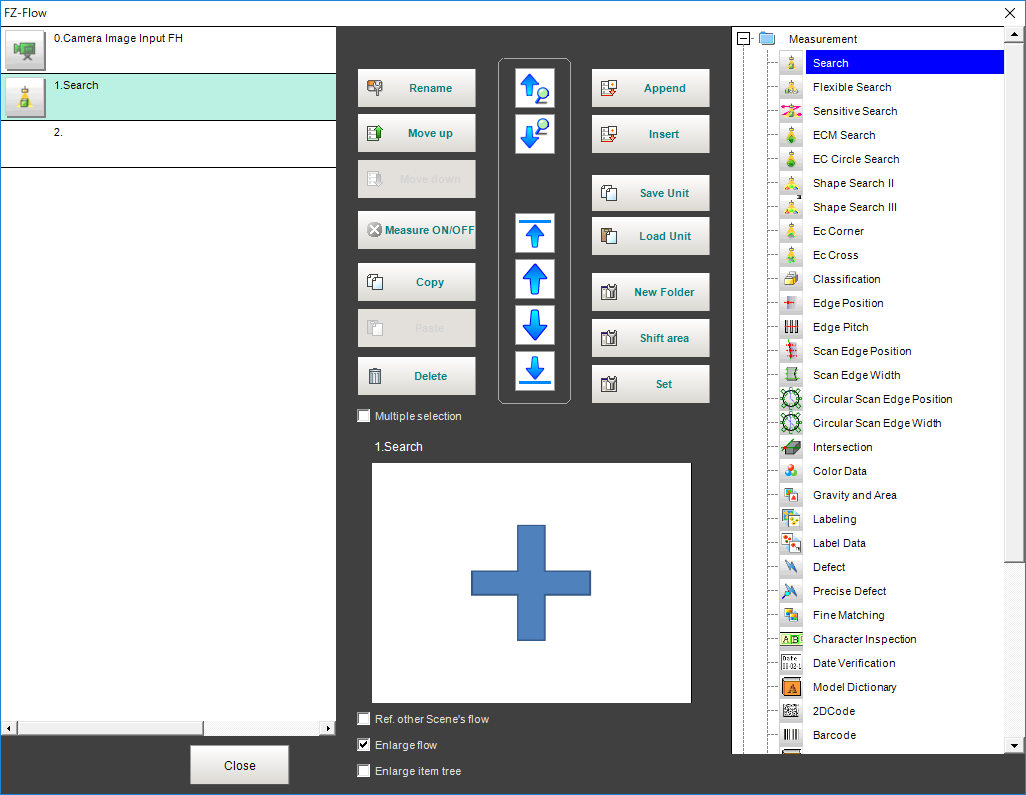
→ [Search] is selected.





④ Click on [Settings]

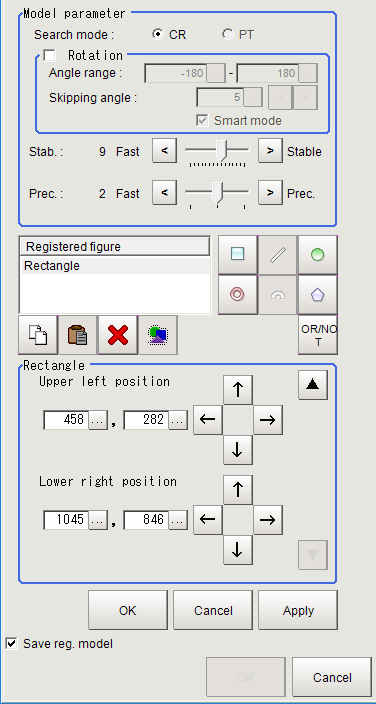
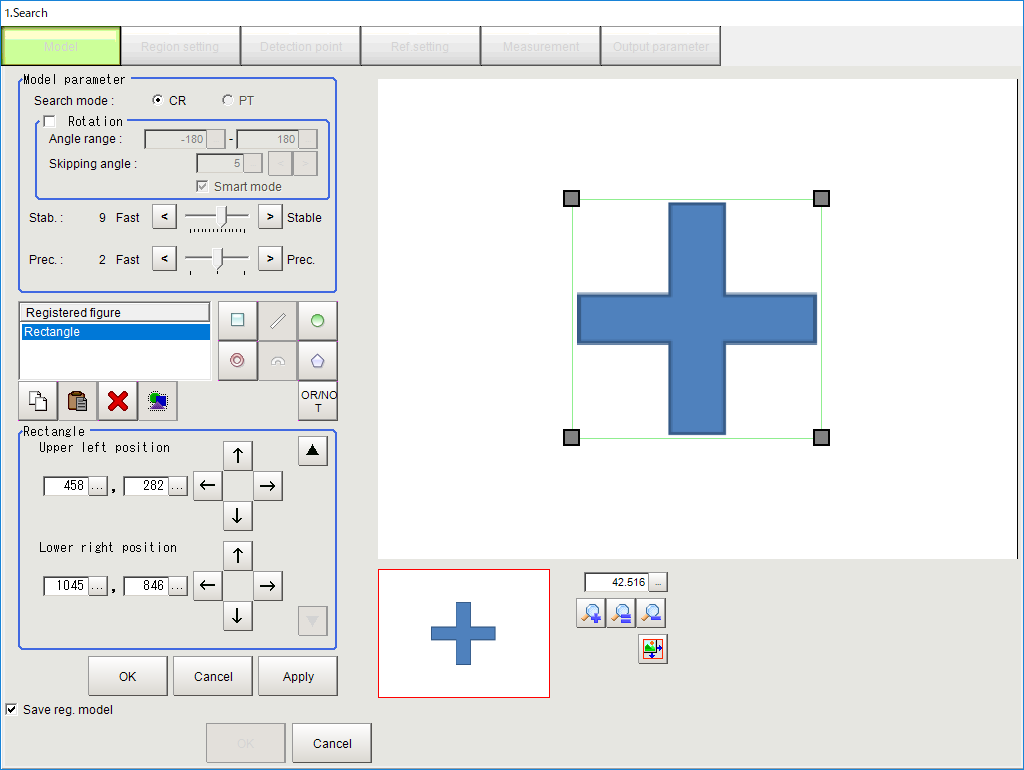
→ The property dialog box for the unit is displayed.



※ Similarly, you can display the processing item property setting screen by clicking the processing item icon on the unit list.

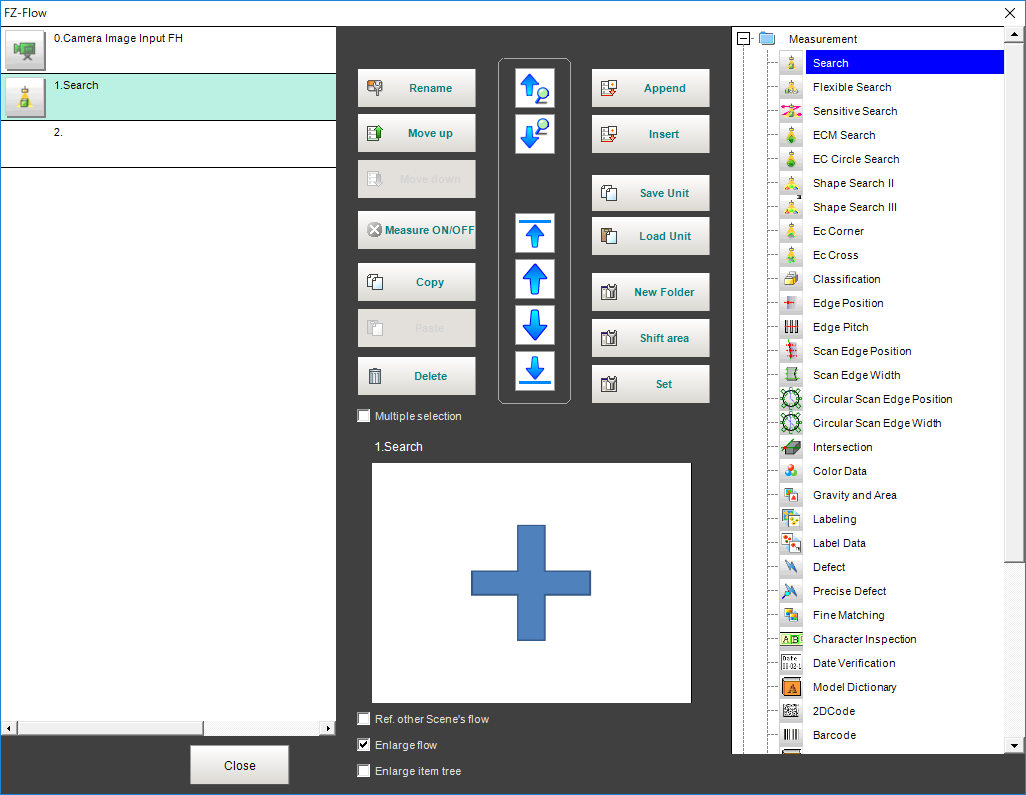
12

⑤ Set the properties for the processing item. For details on processing items, please refer to the Processing Item Function Reference Manual.



⑥ When you complete settings, click [Close].

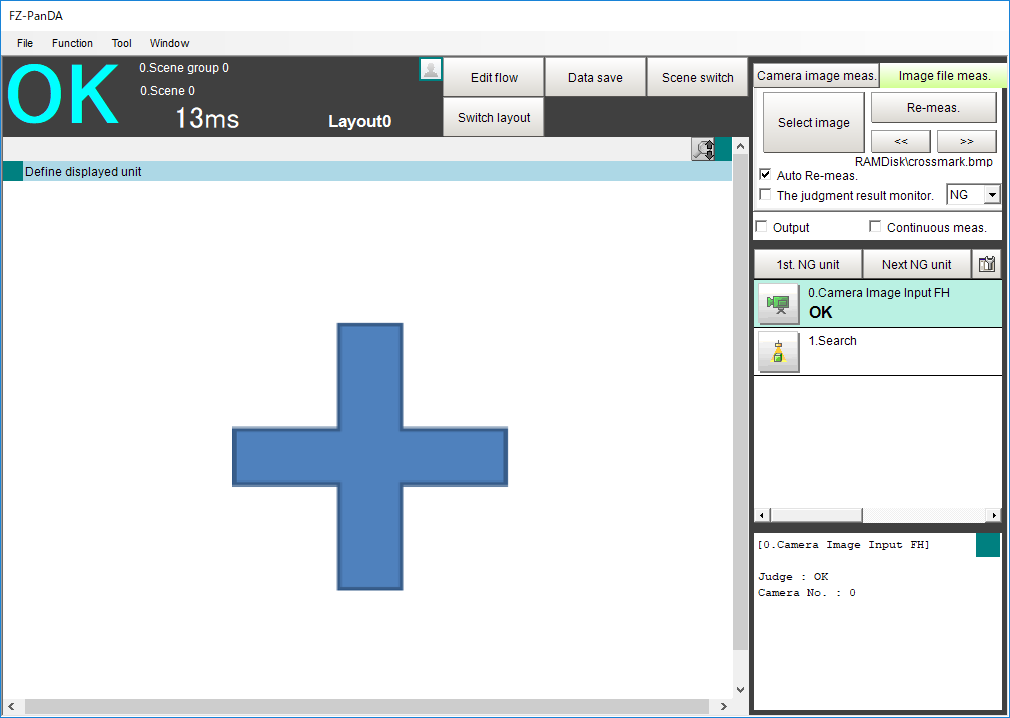
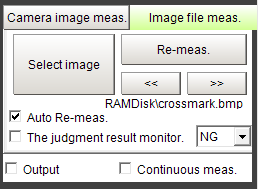
→ Returns to the Measurement screen



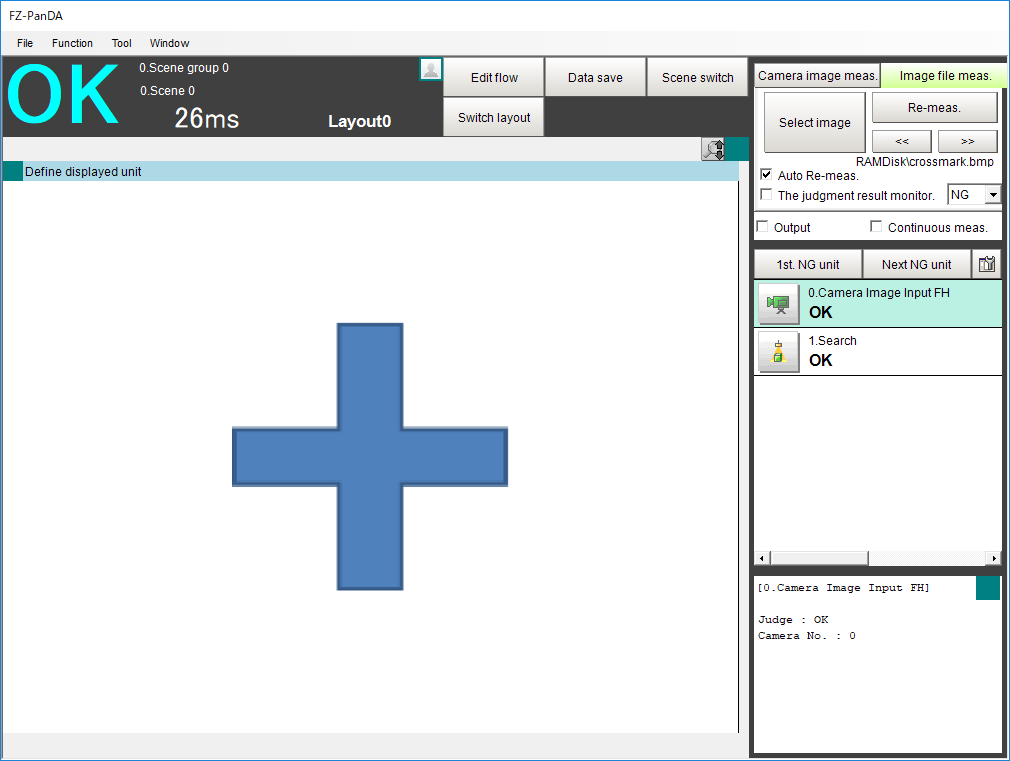
13

**■ Measuring Images**

Click the [Re-meas.] button.



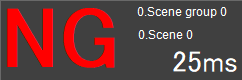
→ The measurement results and processing time are displayed on the upper left of the screen.



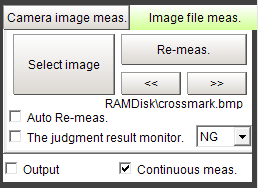
**OK Result**



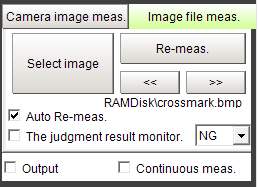
**NG Result**



※ The displayed processing time is only an approximate time. It will vary depending on the PC environment.



* When [Continuous meas.] is checked, continuous measurement is performed automatically for all images in the specified folder.
* When [Auto Re-meas.] is checked, clicking [>>] will automatically remeasure the next image, and clicking [<<] will automatically remeasure the previous image.



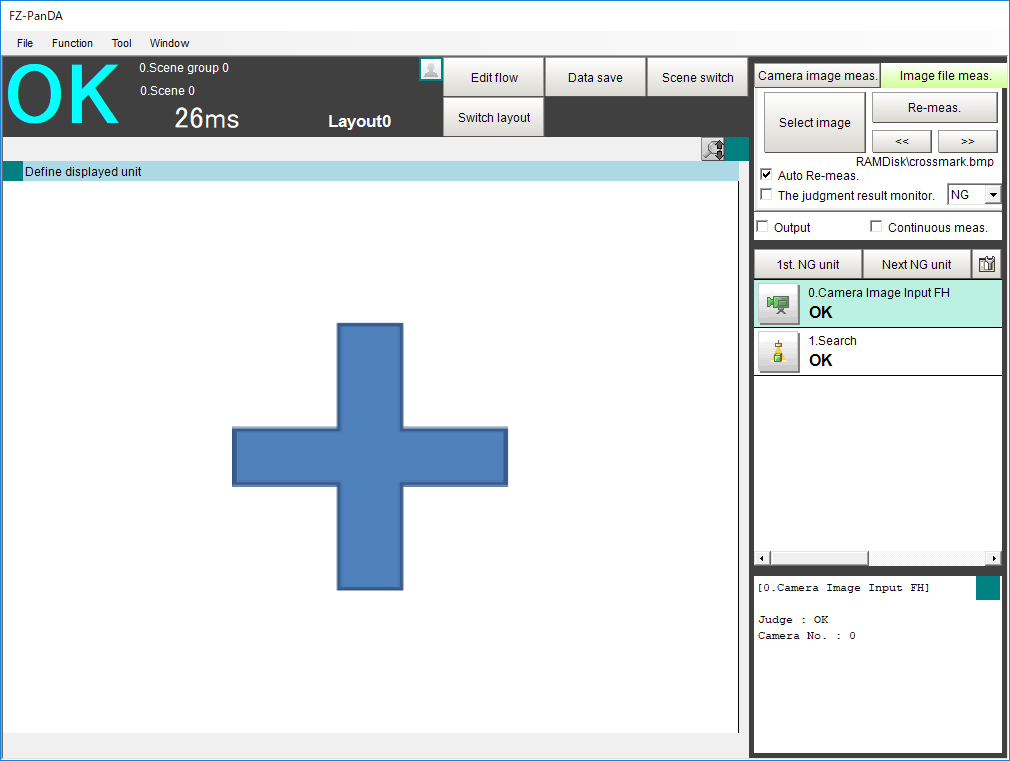
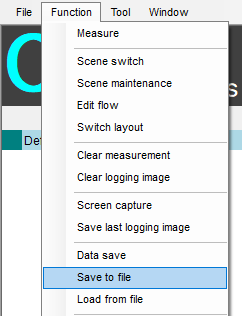
**■ Saving Scene and Scene Group Data (Save)**

It is possible to save conditions you have set to USB memory, etc. The saved Scene group and Scene data can be loaded in to either the Vision System FH/FZ5 series controller, or simulation software.

※ Since the amount of memory that can be used depends on the environment of the personal computer, depending on the size of the created data, it may not be possible to use it on the Vision System FH/FZ5 series controller.

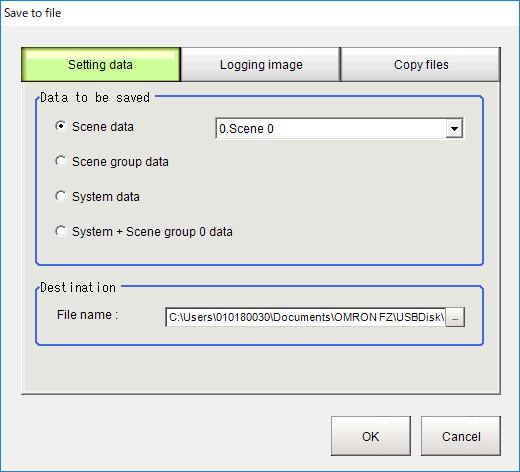
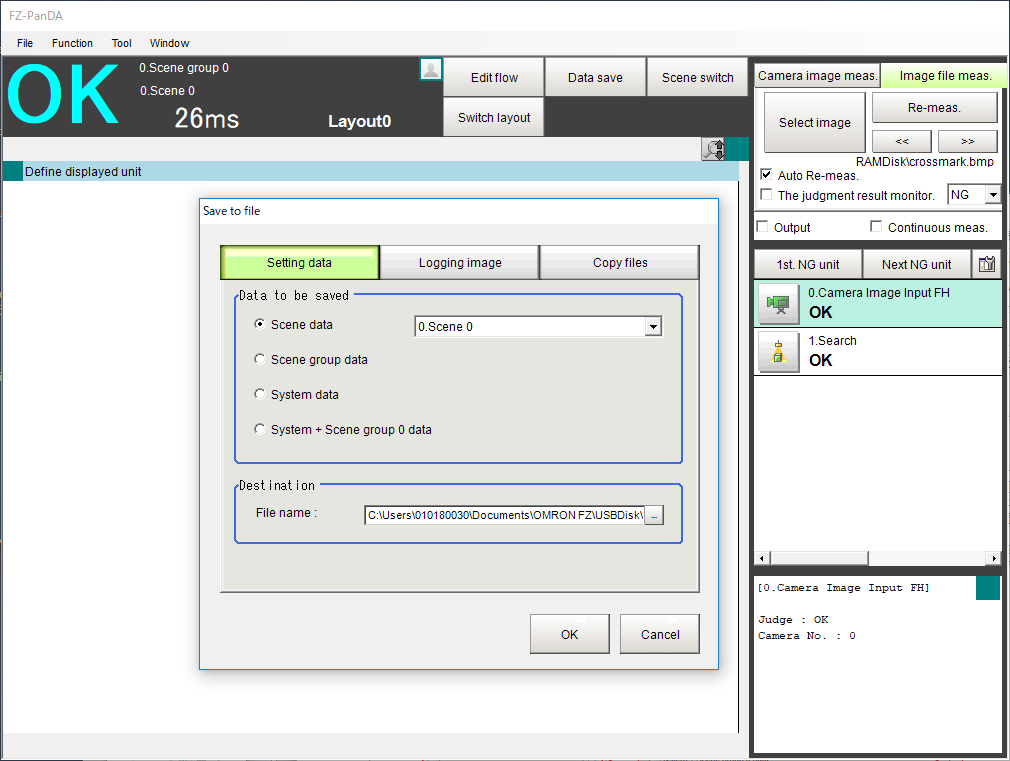
① Click on [Function] - [Save to file].

→ The [Save to file] dialog box is displayed.



② Select the tab of the data to be saved and select the save target and save destination. After confirming, click [OK].

→ Save is complete.

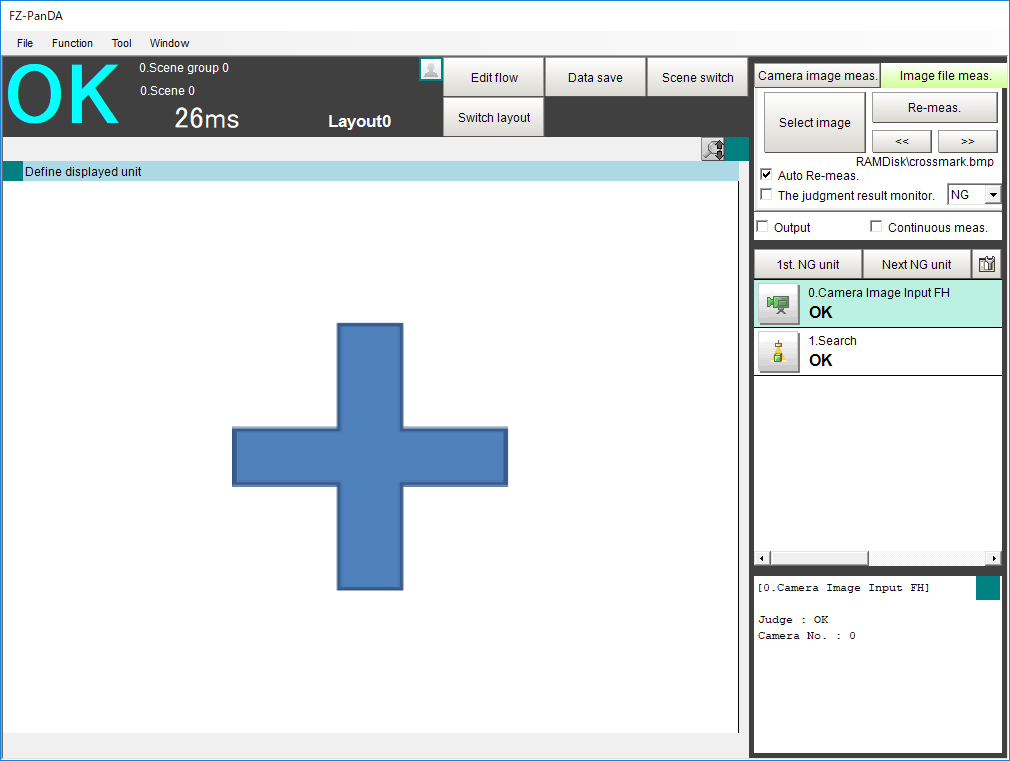
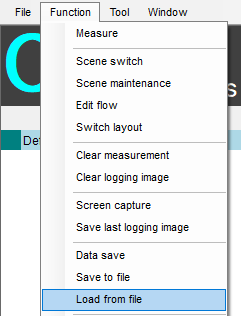


**■ Loading Scene and Scene Group Data (Load)**

Load the scene group, or scene data that has been saved.

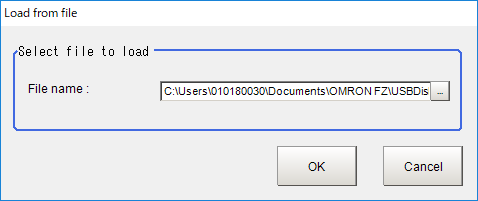
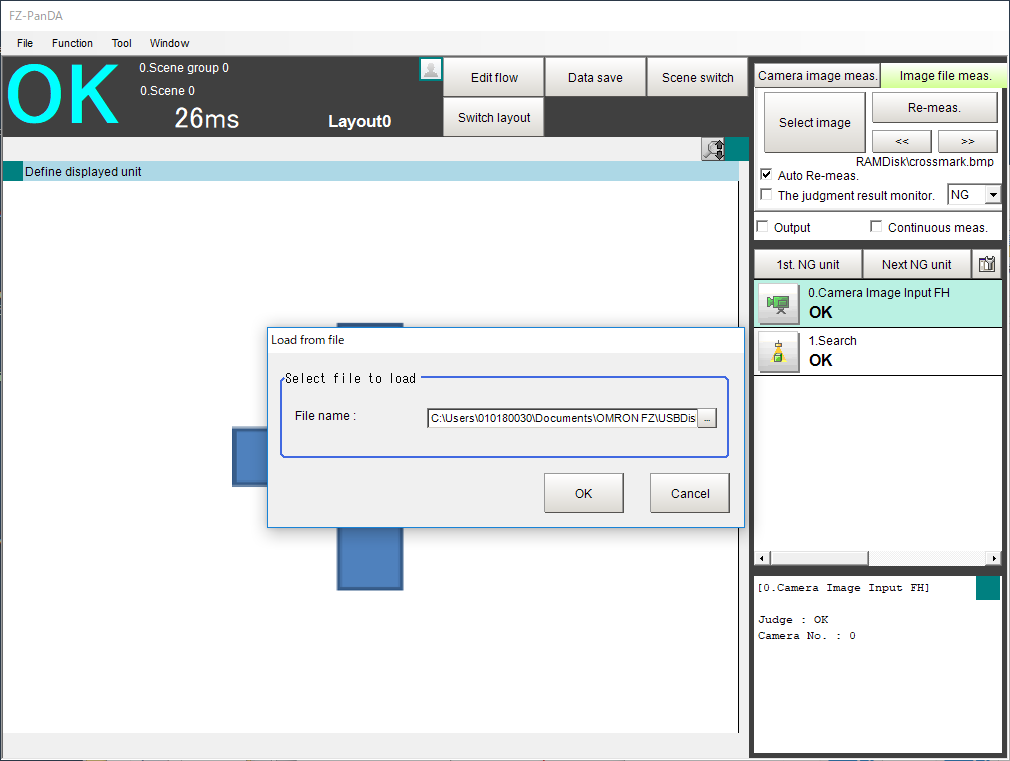
① Click on [Function] - [Load from file]

→ The [Load from file] dialog box is displayed.

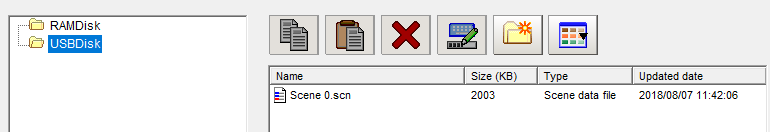
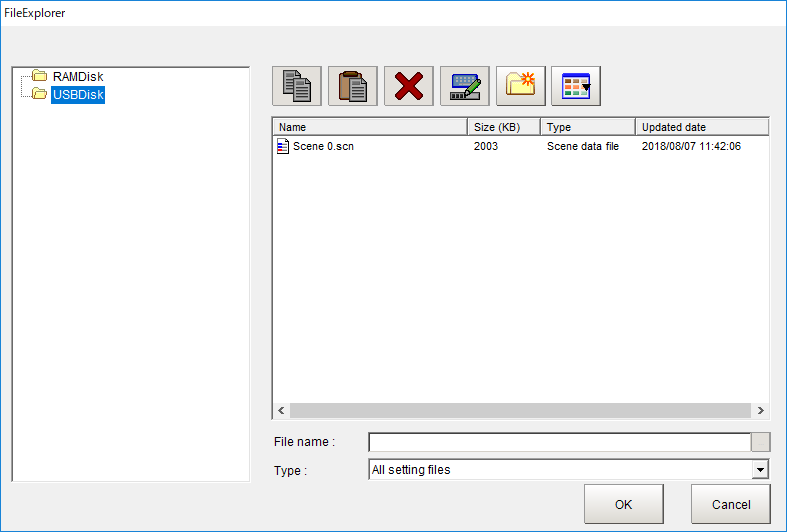


② Click on [．．．]

→ The file selection screen is displayed.

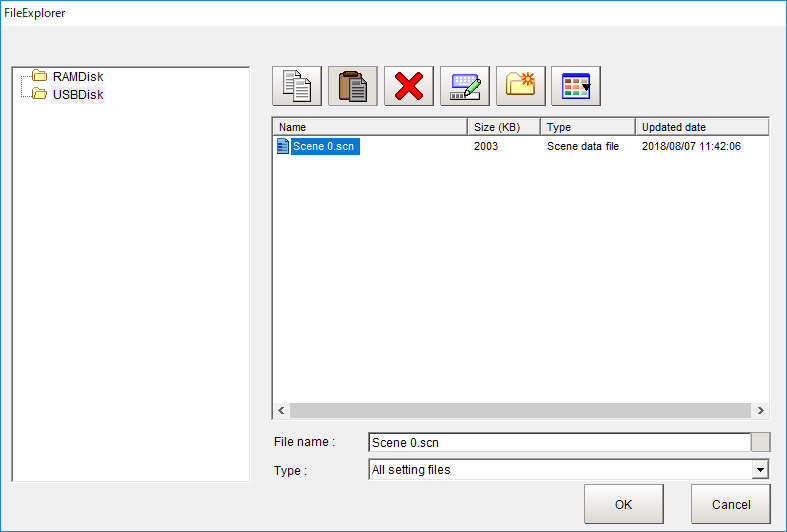


③ Click the desired folder from the left side and select the data you want to load.



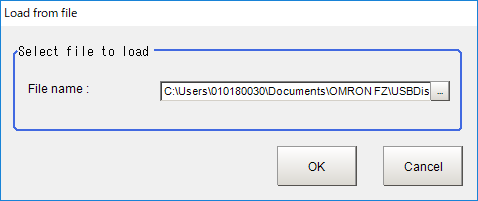
④ Confirm the file name and click [OK].

→ Returns to the Load from file screen.



⑤ Click [OK]

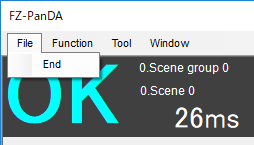
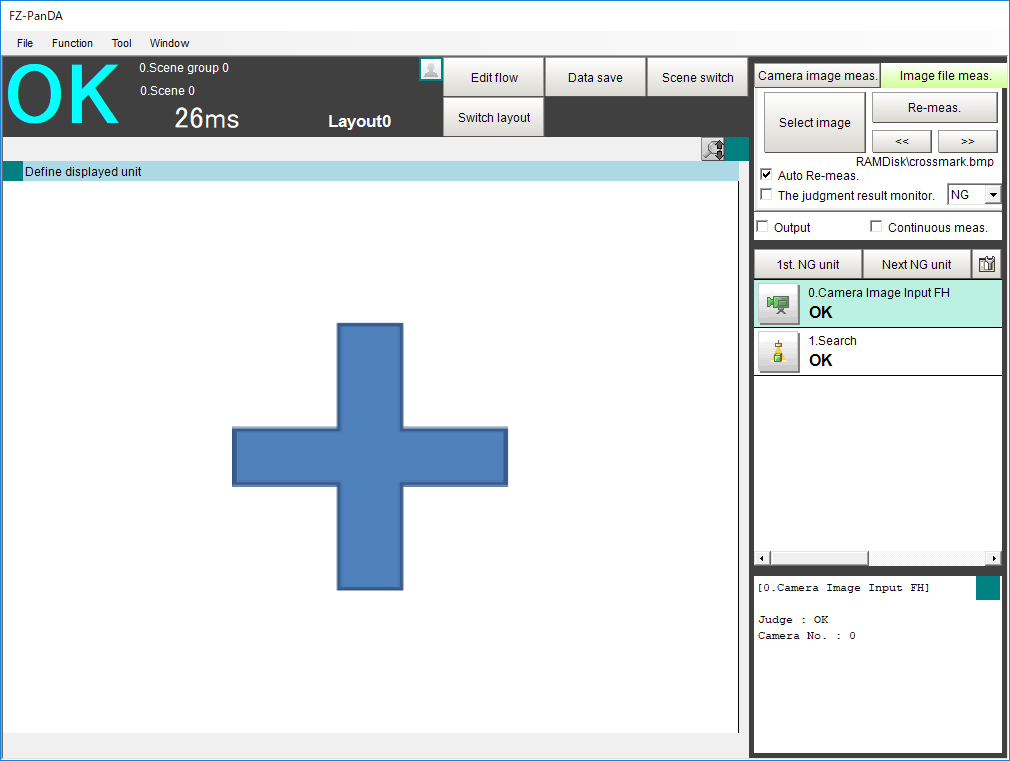
→ The file is selected. Returns to the main screen



# **Closing the Simulation Software**

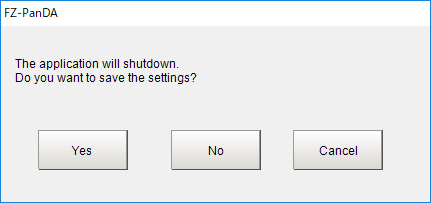
① Click on [File] - [Exit].

→ The Exit Application confirmation screen is displayed.



② Click the OK button.

→ Any setting changes are saved and the application closes.



# **Registering the License**

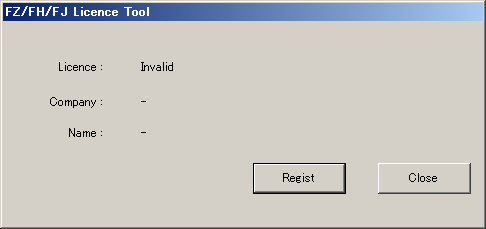
[License error!] will be displayed at startup after 30 days or more has elapsed since installing this software, and it can no longer be used. Please register your license to continue using the software.

Use the "FZ/FH/FJ License Tool" to enter the license number. The "FZ\_FH\_FJ License Tool" must be run using "Run as Administrator".

① In the Windows Task bar, click the [Start] button and then click [All Programs].

② Click on [OMRON] - [FZ\_FH\_FJ] - [FZ\_FH\_FJ License Tool]

→ The FZ/FH/FJ License Tool screen is displayed.

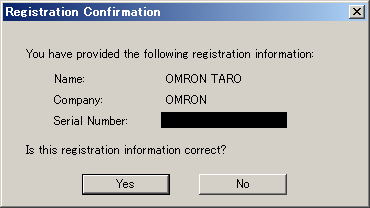


③ Click the [Regist] button.

→ The Setup screen is displayed.

④ On the Setup screen, enter the required information in to the Name, Company, License fields and then click the [Next] button.

→ The Registration Confirmation screen is displayed.



⑤ Click the [Yes] button.

→ If [License:valid] is displayed, input has been completed correctly.



⑥ Click the [Close] button. The window will close.

# **Version Information / Revision History**

**● Simulation Software Version Information**

|  |  |  |
| --- | --- | --- |
| Date | Simulation software version | Controller |
| Aug. 2018 | 6.11 | FH controller Ver.6.11 |
| July 2018 | 6.10 | FH controller Ver.6.10 |
| April 2017 | 5.71 | FH/FZ5 controller Ver.5.71 |
| Dec. 2015 | 5.52 | FH/FZ5 controller Ver.5.52 |
| Feb. 2014 | 5.20 | FH/FZ5 controller Ver.5.20 |
| Jan. 2012 | 4.10 | FZ4 controller Ver.4.10 |
| Dec. 2010 | 3.40 | FZ3 controller Ver.3.40 |
| June 2010 | 3.21 | FZ3 controller Ver.3.21 |
| Feb. 2010 | 3.14 | FZ3 controller Ver.3.14 |
| Jan. 2010 | 3.12 | FZ3 controller Ver.3.12 |
| Jan. 2009 | 3.00 | FZ3 controller Ver.3.00 |