
**User's
Manual**

**Application software
CA700 Application
User's Manual**

This user's manual explains the handling precautions, features, and operating procedures of the CA700 Application. To ensure correct use, please read this manual thoroughly before operation.

After reading this manual, keep it in a safe place.

For the handling precautions, features, operating procedures, and the like of the CA700, see the relevant user's manuals.

For information on how to use Windows, see the relevant manuals.

Notes

- The contents of this manual are subject to change without prior notice as a result of continuing improvements to the software's performance and functionality. The figures given in this manual may differ from those that actually appear on your screen.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your nearest YOKOGAWA dealer.
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Revisions

- March 2016 1st Edition
- June 2017 2nd Edition
- October 2017 3rd Edition
- October 2018 4th Edition

1. Notes about Usage

Disclaimers

YOKOGAWA assumes that you have agreed to the following items when you install the software.

- YOKOGAWA assumes no responsibility for any problems that arise from installing the software.
- YOKOGAWA assumes no responsibility for any and all damages that may occur directly or indirectly through the use of this software.
- This software is provided free of charge. However, the product is not guaranteed to be free of defects. In addition, you may not be able to query about problems with the software and solutions to these problems.
- All rights pertaining to the software—including property rights, ownership rights, and intellectual property rights—belong to Yokogawa Electric Corporation.

Notes on Using the Software

- To allow a CA700 to communicate with a PC through the CA700's USB interface, a USB driver must be installed in the PC.

The USB driver is contained in the CD included with the CA700.

You can also download it from the YOKOGAWA website.

- Do not perform the following operations while using the software. Doing so may cause errors.

Using another software application to operate the CA700

Operating the CA700 directly

- The software may not be able to continue if the PC enters standby or hibernation mode. Disable standby and hibernation modes when you use the software.
- If a connection error occurs, turn off the CA700 and then turn it back on.

2. Product Overview

Software Features

This software provides the following features.

- Collectively manage calibration conditions for CA700 as projects
- Apply the calibration conditions created with this software to the CA700
- Save the calibration conditions to a CSV file
- Rename As Found(data before adjustment) and As Left(data after adjustment) files measured with the CA700

Project

A project is the largest management unit for managing calibration conditions. 20 calibration conditions for CA700 are managed as a group and 20 groups as a single project.

Compatible Measuring Instruments

This software supports the following YOKOGAWA measuring instruments.

- CA700 Pressure Calibrator

Note

For the handling precautions, features, and operating procedures of the CA700, see the CA700 User's Manual.

3. PC System Requirements

PC

- CPU: Dual core or more processor
- Memory: 2 GB or more recommended
- HDD: 10 GB free space or more
- USB port (TypeA)

Operating System

Windows 7, Windows 8, Windows8.1, or Windows 10

Display, Keyboard, and Mouse

- Resolution: 1366×768 dpi or higher
- OS: Operating system mentioned above

CA700

Application version	CA700 firmware version
1.01	1.03, 1.04
1.02	1.10, 1.11
1.03	1.20

Communication with an unsupported version of CA700 will result in an error.

Other

- Microsoft .NET Framework 4.0
- USB cable (type A to mini B)

4. Installing and Uninstalling the Software

Installation

Before installing the software, close all programs that are currently running.

The following procedure explains how to install the software on Windows 7. The windows that appear will vary depending on the operating system.

If you downloaded the software from the YOKOGAWA website, unzip the file in advance.

1. Turn on the PC and start Windows. Log on as an administrator.
2. Double-click setup.exe in the folder that you unzipped. The installer starts.



3. Follow the instructions on the screen, and then click **Next**.



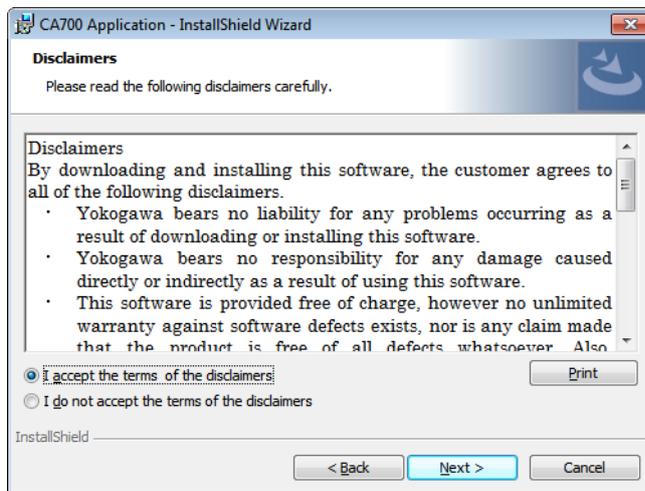
Note

If Microsoft .NET Framework 4.0 is not installed, it will be installed.

4 Installing and Uninstalling the Software

4. If you agree with the disclaimers, select **I accept the terms of the disclaimers**, and click **Next**. (The Japanese disclaimer is displayed after the English one.)

Select **I do not accept the terms of the disclaimers**, and then click **Cancel**. The installation will be canceled.



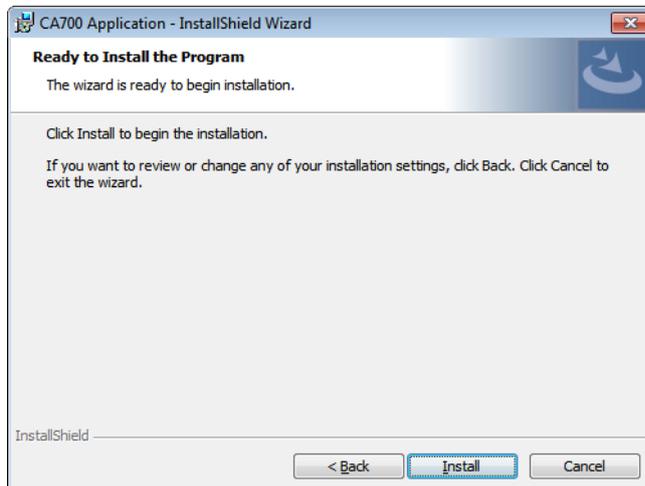
The installation destination is as follows:

- Windows 32-bit version
C: \ProgramFiles\Yokogawa\CA700 Application
- Windows 64-bit version
C: \ProgramFiles(x86)\Yokogawa\CA700 Application

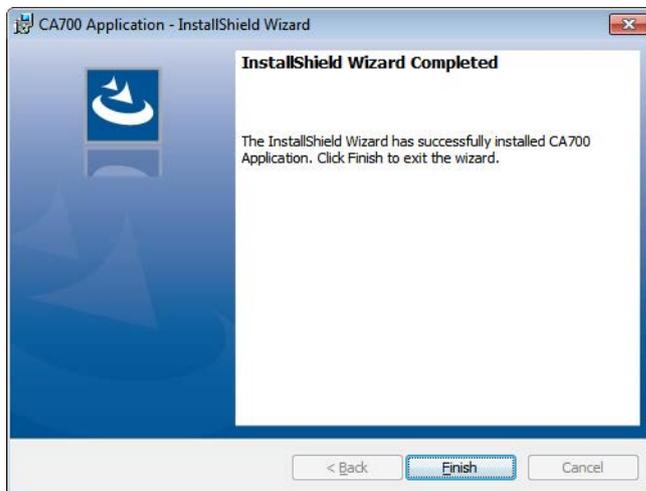
5. A window prompting you to start the installation appears. If there is no problem with the installation settings, click **Install**. The software installation starts.

Click **Back** if you want to change the installation settings.

Click **Cancel** to cancel the installation.



6. On Windows 7, the "User Account Control" window will appear during the installation. Click **Yes** to continue the installation. The installation will continue.
7. When the software installation finishes normally, the following window appears. Click **Finish** to complete the installation. Yokogawa > CA700 Application > CA700 Application will be added to All Programs in the Windows Start menu.



Uninstallation

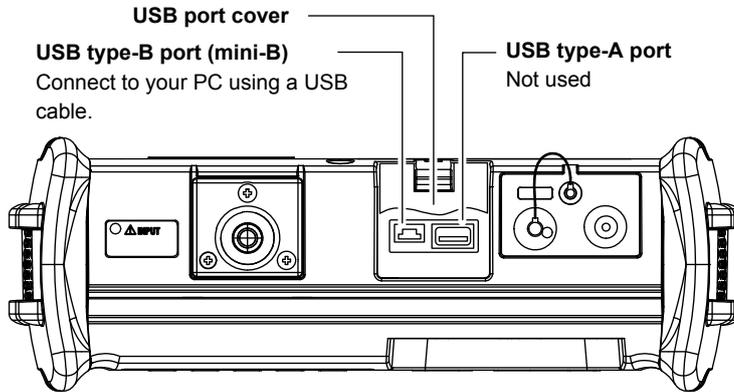
This section explains how to uninstall the software on Windows 7.

1. On the Windows Start menu, click **Control Panel**.
2. Select **Programs and Features** in the Control Panel.
3. On the Programs and Features window, select CA700 Application, right-click it, and select **Uninstall/Change**.
4. A uninstallation confirmation window appears.
Click **Yes**. Uninstallation of CA700 Application begins.
Click **No** to cancel the CA700 Application uninstallation.
5. On Windows 7, the "User Account Control" window will appear during the uninstallation. Click **Yes** to continue the installation. The uninstallation will continue.

5. Connecting the CA700 to a PC

Connecting to the CA700

Use the USB port for PC (USB mini-B port) at the top of the CA700 to connect to your PC.



USB Configuration on the CA700

Configure the CA700 USB according to section 5.2 in the user's manual (IM CA700-01EN).

When Sending Calibration Conditions from the PC to the CA700

USB Connection: Function

USB Function: Communication

When Copying Measured Data Stored in the CA700 to the PC and Renaming It

USB Connection: Function

USB Function: Mass Storage

6. Starting and Exiting the Software

Preparation before Starting the Software

Do the following before you start the software.

- Turn on the CA700.
- Connect the CA700 to the PC (see chapter 5).

Starting the Software

1. To start the software, click the Start button, All Programs, Yokogawa, CA700 Application, and then CA700 Application.

This software start using the last settings. The first time you start the software after installation, the software will start using the default settings.

The main menu appears.

File menu

Copies group information

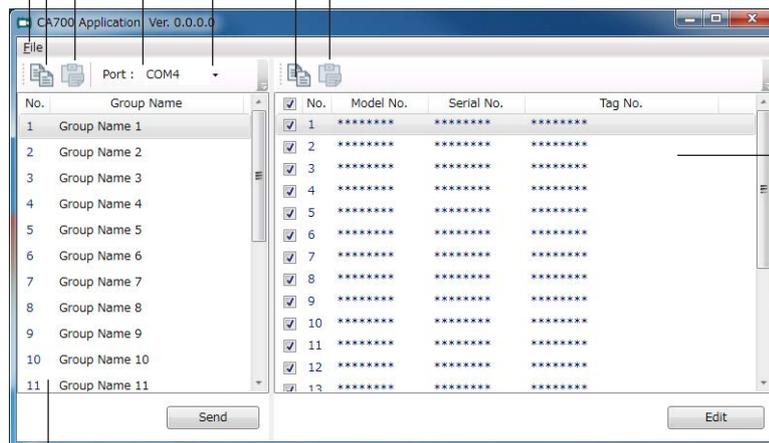
Pastes group information

CA700 communication port number

Shows a list of communication ports

Copies calibration conditions

Pastes calibration conditions

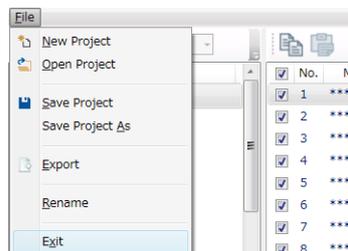


Calibration conditions registered in the selected group (up to 20)

Groups registered in the project (up to 20 groups)

Exiting the Software

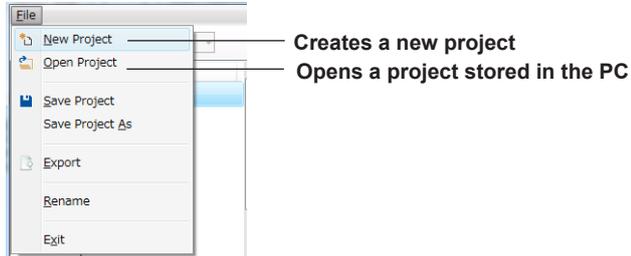
1. Click **Exit** on the **File** menu. The software will close.



7. Creating and Editing Projects

Opening a Project

1. Click **File** to open the File menu.

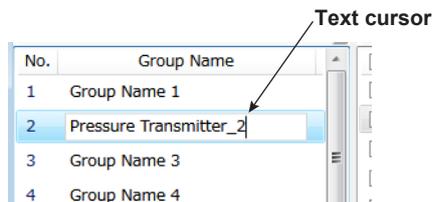


2. To create a new project, click **New Project**. To open a project that you created before and saved in the PC, click **Open Project**.
3. If you click Open Project, select the project you want to open.

Editing Groups

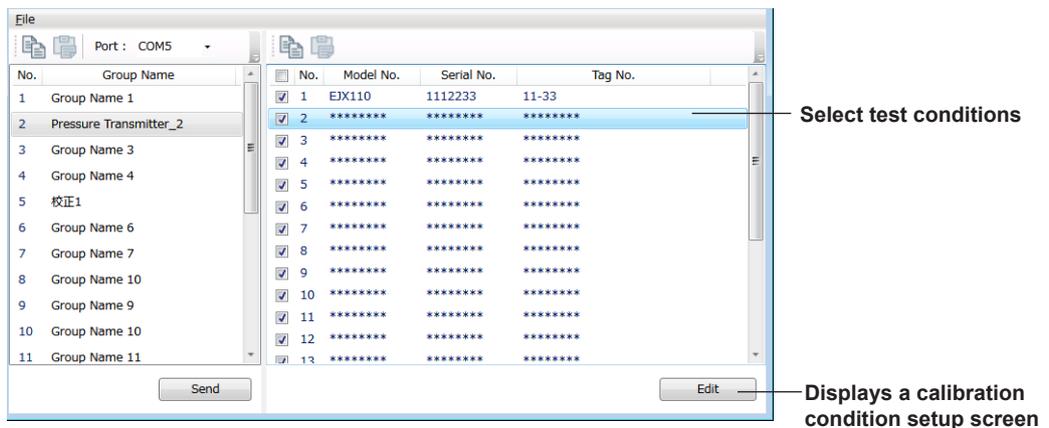
Changing a Group Name

1. Click the group name you want to change.
A text cursor appears.
2. Enter the group name.



Setting Calibration Conditions

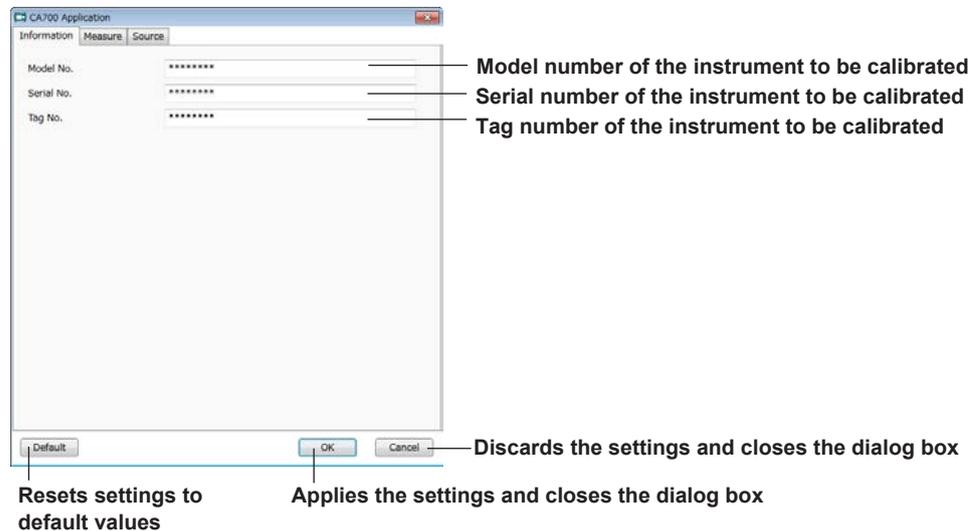
1. Click a group number to select a group. Clicking a group name will not select the group.
A list of calibration conditions for the selected group appears.



- Click the calibration condition that you want to set and click **Edit**, or double-click it.
A calibration condition setup screen appears.

Setting Information of the Instrument to be Calibrated

- Click the Information tab.
- Enter the information of the instrument to be calibrated.

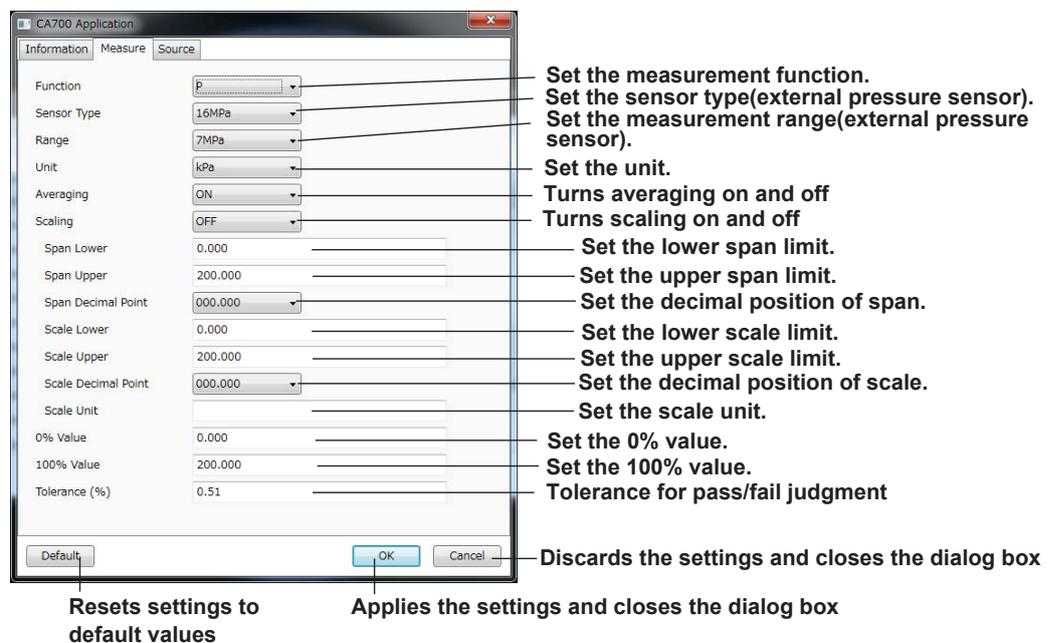


Setting Measurement Conditions

- Click the Measure tab.
- Set the measurement conditions.

The measurement conditions that you can set vary depending on the measurement function. Unneeded settings appear dimmed.

For details on measurement conditions, see the CA700 manual.



Setting Source Conditions

7. Click the Source tab.
8. Set the source conditions. The source conditions that you can set vary depending on the source function. Unneeded settings appear dimmed.

For details on source conditions, see the CA700 manual.

The screenshot shows the 'Source' tab of the CA700 Application dialog box. The settings are as follows:

- Function: P
- Sensor Type: 16MPa
- Range: 7MPa
- Unit: kPa
- Averaging: ON
- Scaling: OFF
- Span Lower: 0.000
- Span Upper: 200.000
- Span Decimal Point: 000.000
- Scale Lower: 0.000
- Scale Upper: 200.000
- Scale Decimal Point: 000.000
- Scale Unit: (empty)
- 0% Value: 0.000
- 100% Value: 200.000
- Number Of Points: 5
- Direction: Up/Down

Annotations on the right side of the dialog box:

- Set the source function.
- Set the sensor type(external pressure sensor).
- Set the measurement range(external pressure sensor).
- Set the unit.
- Turns averaging on and off
- Turns scaling on and off
- Set the lower span limit.
- Set the upper span limit.
- Set the decimal position of span.
- Set the lower scale limit.
- Set the upper scale limit.
- Set the decimal position of scale.
- Set the scale unit.
- Set the 0% value.
- Set the 100% value.
- Set the number of calibration points.
- Set whether to calibration from 0% or 100%.

Annotations at the bottom of the dialog box:

- Resets settings to default values (pointing to the Default button)
- Applies the settings and closes the dialog box (pointing to the OK button)
- Discards the settings and closes the dialog box (pointing to the Cancel button)

Copying and Pasting Calibration Conditions

1. Click the calibration condition you want to copy.
2. Click the copy icon.

The screenshot shows a table of calibration conditions. The 'Copy' icon is highlighted above the table. The table data is as follows:

No.	Group Name	No.	Model No.	Serial No.	Tag No.
1	Group Name 1	1	EJX110	1112233	11-33
2	Pressure Transmitter_2	2	*****	*****	*****
3	Group Name 3	3	*****	*****	*****

Annotations:

- Copy Paste (pointing to the copy icon)
- Selected calibration condition (pointing to the first row of the table)

3. Click the calibration condition you want to paste to.
4. Click the paste icon. The instrument information, measurement conditions, and source conditions are pasted.

The screenshot shows the same table of calibration conditions. The 'Paste' icon is highlighted above the table. The table data is as follows:

No.	Group Name	No.	Model No.	Serial No.	Tag No.
1	Group Name 1	1	EJX110	1112233	11-33
2	Pressure Transmitter_2	2	*****	*****	*****
3	Group Name 3	3	*****	*****	*****

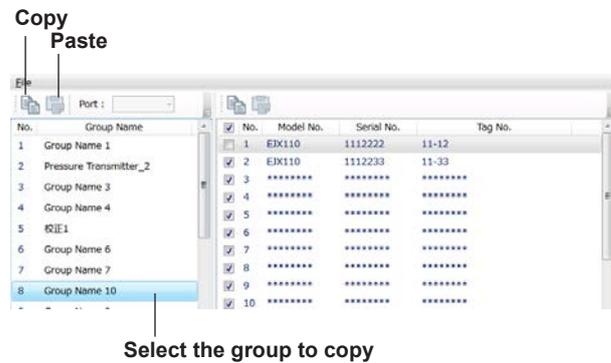
Annotations:

- Copy Paste (pointing to the paste icon)
- Calibration condition at the paste destination (pointing to the second row of the table)

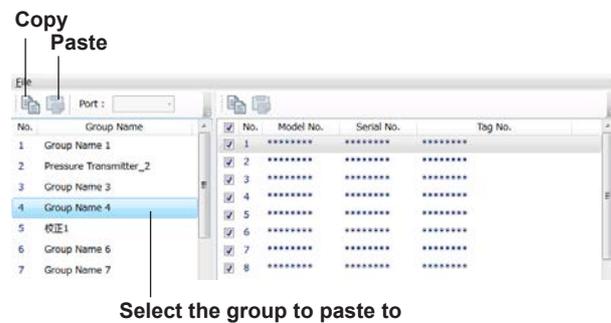
When pasting, you can also select a destination of another group.

Copying and Pasting Groups

1. Click the number of the group you want to copy.
2. Click the copy icon.

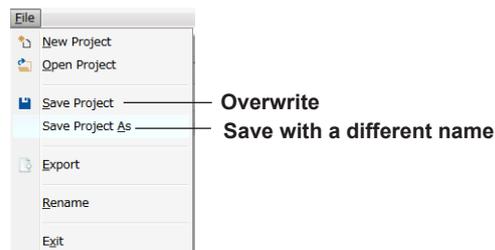


3. Click the number of the group you want to paste to.
4. Click the paste icon. The calibration conditions of the copied group are pasted.



Saving the Project

1. Click **File** to open the File menu.



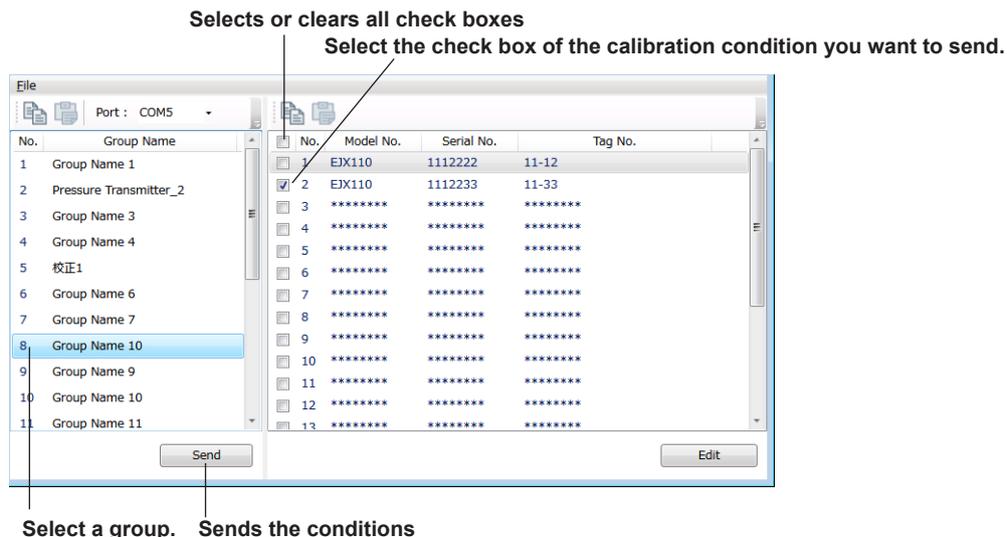
2. To overwrite the project, click **Save Project**. To save with a different name, click **Save Project As**.
3. To save with a different name, set the save destination and project name.
The extension of the saved file is **.dat**.

8 Sending Calibration Conditions to the CA700

Selecting the Calibration Conditions to Send

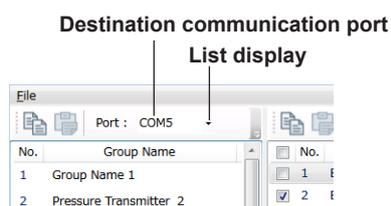
1. Select the group in which the calibration conditions you want to send are registered.
2. In the list of calibration conditions, select the check box of the calibration condition you want to send.

Selecting the check box in the head column selects or clears the check boxes of all calibration conditions.



Selecting the Send Destination

3. If multiple CA700s are connected to the PC, select the destination CA700 port number from the Port list.



Sending Calibration Conditions

4. Click **Send**.

Calibration conditions are sent to the CA700.

The calibration conditions in the CA700 at the same number as the calibration condition number that was sent are overwritten.

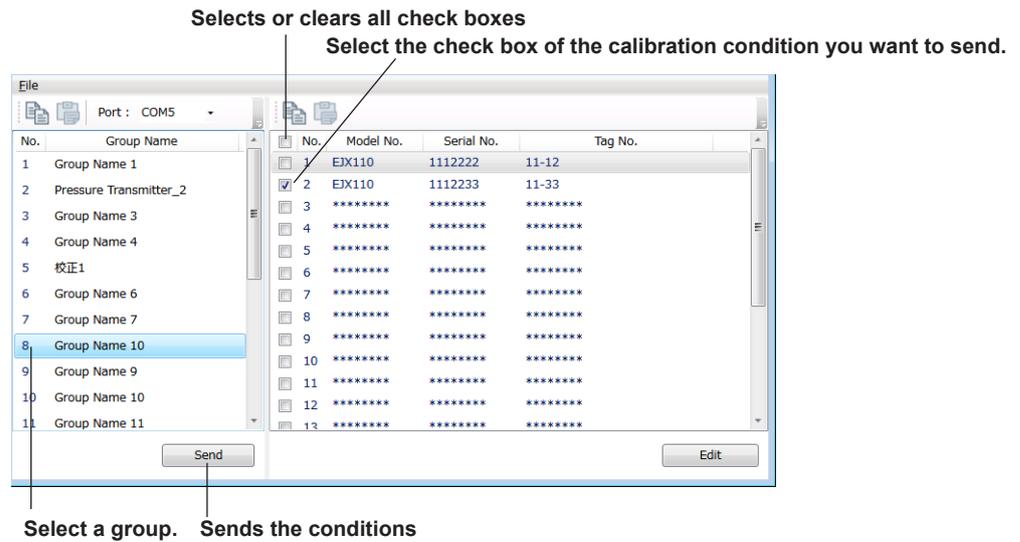
9

Exporting Calibration Conditions in CSV Format

Selecting the Calibration Conditions to Export

1. Select the group in which the calibration conditions you want to export are registered.
2. In the list of calibration conditions, select the check box of the calibration condition you want to export. Select calibration conditions whose Tag No. is specified. If you select calibration conditions whose Tag No. is not specified, the conditions will not be exported.

Selecting the check box in the head column selects or clears the check boxes of all calibration conditions.



Selecting the Export Destination

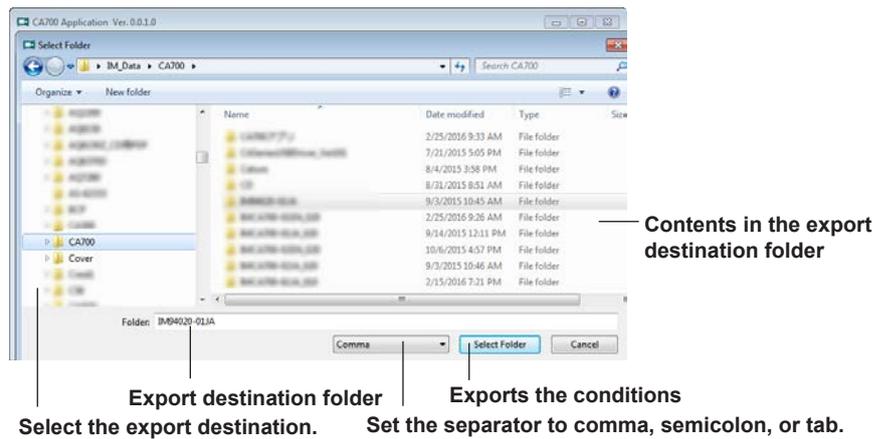
3. Click **File** to open the File menu.



4. Click **Export**.
A folder selection window appears.

9 Exporting Calibration Conditions in CSV Format

5. Select the export destination folder and the separator.



Executing the Export

6. Click **Select Folder**. The selected calibration conditions are exported in CSV format.

When exporting is complete, a message window indicating the completion appears. Click OK to close the window.

If you selected multiple calibration conditions, a file is created for each set of calibration conditions.

File Name

The file name is automatically assigned.

The file name takes the form "Tag No._group name_Proc.CSV."

If characters that cannot be used in file names are used in Tag No. or group name, they are automatically replaced with underscores.

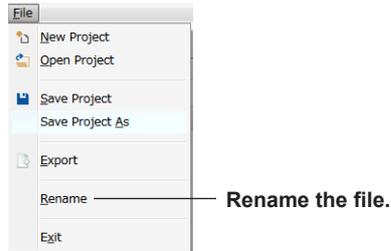
10 Renaming CA700 Measured Data Files

Selecting a Measured Data File

Select a measured data file stored in the CA700 or PC.

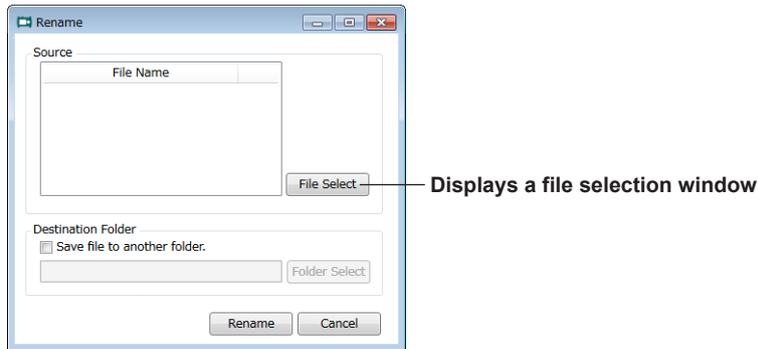
To change the name of a measured data file on the CA700, set the CA700 USB function to mass storage, and then connect to the PC.

1. Click **File** to open the File menu.



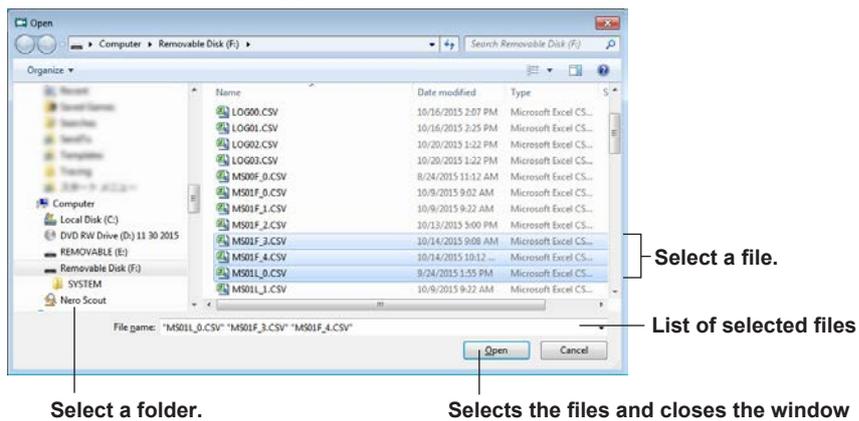
2. Click **Rename**.

A file selection window appears.



3. Click **File Select**.

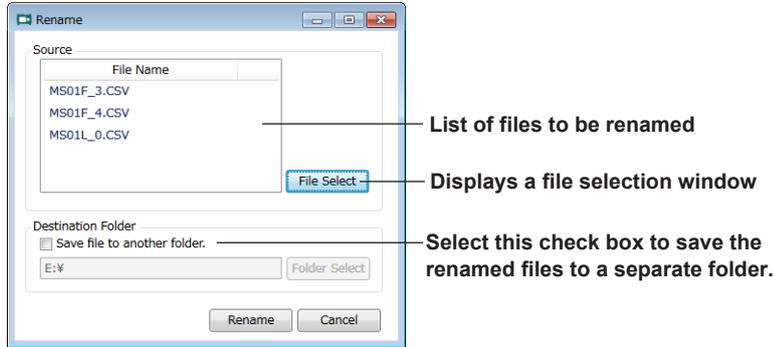
A file selection window appears.



- 4. Select the file, and click **Open**.

The name of the logging file cannot be changed.

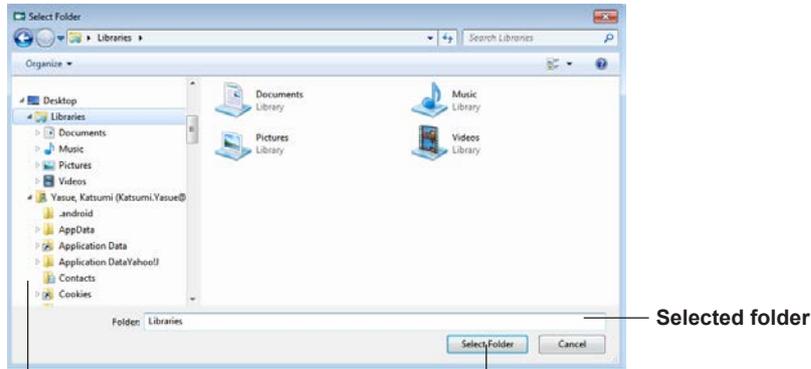
The window shown in step 2 appears.



Selecting the Save Destination Folder

- 5. To save a file to a different folder, select the **Save file to another folder** check box, and then click **Folder Select**.

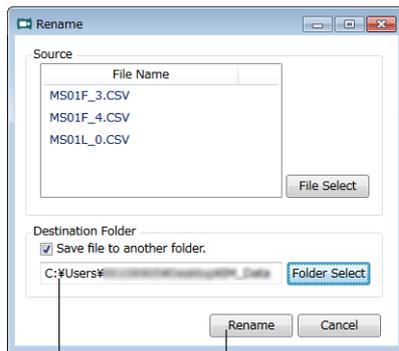
A folder selection window appears. Select the save destination folder, and then click **Open**.



Select a folder.

Selects the folder and closes the window

- 6. Click **Rename**. The file name is changed, and the file is saved in the specified folder.



File Name

The file name is "Tag No._ calibration date_ original file name.CSV." The order of the calibration date depends on the Date Format setting of the CA700.

Example: Tag_2015-10-14_MS01F_4.CSV, Tag_14-10-2015_MS01F_4.CSV

If characters that cannot be used in file names are used in Tag No., they are automatically replaced with underscores.