mek®

Cs-Center

Operation manual

Version 2.1.x

Cs System

EN

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Rev.4

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1. Introduction

Read this manual carefully in order to use this software correctly, and understand the following: Please learn the basic operation of the personal computer by yourself. Use the personal computer only for this software. Marantz Electronics, Ltd. and the suppliers are not responsible for any damage (including damage and failure of the hardware or other hardware irrespective of ordinary damage, special damage or consequential damage) that may directly or indirectly occur to the customers in connection with the install or use of this software and any claim from a third party.

2. Outline

CS-Center is application software that remotely controls AOI Model 22X series and collects inspection data. It is possible to connect two or more AOI and perform centralized control. Use this software on the condition that the screen resolution is 1024 x 768 high color (16 bit) or more and it is connected to AOI via Ethernet network interface and TCP/IP communication is available. Set the network adaptor and related devices in advance. A fixed IP address is necessary. HASP is necessary to execute this software. Installation of a driver is necessary to HASP.

3. System Requirement

The following systems are necessary for CS-Center.

- PC with Microsoft Windows XP/Windows 7/Windows 8/Windows 8.1/Windows 10/Windows 11 Operation System
- 50GB or more free hard disc space (this capacity is only for software, not for data)
- Gigabit Ethernet Network Interface (TCP/IP Fixed IP Address)
- HASP protection key (driver should be installed.)
- The administrator authority to install and execute CS-Center.

4. Conditions for Catch System

Catch System is the production management software consists of **CS-Center**, **CS-Repair**, **CS-Watch** and **CS-Analyzer**. Recommended conditions to use Catch System effectively are as below:

Language

Language **must be common** for CS-Center/CS-Repair/CS-Watch/CS-Analyzer and 22X.

LAN

1. Do not use Wireless LAN, because transferring can be unstable. Data may be lost.

Comparing images from 4 production stages on CS-Analyzer

1. Each PCB has barcode.
2. Inspection program should have same name for all production stages.
3. Components have Reference Designator, it is possible without it by XY position, however it can not be detected if the XY coordinates are widely shifted.
4. Use G/NG Confirmation Mode on AOI. NG Cell View Mode is not suitable.

When a Reference Designator is consisted from several stamps

It is useful for managing data to input identifier numbers after Reference Designator.
Ex. If Reference Designator is IC100 then, IC100-1, IC100-2, IC100-3...

Handle panellized PCB

When a PCB is consisted from multiple small PCBs and each PCB has barcode, and you'd like to check them separately, you need to create Block for each small PCBs in the inspection program. The Block must include barcode. Then data include Block numbers [1], [2]... after Reference Designator.

Display combined data with 2 AOI

Name Mac PC and inspection data the same on 2 AOI. If different names are set, the PCB is not identified as 1 PCB on CS-Repair, as a result identified as 2 PCBs.

Display production status of PCB with A+B sides

On CS-Center, you can show the production status in status monitor. If your PCB is inspected from both top and bottom side, you can show the total result after inspection. To activate the function, set same PC name to each AOI, and select PC for B side inspection from the list. This function requires the barcode management for each PCB.

Display graphs on CS-Watch / CS-Analyzer

1. If data does not contain Reference Designator, XY coordinates are displayed in N/F graph instead.
2. If you'd like to display P graph, input Parts Name in the comment column in the inspection program. If you use CAD data, it is easy process to input Parts Name in the comment column by performing "Convert Part Name to Comments".

Display position shifting graphs on CS-Watch / CS-Analyzer

1. In case of Pack Stamp, the position information is not collected without setting an anchor (Pack Master).
2. If Fillet is set in filter setting window of the inspection frame, position shifting information is not displayed.

5. Data Loss and Recovery

CS-Center has a recovery system not to lose inspection data when connection to AOI is cut by LAN cable accident or by the other cause (Version 4.2.x or greater operation software required for AOI). For version greater than 1.1.2.5, operation software version 4.4.x for AOI is required. *This recovery system does not guarantee the data loss.*

*** Caution: If the version of each software is not suitable, data may not be sent or be sent double.**

6. Storage Management (General)

Ideal data storage

10GB per day, 250GB per month of free disk space is required under these conditions;

PCB size:	120x100 to 510x200, 420x380
Inspection points:	20 to 2500 (10,000,000 points per month)
PCB amount:	6500 pcs per month
Setting of data to save:	NG + false NG pictures (200 points per PCB) + Cell images

Required Hard Disk Drive

1. NTFS format (FAT32 not acceptable)
2. If you need to store data for longer period, use exchangable HDD or HD cartridge.
3. eSATA interface. (eSATA can transfer data 2.5 times faster than USB2.0. eSATA port is required on PC.)

Caution: USB3.0 HDD is not recommended to use, because USB3.0 external HDD is very slow to be recognized on Windows OS. As a result, it is recognized after PostgreSQL startup, and there appears error message on Catch software screen.

7. Storage Management (Use External HDD/ Cartridge HD)

Case when you need External HDD or HD Cartridge

In below cases, you'd better to use cartridge type HD or external HDD;

- Need to save enormous data (you manage multiple lines and AOI.)
- Need to store data for a certain period for traceability.
- Review old data in another PC while main PC is using to store current data.

With exchangeable HD, you can exchange when it is full, and can store data for months.

Preparation

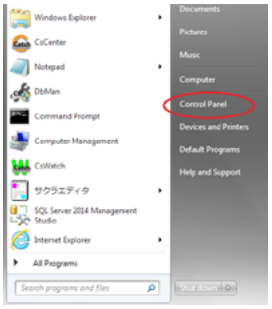
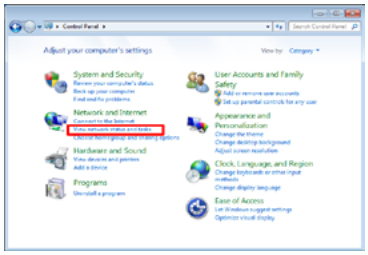
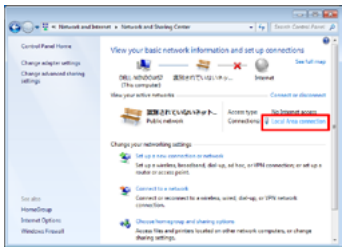
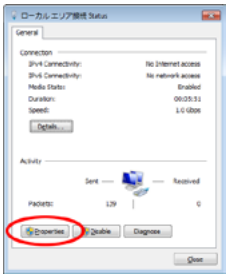
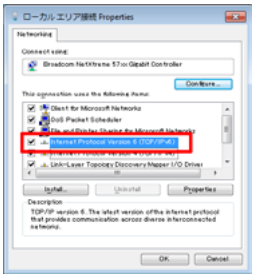
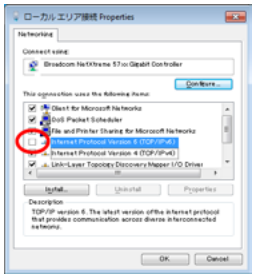
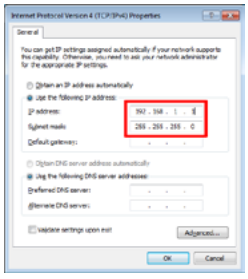
Connect HDD to PC before installing PostgreSQL which is formatted in NTSF.
After installation of PostgreSQL, you must execute extra work for allowing PostgreSQL to access external HDD. This work is written in installation workflow in chapter 8 with "**Extra Settings when using External HDD or HD Cartridge**".

8. Initial Settings and Installation

PC Initial Settings

Network settings

Open Start menu, select **Control Panel**. Select **"View network status and tasks"** in "Network and Internet" settings. Select "**Local Area Connection**".

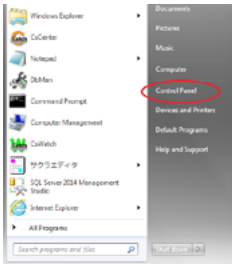
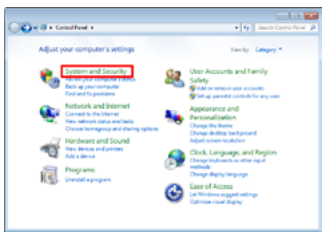
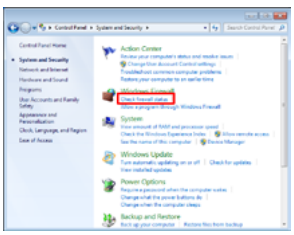








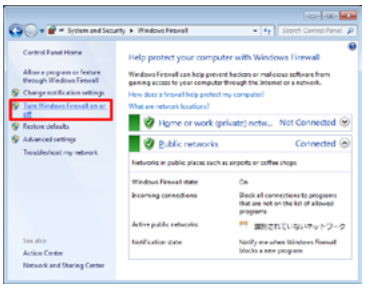
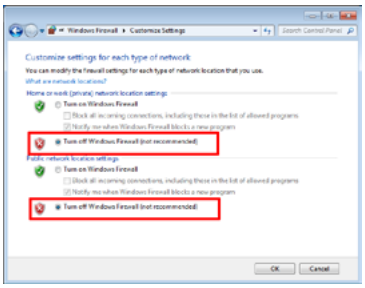
Select **properties**. Properties window opens.
Check-off **Internet Protocol version 6 (TCP/IPv6)**, otherwise network connection fails.
Select **Internet Protocol version 4 (TCP/IPv4)**, and press **Properties** button. Set IP Address, and others .

Remarks: Wireless LAN is unstable, must not to use for Catch System.

Kill FireWall

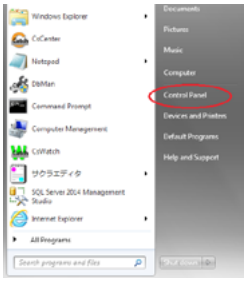
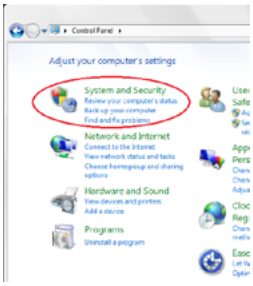
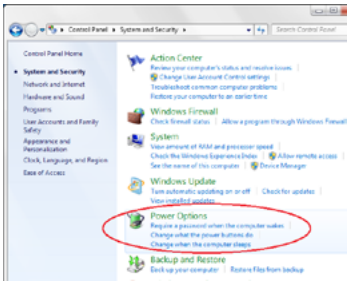
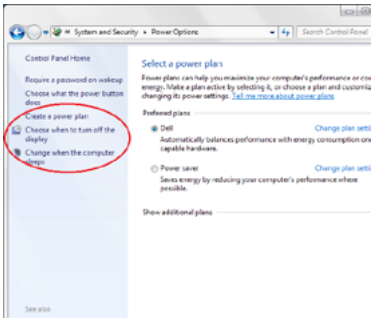
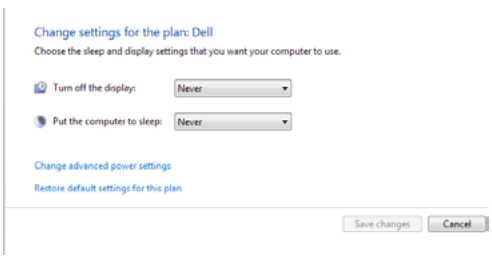
FireWall must be killed on PC for Catch System.
Open **Control Panel**, select **System and Security**. Select **Check firewall** status.
Select **Turn Windows Firewall on or off** on left list. Check **Turn off Windows Firewall (not recommended)** on for both network locations.

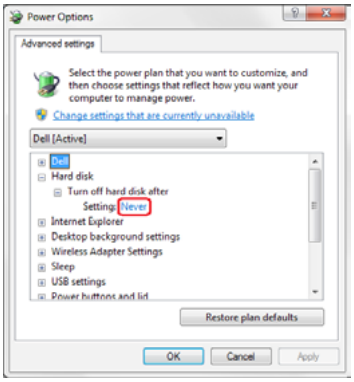



Disable the Sleep function

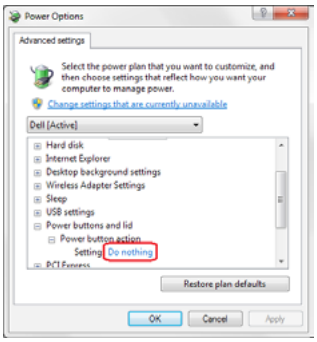
Open Start menu, select **Control Panel**. Select **System and Security**. Go to "Change settings for the plan" menu in **Power Options**. Select "Never" for "Turn off the display" and "Put the computer to sleep" settings.

Next, select "Change advanced power settings". Set to "Never" in "Setting" from "Turn off hard disk after" in "Hard Disk" menu.

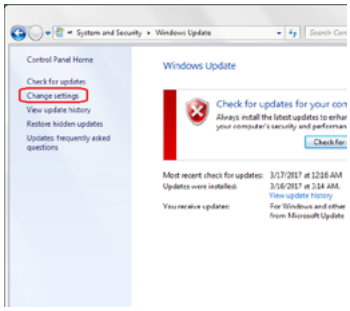


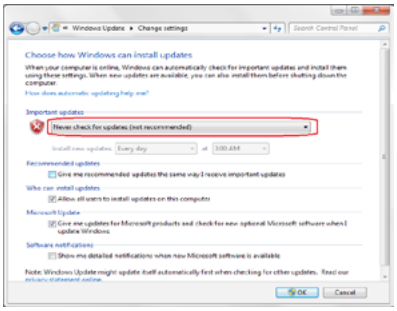
Set to "Do nothing" in "Power button action" from "Power button and lid" menu.



For Windows 7

Open **Control Panel**, then select **System and Security**. Select "Never check for updates" in **Change settings** from **Windows Update**.



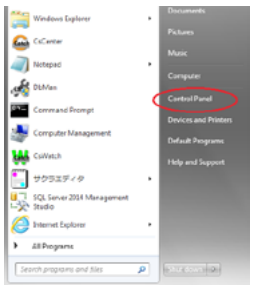


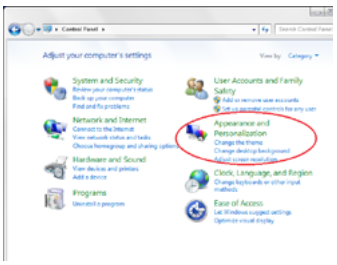
For PC manufacturer's original power management software

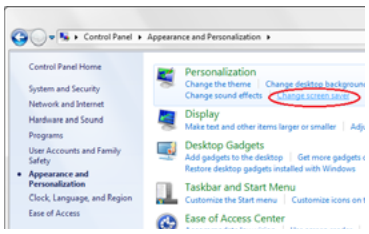
If PC manufacturer's original power management software is installed, please change the setting to disable the Sleep function accordingly.

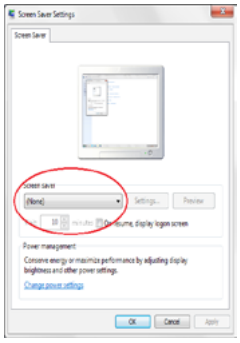
Disable the Screen Saver function

Open Start menu, select **Control Panel**. Select "Change screen saver" in "Appearance and Personalization". Select "None" in screen saver function.



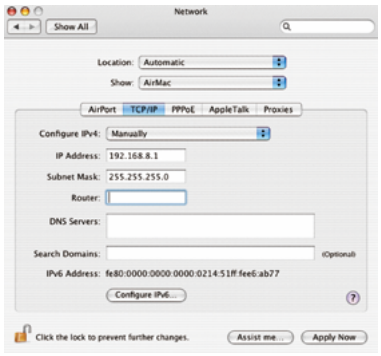






AOI network settings

Set IP address under proper network settings.
Click the apple mark - system preferences - Network - TCP/IP. Input the IP address and the subnet mask. Be sure to input unique IP address on the network.

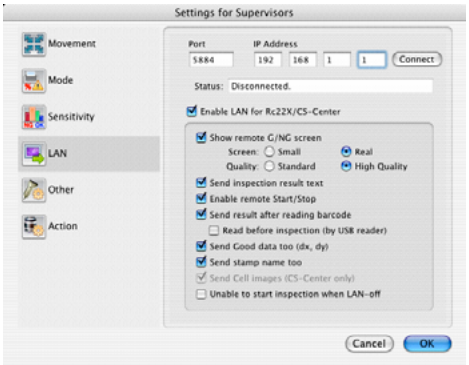


22x operation software settings

Select **Settings - Configuration - For Supervisor** in the menu, move to **LAN** tab

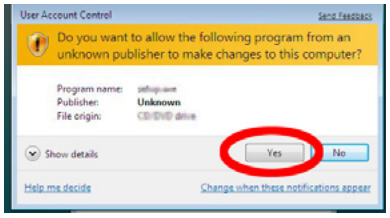
Input IP Address for PC that CS-Center is installed. Input port number that you set when setting of CS-Center (page 14). Put check to "**Enable LAN for Rc22X/CS-Center**", "**Show remote G/NG screen**", "**Send inspection result text**", "**Enable remote Start/Stop**", "**Send Good data too (dx.dy)**", "**Send stamp name too**" and "**Send Cell images (CS-Center only)**".

If your PCB has barcode, and you would like to manage PCB with barcode, check also "**Send result after reading bar code**" on.



User Account Control for Windows 7

You will receive warning message while installing any Mek software. Please just click "Yes", and continue installation.



Disabling Fast Startup in Windows 10

When using Windows 10, follow the steps below to disable Fast Startup.

1. From the Start menu, click [Windows System Tools] - [Control Panel].
2. Click [Control Panel] - [Hardware and Sound] - [Power Options], then [Select Power Button Behavior].
3. Click [Change Settings Not Currently Available] on [System Settings].
4. Uncheck [Enable Fast Startup] and click [Save Changes].

Installation Work Flow

If you install all of CS-Center, DB (PostgresSQL), DB Manager, and CS-Watch, follow the steps below.

1. CS-Center installation
2. DB (PostgreSQL) installation
3. DbManager installation
4. Install CS-Watch
5. DB initial setting and optimization
6. Install Catch System to more than one PC's
7. Extra Settings when using External HDD or HD cartridge (optional)
8. HASP Driver installation
9. Setting CS-Center

Insert a media and double-click Install.exe in CsRep[xxxx] folder. [xxxx] is a four-digit number that means the software version. Install.exe may start automatically when the media is CD. Insert a media to install. If it does not start automatically, double-click Install.exe. Click [Install.exe] when window appears. Click "Yes" to continue if warning message appears from User Accont Control.

Do not insert HASP key on PC yet.

*** If you have 3rd party's SPC software which can import XML data, and you just want to analyze the statistics on the SPC software, you do not need to install PostgreSQL. Do not follow the below procedure. Just install CS-Center and set to output XML data (Please read Chapter 11. Menu).**

Preparation when using External HDD or HD cartridge (optional)

Catch System uses PostgreSQL database to store data.
In case using external HDD or HD cartridge for saving data, connect them. Please confirm if it is formatted in **NTSF.**

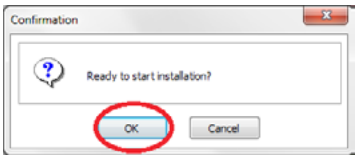
Caution: Some vendor's external HDD is already formatted in NTSF, however sometimes PostgreSQL does not accept this format and installation may fail. In such case, re-format disk. (Please read Windows 0S's help for how to format hard disk.)

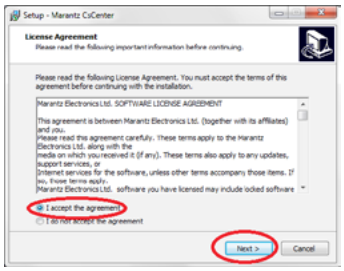
Install all software

Install all four software to one PC. Installation starts in order from CS-Center, PostgreSQL, DbManager and CS-Watch. It is useful to install more than one software. Please refer to procedure in following.
If you install only DB (PostgreSQL), please install DbManager together. CS-Center and CS-Watch can be installed if necessary. If you want to install afterwards, you can install by clicking individual software button.

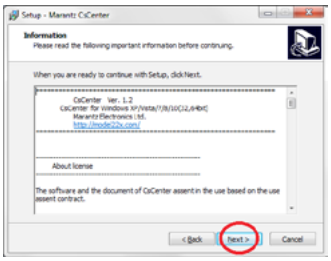
CS-Center installation

1. Click "Install CSCenter" button.
2. Click **OK** when message window "Ready to start installation?" appears.
3. Setup window for **License Agreement** appears. Review the content, and click radio button of "I accept the agreement" when you agree the content.
4. Click **Next**.

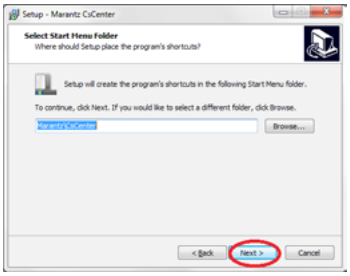


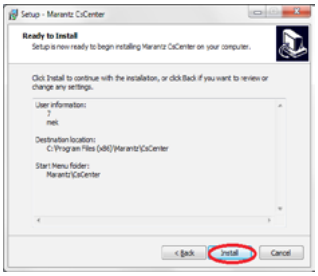


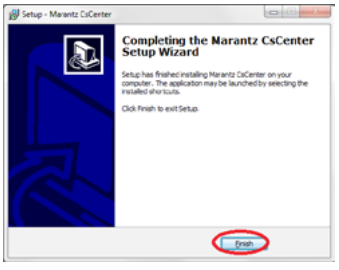
5. **Information** window appears. Continue with clicking **Next**.
6. Input User name, Company, and Serial number, and continue with **Next**.
7. Window of **Select Destination Location** appears. Continue with clicking **Next**.
8. Window of **Select Start Menu Folder** appears. Continue with clicking **Next**.



9. **Ready to Install** window appears. Check the content, and click **Install**.
10. Window to complete the setup appears. Click **Finish**,and installation procedure complete.



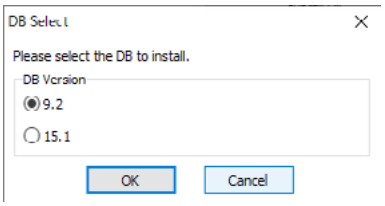




Next, select "Install HASP driver" to install the driver for HASP. Insert HASP key into the USB terminal after installation is completed. **Do not start CS-Center yet.**

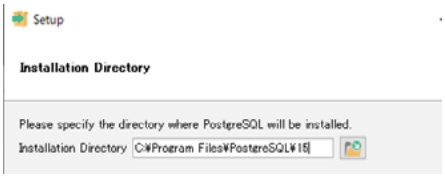
DB (PostgreSQL) installation

Catch System uses PostgreSQL database to store data. Connect external HDD or HD cartridge to PC for saving data. Please confirm if it is formatted in NTSF.
Then, select the DB version to install. If you have already installed Catch-PC, select the same version.

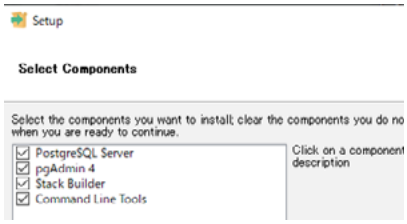


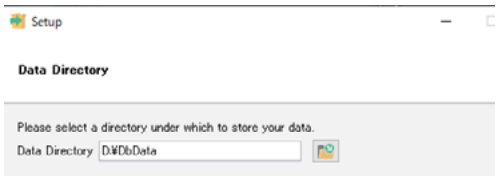
Installing PostgreSQL V15

1. Run CsCenter's Install.exe and click [Install DB].
2. The PostgreSQL installer will start; do not change the Installation Directory and click Next.

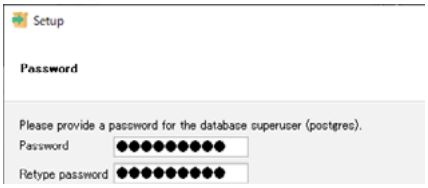


3. For Select Components, check all four boxes and click Next.
4. For Data Directory, enter an empty folder or a newly created folder name, then click Next. If the folder does not exist, it will be created automatically.

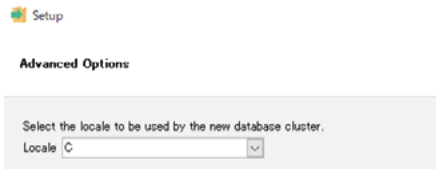




5. For Password, set postgres1 and click Next.
6. For Port, enter the default value of 5432 and click Next.

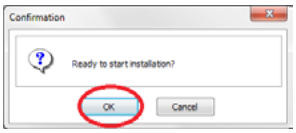


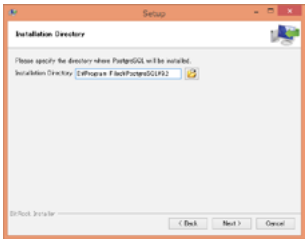
7. For Advanced Option, select C and click Next.
8. Click Next for all the following options, and then execute the installation.
9. On the Installation Complete screen, uncheck "Launch Stack Builder at first?" and click Finish.

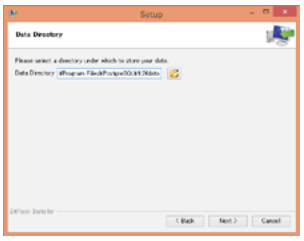


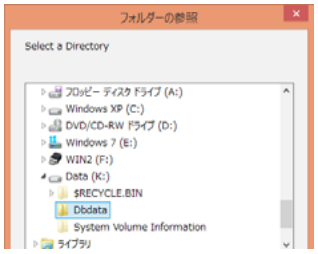
Installing PostgreSQL V9.2

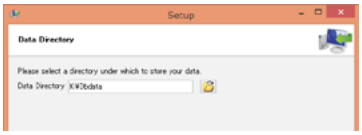
1. Click "Install DB" button.
2. Window with message "It installs DB. Are you OK?" will appear. Click **OK**.
3. Install DB proceeds only with English language. You cannot change the language. Go on with clicking **Next** button.
4. Click **Next** to go on.
5. Click folder icon, and create new folder named "DbData" to HDD. Specify the saving location, and click **OK**.
6. Confirm the data directory, and go on with **Next**.



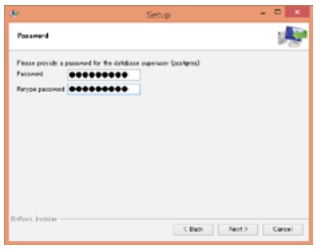


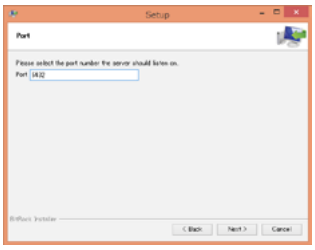


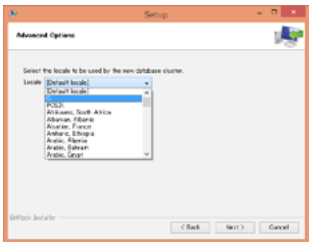




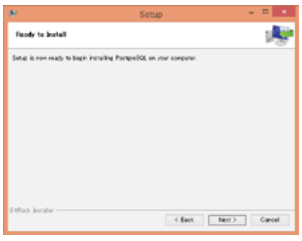
7. Input password "postgres1". Retype same password for confimation, and click **Next**.
8. Port setting menu appears. Confirm that port is "5432", and click **Next**.
9. Locale setting menu appears. Press pull down button, and select "C", and click **Next**.





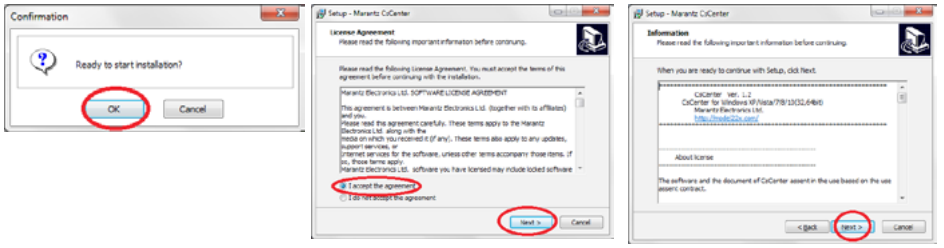


10. Click **Next**, and installation starts.
11. After installation is successfully completed, **Uncheck** Launch Stack Builder when you exit the setup menu. Press **Finish** to complete.

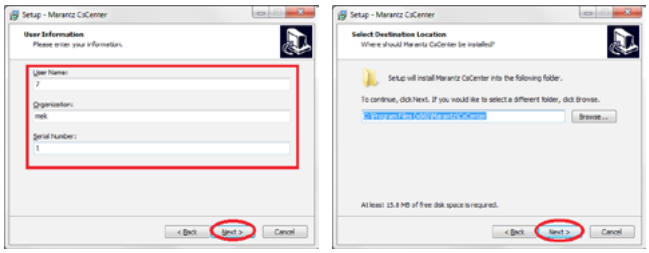


Install DbManager

1. Click "Install DbManager" button.
2. Window with message "It installs DB. Are you OK?" appears. Click **OK**.
3. Window of **Select Destination Location** appears. Continue with clicking **Next**.
4. Window of **Select Start Menu Folder** appears. Continue with clicking **Next**.

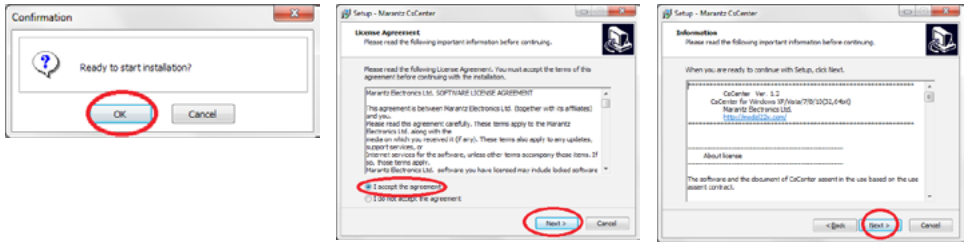


5. **Ready to Install** window appears. Check the content, and click **Install**.
6. Click **Finish**, and installation procedure completed.
   Do not start DbManager yet.

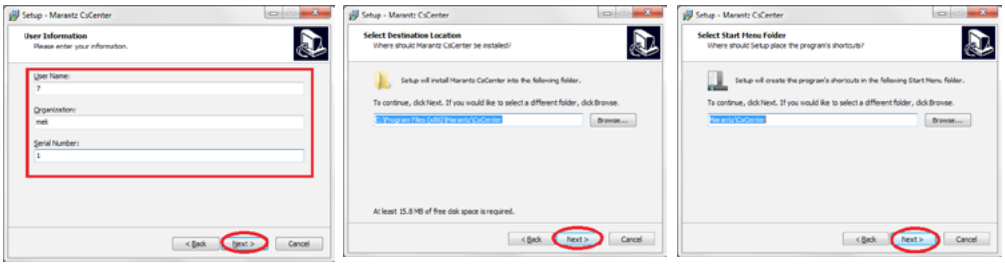


Install CS-Watch

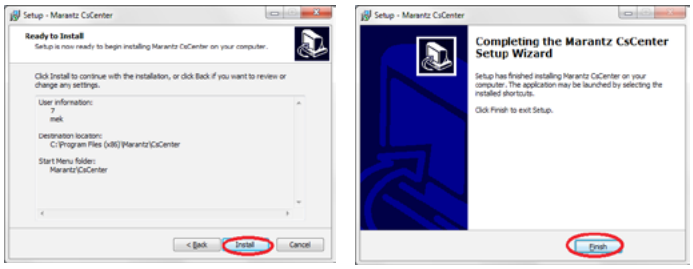
1. Click "Install CsWatch" button.
2. Window with message "It installs CSWatch. Are you OK?" appears. Click **OK**.
3. Setup window for **License Agreement** appears. Review the content, and click radio button of "I accept the agreement" when you agree the content.
4. Click **Next**.
5. **Information** window appears. Continue with clicking **Next**.



6. Input User name, Company, and Serial number, and continue with **Next**.
7. Window of **Select Destination Location** appears. Continue with clicking **Next**.
8. Window of **Select Start Menu Folder** appears. Continue with clicking **Next**.

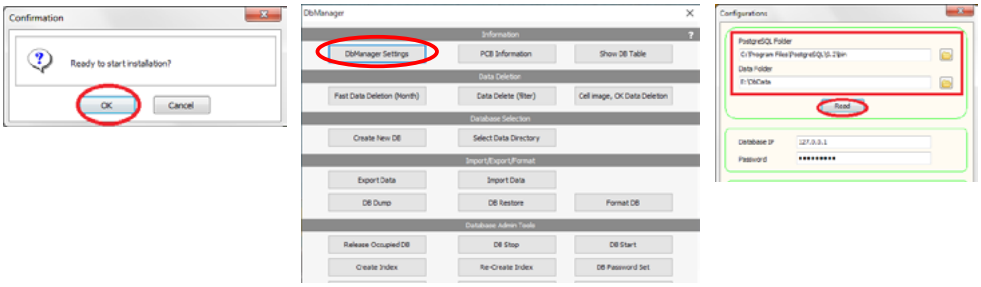


9. **Ready to Install** window appears. Check the content, and click **Install**.
10. Window to complete the setup appears. Click **Finish**,and installation procedure complete. **Do not start DbManager yet.**

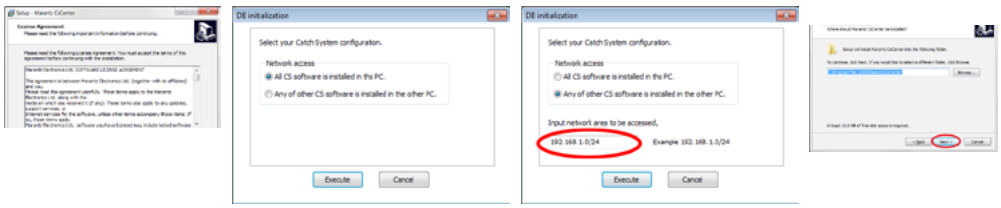


Initialize and optimize PostgreSQL

1. Start **DbMan** by double clicking desktop shortcut, or under marantz directory in Program Files.
2. DBManager window opens, then press **DbManager Settings** button. Configurations window appears. Press **Read** button. The folder where PostgreSQL is installed and the folder where data is saved are automatically searched and become correct path. Click **OK** and close the window.



3. Next, Press **First Setup** button. Then, press **Yes** to start optimizing.
4. Select your Catch System configuration. If all Catch System software is installed in this PC, select "**All CS software is installed in this PC**".
5. If you install any software in the other PC (for example, CS-Repair is installed in another PC), select "**Any of other CS software is installed in the other PC**". By selecting this, a field to input network area to be accessed will be shown. IP address [192.168.1] is shown. Put IP address of PC which PostgreSQL is installed. [.0/24] part stays same. Press **Execute**.
6. A message "**Complete**" is displayed, then "**Please restart PC**" will be shown. Press **OK** and reboot PC.



Compatibility between PostgreSQL versions

DbData created in another version cannot be used. Please use DB Dump/Restore and Export/Import to import data from another version into the current version.
If multiple versions are installed on one PC, it will not be possible to save the results to DB properly, so please uninstall them before installing another version. Please uninstall the other versions before installing them.

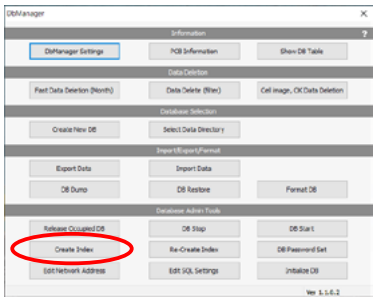
How to check the version of DbData

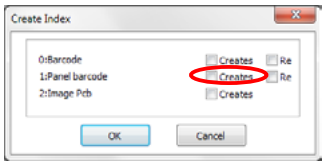
1. Open DbData in Explorer.
2. Select and right-click the PG_VERSION file in the DbData folder.
3. Select [Open] from [Programs].
4. Select [Notepad] and click [OK].
5. Notepad will open and the PostgreSQL version will be displayed.

Handling panellized PCB

If you are producing panellized PCB, and each block has barcode (multiple barcode for one PCB), you must execute the additional setting.

In DBManager, select **Create Index** button. Check on "Creates" in "1: Panel barcode".



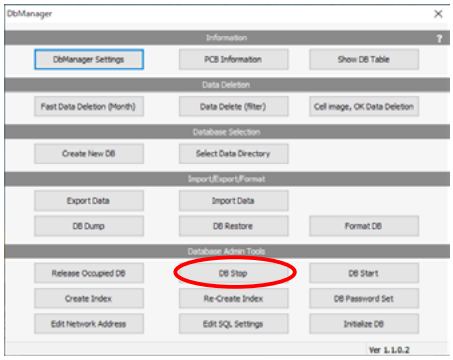


Initialize all replacement HDD

If you use multiple HDD or cartridges, execute following work to all replacement HDD.

1. Start DBManager, and clik "**DB Stop**" button to stop PostgreSQL service.
2. Copy **DbData** folder on desktop. HDD will not operate if there is no DbData folder with status before operation.
3. Un-plug the first HDD, then plug the second HDD.
4. Copy the folder **DbData** from desktop to the second HDD.
5. Add Read/Write permission to folder DbData of second HDD as same procedure in "**Extra Settings when using External HDD or HD Cartridge**"
6. Click "**DB Start**" button in DBManager, and start PostgreSQL service.

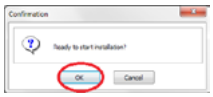
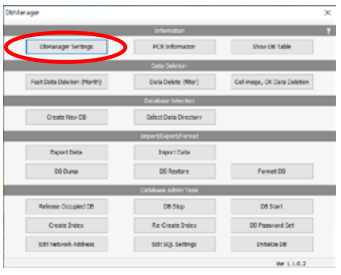
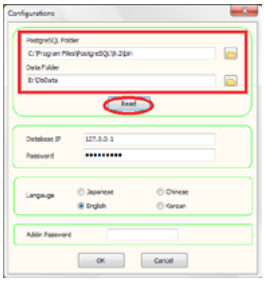
Caution: When changing HDD, confirm that same drive name (e.g. G:/) is assigned to the second HDD.



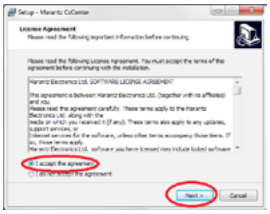
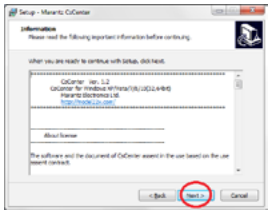
Extra Settings when using External HDD or HD Cartridge

Allow to Read/Write the external HDD.

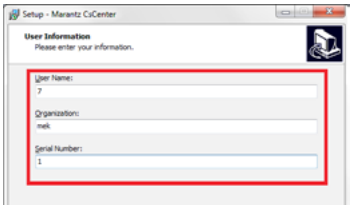
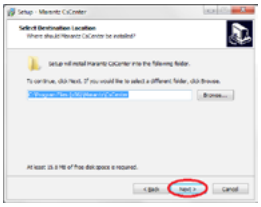
1. Confirm that external HDD is formatted in NTSF. Copy DbDada folder to HDD which is created at PostgreSQL installation.
2. Right click the folder in HDD, and select **Property**.
3. Click **Edit** button in **Security** tab. Click **Add...** button in Permissions for DbData.

4. Select Users or Groups window opens. Click **Advanced...** button, then click **Find Now** button. All users of this PC will be listed up.
5. Select "Everyone" from the search result, and click **OK**.

6. Confirm that "Everyone" is added under "Enter the object names to select", and click **OK**.
7. Put check to "**Allow**" box in **Full Control** in Permissions for Everyone. Confirm all permissions are status with "**Allow**", and click **OK** to complete the procedure.

How to Exchange HDD

Here explains how you can exchange HDD after all installation and setup is finished and the first HDD is nearly full with inspection data. You need to stop AOI for 3 -10 minutes, and required to shutdown PC for PostgreSQL.

1. If you are using Windows 10, make sure Fast Startup is disabled.
2. Stop 22X.
3. Close CS-Center. If warning message "postgreSQL is still writing..." is shown, please wait for a while until writing is completed.
4. Start DBManager and select [DP Stop].

Setup is required after HDD replacement. Please refer to the next page for the procedure. It may be necessary to change the access permission settings. Refer to "Access Rights Settings when Replacing External HDD" for the procedure for changing the settings.

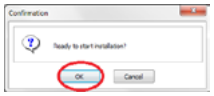
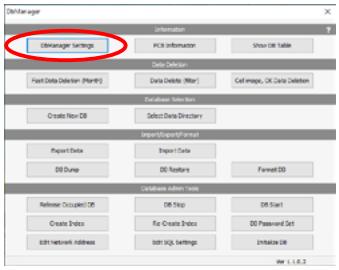
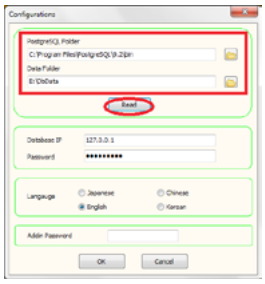
Setup Procedure for HDD Replacement

There are two ways to set up DbData: copying the already set up DbData and executing [Create New DB] in DBManager. In the case of [Create New DB], the procedure differs depending on whether the data on the old HDD can be used or not.

Copying a pre-setup DbData

Perform this procedure if you have pre-setup DbData on your desktop.

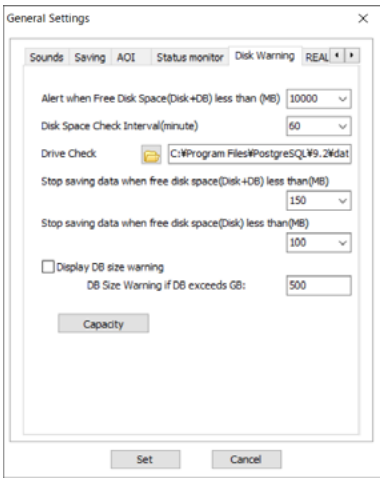
1. Remove the old HDD and connect the new HDD.
2. Allow the external HDD to read/write. See "Extra Settings when using External HDD or HD Cartridge" on p. 15.

3. Execute "**DB Start**" in DbManager.

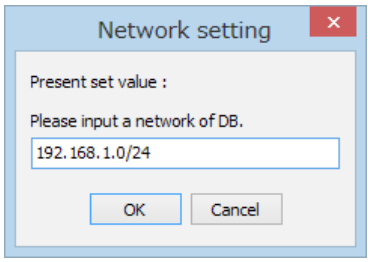
Execute "Create New DB" in DbMan (if the data on the old HDD can be viewed)

1. Connect both old and new HDDs to PC.
2. Create a new folder directly under the new HDD and rename it to [DbData].
3. Select [Create New DB] in DbManager and select [DbData] folder on the new HDD.
4. After completion, DB will start automatically. Remove the old HDD.
5. If the drive name of DbData has been changed after HDD replacement, go to [Settings] - [Operational Settings] in CS-Center, select the [Disk Warning] tab, and change the [Drive Check] to the DbData folder of the new HDD.

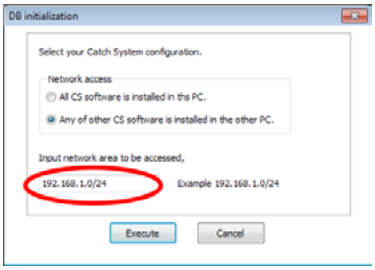


Execute "Create New DB" in DbMan (if the data on the old HDD cannot be viewed)

1. Connect a new HDD to PC.
2. Create a new folder directly under the new HDD and rename it to [DbData].
3. Select [Create New DB] in DbManager and select [DbData] folder on the new HDD.
4. After completion, select [Edit Network Address] to access DB from the outside.



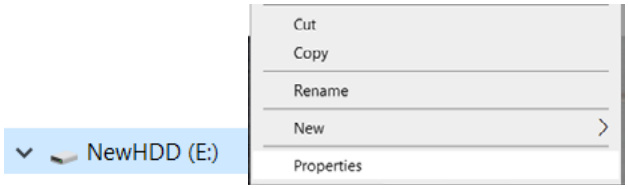
In case of DbMan V2.0.0.1, if the network settings are not taken over, the network setting screen will appear after creating a new DB. Select [Any of other CS software is installed in the other PC], enter the network settings, and click the [Execute] button.
After the network settings are made, the DB initialization will be executed automatically and the new DB creation will be completed.



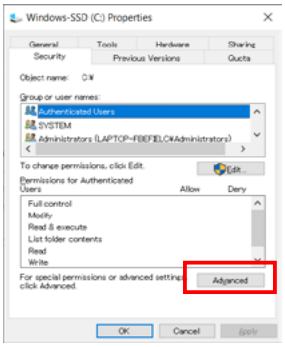
Access rights settings when replacing an external HDD

Follow the steps below to change the access rights settings.

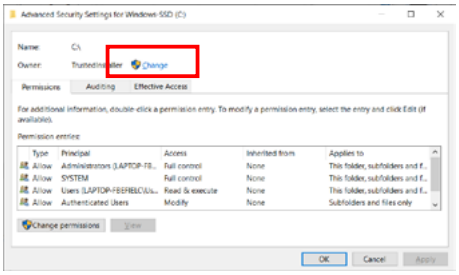
1. Open Explorer, right-click on the drive of the external HDD and select [Properties].



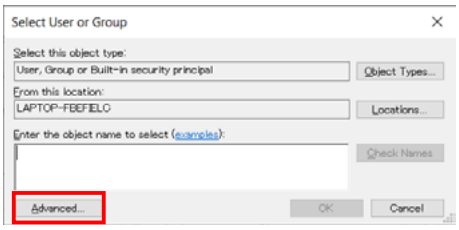
2. Select [Security] tab and choose [Advanced].



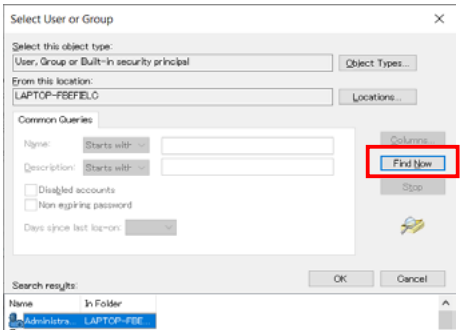
3. Click [Change] to change the Owner to the current user.



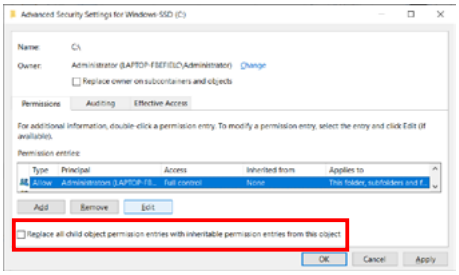
4. Select [Advanced...].



5. Click [Find Now] button to display users, then select the currently logged in user.



6. Click [OK] when the object to be selected is entered.
7. Check [Replace all child object permission entries...] checkbox, then click [OK].

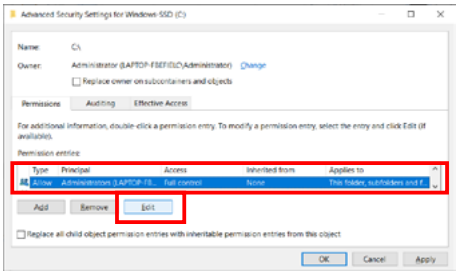


8. Click [Yes] to execute the permissions.
9. An error message may appear during execution. Click [Continue].The message may appear multiple times.
10. After execution, click [OK] to close the window.

While changing access rights, the user name may be duplicated and an error may occur.
In this case, follow the procedure on the next page to change the settings.

Configure additional settings for duplicate user name errors

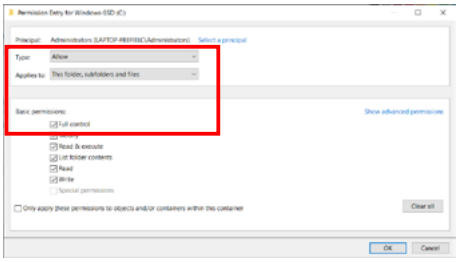
1. Refer to the steps 1-3 in "Access rights settings when replacing an external HDD" to change an owner a current user, then select [SYSTEM] and [Edit].



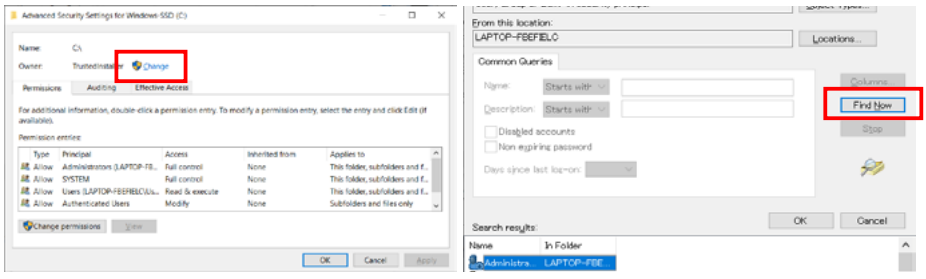
2. Select [This folder, subfolders and files] as the target, check [Full Control], and select [OK].

3. Select [Administrators] and click [Edit], then change the settings as you did for [SYSTEM] in step 2.
4. Select [Add] to add access rights to the current user.
5. Select the current user on [Principal].
6. Set the permission entries as follows and select [OK].

Type	Allow
Applies to	This folder, subfolders and files
Permission	Full Control



7. On the Advanced Security Settings screen, select [Change] for Owner, select [Everyone] under [Advanced...] - [Find Now], and grant access rights in the same manner as described in steps 1-6.



8. Select [OK] to close the window. Restart the PC to make sure that the HDD can be accessed.

Data migration from old DB when upgrading PostgreSQL

1. Perform DB Dump or Export in the current version.
2. After completion, uninstall the current version if you want to upgrade the PostgreSQL version on the same PC.
3. Install new PostgreSQL. (see installation instructions)
4. With the new PostgreSQL running, execute DB Restore and Import of DbManager to migrate the data.

*If you want to consolidate the data of multiple HDDs into one HDD, execute Dump/ Restore only on the first HDD.

Initial Setting of CS-Center

Start up CS-Center

Insert HASP key, and confirm whether the lamp of the key is lighting. Normally CS-Center confirm the connection to other machine such as SPI and Review after waiting for stable network connection. If connection fails, it retry for 5 times so there is a case to take time for start up CS-Center. If error happens, you need to check the connection.

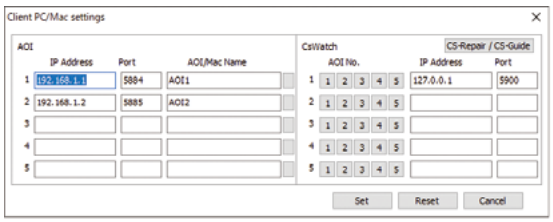
Address Setting

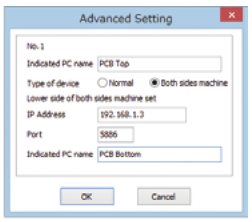
Select **Address Setting** from **Settings** menu. "**Client PC/Mac settings**" window opens.

For left side, input Mac's IP address, Port number and AOI/Mac name up to maximum 5. We recommend to use 589x for Port number, but it should be all unique numbers. AOI/Mac name is the Mac's name.

Click the button at right side of AOI/Mac name.
Window of **Advanced Setting** is displayed, so set the AOI type.
For Indicated PC name, input the text displayed in title of Status Monitor. If there is no text, put PC name.
Select Type of device for “Normal” for usual top inspection or “Both sides machine” for dual inspection.
If you select “Both sides machine” in Type of device, set IP address, Port number, and PC name for bottom inspection in Dual inpection machine.

For right side, input PC's IP address in which CS-Watch is installed. If you have two or more CS-Watch, input all IP addresses up to maximum 5. Port numbers are input 5885 on default, and you do not need change them. Press AOI No. that you want monitoring on each CS-Watch.



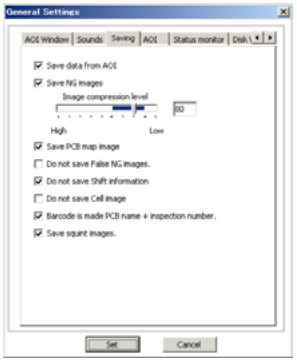


Database setting

Set IP address where PostgreSQL is installed. If PostgreSQL is installed in the same PC, input 127.0.0.1

Minimum settings for saving data

Open **General Settings** from **Settings** menu. Move to **Saving** tab, check the data which you want to save.



Save settings

Before finishing CS-Center settings, please output setting file. Select **Set Save...** from File menu. Your CS-Center's settings will be exported as a file. Store it in safe place.

Operation

To operate CS-Center, install PostgreSQL to C drive, and set data folder to the drive other than C drive.

If data becomes full, there are method to exchange HDD or delete the data. For the method of exchange HDD, exchange full HDD, and save data to new drive. Save old HDD for the time to check when it is necessary. You can check the content by connecting old HDD to another PC.
For the method of deleting the data, keep capacity by deleting data in HDD. If you need to save the data, copy data folder of PosgreSQL to another HDD. Stop PostgreSQL service when you copy the data. 2 to 3 hours may need for data copy for 500G data.

Delete data

Most fast method to delete the data is to format DB in **DbMan**. It will delete all data in few tens of seconds. If you do not want to delete all data, you can also delete the data fast by month in **DbMan**. Other method to delete large data is not recommended that it takes long time to delete.

Backup

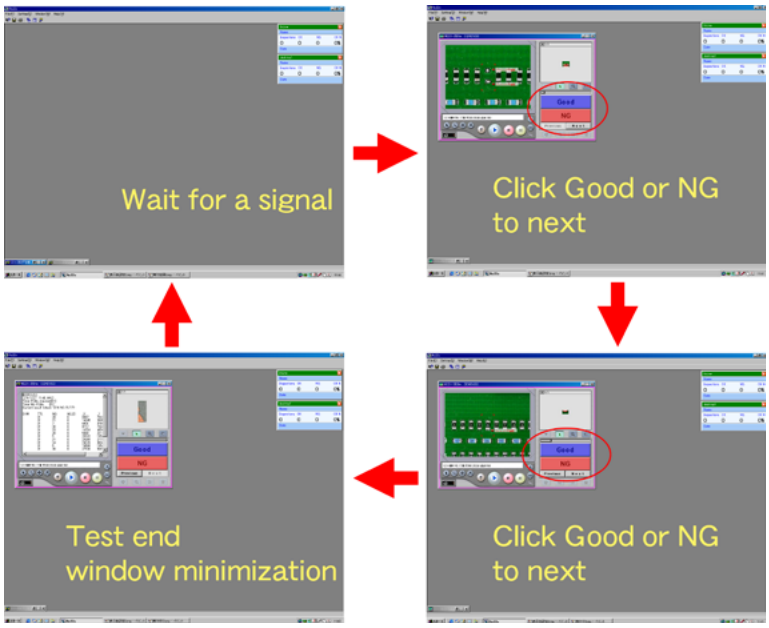
We recommend regular data backup in case of trouble. You can backup PostgreSQL data with **DB Dump** in **DbMan**. DB Dump can backup all PostgreSQL data. It cannot backup patial data. **DB Dump** can be executed during CS-Center operation, but performance will decline. We recommend to execute **DB Dump** during midnight or holiday when machines are not in operation.
There is another method of backup which is to copy PostgreSQL data folder. For data security, you need to stop PostgreSQL service for this method, so it cannot be executed during machine operation.

You need same HDD capacity with data HDD to save backup data for both backup method. Backup takes time, so we recommend high-speed HDD and high-speed interface (eSATA, USB3, etc.).

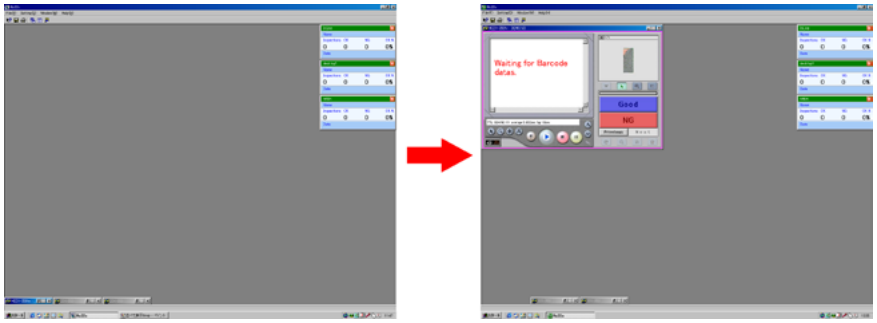
9. How to use CS-Center

If AOI is connecting to LAN, it is automatically connected to CS-Center. When AOI is operated in G/NG confirmation mode and a defect is found during inspection, that information is sent to CS-Center. A virtual window opens in CS-Center software to show this information (Virtual window is called **AOI Window**). In AOI Window, Good, NG and other buttons can be clicked remotely (the shape of the mouse cursor changes to a hand), you can classify the defect.
You can use the keyboard also. With ten keys, you can classify by NG_ID using 0 to 9. The input is sent to AOI and AOI works based on this order. After inspection by AOI is completed, the result is transmitted and displayed on CS-Center.

If "Minimize the Window after inspection" has been checked in AOI Window tab in general settings, the window is miniaturized. When a defect is found on the next PCB, the size of the window automatically returns to the original size and display what AOI's inspecting.

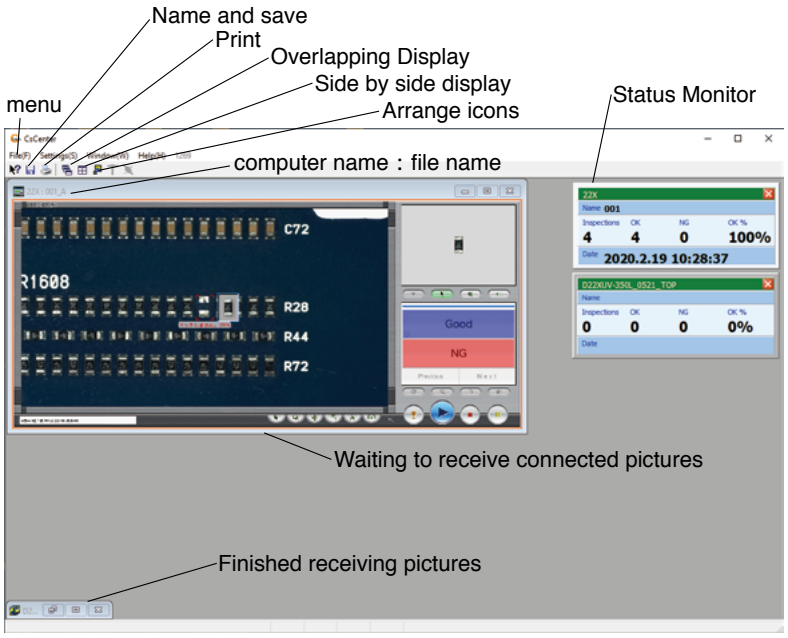


When AOI stops due to an error, a message is displayed in AOI Window.



When CS-Center receives a signal from AOI, CS-Center opens AOI Window to show the screen. In case CS-Center is inactive and minimized, the minimized window in task bar blinks, and the alarm sounds to let you know that the inspection starts.

10. Main Window



Simple

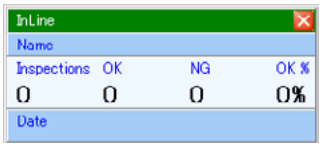
Real

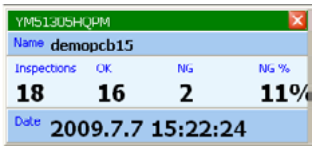
If your CS-Center version is 1.4.0.0 or later and your 22X version is 6.3.0 or later, the layout will be unified as follows.

Status Monitor

When receives an inspection result from AOI, Status Monitor displays the cumulative result in real time.

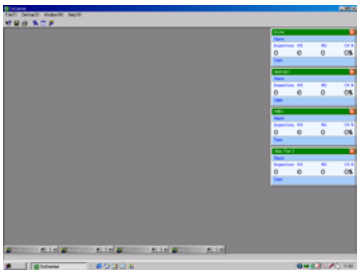
NAME	the name of an inspection program.
INSPECTIONS	the total number of inspected PCBs.
OK	the total number of good PCBs.
NG	the total number of defective PCBs.
OK %	the rate of the number of good PCBs out of total inspected PCBs.
DATE	the inspection date and hour.



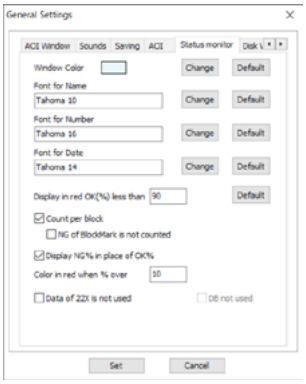


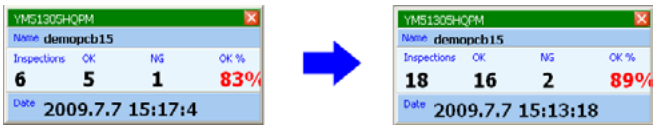
To close Status Monitor, click X on the upper right corner. To display the window again, click “Status Monitor” from the window menu.

Clicking “Cascade”, “Tile” or “Status Monitor” arrange the status monitor on the top right corner of the screen. The monitor or text color can be changed from “Status monitor” tab of “General Settings” in the settings menu.



If you are inspecting panelized PCB (The PCB that one sheet contains multiple small blocks.), you can switch Status Monitor to count blocks instead of sheet. In addition you can switch to show NG rate instead of showing OK%. You can set the status by activating the function in "Status Monitor" in "General Settings".



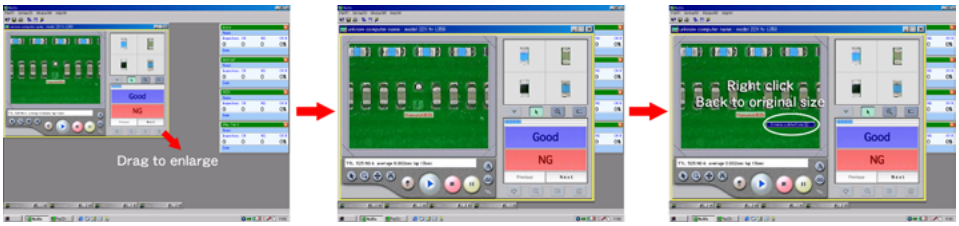


Count blocks

Show NG rate

AOI Window

The window size is changeable. Dragging the boundary line can change the window size. Right click and clicking "Change to default size" of the displayed pop-up menu returns the display to original size.



DB Connection

Indicates the status of the connection to the DB. Icons have the following meanings.

	DB available	DB is accessible.
	DB unavailable	This icon is displayed when an error occurs during DB access. In this state, it is not possible to connect to the inspection machine. The reason may be that the DB has stopped or has not been initialized. Refer to the chapter [22. Error Messages] and perform the DB recovery process. Click to execute the reconnection process.
	DB saving unavailable	This message is displayed when less than the HDD capacity warning is detected. In this state, it is not possible to connect to the inspection machine. Please delete files or replace HDD according to the manual. Click to run the memory storage check.

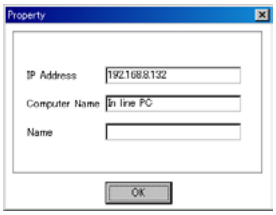
11. Menu

File

The menus related to file are as follows:
Property, Save As, Print, Export, Delete, Save & Load Setting, Exit

Property

This displays the information of the Computer currently connected to CS-Center.
The IP address, the computer name and the name of inspection program is displayed.



IP Address

Displays the IP address of connected PC.

Computer Name

Displays the computer name of connected PC.

Name

Display the file name of program in execution with connected PC.

Save As

This menu is used to save the image displayed in AOI Window as a JPEG file.

Print

This menu is used to print the image memorized in the AOI Window.

Export

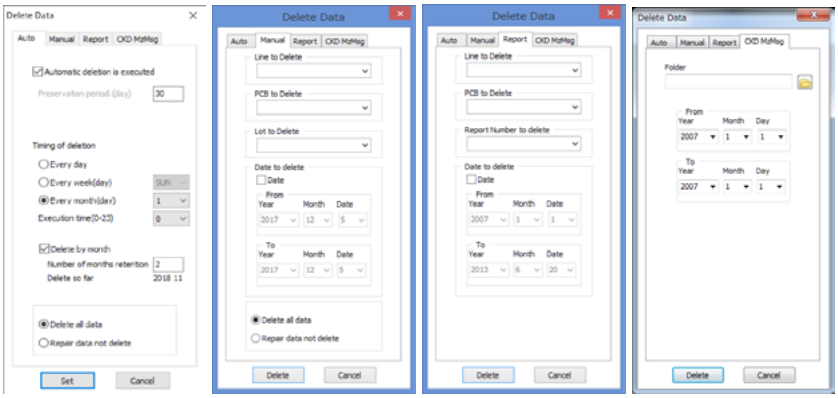
This menu exports PCB data in text format. This data is same as Rc22x file version.

Auto

Outputs data at the specified time. The output format is same as DbManager's export output. If [Delete DB data after export is completed] is checked, the data in the output period will be deleted after output.

Delete

This menu deletes data in CS-Center by inputting lot, line, PCB, and date (start date and end date). PC's CKD data on internet can be deleted. However, data used for improvement report with CS-Repair is not deleted.



Auto

Set timing of deletion and preservation period of the data.

Manual

Input lot number to delete, and click **Delete**.

Report

Input the line name, PCB, date (start date and end date) to delete, and click **Delete**.

CKD MzMsg

Set data in CKD data folder on network. Input date (start date and end date), and click **Delete**.

Save and Load Setting

Settings such as address setting can be saved and back up. It is possible to restore the settings to another PC. To save the settings, go to **Set Save...** from **File** menu. To restore the settings, select **Set Load...** from **File** menu.

Exit

This menu terminates CS-Center.

Settings

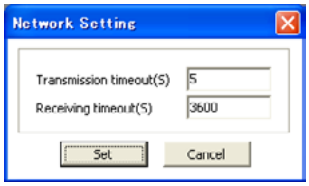
The menus related to setting are as follows:
Database, Network, General, Window Color, NG Classification ID, Address Setting, SPI Setting, Operator Setting for XML2(P)..., Operator Setting for XML2(E)..., A/B side summary, and Language

Database

Set IP Address of PC to save data. If CS-Center is installed in the same PC as DB, input 127.0.0.1. If it is not installed to same PC, input IP address of PC which data is installed. You can set up to 4 databases, and can switch by clicking "Active" button.
Caution: Please make sure that data is not in transfer while switching the database.

Network

This menu is used to set the communication parameter. As the network setting dialog is displayed, input transmission time out and receiving time out.



Transmission timeout

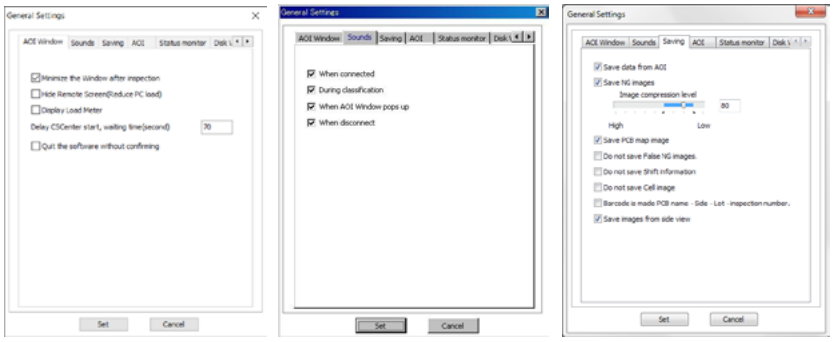
Input the period of time out in transmission to the PC connected to CS-Center in second. If transmission cannot be done within this period, an error occurs and the network is disconnected.

Receiving timeout

Input the period of time out in receiving from the PC connected to CS-Center. If receiving cannot be done within this period, an error occurs and the network is disconnected.

General

Menu to set actions or options. Functions are displayed in tabs in General Settings. Put check, and click **Set** to activate the function.



AOI Window

Minimize the Window after inspection

AOI Window is minimized after every inspection.

Hide Remote Screen (Reduce PC load)

Do not show Remote Control Window, this will decrease task for PC as a result data will be stored faster and response will be better.

Display Load Meter

Show Load Meter which indicates the PC performance.

Display CS-Center start, waiting time (second)

Set waiting time for stable network to start CS-Center. Time is from PC start to stable network.

Quit the software without confirming

Quit the software without displaying confirmation screen.

Sounds

If you check on each item, the beep sounds on each action.

When connected

Beeps when PC is connected.

During classification

Beeps when G/NG confirmation is necessary when image is displayed.

When AOI window pops up

Beeps when the inspection result is displayed after inspection.

When disconnect

Beeps when PC is disconnected.

Saving

Save data from AOI

Save inspection data as a file when it is sent from connected PC. File save is necessary when you use Catch System.

Save NG images

Save pictures of G/NG confirmation as a file when it is sent from connected PC. If you use data by CS-Repair or CS-Analyzer, please check this on. You can set image compression level. If level is high, then file will be small but not in good image quality. If level is low, then file size will be large but in good image quality. Estimate size of picture is when compression level is 50 then 10 KB, when 80 then 20 KB, and when 90 then 30KB.

Save PCB map image

If this option is checked on, then PCB image is saved. If you use data by CS-Repair

please check this on.

Do not save False NG images

If a defect is classified as a false NG, then the picture is not saved.

Do not save Shift information

If this is checked on, then CS-Center does not save inspection result text data except actual NG or false NG.

Do not save Cell image

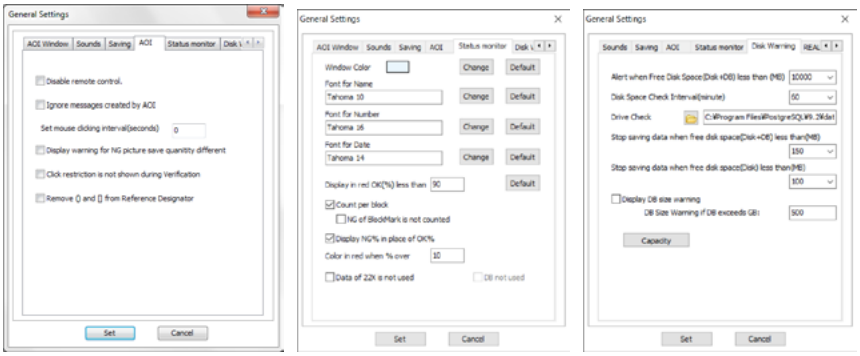
If this is checked on, then CS-Center does not save Cell images. It saves only the image sent by G/NG confirmation mode.

Barcode is made PCB name - Side - Lot - inspection number

When your PCB does not have barcode, you can create barcode for each PCB by naming as "inspection data name - side - Lot - total PCB".

Save images from side view

If this is checked on and Angular Camera is activated on AOI, images are saved.



AOI

Disable remote control

If this is checked, remote classification from CS-Center is disabled.

Ignore message created by AOI

Normally important warning message on AOI pops up also on CS-Center. This disables to show warning messages.

Set mouse clicking interval (seconds)

When operator click mouse continuously and carelessly, set interval to allow click.

Display warning for NG picture save quantity different

Displays the warning message when number of NG is different from the number of saved NG.

Click restriction is not shown during Verification

Does not display the NG picture, and make the result to NG for click restraint status which is set in G/NG Confirmation mode.

Remove ( ) and [ ] from Reference Designator

If ( ) and [ ] is included in Reference Designator, remove when saving it to the database.

Status Monitor

Window Color

Here you can change Status Monitor's color. Click "Change" button when you change the color. Color setting dialog is displayed, so select the color. If you want to create new color or return to initial setting, click "Defaut" button.

Font for Name

Set the font for Name to be displayed. Click "Change" button when you change the font. Font setting dialog is displayed, so select the font and click **OK**. Click "Defaut" button if you want to return to initial setting.

Font for Number

Sets the font for number which displays **Inspections**, **OK**, **NG**, and **OK%**. Click "Change" button when you change the font. Click "Defaut" button if you want to return to initial setting.

Font for Date

Sets the font for date to be displayed. Click "Change" button when you change the font. Click "Defaut" button if you want to return to initial setting.

Display in red OK(%) less than

You can set the percentage of OK PCB alert. If the rate PCB judged as OK is less than set value, then OK% is colored in red. Click "Defaut" button if you want to return to initial setting.

Count per block

When your PCB is panelized PCB (PCB as sheet, having small PCB blocks), if this option is ON, status monitor displays count based on block.

NG of BlockMark is not counted

Does not count the PCB which becomes NG with BlockMark.

Display NG% in place of OK%

When this option is ON, status monitor displays NG% instead of OK%.

Color in red when % over

You can set threshold to display text in red when NG rate exceeds the set value.

Data of 22X is not used

Does not use data received from 22X. Refers DB data if **DB not used** is OFF.

Disk Warning

Make an alert if the disk free space becomes less than setting MB.

Alert when Free Disk Space less than (MB)

Select free disk space from drop-down list. Free space of the drive where to save the data become less than set value, alert message is displayed.

Disk Space Check Interval (minute)

Select interval minutes from drop-down list. Set interval for CS-Center to check Free Disk Space

Drive Check

Set the drive to save the data.

Stop saving data when free disk space less than (MB)

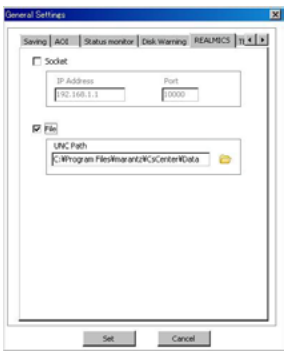
Monitor the free disk space of Drive and Database, and set the space limit to stop saving data.

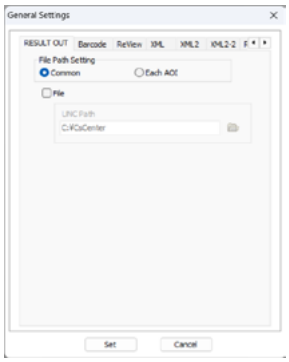
Stop saving data when free disk space(Disk) less than(MB)

Monitor the free disk space of Drive, and set the space limit to stop saving data.
Set the greater limit value to “Stop saving data when free disk space(Disk+DB)” than setting value of “Stop saving data when free disk space(Disk)”.

Display DB size warming

If you tick this item and data size is more than the input number on "**DB Size Warning if DB exceeds GB**", caution message is displayed.





REALMICS

This setting is for sending data of the inspection results to REALMICS. Set the value by put check to Socket and File.

Socket

Set IP Address and Port of PC which REALMICS is installed.

File

Set the folder to save the data.

TECNOMATIX

This creates file in the designated holder for TECNOMATIX. When you check in the File check box, UNC Path is available, so input a folder. Clicking on the folder button on the right displays a folder selection dialogue.

File

Set the folder to save the data.

RESULT OUT

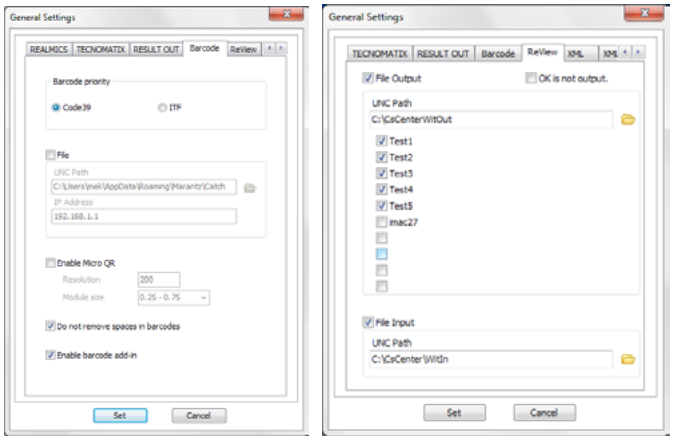
This creates file in the designated folder for RESULT OUT. When you check in the File check box, UNC Path is available, so input a folder. Clicking on the folder button on the right displays a folder selection dialogue.

File Path Setting

Selects the export setting.

File

Set the folder to save the data.



Barcode

Set the special setting of barcode read by AOI.

Barcode priority

Set priority of barcode setting whether Code39 or ITF.

File

Send barcode info to the other machine, set directory and IP address of PC where you want to save the data.

Enable Micro QR

Activate this when scanning Micro QR on AOI. You require analyzing software (optional) to read Micro QR.

Do not remove spaces in barcodes

Do not delete the space before and after barcode, when activate (put check) this function.

Enable barcode add-in

Use high performance barcode add-in (optional) function which has high decoding perfomance.

Data without barcode is not output to XML

Does not output inspection data without barcode information into XML.

ReView

For details to communicate to an external optical reviewing machine, please refer the chapter "**Connect to optical reviewer**".

Angular Cameras image is Exported

Exports images of Angular Cameras to same folder as other images while exporting inspection data into XML. Available only when both of **Save images from side view** option on **Saving** tab and **Image** option on **XML** tab are active.

File Output

Set folder to send the data to external optical reviewing machine. Put check to the machine which you get the data from.

File Input

Set folder to receive the data from external optical reviewing machine.

OK is not output

Send only False NG and NG detail to external optical reviewing machine.

XML

File

Export data in XML format. You can select "File per panel" or "File per PCB", and set the output destination. Also Text data, PCB map, and NG pictures can be output.

File Path Setting

When [Common] is selected, the settings are shared by all PCBs.

When [File per PCB] is selected, output conditions are set for each PCB.

Lot is Exported

Output the Lot to XML

OK is Exported

Output OK result to XML

It is sent to the HTTP server

Send XML data to HTTP server. Select the “file per panel” or the “file per PCB”, and set the output destination. Set the address of HTTP server at “Host”. If you put check mark in “Lot is output”, Lot will output. Set the time in “Time Out” for server communication. Set time is in seconds.

A block mark (Bad board mark) is not Exported

If you put check mark, BlockMark will not output to XML.

pcb_Number

Depending on the settings you select, the output content in the XML file will be switched.

Number: Serial number of the block in the XML output

BlockNumber: Block number in the inspection result

*** In software version 2.0.0.7 or later, BlockNumber is output sorted by block number.**

The x part of the following data will change.

<serial_pcb_x>

<status_pcb_x>

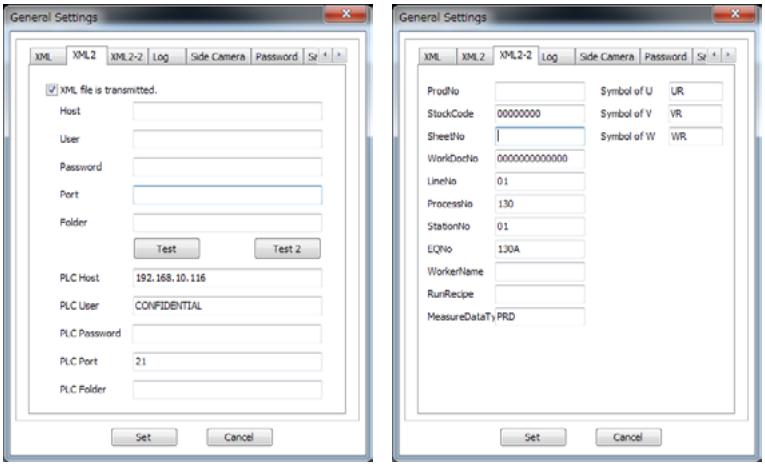
<pcb_no>x</pcb_no>

Output the number of NG in error_conf

The number of NGs after the inspection is entered in the error_conf field.

NG of BlockMark makes judgement of XML output OK

Normally, if a BlockMark is NG, the output is [NG]. By turning this setting ON, the output can be set to [OK] or [Empty].

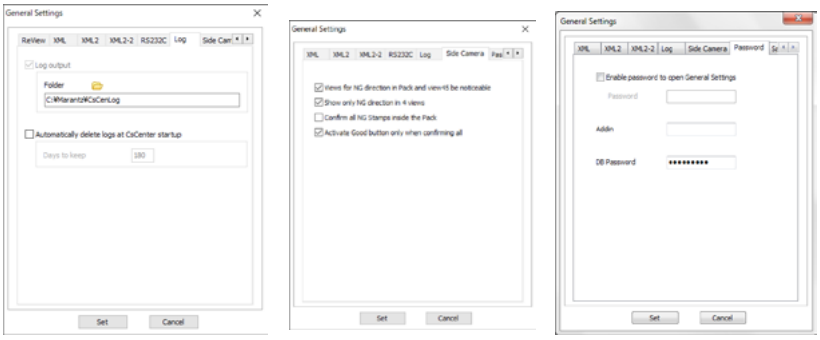


XML2 and XML2-2

Send text string of XML format to server. Set parameter to send the data.

RS232C

Connecting option with particular system.



Log

When there is trouble on CS-Center or database, you can output logs for us to analyze the problem. This setting is fixed to be enabled in Version 1421 and later.

Log output

Output the log. File is saved to the destination shown under "Folder". If you want to change the output destination, click folder icon to change the destination to save the data.

Automatically delete logs at CsCenter startup

Automatically delete logs which is older than set days when startup CsCenter.

Side Camera

Views for NG direction in Pack and view45 be noticeable

If there is NG in Pack, highlights the NG point and darken the unnecessary views for easy viewing.

*** For the same display on 22X, enable the setting [Views for NG direction in Pack and view45 be noticeable] in [For supervisor] - [Angular camera] of the 22X.**

Show only NG direction in 4views

Shows NG with four cameras for easier viewing.

*** For the same display on 22X, enable the setting [Show only NG direction in 4views] in [For supervisor] - [Angular camera] of the 22X.**

Confirm all NG Stamps inside the Pack

If there are several NG Stamps inside the Pack, confirm all NG Stamps.

Activate Good button only when confirming all

If there are several NG Stamps inside the Pack, Good button is activated only when all Stamps are confirmed.

Password

Enable password to open General Settings

Protect General Settings by password being touched by anyone. You can set and change the passoword in this window.

Addin

Set if you need the operation of special function. Normally this stays blank, and no need to input.

DB Password

Password requires to connect data base. Password which was set at installation is automatically applied. If you change the password in DbManager, you need to change this password, too.

Save inspection information RC22 Format

Save inspection information to file

If you activate this function, inspetion information is saved to the folder after each inspection.

Create the folder of YYYYMMDD\PCName\HH to the set folder, and save with file name “PCName_PCBName_Barcode_ YYYYMMDDHHMMSS.txt”. Additionally, create cell and jpg folder, and save the JPEG file of cell image and NG image.

Example of text file:

```
IMAC9_test1_A_20160921185019
16/09/21 18:50:19
IMAC9
A
test1
 [ 2016.9.21 18:50:18 ]
Total PCBs checked[207] block<0>
Total NG PCBs     [171] block<0>
Current result (check 5 NG 4/4) Spent time 0 (check2 5) [0/4/5]
BarNum (2560416423)
LotNum (001)
plist 1,41000,35000,0,0,39034,3633,0,0,1584,1184,265

SYM   NG_ID   _X     _Y     _NUM    _MX      _MY      _MA WSIZEX  WSIZEY   _NOTE
UR    -       1644   1763   +1      37920    9863     0   0       223      (0 0)
VR    0       6481   5455   2       33083    6169     0   0       342      Mismatch by Saturation.
```

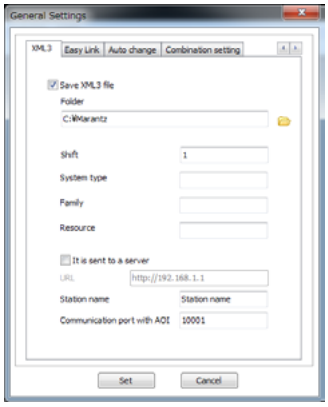
too high(0.11 -0.03)

WR	-	13591	6275	+3	25975	5349	0	0	331	(0 0)
	-	6184	5436	+4	33380	6188	0	0	481	(0 0)
	0	13075	6264	5	26491	5360	0	0	322	Mismatch by Hue(-0.07

0.11)

Synchronize timing of result text output of dual machine

Synchronizes the output time stamp between top machine and bottom machine.



XML3

*** This function is for specific users; please use “XML” if you consider using the XML output function.**

Save XML3 file

Output the file of different format with operation setting XML.

Shift

Sets value which is output to SHIFT on FACTORY group of output file.

System type

Sets value which is output into SHIFT on FACTORY group of output file.

Family

Sets value which is output into SYSTEMTYPE on FACTORY group of output file.

Resource

Sets value which is output into RESOURCE on GROUP group of output file.

It is sent to a server

Sends information to set URL after exporting XML.

URL

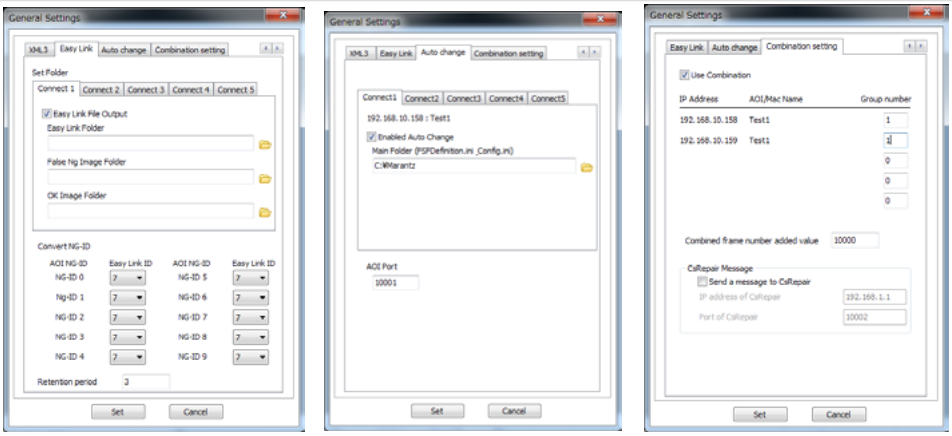
Is used when sending information to Server.

Station name

Is used when sending information to Server.

Communication port with AOI

Sets Communication port with AOI.



Easy Link

Set the Easy Link function for Fuji Smart Factory.

Easy Link File Output

Activate when you want to output Easy Link file.

Easy Link Folder

Set the folder when you output Easy Link file. You can select folder by clicking the folder icon at right.

False Ng Image Folder

Set the folder to output false NG image file. You can select folder by clicking the folder icon at right.

OK Image Folder

Set the folder to output OK image file. You can select folder by clicking the folder icon at right.

Each setting is proceeded for each AOI connection (Tab Connect 1 to Connect 5).

Convert NG-ID

Set when you need to convert NG-ID to output ID for Easy Link. Set Easy Link ID assigned to NG-ID 0 to NG-ID 9. This setting is common to all connection.

Retention period

If file cannot be saved with problem such as network trouble, save the file to designated folder temporarily. There is function to store this temporarily saved file to authorized folder after trouble had been solved. Set the temporary retention period in minutes for this function. If the file is stored over this period, it will be deleted. If you set "0", the temporary file save function is not active.

Auto change

Set the function of auto change of the model for Fuji Smart Factory.

Enable Auto Change

Put check when you want to activate the auto change function.

Main Folder

Set the folder for auto change function. Please set the folder with FSFDefinition.ini. You can select the folder by clicking folder icon at right.

AOI Port

Set the AOI port for Auto Change function.
This setting is common for all connection.

Combination setting

Set when combining more than one AOI for tact improvement. Combine the inspection result of multiple AOI, and output the result as same as inspecting by one AOI.

Use Combination

Put check when you want to activate the combination function. You also need the setting in AOI to use the function.

Group number

Input the number for the combined group referring to the displayed IP address and PC name. Combine the inspection data for same group number. It does not combine when group number is "0".

Combined frame number added value

Set the additional value for the function to avoid the duplication by adding certain number to frame number for each AOI. Use this function when there is possibility of frame number duplication when using combination function.

Send a message to CsRepair

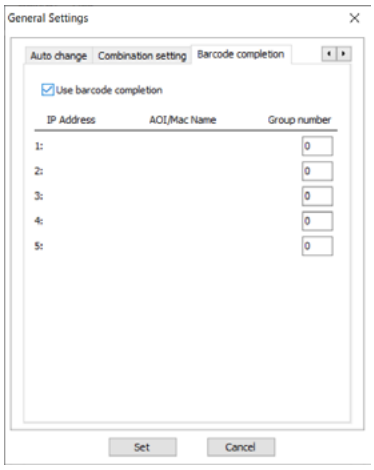
Send message to CS-Repair when data inside the group is not aligned for data combination. You also need the setting in CS-Repair to show the message.

IP address of CsRepair

Set the IP address of CS-Repair for sending message.

Port of CsRepair

Set the Port of CS-Repair for sending message.



Barcode completion

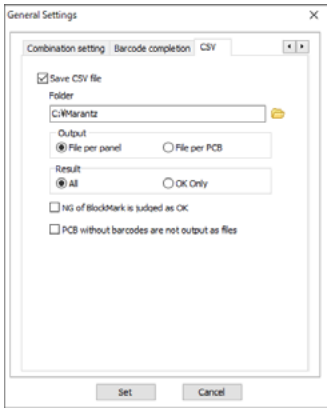
Completes lack barcode information when a barcode is put on just one side. This function works when ticking Use barcode completion.

Those three conditions are required:

*Barcode information for both sides exist.

*Besides, PCB barcode information is on a side.

*Inspection is started from A side to B side.



CSV

Save CSV file

If it is active, CSV file is saved on the folder you choose.

Output

Set [File per PCB] to output information for each sub PCB.

Result

When [OK only] is selected, the CSV file is output only when the child is judged as OK.

NG of Blockmark is judged as OK

For the PCBs that are judged as NG by the BlockMark stamp, they are treated as OK.
When the option is ON, the judgment is indicated as 'BM' when the file is output.
When the option is OFF, it is judged as NG.

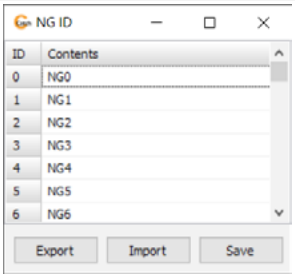
PCB without barcodes are not output as files

When the option is ON, PCBs without barcodes are not output to file.

Window color

When two or more AOIs are connected, the window frames displayed on the screen are colored in order to discriminate each AOI easily. Set the color for each window.

As the Display Color Setting dialog is displayed, set the display color and click Set button. Windows 0 to 9 correspond to the final numbers of the IP address to be connected. When AOI is connected, its name is displayed. To change the display color, click the colored frame. As the color dialog is displayed, select the color. To make a new color, make a color by clicking the color-making button and click the addition button.



NG Classification ID

The NG ID window is displayed. It serves as a useful reference for input of NG ID from the keyboard when classifying NG in cause or phenomenon. The item can be edited by double-clicking on white columns. To quit from editing, press enter, or click other space. NGID can be registered from 0 to 255.

Export

Outputs the displayed NG-ID items to an arbitrary file.

Import

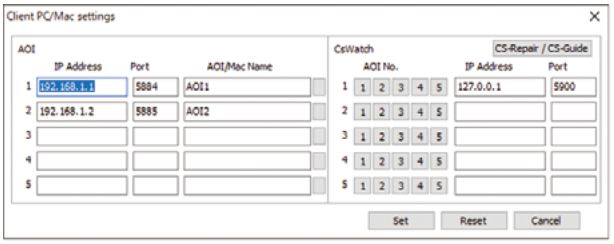
Reads NG-ID items from the file and displays them on the screen.

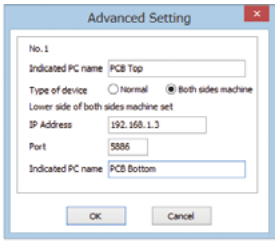
Save

Export the contents of the NG ID in a file.

Exit

Click upper-right button to close the NG ID window. When the NG ID has been changed but not saved, the alert message is displayed.





Address Setting

Set network setting of AOI and CS-Watch which is communicating with CS-Center by TCP/IP.

AOI IP Address

Input IP address of connected AOI.

AOI Port

Input Port number for TCP/IP. All numbers should be unique.

AOI/Mac Name

Input connected AOI computer name.

CsWatch AOI No.

Select and press all AOI No. button which you want to send data to CS-Watch from CS-Center.

CsWatch IP Address

Input PC's IP address in which CS-Watch is installed.

CsWatch Port

Input Port number for TCP/IP. All numbers should be unique.

Set/Reset/Cancel

Click **Set** when you execute the setting. If there is some trouble with connection among each device, click **Reset**. Click **Cancel** if you do not set or change anything.

Setting for Dual inspection

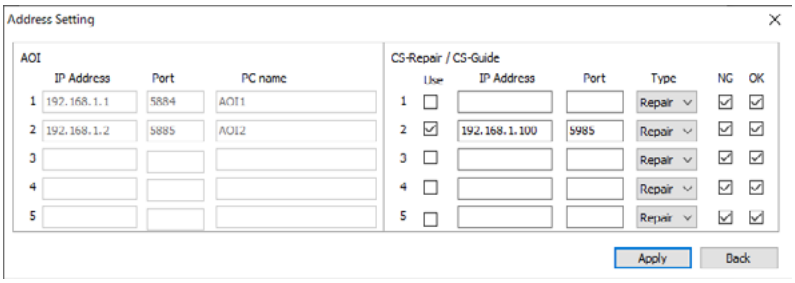
Click the button next to AOI/Mac Name to open **Advanced Setting** window.

Indicated PC name

Input the text displayed in title of Status Monitor. If there is no text, put PC name.

Type of device

Select “Normal” for usual top inspection or “Both sides machine” for dual inspection. If you select “Both sides machine” in Type of device, set IP address, Port number, and PC name for bottom inspection in Dual inpection machine.



CS-Repair / CS-Guide

After receiving the inspection results from the inspection machine, the inspection information is notified to the target software CS-Repair/CS-Guide, and the settings are made for sending and displaying the inspection information.

Use

When the box is checked, inspection information is notified to the Repair/Guide.

IP Address

Sets the IP address of the Repair/Guide to which the inspection information is sent.

Port

Sets the port number of the Repair/Guide to which the inspection information is sent.

Type

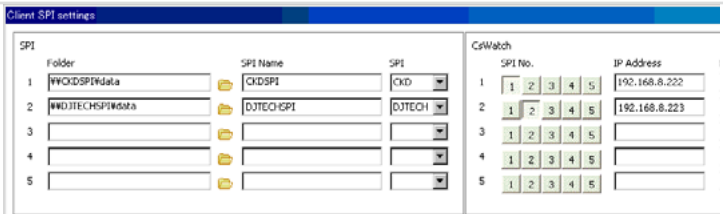
Specify the destination (Repair or Guide) to which the inspection information is sent.

NG

NG inspection information is notified to Repair/Guide.

OK

OK inspection information is notified to Repair/Guide.



SPI Setting

Catch System can receive inspection result from Solder Paste Inspection machine of CKD corporation and DJTECH Co., Ltd. For details, please refer to the chapter for **Connect to Solder Paste Inspecion machine** in Chapter 21.

SPI Folder

Set the input folder to receive the data from SPI machine.

SPI Name

Inpuy PC name which is connected to SPI machine.

SPI

Select the company name of SPI machine.

CsWatch SPI No.

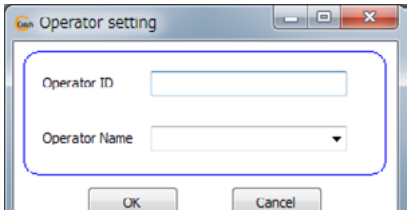
Select and press all SPI No. button which you want to send data to CS-Watch from CS-Center.

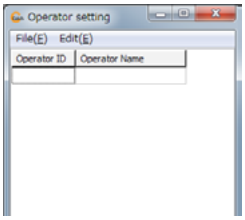
CsWatch IP Address

Input PC's IP address in which CS-Watch is installed.

CsWatch Port

Input Port number for TCP/IP. All Port numbers should be unique.





Operator setting

Set the operator for XML2.

Operator ID

Input operator ID number. Operator name is displayed when you press [Enter] key.

Operator Name

Select operator name by clicking the pull down (right end) of "Operator Name" field.

Operetor setting window

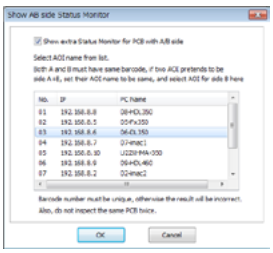
Operator ID window is displayed.

Open

This function loads the contents of an NG ID from the file. If you right click the **File** menu, **Open**, **Save** and **Exit** menu is displayed. From menu File > Open, select the file which NG ID is saved, and click **Open**. When startup, **NGID.TXT** file which is set at folder setting is loaded.

Save

Export the contents of the NG ID in a file. A dialogue to save as a file is displayed, set the folder and file name.



Show AB side Status Monitor

If you inspect PCB both from front and back sides, this function is very useful to see the prodution status in real time.Normally when you inspect PCB first front side (side A), then back side (side B), the status monitor counts each side separately. But if this is active, an additional status monitor to show the result of the PCB (total result of side A+B) will be displayed.Check on "Show extra Status Monitor for PCB with A/B side".
Select PC Name (AOI) of which both sides are inspected.
You can also apply this for combined AOI such like the first AOI inspect side A and the second AOI inspect side B. In this case, you have to input the same PC Name in Address Settings. And select the second AOI here. This function requires management of barcode for each PCB.

Language

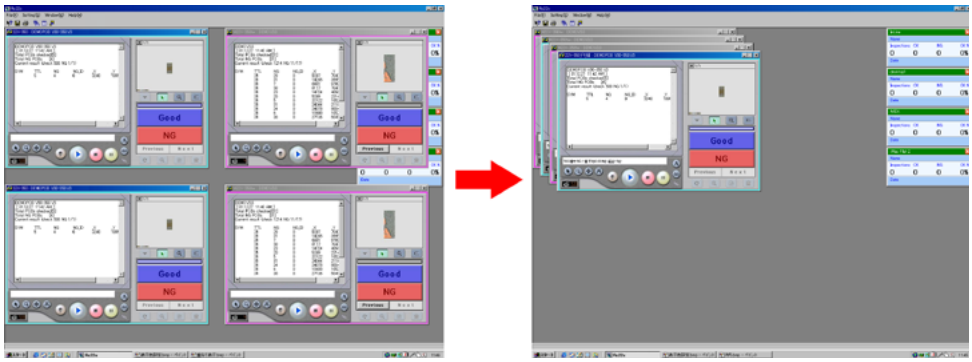
Operation language is selectable from English/Japanese/Korean/Chinese.

Window

The menu related to window operation are as follows:

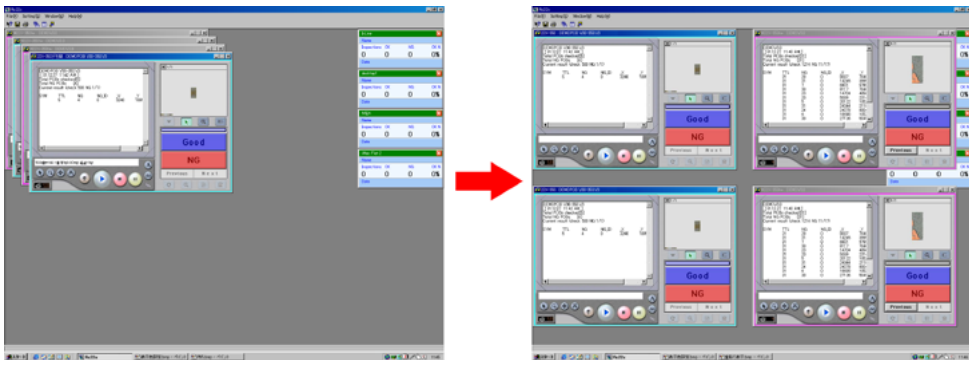
Cascade

Two or more windows are displayed being overlapped with each other.



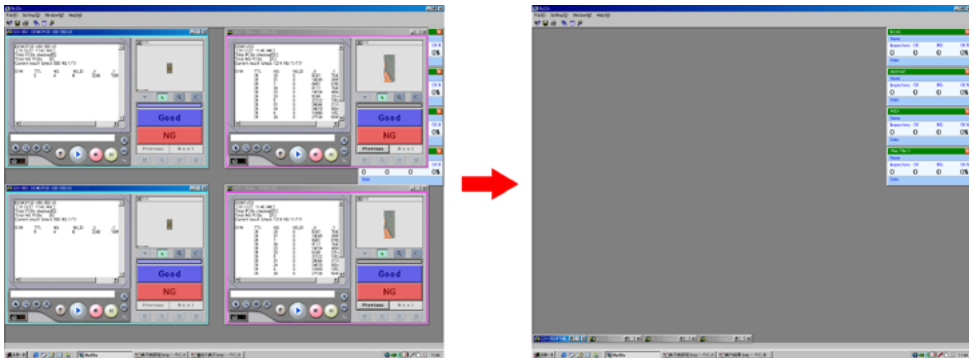
Tile

Two or more windows are displayed side by side.



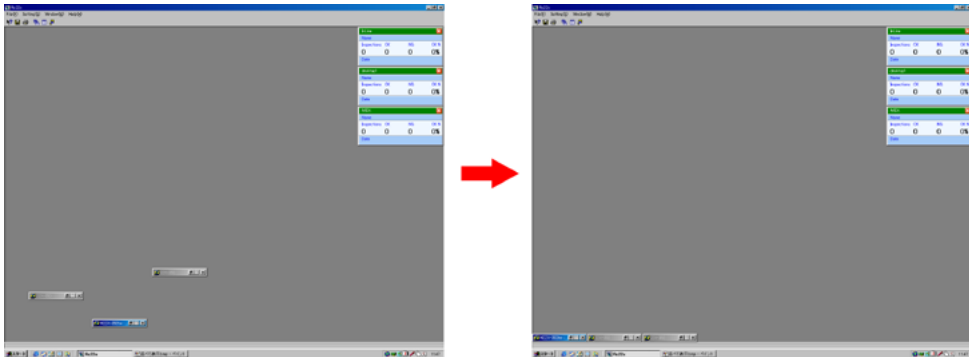
Minimize

This menu is used to minimize all windows.



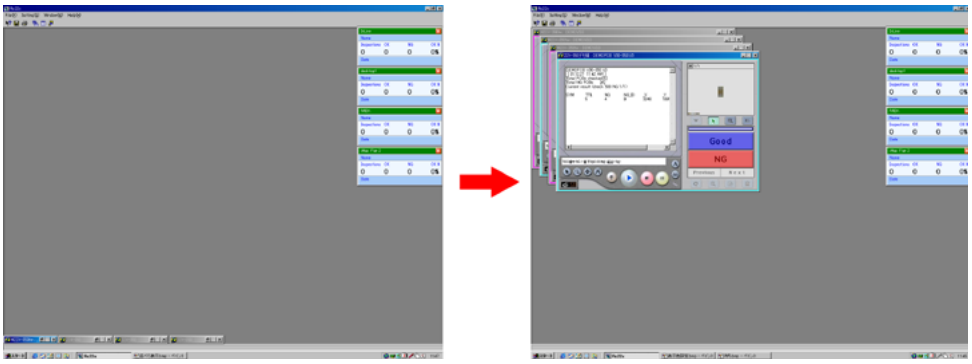
Align icons

This menu is used to arrange the minimized windows.



Original size

This menu is used to return all windows to original sizes.



Status Monitor

Regenerate the Status Monitor window while machine is connected.

Load Meter

Confirm operation status of PC. Check if the cause of AOI stop comes from PC load.

Help

The menu related to Help are as follows.

Help

This menu is used to display the help description.

About CsCenter

This menu is used to display the dialog to show information including versions.

12. Tool buttons

Property

This function displays the information of the computer connected to the active window. The property window is displayed to show IP address, the computer name and the name of the file being executed.

Save

This function saves the image being displayed on the active window as a JPEG file. When “Save as name” dialogue box is displayed, input the name of the folder and file you want to save, and click on the Save button.

Print

This function prints the images being memorized in the AOI window. As a print dialogue box is displayed, click on the OK button.

Arrange Windows overlapping

Two or more windows are displayed being overlapped with each other.

Arrange Windows side by side

Two or more windows are displayed side by side.

Recover Window size to default

This function restores all minimized windows to the original size.

SPI communication test

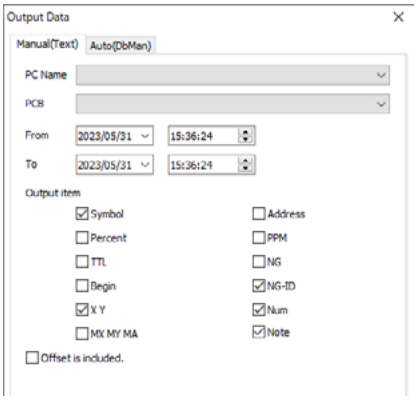
Test if SPI machine is connected properly to the data directory which is set at SPI Setting or Review in General Settings. Message to show the test success is displayed after pressing test button. If connection fails, button changes to red color to alert the error. If setting is not activated, button changes to grey color, and cannot press it.

SPI communication reset

Reset the connection to SPI machine if data is not sent correctly from SPI or Optical Reviewer machine. If connection fails, error message is displayed. Please confirm the connection. If setting is not activated, button changes to grey color, and cannot press it.

13. Export Data

You can export data and images stored in Catch System. Select **Export...** from File menu.



What you can export

The text file format exported here is same as text generated by Rc22x.

For exporting, you can sort data. If you specify PC Name, PCB and period. Automatically data is exported on desktop. Without specifying PC Name or PCB, data during specified period can be exported. In this case, a information file will be created. The information file is a reference of data. You will be asked to input a file name for this information after pressing Output button.

Below 3 data will be exported;

1. Inspection result in text format

   The text file will be named "PC Name + PCB Name + PCB side + Date". Format will be as below. Information per inspection points will be differ from AOI settings or exporting settings.

Example:

```
07/01/10 22:26:43                                   Date on AOI
demoPCB10                                           PCB name
 [ 2007.1.10 22:16:55 ]                             Date on CS-Center
Total PCBs checked[1]                               Inspected PCB number
Total NG PCBs     [1]                               Cumulative PCB number
Current result (check 2257 NG 625/626) Spent time 23  Inspection result

SYM ADRS % ppm TTL NG Begin NG_ID _X _Y _NUM _NOTE  Info per inspection points
1608 B 02 0.00 0 1 0 05/9/30 - 7515 4610 +35 1608:(0 0){1608P}
 B 02 0.00 0 1 0 06/1/17 - 5504 4720 +3 (* *){special:NewCellAid}
603 B 02 0.00 0 1 0 05/1/13 - 5858 4720 +220 603:(0 0){603}
603 B 02 0.00 0 1 0 05/1/13 - 5858 4519 +219 603:(0 0){603}
603 B 02 0.00 0 1 0 05/1/13 - 5918 4620 +218 603:(0 0){603}
```

2. PCB map

   Formatted in JPEG image, and named "PC name + PCB name + PCB side".

3. NG point images
   Formatted in JPEG image but extension is .22x, and named "PC name + PCB name + PCB side + date + number".

*** When exporting data, NG point images require lots of HDD capacity. Please select directory where there are enough free disk space.**

14. Delete Data

There are more than one method to delete inspection result data in PostgreSQL. CS-Center, CS-Repair, CS-Analyzer offers menu for deletion. Also, you can delete all data by initializing database with DB Manager software.
This chapter explains how you can delete data by DB Manager or CS-Center/CS-Repair/CS-Analyzer.

Delete whole data

This is the fastest way to delete all data in database, takes only few seconds or a minute. Start DB Manager. Press Format**DB** button. Initialize will be started, and will be finished within a minute.

Delete a part of data

You can delete selected data manually. Select Delete... from File menu in CS-Center. A window pops up. Select Manual tab. Delete selected data by sorting line, PCB, lot or date. The same operation is possible also on CS-Repair and CS-Analyzer.
You can also delete report created on CS-Analyzer in database in **Report** tab on CS-Center or CS-Analyzer. You wil need long time to delete the data with this method. Delete 100GB data may take approximately 5 hours. Please do not operate Catch System while deleting data.

Delete data automatically

Select **Auto** tab. Check on **Automatic deletion is executed**, and set how long data should be saved in database. Select when to delete from day, week, month, then set hour to execute deletion. You can select whether deleting all data or exclude repair data. You wil need long time to delete the data with this method. Please do not operate Catch System while deleting data.

15. Back Up & Recover CS-Center settings

There is possibility that PC suddenly stops working, and you have to urgently run CS-Center on another PC. For such trouble, you can export settings file and import it to new PC.

Back Up

Select **Set Save...** from File menu. Input any name. Your CS-Center's settings will be exported as a file. Store it in safety place.

Recover

Select **Set Load...** from File menu. Open *.ini file that you created in Back Up settings file procedure.

16. Un-installation

Un-install CS-Center

Select CSCenter from “Add/Delete Application” on the control panel for un-installation.To un-install the HASP driver, start Install.exe of the CD and execute “Un-install HASP driver.

Un-install PostgreSQL

Select PostgreSQL from “Add/Delete Application” on the control panel for un-installation. This operation only delete PostgreSQL, and does not delete data stored by PostgreSQL.

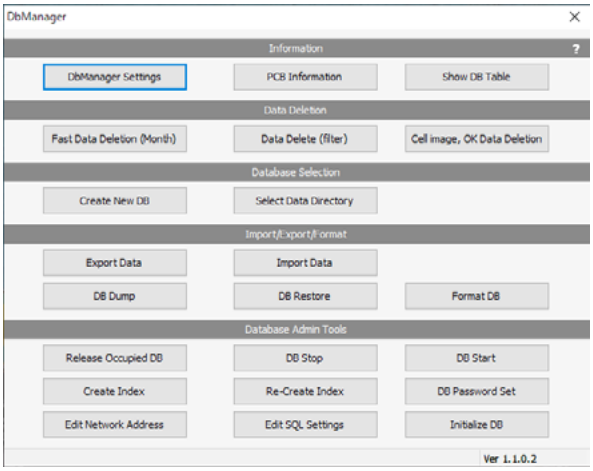
If you like to delete everything completely, execute following;

Data is stored under C:¥Program Files¥PostgreSQL, delete PostgreSQL folder.

Data is stored in the other driver in Dbdata directory, delete Dbdata folder.

17. DB Manager Menu

DbManager is a tool which enables to operate PostgreSQL directly.



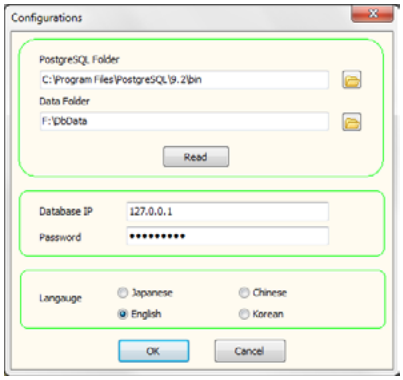
DbManager Settings

DbManager is compatible with PostgreSQL v15 since Version 2.0.0.0.
Set location of PostgreSQL and its data folder, and PC.
In case, you did not install PostgreSQL or its data in default directory, change location.

*** PostgreSQL Folder and Data Folder setting affect to "Format DB", "DB Dump", "DB Restore", "Re-create Index" and "Create Index".**

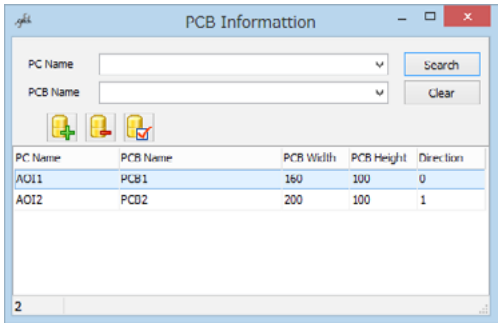
If database is installed in another PC (other PC than DbManager is installed), input IP address.

*** Database address setting affects to "Show DB table", "Export data", "Import data" and "Release occupied DB".**



PCB Information

Set the PCB information.



Addition

Click addition button.

Input PC Name, PCB Name, PCB Width, PCB Height, Direction, and Count block.
Not necessary to put _A or _B for the face of PCB Name.
Input PCB Width and PCB Height with the value of 1/100mm. If it is 100mm, input 10000.
Input Direction from any of 0,1,2,3. “0” is from right to left, “1” is from left to right, “2” is from right to left for Bottom inspection, and “3” is from left to right for Bottom inspection.
Input the number of block for split PCB in lateral direction in Count block.

Delete

Click “Search” button, and display the PCB information. Select the information you want to delete by clicking, and click the delete button.

Change

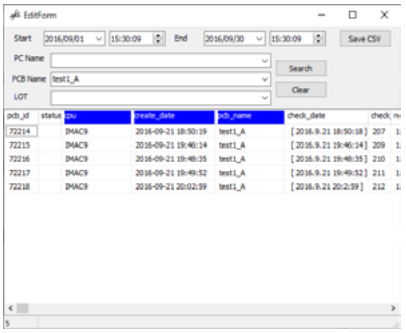
Click “Search” button, and display the PCB information. Select the information you want to change by clicking, and click the change button.
Click “OK” after changing the content.

Show DB Table

Display contents of database in list. This menu is for confirming data before executing Index Re-creation, or for checking if there is any problem on database.
Select PC and PCB, press Search. Also enable to sort by date and Lot.

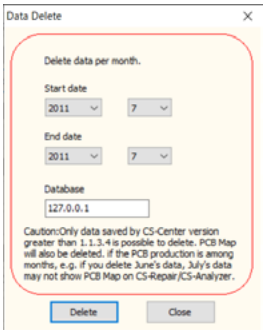
*** If you can not select PC or PCB, or error is displayed, maybe the directory setting of PostgreSQL is wrong, set correct directory from DbManager Settings menu.**

The header of the selected item turns into blue. Select any lines and click "Save CSV", then enter the file name and saving place. Selected lines are saved as CSV form.



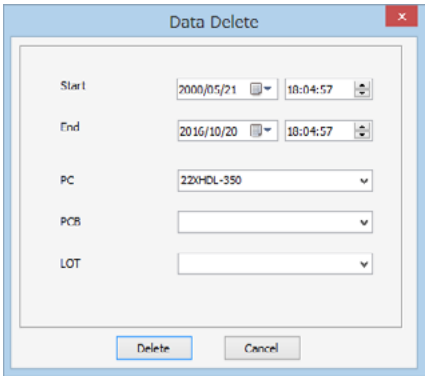
Faster data deletion

You can delete the data in database by month. For production data which extends over two months, and if you open the data which is not deleted, there is the case that PCB map is not shown if the data is opened in CS-Repair or CS-Analyzer.



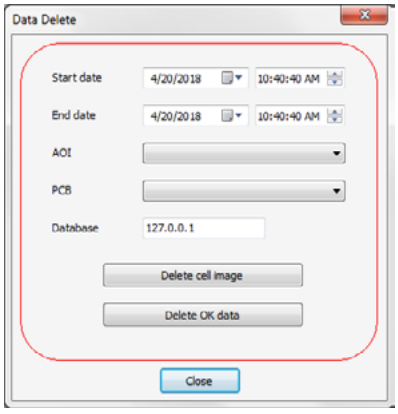
Data Delete

Delete the data by setting Start, End, PC, PCB, and LOT.
If you do not set PC, PCB, and LOT, it will delete all data.



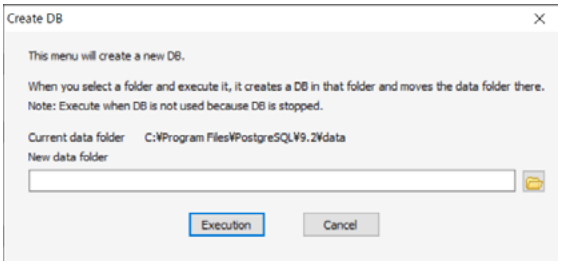
Cell image, OK data deletion

Delete cell image and OK data in selected area. Set the condition you want to delete, and click the button accordingly.



Create New DB

Create a new Db and input data folder settings.

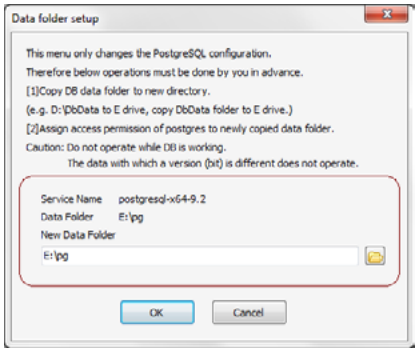


In DbMan V2.0.0.1 or later, if the network settings could not be transferred from the current data folder, the network settings screen will appear after creating a new DB. Select [Access DB from other PCs], enter the network settings, and click the [Set] button. After the network settings are made, the DB initialization will be automatically executed and the new DB creation will be completed.

Select Data Directory

Change the saving directory of database. Select new datafolder and click **OK**.

*** Prepare new folder and its access authority setting before changing directory.**

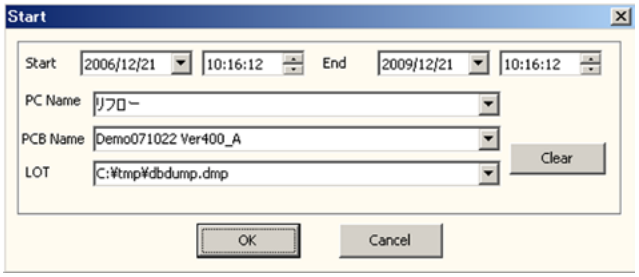


In DbMan V2.0.0.1 or later, a confirmation message will appear if the network settings are different from those of the DbData before the change when the referenced DbData is changed. To change the network settings, select [Yes] to display the network settings screen and update the settings.

Export Data

Export selected data.

Select PC and PCB, press Search. Also enable to sort by date and Lot.



Data will be exported in text file and images.

Caution: There are many images, so export data in a folder. Never export on desktop.

*** Export Data function takes so much time compared to Dump function.**

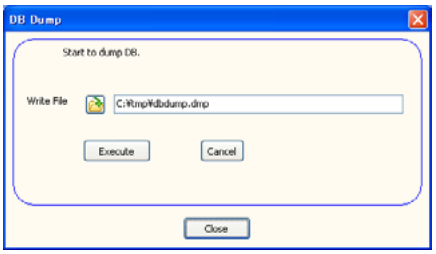
Import Data

Import data which is exported by Export menu.

*** Not like DB Restore, data in database is not replaced, data is just added. It takes much time to execute.**

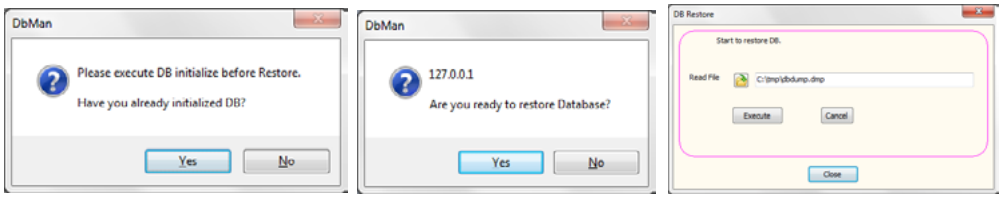
DB Dump

Dump data in PostgreSQL. Dump will export whole data in PostgreSQL.
By pressing folder icon of **WriteFile**, you can select the directory to dump data.
*When restoring, you can restore a Dump file created with an older version of Postgre, but you cannot restore a Dump file created with a version of Postgre newer than the one you are currently using. When dumping, be sure to save the file with a name that identifies the Postgre version.



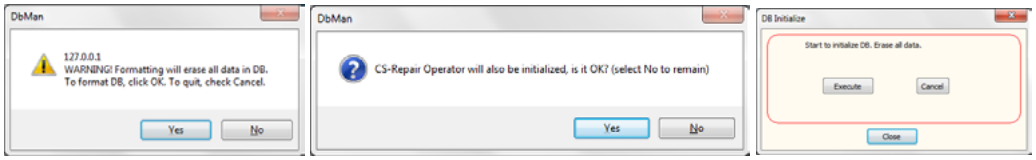
DB Restore

Restore dump data.
*** When you execute DB Restore, whole database is replaced by dump file data. Be careful, current data will be overwritten. Also, it is not possible to restore a newer version of a Dump file with an older version of Postgre.**
Click **Execute** to restore dump data.
By pressing folder icon next to **Read File**, you can select the dump data to restore.



Format DB

Format DB to delete all data. This menu will be used when DB is broken, or want to delete all data completely. Press Yes, and Execute.



Release occupied DB

While you work on CS-Repair, seldom, the other user is occupying data to verify and displayed something like "Db is locked", but in fact nobody is occupying. This is PostgreSQL's error, however, you can release database by pressing this button.

DB Stop

Stop database temporarily. Stop database when removing HDD while running PC. Normally please replace HDD after power off the PC.

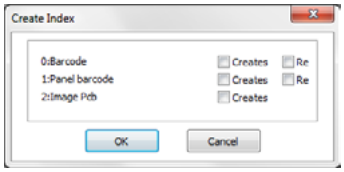
DB Start

Start database from stop status.

Create Index

Create index for optimizing barcode handling or large storage.
To create the index for barcode, put check to **Creates** for **0: Barcode**. If index had been already created, and you want to create again, put check to **Re**. To create the index for Block barcode, put check to **Creates** for **1: Panel barcode**. f index had been already created, and you want to create again, put check to **Re**. To create the index for images, put check to **Creates** for **2. ImagePcb**.

*** From version 1.0.1.3, the index is automatically created when executing DB initialization. Therefore please do not execute this function except with the case when there is an indication from manufacturer or support engineer of local agent.**



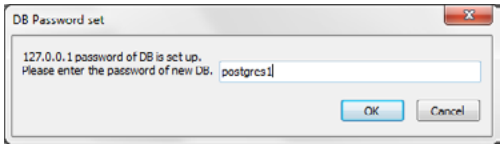
Re-create Index

Execute this menu after deleting large data and if you feel that database access speed is slower. This will re-create index to be in order.

DB Password set

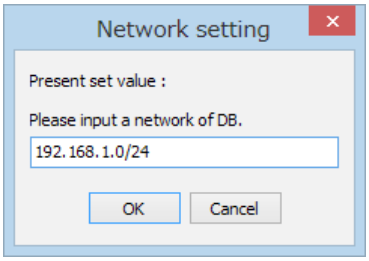
Execute when you change the password of database from the one you set at installation.
Input new password, and click **OK**.

*** When you change the password with this function, you also need to change all password in CatchSystem software connected to database.**



Edit Network Address

Change the network setting. Set the new value.
Setting will fail if Data Folder is not set correctly in DbManager Settings.



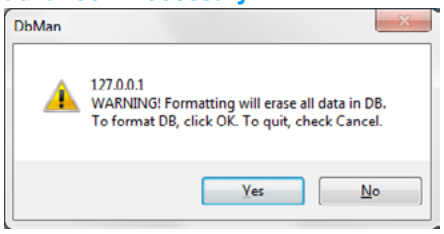
Edit SQL Settings

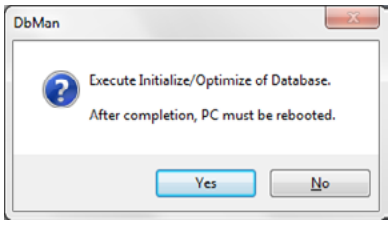
If you start inspection while installing database without executing DB first setup, this function executes initial setup without deleting data. If function executes correctly, dialog is displayed to confirm PosgreSQL is updated. If your Catch System is running earlier than February 2012, by executing this button, your database access speed will be faster.

Initialize DB

Menu to be used after installation.

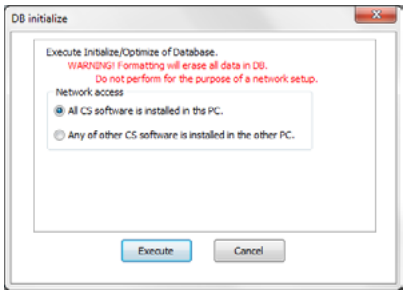
*** This operation includes the initialization of database. Please back up the data in advance if necessary.**





Continue with clicking **Yes**.

If PC with PostgreSQL installed and PC with CS-Repair, CS-Watch, and CS-Analyzer is same, select "All CS software is installed in this PC", and click **Execute**.

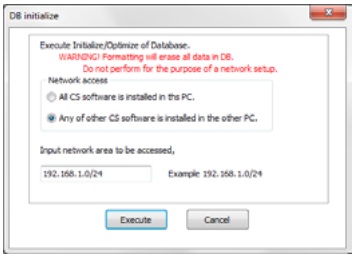


If PC with PostgreSQL installed and PC with CS-Repair, CS-Watch, and CS-Analyzer is different, select "Any of other CS software is installed in the other PC.", and click **Execute**.

Please input IP address of PC which PostgreSQL is installed to "Input network area to be accessed,". Part which shows "192.168.10" is for IP adress, and "0/24" stays unchanged.

Please contact your local agent if you want to connect to intracompany network.

When you complete the procedure, restart PC.



If you select "Any of other CS software is installed in the other PC.", additionally please proceed following procedure to kill Firewall.

Open **Control Panel**, select **System and Security**. Select **Check firewall** status.

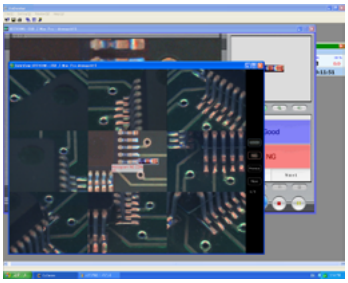
Select **Turn Windows Firewall on or off** on left list. Check **Turn off Windows Firewall (not recommended)** on for both network locations.

18. Connect to AOI with Angular Camera Unit

When the angular camera unit is equipped to AOI, you can also send images from 8 angular cameras to CS-Center.

Settings

If the screen of angular camera is activated on AOI, the same screen will be shown in CS-Center.

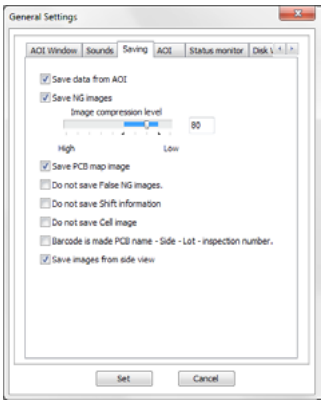


To save pictures by the angular cameras, activate "Save images from side view" in Saving tab in General Setting.

Operation

The most of operations that is possible in the angular camera screen on AOI, can be also possible on its screen on CS-Center.

- Zoom one of the view by mouse click or pressing **asterisk** key.



- Show red cross-hair with **+** key.
- Visible/invisible screen with **/** key.
- Move camera position by clicking mouse with **control** key in the center picture.

Remarks: If "Do not show Remote Screen (less work for PC)" is checked, the images not only in 22X main screen but also in angular camera screen will be hidden.

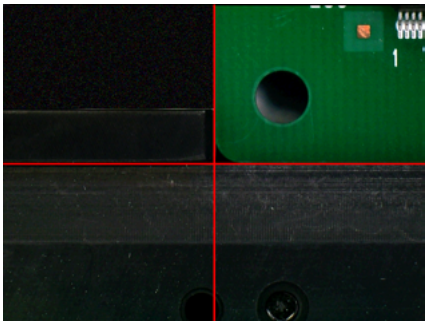
*** If you cannot designate PC name or error is displayed, there is possibility of designating incorrect database. Please set PostgreSQL folder and Data folder correctly with First Setup menu in DbManager.**

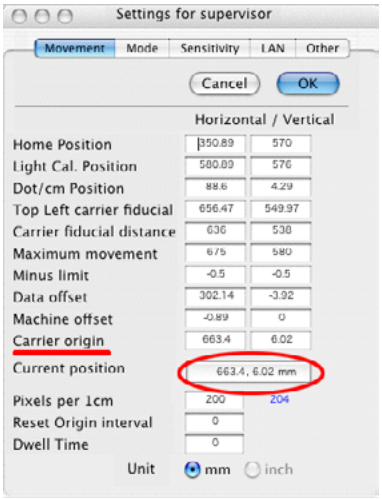
19. Connect to 3rd Party's Optical Reviewer machine

Marantz AOI can connect to an optical reviewer in order to confirm the defective points visually with angle cameras after inspecting by AOI. Operator can easily confirm these defects since Catch System sends coordinates and pictures of NG points to reviewer.

Setting

1. Set value for **Carrier origin** in For supervisors menu on 22x operation software. Carrier Origin is defined as the coordinates of bottom-left corner of PCB. Set a PCB on AOI, move camera by Move tool, move to the position until the bottom-left corner of PCB is in the center of XY coordinates. Check value of "Current position", and input this value in "Carrier Origin".





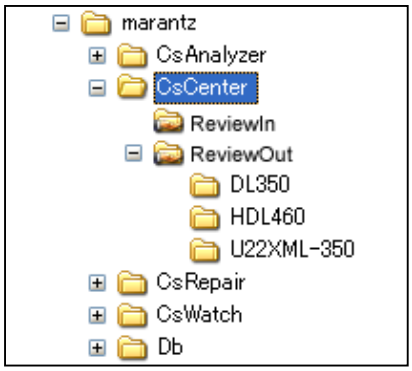
2. Create a new directory in the PC which CS-Center in installed. The directory is used to store data sending to reviewer machine, it should be set to share by the PC for reviewer.

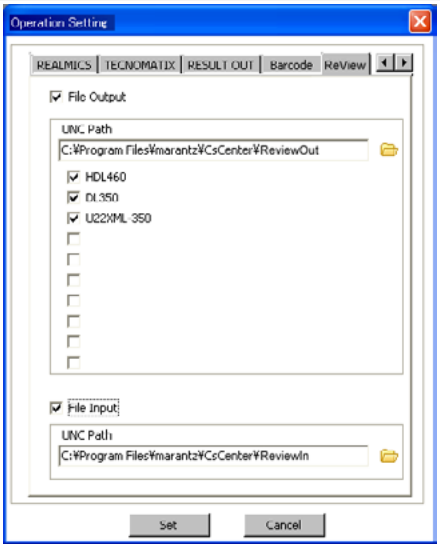
3. Start CS-Center. Select **ReView** tab in **General** of **Settings** menu.

4. Check on **File Output**, select the directory which you create at step 2 by pressing the folder icon.

5. All AOI connected to CS-Center is listed, check AOI on which you want to send inspection data to reviewer. If AOI is not listed, connect AOI to CS-Center by setting Address Setting in Setting menu. Run AOI one time, then a new directory with AOI name is automatically created under the shared folder which you create at step 2. After folder is created, go to reviewer machine's PC and set the directory to be a target folder.

6. If you want to update the pictures in CS-Center after verifying by reviewer machine, set the following. Create a new directory for storing updated pictures in CS-Center's PC. The directory should be shared (with reviewer machine). Check on **File Input** in **ReView** tab in CS-Center, select the directory which you just create.





Operation

After inspecting by AOI, set the PCB on reviewer machine, select data, confirm the defective points. After verification, if you enable File Input, data is transferred from reviewer machine to CS-Center and stored in database. Updated data is possible to be confirmed by CS-Repair.

Remarks

1. If you use File Input mode, inspection result from AOI is all overwritten by data from reviewer machine. Thus if you check inspection data by CS-Repair, the ordinary defective picture with master picture from AOI is no more available.

2. Data file from reviewer machine is immediately migrated to database, so that usually the dicrectory for File Input is empty.

3. Please refer to reviewer machine's operation manual for its operation and setting. Normally reviewer machines can handle data from any number of AOI.

20. Connect to Solder Paste Inspection machine

Catch System can recieve inspection result from Solder Paste Inspection machine of CKD corporation and DJTECH Co., Ltd.
This chapter describes how you can connect the third party's SPI machine. If you use Marantz AOI for 2D solder paste inspection, its setting is the same as the AOI used for normal inspection.

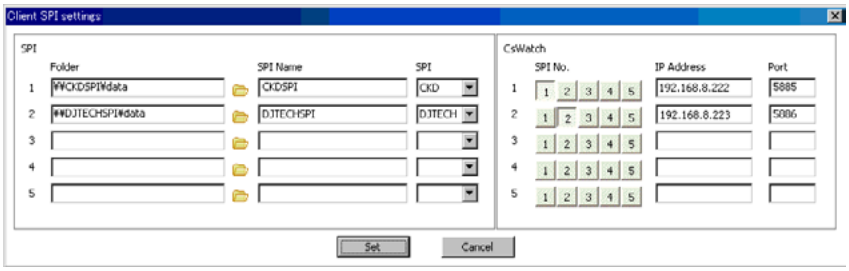
Setting on SPI machine

1. Buy a new external eSata HDD drive (at least more than 500GB) for storing SPI data for Catch System. Create a new folder in the HDD, set the folder be shared with Catch

System via LAN.
2. Connect SPI machine's PC to LAN.

Setting on CS-Center

1. Open **SPI Setting** in Settings menu. Set Folder, PC Name and SPI on leftside. **Folder** should be the share folder on SPI machine's PC which you created in the previous setting. **PC Name** is the field that you can input any name you like.
2. **SPI** should be selected from CKD or DJTECH.
3. If you use CS-Watch to monitor SPI machine, input right side setting for CS-Watch. Press applicable SPI No., input IP address for PC where CS-Watch is installed and port number.



Connection

SPI machines from CKD or DJTech do not open AOI window or status monitor in CS-Center. To check the connection, press **SPI test** button in toolbar. If connected, a message "Succeeded in the SPI communication test" pops up. If failed, "Failed in the SPI communication test" pops up, in this case, confirm LAN setting and folder share setting. After confirming and re-test, press **SPI reset** button to receive data while connection is out.

*** SPI machines from CKD or DJTech can not be remotely controlled by CS-Center.**

Delete CKD data

Possible to delete unnecessary data in CKD data folder in network from CS-Center.
Open **Delete** from File menu. Select **CKD MzMsg**, set the folder and input date (start and end date), then click **Delete** button.

21. Connection Error

Confirm the following;

1. Is IP address set without overlapping with the other PC in the Macintosh/Windows setting? Is the subnet mask setting the same in every Macintosh/Windows setting?

2. Is a cross cable used for direct connection or a straight cable is used for connection with a hub as the cable to connect Macintosh/Windows PCs?

3. Is there no X or ? In the control panel, system, and device manager of Windows?

4. Is the Macintosh network connection TCP/IP via Ethernet?

5. Has CS-Center started before connecting from Mac (AOI)?

6. Is the FireWall killed?

22. Errors

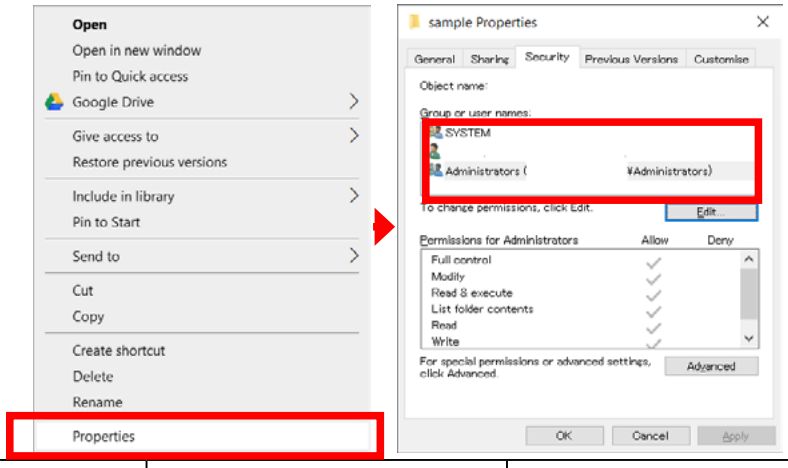
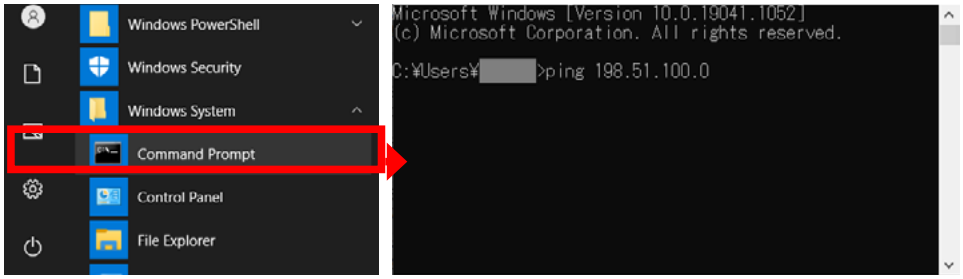
Message	Description	Counter Measurement
Incorrect key number	Key number incorrect	Input correct key number
Invalid key number entry.		
Installation failed	Software not installed correctly	Re-install software
Please re-installation		
No printer installed	Printer not installed	Install printer driver and connect correctly
Connection time out	Communication to AOI fails	Confirm the connection and settings to AOI
Error in receiving jpeg images.		
Error in receiving inspection result text.		
Error in receiving PCB map image.		
Error in receiving error message.		
Warining! Disk is almost full.	Less HDD empty space	Confirm the empty space, if it is nearly full, delete the unnecessary data or replace HDD to new one
Error in receiving QR code.	Communication to AOI incorrect	Confirm the connection and settings to AOI
HASP key not found.	HASP key not working correctly	Confirm the connection, the installation of driver. If still not improved, contact to your local reseller.
HASP keyversion invalid.		
HASP key not found or Key ID incorrect. Error : %d %d		
Hasp.dll loading error.		
Hasp key routine not found.		
Not enough disk space, data is not saved.	HDD empty space too less, stop saving data	Confirm the HDD capability, if it is nearly full, delete the unnecessary data or replace HDD to new one
Port for AOI 1 is ocuppied by the other application.	Port for the AOI is occupied by the other software	Please assign the other free port
Port for AOI 2 is ocuppied by the other application.		
Port for AOI 3 is ocuppied by the other application.		
Port for AOI 4 is ocuppied by the other application.		
Port for AOI 5 is ocuppied by the other application.		

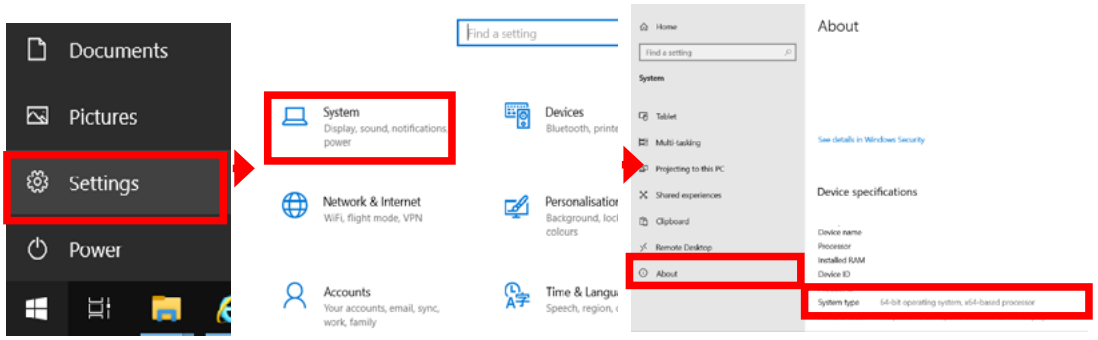
Message	Description	Counter Measurement
SPI folder can not be watched.	Communication or setting to SPI machine incorrect	Confirm the connection and settings to SPI machine
It failed in the SPI folder communication test.		
There is no folder of SPI.		
Not enough disk space (100M), data is not saved.	Stop saving data because the empty HDD space is less than 100MB	Confirm the HDD capability, if it is nearly full, delete the unnecessary data or replace HDD to new one
It is not in the file of CsCenter. Processing is stopped.	Trying to load incorrect setting file	Do not load incorrect file. Load CS-Center setting file
A folder of log can not be used. The log is changed to the setting which is not used.	Not possible to output or delete log files	Confirm the existance and access permission of log output folder
A folder of log can not be used. The setting of log is not changed.		
Review IN folder is not found.	Data directory of 3rd party's optical reviewer machine not found	Confirm the connection and settings to optical reviewer machine
Some AOI/Mac has same IP Address, please input unique IP Address.	IP address of AOI duplicating	Change one of the AOI's IP address
Please input numerical values for port number.	Non numerical character is input in port	Please assign number for port
Port number is invalid.	Port number out of range	Port number must be within range
Some AOI/Mac has same Port number, please input unique Port number.	Port number of AOI duplicating	Change one of the AOI's Port number
Folder is not found. Please set the existing folder.	Folder assigned in General Setting not found	Please confirm the folder path
out of memory	Not enough RAM memory	* Not enough memory. Please add more RAM memory. * PC not capable, please use 64bit PC.
Jpeg display error.	Communication between AOI incorrect while verification	Confirm the connection to AOI
Text display error.		
Jpeg erasing error.		
An error while displaying an error message.		

Message	Description	Counter Measurement
The file is locked.	Communication to REALMICS incorrect	Confirm the connection and settings to REALMICS
Save error		
The file is locked and could not be deleted.		
Data transmission error to MICS.		
QR code decoding error.	Error occured while decoding QR code	Confirm the connection to AOI and confirm if the QR code is possible to decode
Data Matrix barcode decoding error.	Error occured while decoding Data Matrix	Confirm the connection to AOI and confirm if the Data Matrix is possible to decode
It could not be sent to CsWatch. Please check CsWatch.	Not possible to send data to CsWatch	Confirm the connection and settings to CsWatch
_ there is a character which can not be used for an equal file. Please change it.	Data sent from AOI has unacceptable character such as _ in database	Replace such character to acceptable character (inspection program name or stamp name)
Error occurred by the data output.	Problem occurs while exporting data.	Confirm the setting of export
Invalid value.	Problem occurs while deleting data (setting of date)	Please confirm the period to delete data
Not possible to delete.		
File not found.	Result from SPI machine not found	Confirm the connection and setting between SPI machine
It was not eliminated.	Failed to delete SPI machine's result file	
It was not preserved in a data base.	SPI machine's result data not saved in database	Confirm the connection and setting between SPI machine
The error occurred by observing the SPI folder.	Folder for SPI machine's result data failed to observe	
Some SPI has same folder, please input unique folder.	Setting of data folder of SPI machine duplicating	Change folder setting of SPI machine
Please input numerical values for port number.	Non numerical character is input in SPIport	Please assign number for SPI port
Port number is invalid.	SPI port number out of range	Port number must be within range
Some AOI/Mac has same Port number, please input unique Port number.	Port number of SPI duplicating	Change one of the SPI's Port number

Message	Description	Counter Measurement
Incorrect value is input	Incorrect setting for XML2	Confirm the connection and setting for XML2
Unexpected value is input.		
It succeeded in the FTP test.		
It failed in the FTP test.		
Please input it by 8 digits.		
Please input it by 10 digits.		
Please input it by 13 digits.		
It failed in the connection of the server. Please confirm operation and the network of the FTP server.		
The error occurred by the FTP forwarding. Please confirm operation and the network of the FTP server.		
The error occurred by the FTP2 forwarding.		
It failed in the connection of the FTP2 server.		

The following error is displayed when there is a problem with the connection to the DB.
The instructions are based on Windows 10.

Message	Description	Counter Measurement
could not connect to server: Connection refused (0x0000274D/10061) Is the server running on host "127.0.0.1" and accepting	Failed to connect to DB	* Confirm the Port and IP address set on CS-Center/Repair/Watch/Analyzer. * PostgreSQL Service may not start, open Db Manager and press DB Start buttton. * Right-click on the folder, click on [Properties], and check the [Security] tab, and make sure that [Everyone] is displayed in the [Group or user names] field (as shown below). If it is not, edit the permissions . * If you cannot access the HDD, please check the power supply and cable connections.
		
TCP/IP connections on port 5432?	Failed to connect to DB via port 5432	* If the PostgreSQL data is stored on an external HDD, please make sure that the external HDD is recognized by Windows and that you can access the data folder using Explorer. * Ping the target PC and check if it can be accessed by selecting [Windows System] - [Command Prompt] from [Start] in the lower left corner and entering [ping {IP address of the target PC}] (as shown below). * If you can't access it, please make sure that the HDD power is on and the cable is connected.
		

Message	Description	Counter Measurement
expected "]" to end datum	Data error in DB	Data is corrupted or error occurs when you connect 32bit data to 64bit data. Check whether the OS is 32bit or 64bit. In the case of Window 10, you can find the bit information under [System type] by selecting [System] - [About] from [Settings] in the lower left corner (as shown below).
		
operator does not exist: integer = text	Incorrect data in DB	* DB data may be broken or the version of PostgreSQL on PC and in data may be different. Confirm the version. * CS-Center maybe old. pdate CS-Center.
no pg_hba.conf entry for host	Not possible to access pg_hba.conf file	* Confirm if there is pg_hba_conf file in Dbdata. * When using external HDD, confim the access permission to Dbdata and pg_hba_conf file. * pg_hba_conf file maybe broken. Please confirm if the file is possible to open by Memo Pad. * Definition in pg_hba_conf maybe incorrect. Please compare the file to backup file which you saved soon after installation. If you find any difference, please update the pg_hba_conf file.
character with byte sequence 0xe3 0x83 0xbc in encoding "UTF8"	Text encoding (language) mismatch	Language used in PostgreSQL and CS-Center is different. Please change CS-Center's language
password authentication failed for user "postgres"	Incorrect password to access database	* This message tends to be displayed when incorrect password (other than postgres1) is set while installation. * Input same incorrect password to CS-Center/Repair/Watch/Analyzer in Password tab * Otherwise, files in Dbdata is broken or injured. See the following setp to initialize and reset the password.

Initialize and Reset PostgreSQL password

The commands are different for PostgreSQL versions v15 and v9.

For PostgreSQL version v15

Open hba.conf file under DbData directory by Memo Pad or text editor.
Change

```
host    all    all    127.0.0.1/32    password
```

To

```
host    all    all    127.0.0.1/32    trust
```

Then save the file.

Start DbManager. Execute "DB Stop". Then execute "DB Start". Press "DB Password set" button. Input new password **postgres1**

Again, open hba.conf file under DbData directory by Memo Pad or text editor.
Change

```
host    all    all    127.0.0.1/32    trust
```

To

```
host    all    all    127.0.0.1/32    password
```

Then save the file.

Start DbManager. Execute "DB Stop". Then execute "DB Start".

For PostgreSQL version v9

Open hba.conf file under DbData directory by Memo Pad or text editor.
Change

```
host    all    all    127.0.0.1/32    md5
```

To

```
host    all    all    127.0.0.1/32    trust
```

Then save the file. Thereafter, follow the same procedure as for v15, changing [trust] back to [md5].

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