MITSUBISHI

Mitsubishi Electric Air Conditioning Network System

PLC Software for General Equipment   PAC-YG21CDA(Ver.2)

Table Setting Tool

Contents

Please read this manual before using the unit.

Please keep this manual for future use.

1. Safety Precautions

- Please read the Safety Precautions section very carefully before using the unit.
- The safety cautions provided here are very important for your safety. Please observe them at all times.
- The degree of danger involved with incorrect operation of the unit are indicated in this manual using the following symbols.

⚠ WARNING   Incorrect operation could result in death or severe injury.
⚠ CAUTION   Incorrect operation could result in injury or damage to property.

- After reading this information, please keep this manual in a location where the operator can see it.

Note : Refer to the warnings and cautions in the respective installation manuals and instruction manuals for the PLC, personal computer and software, etc.

⚠ WARNING

Read the installation manuals and operation manuals for the computer, peripherals and other machines.
Improper operation could result in fire or damage to the computer or peripherals.

Always read the installation manual and instruction manual for the PLC.
Incorrect handling could result in PLC fires or faults, etc.

⚠ CAUTION

Do not use the product for any other purpose.
This product (tool) is designed for the table setting of PLC software (PAC-YG21CDA Ver.2 series) for general equipment control. Do not use it for other purpose than the above. Otherwise, erroneous operation may be caused.

Warning to all users (User Agreement)
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2. Introduction

The table setting tool is software to set the function and operation of the "PLC software for general equipment control (Ver.2)." This tool is used to create setting files that contain such settings as input/output-related settings and output method settings for each facility. These files are then written in on the ATA card and are used by the PLC for general equipment control to perform its control functions (Interlock control). No settings with the table setting tools are required if the PLC software for general equipment control is used only for general equipment control and schedule control without the interlocking control function being used, unless changes to the operating output format to the general equipment are made.

2-1   About This Manual
- This instruction book describes the Table Setting Tool to set the operating function of the "PLC software for general equipment control (Ver.2)."

  *This table setting tool is applicable to Ver. 2 of the "PLC software for general equipment control."

    Model : PAC-YG21CDA (Ver.2 series)

Table 2-1 Available version of table setting tool   [V]: Available

PLC / Table Setting Tool		PAC-YG21CDA		Remarks
		From Ver.2.00 to Ver.2.11	**Ver.2.20 (the latest)**	
Ver.1.10	Display in Centigrade*2	V	V	
Ver.1.20	Display in Centigrade*2	V	V	
Ver.1.30 (the latest)	Display in Centigrade*2	V	**V**	
	Display in Fahrenheit*2	-(*1)	**V**	*G-50A and indoor units that have 1ºF temperature setting function are required. (Refer to page 17.)

*1: Not available in this combination. Use the latest version of PLC in combination with the latest version of Table Setting Tool.
2: The temperature unit displayed must be the same in one system.

- Some screens used in this Manual provide just an image differing from actual appearance.
- Unless otherwise specified, "G-50A" in this manual refers to both "G-50A" and "GB-50A".

2-2   Expressions in This Manual
- Unless designated, Windows® 2000 Professional and Windows® XP are expressed as [Windows].
  * Windows is a registered trademark or trademarks of Microsoft Corporation in the United States and/or other countries.
- "Click" refers to the action of positioning the mouse cursor on the object (such as button or folder) and pressing down and releasing the left mouse button once. "Double click" refers to the action of pressing down and releasing the left mouse button twice in quick succession.
- PLC refers to the Programmable Logic Controller.

2-3   Required Materials and Hardware Requirement
- The following materials are required to install the data being set by this table setting tool in the assigned ATA card.

Table 2-2 Materials required by operating table setting tool

Item	Details	Remarks
Setup CD-ROM	Master CD of the PLC software for general equipment (PAC-YG21CDA)	* Table setting tool contained by mentioned CD is used.
ATA card	Q2MEM-8MBA (The ATA card in which PLC software was written after the format.)	1 piece is required by 1 set of PLC. Mitsubishi Electric made. Writing ATA card
For PC ATA card adapter	Q2MEM-ADP	For ATA card writing
Computer	Refer to Table 2-3.	*PCMCIA slot is needed

- To operate the table setting tool of PLC for general equipment control, the PC to be installed should satisfy the following requirement.
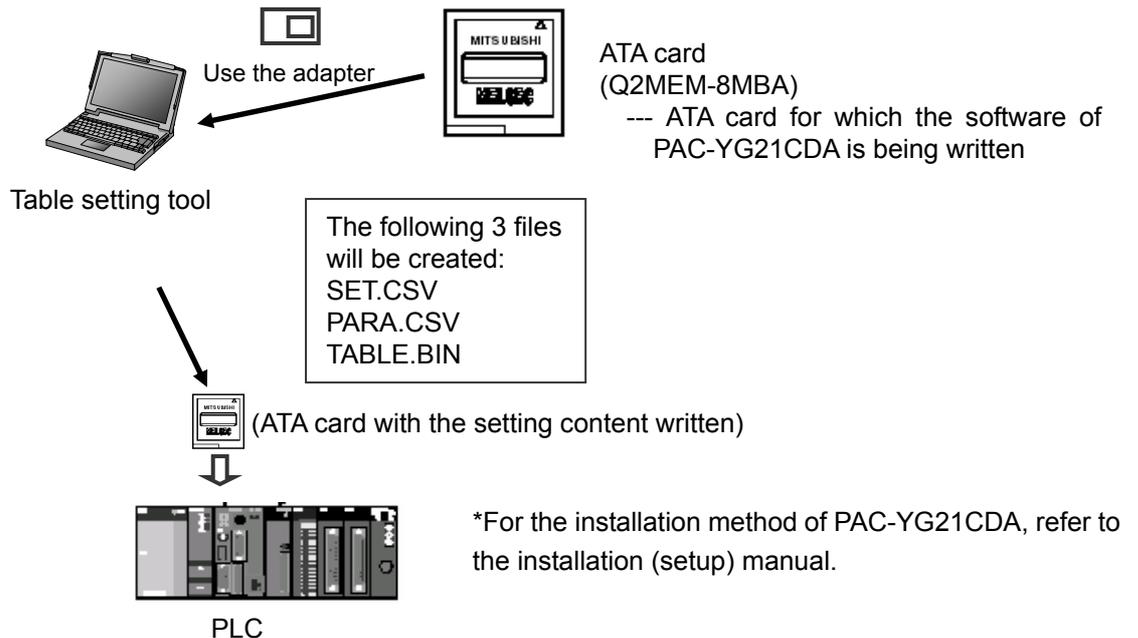
Table 2-3   Hardware requirement of table setting tool

Item	Details	Remarks
Computer unit	Pentium® II 500MHz or faster	
OS	Windows® 2000Pro/XP English version	
Memory	128Mbyte or more, (For WindowsXP, recommend 256MByte or more)	
Screen resolution	1024×768 or more	
Hard disk	At least 100 Mbytes of available space	
Slot	PC card slot	*Use with ATA card adapter
Drive	CD-ROM drive (Requires at installing)	
Others	Pointing device, such as a mouse	

* Pentium is the trademark or registered trademark of Intel Corporation in the United States of America and other countries, or its subsidiary.

2-4 Image of Using Tool

By using this table setting tool, the number of G-50A to be controlled, the output signal format, the relationship between the input and the output, may be set. Save the set content into ATA card, and insert the ATA card to the sequencer for use.

Use the adapter

Table setting tool

ATA card
(Q2MEM-8MBA)
--- ATA card for which the software of PAC-YG21CDA is being written

The following 3 files will be created:
SET.CSV
PARA.CSV
TABLE.BIN

(ATA card with the setting content written)

PLC

*For the installation method of PAC-YG21CDA, refer to the installation (setup) manual.

Notice
- The set content may be saved by the HDD of your PC in addition to the ATA card. Backing up the set content is strongly recommended.

3. Installing/Uninstalling the Table Setting Tool

Given below is an explanation on how to install and uninstall Table Setting Tool, and start and close the program.

3-1 Installing the Table Setting Tool

(1) Insert "Setup Disk of PLC software for General Equipment" into the CD-ROM of the computer(PC) you are installing the program on.
In order to set up a table setting tool, the following holder is opened and "Setup.exe" is double-clicked.

      CD Drive: ¥Tool¥setup.exe

After double-clicked, the dialog shown on the right will appear on screen.
Click [Next] to proceed with installing Table Setting Tool and advance to the next dialog.
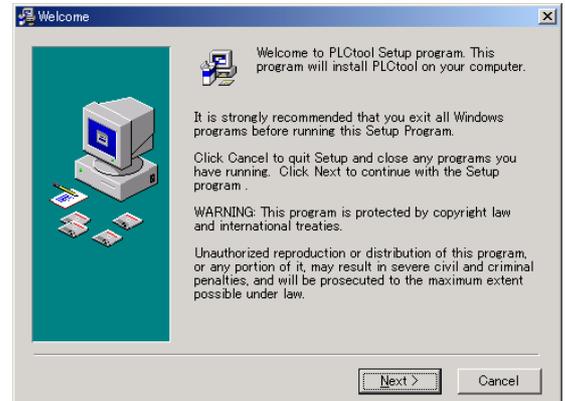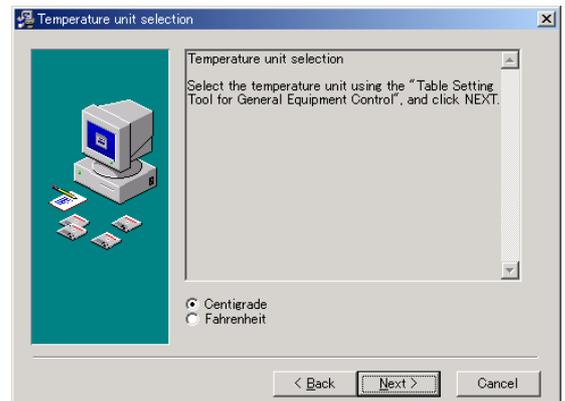
(2) The screen to confirm the folder to be installed is displayed.
Clicking [NEXT] starts installing.

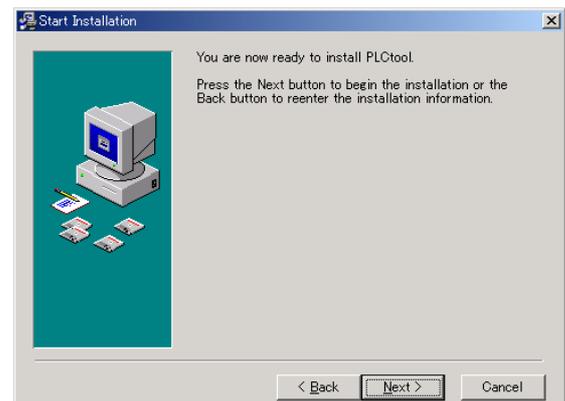   The destination folder address is:
            C:¥PLCTool¥

(3) Select the unit used for temperature display (Centigrade/Fahrenheit).
Click [NEXT] after selecting the temperature unit.
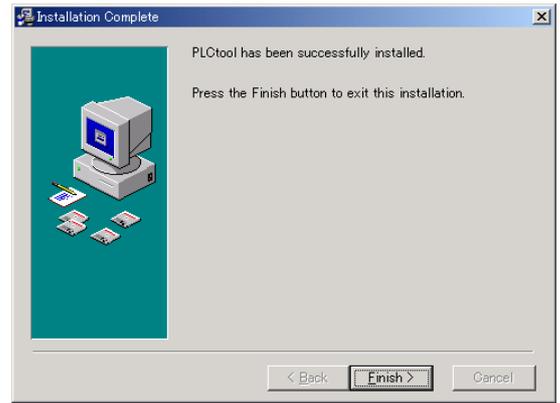
      Default: Centigrade

(4) The screen shown on the right is the installation confirmation screen.
Click [NEXT] to start the installation.

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(5) When the setup program has installed the program in the selected destination folder, the dialog shown on the right will appear. Click [Finish] to complete the installation process.

3-2   Uninstalling the Table Setting Tool

(1) To uninstall Initial Setting Tool, click [Start], point to [Settings] and click [Control Panel] to open Control Panel.

(2) Double click [Add/Remove Programs] displayed in the Control Panel window. A list of installed programs will appear. Click [PLCtool] and click [Remove] to uninstall Table Setting Tool.
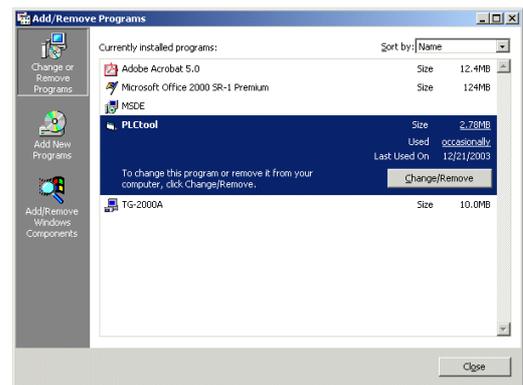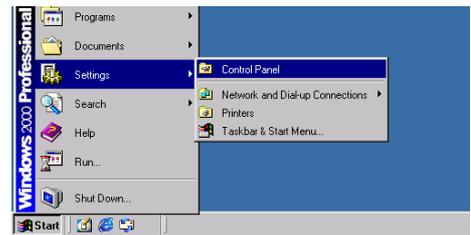
3-3   Starting and Closing the Program

(1) To start the program, select [Program] - [Table Setting Tool of PLC for General Equipment] - [PLCTool] from the [Start] menu and click.

(2) Starting the table setting tool displays the screen shown right.

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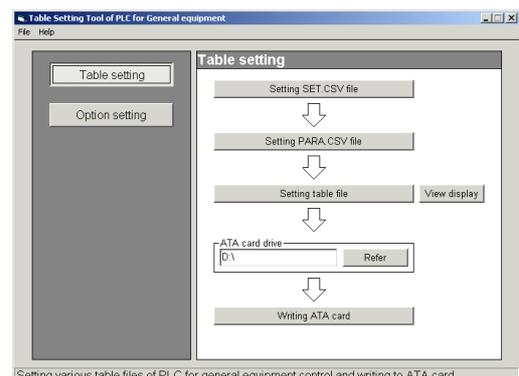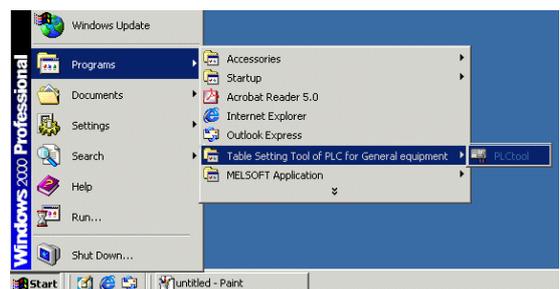
(3) To close the program, click [File] then [Exit] from the Table Setting Tool menu.
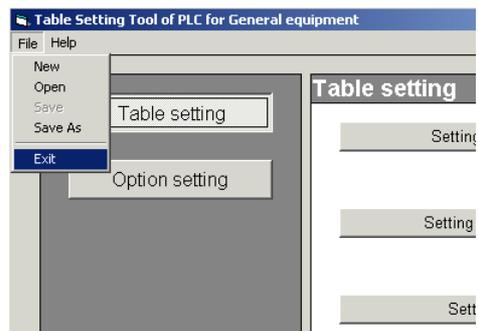
4. Screen Configuration and Various Utilities

Given below are an explanation of the layout of the Table Setting Tool main window and an explanation on how to use the various utilities available from the menu bar.

Outline of Table Settings
●STEP 1 (Setting the number of G-50A units to be connected. "SET.CSV" file will be created.)
  The PLC software for general equipment control can send interlock commands to up to 2 G-50A units.
  On the "SET.CSV" screen, the number of G-50A units to be connected will be selected. The default setting is 0.

Table 4-1 Setting the number of G-50A to be controlled

| No. of G-50A connected	Settings on the Table Setting Tool	Remarks
No interlock control commands issued	No table settings required (0:0set)	-
Interlock control commands to one G-50A unit	1: 1 set	When general equipment is controlled on the basis of general equipment operating condition input, G-50A is irrelevant. In this case, set it to 1.
Interlock control commands to 2 G-50A units	2: 2 sets	-

●STEP 2 (Setting the operating output format for the general equipment. "PARA.CSV" file will be created.)
  On the "PRAR.CSV" screen, operating output format is set for the PLC software for general equipment to control the general equipment. Three types of settings are possible. To change the operating output format for the general equipment, this setting is required even when interlock control is not used.

Default setting is A-contact pulse. Pulse width is 1sec.

Pattern 1 (A-contact pulse *sec)	*sec: pulse width
Pattern 2 (B-contact pulse *sec)	*sec: pulse width
Patter 3 (level)	

*The pulse width can be set to any arbitrary value in 0.1 sec increments.

Table 4-2 Setting the signal output format

Type of Control	Settings on the Table Setting Tool	Remarks
No interlock control	No table settings required	-
Interlock control A-contact pulse 1 sec	No settings required Check the settings for operating output format.	-
Interlock control A-contact pulse setting other than 1 sec	Make the settings for operating output format. This setting can be made for each piece of equipment.	-

●STEP 3 (Interlock settings. "TABLE.BIN" file will be created.)
  On the "TABLE.BIN" screen, interlock settings are made in the following order. Interlock control is not selected as a default.
1). Set the type and number of input sources (trigger). (Choose from among the available options on the screen.)
2). Set the type and number of output sources. (Choose from among the available options on the screen.)
3). Make the interlock setting. (Link the input source and output source that are set in steps 1) and 2) above.)

In step 3) above, up to 50 output contents can be set for each input source. (Example: Card key 1 (General equipment 1) is turned on →Group 1 indoor units OFF-----Group 50 indoor units OFF)

4-1 Screen Configuration

The screen of the table setting tool is consisted of 3 parts, the menu bar, setting menu section and setting sub-menu section. Clicking the setting item of the setting sub-menu section displays the screen for various settings. To execute various settings, click the item desired to set at the setting sub-menu section, and enter the set data on the setting screen displayed. This screen is called [Initial screen].

On the menu bar, various utilities can be executed such as to save or read the setting data.
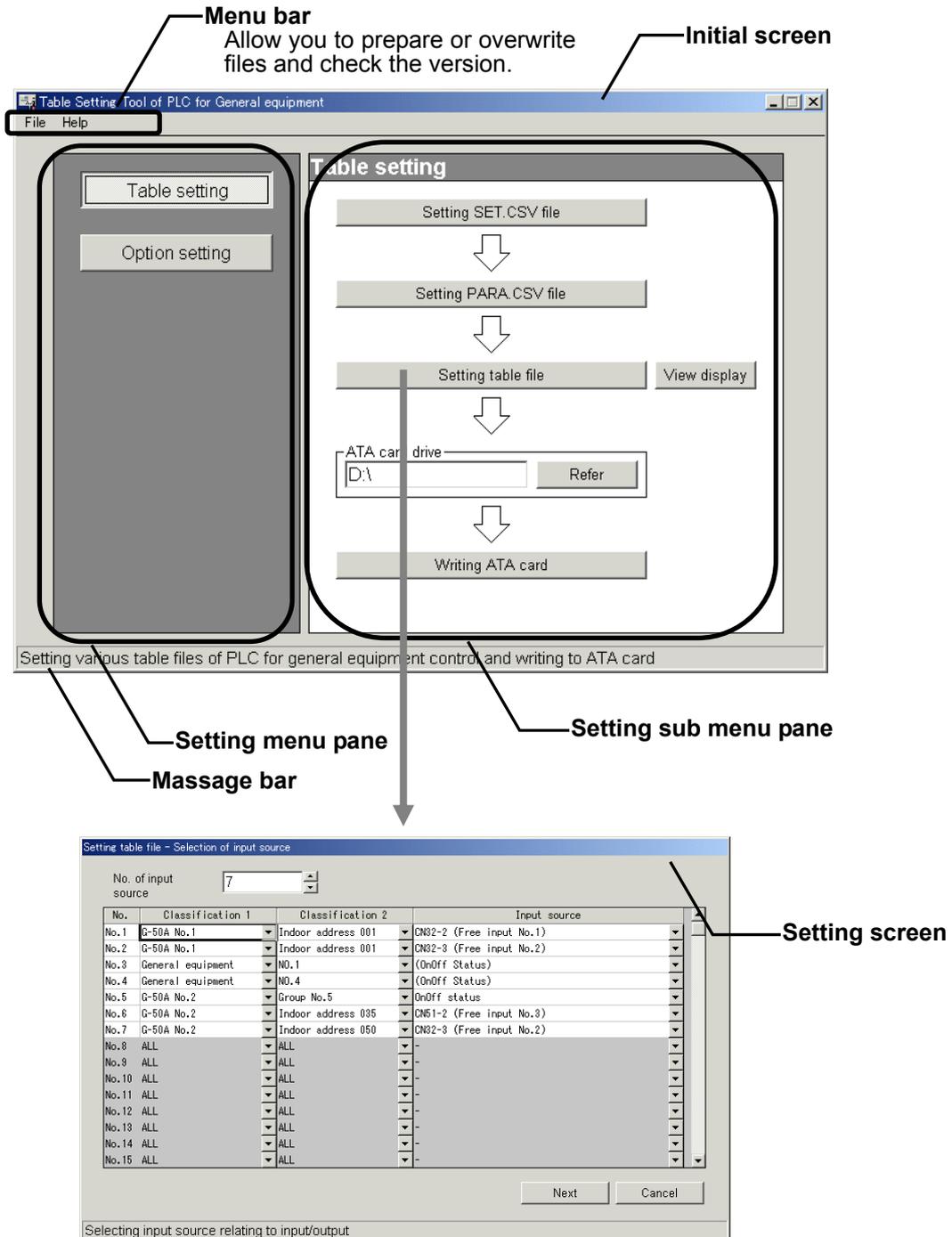
4-2 Various Utilities
Given below is an explanation of each type of utility that can be selected from the menu bar.

4-2-1 Reading setting data
(1) Click [File]-[Open] from the menu bar.
(2) Selecting the file storing the set data on the screen
   to select the directory allows reading the table set data,
   and selecting the set item displays the data on the
   setting screen.
   All set data will be read.
Setting data cannot be loaded unless all of the following
3 files can be found: SET.CSV, PARA.CSV, and TABLE.BIN.
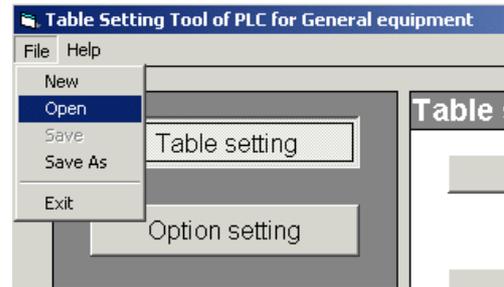
4-2-2 Saving setting data
(1) To save the setting data to a directory in which data
   was saved the last time (or a directory from which the
   data was read), click [File]-[Save].
   All set data will be saved.
An alarm message will appear if any of the following three
items is skipped, SET.CSV, PARA.CSV, TABLE.BIN. If there
is no need to change the settings in the menus such as
PARA.CSV, proceed to the next step.
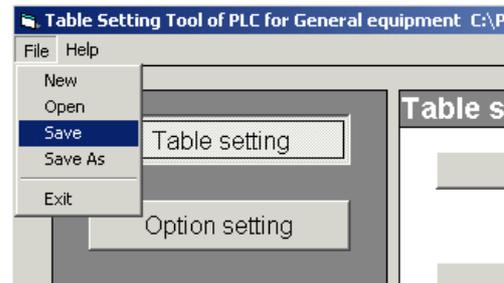
(2) To save to a different directory, click [File]-
   [Save As] and use the Save Directory dialog
   to choose the directory in which you want to
   save the data.
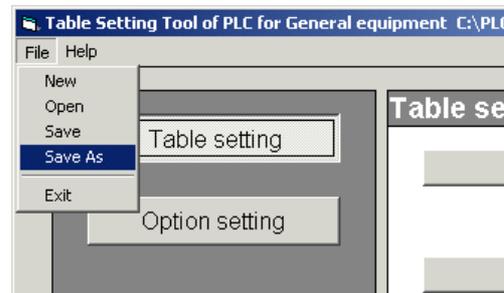
Select or create newly a folder to be saved on the
screen to select folder.

Setting the new folder name
A new folder can be created inside the
folder selected in the upper column.
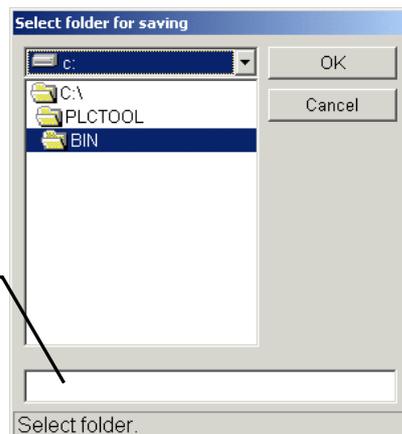
4-2-3 New creation

To create set data newly, select [File] - [New] and click.
In case of under setting presently or the file is being opened, a message prompts you whether destruct the current data. Select the proper button after confirming.
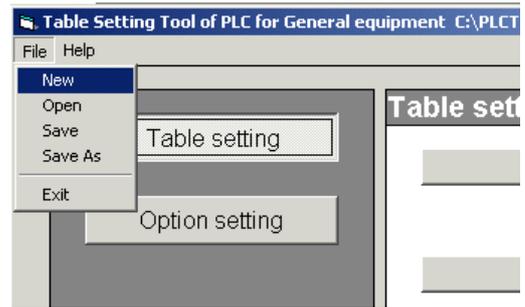
4-2-4 Help/Version Information

(1) You can check the version information of Table Setting Tool by clicking [Help]-[About Version].
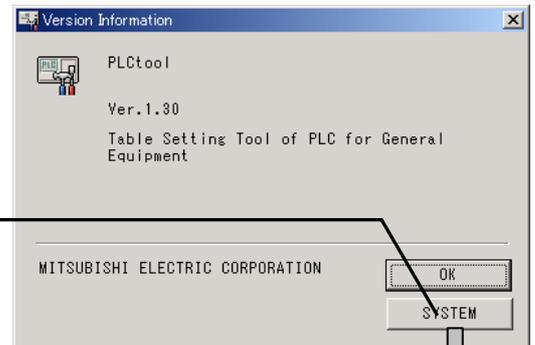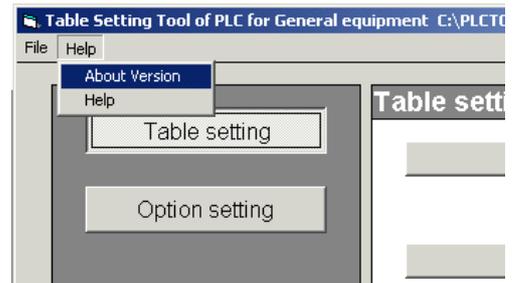
System button

The screen of system information can be displayed.

Notice

- The system information collects configuration information on the system and provides menu to display information on the relevant system. You may search data necessary to solve the problem of the system.
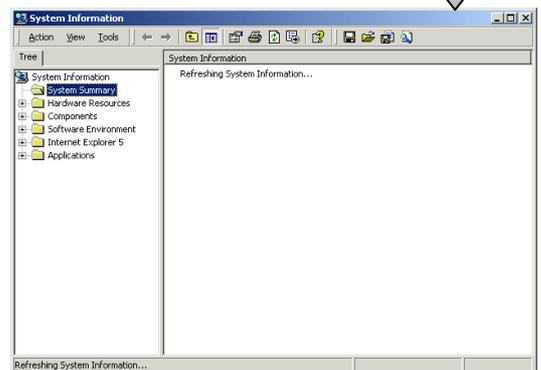
(2) Click [Help]-[Help] when you want to view this operation manual. The help screen will appear. To view this manual, you need Adobe Systems Incorporated's Acrobat® Reader Version 5.0 or later.

Note: Acrobat is a registered trademark of Adobe Systems Incorporated.

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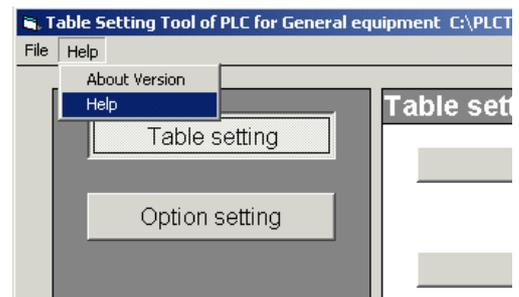
Here a method is explained to set the input/output relations or the output system of PLC for general equipment control to the table in compliance with the site.

5-1 Screen Configuration of Table Setting

Clicking [Table setting] of the set menu section displays the table setting screen of PLC software for general equipment control. On this screen, the function and operation items are set to operate PLC software for general equipment control and write them into ATA card.

Table setting
For setting change of table, display, writing into ATA card.

Setting SET.CSV file
For setting of connecting number of G-50A (1 ~ 2 sets)

Setting PARA.CSV file
For setting of output specification of general equipment at PLC side

Displaying the table set detail
For displaying of the set detail of input/output relation table

Setting the table file (table.bin)
For setting of input/output relations. Up to 200 sets maximum.

Setting ATA card drive
For setting/changing the drive of PC card locating ATA card

Writing into ATA card
For writing various data files into ATA card

Figure 5-1. Initial screen

Start the table setting from the top in order.
The set data can also be saved in a file other than ATA card. (Refer to Chapter 4 -2- 2.)

5-2 Setting SET.CSV file

Clicking [Setting SET.CVS file] in the setting sub-menu displays the screen to set the connecting number of G-50A or the like. This screen is to set the connecting number of G-50A.

Notice
- On the screen to set SET.CSV file, the connecting number of G-50A can only be set.
  (The demand controller if connected and the objective G-50A for demand value transmission can not be set.)

(1) Set the connecting number of G-50A controlled by PLC for general equipment control to a range of 0 ~ 2 sets.
   *The default value is set to [0 set]. The case without G-50A connection (0 set) only applies to operating/monitoring the general equipment at PLC side.

(2) After finishing the setting, click the [OK] button. The set detail is saved to back to the initial screen.
   *Clicking the [Cancel] button returns to the initial screen without saving the set detail.

Function selection   [General equipment control ▼]

No. of G-50A connected   [0 set ▼]
[0 set]
[1 set]
[2 sets]

Selecting the connecting number of G-50A
Select the connecting number of G-50A to be controlled. The set value ranges from 0 to 2 sets. (Select "1set/2sets" to perform the interlock control.)

[OK] button
For saving the set detail

[Cancel] button
For returning to initial screen without saving set detail

[OK]   [Cancel]

Setting No. of G-50A connected , demand controller if connected, objective G-50A for demand value transmission, etc.

Figure 5-2. Setting screen of set file

5-3　Setting PARA.CSV file

Clicking [Setting PARA.CSV file] displays the screen for the output format setting of general equipment. On this screen, the output format and pulse width are set for the DO unit of general equipment at PLC side.

Selecting the operating output format
The output format at operating side is selected. [Level] [A-contact pulse] [B-contact pulse] *Selecting the level makes the stopping side level also.

Selecting the operating pulse width
In case of pulse, select the pulse width. [0.1, 0.5, 1, 5, 10s]

Selecting the stopping pulse width
In case of pulse, select the pulse width. [0.1, 0.5, 1, 5, 10s]

Selecting the stopping output format
Select the output format at operating side. [Level] [A-contact pulse] [B-contact pulse]

[OK] button
For saving of set detail

[Cancel] button
For returning to initial screen without saving set detail

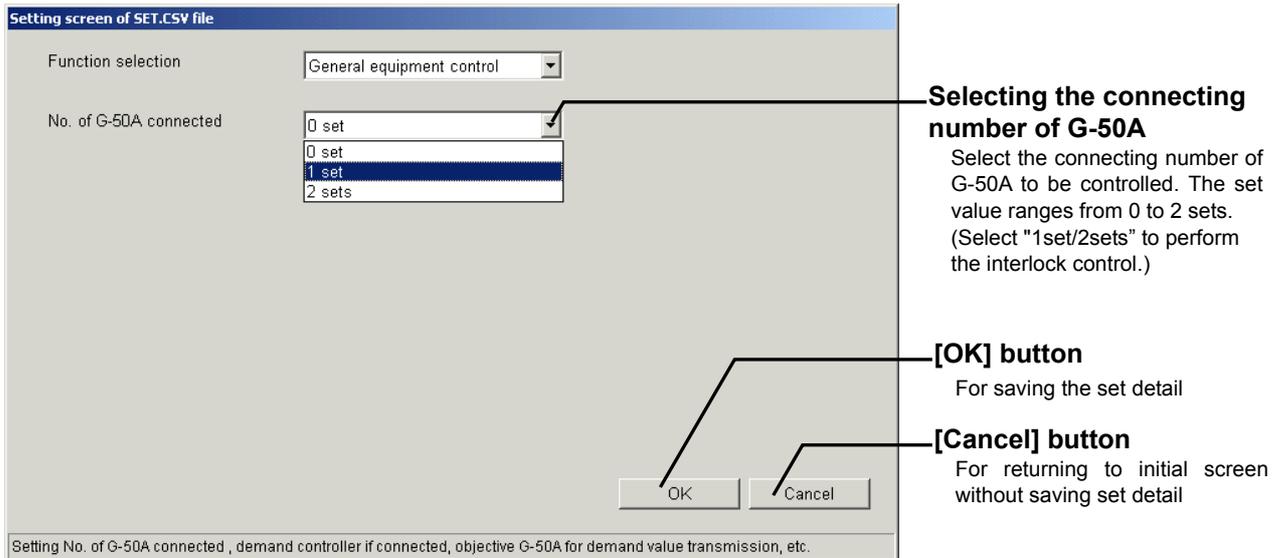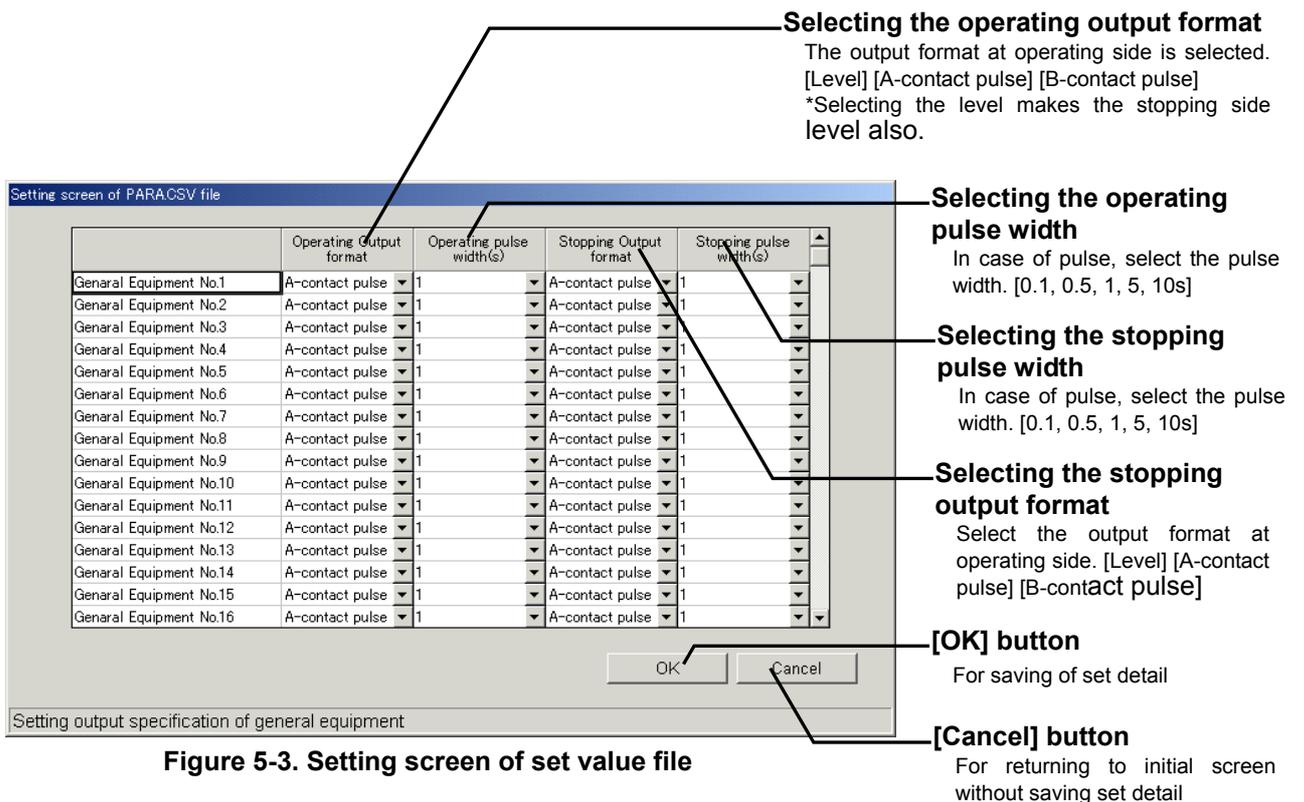|	Operating Output format	Operating pulse width(s)	Stopping Output format	Stopping pulse width(s)
Genaral Equipment No.1	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.2	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.3	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.4	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.5	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.6	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.7	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.8	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.9	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.10	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.11	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.12	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.13	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.14	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.15	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼
Genaral Equipment No.16	A-contact pulse ▼	1 ▼	A-contact pulse ▼	1 ▼

[OK]   [Cancel]

Setting output specification of general equipment

Figure 5-3. Setting screen of set value file

(1) The output format is selected for each general equipment, and the pulse width is selected in the case of pulse.
　　* The default value is set to [A-contact pulse, 1s]. For the pulse width, numerical input can be performed in addition to selecting the candidate value (From 0.1 to 99.9).

(2) After finishing the setting, click the [OK] button. The set detail is saved to return to the initial screen.
　　*Clicking the [Cancel] button returns to the initial screen without saving the set detail.

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5-4 Setting the Table File

Clicking [Setting the table file] of the setting sub-menu section displays the wizard screen to set the input/output relations. On this screen, set the input source and output source relations and relating items.

> **Notice**
> - The setting of input/output relations is to set the relationship between the input and output representing an event operation to operate the output of certain equipment when the input condition of the equipment changes.

5-4-1 Selecting the input source

On the [Selection of input source] screen representing the wizard screen for table file setting, select the object to be used as the input source. On this screen, in order to use it for the input/output relations, input source candidate is set up.

Figure 5-4. Setting screen to select input source

(1)Setting the input source number
The objective number of input source can be set up to 200.

(2)Selecting the input source
Select the objective input source from the Classification 1, 2 and input source columns.

[Next] button
For advancing to the next setting screen

[Cancel] button
For returning to the initial setting screen without saving set detail

(1) First, set the desired number of input sources.
   *The default value is set to [0].   Settable up to 200. Set it by the ▲▼ button operation or numerical input.

(2) Select the objective input source from the classification 1, 2 and input source columns.

(3) After finishing the setting, click the [Next] button. The next setting screen is displayed.
   *Clicking the [Cancel] button returns to the initial setting screen without saving the set detail.

> **Request**
> - In selecting the input source, you are kindly requested to select the object actually used.
>
> **Notice**
> - The objects of input source include the ON/OFF status of air conditioner, the free contact input of indoor unit and the input of general equipment (For each PLC for general equipment).
>
> | | | |
> |---|---|---|
> | ON/OFF status of air conditioner | : 100 groups | ON/OFF status |
> | Free contact input | : 100 units | 4 input external signal |
> | General equipment | : 32 units | ON/OFF and error status |

Supplementary Explanations for Table Settings

Ctrl+C and Ctrl+V (or Ctrl+Insert and Shift+Insert) key combinations on the Windows can be used to copy and paste certain settings.
Copying is done by row. If the setting in a single cell is copied and pasted, all the settings in the entire row will be copied and pasted, except that the equipment number under Classification 2 will automatically change to the number that is 1 larger than the one in the copy source.

Use these functions to make the same settings for multiple pieces of equipment.

(Example)

When the settings in the first row are copied and pasted in the second row, the equipment number under Classification 2 in the second row will automatically change to "No. 2."
If the number under Classification 2 in a certain row in the copy source is set to the maximum value (32 for general equipment and 50 for air conditioning units), the settings in such row cannot be copied or pasted.

5-4-2 Selecting the output source

On the [Selection of output source] screen representing the wizard screen for table file setting, select the object to be used for the output source. On this screen, in order to use it for the input/output relations, output source candidate is set up.

(1)Setting the output source number
First, the number of objective output sources are set. Can be set up to 10,000 maximum.

(2)Selecting the output source
The output source objects are selected from the classification 1, 2 and output source columns.

[Back] button
For returning to the former setting screen.

[Next] button
For advancing to the next setting screen

[Cancel] button
For returning to initial setting screen without saving set detail

Figure 5-5. Setting screen to select output source

(1) Enter the desired number of output sources.
  *The default value is set to [0]. Set it by the ▲▼ button operation or numerical input.

(2) Select the objective output source from the classification 1, 2 and output source columns.
  * In the columns of classification 1 and 2, the selection in addition to [All] is required. Further, the object of the same output source can not be selected.

(3) After finishing the setting, click the [Next] button. The next setting screen is displayed.
  *Clicking the [Cancel] button returns to the initial setting screen without saving the set detail. Clicking the [Back] button returns to the former setting screen.

Request
- In selecting the input source, you are kindly requested to select the object actually to be used.

Notice
- The objects of output source;
  ON/OFF of air conditioner group (including Ventilation Operation), mode, set temperature, air velocity, operation prohibition, ON/OFF of general equipment, output of free contact.
  Up to 10,000 output sources from the ones listed above are selectable.
- Just as when making the settings for the input source, settings can be copied and pasted using Ctrl+C and Ctrl+V key combinations respectively.

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5-4-3 Setting the input/output relations

On the [Setting relating to input/output] screen representing the wizard screen for table file setting, set the setting number of input/output and the input/output relations. On this screen, in order to set up input/output relation, set up from the candidate of the selected input and output source.

(1)Setting the number of input/output to set
The number of setting input/output can be set up to 200.

(2)Selecting No. of input/output relations
Select No. of input/output relations desired to be set.

(3)Selecting the input source
Select the input source from the classification 1, 2 and input source columns. Selectable from the objects being selected on the screen to select input source.

(3)[Reference] button
Able to refer from the input sources set in selecting the input source.

(3)Event selection of input source
The input event of input source is selected.

(4)Selecting the output numbers
The number of output for the input event being selected is set up to 50.

(5)Selecting the output source and detail
The output source and detail are selected from the classification 1, 2 and the set detail columns.

[Cancel] button
For returning to initial setting screen without saving set detail

[Finish] button
For saving the set detail to return the initial setting screen

[Back] button
For returning to the former setting screen.

Able to refer from the output sources set in selecting the output source

Figure 5-6. Screen to set input/output relation

(1) First, set the input/output set number desired to set for the input/output relations.
    *The default value is set to [0].

(2) Select No. desired to be set with the input/output relations.

(3) Select the object of the input source from the classification 1, 2 and output source columns. Select the status desired to be input condition from the event column.
    *Selection is needed in addition to [All] for the classification 1 and 2 columns.
    *By clicking the [Reference] button, you may select from the input source previously set

(4) With the input condition being set by (3) above, set the output number desired to output.
    * Settable up to 50

(5) Select the object of the output source from the classification 1, 2 and output source columns.
    *Selection is needed in addition to [All] for the classification 1 and 2 columns.
    *The same output source can not be set to the same input source and event detail.
    *By clicking the column of No., you may select from the output source previously set**.**

(6) Set all input/output relation numbers as (2) ~ (5) above.

(7) After finishing the setting, click the [Finish] button. The set detail is saved to return to the initial screen.
    *Clicking the [Cancel] button returns to the initial setting screen without saving the set detail. Clicking the [Back] button returns to the former setting screen.

Request

- In selecting the output source, set the function usable practically. For example, please refrain from setting to [AUTO mode] to the indoor group without the [AUTO mode] function.
- The operating temperature can be set to a temperature between 12ºC and 28ºC on the indoor units whose operation mode is set to Heating in the "Setting relating to input/output" menu. Do not make this setting on the units that are not designed to operate in the heating temperature range of between 12ºC and 18ºC.

Notice

- For setting of the detail of output source, all functions are displayed as the candidates. Select the function being provided to the actual equipment.
- The candidates of input and output sources unused will be deleted at completion of the setting of the table file. Setting with the candidates of the input or output source is required again.
- Settings for the output content can be copied and pasted with Ctrl+C and Ctrl+V key combinations.
- Settings for the output content can be deleted by row with Ctrl+X (or Sfhit+Delete) key combinations.

Screen image when the Fahrenheit unit is selected

Notice

- When the setting temperature shown below is selected, use G-50A, PAC-YG21CDA, indoor units, or remote controllers that have 1ºF temperature setting function.

      54 56 58 60 62 64 66 70 72 74   76 78 80 82 ºF

    [Applicable version]   G-50A   : Ver.3.00 or later

                       PAC-YG21CDA   : Ver.2.20 or later

                       Indoor unit /Remote controller   : Models with 1ºF temperature setting function

At selecting the [Refer] button of input source;

Clicking the [Refer] button of input source displays the contents set on the selecting screen of input source. You may select the input source from the candidates.

(1) Clicking the [Refer] button displays the screen to select input sources.

(2) Click the candidate of the input source for selection.

(3) Select the [OK] button.

 *To cancel the selection,

  click the [Cancel] button.

Figure 5-7. Selecting screen of input source

At selecting the [No] column of output source;

Clicking the cell of the [No.] column of output source displays the contents set on the selecting screen of output source. You may select the output source from the candidates.

(1) Clicking the cell of the [No.] column displays the screen to select output source.

(2) Click the candidate of the output source for selection.

(3) Select the [OK] button.
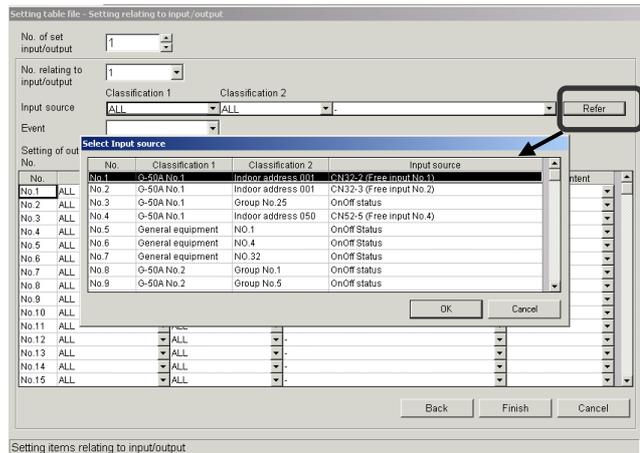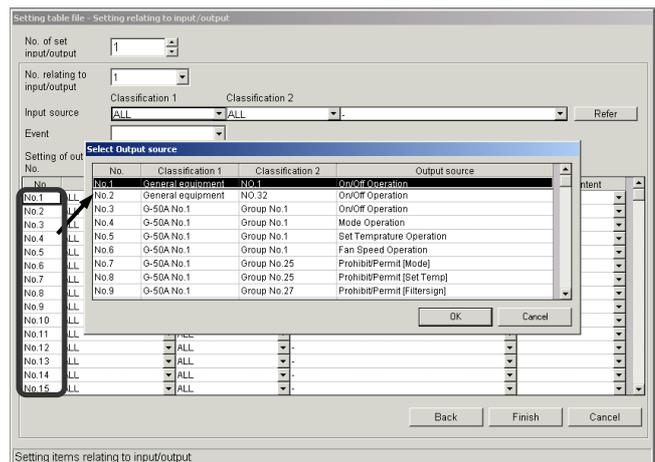
 *To cancel the selection, click the [Cancel] button.

Figure 5-8. Selecting screen of output source

[Supplemental explanation of output detail setting]

The operation detail of air conditioners is as shown in the table below.

Table.5-1 - Setting detail of air conditioner operation

No.	Items	Detail	Remarks
1	ON/OFF	[ON] [OFF]	
2	Mode	[COOL] [DRY] [FAN] [HEAT] [AUTO]	*Set only functioning mode
3	Set temperature	[19(12)] ~[28]	The temperature range can be set to 12-18ºC (53-83ºF)on some models of units.
4	Fan speed	[****(HIGH)] [***(MID1)] [**(MID2)] [*(LOW)]	*Set the fan speed only that can be used by objective equipment.
5	On/OFF item	[ON] [OFF] *1	*Set together with No.5 in a pair.
6	Mode item	[ON] [OFF] *1	
7	Set temperature item	[ON] [OFF] *1	
8	Filter sign item	[ON] [OFF] *1	
9	Interlocked ventilation ON/OFF	[High] [Lo] [OFF]	

*1 : At selecting [ON], this item is the object of the prohibit. At selecting [OFF], this item is the object of the permit.

[Supplemental explanation on input/output of indoor unit free contact]

For the free contact of the indoor unit, 4 points can be used for input and 3 points for output. (Setting of DIP SW of indoor unit is required. SW1-9,10:ON)

Table 5-2- Input and output for the free contact of indoor unit

No.	Items	Detail
1	Free contact input No.1	CN32-2 port
2	Free contact input No.2	CN32-3 port
3	Free contact input No.3	CN51-2 port
4	Free contact input No.4	CN51-5 port
5	Free contact output No.1	CN52-2 port
6	Free contact output No.2	CN52-3 port
7	Free contact output No.3	CN52-4 port

* "Free contact input/output No.*" is abbreviated to "Free input/output No.*" and displayed on each screen.

[Explaining the error message at selecting the completion button]

(1) Error message when it is not selected

When it is not selected for the input or output source, the error message will be displayed as below.

Example) When input source is not selected

Error
InputNo.3   ALL Do not select
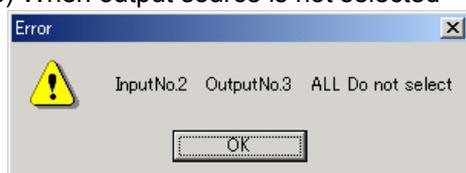OK

(Supplement)

This displays that the input source of the input/output relation No.3 is not being set.

Input No. is representing the input/output relation No. (No. of input source).

Example) When output source is not selected

Error
InputNo.2   OutputNo.3   ALL Do not select
OK

(Supplement)

This displays that the output source No.3 of the input/output relation No.2 is not being set.

Example) When the output content of the output source is not selected

Error	☒
⚠ The InputNo.1 OutputNo.1 is in the state where it does not set up.	
OK	

(Supplement)

This displays that the output content of the output source No.1 of the input/output relation No.1 is not being set.

(2) Error message at duplication

When the output source is duplicated under the same input source condition, the error message below will appear.

Error	☒
⚠ InputNo.1 and 2 OutputNo.1 and 3 General equipment NO.1 OnOff Status Output source is duplicated in input/output No.	
OK	

(Supplement)

The output source of the input source [General equipment No.1 On/Off status] is being duplicated.

Output source No.1 of input/output relation No.1

Output source No.3 of input/output relation No.2

* The same output source is set under the same input source condition.

<u>InputNo.1 and 2</u>   <u>OutputNo.1 and 3</u>   <u>General equipment NO.1 OnOFF Status</u> Output source in input/output No.
       (a)   (b)   (c)

(a) Indicates the input source No. (input/output relation No.).

(b) Indicates the output source No.

(c) Indicates the content of the input source.

> **Notice**
> - As an error message displays the content initially admitted as an error, check that the error message will not be displayed after modifying the error.
> - When an error message is displayed, this input/output relation setting can not be finished. (Except the message for the existence of unused sources.)

(3) Error message for unused sources

When the input or output source being not used for the input/output relation setting is existed, the error message below will be displayed.

Confirmation	☒
⚠ The Input sorce of [General equipment NO.2 OnOff Status] has not been set up. Return to a setup?	
Yes No	

(Supplement)

The input source of [General equipment No.2 On/Off status] is not being used.

To return to setting up : Click the [Yes] button.

To finish : Click the [No] button.   (Finishing under unused state. Unused sources will be

deleted.)

5-5 Selecting the Drive of ATA Card

Clicking [Reference] of [ATA card drive] in the setting sub-menu displays the screen to select the drive. On this screen, select the drive in which PC card of ATA card is inserted.
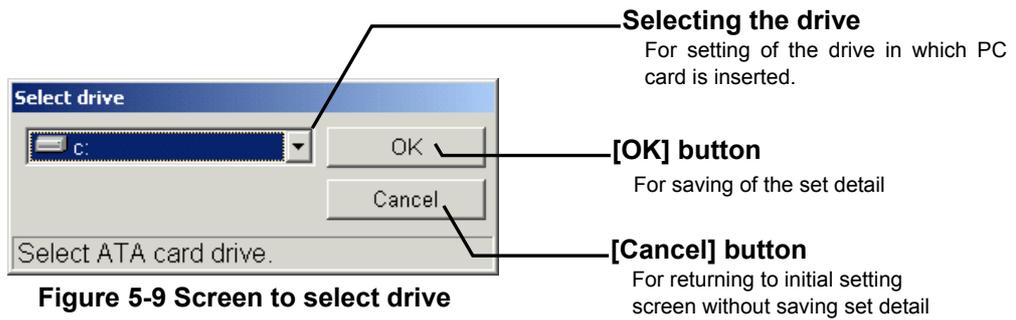
Selecting the drive
For setting of the drive in which PC card is inserted.

[OK] button
For saving of the set detail

[Cancel] button
For returning to initial setting screen without saving set detail

Figure 5-9 Screen to select drive

(1) Select the drive of PC card to write data in ATA card.
    The sub directory of the ATA card cannot be chosen as the destination to write the data in; store data in the root directory of the ATA card.
(2) After finishing the setting, click the [OK] button.
    *Clicking the [Cancel] button returns to the initial setting screen without saving the set detail.

5-6 Writing in ATA Card

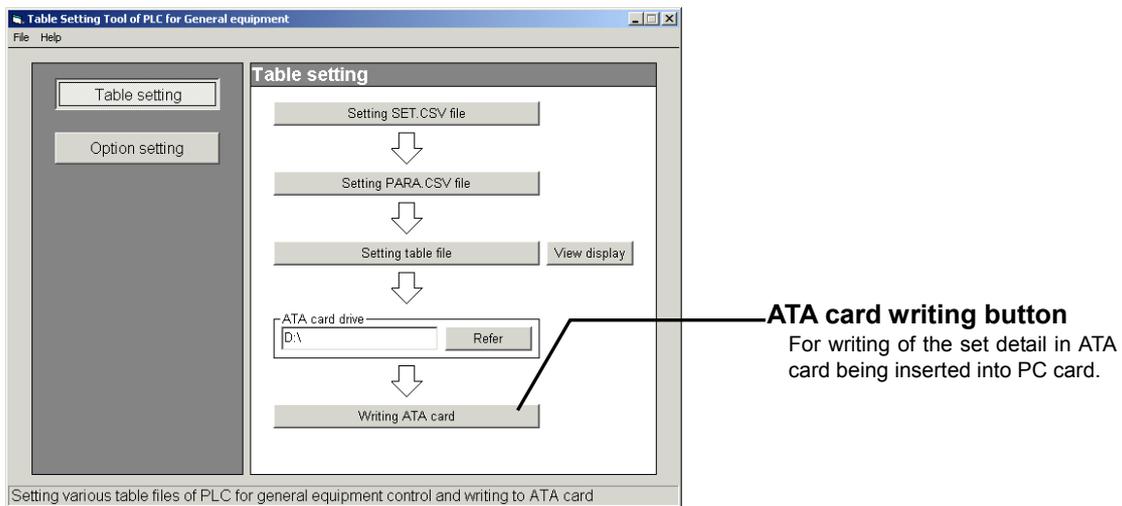Clicking [Writing in ATA card] of the setting sub-menu allows you to write the detail being set to ATA card.

ATA card writing button
For writing of the set detail in ATA card being inserted into PC card.

Figure 5-10 Initial screen

(1) Set PC card being inserted with ATA card to the drive.

(2) Clicking [Writing ATA card] of the setting sub-menu displays a massage to confirm. After confirming the message detail, write the set detail in ATA card. At completion of the writing, a message to finish is displayed.
    *Clicking the [Cancel] button returns to the initial setting screen without saving the set detail.

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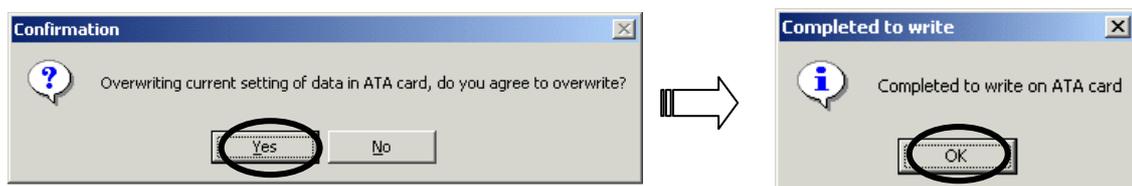
(3) To remove PC card in safe, right-click [Unplug or eject hardware] in the task bar to display and then select it.
On the Unplug or Eject Hardware screen, select the device desired to remove, and click [Stop]. Then the screen to confirm is displayed. After confirming the screen display, prepare for the removal of the PC card.
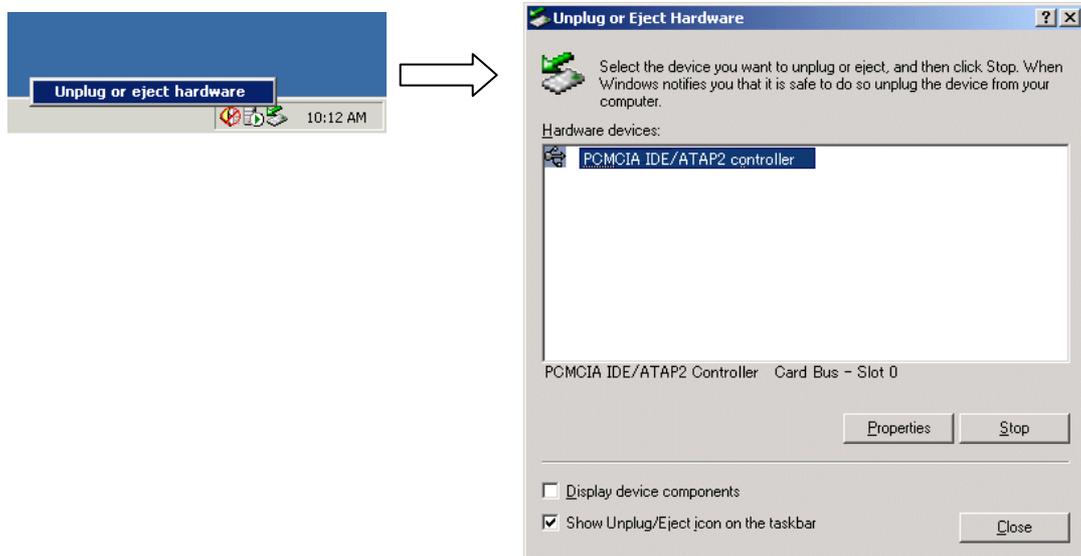
6. Option Setting

This section introduces how to read the set detail being written in ATA card.

6-1 Screen Configuration of Option Setting

Clicking [Option] in the setting menu displays the option setting screen. On this screen, the set detail written in ATA card can be read.
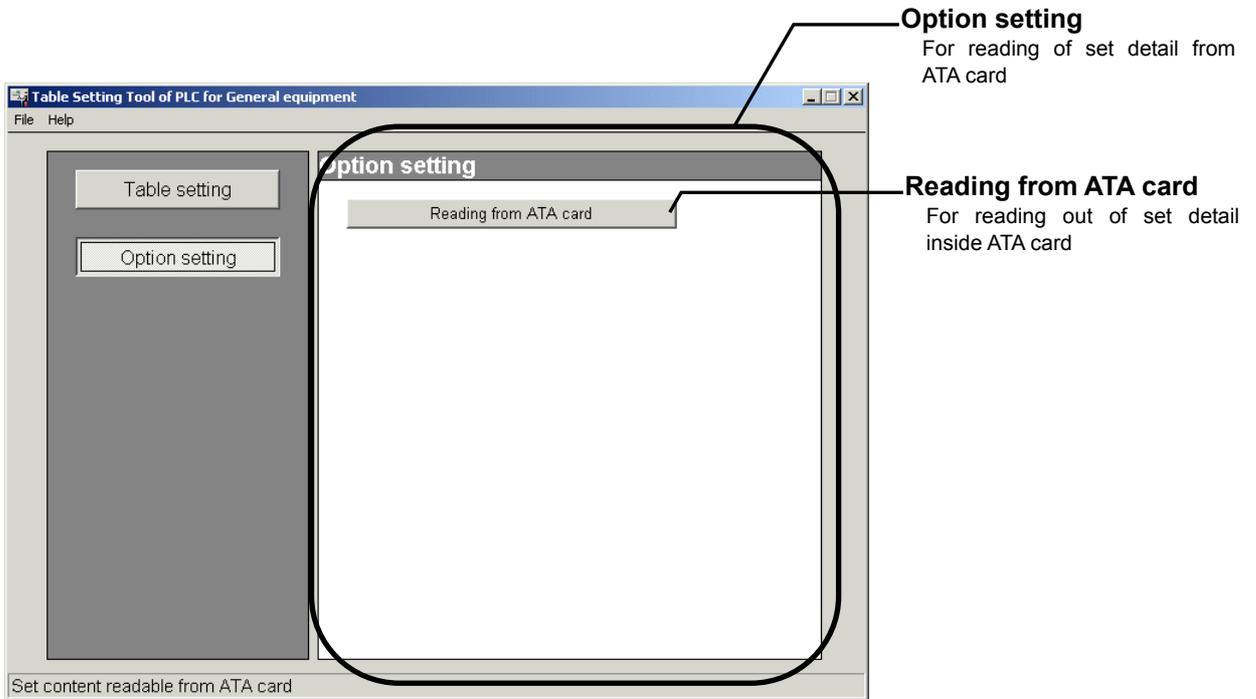
Option setting
For reading of set detail from ATA card

Reading from ATA card
For reading out of set detail inside ATA card

Figure 6-1. Initial screen

6-2 Reading from ATA Card

Clicking [Reading from ATA card] in the setting sub-menu displays the screen to read the set detail from ATA card. The data being set to ATA card can be read in.

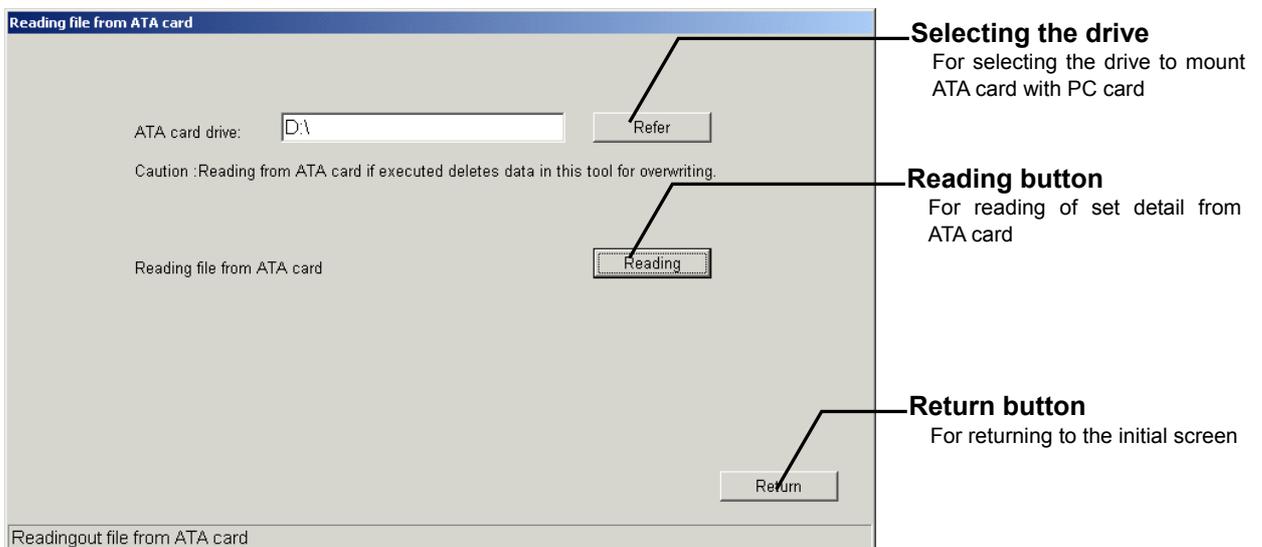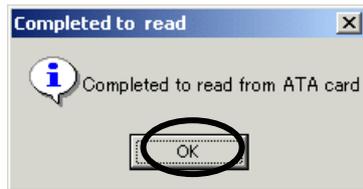**Selecting the drive**
For selecting the drive to mount ATA card with PC card

Reading button
For reading of set detail from ATA card

Return button
For returning to the initial screen

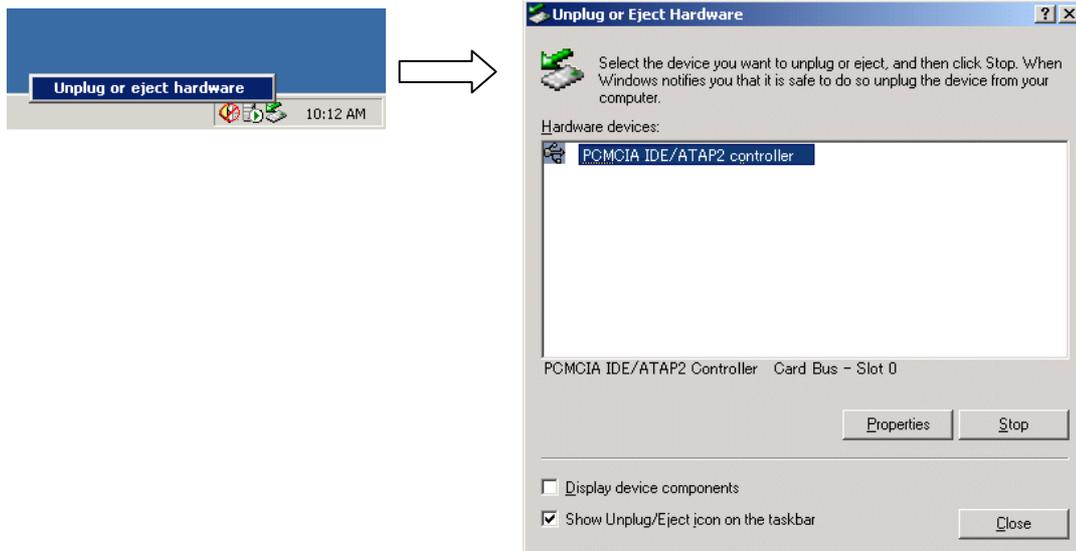**Figure 6-2. Setting screen to read from ATA card**

(1) Select the drive of PC card to read the set detail from ATA card.

(2) Clicking the [Reading] button displays the screen for confirmation. Confirm the message and then click the [YES] button to display the finishing screen to read the set detail from ATA card.
  *Clicking the [NO] button returns to the initial screen without reading from ATA card.

Confirmation	✕

? Reading data from ATA card destructs current setting, do you agree to read?

Yes　　　No

⇩

Completed to read	✕

i Completed to read from ATA card

OK

(3) To remove PC card in safe, right-click [Unplug or eject hardware] in the task bar to display for selection. On the Unplug or eject hardware screen, select the device desired to remove, and click [Stop]. Then the screen to confirm is displayed. After confirming the screen display, prepare for the removal of the device.

Unplug or eject hardware

10:12 AM

⟹

Unplug or Eject Hardware	? ✕

Select the device you want to unplug or eject, and then click Stop. When Windows notifies you that it is safe to do so unplug the device from your computer.

Hardware devices:

PCMCIA IDE/ATAP2 controller

PCMCIA IDE/ATAP2 Controller　Card Bus – Slot 0

Properties　　　Stop

☐ Display device components

☑ Show Unplug/Eject icon on the taskbar　　　Close

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7. Troubleshooting

This section introduces the possible causes of and countermeasures against troubles occurred on this PLC for general equipment control and table setting tool.

Table 7-1 Trouble causes and countermeasures

Symptom of trouble	Possible causes	Countermeasures
Unable to prohibit local remote controller operation	From the operation item of [PROHIBIT/PERMIT], [PERMIT] is being set.	Set [PROHIBIT] to the output source from the item [PROHIBIT/PERMIT].
	Operation is being permitted from other controller	Change the system to allow only one remote controller to operate for prohibition. The later selection has priority in the operation of prohibit/permit.
Operation is prohibited without the setting of local remote controller at PLC.	Prohibit/permit is operated from plural spots by G-50A unit and PLC, etc.	Change the system to allow only one remote controller to operate for prohibition. The later selection has priority in the operation of prohibit/permit.
		When operating for prohibit/permit from PLC, do not operate for them at G-50A unit.
Unable to write in ATA card	Erroneous selection of drive	Change to the drive inserted with ATA card located in PC card.
	ATA card not formatted yet	Format ATA card by using PLC and GX Developer.

Q & A about the table setting tool of PLC for general equipment control are given below.

Table 7-2 Q & A about the table setting tool of PLC for general equipment control

Question	Answer	Remarks
How to confirm the version of the table setting tool?	Select the menu [Help] - [Version] of the table setting tool displays the version in question.	
What is the measure to be taken when the output setting exceeds a certain input?	For one input/output relation setting, the output setting of 50 maximum is provided. For the output setting number of over 51, set the same input by using another input/output relation setting.	* The setting number of input/output relations counts for 200 maximum.
What is a unit of the output setting numbers?	One output per each output source. For ON/OFF prohibition and OFF operation for example, two output settings, [ON/OFF] and [ON/OFF ITEM] are required.	
What is the setting method to only prohibit the local ON/OFF of air conditioners?	To one air-conditioning group, [ON/OFF ITEM] is turned [ON].	ON : prohibit OFF: permit
What is the method to restore the set detail of the schedule when grading up the version from Ver.1 of PLC software for general equipment control?	Transmit the setting again on the schedule setting screen of the integrated centralized control software TG-2000A.	
Can we use "OR" or "AND" as the input condition?	"OR" or "AND" can not be used. A single input condition can be used only.	
Shall we stop PLC for general equipment to change the set content?	Shut off the sequencer power source as the PLC for general equipment shall be stopped. To change the set content, eject ATA card from the sequencer and renew the set content.	*Pulling in or out of ATA card at the powering of the sequencer may cause trouble.

Question	Answer	Remarks
Is it possible to display the temperature in Fahrenheit on this tool?	Yes, it is. Select "Fahrenheit" on the installation screen before installing this tool, then install this tool. (The temperature unit (Centigrade/Fahrenheit) cannot be changed after installing this tool.)	
On which model can 12-17°C (53-64°F) be set for heating?	It can be set only on R407, R410A models of CITY MULTI (except for S series). **(Note: It cannot be set on MULTI S series.)**	
Is it possible to use GB-50A?	Yes, it is. Read this manual changing the word from "G-50A" to "G-50A/GB-50A". The license for "PLC for General Equipment" must be registered on G-50A/GB50A.	Only Ver.2.90 or later of GB-50A is released. The 1°F temperature setting function is available only on Ver.3.00 or later.
The temperature setting by 1°F increment on the PLC of PAC-YG21CDA is necessary. Which combination makes it possible?	The following combination is possible. This Table : Ver.1.30 or later Setting Tool (when the Fahrenheit is selected) G-50A : Ver.3.00 or later PAC-YG21CDA : Ver.2.20 or later Indoor unit : Models with 1°F /Remote controller temperature setting function	*The temperature unit displayed must be the same in one system.

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