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TCS-NET GENERAL PURPOSE INTERFACE **Setting Tool Manual**

For advanced conjunction function

Model name: _____

TCS-NET General Purpose Interface
TCB-IFCG1TLE
(TCB-IFCG2TLE)

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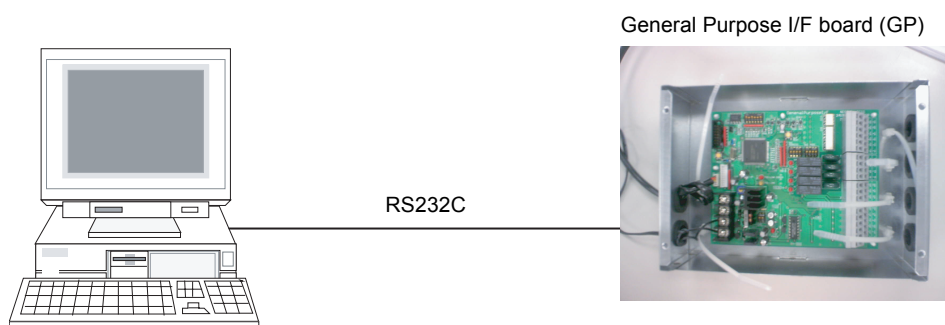
1. Introduction

This manual describes how to use the setting tool software for the advanced conjunction function for the general purpose interface. The setting tool allows writing, reading, and erasing air conditioning control data to respond to input port changes for the general purpose I/F board (TCB-IFCG1TLE, referred to as GP hereinafter).

2. Overview of the System

This manual is intended for the setting tool for operations in conjunction with the GP.

Set the switches on the GP to SW5-5: OFF and SW5-6: ON, connect the connector CN5 on the GP to the RS232C connector on the PC with the DYNA KIT cable, connect the power line of the GP, and then press the RESET button (SW7) on the GP.



3. Necessary equipment and software

Product	Product name	Obtain from
DYNA KIT cable	Adapter CNV2-3.3V	Carrier sales company
.NET Framework	Microsoft .NET Framework 2.0 or later	Download from Microsoft web site.
Writing tool software	Setting tool software for advanced conjunction function for the General Purpose Interface	Carrier sales company
PC	Windows 2000, XP or Vista with RS232C port	—

4. Operating Environment and Installation

4-1. Operating Environment

Supported OS: Windows 2000 / XP / Vista

Microsoft .NET Framework 2.0 or higher and a serial port are necessary to operate this system.

For computers which do not have serial port, PC Card or USB to RS232C converter can be used to arrange an RS232C port.

4-2. Required Files and Installation

- Microsoft .NET Framework 2.0 or higher can be downloaded from the Microsoft website.
- Copy the following files to an appropriate directory.
 - serialPort.txt
 - GPSettingTool.exe

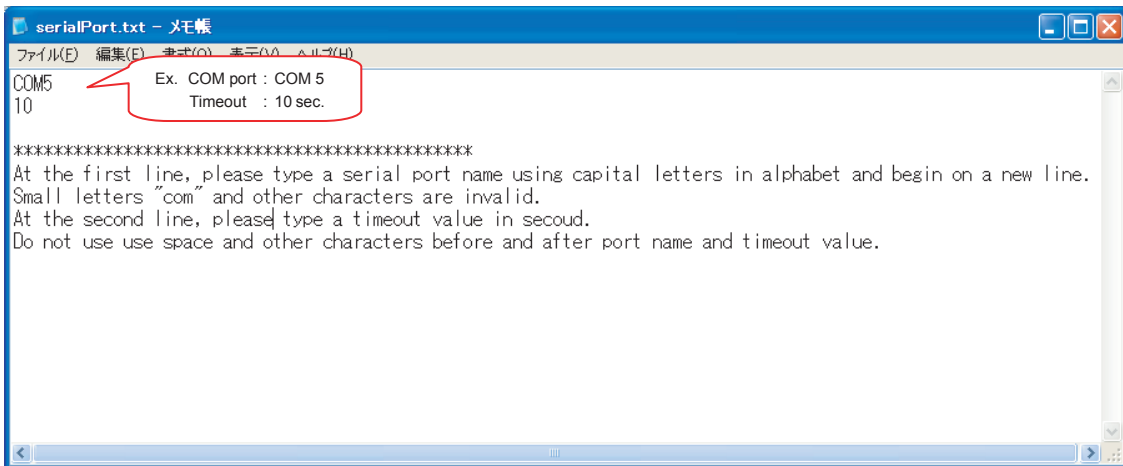
4-3. Serial Port Setting

Set the serial port as follows:

- Baud Rate = 38400 bps
 - Data bit = 8
 - Parity check = no parity
 - Stop bit = 1
- } Fixed
- No flow control
 - COM port = COM1 (default)
 - Timeout = 2 seconds (default)

5. Serial Port Setup File Format

The COM port and timeout period settings can be changed with the setup file "serialPort.txt". However, even if the settings are changed after startup, the setting change is not reflected because these settings are made during system startup. If there is an error in the setup file, an error message appears and the GP setting tool is not activated. The COM port and timeout period cannot be changed independently. Therefore, when changing either COM port or timeout period, both COM port or timeout period must be set together. If the setup file does not exist in the same directory, the default settings of the COM port and timeout period are used.



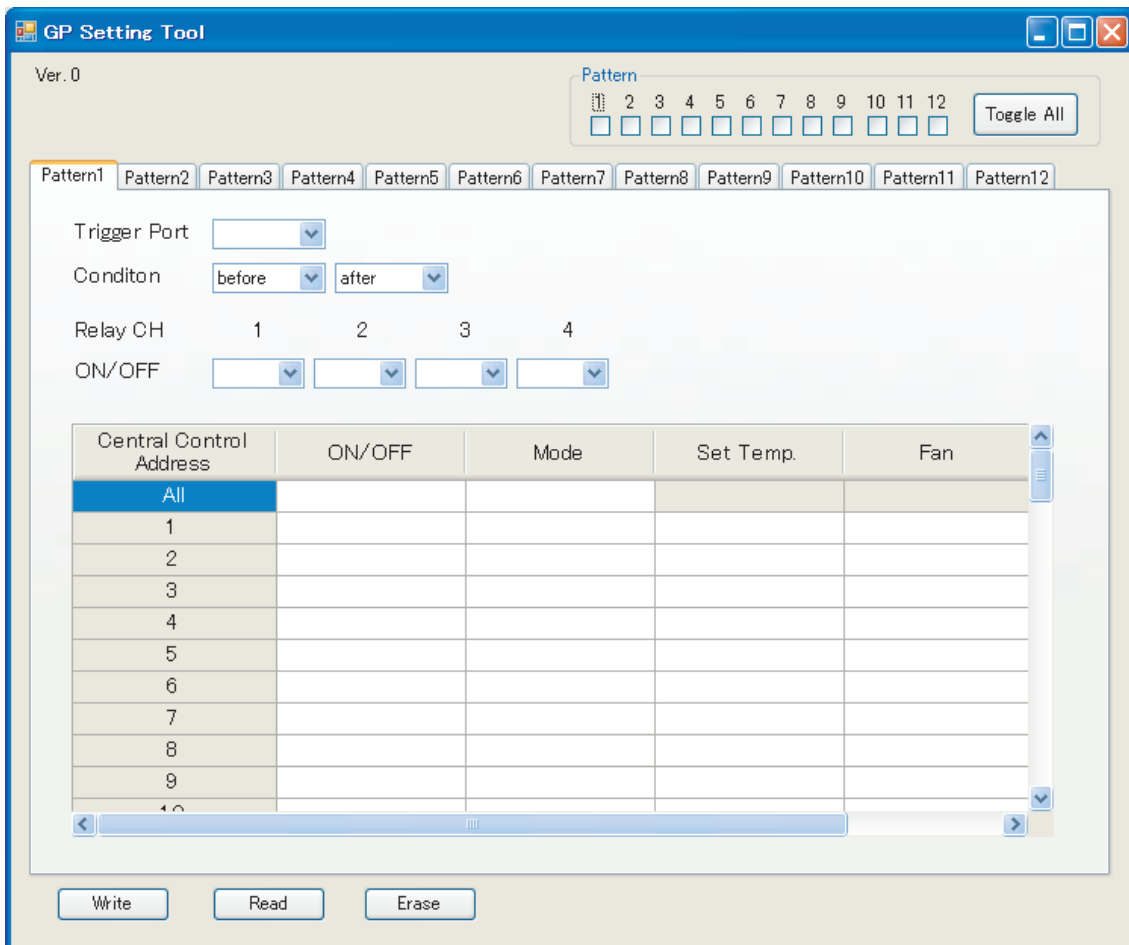
- Type a COM port name using capital alphabets on the first line.
If small letters (e.g. com) are entered, an error occurs.
- Type a timeout value in second on the second line.
A value from 1 to 300 (seconds) can be set. If a value outside this range (e.g. -1, 0, or 400) or a fractional value (e.g. 1.5) is entered, an error occurs.

If these settings are entered on other lines or space or other characters are used before or after the port name and timeout value, an error occurs.

6. How to Use the GP Setting Tool

6-1. Startup

Start the GPSettingTool.exe.



6-2. Write Operation

The set data of the selected patterns can be written to the GP.

The set data of other patterns in the GP remains unchanged when the set data of the selected patterns is written. When the set data of the selected patterns already exists, it is overwritten to the new data by the write operation. The write operation takes time in some cases.

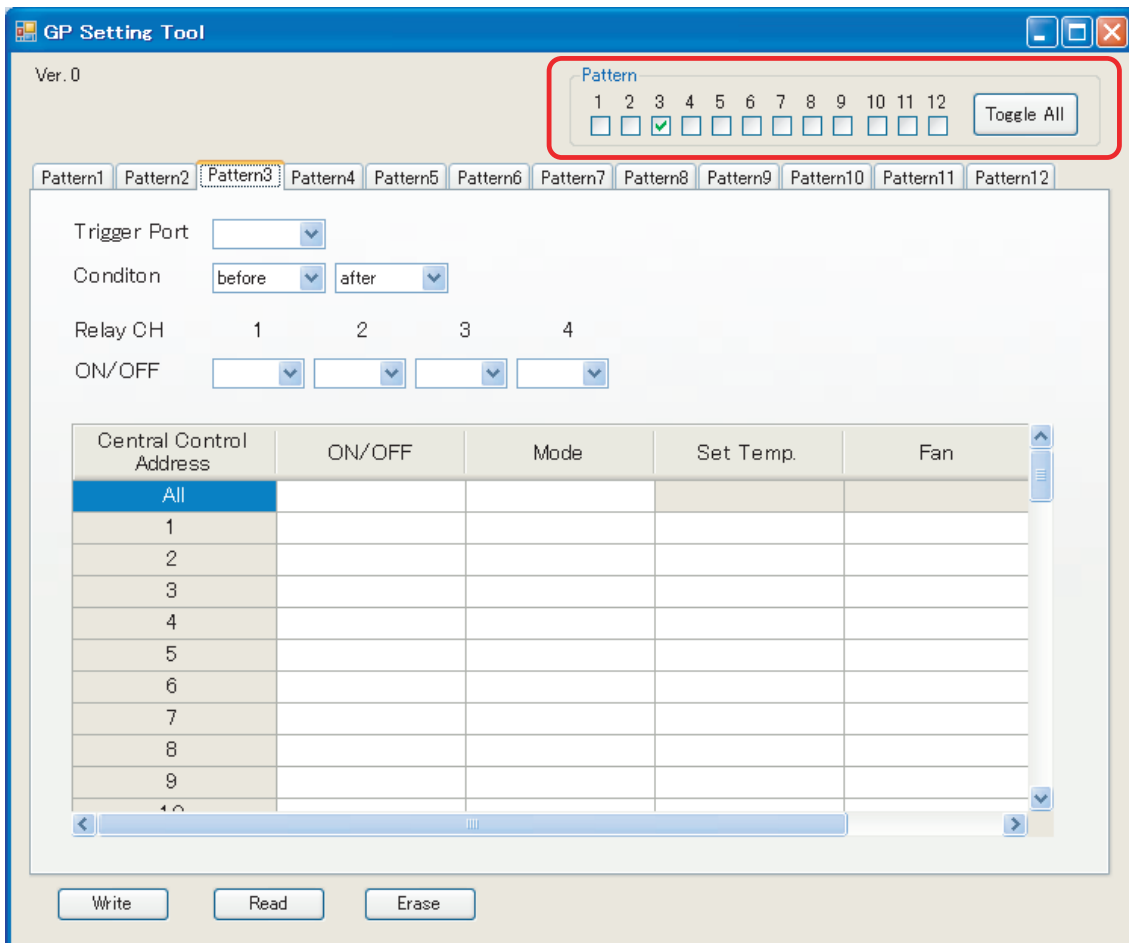
6-2-1. Selecting Patterns

Click the checkboxes of patterns you want to select.

Two or more patterns are selectable.

Click the Toggle All button to select all patterns or cancel selection of all patterns.

If no pattern is selected, an error occurs.



6-2-2. Setting Trigger Port and Condition

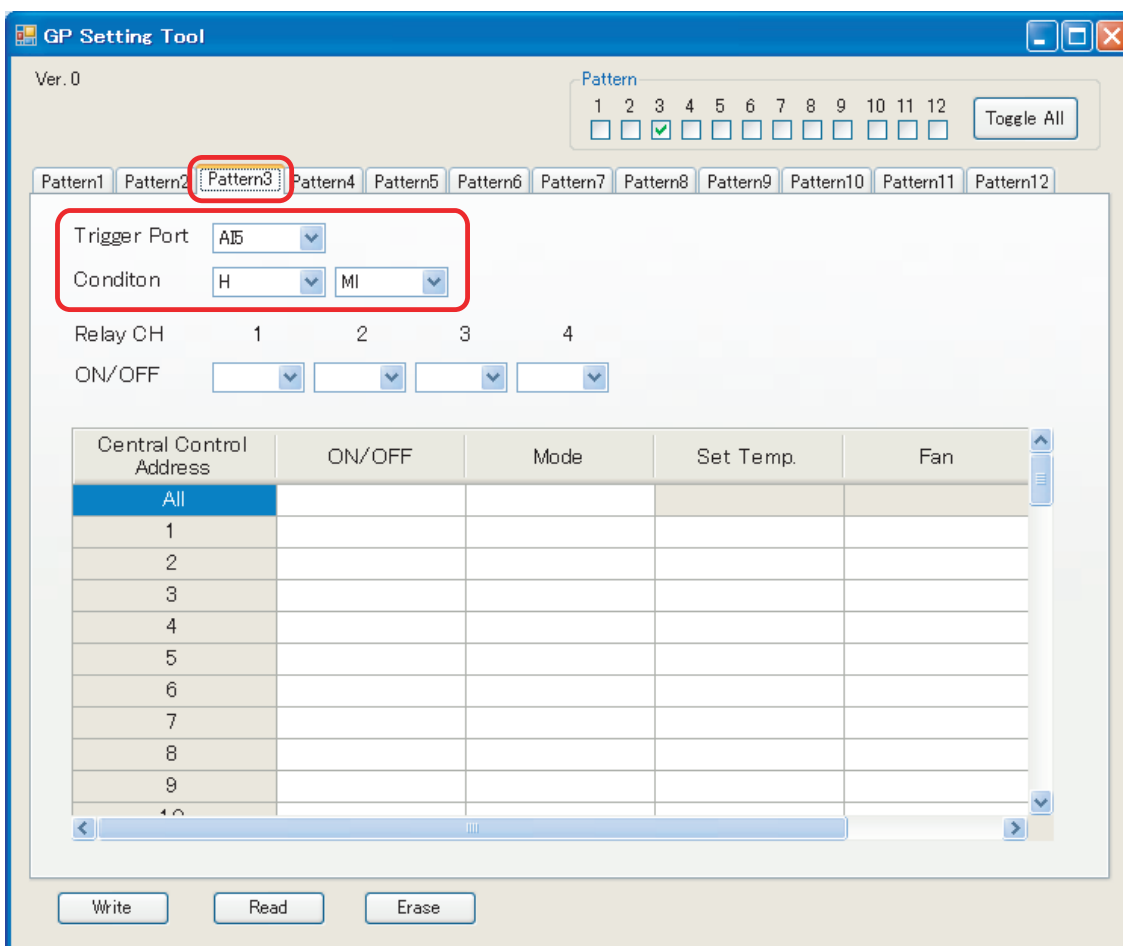
Select the tab of the selected pattern to set Trigger Port and Condition.

If no Trigger Port is selected, an error occurs.

When selecting values for Condition, if the same value is selected for before and after (e.g. before = H, after = H), an error occurs.

When digital input (DI1 to DI6) is selected for Trigger Port, if values except for the combinations shown below are selected, an error occurs. “H” corresponds to the state where input current does not flow to the relevant DI port, and “L” corresponds to the state where the input current flows to the relevant DI port.

Before	After
H	L
L	H



6-2-3. Setting Relay CH and Air Conditioning Control Data

The following items can be set for air conditioning control data.


- On/OFF
- Operating mode
- Set temperature
- Fan speed
- Disabling of remote control (ON/OFF only)

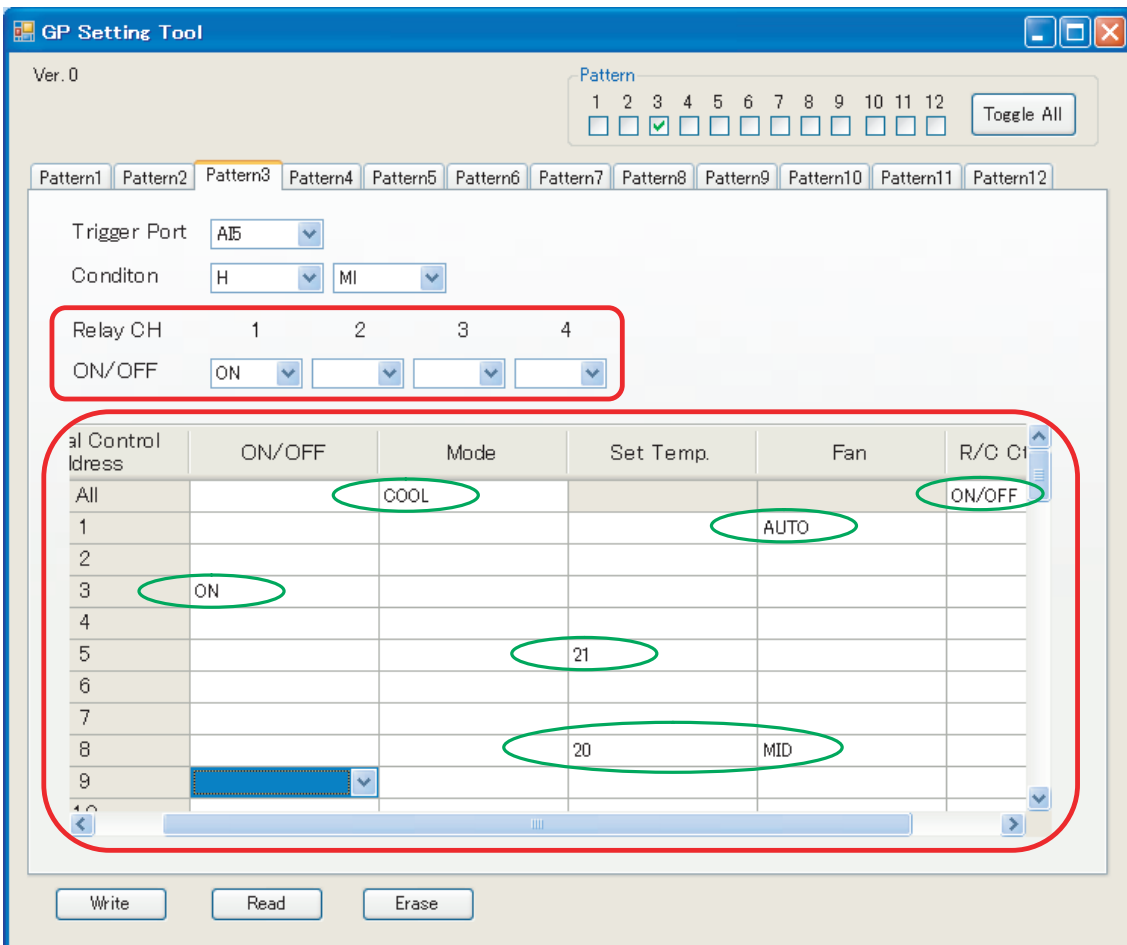
Each central control address (1 to 64) can be set individually, and all addresses (1 to 64) can also be set collectively with the All button. However, the All button cannot be used for setting set temperature and fan speed. While setting of an item (e.g. operating mode HEAT) is made for all addresses, if the setting of the same item is made for an address (e.g. address 10), an error occurs.

If no data is set for both Relay CH and air conditioning control data, an error occurs.

Up to 30 settings can be made for air conditioning control data. If excess settings are made, an error occurs.

For each central control address, set temperature and fan speed are treated as one air conditioning control data.

Example) In the case of the following window, there are six settings as  is one air conditioning control data.



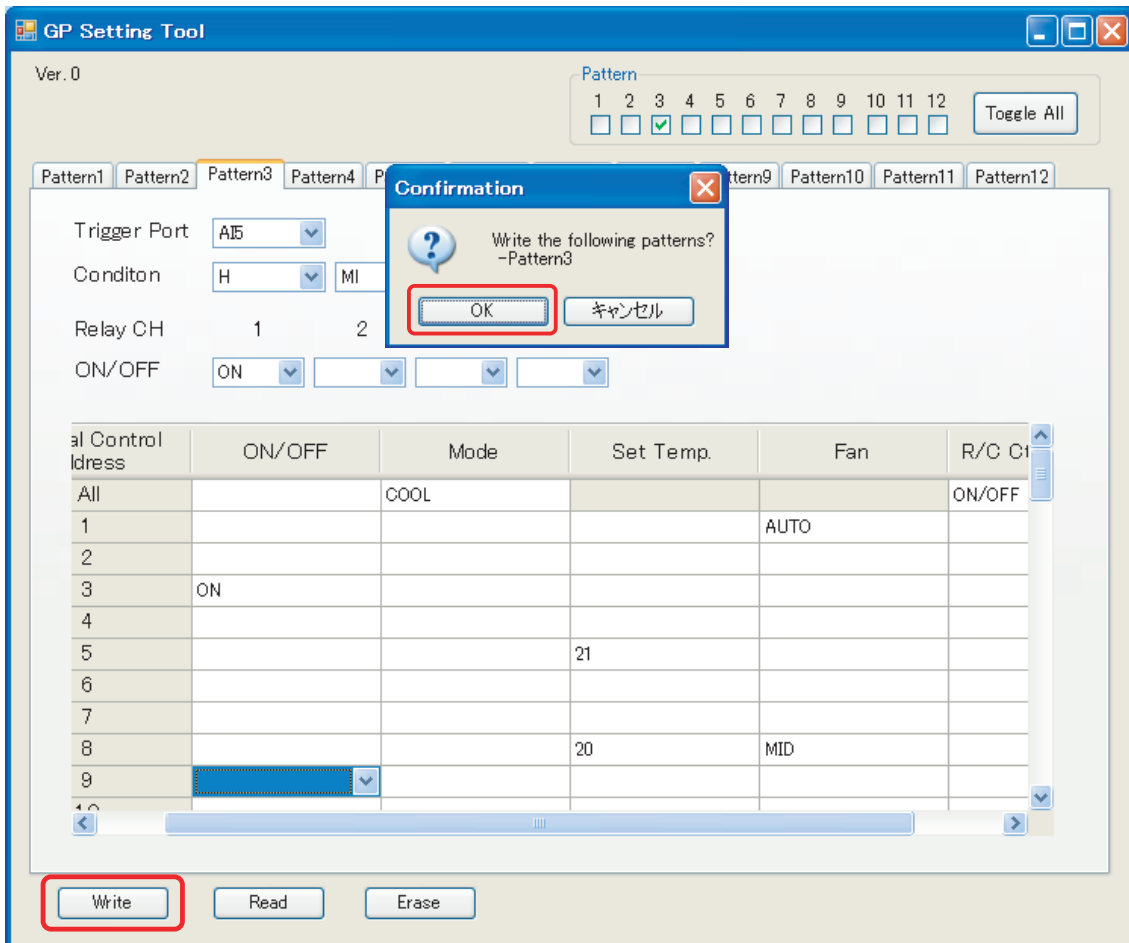
6-2-4. Writing Set Data

After all data have been set, click the Write button.

A confirmation message appears. Confirm the message and click the OK button to send the set data.

To cancel the write operation, click the Cancel button.

After the writing is completed, a completion message appears.



6-3. Read Operation

When the set data of the selected pattern is stored in the GP, the data can be read and displayed on the window. During this read operation, only the data of the selected pattern is displayed and the display contents of other patterns on the window are completely cleared.

The read operation takes time in some cases.

6-3-1. Selecting Patterns

Click the checkboxes of patterns you want to select.

Two or more patterns are selectable.

Click the Toggle All button to select all patterns or cancel selection of all patterns.

If no pattern is selected, an error occurs.

6-3-2. Reading Set Data

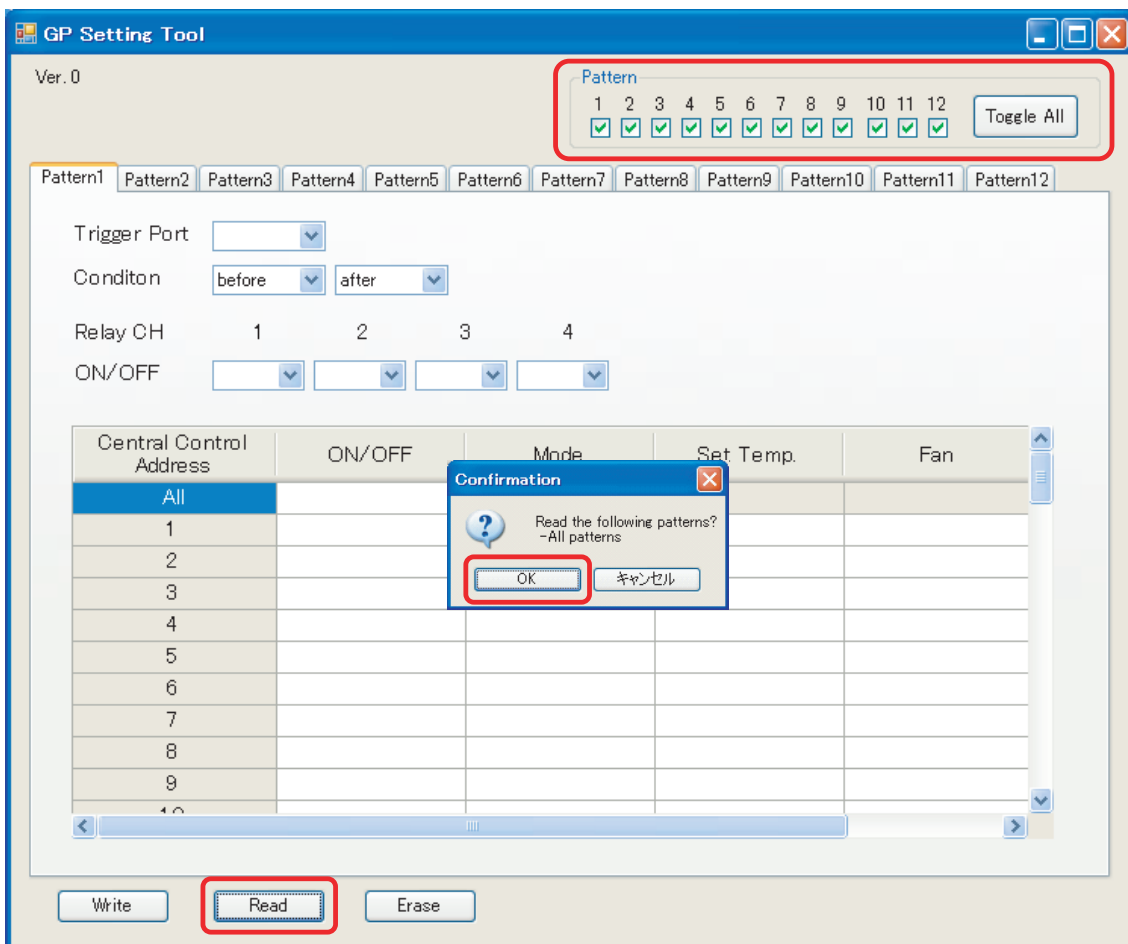
Click the Read button after patterns are selected.

A confirmation message appears. Confirm the message and click the OK button to read the set data.

To cancel the read operation, click the Cancel button.

After the reading is completed, a completion message appears and the read data is displayed on the window of the selected pattern.

If there is no set data, a confirmation message appears indicating “no data.”



6-4. Erase Operation

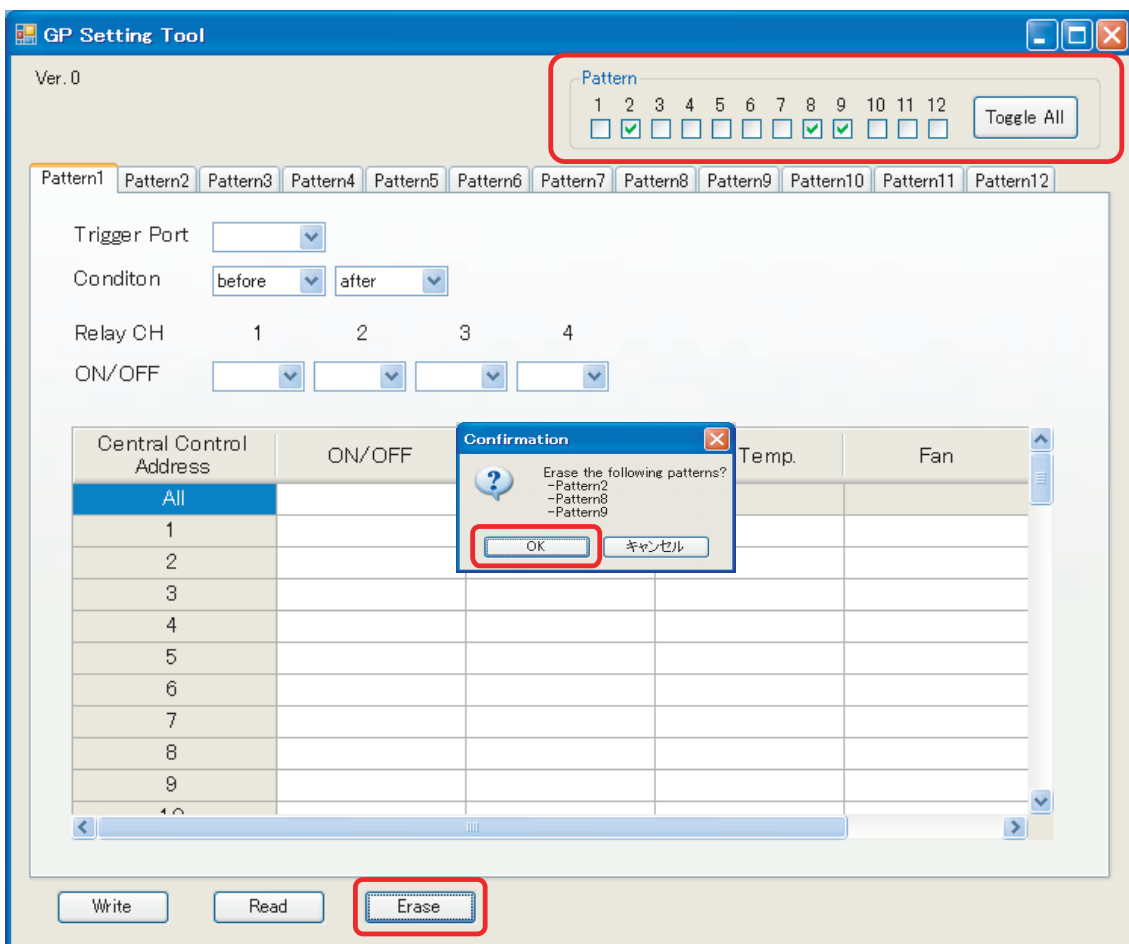
The set data of the selected patterns, which is stored in the GP can be erased with the Erase button.
The set data of other patterns in the GP is not erased when the set data of the selected patterns is erased.
The erase operation takes time in some cases.

6-4-1. Selecting Patterns

Click the checkboxes of patterns you want to select.
Two or more patterns are selectable.
Click the Toggle All button to select all patterns or cancel selection of all patterns.
If no pattern is selected, an error occurs.

6-4-2. Erasing Set Data

Click the Erase button after patterns are selected.
A confirmation message appears. Confirm the message and click the OK button to erase the set data.
To cancel the erase operation, click the Cancel button.
After the erasure is completed, a completion message appears and the windows of the selected patterns are cleared.



7. Errors

7-1. Communication Error

Error Message	Action
Time Out	Check the following: <ul style="list-style-type: none"> • Power supply to the GP • Connection between PC and GP • Connection of the serial cable • COM port setting • Timeout period setting If this error still occurs after these connections and settings are checked, contact Global Sales Division /Engineering Consultant Group of Toshiba Carrier Corporation.

7-2. System Errors

If normal operation is prevented due to the following errors, contact Global Sales Division /Engineering Consultant Group of Toshiba Carrier Corporation.

Error Message	Description
Format Error(GP)	Receive data from GP is incorrect
FCC error	GP's FCC error
PN error	Pattern number error
PN error(Erase)	Erase pattern number error
STX code error	GP's STX code error
ACK: FCC error	FCC error
ACK: DL error	DL error
ACK: Format error	Format error
ACK: Memory full	Outside the EEPROM area
ACK: PN error	Pattern number error
ACK: Pattern Exist	Specified pattern exists during write operation
ACK: Command error	Command (STX) error