Instruction Manual

# PARAMETER LOADER FOR PAPERLESS RECORDER

**TYPE: PHL / PHU / PHF**

Fuji Electric Co., Ltd.

INP-TN513995e-E

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- Be sure to read the Readme.text file included in CD-ROM.
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- Please note that operation except the Personal Computer which made by maker, such as self-assembled PC and so on, cannot be guaranteed.

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# 1. OUTLINE

## 1.1 Foreword

This instruction manual describes installation and operation for the parameter loader of the paperless recorder. Read it carefully before use.

## 1.2 Parameter loader for paperless recorder

Connect the parameter loader (hereafter referred to as loader) to the paperless recorder using commercially available USB cable or LAN cable, and referencing (uploading), editing, and setting (downloading) of each parameter of the paperless recorder can be made. Connect USB miniB type male connector to the paperless recorder.

Note: When program version of PHL is V07L to V10L, available dedicated cable (optional) is required to use the loader.

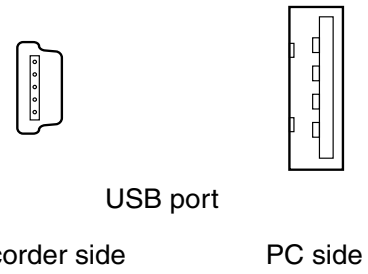
## 1.3 Contents of package

The following items are packaged with the product.

- CD-ROM for installation: 1
- Instruction manual which is installed to above CD-ROM

## 1.4 Recommended operating environment

- Microsoft Windows 2000 or XP or Windows 7 (Home Premium, Professional (Not applicable for 64 bit version)).
- Hard disk with a free capacity of 30MB or more
- RAM with 64MB or more
- USB port
- USB cable (USB miniB)
- LAN port (when provided with Ethernet option)
- LAN cable (when provided with Ethernet option)




Note: 1) Operation by the self-made AT compatible machine and the remodeling machine is not secured.
Trouble might be caused in operation in a part of AT compatible machine or OS.
2) Operation by Windows 95/98/Me/NT is not secured.
3) When program version of PHL is V07L to V10L, the hardware requirements of the loader are as follows.
   - RS-232C serial port (D-sub 9 pin)
   - Communication cable dedicated to parameter loader (Option: PHZP0201)

## 1.5 Installing the parameter loader for paperless recorder

1) If other application software programs are open, terminate all of them.
2) If the programming loader has been already installed, open “Add/Remove Programs” on Control Panel and delete the parameter loader.
3) Set CD-ROM in the personal computer drive.
4) Execute “top_page.html” saved at root folder in the CD-ROM
5) Follow the prompts displayed on the screen.
6) Please install the main body of the parameter loader.
   A message is displayed, prompting you to verify that “Parameter loader setup is complete”.
   Now, the Parameter Loader installation is completed.

## 1.6 Installing USB communication driver

The driver can be installed on Windows XP as follows for example.

1) Connect the USB port of the paperless recorder whose power has been turned on and a running PC with a USB cable.
2) The message “Found New Hardware” and then the driver installation wizard appear on thecomputer. Click the [Next] button.

3) When the dialog box below is displayed, select [Display a list of the known drivers for this device so that I can choose a specific driver] and click the [Next] button.


4) The dialog box below is displayed. Select [Other Devices] and click the [Next] button.


5) The dialog box below is displayed. Click [Have Disk].

6) The [Install From Disk] dialog box is displayed. Click the [Browse] button.

7) The USB driver “OP-U.inf” is automatically stored in the “inf” folder within the install folder (“ParameterLoader” for example) of the parameter loader.
Select the “OP-U.inf” file and then click “Open.”

8) The previous dialog box is displayed again. Check the path shown under [Copy Manufacturer’s Files From:] and click the [OK] button.

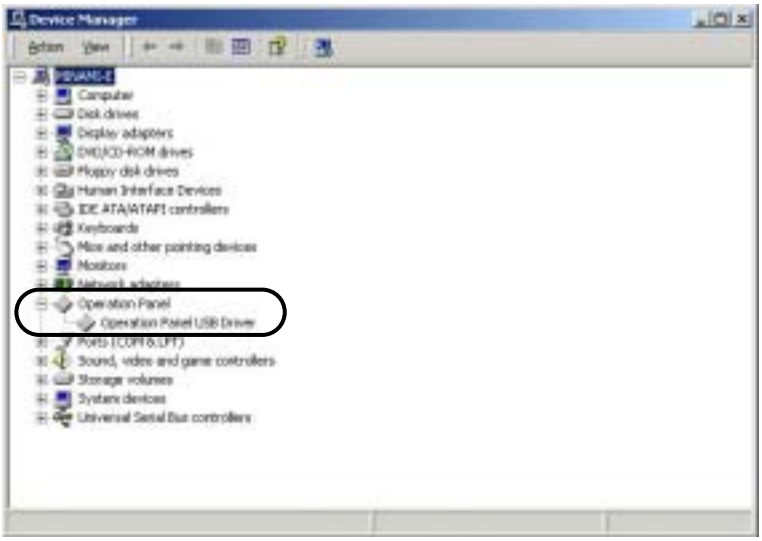
9) The dialog box below is displayed. Check that [Operation Panel USB Driver] is shown under [Models:]. Click the [Next] button.

10) The driver installation starts.


11) The dialog box below is displayed on completion of installation. Click the [Finish] button.

Recognition of USB Driver

When the driver has been installed successfully and the paperless recorder and the computer are connected with a USB cable, the [Device Manager] window shows “Operation Panel - Operation Panel USB Driver.”




This will disappear when the paperless recorder and the computer are disconnected.

If [Other Device] or [?] is shown even while their connection via USB is maintained, the USB driver may not be recognized. If this happens, uninstall the USB driver once and reinstall it.

## 1.7 Uninstalling the parameter loader software for paperless recorder

Follow Windows operation.
In case of installation of new loader software, you should delete current loader software which you use before installation of new loader software.

## 1.8 Cautions

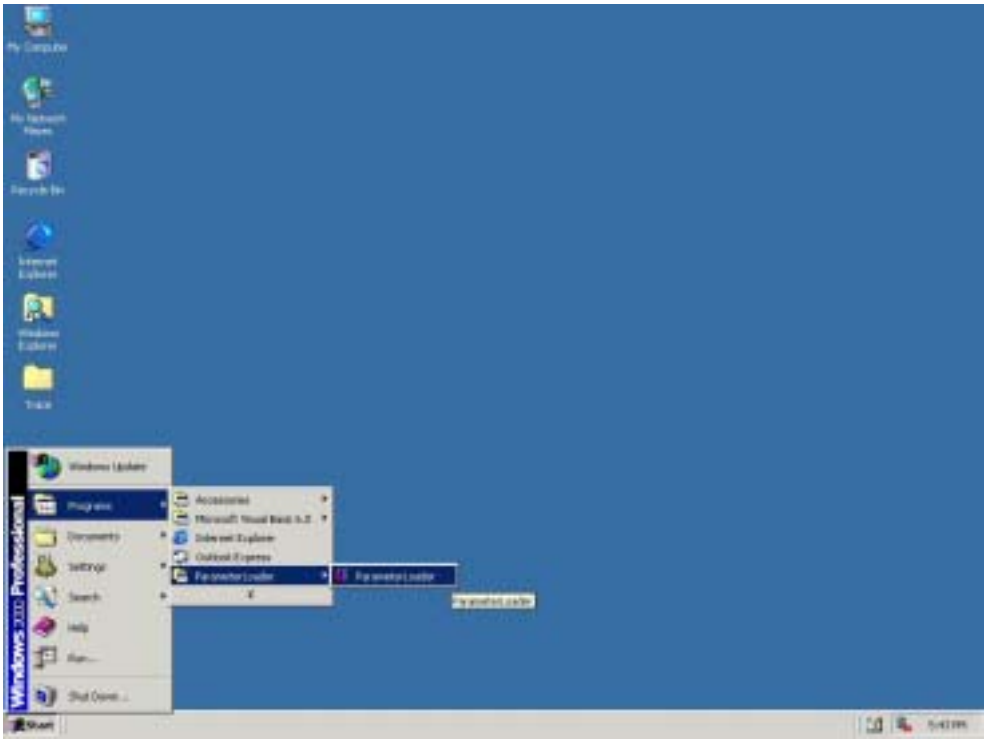
When operating the Loader, be careful of the following items:

- Before starting the paperless recorder, be sure to assure that the Loader setting is reflected to the paperless recorder.
- For the communication setting for the paperless recorder ("Main Unit Set" → "System Setting"), the MODBUS communication function should be set to ON. After the MODBUS communication function has been switched from OFF to ON, turn OFF the power once, and then turn it ON.
- The Loader cannot use more than 1 window at the same time.
  If more than 1 window is open, leave only a single window open and close all of other windows (this can be checked on the Window menu).
- The Loader is used for the paperless recorder only.
- Initial values on each Loader screen may be different from those of the paperless recorder main unit.
- Whenever you want to write the setting data on parameter loader into paperless recorder, please return the display of paperless recorder to Display Mode such as Real Time Trend Screen. Don't display Parameter Setting Screen, or this loader software may miss to write into the paperless recorder.
- At this loader, some parameters which do not exist on paperless recorder may be displayed. But the parameter which doesn't exist in the paperless recorder isn't written.
- **During paperless recorder is recording or totalizing, it is impossible to write into paperless recorder from this parameter loader.**

# 2. BASIC OPERATION

## 2.1 Start

Click “Programs” ⇒ “Parameter Loader” ⇒ “Parameter Loader” from the Start menu.



It is displayed such as following screen.

Note: Whenever, this screen is for 18th inputs. It doesn’t depend on the input points.

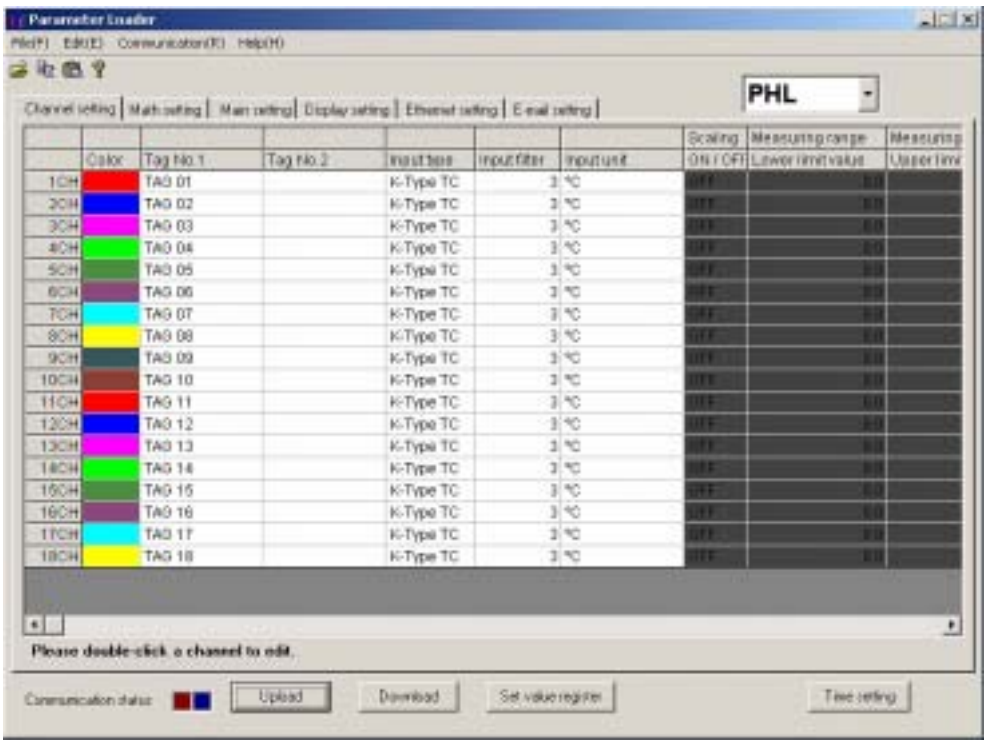
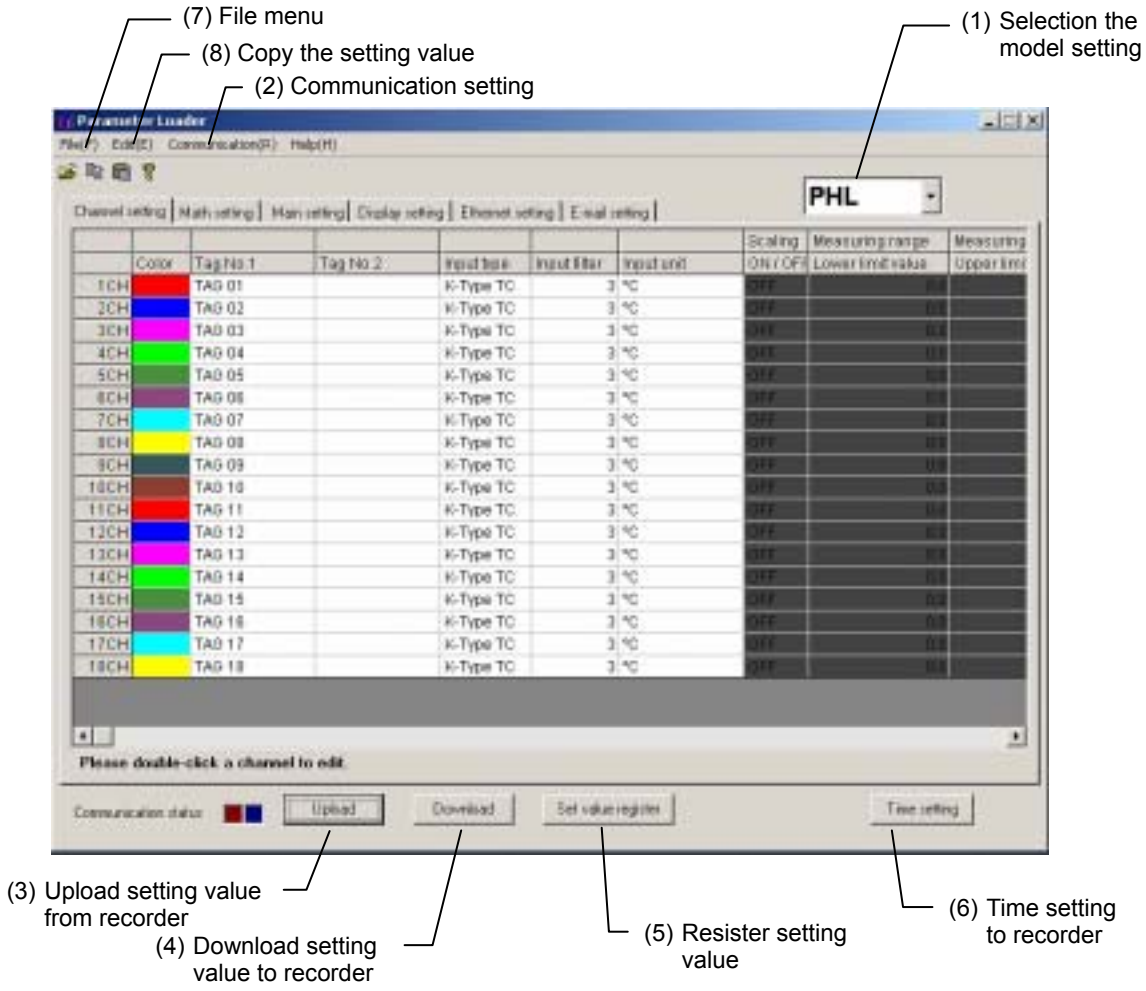



Table of setting channel display

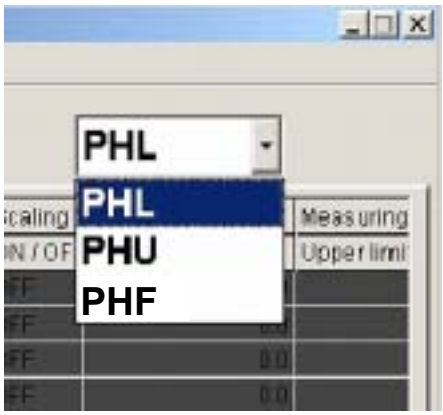
## 2.2 Table of setting channel display

The following is the screen when PHL is selected.




(1) Selection the model setting

Model to be set by parameter loader can be selected.



Display contents and setting range of each model are as tabled below.

| Model | PHL | PHU | PHF |
|---|---|---|---|
| Channel setting | 18 channels (ch 1 to 18) | 36 channels (ch 1 to 36) | 6 channels (ch 1 to 6) |
| Math channel setting | 12 channels (ch 19 to 30) | 36 channels (ch 37 to 72) | 0 channels (None) |
| DI setting | 10 | 16 | 5 |
| DO setting | 28 | 38 | 10 |
| Display group setting | 4 groups | 8 groups | 1 group |
| Channel color setting | Provided | Provided | Not provided |
| Bar graph / analog meter selection | Provided | Provided | Not provided |
| Message setting | Provided | Provided | Not provided |
| Totalize setting | Provided | Provided | Not provided |
| F value calculation setting | Provided | Provided | Not provided |
| Modbus communication setting | Provided | Provided | Not provided |

(2) Communication setting

The setting on the communication with the paperless recorder can be made.

a) Communication

The communication method with the paperless recorder can be selected from USB, Ethernet, and RS-232C.

Note:

1) USB or Ethernet communications cannot be conducted if the program version of PHL is V07L to V10L.
2) RS-232C communications cannot be conducted if the program version of PHL is V16L or later. Note that to conduct Ethernet communications, optional Ethernet communication board is necessary.


b) IP Address

Setting is necessary to conduct Ethernet communications with the paperless recorder.

IP Address and Station No. of the paperless recorder can be set.

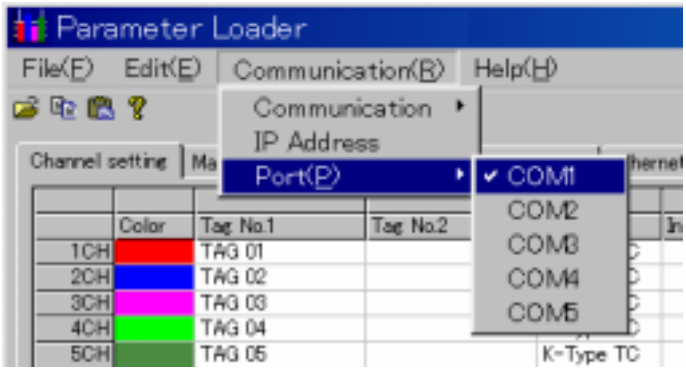
c) Port

Setting is necessary to conduct RS-232C communications with the paperless recorder.

The communication port of the PC used to communicate with the paperless recorder can be set.

This function can change communication port of PC which communicates with paperless recorder. At starting of this loader, COM1 is selected as communication port. Set the port number that you want to use at first.

At the executing screen, click [Com(R)] — [Port(P)] and select using port. Normally, COM1 is selected.




(3) Upload setting value from paperless recorder

It is available to upload all the setting such as channel setting, math channel setting, main setting, display setting and so on from paperless recorder.

(4) Download setting value to paperless recorder

It is available to download all the setting such as channel setting, math channel setting, main setting, display setting and so on to paperless recorder.

Note: 1) Download prohibit during recording or totalizing.

2) Be careful that if you don't register set value, your setting isn't registered, so when you turn off and on the paperless recorder, setting value returns before you change.

(5) Resister setting value

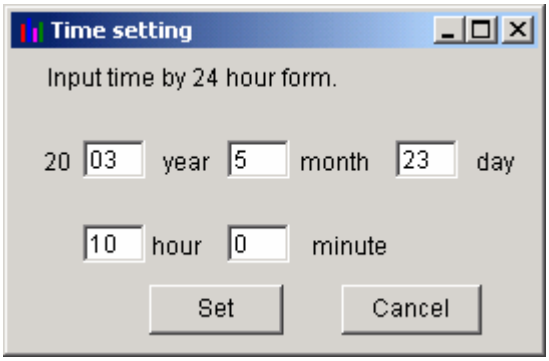
It is available to register setting value to Flash ROM.

(6) Time setting to paperless recorder

It is available to change time setting of paperless recorder. Press [Time setting] button, and screen as shown below appears. Set the time that you want to change. And then press [Change] button.

Note: 1) This setting prohibit during recording or totalizing.

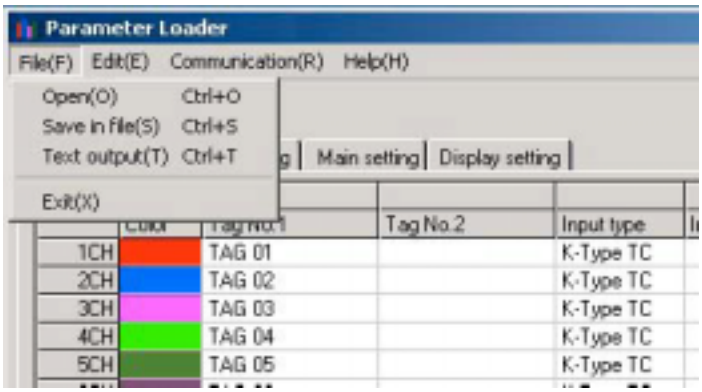
2) This setting is not necessary to register set value.




Screen of time setting

(7) File menu

This menu, you can use functions as shown below.




a) Open

Paperless recorder parameter setting files stored in your PC can be opened.

Parameter setting files stored in the paperless recorder can also be opened.

b) Save

Parameters currently being set can be stored in your PC.

Extension for parameter setting file to be created differs according to model setting.

When PHL is selected: ******.PHL

When PHU is selected: ******.PHU

When PHF is selected: ******.PHF

Substitute ***** with an arbitrary name. Select a file name consisting of alphanumeric characters with 7 uppercase characters or less when a parameter setting file is to be read from a compact flash card to the paperless recorder.

Example:

OK: PARA00.PHL, P123456.PHL NG: Para00.PHL, P1234567.PHL

c) Text output

Output setting value as text data..

Please refer to attached “Appendix. 1: Example of setting parameters to be printed out.”

d) Exit

Exit this menu.

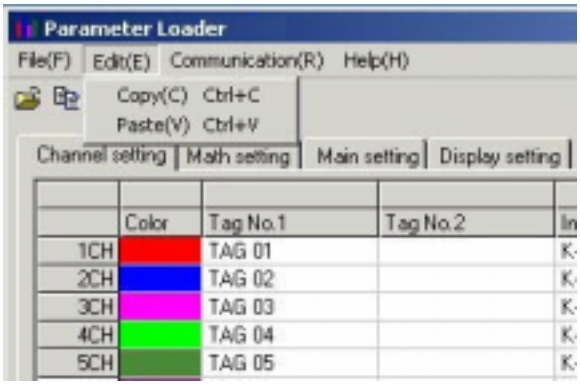
Note: 1) If you change setting value of recorder, press [Set value register] before exit this software, or your setting isn’t registered, so when you turn off and on the recorder, setting value returns before you change.

2) If you want to use setting value on another day, it is recommended to save the setting value file of recorder before exit this software.

(8) Copy the setting value

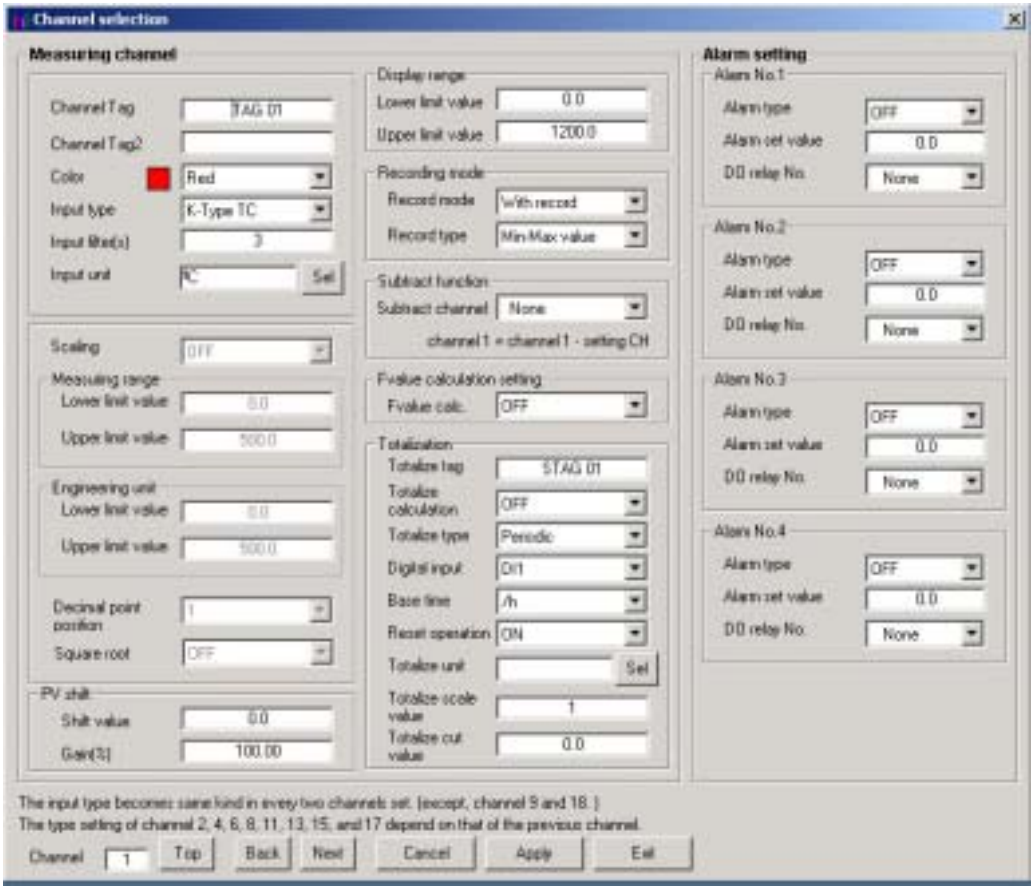
Copy the setting value such as channel setting, main setting, display setting and so on.

Click in line of original data and press [Copy]. Click in line that you want to copy., and then press [Paste].



## 2.3 Setting channels

Set the parameter regarding to input, calculation, alarm, display and record of each channel.
On “Table of setting channel display”, double-click the channel you want to change.
The following is the screen when PHL is selected for model setting.




And then channel setting display appears.

* Items that can be set differ according to model setting.
  (The above is the screen when PHL is selected for model setting.)
* Number of channels differs according to model setting.
  It is available to set till 18ch whichever PHL is 9 or 18 input points.
  It is available to set till 36ch whichever PHU is 9, 18, 27 or 36 input points.
  It is available to set till 6ch whichever PHF is 3 or 6 input points.
* There are some screen to be able to display up to 7 characters as channel tag in spite of setting is available up to 8 characters. So don’t set 8 characters as channel tag.
* When you set out of the range, message as shown below appears.


Message in recording range

* Press [Apply] after changing channel setting, or your setting isn't registered, so when you turn off and on the recorder, setting value returns before you change.
* When setting model is PHF, channel color setting item is not displayed.
* Basically input type setting is the same for every two channels.

(1) When changing the input type of channel, setting may be limited by the input type of channel just before the selected channel.

When PHL is selected:

When PHL is selected, only the same input type as that of the channel just before the selected channel can be set for channels 2, 4, 6, 8, 11, 13, 15 and 17.

However, input type can be selected regardless of other channels for only channels 9 and 18.

When PHU is selected:

When PHU is selected, only the same input type as that of the channel just before the selected channel can be set for channels 2, 4, 6, 8, 11, 13, 15, 17, 20, 22, 24, 26, 29, 31, 33 and 35.

However, input type can be selected regardless of the other channels for only channels 9, 18, 27 and 36.

When PHF is selected:

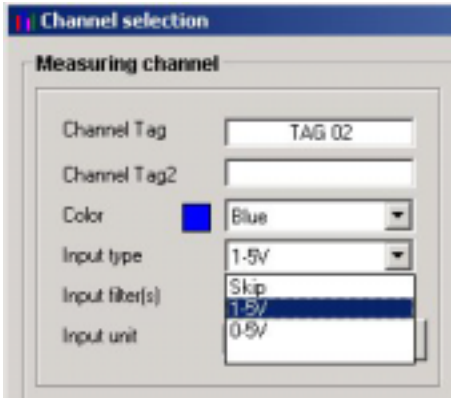
When PHF is selected, only the same input type as that of the channel just before the selected channel can be set for channel 5.

Input type can be selected regardless of other channels for the channels other than channel 5.

Input type is shown as follows:

| Input category | Input type |
|---|---|
| Thermocouple, 50mV | K-Type TC, E-Type TC, J-Type TC, T-Type TC, R-Type TC, S-Type TC, B-Type TC, N-Type TC, W-Type TC, L-Type TC, U-Type TC, PN-Type TC, 50mV |
| Resistance bulb | Pt100Ω, JPt100Ω, Ni100Ω, Pt50Ω, Cu50Ω |
| 500mV | 500mV |
| 5V | 1 to 5Vdc, 0 to 5Vdc |

For example, when 1-5V is selected as input type of channel 1 in PHL, only 1-5V, 0-5V or Skip can be selected as input type for channel 2 as follows.




Example: Setting input type of each channel

| | Input type | Input group | Explanation |
|---|---|---|---|
| Channel 1 | K-Type TC | Thermocouple, 50mV | It is available to set any type of TC or 50mV. |
| Channel 2 | T-Type TC | | |
| Channel 3 | 1 to 5V | 5V | |
| Channel 4 | 0 to 5V | | |
| Channel 5 | Pt100 | Resistance bulb | It is available to set Pt100Ω or JPt100Ω. |
| Channel 6 | JPt100 | | |
| Channel 7 | 500mV | | |
| Channel 8 | 500mV | | |
| Channel 9 | J-Type TC | Thermocouple, 50mV | It is available to set any input type to channel 9. |
| Channel 10 | K-Type TC | Thermocouple, 50mV | It is available to set any type of TC or 50mV. |
| Channel 11 | 50mV | | |
| Channel 12 | Skip | 5V | It is available to set skip under any input type. |
| Channel 13 | 1 to 5V | | |
| Channel 14 | Pt100 | Resistance bulb | |
| Channel 15 | Skip | | |
| Channel 16 | Skip | 500mV | |
| Channel 17 | 500mV | | |
| Channel 18 | 50mV | Thermocouple, 50mV | It is available to set any input type to channel 18. |

(2) When input type of channel is changed, initialization of next channel may be required:

When PHL is selected:

If PHL is selected, initialization of next channel input type may be required when changing the input type for channels 1, 3, 5, 7, 10, 12, 14 and 16.

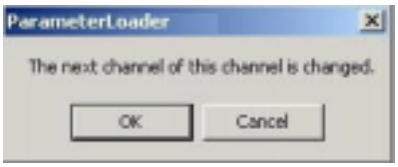
When PHU is selected:

If PHU is selected, initialization of next channel input type may be required when changing the input type for channels 1, 3, 5, 7, 10, 12, 14, 16, 19, 21, 23, 25, 27, 30, 32 and 34.

When PHF is selected:

If PHF is selected, initialization of next channel input type may be required when changing the input type for channel 4.

When initialization of next channel is required, push “Apply” button to display the next message screen.



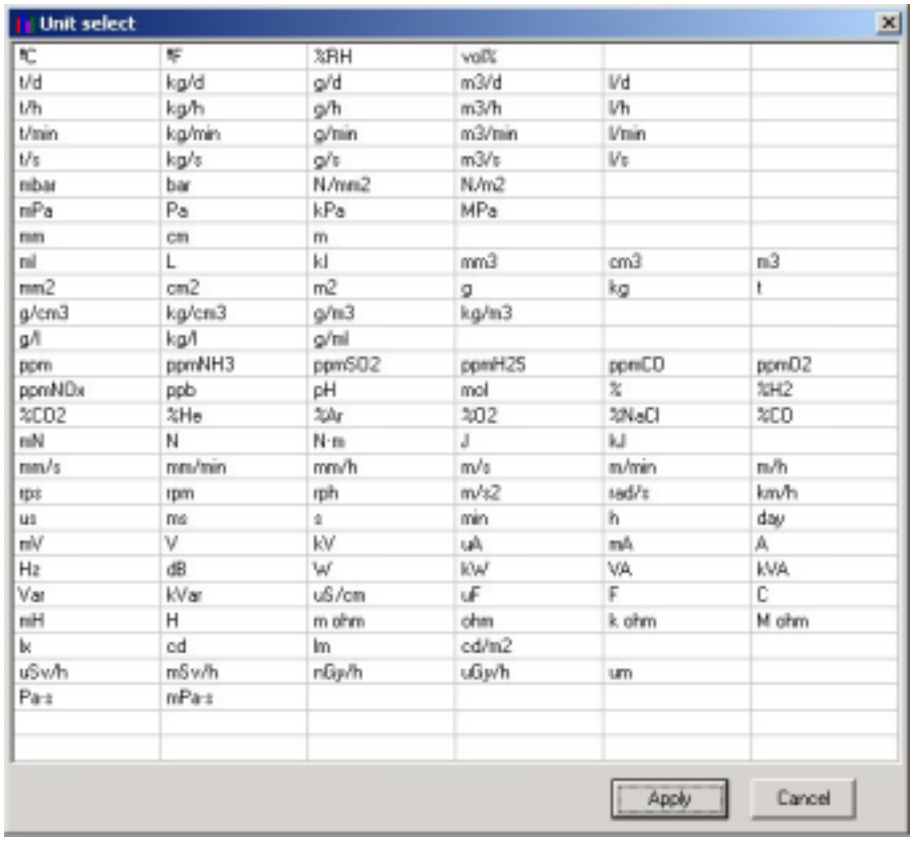

At this screen, if you press [OK] button, the input type of next channel is initialized to the same input type of current displayed channel. In case of 50mV, the next channel becomes K-type TC.

In case of resistance bulb, the next becomes Pt100Ω.

* When you set input unit, set ON the “Scaling” at first. And then press “SELECT” key.
In case of Thermocouple or Resistance bulb input, it is available to select either Celsius or Fahrenheit. And the others unit are not displayed.



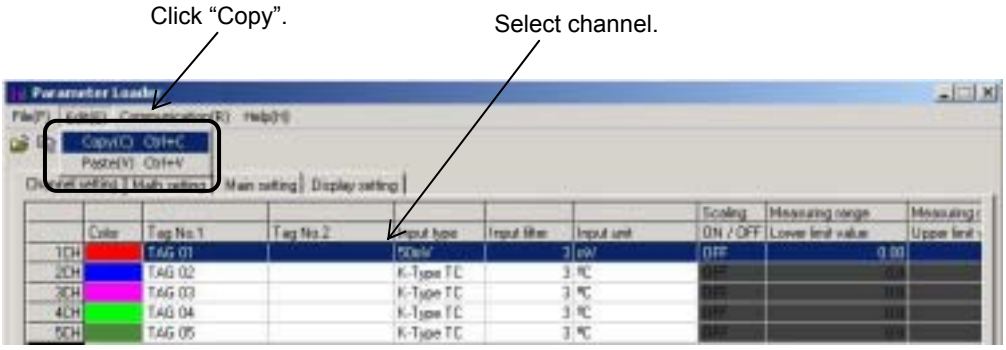
The Unit Select screen appears. On the screen that is displayed, click a unit and press the “Apply” button. Note that the unit cannot be selected without pressing the “Apply” button.



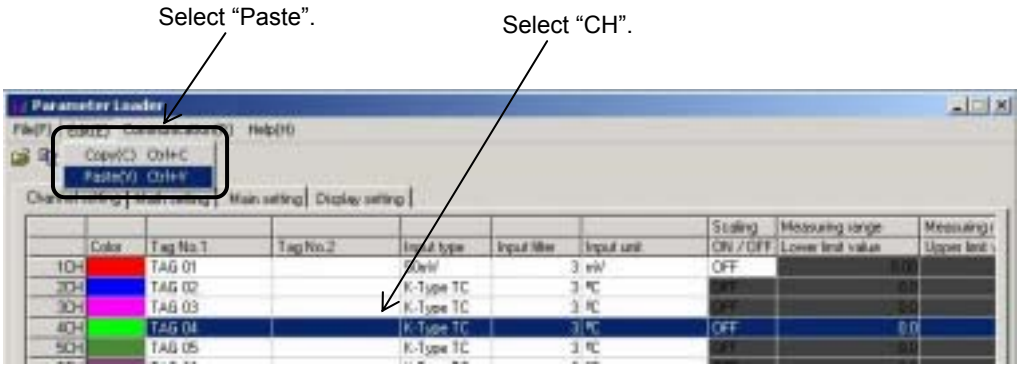

Example: At voltage input and scaling ON

### 2.3.1 Copying the channel set

This screen allows you to copy one or more set values from one channel to another.
Move the cursor to CH on the Table of Setting Channel display, and click it (channel selection).
Click “Edit” ⇒ “Copy”.




Move the cursor to CH where you want to paste channel settings and click it (Channel selection).
Click “Edit” ⇒ “Paste”.




Next, the following message appears, prompting you to select the option.
Click “OK” when you want to copy the channel setting.
If the input type is different between current type and new one, paperless recorder works such as below.

(1) Copying of channel setting in PHL
   1) When copying is made to 1 to 8, and 10 to 17 channels in PHL:
      The same input type (*2) is used for the pair channel (*1).
      (*1: 1ch and 2ch, 3ch and 4ch, 5ch and 6ch, 7ch and 8ch, 10ch and 11ch, 12ch and 13ch, 14ch and 15ch, and 16ch and 17ch are the pair channels.)
   2) When copying is made to 9ch and 18ch:
      Channels other than 9ch and 18ch do not change.

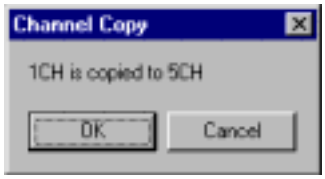
(2) Copying of channel setting in PHU
   1) When copying is made to 1 to 8, 10 to 17, 19 to 26, and 28 to 35 channels:
      The same input type (*2) is used for the pair channel (*1).
      (*1: 1ch and 2ch, 3ch and 4ch, 5ch and 6ch, 7ch and 8ch, 10ch and 11ch, 12ch and 13ch, 14ch and 15ch, 16ch and 17ch, 19ch and 20ch, 21ch and 22ch, 23ch and 24ch, 25ch and 26ch, 28ch amd 29ch, 30 and 31ch, 32ch and 33ch, and 34ch and 35ch are the pair channels.)

2) When copying is made to 9ch, 18ch, 27ch and 36ch:
Channels other than 9ch, 18ch, 27ch and 36ch do not change.

(3) Copying of channel setting in PHF

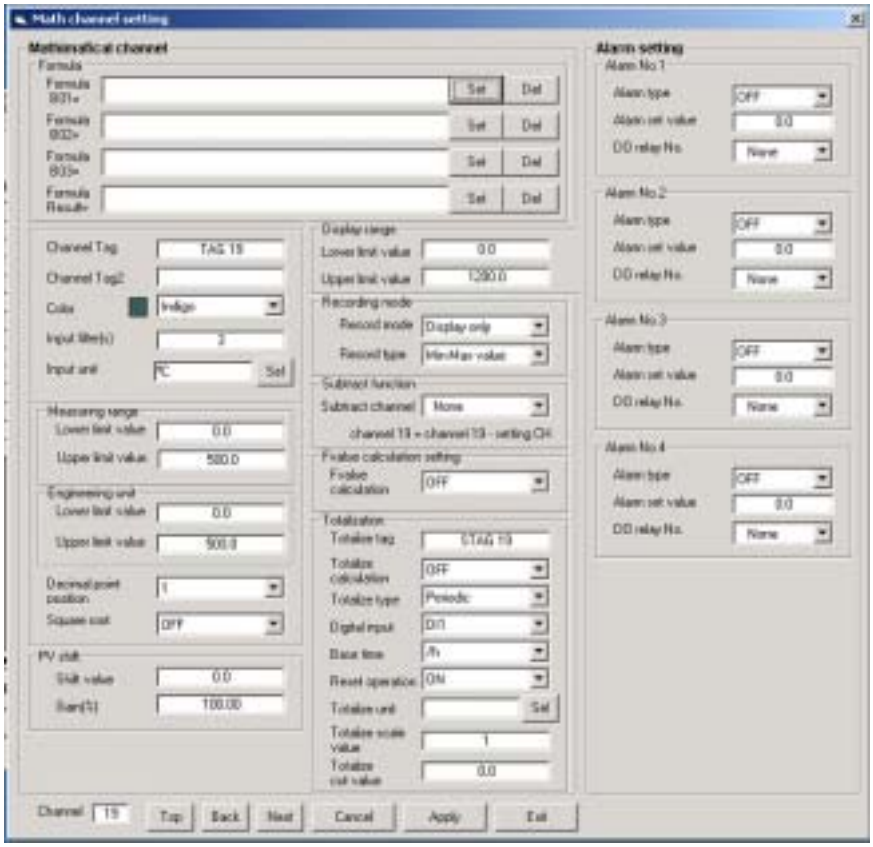
1) When copying is made to 4ch and 5ch:
The same input type is used for both 4ch and 5ch.

2) When copying is made to 1, 2, 3 and 6ch:
Channels other than 1ch, 2ch, 3ch and 6ch do not change.



## 2.4 Setting math channels

Set the parameter regarding to formula, calculation, alarm, display and record of each math channel. On “Table of setting math channel display”, double click the channel you want to change.



And then math channel setting display appears.

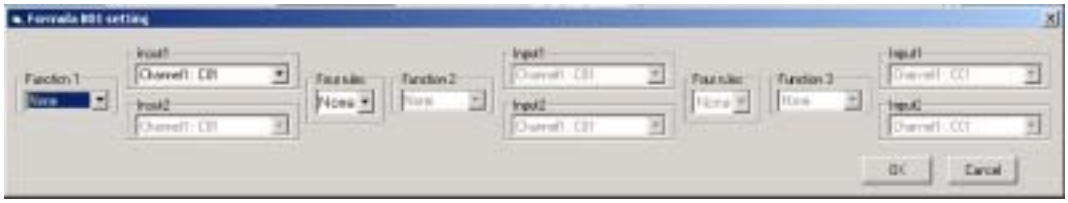
* When setting model is PHF, math channel setting screen is not displayed.
* Number of math channels differs according to model setting.
  When PHL is selected : It is available to set till 12 channels between ch19 and ch30.
  When PHU is selected : It is available to set till 36 channels between ch37 and ch72.
* There are some screen to be able to display up to 7 characters as channel tag in spite of setting is available up to 8 characters. So don’t set 8 characters as channel tag.
* When you set out of the range, message as shown below appears.


Message in recording range

* Press [Apply] after changing channel setting, or your setting isn’t registered, so when you turn off and on the recorder, setting value returns before you change.

### 2.4.1 Formula setting

Please click the [Set] button in the column of formula of Math channel setting to set the formula.



The Formula setting screen appears.

* Please select the operational expression and the value respectively, push the [OK] button, and fix it.

<List of functions that can be used for Formula setting>

| Grammar | Operation | Explanation |
|---|---|---|
| None | No operation | Argument is used with no operation performed. |
| ABS(A) | Absolute value | Finds the absolute value of input A. |
| POW(A,B) | Power | Finds the value of input A to “input B”th power. |
| SQR(A) | Square root | Finds the square root of the value of input A. |
| LOG(A) | Common logarithm | Finds the common logarithm of the value of input A. |
| LN(A) | Natural logarithm | Finds the natural logarithm of the value of input A. |
| EXP(A) | EXP | Finds the exponentiation of the value of input A with base “e.” |
| RH(A,B) | Humidity | Finds the relative humidity with input A assumed to represent dry-bulb temperature and input B wet-bulb temperature. |
| MAX(A,B) | Maximum (between channels) | Compares input A and B and finds the larger value. |
| MIN(A,B) | Minimum (between channels) | Compares input A and B and finds the smaller value. |
| H-P(A) | Maximum (time) | Finds the maximum value of input A within a certain period of time. |
| L-P(A) | Minimum (time) | Finds the minimum value of input A within a certain period of time. |
| AVG(A) | Average | Finds the average value of input A within a certain period of time. |
| SUM(A) | Summation | Finds the sum of input A within a certain period of time. |

<List of arguments (input) value that can be used for Formula setting>

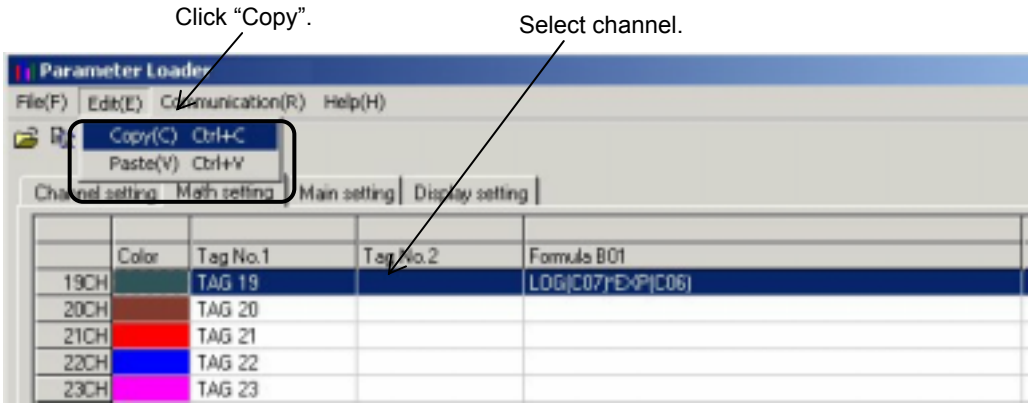
| Argument | Explanation | Example |
|---|---|---|
| Channel | Input channel | C01 |
| Totalize | Totalize channel | T01 |
| DI | Digital input | D01 |
| Communication | Communication input | M01 |
| Constant | Constant | K01 |
| Temporary data | Result of previous operation | B01 |

## 2.4.2 Copying the math channel set

This screen allows you to copy one or more set values from one channel to another.

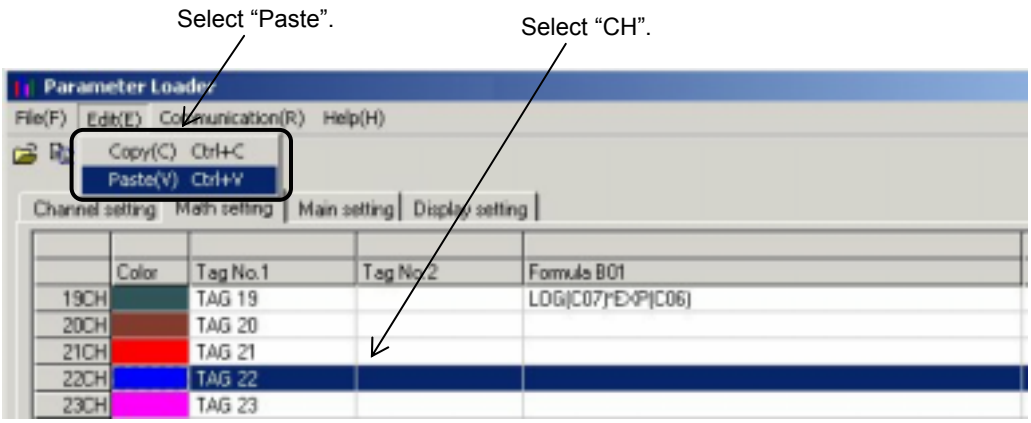
Move the cursor to CH on the Table of Setting Channel display, and click it (channel selection).

Click “Edit” ⇒ “Copy”.




Move the cursor to CH where you want to paste channel settings and click it (Channel selection).

Click “Edit” ⇒ “Paste”.

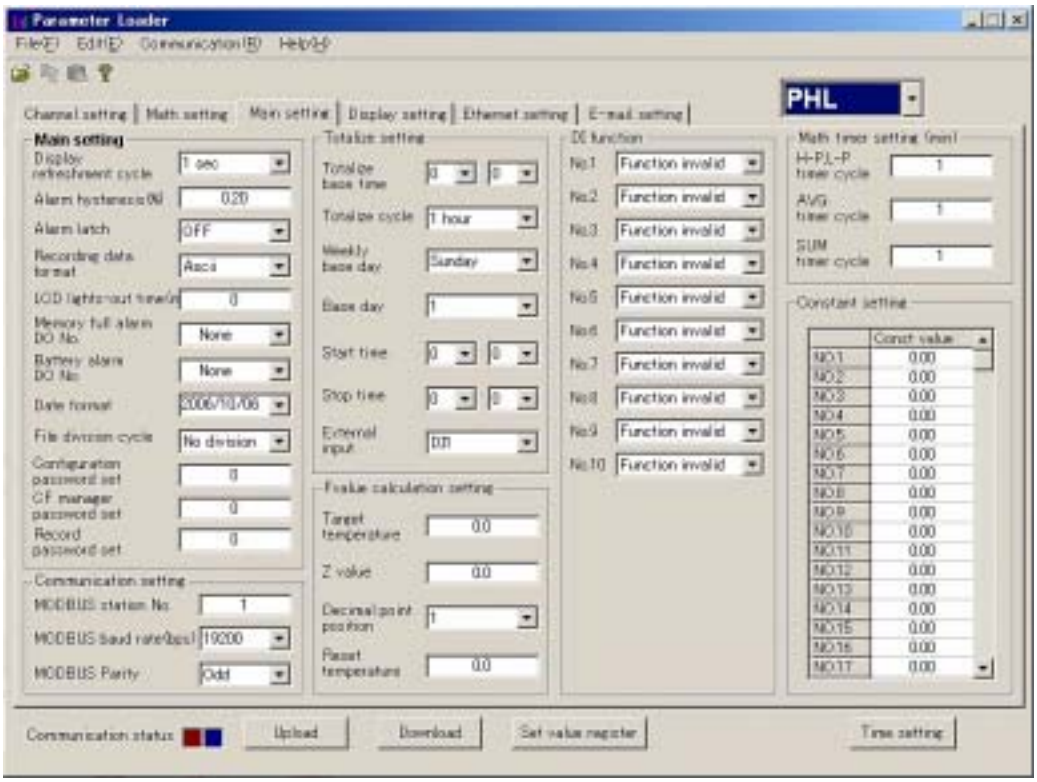



Next, the following message appears, prompting you to select the option.

Click “OK” when you want to copy the channel setting.

## 2.5 Setting the main unit

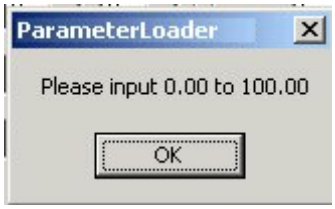
This screen allows you to set the recorder main unit.
Move the cursor to MAIN UNIT on the Table of Setting Channel display, and click it.




The Main unit set screen appears.

* Items that can be set differ according to model setting. (The above is the screen when PHL is selected for model setting.)

* If values are entered over the specified range, the following message appears.

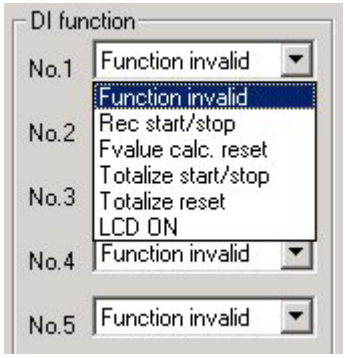



Alarm Hysteresis message

### 2.5.1 DI function setting (option)

The DI function allows you to accept the ON/OFF input from external devices connected to external terminals. Number of DI input points differ according to model setting.

When PHL is selected: DI1 to DI10 (10 points)
When PHU is selected: DI1 to DI16 (16 points)
When PHF is selected: DI1 to DI5 (5 points)




Note:

When PHL is selected:

DI1-DI5 cannot be used because DI (external control unit) option cannot be provided when the input point is 18 points.

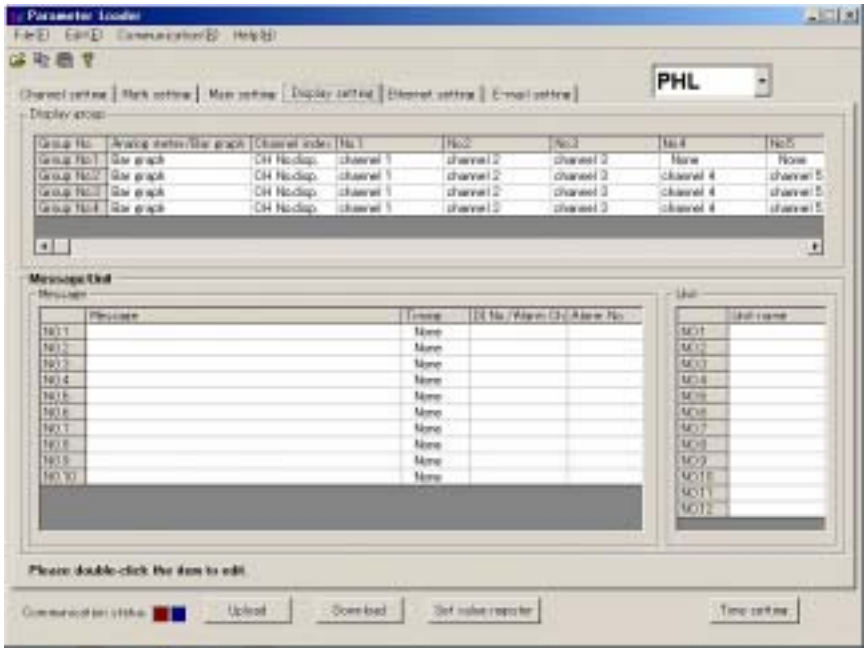
Without the communication function, DI6-DI10 cannot be used.

When PHU or PHF is selected:

DI cannot be used if DI (external control unit) option is not provided.

## 2.6 Display setting

At this screen, you can see or set regarding to screen setting such as structure of screen, trend display screen and so on. Click “Display setting” tab of [Structure of setting channel display].




Setting screen appears and you can see status about screen setting.

* Items that can be set differ according to model setting. (The above is the screen when PHL is selected for model setting.)
* When PHF is selected for model setting, “Analog meter / Bar graph” setting item in “Group setting” screen is not displayed.

### 2.6.1 Display setting

At this screen, you can set regarding to screen setting such as structure of screen, trend display screen and so on. Double click the group No. at “Display group” column on Display setting screen,

* Edit the displayed group on “Selected group No.”.
* Screen name can set to recorder up to 16 characters.
* If scale display is ON, trend screen is divided in accordance with the scale, not the setting of “Display divided”.

### 2.6.2 Setting channels

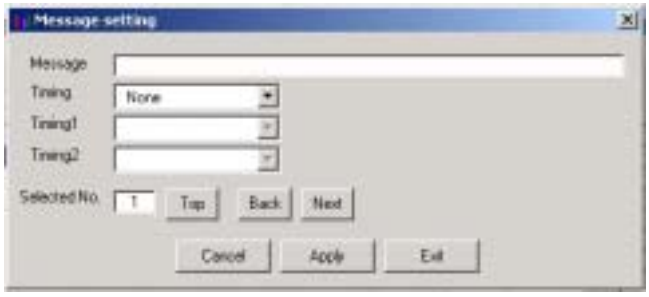
Set the structure of screen.

No.1 at this screen equals to data 1 of "display setting" of recorder, No.2 equals to data 2. Following is the same as above until No.10.

### 2.6.3 Setting message

The screen allows you to set messages to be displayed when an event occurs.

Move the cursor to No. of the Message box on the Main Unit Set screen and double-click it.



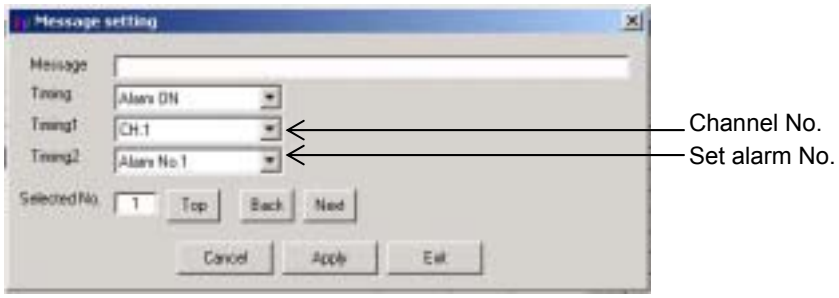

The Message Setting screen appears.

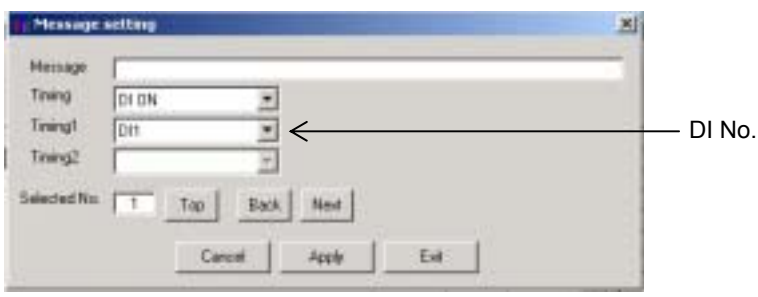
* When PHF is selected for model setting, setting cannot be made as message function is not available.

* Up to 32 characters is available for the message. The characters exceeding 32 cannot be displayed on the recorder main unit.

* After the input of message set data, be sure to press the "Apply" button, or the message cannot be registered.

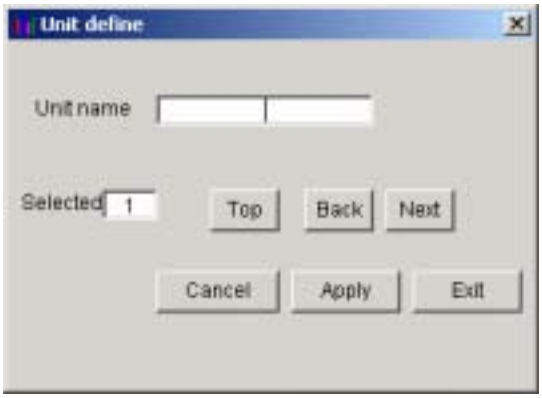
* Message timing is allocated as follows:



### 2.6.4 Unit coding

Units can be made in alphanumerical characters. This unit can be registered in the input unit when scaling is set to ON on the Channel Setting screen.
Move the cursor to No. of the Unit box on the Main Unit Set screen and double-click it.




The Unit Setting screen appears.

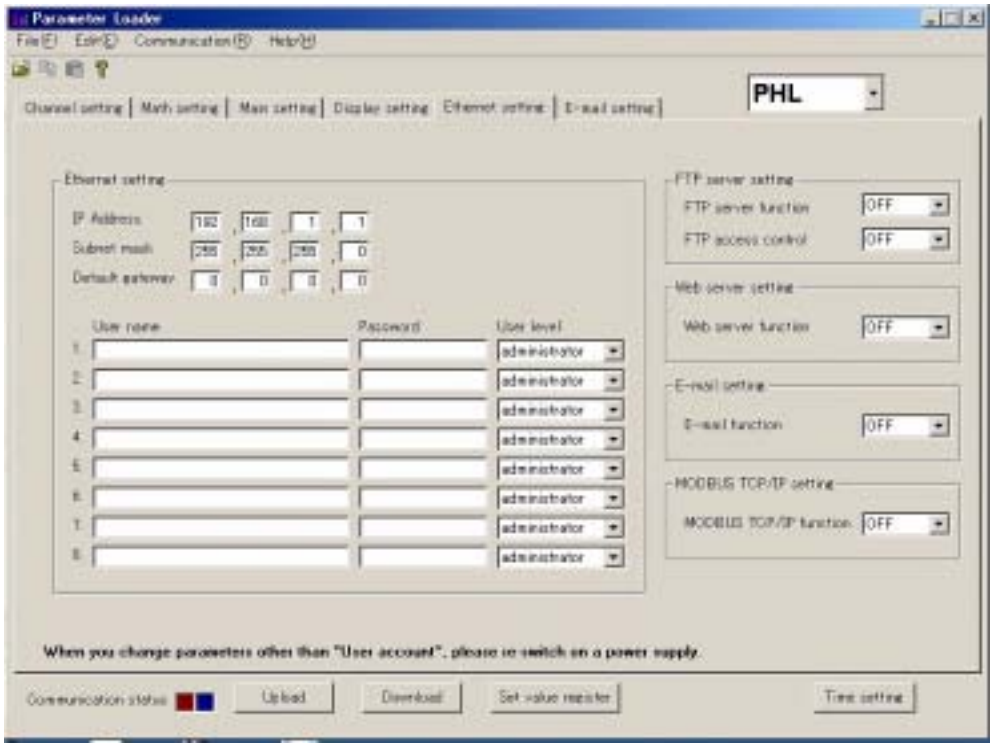
* A message (unit) consisting of up to 7 characters is available for the recording main unit.

* After the input of unit set data, be sure to press the “Apply” button, or the unit cannot be registered.

## 2.7 Ethernet communication setting

Settings related to Ethernet communications such as IP address, user name, operation setting of each Ethernet communication function of the paperless recorder can be checked or made.

* Ethernet communication function cannot be used unless the paperless recorder main unit is provided with Ethernet communication option.




* Up to 16 characters can be entered as user name.

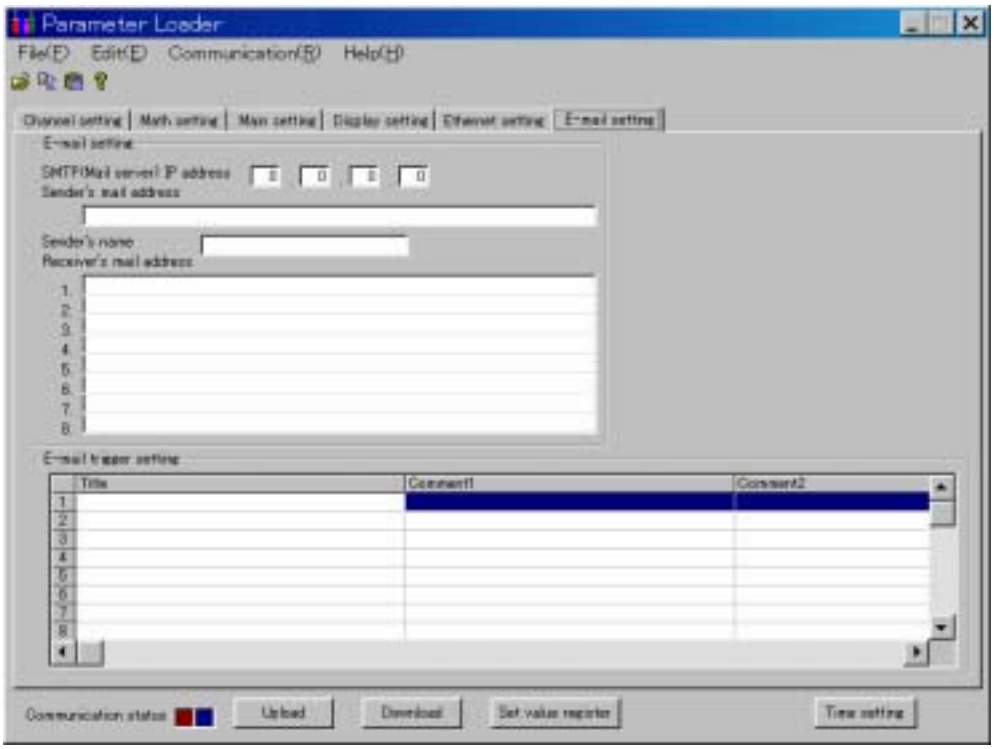
* Up to 8 characters can be entered as password.

* Items that can be set in user level differ according to model setting.
When PHL or PHF is selected: “Administrator”, “Guest”
When PHU is selected: “Administrator”, “Engineer”, “Operator”, “Guest”

## 2.8 E-mail communication setting

Settings related to E-mail communications such as send/receive address and send trigger can be made.

* E-mail communication function cannot be used unless the paperless recorder main unit is provided with Ethernet communication option.

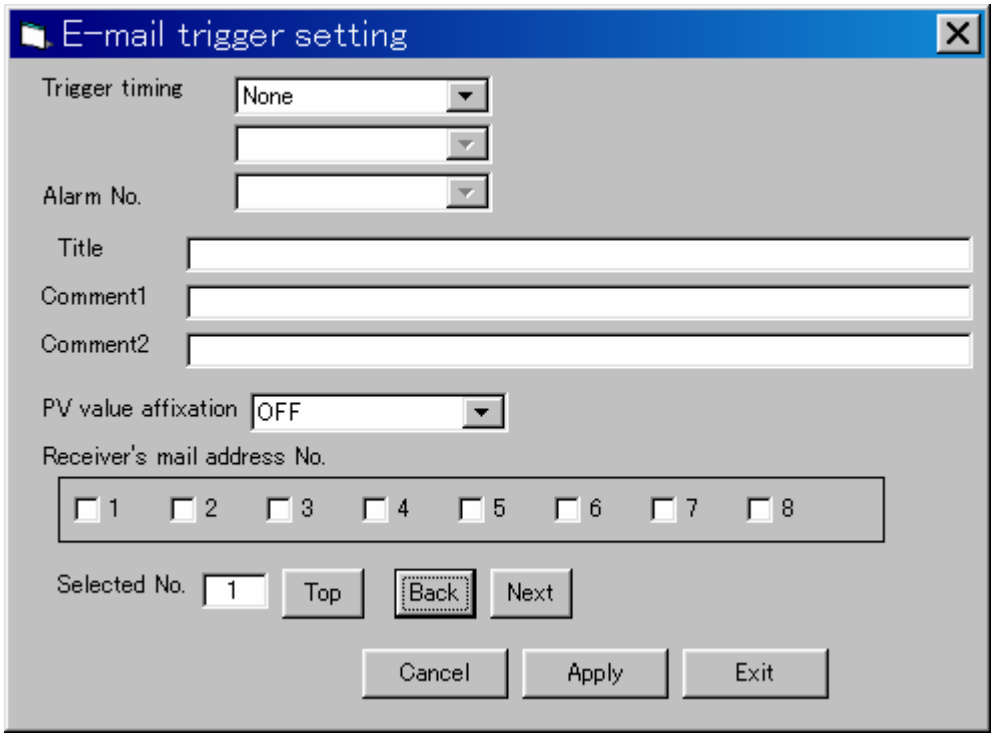



* Up to 64 characters can be entered as send/receive address.
* Up to 32 characters can be entered as sender name.

### 2.8.1 E-mail trigger setting

Other conditions for E-mail transmission can be selected as follows.

Move the cursor to “E-mail trigger” on the E-mail setting screen and double-click it.

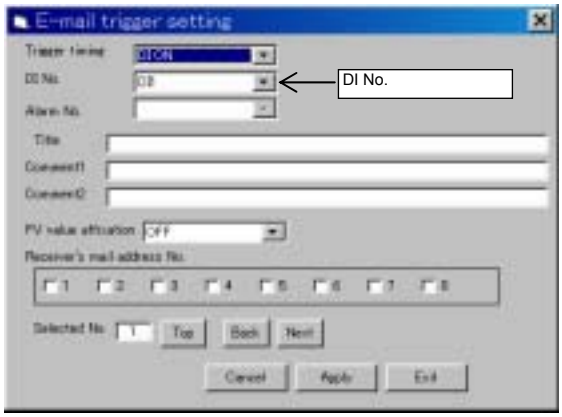



* Up to 32 characters can be entered as the title of E-mail and comments 1 and 2.

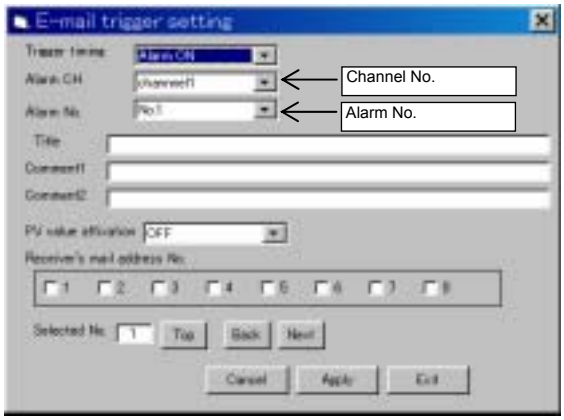
* Be sure to press the [Apply] button to confirm the E-mail trigger setting data that has been entered.

* E-mail trigger timing is allocated as shown below.

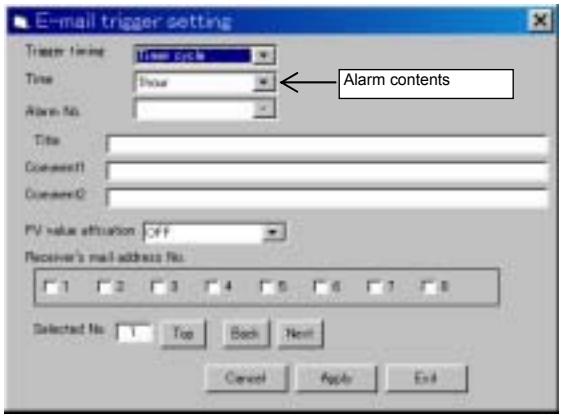
- When sending E-mail by DI operation



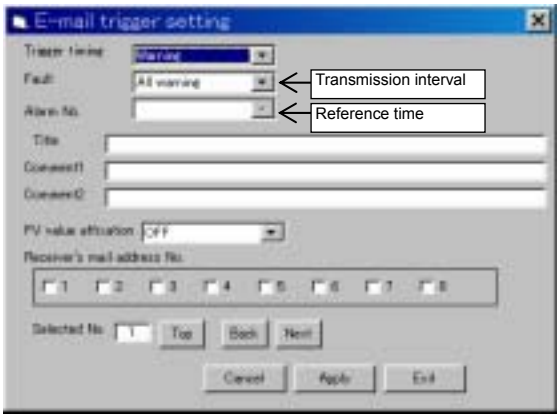

- When sending E-mail by alarm operation



- When sending E-mail by alarm operation of the main unit




- When sending E-mail at fixed intervals



# APPENDIX.1 EXAMPLE OF SETTING PARAMETERS TO BE PRINTED OUT

2005/11/19 11:01:32

PILC : PHL21B11-E10YY
Ser.No.: LYT0006T
Ver. : V05L

*****Channel setting*****

| | Input type | Color | Tag No.1 | Tag No.2 | Input unit | Scaling ON/OFF | Measuring range Start | Measuring range End | Engineering unit Start | Engineering unit End | Square rooter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CH1 | K-Type TC | Sky blue | Tag 01 | Tag 2-01 | °C | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH2 | T-Type TC | Yellowish green | Tag 02 | Tag 2-02 | °F | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH3 | Pt100 | Violet | Tag 03 | Tag 2-03 | °F | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH4 | JPt100 | Green | Tag 04 | Tag 2-04 | °C | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH5 | 500mV | Deep green | Tag 05 | Tag 2-05 | mV | ON | 2.0 | 522.0 | -500.0 | 550.0 | OFF |
| CH6 | 500mV | Purple | Tag 06 | Tag 2-06 | mV | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH7 | 500mV | Red | Tag 07 | Tag 2-07 | mV | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH8 | 500mV | Yellow | Tag 08 | Tag 2-08 | mV | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH9 | 0-5V | Indigo | Tag 09 | Tag 2-09 | V | ON | 0.123 | 5.123 | 1.900 | 5.900 | ON |
| CH10 | B-Type TC | Dark red | Tag 10 | Tag 2-10 | °C | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH11 | 50mV | Red | Tag 11 | Tag 2-11 | mV | OFF | 0.00 | 50.00 | 0.00 | 50.00 | OFF |
| CH12 | 500mV | Blue | Tag 12 | Tag 2-12 | mV | ON | 10.0 | 502.0 | 0.5200 | 0.0000 | ON |
| CH13 | 500mV | Violet | Tag 13 | Tag 2-13 | mV | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH14 | JPt100 | Purple | Tag 14 | Tag 2-14 | °F | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH15 | Pt100 | Deep green | Tag 15 | Tag 2-15 | °F | OFF | 0.0 | 500.0 | 0.0 | 500.0 | OFF |
| CH16 | 0-5V | Purple | Tag 16 | Tag 2-16 | V | OFF | 0.000 | 5.000 | 0.000 | 5.000 | OFF |
| CH17 | 0-5V | Pale blue | Tag 17 | Tag 2-17 | V | OFF | 0.000 | 5.000 | 0.000 | 5.000 | OFF |
| CH18 | 1-5V | Blue | Tag 18 | Tag 2-18 | V | ON | 2.000 | 4.000 | 80 | 5008 | ON |

| | Input filter | PV shift | PV gain | Subtract channel | Fvalue calc. | Recording mode | Recording type | Display range Start | Display range End |
|---|---|---|---|---|---|---|---|---|---|
| CH1 | 3 | 1.0 | 100.01 | None | OFF | With record | Min-Max value | 0.0 | 1200.0 |
| CH2 | 0 | 0.2 | 100.02 | None | OFF | With record | Point value | 32.0 | 572.0 |
| CH3 | 3 | 0.3 | 100.03 | channel2 | OFF | With record | Average value | 32.0 | 932.0 |
| CH4 | 4 | 400.0 | 140.00 | channel9 | ON | With record | Min-Max value | 4.000 | 5.004 |
| CH5 | 5 | -50.0 | 50.00 | channel4 | OFF | With record | Point value | 0.5 | 500.0 |
| CH6 | 6 | 0.6 | 100.00 | channel5 | OFF | With record | Average value | 0.6 | 500.6 |
| CH7 | 7 | 0.0 | 100.00 | None | OFF | With record | Min-Max value | 0.0 | 500.0 |
| CH8 | 8 | 0.0 | 100.00 | None | OFF | With record | Point value | 0.0 | 500.0 |
| CH9 | 0 | 9.000 | 109.00 | channel2 | ON | With record | Average value | 0.900 | 5.090 |
| CH10 | 3 | 1.0 | 101.00 | None | OFF | With record | Min-Max value | 600.0 | 1700.0 |
| CH11 | 3 | 0.00 | 100.00 | None | OFF | With record | Point value | 0.00 | 50.00 |
| CH12 | 90 | 0.1000 | 100.00 | channel18 | ON | With record | Average value | 5.000 | 0.000 |
| CH13 | 3 | 0.0 | 100.00 | None | OFF | With record | Min-Max value | 0.0 | 500.0 |
| CH14 | 10 | 10.0 | 90.00 | channel18 | ON | With record | Point value | 0.000 | 5.000 |
| CH15 | 5 | 0.0 | 100.00 | channel3 | OFF | With record | Average value | 0.0 | 500.0 |
| CH16 | 3 | 0.000 | 100.00 | None | OFF | With record | Min-Max value | 0.000 | 5.000 |
| CH17 | 3 | 0.000 | 100.00 | None | OFF | With record | Point value | 0.000 | 5.000 |
| CH18 | 20 | 0 | 0.00 | None | OFF | With record | Point value | 1 | 10 |

*****Totalize setting*****

| | Totalize Tag | Totalize calc. | Totalize Type | Digital input | Totalize Base time | Reset operation | Totalize Unit | Totalize Cut value | Totalize Scale value |
|---|---|---|---|---|---|---|---|---|---|
| CH1 | STAG 01 | Totalizer | Daily | DI3 | /h | ON | ppmCO | 10.0 | 2 |
| CH2 | STAG 02 | Counter | Weekly | Ch1 Alarm2 | /min | OFF | rps | 0.0 | 3 |
| CH3 | STAG 03 | Counter | Periodic | DI1 | /h | ON | SEC | 0.0 | 4 |
| CH4 | STAG 04 | Totalizer | Periodic | DI1 | /h | ON | m/s2 | 0.010 | 3600 |
| CH5 | STAG 05 | Timer | Periodic | DI3 | /min | OFF | uGy/h | 50.0 | 9999 |
| CH6 | STAG 06 | Totalizer | Monthly | Ch6 Alarm3 | /day | OFF | dB | 60.0 | 160 |
| CH7 | STAG 07 | Counter | Annual | DI1 | /h | ON | %NaCl | 0.0 | 32767 |
| CH8 | STAG 08 | Totalizer | Periodic | DI1 | /h | ON | | 0.0 | 1 |
| CH9 | STAG 09 | Totalizer | Daily | Ch13 Alarm3 | /day | ON | m/min | 0.090 | 19 |
| CH10 | STAG 10 | Counter | External | DI1 | /min | ON | mol | 370.0 | 32 |
| CH11 | STAG 11 | Totalizer | Periodic | DI1 | /h | ON | | 0.00 | 100 |
| CH12 | STAG 12 | Totalizer | Daily(Time set) | DI9 | /s | OFF | km/h | 1.200 | 54 |
| CH13 | STAG 13 | Counter | Periodic | DI1 | /h | ON | | 0.0 | 3 |
| CH14 | STAG 14 | Totalizer | Periodic | DI1 | /h | ON | min | 1.100 | 1 |
| CH15 | STAG 15 | Timer | Annual | Ch30 Alarm4 | /min | OFF | mm/min | -10.0 | 15 |
| CH16 | STAG 16 | Counter | Periodic | DI1 | /h | ON | | 0.000 | 65 |
| CH17 | STAG 17 | Totalizer | Weekly | Ch29 Alarm2 | /s | ON | uGy/h | 0.170 | 17 |
| CH18 | STAG 18 | Totalizer | Periodic | DI1 | /h | ON | | 0 | 18 |

*****Alarm setting*****

| | Alarm No.1 Alarm type | Alarm No.1 Alarm set value | Alarm No.1 DO relay No. | Alarm No.2 Alarm type | Alarm No.2 Alarm set value | Alarm No.2 DO relay No. | Alarm No.3 Alarm type | Alarm No.3 Alarm set value | Alarm No.3 DO relay No. | Alarm No.4 Alarm type | Alarm No.4 Alarm set value | Alarm No.4 DO relay No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CH1 | H | 100.0 | 1 | H | 100.0 | 2 | H | 100.0 | 3 | H | 100.0 | 4 |
| CH2 | H | 800.0 | None | OFF | 0.0 | None | OFF | 0.0 | None | L | 200.0 | None |
| CH3 | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None |
| CH4 | H | 0.400 | 1 | OFF | 0.040 | 2 | L | 0.004 | 5 | OFF | 4.000 | 3 |
| CH5 | H | 50.0 | 28 | L | 50.0 | 27 | H | 50.0 | 26 | L | 50.0 | 25 |
| CH6 | H | 500.0 | 1 | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None |
| CH7 | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None |
| CH8 | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None |
| CH9 | L | 0.900 | 3 | H | 0.900 | 5 | L | 0.900 | 6 | H | 0.900 | 28 |
| CH10 | OFF | 600.0 | 5 | H | 600.0 | None | L | 600.0 | 22 | H | 600.0 | None |
| CH11 | OFF | 0.00 | None | OFF | 0.00 | None | OFF | 0.00 | None | OFF | 0.00 | None |
| CH12 | L | 0.100 | 4 | H | 0.200 | 6 | OFF | 0.300 | None | OFF | 0.400 | 27 |
| CH13 | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None | OFF | 0.0 | None |
| CH14 | H | 0.000 | None | L | 0.000 | None | OFF | 0.300 | None | OFF | 0.500 | None |
| CH15 | L | 40.0 | None | H | 30.0 | 5 | H | 20.0 | 27 | OFF | 10.0 | 4 |
| CH16 | OFF | 0.000 | None | OFF | 0.000 | None | OFF | 0.000 | None | OFF | 0.000 | None |
| CH17 | OFF | 0.000 | None | OFF | 0.000 | None | OFF | 0.000 | None | OFF | 0.000 | None |
| CH18 | OFF | 1000 | None | H | 1000 | None | L | 1000 | None | H | 1000 | None |

*****Math channel setting*****

| | | Formula |
|---|---|---|
| CH19 | B01 | = LN(C01)+SQR(C06) |
| | B02 | = C01+C01+C01 |
| | B03 | = C01/C01/D10 |
| | Result | = SUM(K14,K15) |
| CH20 | B01 | = ABS(B03)-ABS(C06)*ABS(C07) |
| | B02 | = C01 |
| | B03 | = T16*M04-LOG(T08) |
| | Result | = SUM(C01,C06)-MIN(C01,C06)+POW(T11,C07) |
| CH21 | B01 | = C21 |
| | B02 | = C01 |
| | B03 | = C01 |
| | Result | = C01 |
| CH22 | B01 | = C22 |
| | B02 | = C01 |
| | B03 | = C01 |
| | Result | = C01 |
| CH23 | B01 | = C23 |
| | B02 | = |
| | B03 | = |
| | Result | = |
| CH24 | B01 | = C24 |
| | B02 | = |
| | B03 | = |
| | Result | = |

| | | Formula |
|---|---|---|
| CH25 | B01 | = C25 |
| | B02 | = |
| | B03 | = |
| | Result | = |
| CH26 | B01 | = C26 |
| | B02 | = |
| | B03 | = |
| | Result | = |
| CH27 | B01 | = C27 |
| | B02 | = |
| | B03 | = |
| | Result | = |
| CH28 | B01 | = C28 |
| | B02 | = |
| | B03 | = |
| | Result | = |
| CH29 | B01 | = C29 |
| | B02 | = |
| | B03 | = |
| | Result | = |
| CH30 | B01 | = C30 |
| | B02 | = |
| | B03 | = |
| | Result | = |

| | Color | Tag No.1 | Tag No.2 | Input unit | Measuring range Start | Measuring range End | Engineering unit Start | Engineering unit End | Square rooter |
|---|---|---|---|---|---|---|---|---|---|
| CH19 | Indigo | TAG19 | Tag 2-19 | t/d | 11.9 | 501.9 | 11.9 | 501.9 | ON |
| CH20 | Dark red | TAG20 | Tag 2-20 | | 0.0120 | 0.5200 | 0.0112 | 0.5200 | OFF |
| CH21 | Red | TAG21 | Tag 2-21 | m/s | 121 | 5210 | 121 | 5210 | OFF |
| CH22 | Blue | TAG22 | Tag 2-22 | ppmH2S | 22.0 | 22.0 | 22.0 | 22.0 | OFF |
| CH23 | Violet | TAG23 | Tag 2-23 | %Ar | 0.123 | 5.023 | 0.123 | 5.023 | OFF |
| CH24 | Green | TAG24 | Tag 2-24 | ppmCO | 0.240 | 5.240 | 0.240 | 5.240 | ON |
| CH25 | Deep green | TAG25 | Tag 2-25 | m3/h | 1.25 | 50.25 | 1.25 | 50.25 | ON |
| CH26 | Purple | TAG26 | Tag 2-26 | %NaCl | 1.26 | 50.26 | 1.26 | 50.26 | OFF |
| CH27 | Sky blue | TAG27 | Tag 2-27 | us | 0.127 | 5.027 | 0.270 | 5.027 | ON |
| CH28 | Yellow | TAG28 | Tag 2-28 | l/min | 0.0280 | 0.5280 | 0.0280 | 0.5028 | OFF |
| CH29 | Indigo | TAG29 | Tag 2-29 | pH | 0.290 | 5.029 | 0.129 | 5.029 | OFF |
| CH30 | Dark red | TAG30 | Tag 2-30 | rps | 30.0 | 300.0 | 30.0 | 300.0 | OFF |

| | Input filter | PV shift | PV gain | Subtract channel | Fvalue calc. | Recording mode | Recording type | Display range Start | Display range End |
|---|---|---|---|---|---|---|---|---|---|
| CH19 | 5 | 101.9 | 100.19 | None | OFF | With record | Point value | 19.0 | 1019.1 |
| CH20 | 10 | 0.0020 | 100.20 | None | OFF | With record | Average value | 0.0200 | 1.0200 |
| CH21 | 21 | 210 | 210.00 | channel11 | OFF | With record | Min-Max value | 210 | 10210 |
| CH22 | 22 | 22.0 | 22.00 | channel5 | OFF | With record | Point value | 220.0 | 122.0 |
| CH23 | 10 | 0.023 | 100.23 | channel24 | OFF | With record | Point value | 0.230 | 23.000 |
| CH24 | 24 | 0.240 | 124.00 | channel11 | ON | With record | Min-Max value | 2.400 | 10.240 |
| CH25 | 25 | 2.50 | 25.00 | channel27 | OFF | With record | Point value | 25.00 | 101.25 |
| CH26 | 26 | 26.00 | 26.00 | channel11 | OFF | With record | Average value | 26.00 | 101.26 |
| CH27 | 27 | 0.270 | 100.27 | channel5 | ON | With record | Point value | 0.270 | 10.270 |
| CH28 | 28 | 0.2800 | 100.28 | channel5 | ON | With record | Point value | 0.280 | 0.280 |
| CH29 | 29 | 0.290 | 100.29 | None | OFF | With record | Point value | 2.900 | 10.290 |
| CH30 | 30 | 30.0 | 130.00 | channel30 | OFF | With record | Min-Max value | 30.0 | 1030.1 |

*****Totalize setting*****

| | Totalize Tag | Totalize calc. | Totalize Type | Digital input | Totalize Base time | Reset operation | Totalize Unit | Totalize Cut value | Totalize Scale value |
|---|---|---|---|---|---|---|---|---|---|
| CH19 | STAG 19 | Totalizer | Periodic | DI1 | /day | OFF | g/ml | 1190.0 | 19 |
| CH20 | STAG 20 | Counter | Daily | DI6 | /min | ON | %CO2 | 0.0020 | 20 |
| CH21 | STAG 21 | Totalizer | Weekly | DI1 | /h | OFF | ppmNH3 | 210 | 210 |
| CH22 | STAG 22 | Totalizer | Monthly | DI1 | /h | ON | VA | 22.0 | 22 |
| CH23 | STAG 23 | Timer | Annual | DI6 | /min | ON | | 0.230 | 23 |
| CH24 | STAG 24 | Counter | Daily(Time set) | DI6 | /s | ON | | 0.240 | 24 |
| CH25 | STAG 25 | Timer | External | DI6 | /day | ON | | 0.00 | 1 |
| CH26 | STAG 26 | Totalizer | Periodic | DI1 | /s | ON | ohm | 2.60 | 26 |
| CH27 | STAG 27 | Totalizer | Periodic | DI1 | /min | ON | | 0.270 | 27 |
| CH28 | STAG 28 | Totalizer | Periodic | DI1 | /h | ON | Pa | 0.280 | 28 |
| CH29 | STAG 29 | Totalizer | Periodic | DI1 | /day | ON | k ohm | 0.290 | 29 |
| CH30 | STAG 30 | Totalizer | Periodic | DI1 | /s | ON | cd/m2 | 30.0 | 30 |

*****Alarm setting*****

| | Alarm No.1 Alarm type | Alarm No.1 value | Alarm No.1 DO relay No. | Alarm No.2 Alarm type | Alarm No.2 value | Alarm No.2 DO relay No. | Alarm No.3 Alarm type | Alarm No.3 value | Alarm No.3 DO relay No. | Alarm No.4 Alarm type | Alarm No.4 value | Alarm No.4 DO relay No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CH19 | H | 159.0 | 28 | L | 319.0 | 4 | H | 219.0 | 20 | H | 189.0 | 4 |
| CH20 | H | 0.4200 | 28 | H | 0.3200 | 8 | L | 0.2200 | 23 | OFF | 0.1200 | 7 |
| CH21 | H | 4210 | None | OFF | 321 | 9 | OFF | 221 | 26 | OFF | 21 | 18 |
| CH22 | OFF | 22.0 | 22 | OFF | 22.0 | 22 | OFF | 22.0 | 22 | OFF | 22.0 | 22 |
| CH23 | H | 4.230 | 27 | H | 3.123 | 8 | L | 2.230 | 22 | OFF | 1.230 | 6 |
| CH24 | H | 4.240 | None | OFF | 3.240 | 1 | H | 2.240 | 27 | L | 1.240 | 7 |
| CH25 | L | 25.00 | 25 | L | 325.00 | 10 | L | 225.00 | 25 | L | 125.00 | 3 |
| CH26 | H | 41.26 | 26 | OFF | 326.00 | 9 | OFF | 226.00 | 19 | L | 126.00 | 1 |
| CH27 | H | 0.270 | 12 | H | 3.270 | 10 | H | 2.270 | 26 | H | 1.270 | 4 |
| CH28 | H | 4.280 | 28 | L | 3.280 | 4 | H | 2.280 | 20 | L | 1.280 | 4 |
| CH29 | L | 4.290 | 22 | OFF | 3.290 | 8 | L | 2.290 | 26 | L | 1.290 | 3 |
| CH30 | H | 430.0 | 27 | OFF | 330.0 | 28 | OFF | 230.0 | 26 | OFF | 130.0 | 25 |

*****Basic setting*****

Display refreshment cycle 10 sec  Alarm hysteresis  1.32 (%)  Alarm latch OFF
LCD lights-out time  0 min  Memory full alarm DO relay No.  5  Battery alarm DO relay No.  4
Data Format Nov-19-05
MODBUS Station NO.  1  MODBUS baud rate  19200 bps  MODBUS parity Odd
Recording data format Binary  File division cycle No division
Configuration password  1  CF manager password  2  REC key password  1

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*****Fvalue calculation setting*****
Target temperature   100.0  ˚C  Z value   200.0  ˚C  Decimal point position      3
Fvalue reset temperature    10.0  ˚C

*****Totalize setting*****
Totalize base time 04:31      Totalize recording cycle 12 hour
Weekly base day Saturday      Monthly base day     31
Totalize start time 23:06     stop time 22:59
Extrnal input Ch19 Alarm1

*****Math timer setting*****
H-P/L-P operation       2  min   AVG operation       4  min   SUM operation       2  min

*****Display setting*****
              Content of screen composition
                No.1      No.2      No.3      No.4      No.5      No.6      No.7      No.8      No.9      No.10
Display group1 channel1  channel2  channel3  channel4  channel5  channel6  channel7  channel8  channel9  channel10
Display group2 channel11 channel12 channel13 channel14 None      None      None      None      None      None
Display group3 channel15 channel16 channel17 channel18 None      None      None      None      None      None
Display group4 channel19 channel20 channel21 channel22 channel23 channel24 channel25 channel26 channel27 channel28

                              Trend       Display      Scale     Bar graph/    Color bar
               Display name   direction   division No. display   Analog meter  display selection
Display group1 1.Diplay Group1   Vertical          20     ON        Bar graph     Tag No.
Display group2 2.Diplay Group2   Horizontal        13     ON        Analog meter  Channel No.
Display group3 3. Diplay Group3  Vertical           7     OFF       Bar graph     Unit
Display group4 4.Diplay Group4   Horizontal        10     OFF       Analog meter  Tag No.

*****Message setting*****
      Message                            Timing1        DI NO./
                                                        Alarm Channel  Alarm NO.
No.1  Massage DI1 ON                     DI ON          DI1
No.2  Massage DI5 OFF                    DI OFF         DI5
No.3  Massage Channel19 Alarm No.1 ON    Alarm ON       CH.19          Alarm No.1
No.4  Massage Channel19 Alarm No.1 OF    Alarm OFF      CH.19          Alarm No.1
No.5  Massage DI4 ON                     DI ON          DI4
No.6  Massage Channel19 Alarm No.3 OFF   Alarm OFF      CH.19          Alarm No.3
No.7  Massage Channel19 Alarm No.2 ON    Alarm ON       CH.19          Alarm No.2
No.8  Massage DI4 OFF                    DI OFF         DI4
No.9  Massage Channel05 Alarm No.4 OFF   Alarm OFF      CH.5           Alarm No.4
No.10 Massage Channel04 Alarm No.2 ON    Alarm ON       CH.4           Alarm No.2

*****Original Unit definition*****
        No.1       No.2       No.3       No.4       No.5       No.6
Unit                         mPa        SEC
        No.7       No.8       No.9       No.10      No.11      No.12
Unit

*****DI function setting*****
DI-1  Rec start/stop               DI-6  Rec start/stop
DI-2  Fvalue calc. reset           DI-7  Rec start/stop
DI-3  Totalize start/stop          DI-8  Fvalue calc. reset
DI-4  Function invalid             DI-9  Totalize start/stop
DI-5  Rec start/stop               DI-10 Totalize reset

*****Constant setting*****
Constant1               1   Constant11          0.002
Constant2               2   Constant12         0.0003
Constant3             3.0   Constant13              0
Constant4            4.00   Constant14            100
Constant5           5.000   Constant15            120
Constant6              60   Constant16              0
Constant7             700   Constant17              0
Constant8            8000   Constant18              0
Constant9             0.9   Constant19           99.3
Constant10           0.01   Constant20             10

*****Ethernet setting*****
Ethernet setting
IP Address          192  . 168  .   0  .   2
Subnet mask         255  . 255  . 255  .   0
Default gateway       0  .   0  .   0  .   0

Password setting
       User name          Password          User level
No.1 SystemTaro             a19b23         administrator
No.2 KirokuKeiko            65790          administrator
No.3                                       administrator
No.4                                       administrator
No.5                                       administrator
No.6                                       administrator
No.7                                       administrator
No.8                                       administrator
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FTP server setting
FTP server function     ON              Access control  ON

Web Server setting
Web server function     ON

E-mail setting
E-mail function         ON

MODBUS TCP/IP setting
MODBUS TCP/IP function  ON

*****E-mail setting*****
SMTP(Mail server) IP address   192  . 198  .   0  .   1
Sender's mail address         boiler035@test.co.jp
Sender's name                 Boiler035

Receiver's mail address
No.1  System-Taro@test.co.jp
No.2  Kiroku-Keiko@test.co.jp
No.3
No.4
No.5
No.6
No.7
No.8

E-mail trigger setting
       Title                              Comment1                           Comment2
No.1  Product1 manufacturing beginning   Product1 manufacturing beginning   Boiler035
No.2  Boiler035 report at regular time   Report at regular time            Boiler035
No.3  The temperature is abnormal!       The temperature is abnormal!      Boiler035
No.4
No.5
No.6
No.7
No.8
No.9
No.10

     Trigger timming  Timming1    Timming2     PV Value   No1 No2 No3 No4 No5 No6 No7 No8
No.1  DI ON          DI2         -               ON        ON  ON  OFF OFF OFF OFF OFF OFF
No.2  Timer cycle    12hour      -               ON        ON  OFF OFF OFF OFF OFF OFF OFF
No.3  Alarm ON       channnel1   No.4            ON        ON  ON  OFF OFF OFF OFF OFF OFF
No.4  None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
No.5  None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
No.6  None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
No.7  None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
No.8  None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
No.9  None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
No.10 None           -           -               OFF       OFF OFF OFF OFF OFF OFF OFF OFF
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