Instruction Manual

PARAMETER LOADER FOR PAPERLESS RECORDER

TYPE: GR200

WARNING

- If an error or improper operation occurs in our product, or customer-made programs should be found defective, protection and safety circuits, etc should be provided for safety of the system to be used. In addition, safety measures should be taken against personal injury or fatal accident to the system.
- A part or all of the information contained herein is prohibited from duplication without SHINKO TECHNOS 's written consent.
- This manual is subject to change without previous notice.
- Although we always keep track of the information contained herein to assure accuracy, SHINKO TECHNOS will not be responsible for any damage to the system due to mistakes, skip or misuse in writing
- Be sure to read the Readme.text file included in CD-ROM.
- Depending on the environment to be used and the usage, it may not operate normally.
- Please note that operation except the Personal Computer which made by maker, such as self-assembled PC and so on, cannot be guaranteed.

(Note) Windows 2000/XP/Me/98/95/NT are registered trademarks of Microsoft Corporation.

Request

- It is prohibited to transfer part or all of this manual without SHINKO TECHNOS's permission in written format.
- Description in this manual will be changed without prior notice for further improvement.

CONTENTS

1. OUT	LINE	1
1.1 For	reword	1
1.2 Par	ameter loader for paperless recorder	1
1.3 Co	ntents of package	1
1.4 Re	commended operating environment	1
1.5 Ins	talling the parameter loader for paperless recorder	2
1.6 Ins	talling USB communication driver	2
	installing the parameter loader software for paperless recorder	
1.8 Ca	utions	7
2. BAS	IC OPERATION	8
2.1 Sta	rt	8
2.2 Tal	ble of setting channel display	9
2.3 Set	ting channels	14
2.3.1	Copying the channel set	18
2.4 Set	ting of Computing Channel	
2.4.1	Setting of Arithmetic Expression	21
2.4.2	Copying of Computing Channel	
2.5 Set	ting the main unit	23
2.5.1	DI function (external control unit) setting (option)	
2.6 Dis	splay setting	25
2.6.1	Display setting	25
2.6.2	Setting channels	26
2.6.3	Setting message	27
2.6.4	Unit coding	28
2.7 Eth	ernet communication setting	29
2.8 E-1	nail communication setting	30
2.8.1	E-mail trigger setting	
Appendix.	Example of setting parameters to be printed out	33

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: Optionally available dedicated cable is required to use the loader for program versions V01A to V22A of the paperless recorder GR200 main unit.

1.3 Contents of package

The following items are packaged with the product.

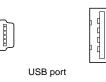
- CD-ROM for installation: 1
- Instruction manual which is installed to above CD-ROM

1.4 Recommended operating environment

- Microsoft Windows 2000 or XP. (Operation by Windows 95/98/Me/NT is not secured.)
- Hard disk with a free capacity of 30MB or more
- RAM with 64MB or more
- USB port
- USB cable [USB(A) male–USB(miniB) male, or Type PHZP1801]
- LAN port (when provided with Ethernet option)
- LAN cable (when provided with Ethernet option)

Note: Hardware requirements of the loader are as follows when it is used for program versions V01A to V22A of the paperless recorder GR200.

- RS-232C serial port (D-sub 9 pin)
- Communication cable dedicated to parameter loader (Option: PHZP0201)



Recorder s

de	PC side



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) Start "Setup. exe" 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 the computer. Click the [Next] button.

Found New Hardware	Found New Hardware Wizard	Man and a second se
USB Davice Installing		Welcome to the Found New Hardware Wizard This wizard helps you install a device driver for a hardware device.
		< Back

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.

In	stall Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
	This wizard will complete the installation for this device:
	USB Device
	A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
	What do you want the wizard to do?
	<u>Search for a suitable driver for my device (recommended)</u>
	Display a list of the known drivers for this device so that I can choose a specific driver
	< Back

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

Select a hardware type, and th	en click Next.	
Hardware types:		
🔊 Multi-port serial adapters		
Network adapters		
NT Apm/Legacy Support		
Operation Panel		
Other devices PCMCIA adapters		
Ports (COM & LPT)		
Printers		
SCSI and RAID controllers		

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

Select a Device Driver Which driver do you want to in	nstall for this device?
	d model of your hardware device and then click Next. If you re driver you want to install, click Have Disk.
V	
anufacturers:	Mo <u>d</u> els:
Standard IDE ATA/ATAPI cor Standard Infrared Port) Standard Modem Types) Standard port types) Standard system devices)	Standard Dual Channel PCI IDE Controller Standard IDE/ESDI Hard Disk Controller
	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 ("C: ¥ Program Files ¥ ParameterLoader" usually) of the parameter loader. Select the "OP-U.inf" file and then click "Open."

ocate File						? ×
Look jn:	INF		•	← 🗈		
History Desktop My Documents	BOP-U.inf					
	File <u>n</u> ame:	OP-U.inf			J (<u>O</u> pen
My Network P	Files of type:	Setup Information (*.inf)				Cancel

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.

Found N	New Hardware Wizard			
	lect a Device Driver Which driver do you want to install for this dev	ice?		
\diamond	Select the manufacturer and model of your have a disk that contains the driver you war			kt. If you
Models Opera	te: ration Panel USB Driver			
			Hav	re Disk
	_	< Back	<u>N</u> ext >	Cancel

10) The driver installation starts.

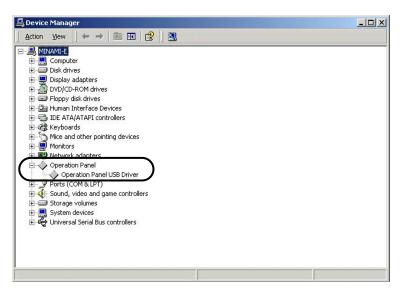


11) The dialog box below is displayed on completion of installation. Click the [Finish] button.



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

For un-installation of the parameter loader for the paperless recorder, proceed from Start of Windows \rightarrow Setting \rightarrow Control Panel \rightarrow Add or delete application. And select Recorder Parameter Loader and follow Windows' instructions and cautions to delete it.

When you install a different version, be sure to un-install the software, which is currently installed, in advance in the above procedures. If not un-installed, it might result in malfunctions such as not starting.

1.8 Cautions

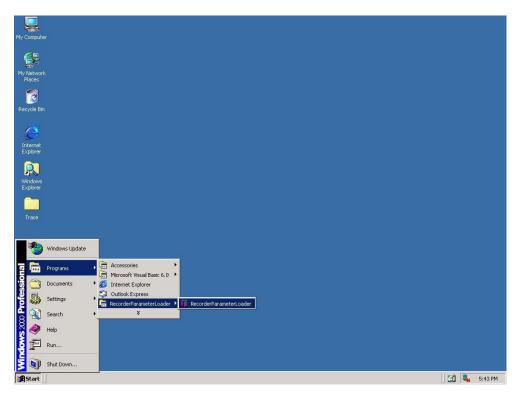
When operating the Loader, be careful of the following items:

- 1) The Loader is used for the paperless recorder only.
- 2) Initial values on each Loader screen may be different from those of the paperless recorder main unit.
- 3) For the communication setting for the paperless recorder ("Main Unit Set" → "Communication Setting"), the Front communication function should be set to ON. (After the Front communication function has been switched from OFF to ON, turn OFF the power once, and then turn it ON.)
- 4) Before starting the paperless recorder, be sure to assure that the Loader setting is reflected to the paperless recorder.
- 5) 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).
- 6) 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.
- 7) When you use this loader to write into the paperless recorder GR200 which the program version is V01A to V05A, and you change the input type to 0 to 5Vdc, paperless recorder receives the input type as 1 to 5Vdc instead of 0 to 5Vdc. And then, this loader's setting is also changed to 1 to 5Vdc. (This is because the main unit does not support 1 to 5Vdc input function.)
- 8) At this loader, some parameters which do not exist on paperless recorder may be displayed. But the parameter which doesn't exist in paperless recorder isn't written.
- 9) During the paperless recorder is recording or totalizing, it is impossible to write into the equipment from this parameter loader.

2. BASIC OPERATION

2.1 Start

Click "Programs" \Rightarrow "Recorder Parameter Loader" \Rightarrow "Recorder Parameter Loader" from the Start menu.



It is displayed such as following screen.

Note) The screen for maximum channels is displayed, regardless of the number of channels of the paperless recorder.

Col	or Tag No.1	Tag No.2	Input type	Input Channel	Input filter	Input unit	Scaling	Measuring rang Lower limit valu
1CH	TAG 01	Tay NU.2	K-Type TC	channel 1		PC	OFF OFF	Lower Inflit Valu
2CH	TAG 01		K-Type TC	channel 1		•C	OFF	
3CH	TAG 02		K-Type TC	channel 1		PC	OFF	
4CH	TAG 04		K-Type TC	channel 1		*C	OFF	
5CH	TAG 05		K-Type TC	channel 1		PC	OFF	
6CH	TAG 06		K-Type TC	channel 1		*C	OFF	
7CH	TAG 07		K-Type TC	channel 1		°C	OFF	
8CH	TAG 08		K-Type TC	channel 1		°C	OFF	
9CH	TAG 09		K-Type TC	channel 1	3	₽C	OFF	
10CH	TAG 10		K-Type TC	channel 1		°C	OFF	
11CH	TAG 11		K-Type TC	channel 1	3	°C	OFF	
12CH	TAG 12		K-Type TC	channel 1	3	°C	OFF	
13CH	TAG 13		K-Type TC	channel 1	3	°C	OFF	
14CH	TAG 14		K-Type TC	channel 1	3	вС	OFF	
15CH	TAG 15		K-Type TC	channel 1		°C	OFF	
16CH	TAG 16		K-Type TC	channel 1		₽C	OFF	
17CH	TAG 17		K-Type TC	channel 1		₽C	OFF	
18CH	TAG 18		K-Type TC	channel 1		°C	OFF	
19CH	TAG 19		K-Type TC	channel 1		°C	OFF	
20CH	TAG 20		K-Type TC	channel 1		°C	OFF	
21CH	TAG 21		K-Type TC	channel 1		°C	OFF	
22CH	TAG 22		K-Type TC	channel 1		°C	OFF	
23CH	TAG 23		K-Type TC	channel 1	3	₽C	OFF	
								<u> </u>
h ase	uble-click a cha	nnel to edit						

Table of setting channel display

2.2 Table of setting channel display

1CH TAG 01 K-Type TC channel 1 3 %C DFF 2CH TAG 02 K-Type TC channel 1 3 %C DFF 3CH TAG 03 K-Type TC channel 1 3 %C DFF 4CH TAG 04 K-Type TC channel 1 3 %C DFF 4CH TAG 05 K-Type TC channel 1 3 %C DFF 5CH TAG 06 K-Type TC channel 1 3 %C DFF 5CH TAG 06 K-Type TC channel 1 3 %C DFF 7CH TAG 06 K-Type TC channel 1 3 %C DFF 7CH TAG 08 K-Type TC channel 1 3 %C DFF 8CH TAG 09 K-Type TC channel 1 3 %C DFF 10CH TAG 14 K-Type TC channel 1 3 %C DFF 11CH TAG 12 K-Type TC channel 1 3 %C DFF 12CH TAG 14 K-T	1CH 2CH			Input type	Input Channel	Input filter	Input unit		easuring range
2DH TAG 02 K-Type TC channel 1 3 %C DFF 3CH TAG 03 K-Type TC channel 1 3 %C DFF 3CH TAG 04 K-Type TC channel 1 3 %C DFF 5CH TAG 05 K-Type TC channel 1 3 %C DFF 5CH TAG 06 K-Type TC channel 1 3 %C DFF 5CH TAG 07 K-Type TC channel 1 3 %C DFF 8CH TAG 08 K-Type TC channel 1 3 %C DFF 8CH TAG 08 K-Type TC channel 1 3 %C DFF 9CH TAG 10 K-Type TC channel 1 3 %C DFF 10CH TAG 10 K-Type TC channel 1 3 %C DFF 11CH TAG 13 K-Type TC channel 1 3 %C DFF 12CH TAG 13 K-Type TC channel 1 3 %C DFF 13CH TAG 14 K-	2CH		1 dg Ho.E						wer limit value
3CH TAG 03 K-Type TC channel 1 3 1C DFF 4CH TAG 04 K-Type TC channel 1 3 1C DFF 5CH TAG 05 K-Type TC channel 1 3 1C DFF 5CH TAG 06 K-Type TC channel 1 3 1C DFF 5CH TAG 07 K-Type TC channel 1 3 1C DFF 3CH TAG 08 K-Type TC channel 1 3 1C DFF 3CH TAG 09 K-Type TC channel 1 3 1C DFF 3CH TAG 08 K-Type TC channel 1 3 1C DFF 3CH TAG 10 K-Type TC channel 1 3 1C DFF 10CH TAG 11 K-Type TC channel 1 3 1C DFF 12CH TAG 12 K-Type TC channel 1 3 1C DFF 12CH TAG 13 K-Type TC channel 1 3 1C DFF 13CH TAG 14 K									
4CH TAG 04 K-Type TC channel 1 3 °C DFF 5CH TAG 05 K-Type TC channel 1 3 °C DFF 5CH TAG 06 K-Type TC channel 1 3 °C DFF 7CH TAG 07 K-Type TC channel 1 3 °C DFF 7CH TAG 08 K-Type TC channel 1 3 °C DFF 8CH TAG 09 K-Type TC channel 1 3 °C DFF 9CH TAG 09 K-Type TC channel 1 3 °C DFF 10CH TAG 10 K-Type TC channel 1 3 °C DFF 11CH TAG 12 K-Type TC channel 1 3 °C DFF 12CH TAG 12 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 14 K-Type TC channel 1 3 °C DFF 13CH TAG 14 K-Type TC channel 1 3 °C DFF 13CH TAG 17 K-Type TC chann	JLH								
SCH TAG 05 K-Type TC channel 1 3 *C DFF SCH TAG 06 K-Type TC channel 1 3 *C DFF SCH TAG 07 K-Type TC channel 1 3 *C DFF SCH TAG 07 K-Type TC channel 1 3 *C DFF SCH TAG 08 K-Type TC channel 1 3 *C DFF SCH TAG 08 K-Type TC channel 1 3 *C DFF SCH TAG 10 K-Type TC channel 1 3 *C DFF 10CH TAG 10 K-Type TC channel 1 3 *C DFF 12CH TAG 12 K-Type TC channel 1 3 *C DFF 13CH TAG 13 K-Type TC channel 1 3 *C DFF 13CH TAG 14 K-Type TC channel 1 3 *C DFF 15CH TAG 17 K-Type TC channel 1 3 *C DFF 15CH TAG 17									
7CH TAG 07 K-Type TC channel 1 3 °C DFF 8CH TAG 08 K-Type TC channel 1 3 °C DFF 9CH TAG 09 K-Type TC channel 1 3 °C DFF 10CH TAG 10 K-Type TC channel 1 3 °C DFF 10CH TAG 10 K-Type TC channel 1 3 °C DFF 11CH TAG 11 K-Type TC channel 1 3 °C DFF 11CH TAG 12 K-Type TC channel 1 3 °C DFF 13CH TAG 12 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 14 K-Type TC channel 1 3 °C DFF 13CH TAG 15 K-Type TC channel 1 3 °C DFF 13CH TAG 15 K-Type TC channel 1 3 °C DFF 13CH TAG 16 K-Type TC channel 1 3 °C DFF 13CH TAG 18 K-Type TC c	5CH	TAG 05			channel 1		3 ºC	OFF	
8CH TAG 08 K-Type TC channel 1 3 %C DFF 9CH TAG 09 K-Type TC channel 1 3 %C DFF 10CH TAG 10 K-Type TC channel 1 3 %C DFF 11CH TAG 10 K-Type TC channel 1 3 %C DFF 11CH TAG 11 K-Type TC channel 1 3 %C DFF 12CH TAG 12 K-Type TC channel 1 3 %C DFF 13CH TAG 13 K-Type TC channel 1 3 %C DFF 13CH TAG 13 K-Type TC channel 1 3 %C DFF 14CH TAG 13 K-Type TC channel 1 3 %C DFF 15CH TAG 16 K-Type TC channel 1 3 %C DFF 15CH TAG 16 K-Type TC channel 1 3 %C DFF 16CH TAG 18 K-Type TC channel 1 3 %C DFF 18CH TAG 20					channel 1				
9CH TAG 09 K-Type TC channel 1 3 %C DFF 10CH TAG 10 K-Type TC channel 1 3 %C DFF 11CH TAG 11 K-Type TC channel 1 3 %C DFF 12CH TAG 12 K-Type TC channel 1 3 %C DFF 12CH TAG 12 K-Type TC channel 1 3 %C DFF 13CH TAG 13 K-Type TC channel 1 3 %C DFF 13CH TAG 14 K-Type TC channel 1 3 %C DFF 13CH TAG 15 K-Type TC channel 1 3 %C DFF 13CH TAG 14 K-Type TC channel 1 3 %C DFF 15CH TAG 15 K-Type TC channel 1 3 %C DFF 16CH TAG 17 K-Type TC channel 1 3 %C DFF 18CH TAG 18 K-Type TC channel 1 3 %C DFF 18CH TAG 20 K-Type TC channel 1 3 %C DFF 20CH TAG 20 K-Type TC <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
10CH TAG 10 K-Type TC channel 1 3 °C DFF 11CH TAG 11 K-Type TC channel 1 3 °C DFF 11CH TAG 12 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 14 K-Type TC channel 1 3 °C DFF 14CH TAG 15 K-Type TC channel 1 3 °C DFF 15CH TAG 15 K-Type TC channel 1 3 °C DFF 15CH TAG 15 K-Type TC channel 1 3 °C DFF 15CH TAG 16 K-Type TC channel 1 3 °C DFF 17CH TAG 18 K-Type TC channel 1 3 °C DFF 13CH TAG 20 K-Type TC channel 1 3 °C DFF 20CH TAG 20 K-Type TC channel 1 3 °C DFF 21CH TAG 22 K-Type TC <									
11CH TAG 11 K-Type TC channel 1 3 °C DFF 12CH TAG 12 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 14CH TAG 13 K-Type TC channel 1 3 °C DFF 14CH TAG 14 K-Type TC channel 1 3 °C DFF 15CH TAG 15 K-Type TC channel 1 3 °C DFF 16CH TAG 16 K-Type TC channel 1 3 °C DFF 17CH TAG 16 K-Type TC channel 1 3 °C DFF 18CH TAG 18 K-Type TC channel 1 3 °C DFF 19CH TAG 18 K-Type TC channel 1 3 °C DFF 19CH TAG 20 K-Type TC channel 1 3 °C DFF 20CH TAG 20 K-Type TC channel 1 3 °C DFF 21CH TAG 23 K-Type TC <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
12DH TAG 12 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 13 K-Type TC channel 1 3 °C DFF 13CH TAG 14 K-Type TC channel 1 3 °C DFF 15CH TAG 15 K-Type TC channel 1 3 °C DFF 15CH TAG 16 K-Type TC channel 1 3 °C DFF 16CH TAG 16 K-Type TC channel 1 3 °C DFF 18CH TAG 17 K-Type TC channel 1 3 °C DFF 18CH TAG 18 K-Type TC channel 1 3 °C DFF 18CH TAG 18 K-Type TC channel 1 3 °C DFF 19CH TAG 20 K-Type TC channel 1 3 °C DFF 20CH TAG 20 K-Type TC channel 1 3 °C DFF 21CH TAG 23 K-Type TC channel 1 3 °C DFF 22CH TAG 23 K-Type TC <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
13CH TAG 13 K-Type TC channel 1 3 ℃ DFF 14CH TAG 14 K-Type TC channel 1 3 ℃ DFF 14CH TAG 15 K-Type TC channel 1 3 ℃ DFF 15CH TAG 15 K-Type TC channel 1 3 ℃ DFF 15CH TAG 15 K-Type TC channel 1 3 ℃ DFF 15CH TAG 16 K-Type TC channel 1 3 ℃ DFF 15CH TAG 18 K-Type TC channel 1 3 ℃ DFF 13CH TAG 18 K-Type TC channel 1 3 ℃ DFF 13CH TAG 18 K-Type TC channel 1 3 ℃ DFF 20CH TAG 20 K-Type TC channel 1 3 ℃ DFF 21CH TAG 21 K-Type TC channel 1 3 ℃ DFF 22CH TAG 22 K-Type TC channel 1 3 ℃ DFF 22CH TAG 23 K-Type TC channel 1 3 ℃ DFF 22CH TAG 23 K-Type TC channel 1<									
14CH TAG 14 K-Type TC channel 1 3 *C DFF 15CH TAG 15 K-Type TC channel 1 3 *C DFF 15CH TAG 16 K-Type TC channel 1 3 *C DFF 15CH TAG 16 K-Type TC channel 1 3 *C DFF 17CH TAG 17 K-Type TC channel 1 3 *C DFF 18CH TAG 18 K-Type TC channel 1 3 *C DFF 19CH TAG 19 K-Type TC channel 1 3 *C DFF 20CH TAG 20 K-Type TC channel 1 3 *C DFF 21CH TAG 21 K-Type TC channel 1 3 *C DFF 22CH TAG 22 K-Type TC channel 1 3 *C DFF 22CH TAG 23 K-Type TC channel 1 3 *C DFF 23CH TAG 23 K-Type TC channel 1 3 *C DFF 23CH TAG 23									
150H TAG 15 K-Type TC channel 1 3 %C DFF 16CH TAG 16 K-Type TC channel 1 3 %C DFF 17CH TAG 17 K-Type TC channel 1 3 %C DFF 18CH TAG 18 K-Type TC channel 1 3 %C DFF 18CH TAG 18 K-Type TC channel 1 3 %C DFF 18CH TAG 18 K-Type TC channel 1 3 %C DFF 18CH TAG 20 K-Type TC channel 1 3 %C DFF 20CH TAG 20 K-Type TC channel 1 3 %C DFF 21CH TAG 21 K-Type TC channel 1 3 %C DFF 22CH TAG 23 K-Type TC channel 1 3 %C DFF 23CH TAG 23 K-Type TC channel 1 3 %C DFF 23CH TAG 23 K-Type TC channel 1 3 %C DFF 23CH TAG 23 K-Type TC channel 1 3 %C DFF									
17CH TAG 17 K-Type TC channel 1 3 %C DFF 18CH TAG 18 K-Type TC channel 1 3 %C DFF 19CH TAG 19 K-Type TC channel 1 3 %C DFF 20CH TAG 20 K-Type TC channel 1 3 %C DFF 21CH TAG 21 K-Type TC channel 1 3 %C DFF 22CH TAG 22 K-Type TC channel 1 3 %C DFF 22CH TAG 23 K-Type TC channel 1 3 %C DFF 23CH TAG 23 K-Type TC channel 1 3 %C DFF									
18CH TAG 18 K-Type TC channel 1 3 °C DFF 13CH TAG 19 K-Type TC channel 1 3 °C DFF 20CH TAG 20 K-Type TC channel 1 3 °C DFF 21CH TAG 21 K-Type TC channel 1 3 °C DFF 22CH TAG 22 K-Type TC channel 1 3 °C DFF 22CH TAG 22 K-Type TC channel 1 3 °C DFF 23CH TAG 23 K-Type TC channel 1 3 °C DFF 23CH TAG 23 K-Type TC channel 1 3 °C DFF	16CH	TAG 16		K-Type TC	channel 1		3 ºC	OFF	
19CH TAG 19 K-Type TC channel 1 3 °C DFF 20CH TAG 20 K-Type TC channel 1 3 °C DFF 21CH TAG 21 K-Type TC channel 1 3 °C DFF 22CH TAG 22 K-Type TC channel 1 3 °C DFF 23CH TAG 23 K-Type TC channel 1 3 °C DFF 23CH TAG 23 K-Type TC channel 1 3 °C DFF									
20CH TAG 20 K-Type TC channel 1 3 ®C DFF 21CH TAG 21 K-Type TC channel 1 3 ®C DFF 22CH TAG 22 K-Type TC channel 1 3 ®C DFF 22CH TAG 22 K-Type TC channel 1 3 ®C DFF 23CH TAG 23 K-Type TC channel 1 3 ®C DFF									
21CH TAG 21 K-Type TC channel 1 3 ®C DFF 22CH TAG 22 K-Type TC channel 1 3 ®C DFF 23CH TAG 23 K-Type TC channel 1 3 ®C DFF 4									
22CH TAG 22 K-Type TC channel 1 3 ®C DFF 23CH TAG 23 K-Type TC channel 1 3 ®C DFF									
23CH TAG 23 K-Type TC channel 1 3 C DFF									
								OFF	
Please double-click a channel to edit.	•			1		-			
	Please doub	le-click a cha	nnel to edit.						

(1) Selection of setting model

Setting model can be selected by the parameter loader.



Display contents or setting range on the setting screen varies with each model.

	GR200
Channel setting	18 channels (ch1 to 18)
Calculation channel setting	None
DI setting	10
DO setting range	28
Screen group setting	4 groups

(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 the paperless recorder GR200 is V01A to V22A. Make sure to set the station No. of the parameter loader to 1.
- 2) RS-232C communications cannot be conducted if the program version of the paperless recorder GR200 is V27A or later. Note that to conduct Ethernet communications, optional Ethernet communication board is necessary. To conduct USB communications, make sure to set the station No. of the parameter loader to 1.

📊 Parame	eter l	.oad	ler			
File(F) Edi	it(E)	Cor	nmunication(R)	Н	lelp(H)	
🛁 🖻 🛱	8	(Communication	۲	🗸 USB	
1			P Address	Ethernet		
Channel setting			Port(P)	۲	RS-232C	setting
	Colo	r	Tag No.1		Tag No.2	
1CH			TAG 01			

b) IP Address, Station No.

Setting is necessary to conduct Ethernet communications with the paperless recorder. IP Address and Station No. of the paperless recorder can be set.

🗎 IP Addre	ss Setting		<u> </u>
IP Address	192 9	200	234
Station No.	1		
[ОК		

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 $[Com(R)] \rightarrow [Port(P)]$ and select using port. Normally, COM1 is selected. (Normally COM1 is selected.)

🚹 Parar	ne	ter l	.oad	er			
File(F) 8	Edit	:(E)	Con	nmunication(R)	H	elp(H)	
🖻 🖻 (1	ę		Communication P Address	۲		
Channe	el s	etting	F	Port(P)	•	🗸 COM1	ay s
	Т					COM2	
		Colo	r	Tag No.1	_	COM3	
10	ЭН			TAG 01		COM4	
20	ЭН			TAG 02		COM5	
	21.1			TAC 00			

(3) Upload setting value from the 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 the paperless recorder.

(4) Download setting value to the 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 the paperless recorder.

Note: 1) Download prohibit during recording or totalizing.

- 2) After the data has been downloaded to the paperless recorder, store non-volatile memory, or the setting value will return to the former value when power is turned OFF.
- (5) The data downloaded to the paperless recorder can be stored non-volatile memory.
- (6) Time setting to the paperless recorder

It is available to change time setting of the 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 be stored non-volatile memory.

Time setting
Input time by 24 hour form.
20 03 year 5 month 23 day
10 hour 0 minute
Set Cancel

Screen of time setting

(7) File menu

This menu, you can use functions as shown below.

🚹 Para	ameter Lo	oader				
File(F)	Edit(E) 0	Communicati	on(R) Help)(H)	
	n(O) e in file(S)	Ctrl+O Ctrl+S				
Text	output(T)	Ctrl+T	9)	Main se	etting	Display settin
Exit(X)					
		Tay NO.	ኘ		TagN	No.2
	100	TAG 01				

a) [Open(O)]

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 in file(S)]

Parameters currently being set can be stored in your PC. For parameter setting file to be created, extensions vary depending on setting model. In case of GR200: *****GR200

Parameter setting file to be created: *****.GR200

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.GR200, P123456.GR200 NG: Para00.GR200, P1234567.GR200

(CAUTION)

If the Parameter Loader setting file is made, and to be load from a compact flash card to the old version paperless recorder (V39Aprevious), there are few points that the user needs to be cautions of.

①The password for Start/Stop Recording should be set to"0".

If "0" is not set, everytime during Start/Stop recording operation, the Password Setting screen will display.

②Set all the recording operation channel to "Display Only".

If it is not set to "Display Only", during recording, the operating channel of Measure Value will be recorded.

However, the stated above will not occur when a setting value is written via communication. When the stated above does occur, the user needs to re-set the setting value again and start all over again.

c) [Text output(T)]

Output setting value as text data..

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

d) [Exit(X)]

Exit this menu.

- Note: 1) If you change setting value of the paperless recorder, register the setting value before exit this software.
 - 2) If you want to use setting value on another day, it is recommended to save the setting value file of the paperless 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].

📙 Para	meter	Load	er			
File(F)	Edit(E)	Con	munication	(R) Help)(H)	
🕞 🗎	Paste	e(V)	Ctrl+C Ctrl+V ath setting	l Marin or		Display
		a l m	aın setting	Main se	sung	Display
	Colo)(Tag No.1		Tag N	√o.2
			TAC 01		1	

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.

easuring channe	el	Display range	Alarm setting	
Channel Tag	TAG 01	Lower limit value		
Channel Tag2	,	Upper limit value 5000	Alarm type	DFF 🔽
Color	Red			0
Input type	Other channel	Record mode With record	DO relay No.	None 💌
Input channel	channel 2	Record type Min-Max value	Alarm No.2	
Input filter(s)	3		-	DFF 💌
Input unit		Subtract function	_ Alarm set value	0
		Sel Subtract channel None	DO relay No.	
Scaling	OFF	channel 1 = channel 1 - setting Cl	н 1	None 🔽
-Measuring range		Fvalue calculation setting	Alarm No.3	
Lower limit valu	ie 0.0	- Fvalue calc. OFF 💌] Alarm type 🛛	DFF 🔻
Upper limit valu	, 10 500.0	Totalization	Alarm set value	0
		Totalize tag STAG 01	DO relay No.	None 🔻
Engineering unit		Totalize Totalizer		
Lower limit valu		Totalize type OFF	Alarm No.4	
Upper limit valu	ie 5000	Digital input DI1 💌	Alarm type	DFF 💌
		Base time /h 💌	Alarm set value	0
Decimal point position		Reset operation ON	DO relay No.	None 🔻
Square root	OFF	Totalize unit Se	, ,	
PV shift	,	Totalize scale		
Shift value	0	value 1 1		
Gain (%)	100.00	Totalize cut 0 value		
			<u> </u>	
		/ two channels set. (except, channel 9 and 18.) 3, 15, and 17 depend on that of the previous ch		

And then channel setting display appears.

* Settable number of channels depends on setting model.
 In case of GR200, it is available to set till 18ch regardless of number of channels.

- * There are some screens 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.

ParameterLoader 🔀
Please input -230.0 to 1400.0
OK

Message in recording range

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

- * The input type becomes same kind in every two channels set.
- (1) When input type of each channel is changed, setting is subjected to limitations.
 - In case of GR200: The type setting of channel 2, 4, 6, 8, 11, 13, 15 and 17 is available only with the same input category of previous channel. Note that, channel 9 and 18 can select the input type regardless of other channels.

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
500mV	500mV
5V	1 to 5Vdc, 0 to 5Vdc

For example, when channel 1 is set to 1 to 5V, channel 2 is available to set only 1-5V, 0-5V, or Skip as shown below.

	iChannel se	lection	
Γ	Measuring channe	el	
	Channel Tag	TAG 02	
	Channel Tag2		
	Color	Blue	
	Input type	0-5∨ ▼	
	Input channel	Skip 1–5V	
	Input filter(s)	0–5V Other channel	

	Input type	Input type	Explanation
Channel 1	K-Type TC	Thermocouple, 50mV	It is available to set any type of TC to each
Channel 2	T-Type TC		channel.
Channel 3	1 to 5V	5V	
Channel 4	0 to 5V		
Channel 5	Pt100	Resistance bulb	It is available to set any type of resistance
Channel 6	JPt100		bulb to each channel.
Channel 7	500mV	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	The same input type is basically allocated
Channel 11	50mV		to 2 channels.
Channel 12	Skip	5V	It is available to set skip under any input
Channel 13	1 to 5V		type.
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.

Example: Setting input type of each channel

(2) When the input type of the channel is changed, the initialization of the input type of next channel might be required.

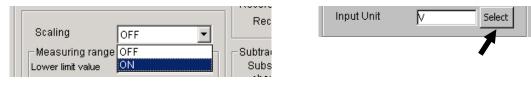
In case of GR200:

When the input type for channels 1, 3, 5, 7, 10, 12, 14 and 16 is changed, the initialization of the next channel might be required.

ParameterLoader		×
The next channel of	this channel is cha	inged.

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 Pt100 Ω .

* 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.



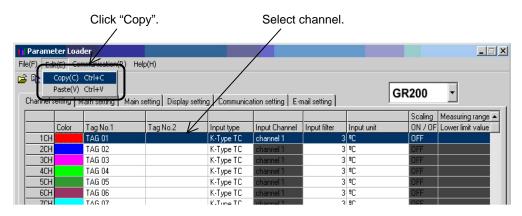
The Unit Select screen appears. On the screen that is displayed, click a unit and press the [Apply] button. Note that the unit cannot be selected without pressing the [Apply] button.

t/d t/h t/min t/s	kg/d kg/h	g/d			
t/min	ka/h	g. a.	m3/d	I/d	
	isgen.	g/h	m3/h	l/h	
t/s	kg/min	g/min	m3/min	1/min	
	kg/s	g/s	m3/s	I/s	
mbar	bar	N/mm2	N/m2		
mPa	Pa	kPa	MPa		
mm	cm	m			
ml	L	kl	mm3	cm3	m3
mm2	cm2	m2	g	kg	t
g/cm3	kg/cm3	g/m3	kg/m3		
g/l	kg/l	g/ml			
ppm	ppmNH3	ppmSO2	ppmH2S	ppmCO	ppm02
ppmNOx	ppb	pH	mol	%	%H2
%CO2	%He	%Ar	%02	%NaCl	%CO
mN	N	N·m	J	kJ	
mm/s	mm/min	mm/h	m/s	m/min	m/h
rps	rpm	rph	m/s2	rad/s	km/h
us	ms	s	min	h	day
mV	V	kV	uА	mA	A
Hz	dB	W	kW	VA	kVA
Var	kVar	uS/cm	uF	F	C
mH	Н	m ohm	ohm	k ohm	M ohm
lx	cd	Im	cd/m2		
uSv/h	mSv/h	nGy/h	uGy/h	um	
Pars	mPars				
					1
			() ()		1

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] \rightarrow [Copy].



Move the cursor to CH where you want to paste channel settings and click it (Channel selection). Click [Edit] \rightarrow [Paste].

		Select "Pa	ste".		Select "(CH".			
📊 Parame	eter Loa	der							
File(F) Ed	it(E) Cou	munication(R) Hel	p(H)	/					
	Copy(C) Paste(V) setting N		etting Display settin	g Zommunica	ation setting E-r	nail setting	GF	200	•
				\checkmark				Scaling	Measuring range 🔺
	Color	Tag No.1	Tag No.2	Input type	Input Channel	Input filter	Input unit	ON / OF	Lower limit value
1CH		TAG 01		K-Type TC	channel 1	3	вС	OFF	
2CH		TAG 02		K-Type TC	channel 1	3	₽C	OFF	
3CH		TAG 03		K-Type TC	channel 1	3	°C	OFF	
4CH		TAG 04		K-Type TC	channel 1	3	°C	OFF	
5CH		TAG 05		K-Type TC	channel 1	3	°C	OFF	
6CH		TAG 06		K-Type TC	channel 1	3	°C	OFF	
7CH		ΤΔG 07		K-Tupe TC	channel 1	1 3	90	OFF	

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, the paperless recorder works such as below.

- (1) Copying of Channel Setting in GR200
 - When the copy destination is cannels 1 to 8, and 10 to 17: The same input types (*2) are used for their paired channels (*1). (*1: The paired channels are 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.) (*2: The K thermocouple input is used for the thermocouple, and the Pt100Ω input for the resistance thermometer.)
 - When the copy destination is 9ch and 18ch: No channel changes other than 9ch and 18ch.

Channel Copy	×
1CH is copied to	5CH
OK)	Cancel

2.4 Setting of Computing Channel

Settings of the arithmetic expression, input, integration, warning and display record for each computing channel are performed. Put the cursor on the desired channel in the screen, displaying the list of the computing channel settings, and double-click it.

ormula				Alarm No.1	
Formula B01=		Set	Del	Alarm type	OFF
Formula B02=		Set	Del	Alarm set value	0.0
Formula B03=		Set	Del	DO relay No.	None
Formula Result=		Set	Del	Alarm No.2	
Tresuit- 1	Display range			Alarm type	OFF
Channel Tag TAG 37	Lower limit value	0.0		Alarm set value	0.0
Channel Tag2	Upper limit value			DO relay No.	None
Color Sky blue	Recording mode				-
	Recording mode		•	Alarm No.3	
Input filter(s) 3	, Recording type	Min-Max rec.		Alarm type	OFF
Input unit 🖭	Sel Subtract functio	1		Alarm set value	0.0
			_	DO relay No.	
Measuring range	Subtract channe			DO IOIGY NO.	None
Lower limit value 0.0		7 = channel 37 - se	ting CH	Alarm No.4	
Upper limit value 500.0	Fvalue calculati			Alarm type	
	Fvalue calc.	OFF	-		OFF
Engineering unit	Totalization			Alarm set value	0.0
Lower limit value 0.0	Totalize tag	STAG 37	· · · · · · · · · · · · · · · · · · ·	DO relay No.	None
Upper limit value 500.0	Totalize calculation	Totalizer	•		
Decimal point	▼ Totalize type	OFF	-		
position J.	External input	DI1	-		
Square rooter OFF	▼ Base time	/h			
V shift		ON			
Shift value 0.0	Reset operation	Jon			
Gain(%) 100.00	Totalize unit	1	Sel		
, , ,	Totalize scale value	1			
	Totalize cut value	0.0			

The computing channel setting screen appears.

- * Number of math channels differs according to model setting.
 When GR200 is selected : It is available to set till 12 channels between ch19 and ch30.
- * 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.

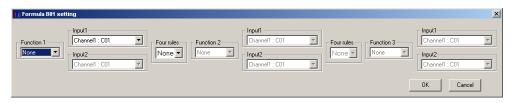
ParameterLoader X
Please input -3276.7 to 3276.7.
OK

Recording range display

* 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 Setting of Arithmetic Expression

Click the "Setting" button in the computing channel setting screen.



The arithmetic expression setting screen appears.

Select an arithmetic function and an input value and click "OK".

Display	Function	Description		
No display	No arithmetic operation	No arithmetic operation is performed. The input value is used as is.		
ABS(A)	Absolute value	The absolute value of the value in the input A is found.		
POW(A,B)	Exponentiation	The "input B" power of the value in the input A i calculated.		
SQR(A)	Square root	The square root of the value in the input A is calculated.		
LOG(A)	Log	The common logarithm in the input A is calculated.		
LN(A)	LN	The natural logarithm in the input A is calculated.		
EXP(A)	EXP	"e exponentiation" of the value in the input A is calculated.		
RH(A,B)	Humidity	The relative humidity is calculated when the input A is dry-bulb temperature and the input B is wet-bulb temperature.		
MAX(A,B)	Maximum value (between channels)	The inputs A and B are compared to find the bigger value.		
MIN(A,B)	Minimum value (between channels)	The inputs A and B are compared to find the smaller value.		
H-P(A)	Maximum value (time)	The maximum value in the input A during a specified time is found.		
L-P(A)	Minimum value (time)	The minimum value in the input A during a specified time is found.		
AVG(A)	Average value	The average value in the input A during a specified time is calculated		
SUM(A,B)	Cumulative value	The cumulative value in the input (A/B) during a specified time is calculated. Cumulating calculation is performed every minute.		

\langle List of inputs usable for arithmetic expression \rangle

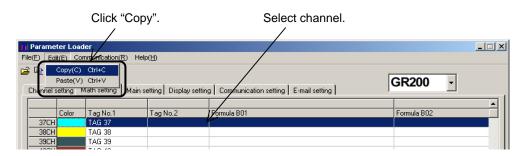
Display	Content	Display example
Channel	Channel input	C01
Cumulating calculation	Channel cumulative value	T01
DI	DI input	D01
Communication	Communication input	M01
Constant	Constant	K01
Temporary data	Result of the last expression	B01

2.4.2 Copying of Computing Channel

A setting value is copied to other computing channel.

Put the cursor on the channel to be copied in the computing channel setting list screen, and click it (channel selection).

Click the "Edit" menu and select "Copy".



Put the cursor on the copy destination and click it (channel selection). Click the "Edit" menu and select "Paste".

		Select "Pas	ste".		Select "CH".				
🚹 Paramete	er Load	er, /			/				_ 🗆 🗵
File(F) Edit(E) Corr	utenication(R) Help	Œ						
- F	opy(C) aste(V)]	GR200	•	
Channel se	tting M	ath setting Main se	etting Display setting	g Confimunicati	on setting E-mail setting	ļ	011200		
	Color	Tag No.1	Tag No.2	Formula B01			Formula B02		
37CH		TAG 37	L L						
38CH		TAG 38							
39CH		TAG 39							
10011		T10.40							

Then the confirmation message appears.

When the "OK" button is pressed, copying is performed.

2.5 Setting the main unit

This screen allows you to set the recorder main unit.

Move the cursor to "Main setting" on the Table of Setting Channel display, and click it.

File(E) Edit(E) Communication(R) Help(H) Image: Second Secon		
Channel setting Main setting Display setting Ethernet setting E-mail setting		
Main setting Totalize setting Fvalue calcule Display refreshment cycle Isec Image: Setting Target Alarm hysteresis 0% 0.20 Image: Setting Image: Setting Image: Setting Alarm latch OFF Image: Setting Image: Setting Image: Setting Image: Setting Alarm latch OFF Image: Setting Image: Setting Image: Setting Image: Setting Alarm latch OFF Image: Setting Image: Setting Image: Setting Image: Setting Image: Setting CD lights-out time 0 min Image: Setting Image: Setting Image: Setting Image: Setting Do No. Image: Setting Image: Setting Image: Setting Image: Setting Image: Setting Image: Setting Date Format 2006/03/21 Image: Setting Image: Setting Image: Setting Image: Setting Image: Setting File division cycle No divisior Image: Setting Image: Setting Image: Setting Image: Setting Image: Setting File division cycle No divisior Image: Setting Image: Setting Image	00 No.1 00 No.2 1 V No.3 00 No.4 No.5 No.6 No.7	tion Function invalid • Function invalid • Function invalid • Function invalid • Function invalid • Function invalid •
Communication setting Modbus station No. 1 Modbus Baud rate 19200 Modbus Parity Odd Start / Stop Manual Start / Stop Manual Start time 0 Start time 0 Start time 0 Start ime 0 Start	No.8 No.9 No.10	Function invalid Function invalid

The Main unit Set screen appears.

* Settable items vary depending on setting model.

(The above screen is displayed when the setting model is GR200.)

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

×
00.00

Alarm Hysteresis message

2.5.1 DI function (external control unit) setting (option)

The DI function determines whether ON/OFF input from external devices connected to external terminal is accepted or not.

DI point varies depending on setting model.

GR200: DI1 to DI10 (Max. 10 points)

No.1	Function invalid
No.2	Function invalid Rec start/stop Fvalue calc. reset
No.3	Totalize start/stop Totalize reset LCD ON
No.4	Function invalid
No.5	Function invalid

Note: Without the DI option, DI function cannot be used.

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.

annel setting Main setting Display set	tting Commun	ication setting	E-mail setti	ing)		GR200	•
Group No. Analog meter/Bar graph Group No.1 Bar graph Group No.2 Bar graph Group No.3 Bar graph	Channel index CH No.disp. CH No.disp. CH No.disp.	channel 1 channel 1 channel 1	cha cha	nnel 2 nnel 2 nnel 2	No.3 channel 3 channel 3 channel 3	No.4 channel 4 channel 4 channel 4	No.5 channel 5 channel 5 channel 5
Group No.4 Bar graph	CH No.disp.	channel 1	cha	nnel 2	channel 3	channel 4	channel 5
essage/Unit Message Message			Timing	DI No./Ala	rm Ch Alarm No.		nit name
NO.1 NO.2 NO.3 NO.4 NO.5			None None None None None			NO.1 NO.2 NO.3 NO.4 NO.5	
N0.6 N0.7 N0.8 N0.9			None None None None			N0.6 N0.7 N0.8 N0.9	
N0.10			None			N0.10 N0.11	
						N0.12	
				value register			ie setting
Group setting					annel setting		
isplay setting	ar graph		, Di		annel setting	nnel 1	
isplay setting Display	ar graph		ii	splay ch	cha		
isplay setting Display	Bar graph Channel Ni Display G		i	splay ch: No.1 No.2 No.3	cha cha cha	nnel 1	
isplay setting Display E Channel index C Display E	Channel N		ii	splay ch: No.1 No.2 No.3 No.4	cha cha cha	nnel 1 nnel 2 nnel 3 nnel 4	
isplay setting Display E Channel index C Display Scale display S	Channel Ni Display G		ii	splay ch: No.1 No.2 No.3	cha cha cha cha cha	nnel 1 nnel 2 nnel 3 nnel 4 nnel 5	
isplay setting Display E Channel index C Display E	Channel Ni Display G Scale OFF			splay ch: No.1 No.2 No.3 No.4 No.5	cha cha cha cha cha cha	nnel 1 nnel 2 nnel 3 nnel 4	
isplay setting Display [Channel index C Display [Scale display S Trend display Y Trend direction Vertica	Channel Ni Display G Scale OFF	Foup1		splay ch: No.1 No.2 No.3 No.4 No.5 No.6	cha cha cha cha cha cha cha	nnel 1 nnel 2 nnel 3 nnel 4 nnel 5 nnel 6	
isplay setting Display E Channel index C Display S Scale display S Trend display	Channel Ni Display G Scale OFF	Foup1		splay ch: No.1 No.2 No.3 No.4 No.5 No.6 No.7	cha cha cha cha cha cha cha	nnel 1	
isplay setting Display [Channel index C Display [Scale display [Trend display [Trend direction [Vertica	Channel Ni Display G Scale OFF	Foup1	i 1 1 1 1 1 1 1 1 1 1 1 1	splay ch: No.1 No.2 No.3 No.4 No.5 No.6 No.7 No.8	cha cha cha cha cha cha cha cha	nnel 1	

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

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 (up to 16 characters) can be set to the recorder.
- * 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 the paperless recorder, No.2 equals to data 2. Following is the same as above until No.10.

* In case of the paperless recorder is 9 inputs type, this screen displays 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.

Message			
Timing	None	•	
Timing1		-	
Timing2		Ŧ	
elected No.	1 Top	Back Next	

The Message Setting screen appears.

- * Up to 32 characters is available for the message. The characters exceeding 32 cannnot 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:

Message :	setting	
Message Timing Timing1 Timing2 Selected No.	Alarm ON	Channel No Set alarm N
1 Message	Cancel Apply Exit	
Message Timing Timing1 Timing2		— DI No.
Selected No.	Top Back Next Cancel Apply Exit	

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.

📊 Unit define	2	<
Unit name 🛛		
Selected 1	Top Back Next	
I	Cancel Apply Exit	

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.

nnel setting Main setting Display setting C	Communication setting	E-mail setting	GR200	•
Ethernet setting IP Address 192 168 1 Subnet mask 255 255 255 Default gateway 0 0 0 0	. 0		FTP server setting FTP server function FTP access control Web server setting	
User name 1. SystemT aro 2. Kirokukeiho 3. 4. 5. 6. 7. 8.	Password [a19b23 [65790 [User level administrator guest administrator administrator administrator administrator administrator administrator	Web server function E-mail setting E-mail function MODBUS TCP/IP setting MODBUS TCP/IP function Communication setting MODBUS station No. MODBUS baud rate(bps) MODBUS Parity	ON
/hen you change parameters other thar	"User account", ple	ease re-switch on a powe	r supply.	

- * Up to 16 characters can be entered as user name.
- * Up to 8 characters can be entered as password.

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.

Parameter Loader File(F) Edit(E) Communication(R) Help(H)		
Channel setting Main setting Display setting Communicat E-mail setting SMTP(Mail server) IP address 192 168 0		GR200 -
SMTP(Mail server) IP address 192 168 0 1 Sender's mail address poller035@test.co.jp		
Sender's name Boiler035 Receiver's mail address 1. System-Tarc@test.co.jp 2. Kiroku-Keiko@test.co.jp 3. 4. 5. 6. 6. 7. 8.		
E-mail trigger setting	Text 1	Text 2
1 Manufacture start.	Manufacture start.	Boiler035
2 Boiler035 a regular report	a regular report	Boiler035
3 The temperature is abnormal ! 4 5 6 7	The temperature is abnormal !	Boiler035
Communication status	ownload Set value register	Time setting

- * 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.

🐃 E-mail trigger setting	×
Trigger timing None	
y .	
Alarm No.	
Title	
Comment1	
Comment2	
PV value affixation OFF	
Receiver's mail address No.	
Selected No. 1 Top Back Next	
Cancel Apply Exit	

- * 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

🖹 E-mail tri	gger setting	X
Trigger timing	DION	
DI No.	D11 DI No.]
Alarm No.	V	
Title		
Comment1		
Comment2		
PV value affixati	on OFF	
Receiver's mail a	address No.	
Selected No.	1 Top Back Next	
	Cancel Apply Exit	

• When sending E-mail by alarm operation

🗅 E-mail t	trigger setting	X
Trigger timing	Alarm ON	
Alarm CH	channel1 Channel No.]
Alarm No.	No.1 Alarm No.]
Title		
Comment1		
Comment2		
PV value affix	ation OFF	
Receiver's ma	il address No.	
	2 🗖 3 🗖 4 🗖 5 🗖 6 🗖 7 🗖 8	
Selected No.		
00.00100 110.	- 1 Top Back Next	
	Cancel Apply Exit	

• When sending E-mail by alarm operation of • When sending E-mail at fixed intervals the main unit

📙 E-mail t	rigger setting X
Trigger timing	Warning
Warning type	Alarm ON(All ch)
	V
Title	
Text 1	
Text 2	
PV value affix	ation OFF
Receiver's mai	l address No.
	2 🗆 3 🗖 4 🗖 5 🔽 6 🗖 7 🗖 8
Selected No.	4 Top Back Next
	Cancel Apply Exit

📊 E-mail trig	gger setting	X
Trigger timing	Timer cycle	
Time	Transmission internal]
Time base(hour)	00:00 Reference time	
Title		
Text 1		
Text 2		
PV value affixatio	on OFF	
Receiver's mail ac	ddress No.	
Selected No.	4 Top Back Next	
	Cancel Apply Exit	

APPENDIX.1 EXAMPLE OF SETTING PARAMETERS TO BE PRINTED OUT

2006/03/21 20: 20: 39

 PILC
 :
 GR200-0AM000006020

 Ser. No. :
 LYT0006T

 Ver.
 :
 V31A

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

* * * * *	Channel set	ti ng*****											
						Other C	Н	Scal i ng	Measurin	g range	Engi n	eering un	it
	Input type	e Col or	Tag No. 1	Tag No. 2	Input unit	Input		ON/OFF1	Min	Max	Min	Max	
CH1	K-Type TC	Sky blue	Tag 01	Tag 2-01	°C	channel	1	OFF	0.0	500.0	0.0	500.0	
CH2	T-Type TC	Yellowish gr	een	Tag 02	Tag 2-02	°F		channel 1	OFF	0.0	500.0	0.0	500.0
CH3	Pt100	Violet	Tag 03	Tag 2-03	°F	channel	1	OFF	0.0	500.0	0.0	500.0	
CH4	JPt100	Green	Tag 04	Tag 2-04	°C	channel	1	OFF	0.0	500.0	0.0	500.0	
CH5	500mV	Deep green	Tag 05	Tag 2-05	mV	channel	1	ON	2.0	522.0	-500. 0	550.0	
CH6	500mV	Purpl e	Tag 06	Tag 2-06	mV	channel	1	OFF	0.0	500.0	0.0	500.0	
CH7	500mV	Red	Tag 07	Tag 2-07	mV	channel	1	OFF	0.0	500.0	0.0	500.0	
CH8	500mV	Yellow	Tag 08	Tag 2-08	mV	channel	1	OFF	0.0	500.0	0.0	500.0	
CH9	0-5V	l ndi go	Tag 09	Tag 2-09	V	channel	1	ON	0. 123	5.123	1.900	5.900	
CH10	B-Type TC	Dark red	Tag 10	Tag 2-10	°C	channel	1	OFF	0.0	500.0	0.0	500.0	
CH11	50mV	Red	Tag 11	Tag 2-11	mV	channel	1	OFF	0.00	50.00	0.00	50.00	
CH12	500mV	BI ue	Tag 12	Tag 2-12	mV	channel	1	ON	10.0	502.0	0.5200	0.0000	
CH13	500mV	Vi ol et	Tag 13	Tag 2-13	mV	channel	1	OFF	0.0	500.0	0.0	500.0	
CH14	JPt100	Purpl e	Tag 14	Tag 2-14	°F	channel	1	OFF	0.0	500.0	0.0	500.0	
CH15	Pt100	Deep green	Tag 15	Tag 2-15	°F	channel	1	OFF	0.0	500.0	0.0	500.0	
CH16	0-5V	Purpl e	Tag 16	Tag 2-16	V	channel	1	OFF	0.000	5.000	0.000	5.000	
CH17	0-5V	Pale blue	Tag 17	Tag 2-17	V	channel	1	OFF	0.000	5.000	0.000	5.000	
CH18	1-5V	BI ue	Tag 18	Tag 2-18	V	channel	1	ON	2.000	4.000	80	5008	
	Square Inp					Subtrac	t	Fval ue	Record	i ng		ngDi spl ay	range
	Rooter	filter	PV shift	PV gain	channel	cal c.		mode	type		Min	Max	
CH1	OFF	3	1.0	100.01	None	OFF		With record		x value	0.0	200. 0	
CH2	OFF	0	0.2	100.02	None	OFF		With record	Poi nt		32.0	572.0	
CH3	OFF	3	0.3	100.03	channel 2	OFF		With record	-	e value	32.0	932.0	
CH4	OFF	4	400.0	140.00	channel 9	ON		With record		x value		5.004	
CH5	OFF	5	-50.0	50.00	channel 4	OFF		With record	Poi nt		0.5	500.0	
CH6	OFF	6	0.6	100.00	channel 5	OFF		With record		e value	0.6	500.6	
CH7	OFF	7	0.0	100.00	None	OFF		With record		x value	0.0	500.0	
CH8	OFF	8	0.0	100.00	None	OFF		With record	Poi nt		0.0	500.0	
CH9	ON	0	9.000	109.00	channel 2	ON		With record		e value		5.090	
CH10	OFF	3	1.0	101.00	None	OFF		With record		x value		700. 0	
CH11	OFF	3	0.00	100.00	None	OFF		With record	Poi nt		0.00	50.00	
CH12	ON	90	0. 1000	100.00	channel 18	ON		With record	-	e value	5.000	0.000	
CH13	OFF	3	0.0	100.00	None	OFF		With record	Mi n-Ma	x value	0.0	500. 0	
CH14	OFF	10	10.0	90.00	channel 18	ON		With record	Poi nt	val ue	0.000	5.000	
CH15	OFF	5	0.0	100.00	channel 3	OFF		With record	Averag	e value	0.0	500.0	
CH16	OFF	3	0.000	100.00	None	OFF		With record		x value		5.000	
CH17	OFF	3	0.000	100.00	None	OFF		With record	Poi nt	val ue	0.000	5.000	
CH18	ON	20	0	0.00	None	OFF		With record	Poi nt	val ue	1	10	
*****	Totolizo	++; ===****											
^	Totalize se Totalize	0	Total i ze	External	Total i ze	e Reset		Total i ze	Total i ze	Tot	alize		
	Tag	calc	Type	innut				n Unit			le value		

	Totalize	Totalize	Totalize	External	Totalize	Reset	Totalize	Totalize	Totalize	
	Тад	cal c.	Туре	i nput	Base time	operation	Uni t	Cut value	Scale value	
CH1	STAG 01	Total i zer	Monthl y	DI 3	/h	ON	ppmCO	10. 0	2	
CH2	TAG 02	Total i zer	OFF	Ch1 Alarm2	/mi n	OFF	rps	0.0	3	
CH3	STAG 03	Total i zer	Daily	DI 1	/h	ON	SEC	0.0	4	
CH4	TAG 04	Total i zer	Daily	DI 1	/h	ON	m/s2	0. 010	3600	
CH5	STAG 05	Total i zer	Daily	DI 3	/min	OFF	uGy/h	50.0	9999	
CH6	STAG 06	Total i zer	Annual	Ch6 Alarm3	/day	0FF	dB	60.0	160	
CH7	STAG 07	Total i zer	OFF	DI 1	/h	ON	%NaCI	0.0	32767	
CH8	TAG 08	Total i zer	Daily	DI 1	/h	ON		0.0	1	
CH9	STAG 09	Total i zer	Monthl y	Ch13 Alarm3	/day	ON	m∕min	0.090	19	
CH10	STAG 10	Total i zer	External inp	ut	DI 1	/min	ON	mol	370.0	32
CH11	STAG 11	Total i zer	Daily	DI 1	/h	ON		0.00	100	
CH12	STAG 12	Total i zer	OFF	DI 9	/s	OFF	km/h	1.200	54	
CH13	STAG 13	Total i zer	Daily	DI 1	/h	ON		0.0	3	
CH14	STAG 14	Total i zer	Daily	DI 1	/h	ON	min	1. 100	1	
CH15	STAG 15	Total i zer	OFF	DI 1	/min	OFF	mm/min	-10.0	15	
CH16	STAG 16	Total i zer	Daily	DI 1	/h	ON		0.000	65	
CH17	STAG 17	Total i zer	OFF	DI 1	/s	ON	uGy/h	0. 170	17	
CH18	STAG 18	Total i zer	Daily	DI 1	/h	ON		0	18	

****	Alarm set	tting*****										
	Alarm N				Alarm No			Alarm No.3			Alarm No.4	
	Alarm	Alarm set		Alarm	Alarm se		Alarm	Alarm set		Alarm	Alarm set	DO relay
0111	type H	val ue 100. 0	No.	type	val ue	No.	type H	val ue	No. 3	type	val ue	No.
CH1 CH2	н	800. 0	1 None	H OFF	100. 0 0. 0	2 None	OFF	100. 0 0. 0	None	H L	100. 0 200. 0	4 None
CH3	OFF	0.0	None	OFF	0.0	None	OFF	0.0	None	OFF	0.0	None
CH4	н	0.400	1	OFF	0.040	2	L	0.004	5	OFF	4.000	3
CH5	н	50.0	28	L	50.0	27	н	50.0	26	L	50.0	25
CH6	н	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	н	600. 0	None	L	600. 0	22	н	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	Н	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	н	0.000	None	L	0.000	None	OFF	0.300	None	OFF	0.500	None
CH15	L	40.0	None	н	30.0	5	н	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	Н	1000	None	L	1000	None	н	1000	None
***** Targe Reset ***** Daily Extrn Progr	Fvalue ca t temperat temperat Totalize totalize al input am versio	ature 100. ture 10.0 setting**** e cycle 12 H DI1	setting***** 0 °C Z v °C ** hour Annua	alue 200. Il base day	31 tting	cimal point	ile division c position : talize recordi	3				
	•	ming Manual setting****			Stop time 2	3: 06 - 22:	59					
		No. 1	No. 2	No. 3	No. 4	4 No. 5	No. 6	No. 7	No	8	No. 9	No. 10
Di spl Di spl	ay group: ay group:	1 channel 1 2 channel 11 3 channel 15 4 channel 1	channel 2 channel 1 channel 1 channel 2	channe 2 channe	el 3 char el 13 char el 17 char	nnel 4 chann nnel 14 None nnel 18 None nnel 4 None				annel 8 ne ne	channel 9 None None None	channel 10 None None None
bropi	ay g. oup		ondimor 2	ondrink			liono	10110			liene	liono
Di spl Di spl	ay group: ay group:	Displayna 1.Diplay(2.Diplay(3.Diplay(4.Diplay(Group1 Vert Group2 Hori Group3 Vert	ction d ical zontal	spl ay vi si on No. 20 13 7 10	Scal e di spl ay ON ON OFF OFF	Bar graph/ Analog meter Bar graph Analog meter Bar graph Analog meter	Tag No. Channel Uni t	sel ecti on			
* * * * *	Mossago	cotti na****	*									
No. 1 No. 2	Message Massage	setting**** e DI1 ON e DI5 OFF	×	Timing1 DI ON DI OFF	DI NO./ Alarm Ch DI1 DI5	annel Alarm	NO.					
No. 3	Massage	Channel 18	Alarm No.1 (DN .	Alarm ON	CH. 18	Alarm M	lo. 1				
No. 4	Massage	Channel 18	Alarm No.1 ()F	Alarm OF	F CH. 18	Alarm M	lo. 1				
No. 5	Massage	DI4 ON		DI ON	DI 4							
No. 6	Massage	Channel 18	Alarm No.3 ()FF	Alarm OF	F CH. 18	Alarm M	lo. 3				
No. 7	Massage	Channel 18	Alarm No.2 (DN .	Alarm ON	CH. 18	Alarm M	lo. 2				
No. 8	Massage	DI4 OFF		DI OFF	DI 4							
	massage											
No. 9	-	Channel 05	Alarm No.4 ()FF	Alarm OF	F CH. 5	Alarm M	lo. 4				
No. 9	Massage		Alarm No.4 (Alarm No.2 (Alarm OF Alarm ON		Alarm N Alarm N					
No. 9 No. 10	Massage Massage		Alarm No.2 (
No. 9 No. 10	Massage Massage	Channel 04 Unit defini No. 2	Alarm No.2 (ition*****)N No. 4	Alarm ON							
No. 9 No. 10 *****	Massage Massage Ori gi nal	Channel 04 Unit defini No. 2	Alarm No.2 (ition***** No.3 mPa SE(NO. 4	Alarm ON No.5 No	CH. 4						

*****DI function setting*****

	c start/s alue calc			Rec start/ Rec start/						
	I-2 Fvalue calc. reset I-3 Totalize start/stop									
	nction in		DI-8 Fvalue calc. reset DI-9 Totalize start/stop							
DI-5 Re	Rec start/stop DI-10 Totalize reset									
****Eth	ernet set	:ting*****								
Ethernet	setting									
IP Addre		192	. 168	. 0 .						
Subnet m		255 0	. 255 . 0	. 255 .						
Defaul t	gateway	0	. 0	. 0 .	0					
	ver settin	-								
	er functi									
Access c	ontrol	ON								
Web Serv	ver settin	ıg								
Web serv	ver functi	on ON								
E-mail s	etting									
E-mail f	`uncti on	ON								
MODDUG -	CD/LD -	ting								
	CP/IP set CP/IP fun	-								
		2.1								
	ount sett									
		Password a19b23	User le Adminis							
 System Kiroku 		a19623 65790	Guest	i a cui						
3.			Adminis	trator						
4.			Adminis							
5.			Adminis	trator						
6.			Adminis							
7.			Adminis							
8.			Adminis	trator						
+++		++								
	nail setti	-								
	i server) s mail add	IP address		198 . 0 35@test.co.						
Sender's		11 033	Boilerd		16					
	Hano		2011010							
Recei ver	's mail a	ddress								
		est.co.jp								
	ku-Kei ko@	test.co.jp								
3.										
4. E										
5. 6.										
7.										
8.										
	rigger se itle	etting		Text 1			Te	xt 2		
		anufacturi ng			nufacturi	ng bea			oiler03	35
		report at re				• •		iler035		
	ne tempera	ature is abr	normal! -	The tempera	ture is a	abnorma	I. Bo	iler035	5	
No. 2 B										
No. 2 Be No. 3 TI No. 4										
No. 2 Be No. 3 TI No. 4 No. 5										
No. 2 Bo No. 3 TI No. 4 No. 5 No. 6										
No. 2 B(No. 3 TI No. 4 No. 5 No. 6 No. 7										
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8										
No. 2 B(No. 3 TI No. 4 No. 5 No. 6 No. 7										
No. 2 Ba No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9										
No. 2 Be No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Trigger	-	Timming1	Ti mmi ng			No2	No3	No4	No5	No6
No. 2 Br No. 3 TH No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Trigger No. 1 D	I ON	DI 2	-	ON	ON	ON	0FF	OFF	OFF	0FF
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Trigger No. 1 D No. 2 Ti	I ON imer cycle	DI 2 e 12hour	- 01: 00	ON ON	ON ON	ON OFF	OFF OFF	OFF OFF	OFF OFF	OFF OFF
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Tri gger No. 1 Di No. 2 Ti No. 3 Ai	I ON imer cycle larm ON	DI 2 e 12hour channel 1	- 01: 00 No. 4	ON ON ON	ON ON ON	ON OFF ON	OFF OFF OFF	OFF OFF OFF	OFF OFF OFF	OFF OFF OFF
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Tri gger No. 1 D No. 2 TI No. 3 AI No. 4 No.	I ON imer cycle larm ON one	DI 2 e 12hour channel 1 -	- 01: 00	ON ON OFF	ON ON ON OFF	ON OFF ON OFF	OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Tri gger No. 10 No. 2 TI No. 2 TI No. 3 AI No. 4 No.	I ON imer cycle larm ON one one	DI 2 DI 2 e 12hour channel 1 - -	- 01: 00 No. 4	ON ON OFF OFF	ON ON OFF OFF	ON OFF ON OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Tri gger No. 10 Tri gger No. 1 D No. 2 Ti No. 3 Ai No. 4 Nr No. 5 Nr	I ON imer cycle larm ON one one one	DI 2 e 12hour channel 1 -	- 01: 00 No. 4	ON ON OFF OFF OFF	ON ON OFF OFF OFF	ON OFF ON OFF OFF	OFF OFF OFF OFF OFF	OFF OFF OFF OFF OFF	OFF OFF OFF OFF OFF	OFF OFF OFF OFF OFF
No. 2 B No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Tri gger No. 10 Tri gger No. 10 No. 2 Ti No. 2 Ti No. 3 Ai No. 4 Nu No. 5 Nu No. 6 Nu	I ON imer cycle larm ON one one	DI 2 e 12hour channel 1 - -	- 01: 00 No. 4 - -	ON ON OFF OFF	ON ON OFF OFF	ON OFF ON OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF	OFF OFF OFF OFF
No. 2 Br No. 3 TI No. 4 No. 5 No. 6 No. 7 No. 8 No. 9 No. 10 Tri gger No. 1 D. No. 2 Tri no. 3 No. 4 No. 5 No. 5 No. 6 No. 5 No. 6 No. 7 No. 6 No. 7 No. 6 No. 7 No. 8 No. 7 No. 8 No. 6 No. 7 No. 8 No. 7 No. 8 No. 7 No. 8 No. 7 No. 8 No. 9 No. 10 No. 5 No. 6 No. 6 No. 6 No. 6 No. 7 No. 6 No. 6 No. 7 No. 6 No. 7 No. 6 No. 8 No. 7 No. 8 No.	I ON I mer cycle I arm ON one one one one	DI 2 e 12hour channel 1 - - -	- 01: 00 No. 4 - - -	ON ON OFF OFF OFF	ON ON OFF OFF OFF	ON OFF OFF OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF OFF OFF OFF OFF

No8

OFF

0FF

OFF OFF

0FF

OFF OFF

0FF

OFF OFF

SHINKO TECHNOS CO., LTD.OVERSEAS DIVISIONReg. Office : 2-5-1, Senbahigashi, Minoo, Osaka, 562-0035, JapanTel : 81-72-727-6100Fax : 81-72-727-7006URL : http://www.shinko-technos.co.jpE-mail : overseas@shinko-technos.co.jp