Temperature Recording System

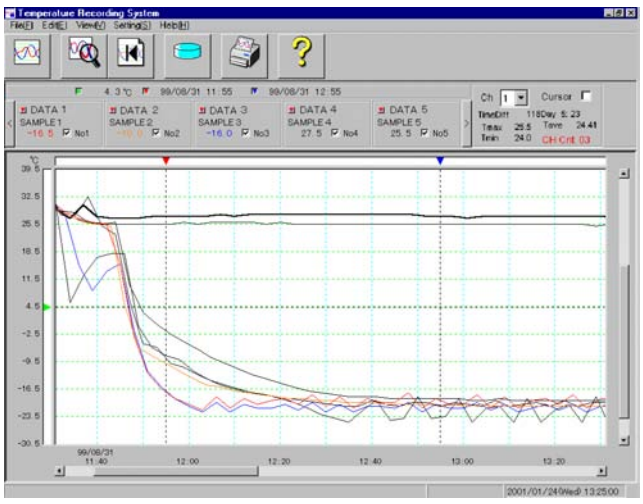
HIOKI

Software Operation Manual

DataPico

(for Windows98/Me)

Thank you for your purchase of our product.
Before using this system, read this Software Operation Manual for the proper operation.
This manual should be retained carefully. It will surely be helpful for the future use.



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HIOKI E. E. CORPORATION

Introduction

Thank you for your purchase of the Temperature Recording System<Data Reader>.

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4.Operating Procedure

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2.Settings

The description of the Settings to use the Temperature Recording System.

5.Others

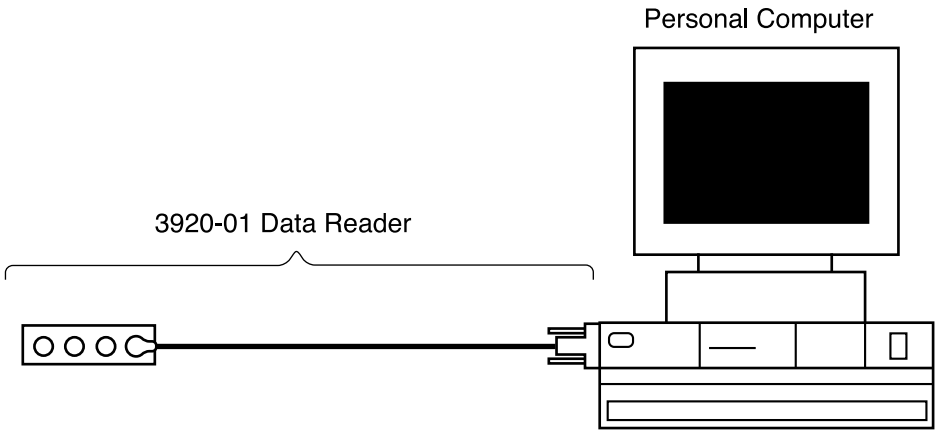
3.3650 Operating

The description of the operating procedure of the 3650.

Operating Requirements 1

Hardware Requirements

The hardware configuration of the Temperature Reader System is illustrated as below.

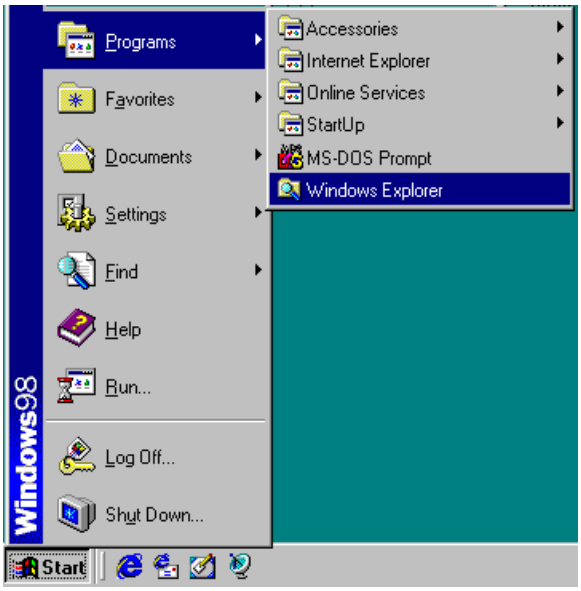


The Installation Procedure 1

While the following explanation applies specifically to Windows 98, the procedures are identical for Windows Me, although button names may differ slightly.

(1) Before the installation,
exit all other active programs.
Otherwise, the installation procedure may be result in.

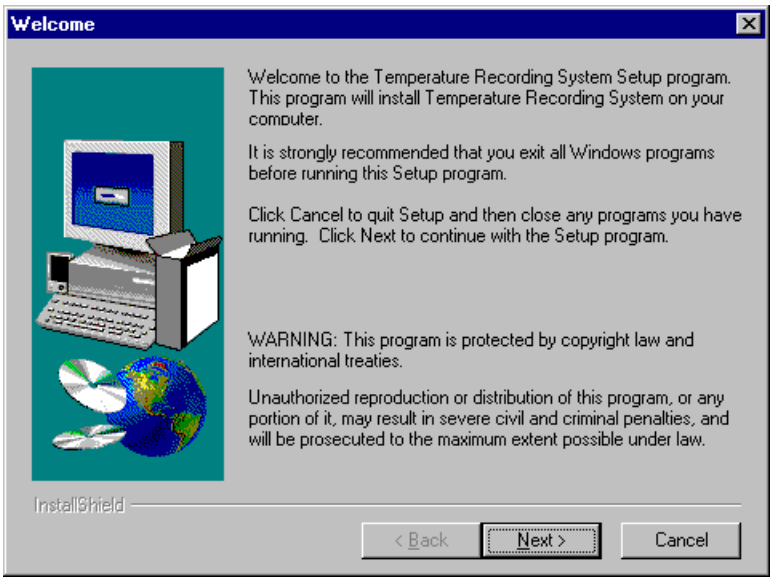
(2) Installation
Click the Start button, select Programs, select Windows Explorer.



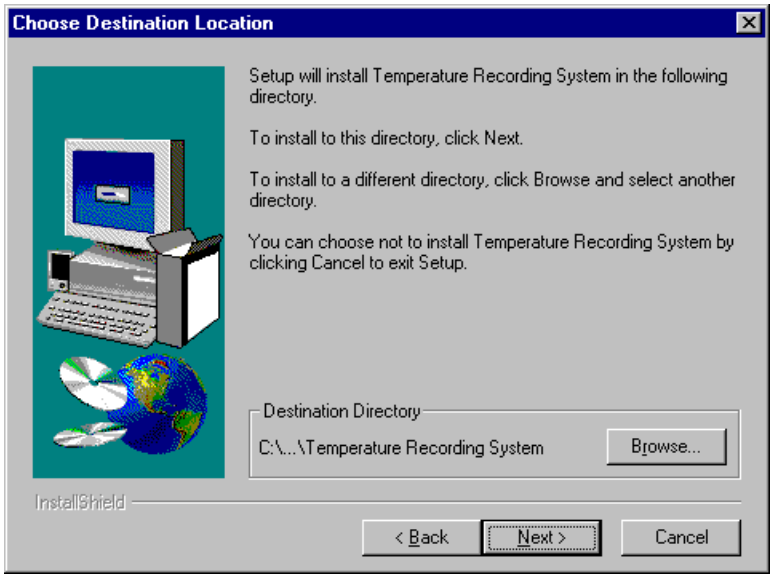
Insert the CD-R into the CD-ROM drive of the computer, double click on the [Setup.exe] in the english folder on the CD-R.

The Installation Procedure 2

With some computer during the installation, a screen may appear asking you whether to reboot the computer to update the system configuration. In such a case, reboot the computer, then start the installation again(follow the installation procedure 1).

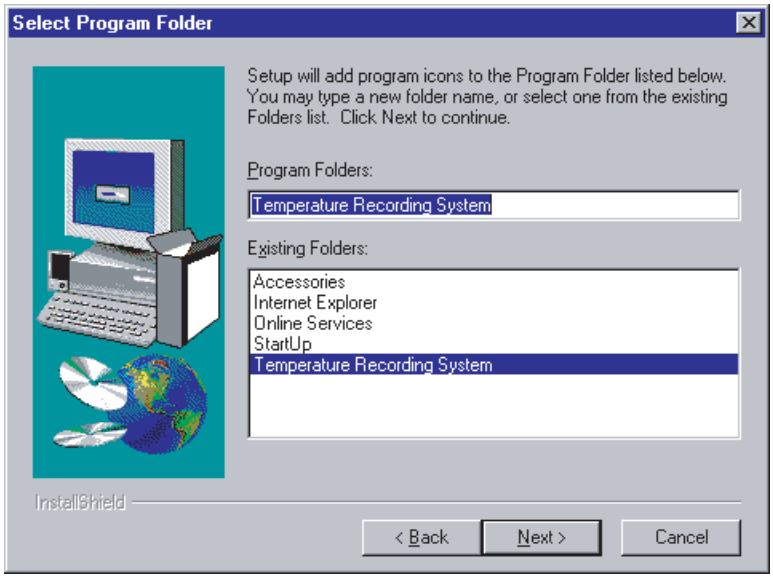


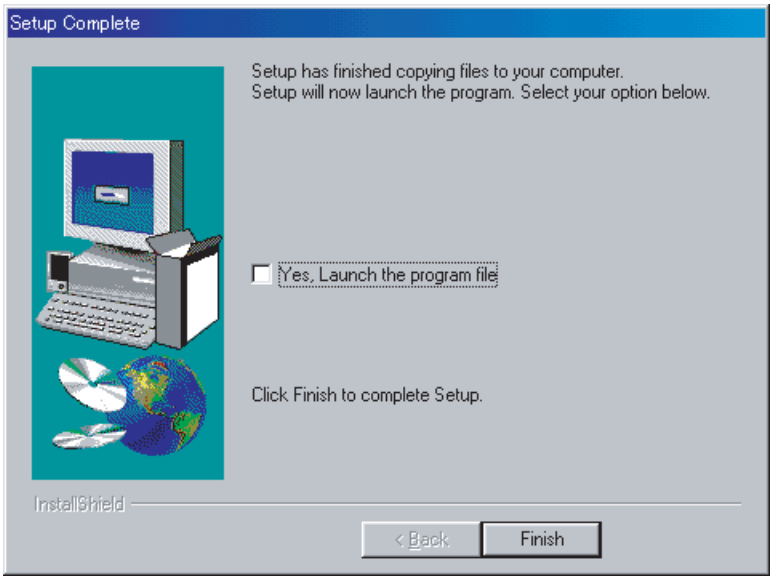
Pressing the "Next" buttons will load the program into the hard disk drive of the computer. It is recommended to that the default installing directory not be changed.



Operating Requirements 3

The Installation Procedure 3





The installation is complete.

Attention

An error message may appear during the installation, since some of the existing Windows shared files are overwritten.
in such a case, choose "Ignore" to skip the error message and continue the installation. Skipping the error message will not affect any other application programs.

Starting the System

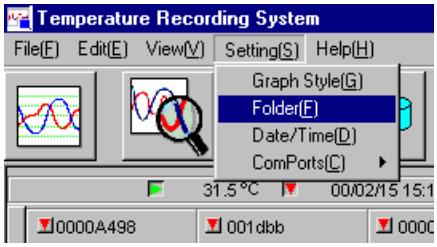
After the installation is complete, the [Temperature Recording Syatem] Group is created in the program menu. Click the [TempRec] icon in the Group to run the system.

Settings 1

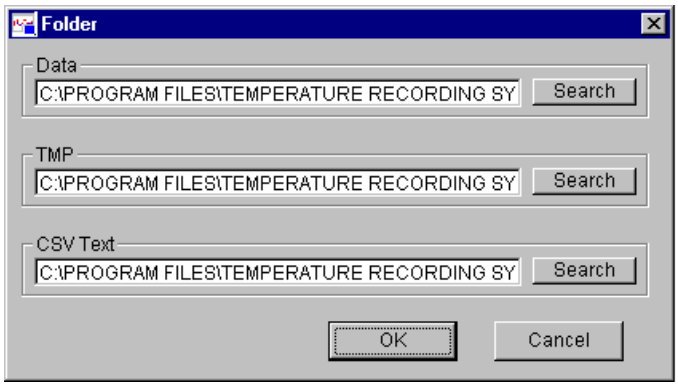
Before using the Temperature recording System, Do the following settings.

Folder Setting

Set the folders used by the "Temperature Recording System" in the first place.



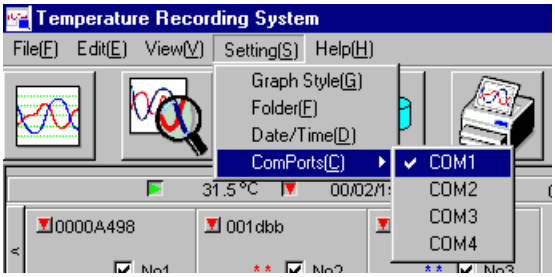
From the "Setting" menu,select "Folder".



- Data : Designate the folder to save the data read by the "3650 Temperature Reader". Press "Search" to select folder from the list.
- TMP : Designate the folder for temporary data.
- CSV Text : Designate the folder to save the CSV-converted data file.

COM Ports Setting

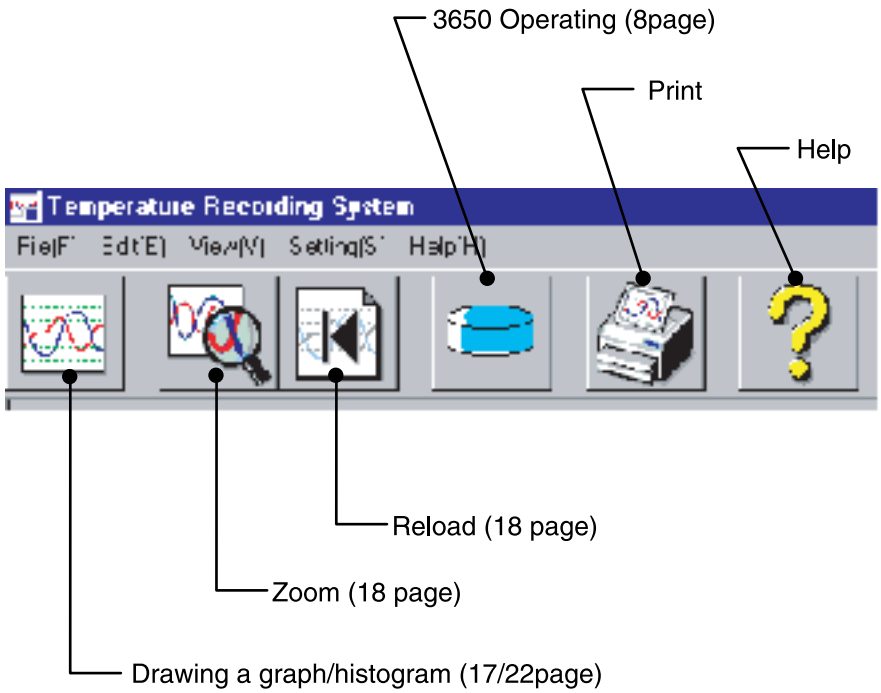
Set the serial ports connected with the Data Reader. The speed of the serial port is set automatically. As shown in the following figure, select Setting from the menu and click "ComPorts" to display COM1 to COM4. Select a COM port to use.



All of the settings before using the Data Reader are complete.

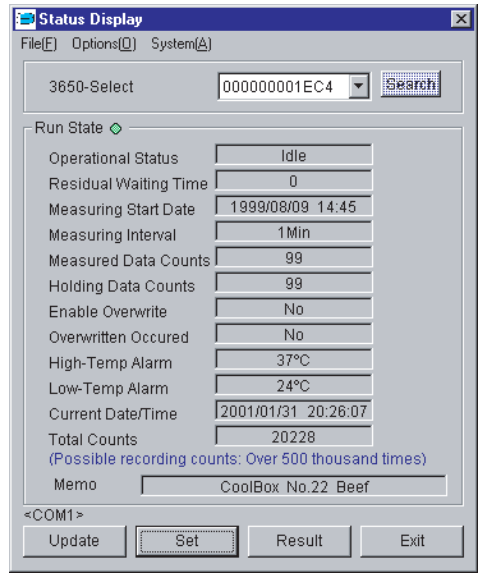
The features of the Toolbar

In the "Temperature Recording system", toolbar is used to proceed the operation. The function of each button is illustrated as below.



Status Display Screen

Pressing the  button will display the dialogue as illustrated below.
Select one of the 3650s set on the Data Reader.

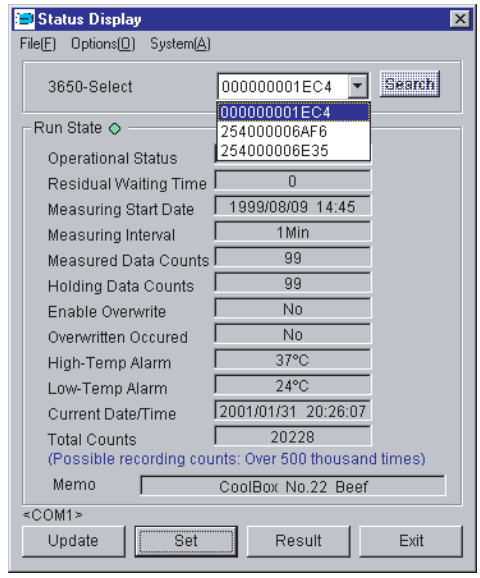


Displays the selected 3650 and the operational status

1. Press the "Search" button to the right of "3650-Select"
   (All of the 3650s set on the Data Reader will be detected. Each time the 3650 is set on the Reader, be sure to press the "Search" button.)

2. Press "▼" to select the 3650.
   (The selected 3650 is displayed in the window to the right of "3650-Select")

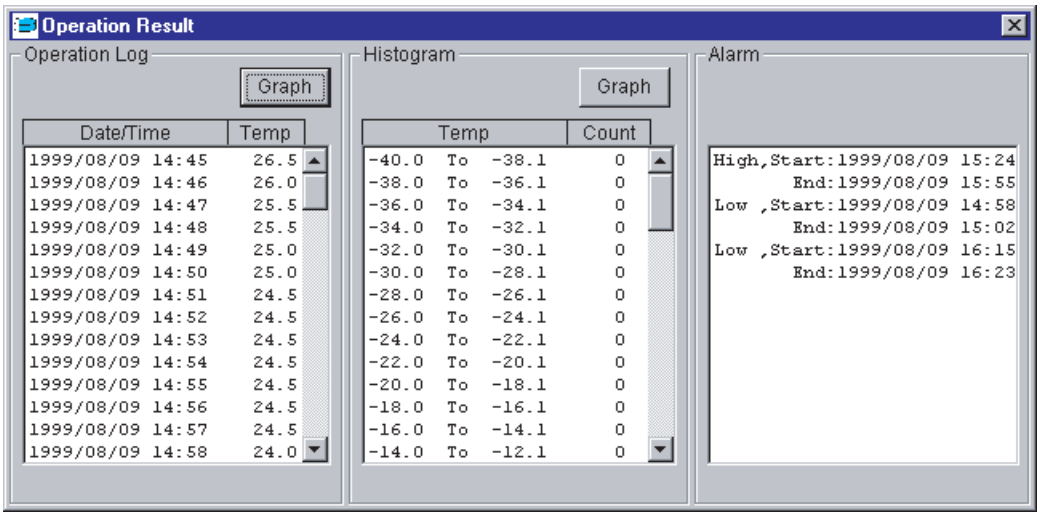
Click the "Update" button to reread current status and setup information from the 3650.
At this point, the current status and settings of the selected 3650 are displayed in the "Status Display" window. The contents of the each item are as follows:



1. Operational Status
   Displays whether the 3650 is running or idle.
2. Residual waiting time
   Residual waiting time before the start of measuring temperature.
3. Measuring Start Date
   The date and time to start measuring temperature.
4. Measuring Interval
   The sampling interval to measure temperature.
5. Measured Data Counts
   The total data counts from the start of the measuring temperature.
6. Holding Data Counts
   Data Counts held in the internal memory.(max. 2048 data)
7. Enable Overwrite
   Specify whether to overwrite the existing data with the new data when the internal memory is full.(max. 2048 data)
8. Overwritten Occurred
   Indicate the occurrence of the overwriting during the measurements of temperature.
9. High-Temp Alarm
   The higher limit temperature to be alarmed.
10. Low-Temp Alarm
    The lower limit temperature to be alarmed.
11. Current Date/Time
    The current date and time of the 3650 internal clock.
12. Total Counts
    The total measured counts. This number can be used to know the battery life.
    ・The symbol "!" to the right of this number denotes that the 3650 was used in the place where the temperature was over 50 . In this case, the possible measuring counts may come short of the expected counts.
    ・Note that the number displayed in YELLOW denotes the measuring counts are over 490,000 and the number in RED denotes the counts are over 500,000.
    (*)The 3650 battery(unexchangeable) lasts for the duration of 500,000 measurements. (The usage in a place over 50 may reduce the battery life)
13. Memo
    The contents of the Memo. (Can be inserted when configuring the start settings)

Operation Results Screen 1

Pressing the "Result" button in the Status Display Screen(8 page) will display the dialogue as illustrated below.

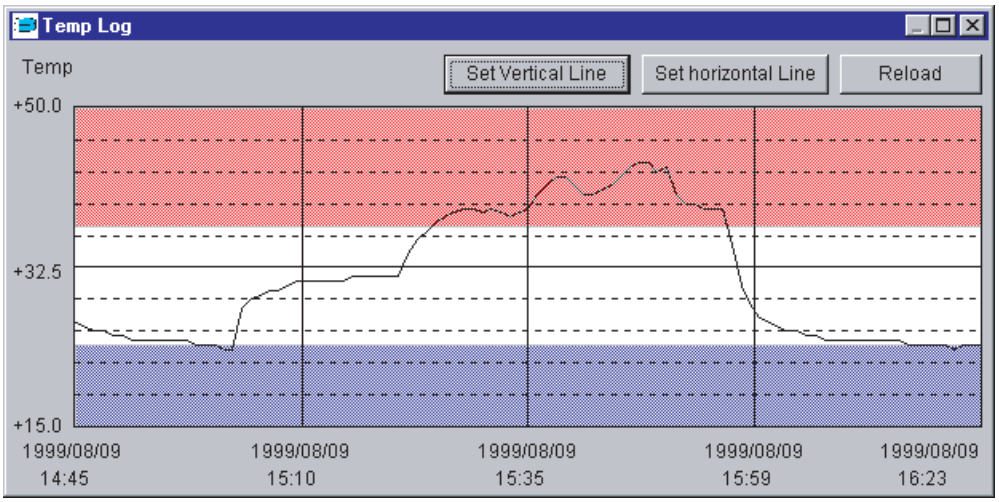


This dialogue displays all the measured data. There are three types of results in this dialogue as described below. (All the data displayed on the "Operation Results Screen" are for display-only. Refer to "Save the measured data" to save the data)

1. Operation Log (Temp Log)
   Displays the measured temperature and the date in order of time stored in the internal memory.
2. Histogram
   Displays the measured counts according to the temperature zone.
   (The overwritten data in memory full condition is also counted)
3. Alarm
   Displays the duration of alarm if it occurred. (The overwritten data in memory full condition is also alarmed)

Pressing the "Graph" button in the "Operation Log" or "Histogram" screen will display the simple graph. (The Red zone in the graph denotes high temperature alarm and the Blue zone denote low temperature alarm)

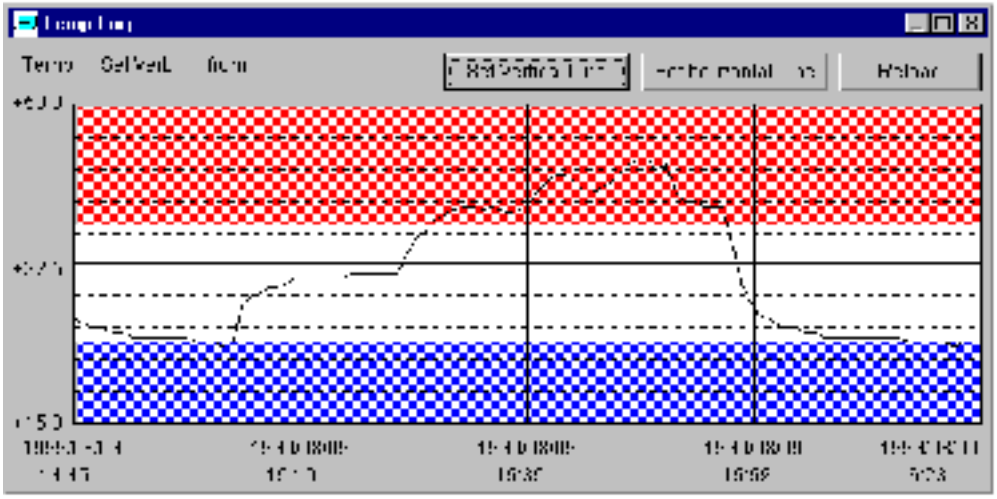
Operation Log (Temp Log)



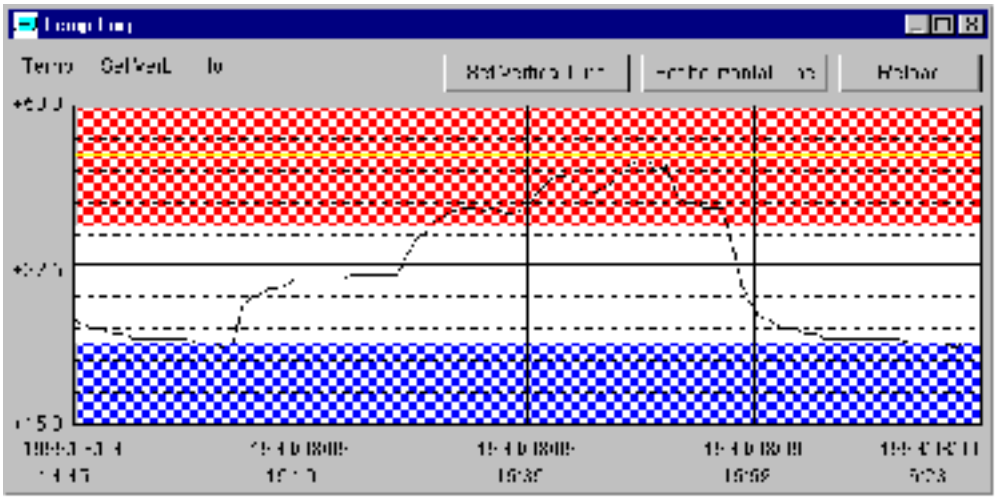
Operation Results Screen 2

The procedure to change Vertical Line

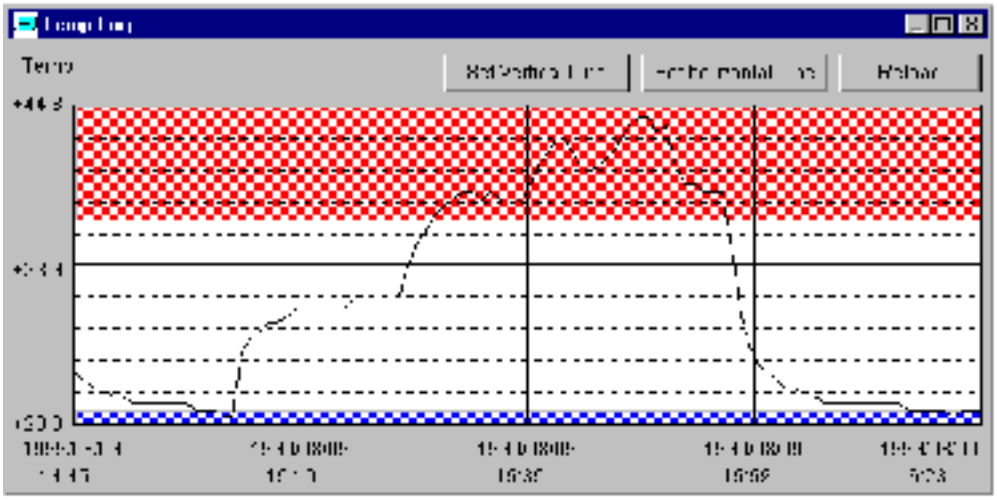
1.Press "Set Vertical Line" button.
(The button starts blinking and "Set Vert: from" appears in the upper left of the screen)



2. Move the mouse cursor to the any place on the graph and click, then the upper(or lower) limit of the temperature graph to zoom is selected.
(The boundary of the selected zone is displayed with a yellow line and "Set Vert: to" appears in the upper left of the screen)

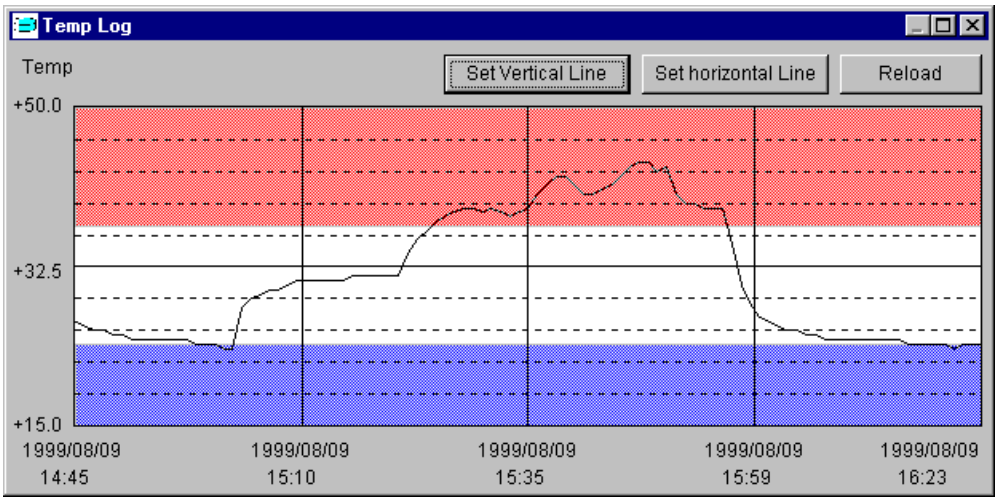


3.Move the mouse cursor to any place on the graph and click, then the lower(or upper) limit of the temperature graph to zoom is selected. At this point, the selected area of the graph is zoomed-in and displayed.

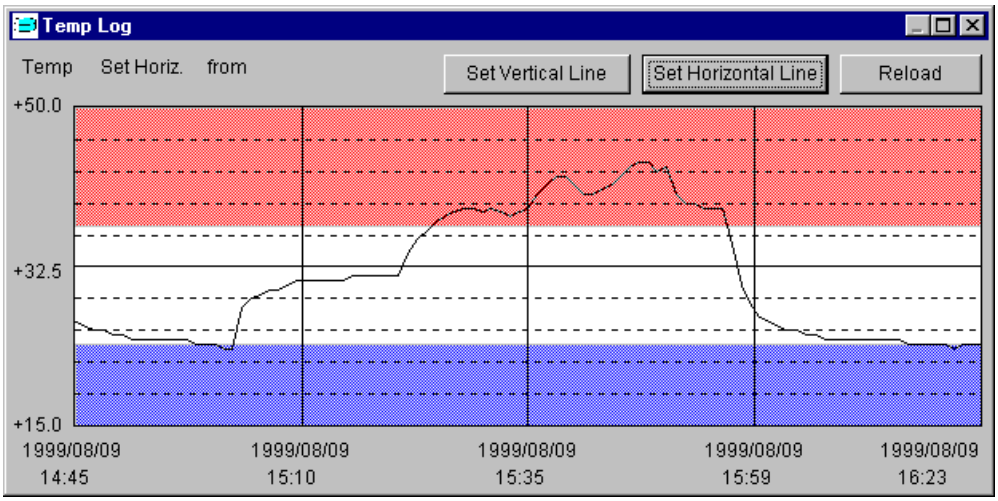


Operation Results Screen 3

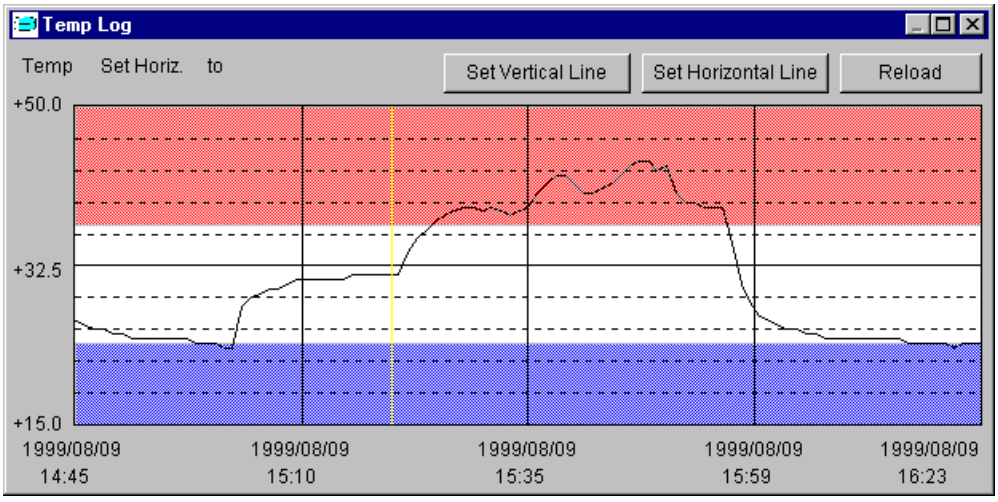
4.Pressing the "Reload" button will reload the graph.



1.Press "Set Horizontal Line" button.
(The button starts blinking and "Set Horiz: from" appears in the upper left of the screen)

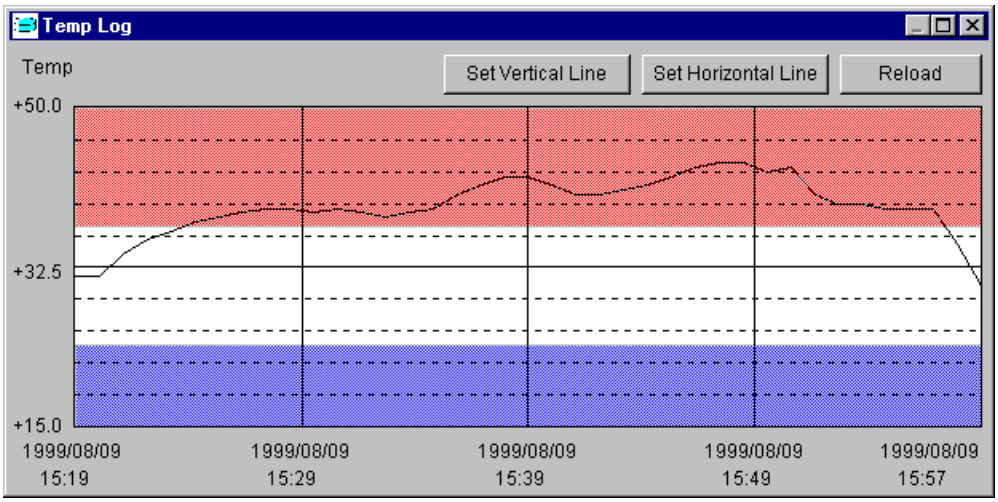


2.Move the mouse cursor to the any place on the graph and click, then the leftmost (or rightmost) of the duration to zoom is selected.
(The boundary of the selected duration is displayed with a yellow line and "Set Horiz: to" appears in the upper left of the screen)

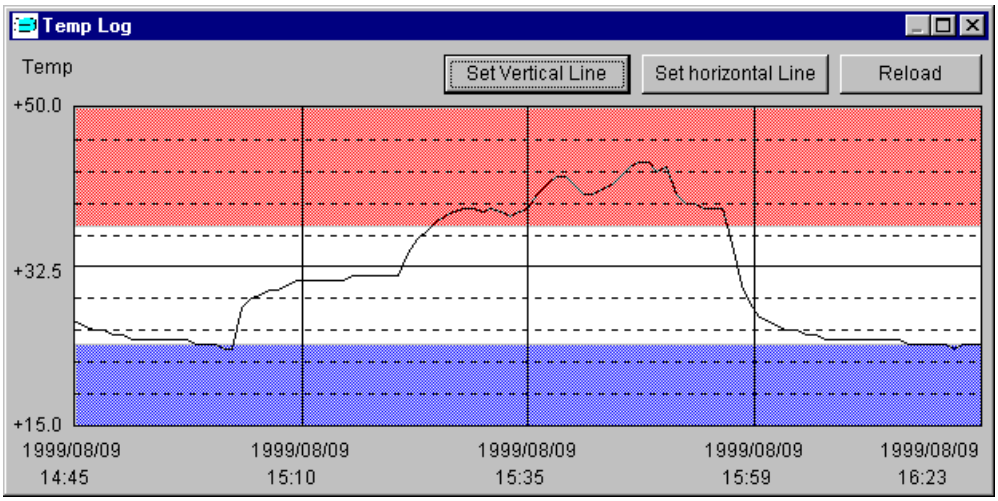


Operation Results Screen 4

3.Move the mouse cursor to the any place on the graph and click, then the rightmost (or leftmost) limit of the duration to zoom is selected. At this point, the selected area of the graph is zoomed-in and displayed.

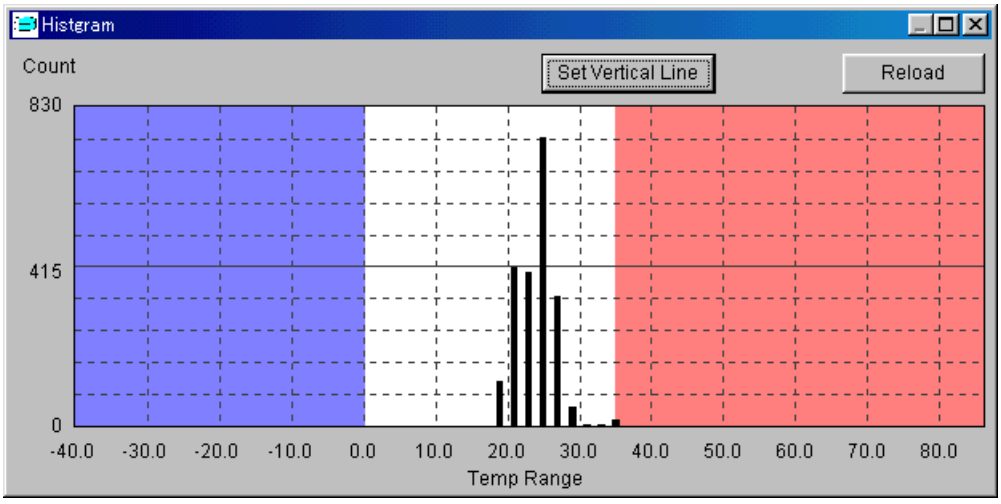


4.Pressing the "Reload" button will reload the graph.



While the zoomed-in graph is displayed, "Set Vertical Line" or "Set Horizontal Line" can be used again to zoom in the graph.

Histogram

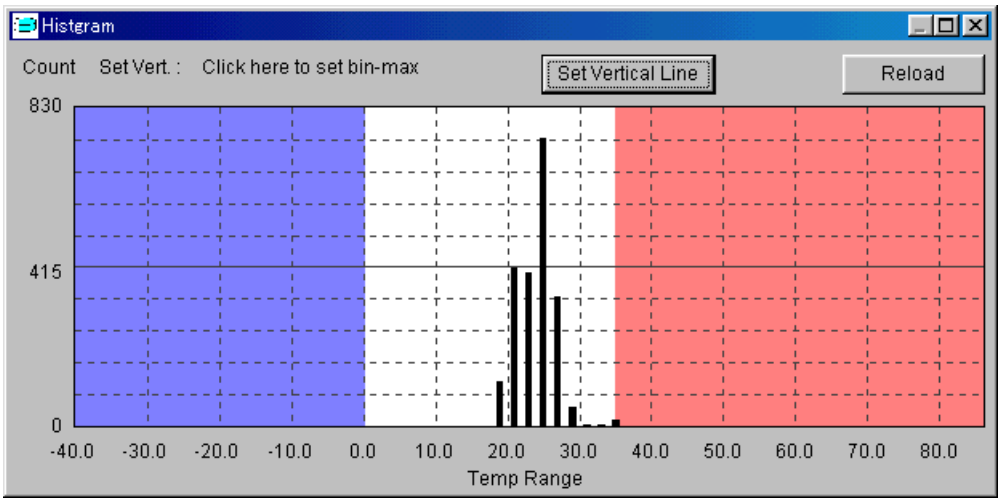


Like the Operation Log, the Histogram Screen has the "Set Vertical Line" function. This function zoom in the graph with the selected counts as the maximum.

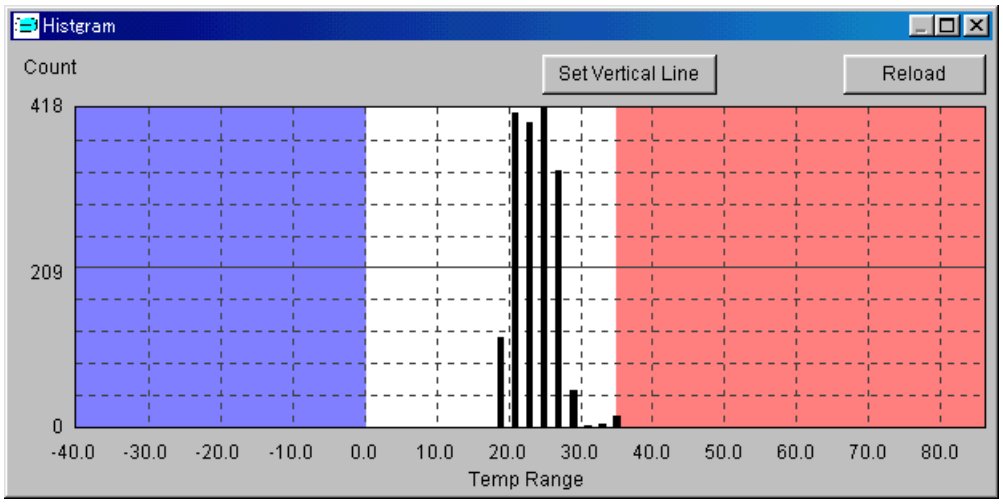
Operation Results Screen 5

The procedure to change Vertical Line

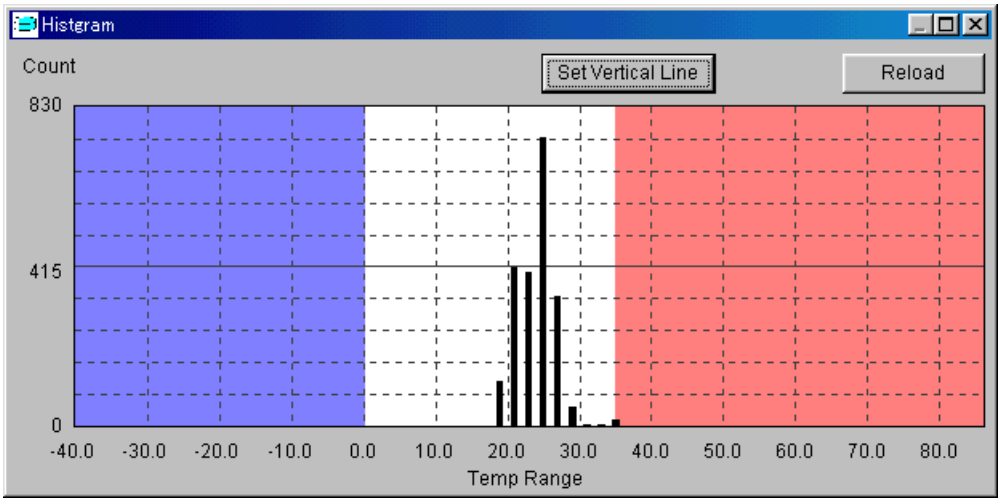
1.Press "Set Vertical Line" button.
(The button starts blinking and "Set Vertical Line: Set Max. Counts Position" appears in the upper left of the screen)



2.Move the mouse cursor to the any place on the graph and click, then the upper limit of the count is selected.
At this point, the selected area of the graph is zoomed-in and displayed.



3.Pressing the "Reload" button will reload the graph.

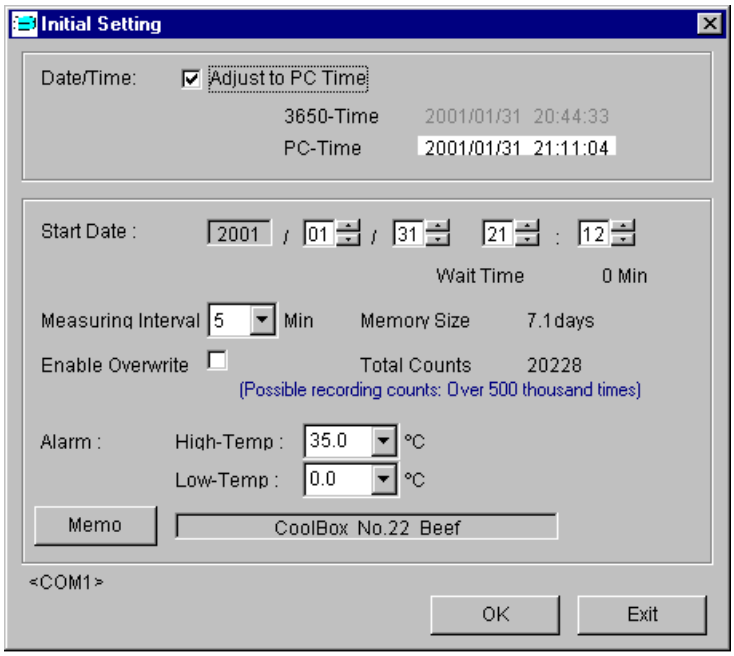


While the zoomed-in graph is displayed, "Set Vertical Line" can be used again to zoom in the graph.

3650 Operating Procedure 7

3650 Initial Settings

Pressing the "Set" button in the Status Display Screen (8 page) will display the dialogue as illustrated below.



Configure the 3650 Initial Settings from this dialogue. The contents of the each item are as follows:

1.Date/Time
Mark off the checkbox next to the "Adjust to PC Time", and the Time of the 3650 will be adjusted to the Time of the personal computer when the "OK" button is selected.

2.Start Date
Set the Date and Time to start measuring temperature. (After the "Date and Time" is set, the wait time before measuring is displayed next to the "Wait Time".)

3.Sample Interval
Set the sampling interval. (After the "Sample Interval" is set, the residual time for the memory to become full is displayed next to the "Memory Size".)

4.Enable Overwrite
Specify whether to overwrite the memory when the measured data counts exceeds the internal memory capacity. (max. 2048 data)
Mark off the checkbox to enable overwriting the internal memory with the new data.
The internal memory will keep the oldest data (max. 2048) by disabling this function, and will keep the latest data (max. 2048) by disabling this function.

5.Alarm
Set the higher limit and the lower limit of the temperature. The High Temperature Alarm occures when the measured temperature is beyond the higher limit, and the Low Temperature Alarm occurs when the measured temperature is below the lower limit.

6.Total Counts
Indicates the total measured data counts. (Refer to P.8 for details)

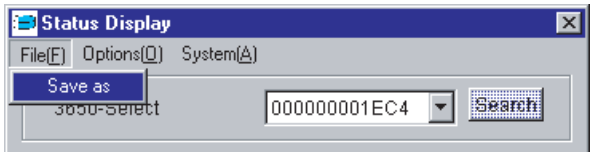
7.Memo
Memo can be attached to any measured data (within 20 characters). (Press "Memo" button to write a memo)

Press "OK" button when all the fields are filled.
(*) The settings are not valid if the "Start Date" is behind the current date and time.

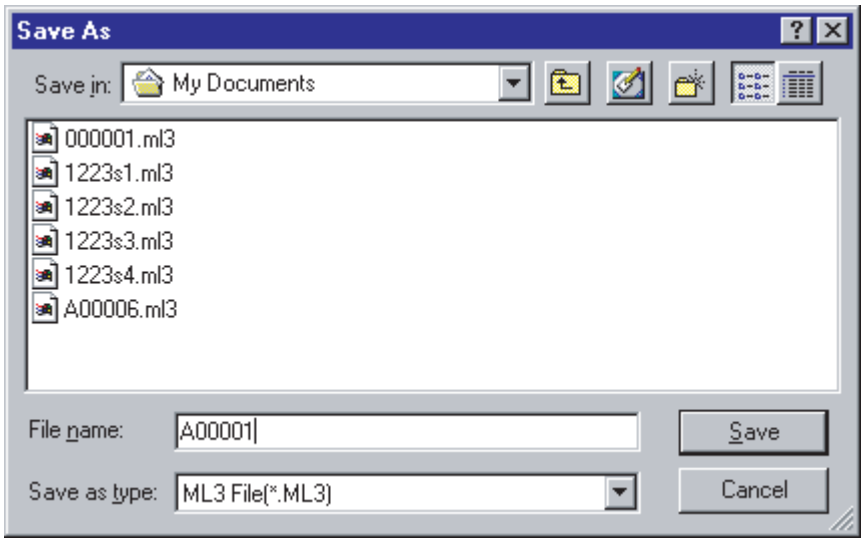
3650 Operating Procedure 8

Save the measured data in a file

The measured data read from 3650 Logger can be saved in as a file.



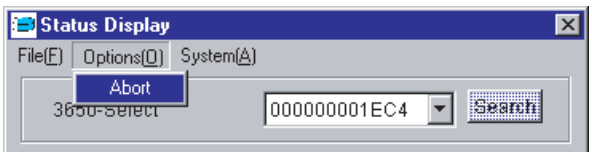
Select "Save As" from the File Menu.



Enter the file name and press "Save" button to save the measured data in the file.

Abort function

The running 3650 can be aborted, however the internal clock continues to run.



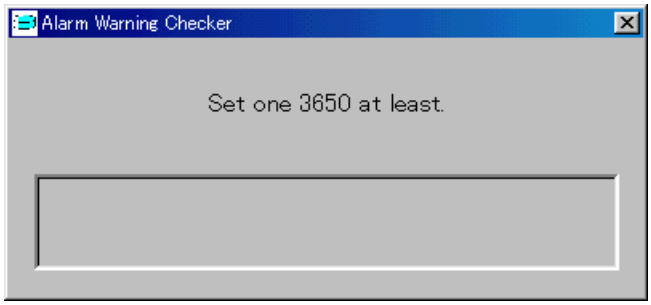
Select "Abort" in the Options menu.

Alarm Warning Software

This software is attached with an Alarm Warning software. Alarming condition of 3650 temperature can easily be detected with this software.

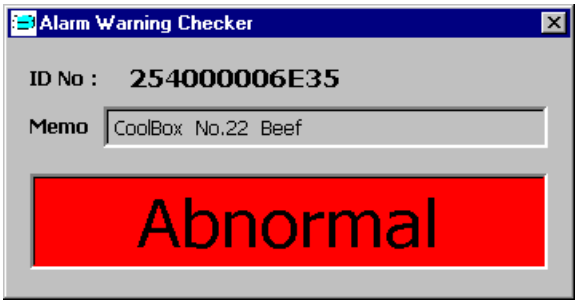
How to Use

Double click on the [AlmWng.exe] in the folder where this program is installed. And the following dialogue will appear.



Alarm Warning --- Set 3650 ---

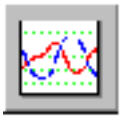
As soon as the 3650 is set on the Data Reader, the screen displays whether the temperature alarm warning has occurred. (This won't happen if several 3650s are set together. Only a single 3650 must be set on the Reader when using this function.)

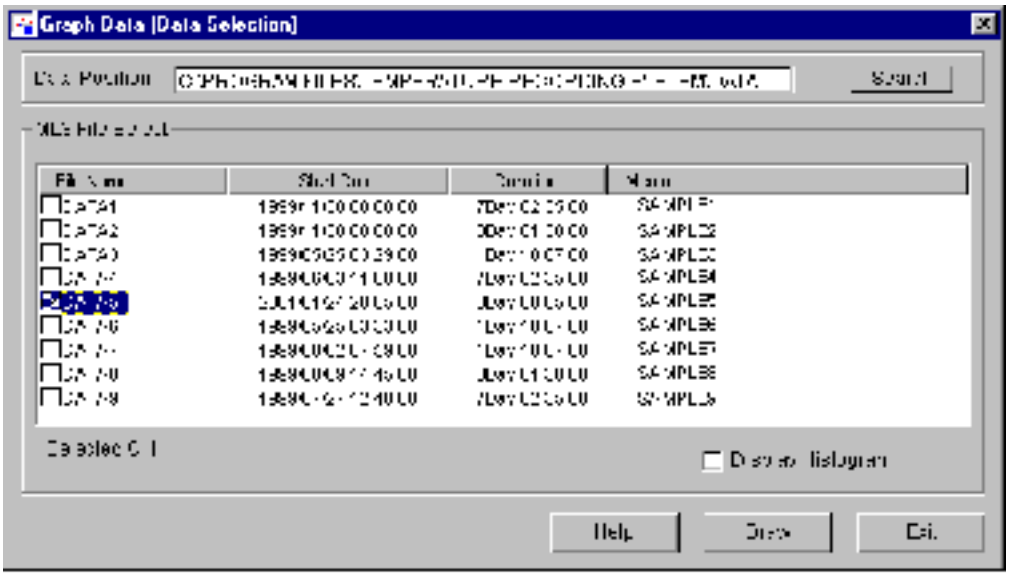


In this dialogue, the following fields are displayed.

1.ID number
The Identification Number of the 3650
2.Memo
The content of the memo
3."Normal" or "Abnormal" message is displayed in the lower window.
Normal : The temperature alarm warning has not occurred.
Abnormal : The temperature alarm warning has occurred.

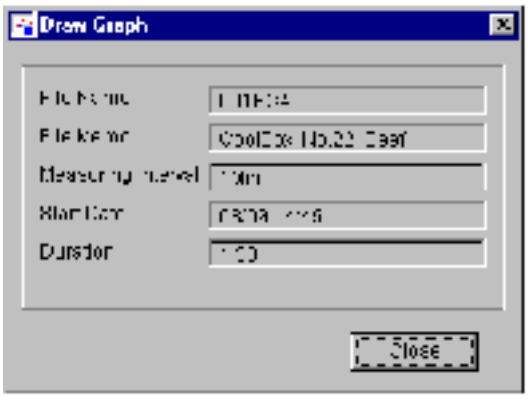
Drawing a graph

Pressing the  *button will display the following dialogue.*



Select the graph data by marking off the checkbox. Sixteen data at maximum can be selected. After selecting the graph data, press the "Draw" button.

Clicking a checkbox will display the corresponding dialogue as illustrated below.



The contents of the items in this dialogue are follows.

1.File Name
The File Name of data

2.FileMemo
The memo attached to the file

3.Measuring Interval
The time interval between the measurements of successive data

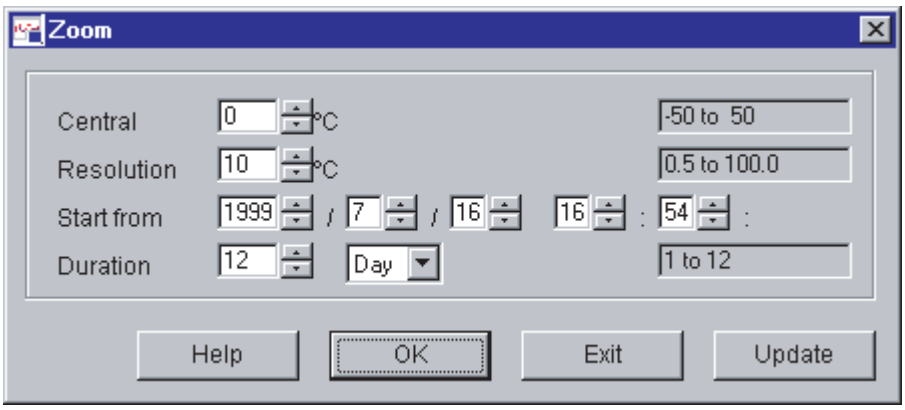
4.Start Date
The measured data of the oldest data in saved in the internal memory

5.Duration
The duration of the measured data saved in the internal memory

Operating Procedure 2

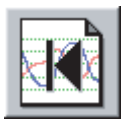
Zoom

Zoom in and zoom out the graph.



Set the fields properly and click the "OK" or "Apply" button.

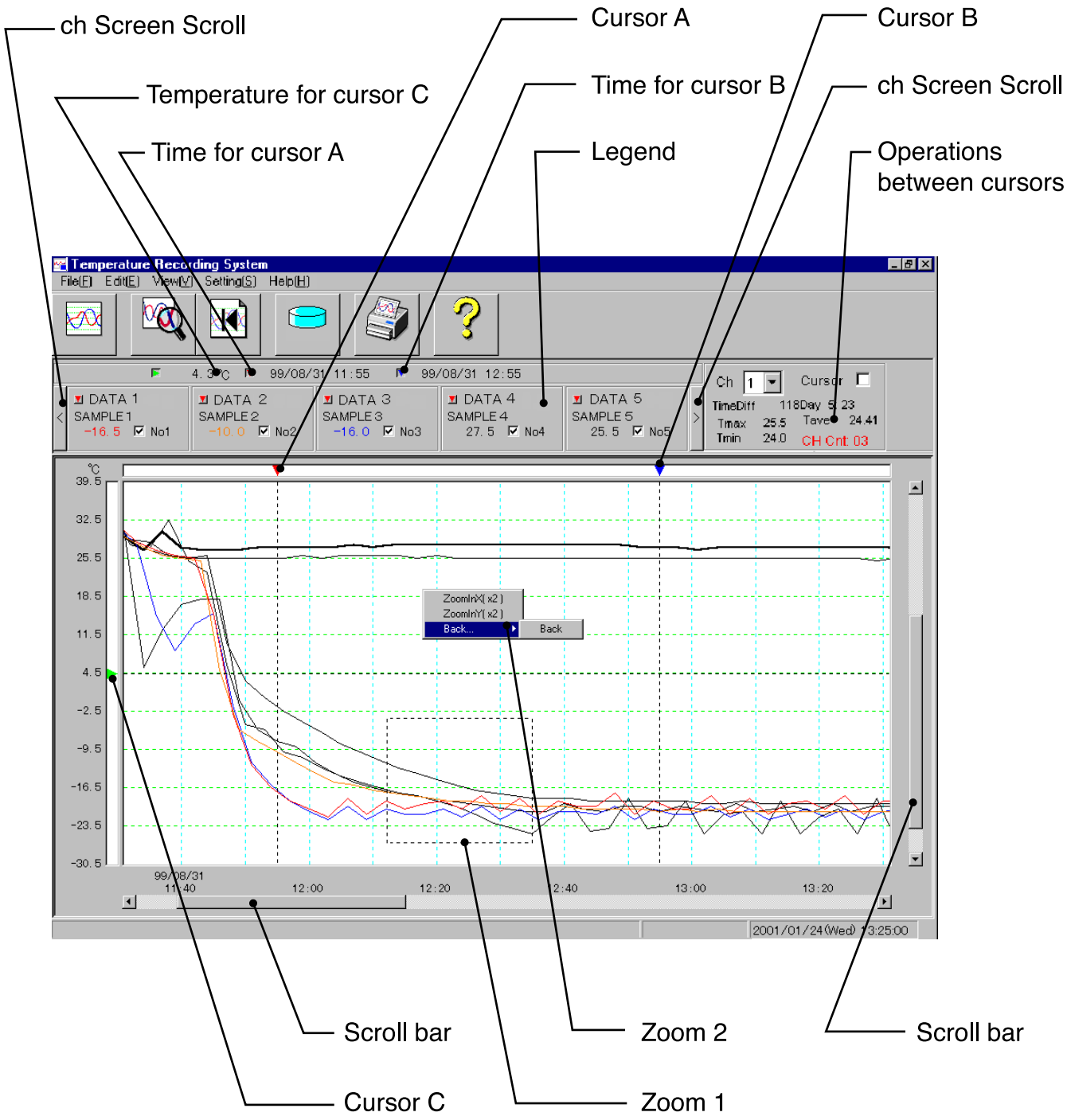
Reload



Reload the original size of the graph.

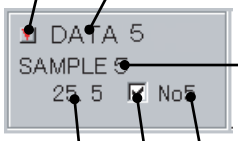
Operating Procedure 3

Operating Procedure on the Graph Display Screen



Operating Procedure 4

Legend



Selecting the cursor
Click here to switch between cursor A and cursor B. The temperature for the selected cursor is displayed as "Cursor Position Temperature."

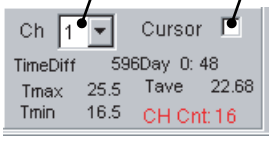
File name

Memo

ch No.

Graph display ON/OFF
Unchecking the item suppresses the graph display for this channel.

Cursor position temperature
This display color represents a graph line color.



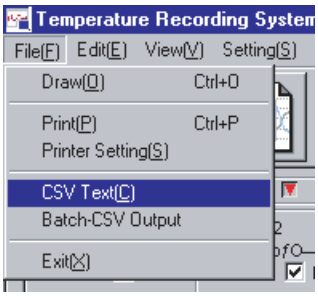
Selecting the file in which operations are to be performed

Selecting operations between cursors
Checking the item executes operations between cursor A and cursor B.

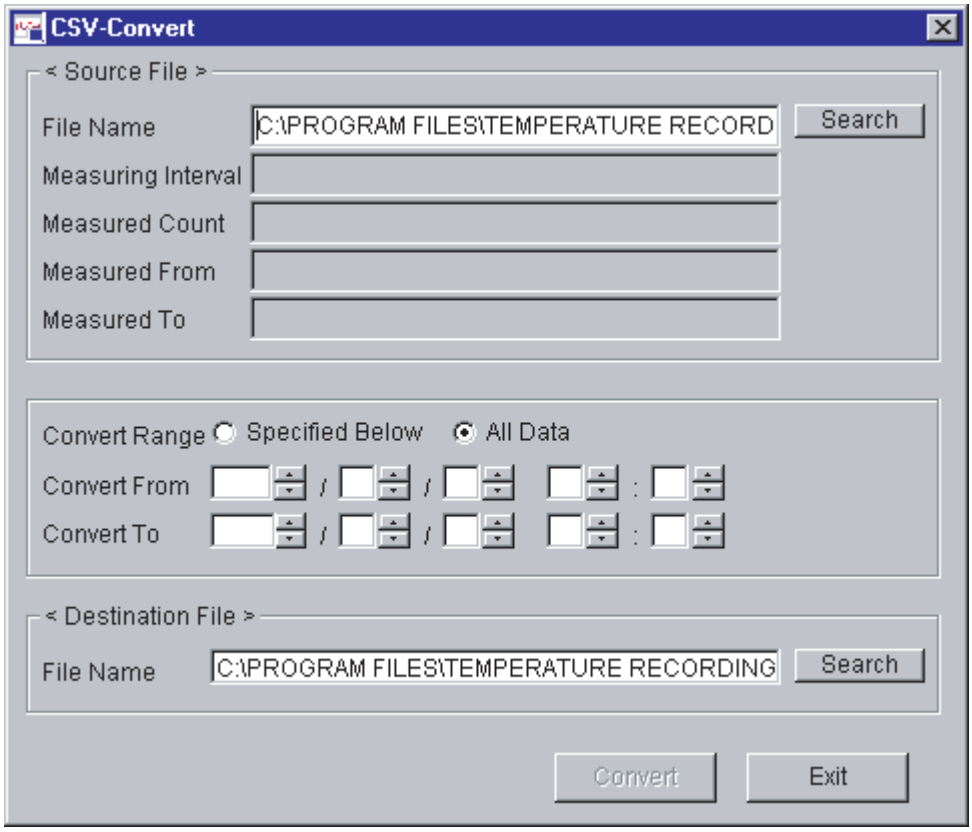
Operating Procedure 5

The conversion of the measured data into the CSV format 1

The data taken from the 3650 Temperature Logger can be converted into the CSV format for the use of spread sheet application, such as EXCEL.
The following operation converts the specified data file into CSV format.



Select "CSV Text" from the File menu.

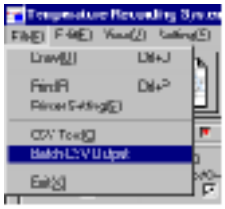


Fill in the Source File Name and the Destination File Name for conversion, then press the "Convert" button will create the CSV format file in the specified folder.

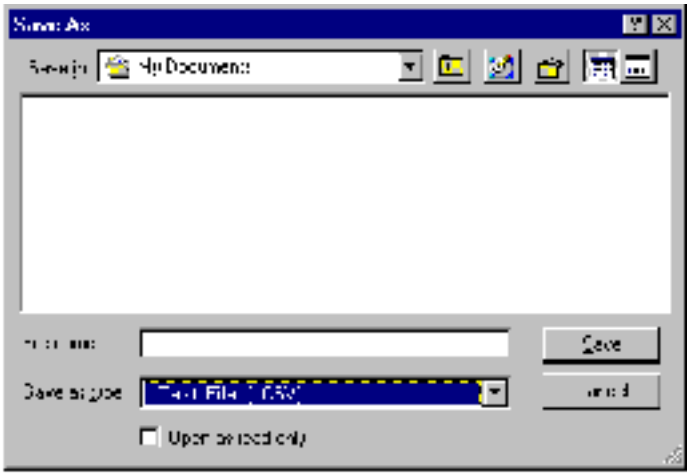
Operating Procedure 6

The conversion of the measured data into the CSV format 2

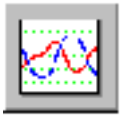
The waveform data being drawn is converted into text data in a format that can be opened by spreadsheet applications, such as Excel.
Select Batch-CSV Output from the File menu.

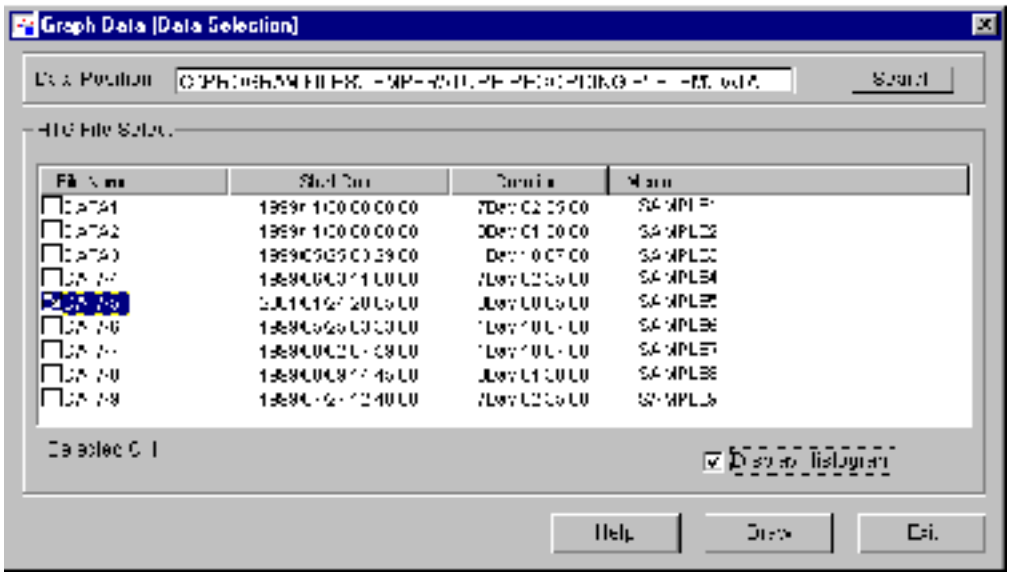


Enter a file name, then click the OK button.



Drawing a histogram

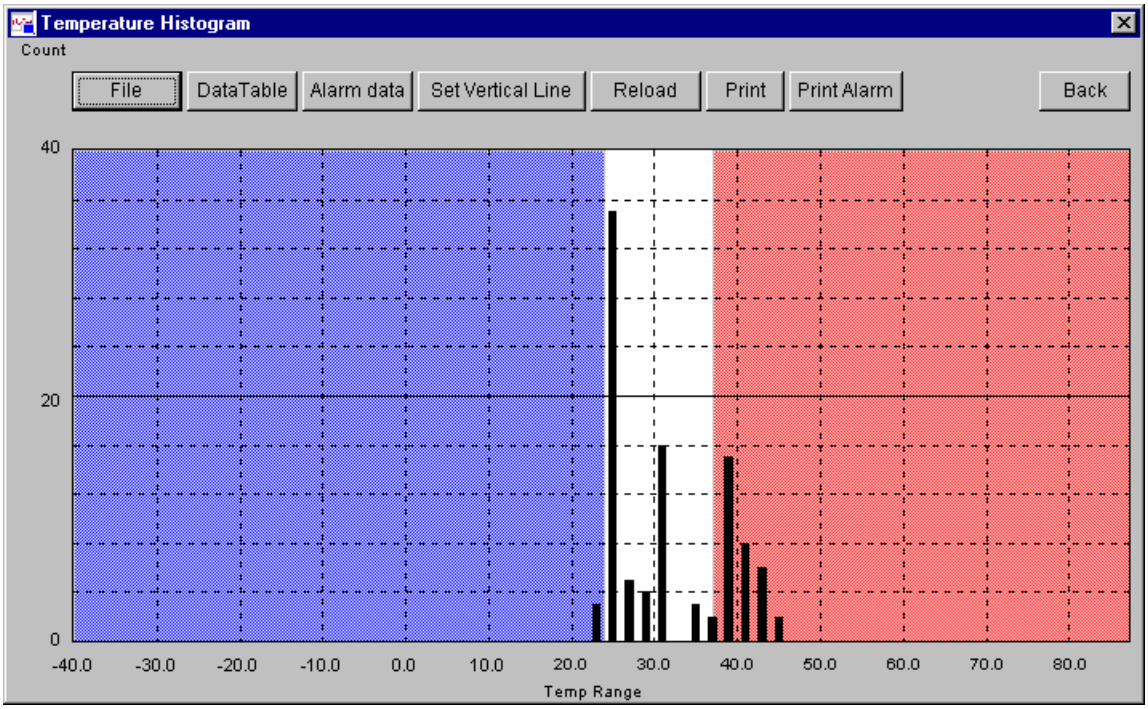
Pressing the  *button will display the following dialogue.*
To display the saved histogram file, click "Display Histogram" and enable the check mark.

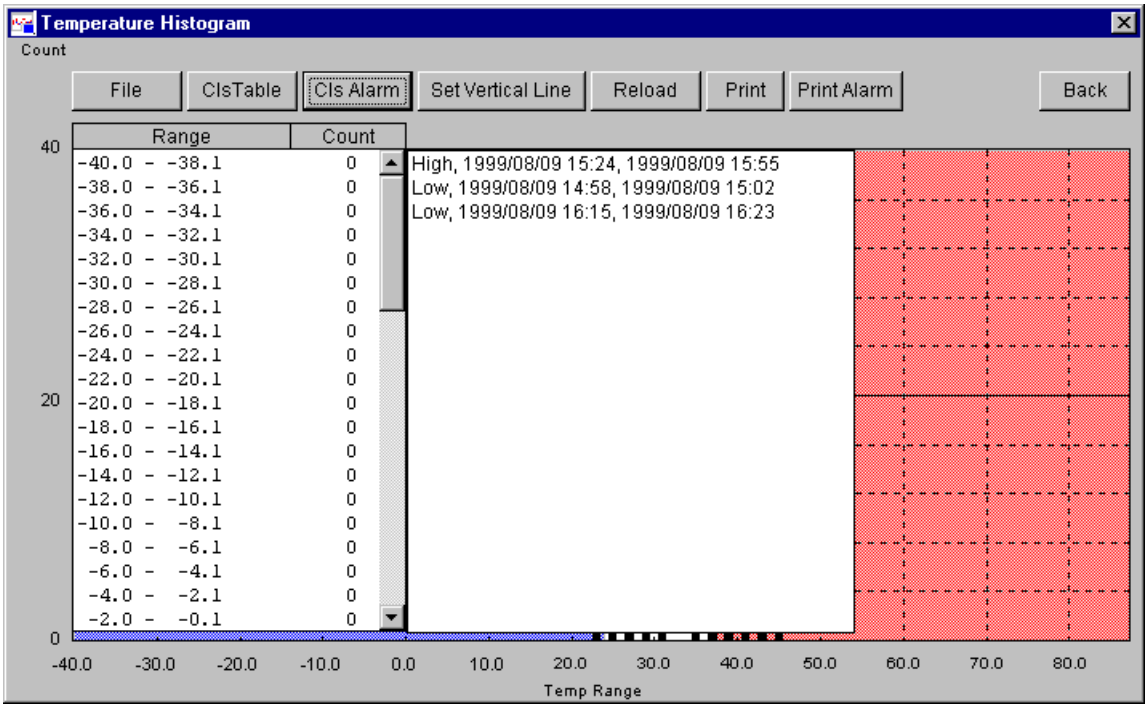


Select the graph data by marking off the checkbox. Select the data to be drawn, then click the "Draw" button. For a histogram, you may select only one unit of data.

Operating Procedure 7

Operating Procedure on the Histogram Display Screen





File	Reselects the data to be displayed.
Data Table	Displays history data on a histogram.(Click these buttons again to close the data display.)
Alarm data	Displays alarm data on a histogram.(Click these buttons again to close the data display.)
Set Vertical Line	Rescales the vertical line in a histogram.
Reload	Resets the scale of the vertical line in a histogram.
Print	Prints a histogram.
Print Alarm	Prints alarm data.
Back	Closes the histogram window.

Others

Others

See Online Help for other details.

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