

GL260

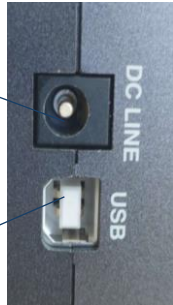
About the Unit



Unit Design

Interface

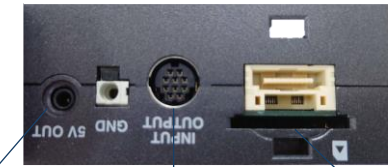
For power supply (8.5V-24V)



PC I / F
USB-Type B



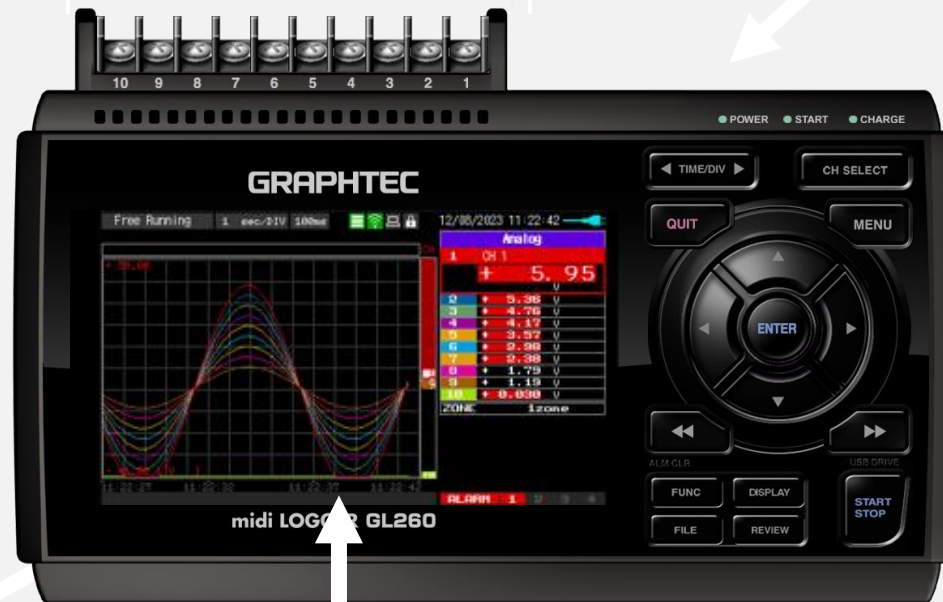
M3 screw terminal (10CH)



For B-530

For B-513

For SD card
or B-568



4.3-inch TFT color LCD

Insert Battery (New battery B-573)



Back



Power button

Control panel key

TIME / DIV: Change Time axis display width

Quit: Quit / Back

NEW
CH SELECT: Select CH Category
(Analog / Logic-Pulse / Calculation)

*Changed from "SPAN / POSI / TRACE" in GL240

MENU: Open setting menu

NEW
ENTER: Enter / **Open waveform setting**

▲▼▶◀: Cursor Key

◀◀ / ▶▶: Fast forward key (KEY LOCK)

DISPLAY: switch display mode

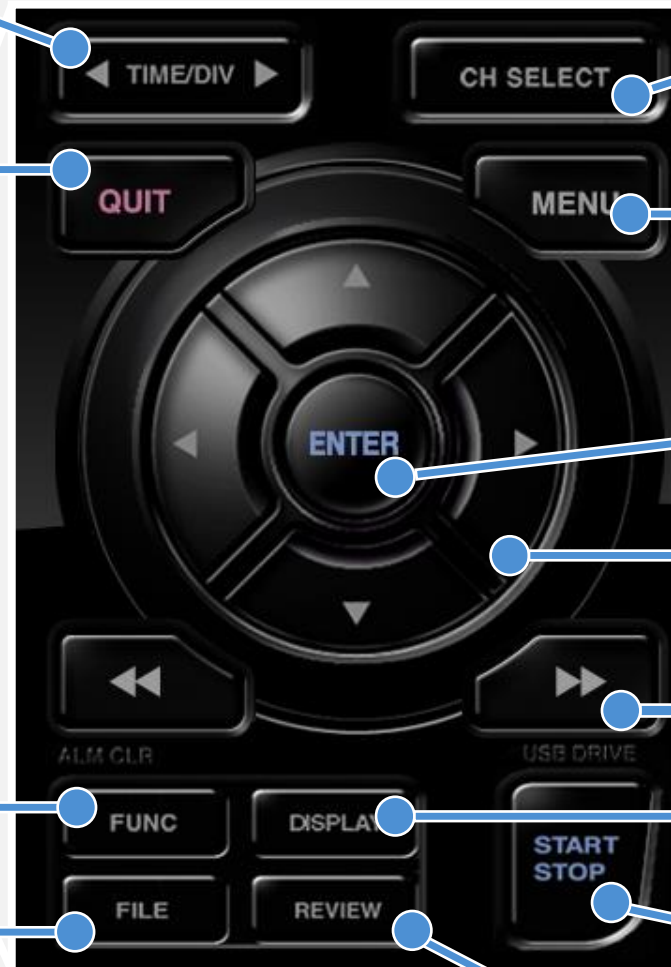
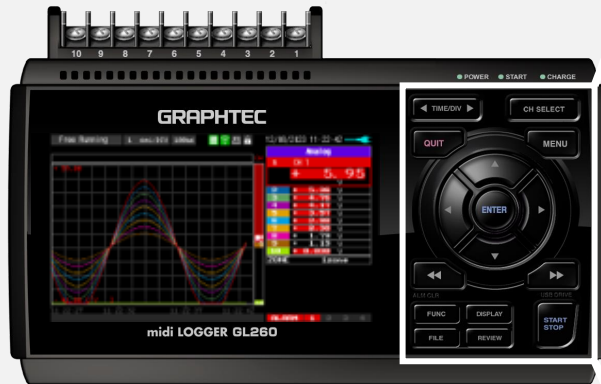
START / STOP: Start / Stop for recording

NEW
FUNC: Shortcuts for useful functions
*Changed from "Cursor" in GL240

NEW
FILE: Open File menu

*Changed from "File / Group" in GL240

REVIEW: Playback of recorded files



Improved Visibility



3 visibility improvements

Display chromaticity

Light in GL240



Dark in GL260



Increased chromaticity to improve visibility.

Changed font

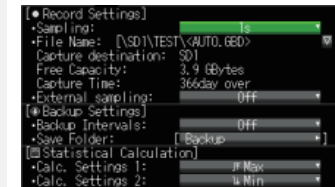
DC

DC

Added margins to improve visibility.

Changed menu tree

hard to read...



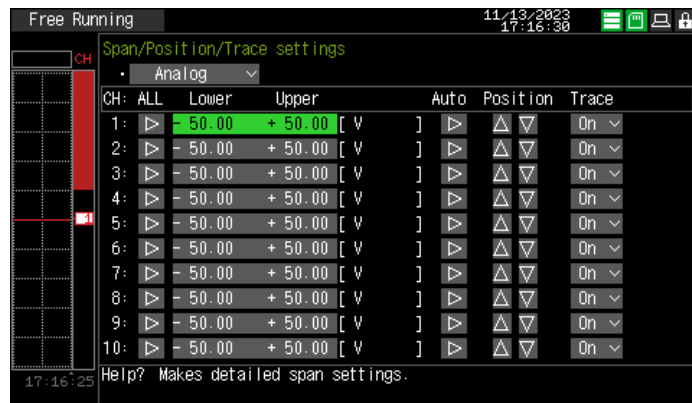
Simplified the menu tree and made it more intuitive.
(Menu Key & FILE Key)

Improved Operability



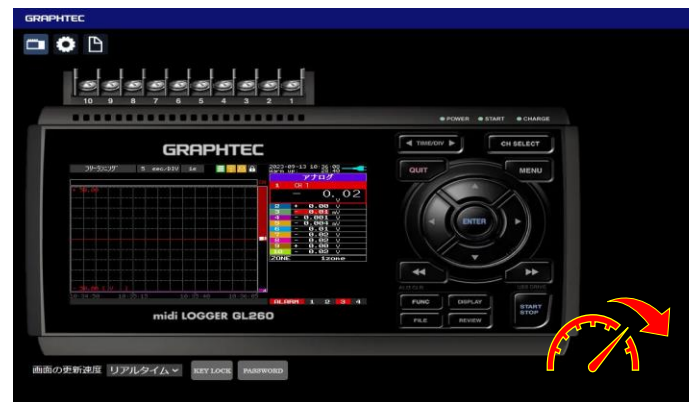
3 operability improvements

Simplified waveform setting



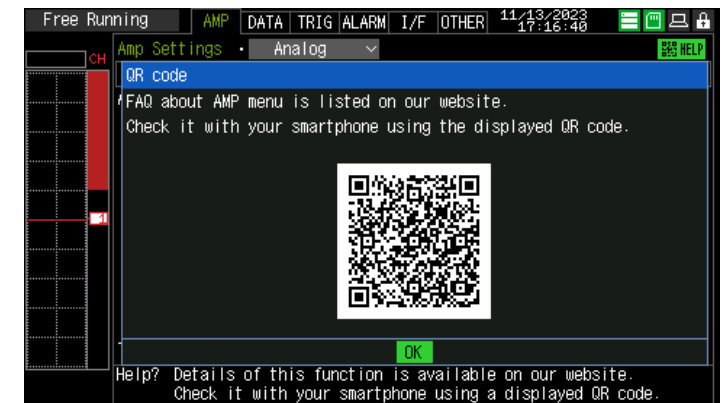
Intuitive SPAN / POSI / TRACE operation.

Web server function



Faster update speed.

HELP-QR function



QR code for more detailed information.

Simplified waveform setting

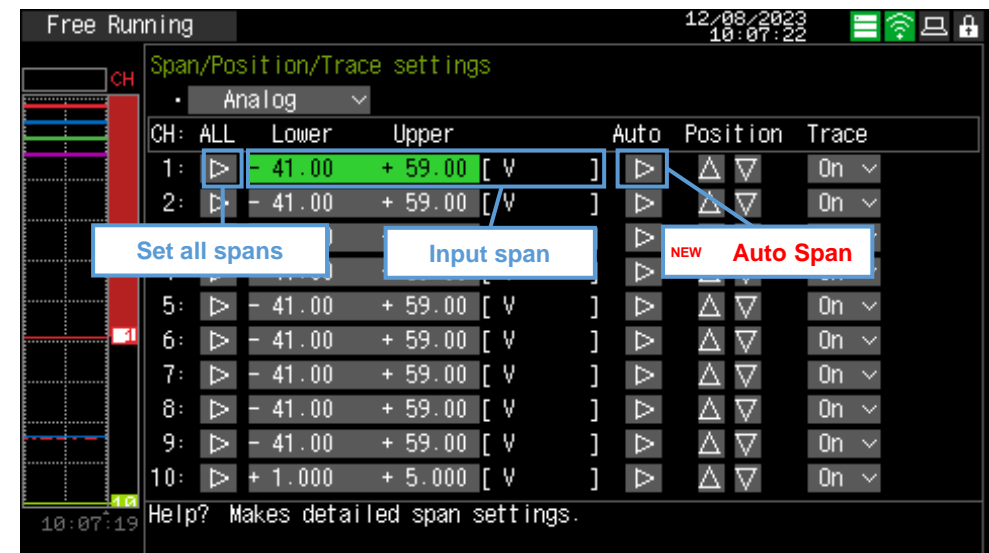


SPAN / POSI / TRACE settings can now be configured in less steps.

1 click to display waveform setting



Actual screen



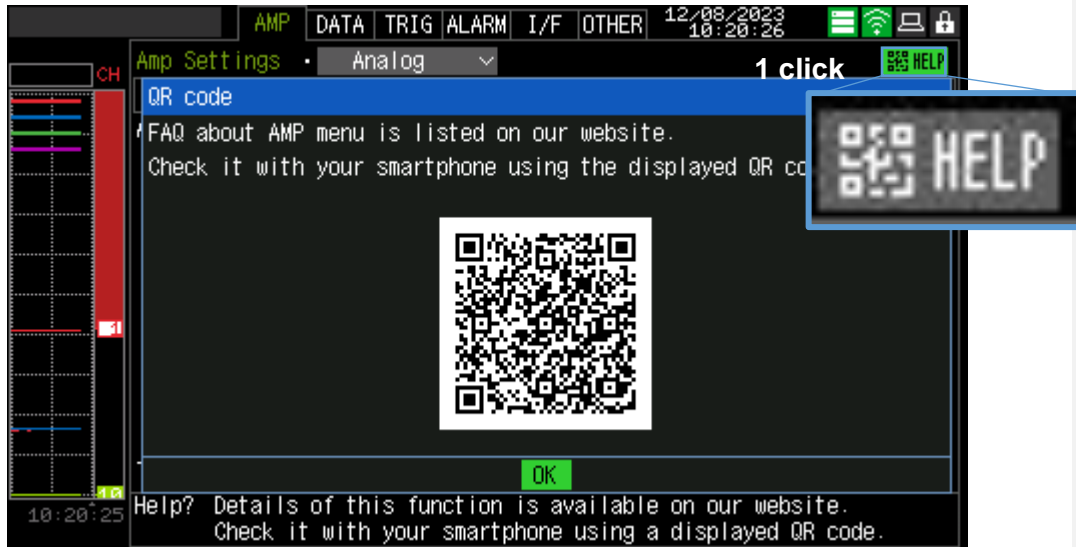
More intuitive setting with auto span

HELP – Display QR Code



Scan the QR code to see the related web page and check the detailed information.

QR code



HELP icon & QR code

Directed to FAQ



By scanning the QR code in each setting item, users can reach to information on the FAQ web page.

FAQ Supported languages: Japanese and English

Faster WEB server function



For smoother operation, CPU processing speed has been increased and settings screen has been renewed.

Faster update speed



Smooth operation is now possible with faster processing speeds.

New setup screen design



Install the same setup screen design as the logger. Data in the loggers can be downloaded.

News

The **game function** has been restored aiming to familiarize users with key operations.

Number order game Arrange in order from 1

<Rules>
Arrange from 1 to 15

[START]: Start
[CURSOR]: Move curs.
[ENTER]: Move panel
[REVIEW]: Redo
[QUIT]: End

3	1	7	
2	12	10	13
9	6	4	15
5			

Total points: 0

Number order

Reversi game [START] starts the game

<Rules>
Rival's stone is placed, upset, and one with a lot of stones wins at end

[START]: Start
[CURSOR]: Move curs.
[ENTER]: Drop stone
[REVIEW]: Pass
[QUIT]: End

Total points: 0

First mover Second mover

Reversi

1024 Game Match numbers.

<Rules>
Combine the same numbers to make 1024

[START]: Start
[CURSOR]: Move panel
[QUIT]: Quit game

Total points: 0

		2	
		2	2
			4

Elapsed: 00:00:06

1024

[START]: Start
[CURSOR]: Move curs.
[FLEFT]: Enter num.
[FRIGHT]: Enter num.
[REVIEW]: Review
[QUIT]: Quit Game

Total points: 0

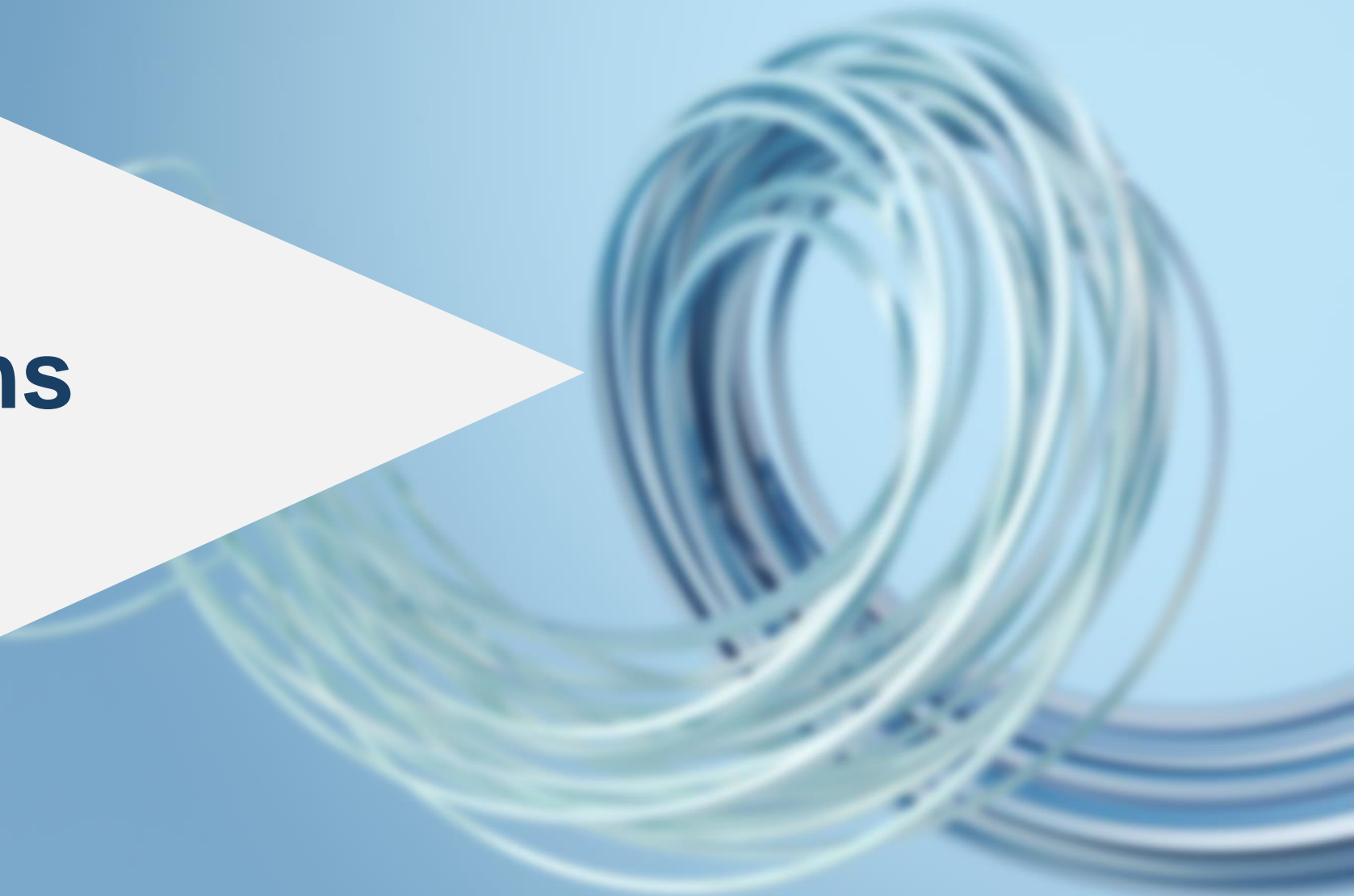
4	7	2	3	6	9	4
		5	9			
	9	3		2	8	
7	2	3	9	6		
	6	5		7	3	
		9	8			
6	2	4	7	9	3	
	8		2	1	5	

Elapsed: 00:00:30

Sudoku

< MENU > ➡ < OTHER > ➡ < Game >

New Functions





3 new functions

Alarm History



Rec	to Int Mem	11/13/2023 18:10:15
==== Alarm history ====		
1:	11/13/2023 18:09:44	Clear CH4
2:	11/13/2023 18:09:48	Occur CH4
3:	11/13/2023 18:09:48	Occur CH2
4:	11/13/2023 18:09:48	Occur CH1
5:	11/13/2023 18:09:49	Occur CH3
6:	11/13/2023 18:09:53	Clear CH1
7:	11/13/2023 18:09:53	Clear CH3
8:	11/13/2023 18:09:54	Clear CH2
9:	11/13/2023 18:09:54	Clear CH4
10:	11/13/2023 18:09:58	Occur CH4

Display of alarm history

New calculation

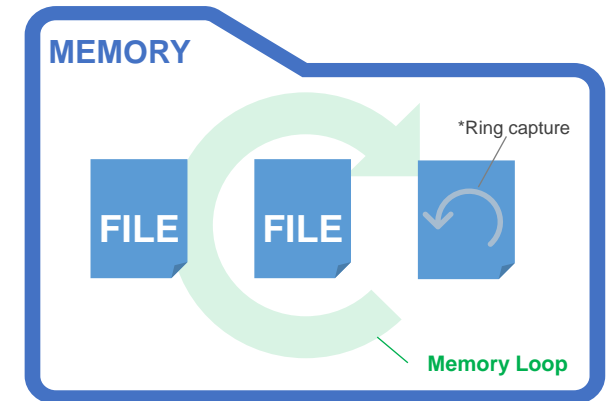


Inter-CH Op Settings
Inter-CH Op: **Operation**
 $((a * CH1) + (b * CH1) + c) * 1$
a = + 1.0000
b = + 1.0000
c = + 0.0000
[Span]
Automatically adjust:
Upper: + 1.0000 Dec pt
Lower: - 1.0000
Select: Voltage Choose
Unit: V
Help? Set inter-CH op On/Off

Calculation
1 CALC1
V

Newly installed calculation CH coefficients can be used for CH calculations.

Memory Loop



Circulation recording is now possible in relay capturing

Alarm History

What is Alarm History Function?



This function shows the date / time history of alarm occurrence / cancellation.

Actual screen

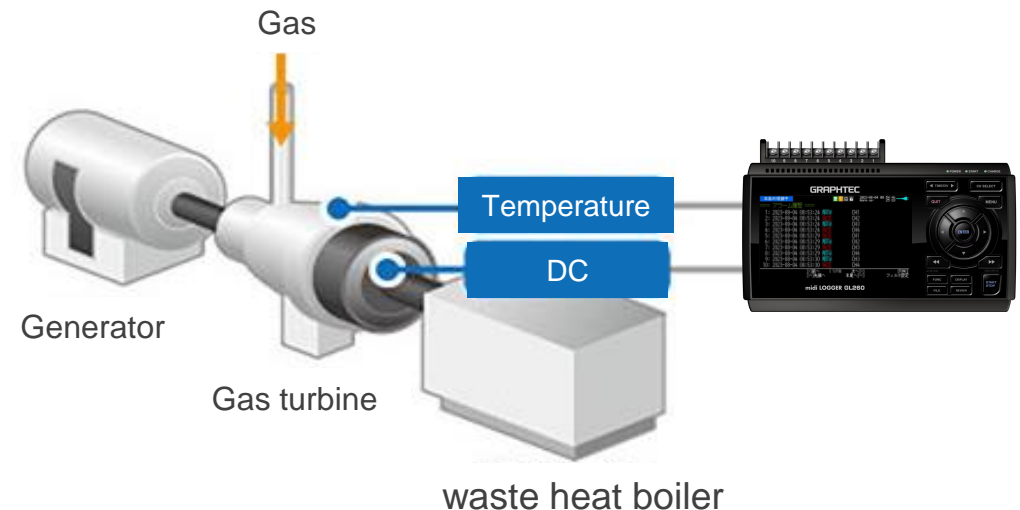
Date and time of alarm		Alarm occurrence CH	
1:	11/14/2023 13:10:57	Occur	CH4
2:	11/14/2023 13:10:57	Occur	CH2
3:	11/14/2023 13:10:58	Occur	CH1
4:	11/14/2023 13:10:58	Occur	CH3
5:	11/14/2023 13:11:02	Clear	CH1
6:	11/14/2023 13:11:02	Clear	CH3
7:	11/14/2023 13:11:03	Clear	CH2
8:	11/14/2023 13:11:03	Clear	CH4
9:	11/14/2023 13:11:07	Occur	CH4
10:	11/14/2023 13:11:07	Occur	CH2

[<]Previous (1 / 3) Next [>] [FUNC]
[<<]Top End [>>] Filter settings

Easily check the CH and date of alarm occurrence at once.

Usage

Gas turbine maintenance



Alarm occurs due to temperature abnormality



Easily check the alarm occurrence date and time with alarm history function.



Target Users

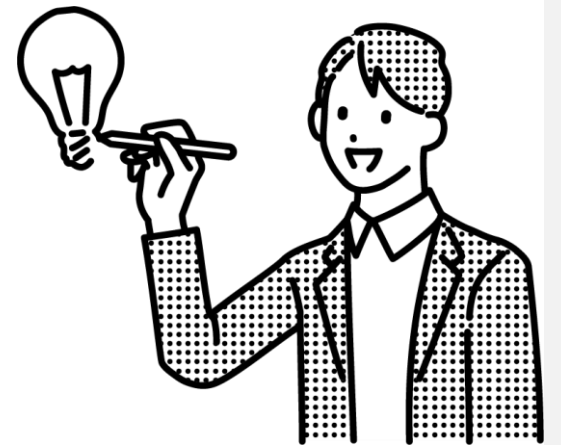
- Want to keep a record of the condition.
- Want to check the alarm history during recording.
- Want to use the alarm function.



Production
Monitoring

Testing

Condition
Monitoring

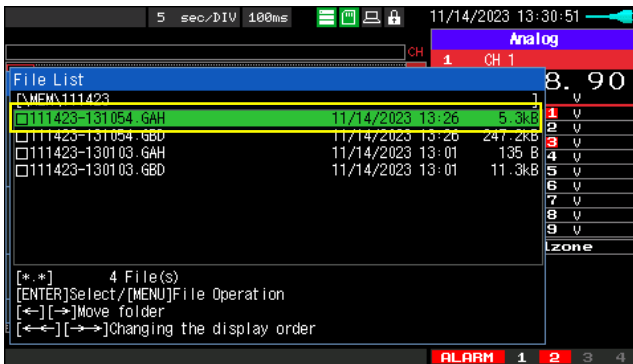


Alarm History - Data format-



Alarm history data is saved in **text format data**.

- Alarm history data is saved in .GAH format.
- GAH can be opened as a text file.



```
111423-131054.GAH - メモ帳
ファイル(F) 編集(E) 書式(O) 表示(V) ヘルプ(H)
Vendor,"GRAPHTEC Corporation"
Model,"GL260"
Version,"1.00"
Suffix,
Number, Data position, Date, Time, CH, Flag, Remarks
1,7888,2023/11/14,13:24:02,CH1,4,"Clear CH1"
2,7888,2023/11/14,13:24:02,CH3,4,"Clear CH3"
3,7896,2023/11/14,13:24:03,CH2,4,"Clear CH2"
4,7897,2023/11/14,13:24:03,CH4,4,"Clear CH4"
5,7937,2023/11/14,13:24:07,CH4,1,"Occur CH4"
6,7938,2023/11/14,13:24:07,CH2,1,"Occur CH2"
7,7945,2023/11/14,13:24:08,CH1,1,"Occur CH1"
8,7946,2023/11/14,13:24:08,CH3,1,"Occur CH3"
9,7988,2023/11/14,13:24:12,CH1,4,"Clear CH1"
10,7988,2023/11/14,13:24:12,CH3,4,"Clear CH3"
11,7996,2023/11/14,13:24:13,CH2,4,"Clear CH2"
12,7997,2023/11/14,13:24:13,CH4,4,"Clear CH4"
13,8037,2023/11/14,13:24:17,CH4,1,"Occur CH4"
14,8038,2023/11/14,13:24:17,CH2,1,"Occur CH2"
15,8045,2023/11/14,13:24:18,CH1,1,"Occur CH1"
16,8046,2023/11/14,13:24:18,CH3,1,"Occur CH3"
17,8088,2023/11/14,13:24:22,CH1,4,"Clear CH1"
18,8088,2023/11/14,13:24:22,CH3,4,"Clear CH3"
19,8096,2023/11/14,13:24:23,CH2,4,"Clear CH2"
```

*GAH files are saved in **the same folder as the recorded files**.

New Calculation

What is the CH-to-CH calculation function?

Calculation function between two CHs.

=> Ex.) CH1 + CH2 = X

GL240 calculation function

- Overwrite analog CH with calculation
= 1 CH occupied by calculation.
- Calculation is only between CHs
= Coefficients are not available.

=> **Only limited calculation can be performed.**

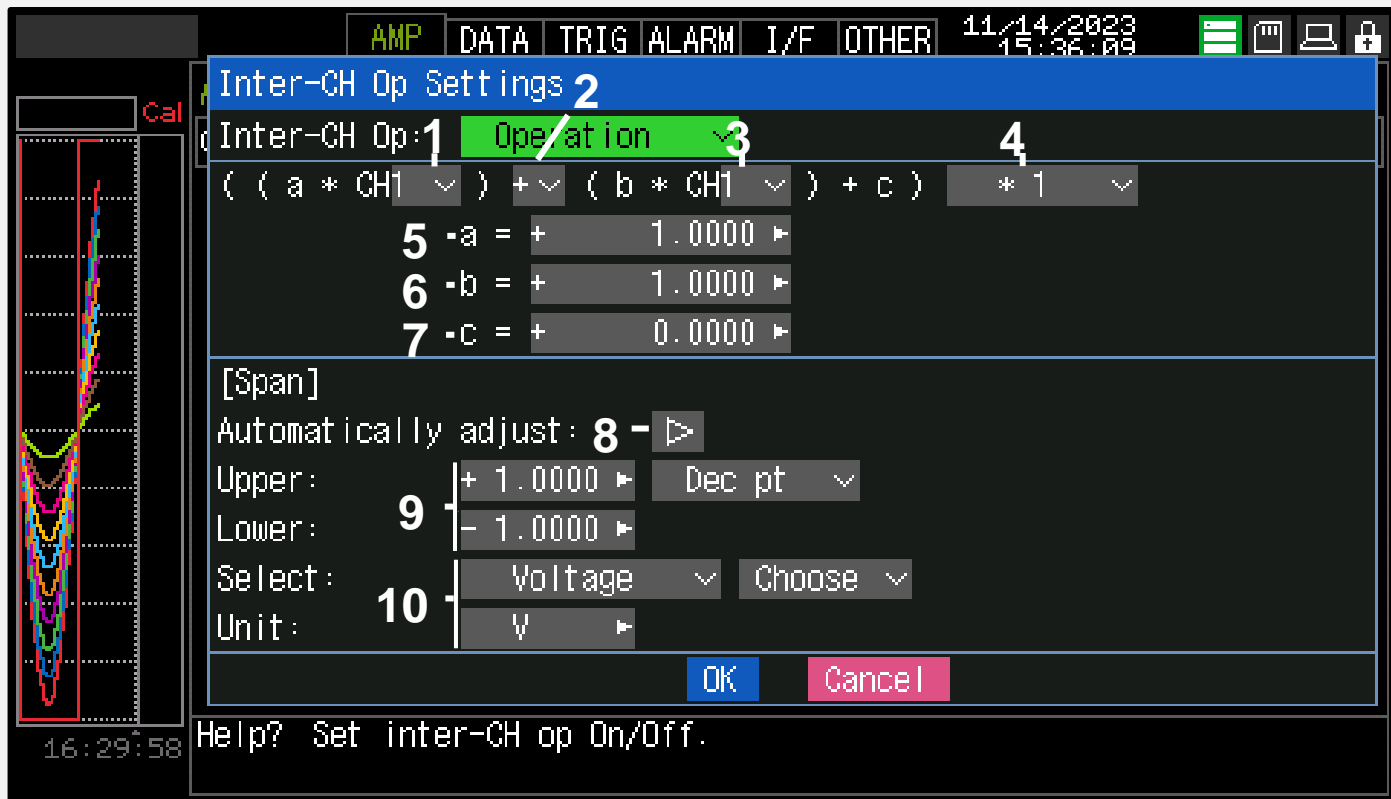
GL260 New Calculation

- **Dedicated CHs** for calculation is set up
- **Coefficients** can now be used
- **Two types** of calculation can be selected



<Calculation> Arithmetic equation

Output calculated data using **coefficients** or adjusting the number of **digits** are now available.



[Arithmetic equation]

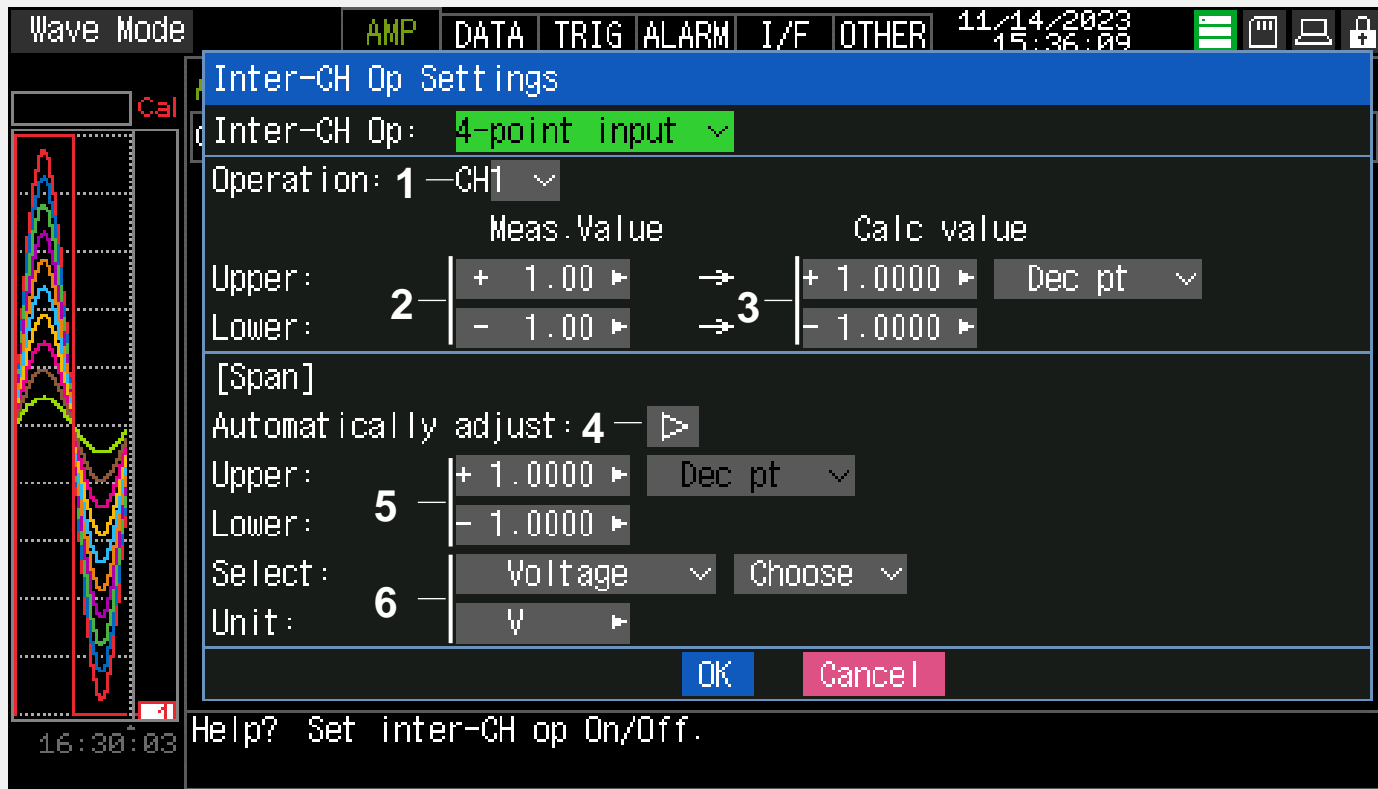
1. CH referenced by calculation
2. Arithmetic symbols
3. CH referenced by calculation
4. Digit adjustment
5. Coefficient a
6. Coefficient b
7. Coefficient c

[Span]

8. Auto span
9. Manual input
10. Select the unit of output value

<Calculation> 4-point input

The 4-point input enables **temperature slope calculation** output.
(Allows adjustment of graph tilt)



[4-point input]

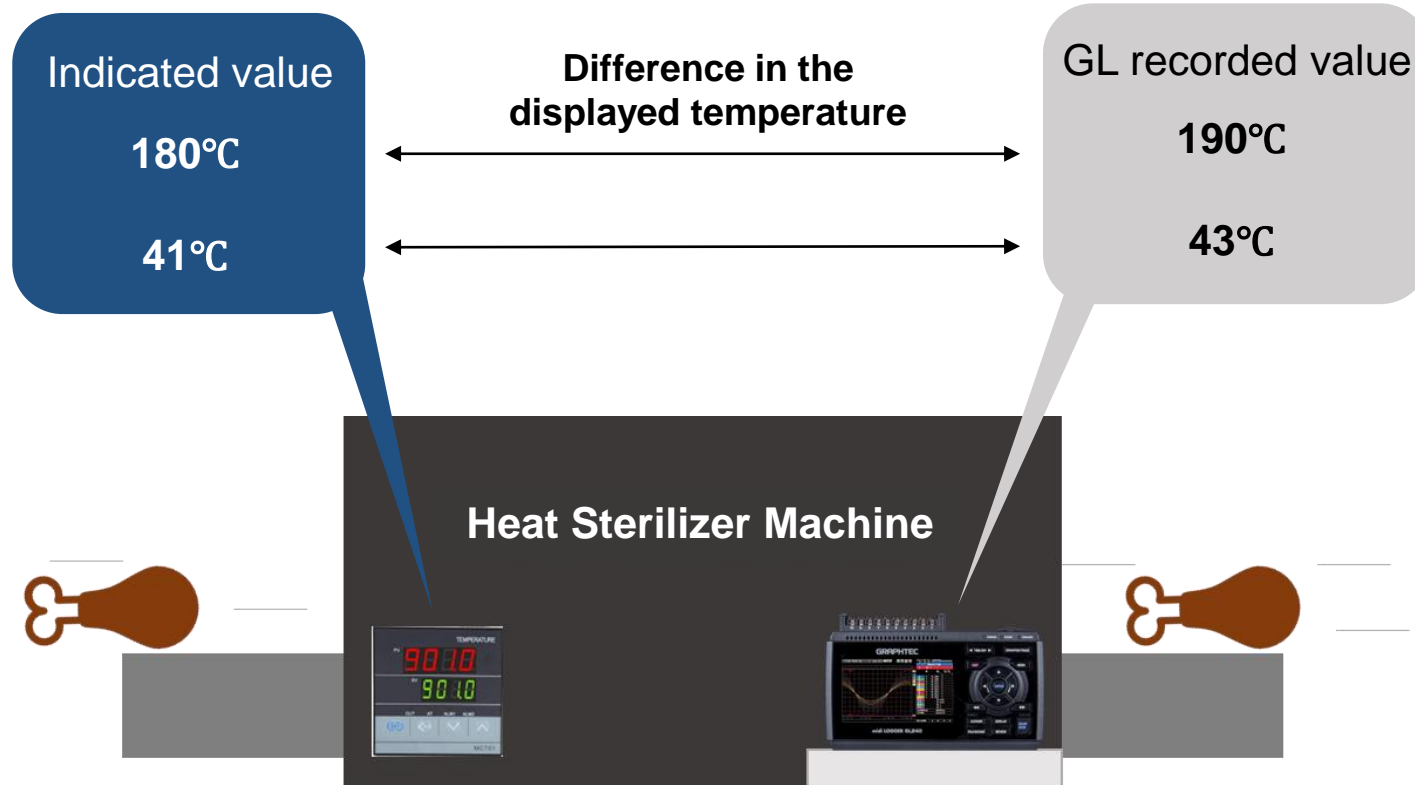
1. Upper and lower limits of measured value
2. Four arithmetic operations
3. Upper and lower limits of output values

[Span]

4. Auto span
5. Manual input
6. Unit Selection of output value

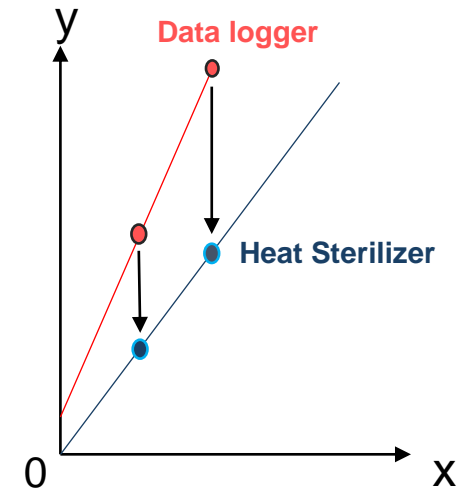
<Calculation> Application Example

Temperature display adjustment in Heat Sterilizer



4-point input

Adjust the difference of displayed temperature between the sterilizer and data logger.

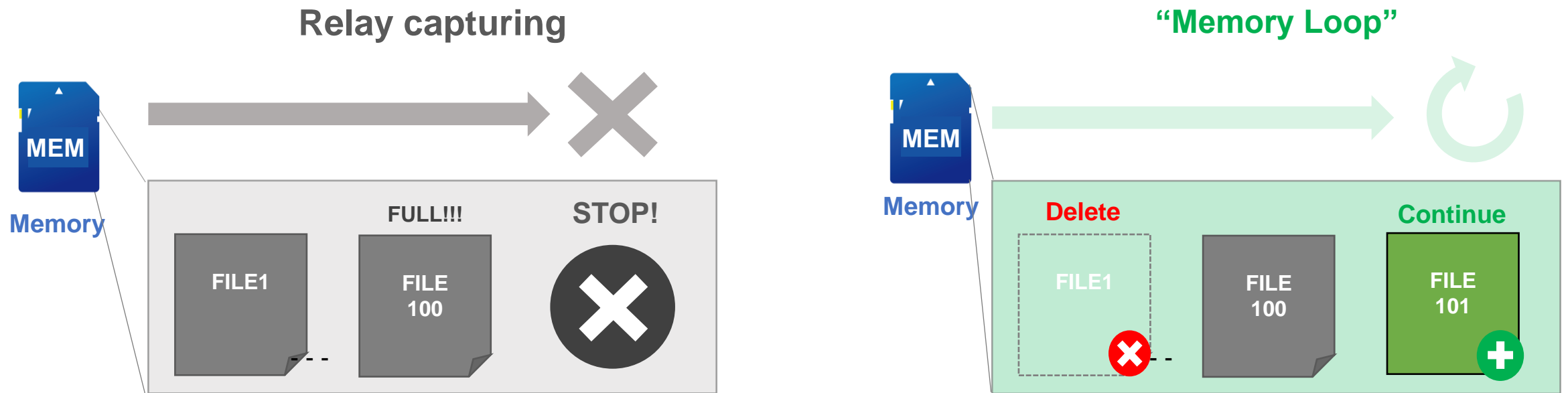


Memory Loop Function

What is Memory Loop Function?



A new optional function of Relay capturing that **automatically deletes the oldest files** before memory capacity runs out and continues recording.



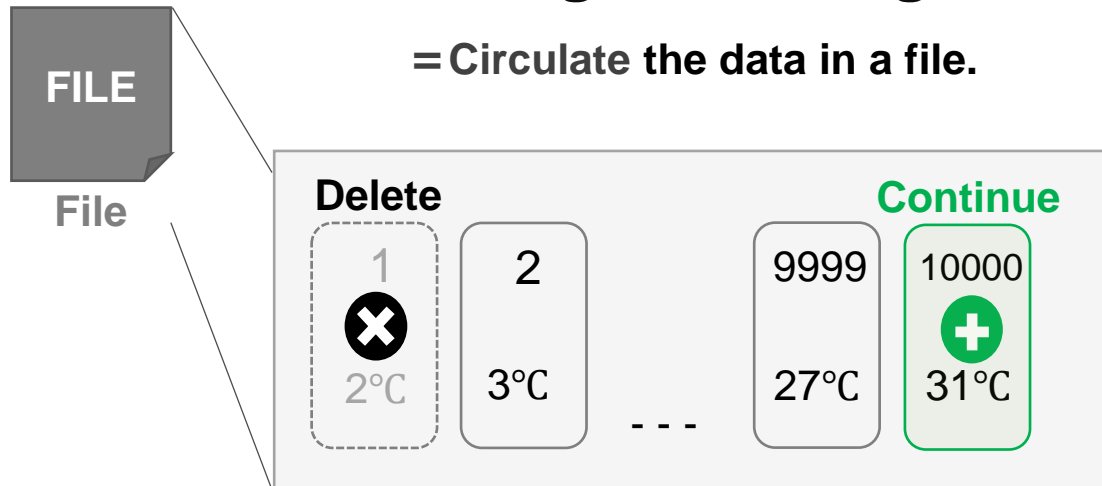
Difference between Ring Capturing and Memory Loop



Ring Capturing is a function that saves only the latest data of a specified number. **Memory Loop** is a function that storages data using the memory of the recording destination to the maximum extent.

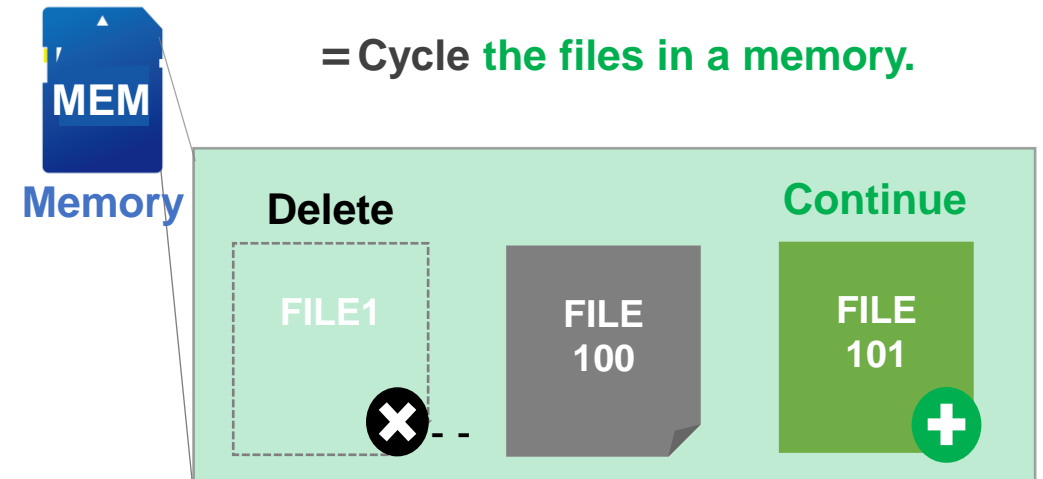
Ring Recording

= Circulate the data in a file.



Memory Loop

= Cycle the files in a memory.



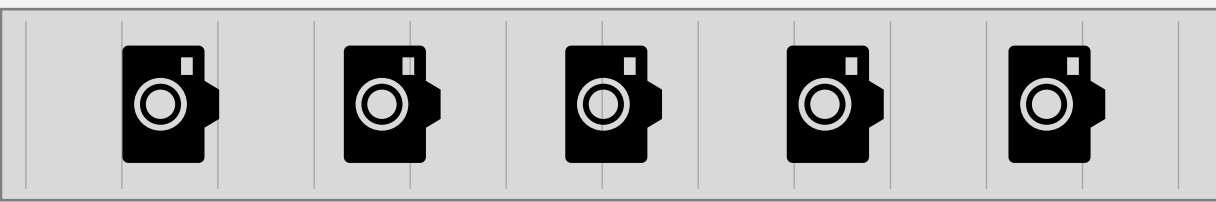
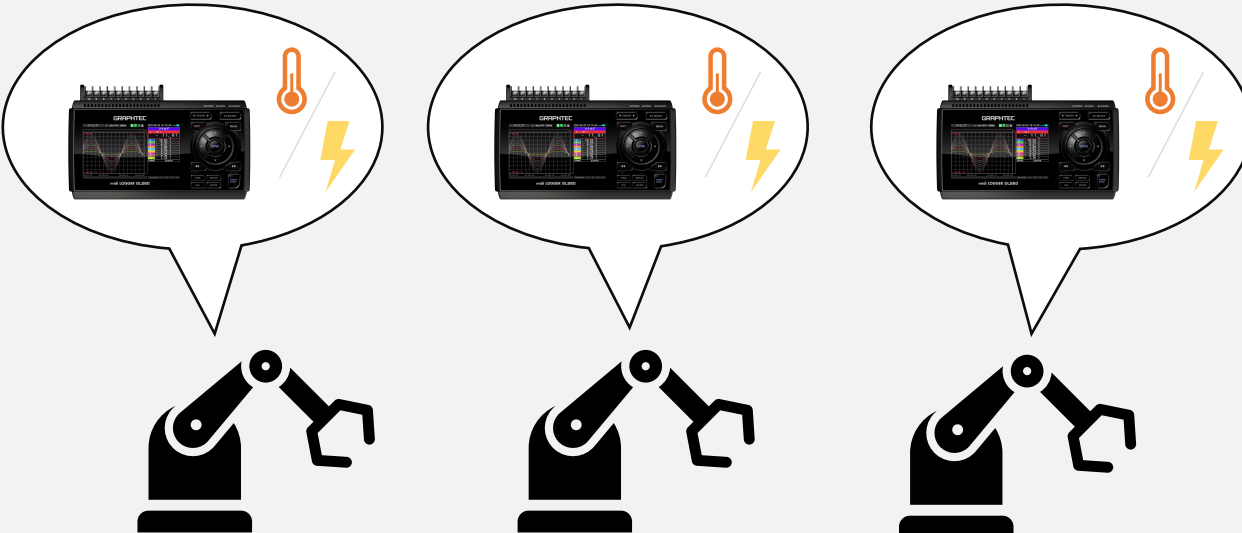
<Memory Loop> Application Example



Maintenance of production line



We want to monitor the machine condition semi-permanently. Also, the recording should be stopped and the data to be saved for 6 months only when a trouble caused.



- Ring Recording
Sampling speed needs to be slower than 200ms.



- Relay Recording
Recording stops automatically when the memory is full



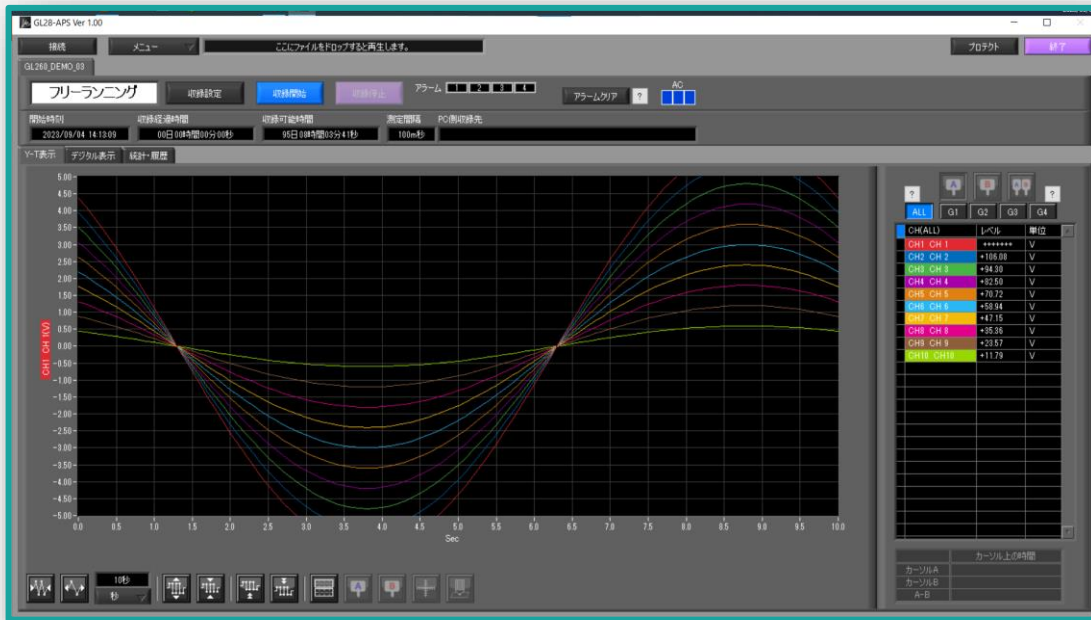
- Memory Loop



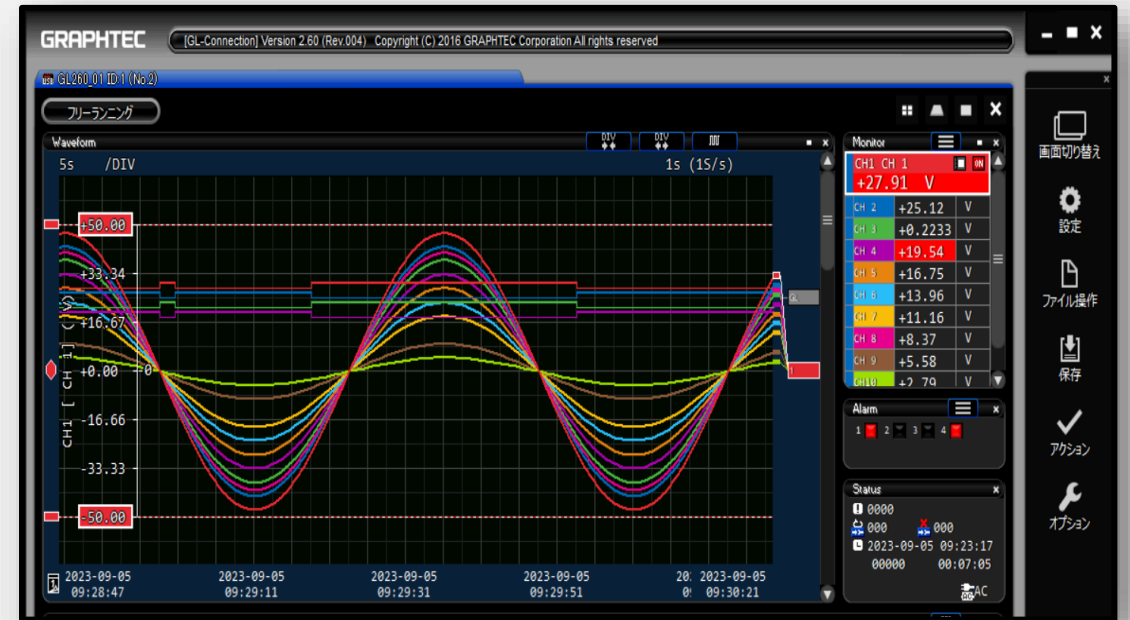
Software



Standard Software



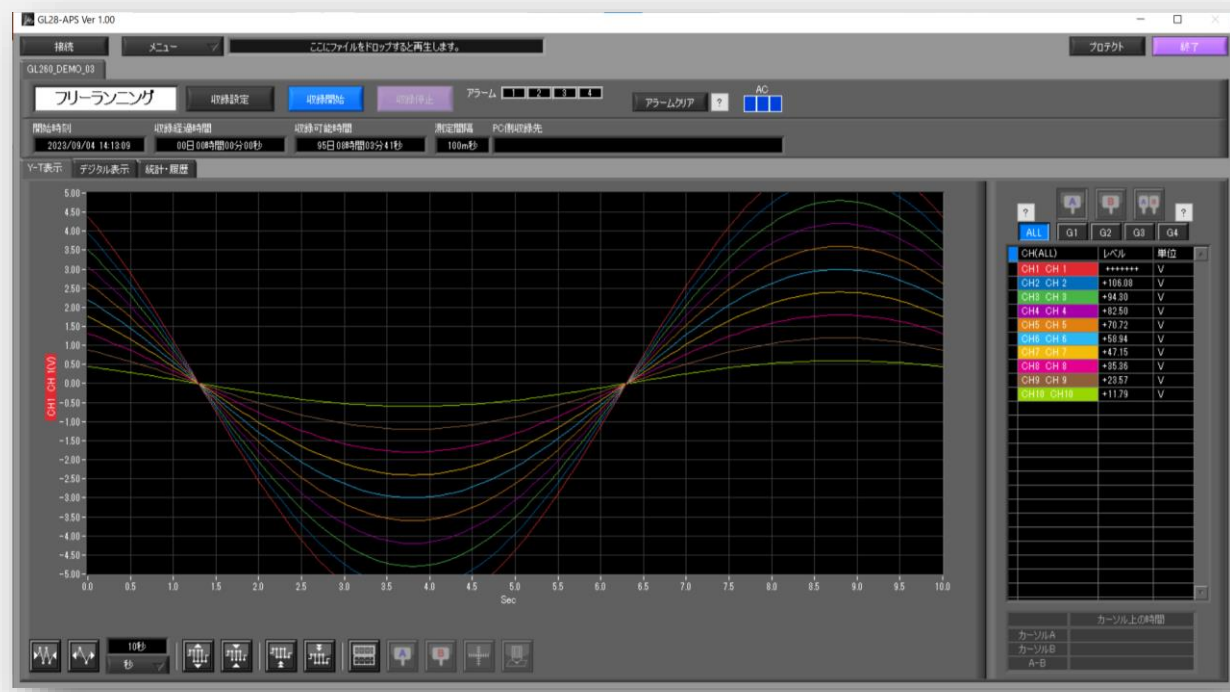
GL28-APS



GL-Connection

GL28-APS

Supported models: GL260 / GL840 / GL240



Max. 10 units can be connected

Standard software to check, record, and save waveforms on a PC

Easy operation

Versatile display

Intuitive UI design
Simple specifications

Digital Value Screen
Statistical calculation screen
Integral bar graph screen

! GL820 / GL220 / GL100 are supported by GL100_240_840-APS.

GL-Connection

Supported models: GL260 / GL7000 / GL2000 / GL980 / GL840 / GL240 / GLT400

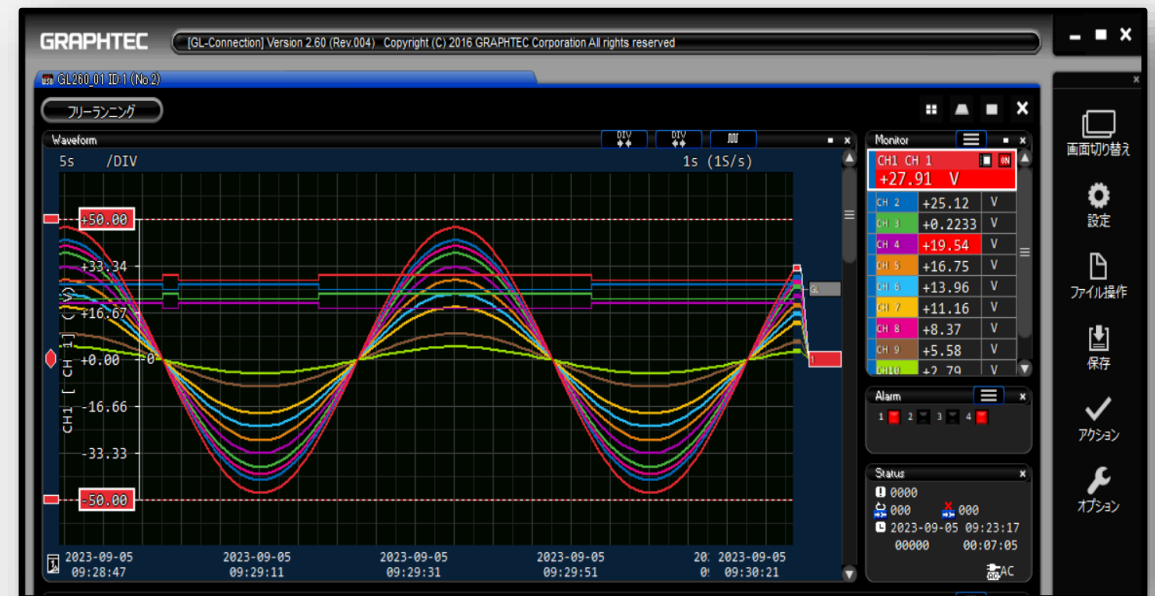
Multiple GL series can be managed at once.

Focus on visibility



Monitor multiple loggers!

Various waveform displays



New Battery Pack

The battery pack will be changed from GL260.

B-569



B-573

GL240

GL260

Model	B-569	B-573
GL240	Y	-
GL840	Y	-
GL980 / GL2000	Y	-
GL260	*	Y

*Battery performance declines by 20%.

Model	B-569	B-573
Capacity	2900mAh	2875mAh
Charge voltage	8.4V	7.2V

Model	B-573	B-569
GL260		
GL240		