GRAPHTEC GL860-GL260 Midi Data Logger User Guide

GRAPHTEC

midi LOGGER
GL860
Quick Start Guide
GL860-UM-800-7L

Contents

Introduction

Thank you for choosing Graphtec midi LOGGER GL860.
The Quick Start Guide is to assist with the basic operations.
Please refer to the USER'S MANUAL (PDF) for more details.
To make measurements using the GL860, the following terminal units are required in addition to the GL860 main unit.

- Standard 20CH screw terminal (B-563)
- Standard 20CH screwless terminal (B-563SL)
- Standard 30CH screwless terminal (B-563SL-30)
- Withstand high-voltage high-precision terminal (B-565)

Check the exterior condition
Check the exterior of the unit to ensure that there are no cracks, defects, or any other damages before use.

Accessories

- Quick Start Guide: 1
- AC cable/AC adapter: 1

Files stored in the internal memory

- GL860 User's Manual
- GL28-APS (Windows OS software)
- GL-Connection (Waveform viewer and Control software)

* When the internal memory is initialized, the stored files are deleted. If you have deleted the User's Manual and the supplied software from the internal memory, please download them from our website.

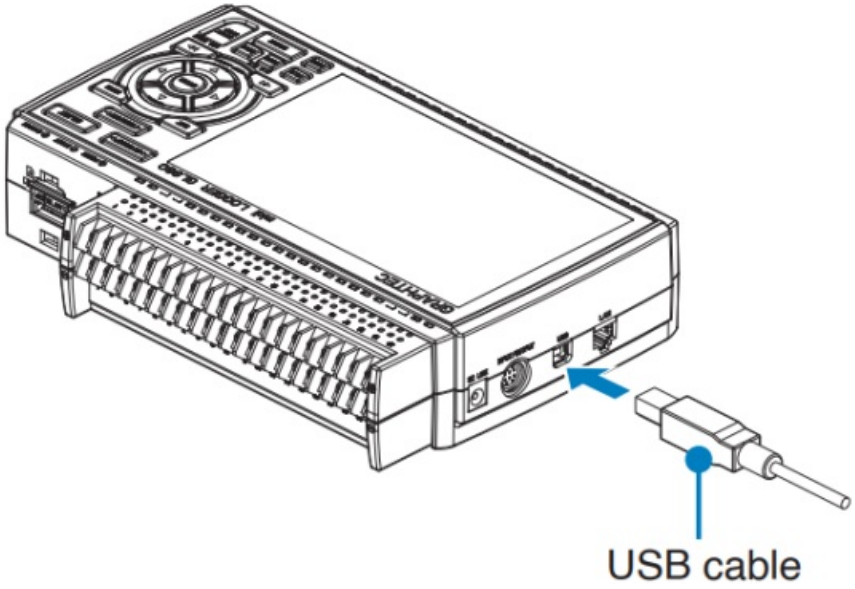
Registered trademarks
Microsoft and Windows are registered trademarks or brands of the US Microsoft Corporation in the USA and other countries.
.NET Framework is a registered trademark or trademark of US Microsoft Corporation in the USA and other countries.

About the User's Manual and Accompanying Software

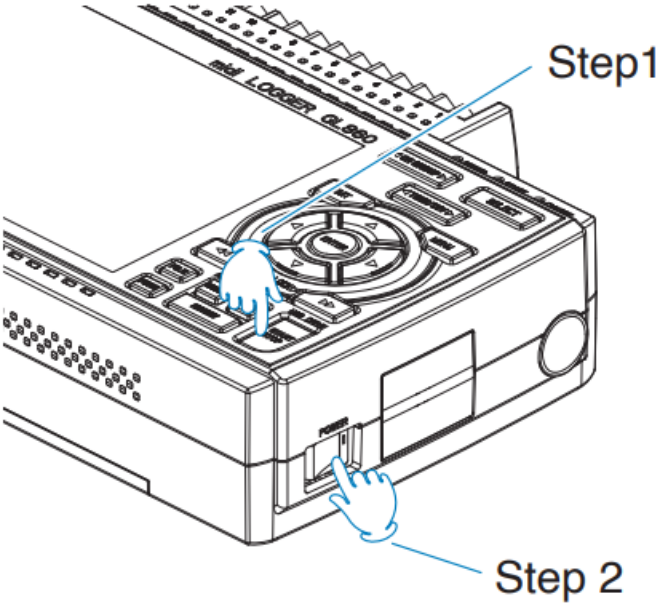
The user's manual and accompanying software are stored in the instrument's internal memory.
Please copy it from the internal memory to your computer. To copy, see the next section.
When you initialize the internal memory, the stored files are also deleted.
Deleting the stored files will not affect the operation of the instrument, but we recommend that you copy the files to your computer beforehand.
If you have deleted the user's manual and attached software from the internal memory, please download them from our website.
GRAPHTEC Website: **https://www.graphteccorp.com/**

How to copy the stored files in USB DRIVE mode

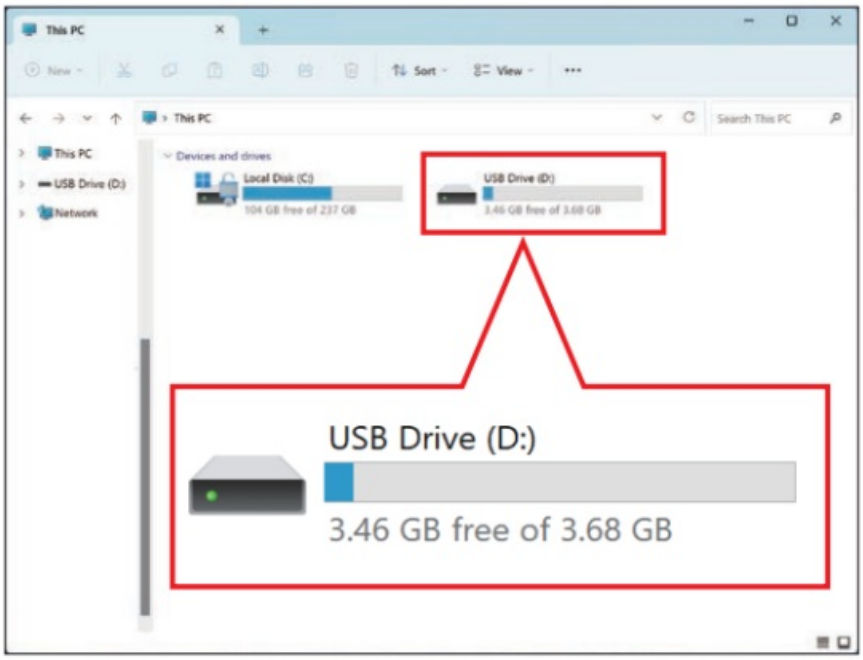
1. Connect the AC adapter cable to the GL860 while powering off, and then connect the PC and the GL860 with the USB cable.



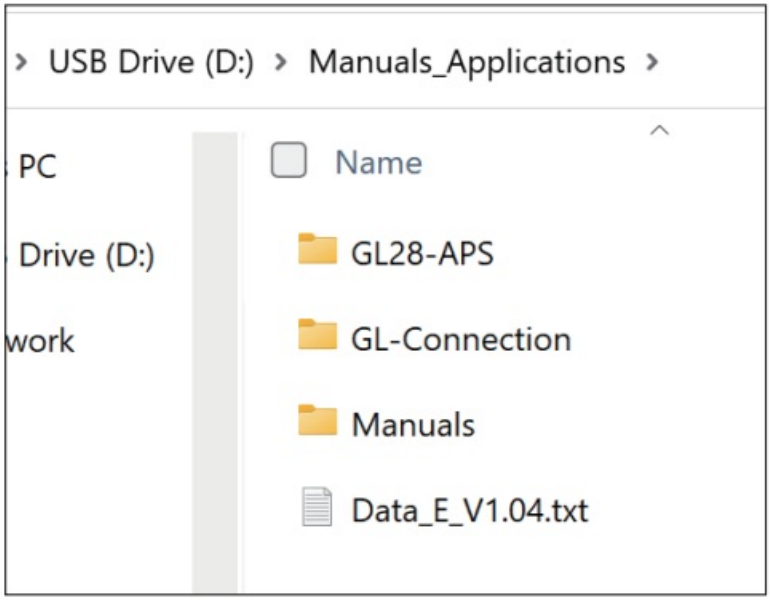
2. While holding down the START/STOP button, turn on the GL860's power switch.



3. The GL860's internal memory is recognized by the PC and can be accessed.

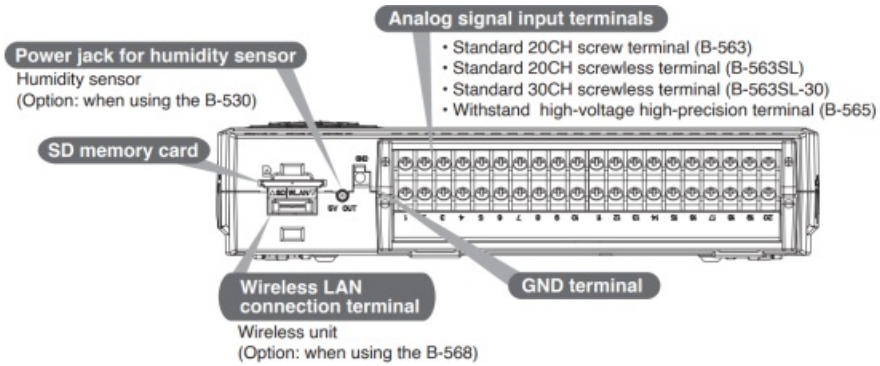


4. Copy the following folders and files to your computer.

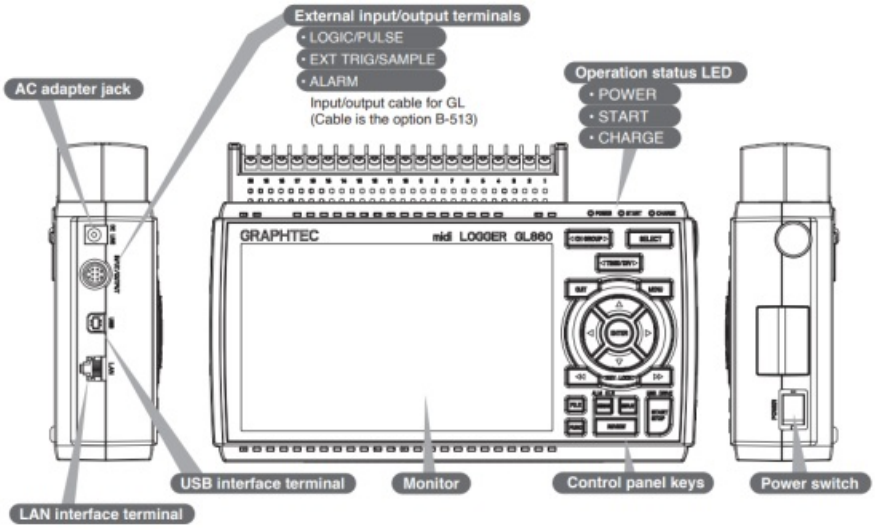


Name of parts

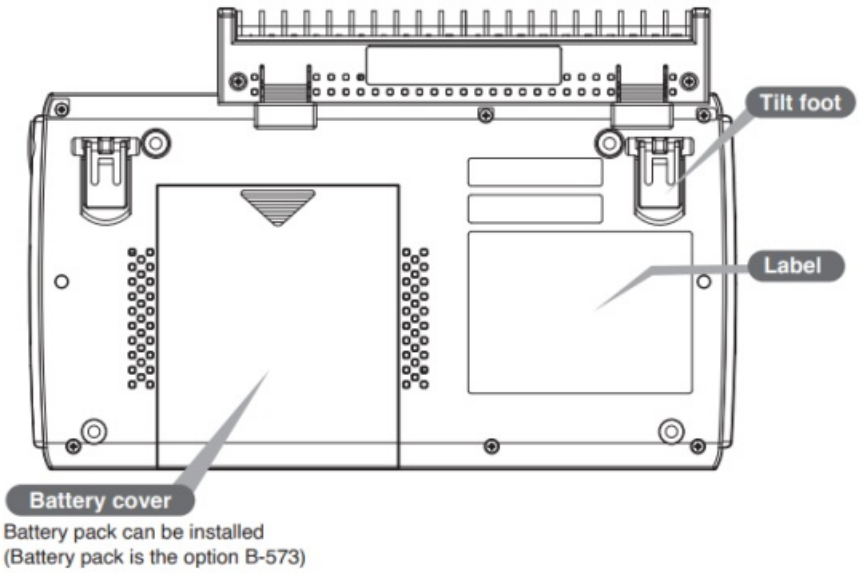
Top Panel



Front Panel



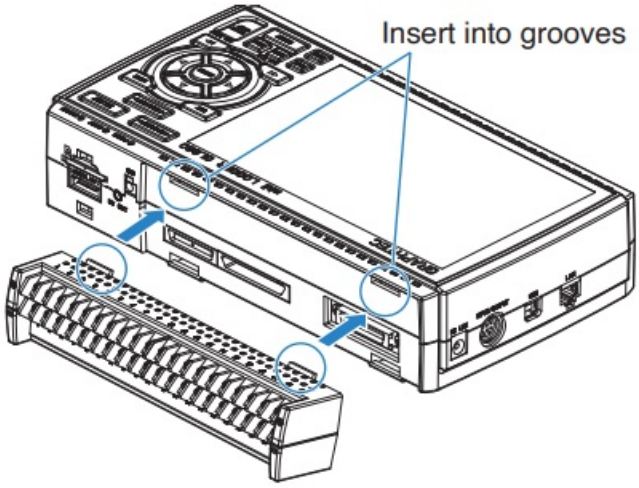
Bottom Panel



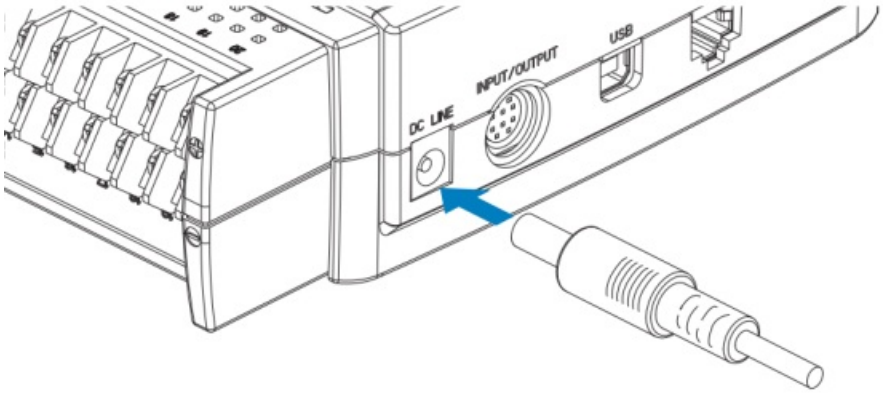
Connection Methods

Mounting each terminal

1. Insert tabs at the top of the terminal unit into the grooves.

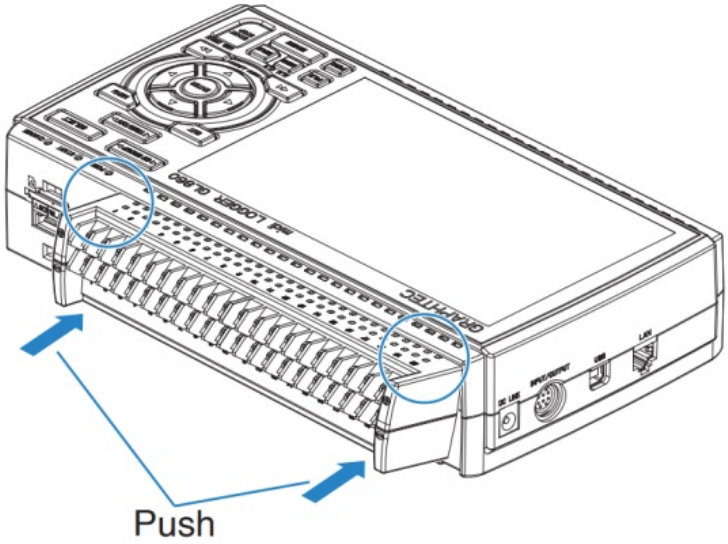


Connecting the AC Adapter

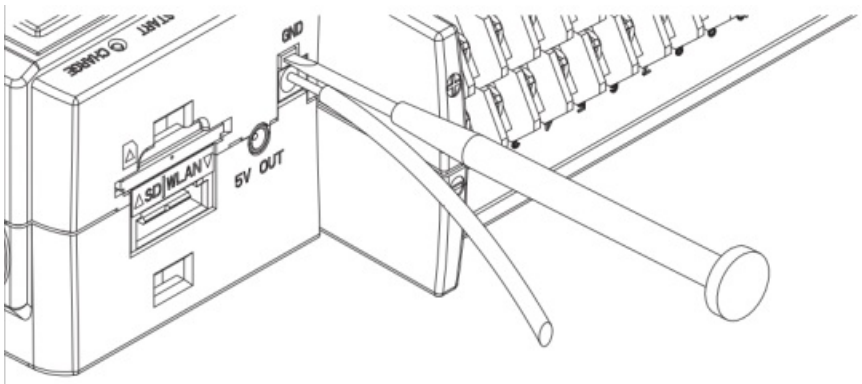


Connect the DC output of the AC adapter to the connector indicated as “DC LINE” on the GL860.

2. Push the terminal unit in the direction shown until it is securely locked.

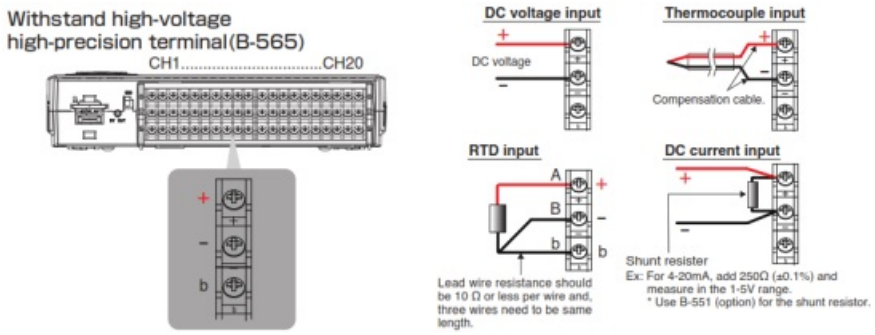


Connecting the Grounding Cable



Use a flathead screwdriver to push the button above the GND terminal while connecting the grounding cable to the GL860.
Connect the other end of the cable to ground.

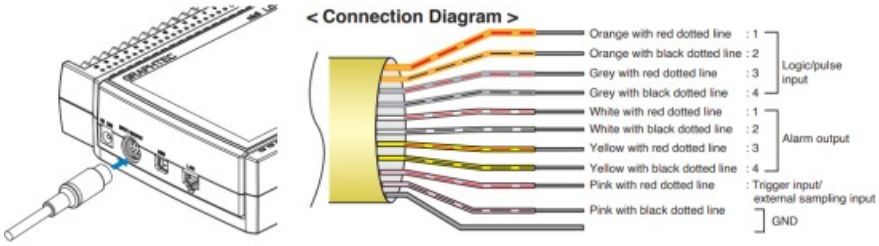
Connecting the Analog Input Terminals



CAUTION

- Connect to any terminal according to the picture above.
  For the connection to the screwless terminal, refer to the instruction manual (PDF).
- B-563/B-563SL/B-563SL-30 do not support RTD input.

Connecting the External Input/Output Terminals

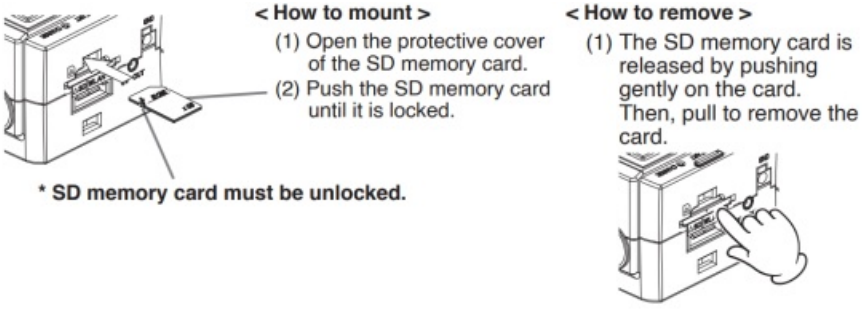


The B-513 input/output cable for the GL series (optional item) is required for connecting external input/output signals. (logic/pulse input, alarm output, trigger input, external sampling pulse input)

Internal memory

- The internal memory is not removable.

Mounting SD Card



CAUTION
To remove a SD memory card, push in gently to release the card before pulling.
When the optional wireless LAN unit is installed, the SD memory card cannot be mounted.
The POWER LED blinks while accessing the SD memory card.

Safety Guide for using GL860

Warm-up
GL860 requires approximately 30 minutes warm-up time to deliver the optimum performance.
Unused channels
For unused CHs, turn off the input setting or short-circuit the +/- terminals.
If an unused analog input section is open, it may appear that signals are being generated on other CHs.

Maximum input voltage
If a voltage exceeding the specified value goes into the instrument, the electrical relay in the input will be damaged.
Never input a voltage exceeding the specified value at any moment.
Standard 20CH screw terminal(B-563)
Standard 20CH screwless terminal(B-563SL)
Standard 30CH screwless terminal(B-563SL-30)

< Between +/– terminals(A) >

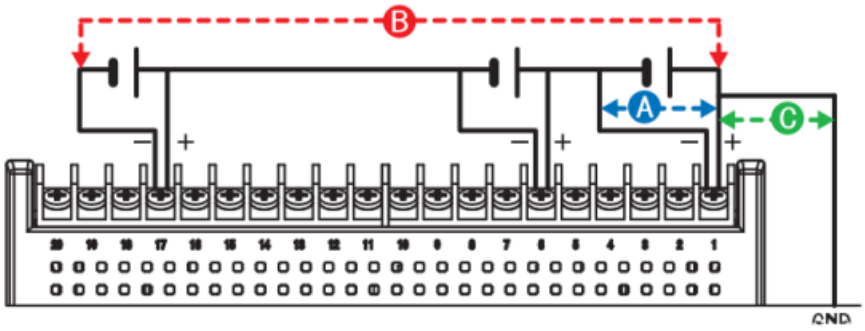
- Maximum input voltage:
  60Vp-p (Range of 20mV to 2V)
  110Vp-p (Range of 5V to 100V)

< Between Channel to channel (B) >

- Maximum input voltage: 60Vp-p
- Withstand voltage: 350 Vp-p at 1 minute

< Between Channel to GND (C) >

- Maximum input voltage: 60Vp-p
- Withstand voltage: 350 Vp-p at 1 minute



Withstand high-voltage high-precision terminal(B-565)

< Between +/– terminals(A) >

- Maximum input voltage:
  60Vp-p (Range of 20mV to 2V)
  110Vp-p (Range of 5V to 100V)

< Between Channel to channel (B) >

- Maximum input voltage: 600Vp-p
- Withstand voltage: 600Vp-p

< Between Channel to GND (C) >

- Maximum input voltage: 300Vp-p
- Withstand voltage: 2300VACrms at 1 minute

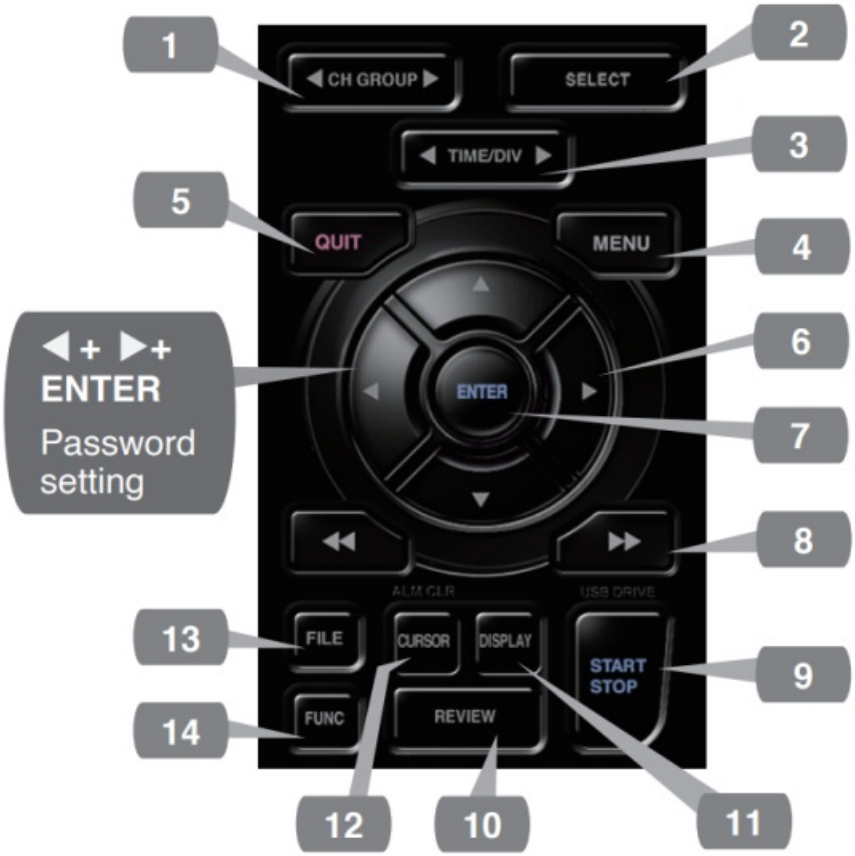
Noise countermeasures
If measured values fluctuate due to extraneous noise, run the following countermeasures.
(Results may vary according to noise type.)
Ex 1 : Connect the GL860's GND input to ground.
Ex 2 : Connect GL860's GND input to measurement object's GND.
Ex 3 : Operate GL860 with batteries (Option: B-573).
Ex 4 : In the AMP settings menu, set filter to any setting other than "Off".
Ex 5 : Set the sampling interval which enables GL860's digital filter (see table below).

Number of Measuring Channels* 1	**Allowed Sampling Interval**	**Sampling Interval which enables Digital Filter**
1 Channel	5ms or slower*2	50ms or slower
2 Channel	10ms or slower*2	125ms or slower
3 to 4 Channel	20ms or slower*2	250ms or slower
5 Channel	50ms or slower*2	250ms or slower
6 to 10 Channel	50ms or slower*2	500ms or slower
11 to 20 Channel	100ms or slower	1s or slower
21 to 40 Channel	200ms or slower	2s or slower
41 to 50 Channel	250ms or slower	2s or slower
51 to 100 Channel	500ms or slower	5s or slower
101 to 200 Channel	1s or slower	10s or slower

*1 Number of Measuring Channels is the number of active channels in which input settings are NOT set to "Off".
*2 Temperature cannot be set when the active sampling interval is set to 10 ms, 20 ms or 50 ms.
In the "OTHER" menu, the commercial power frequency to be used must be set.
Set the AC power frequency to be used.

Select items	**Description**
50Hz	Area where the power frequency is 50 Hz.
60Hz	Area where the power frequency is 60 Hz.

About the Control Panel Keys



1. **CH GROUP**

   Press this key to switch to the next group consisting of 10 channels.

   Press the ◀ key to switch to the previous group.

   Press the ▶ key to switch to the next group.

2. **SELECT**

   Switches between analog, logic pulse, and calculation display channels.

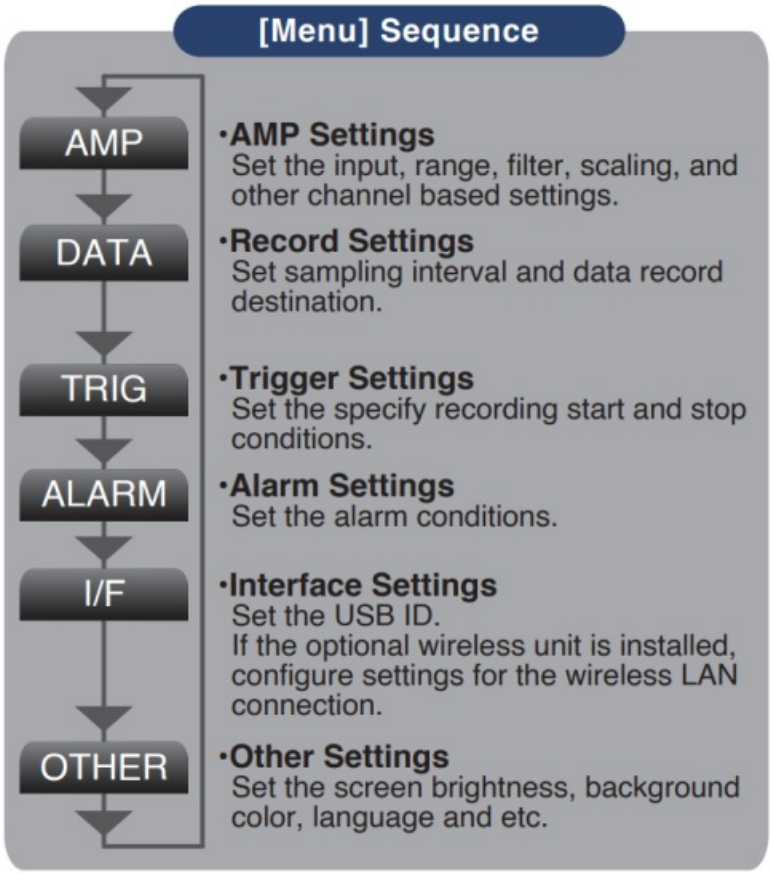
3. **TIME/DIV**

   Push the [TIME/DIV] key to change the time axis display range on the waveform screen.

4. **MENU**

   Press the [MENU] key to open a setup menu.

   Each time this key is pressed, the setup screen tabs change in the sequence shown below.



5. **QUIT (LOCAL)**

   Push the [QUIT] key to cancel the settings and return to the default status.

   If GL860 is in a Remote (Key Lock) status and is run by a computer via a USB or WLAN interface, push the key to return to a normal operating status. (Local).

6. **keys (DIRECTION KEYS)**

   Direction keys are used to select menu setup items, to move the cursors during a data replay operation.

7. **ENTER**

   Push the [ENTER] key to submit the setting and to confirm your settings.

8. **keys (KEY LOCK)**

   Fast forward and rewind keys are used to move the cursor at high speed during replay or change the operation mode in the file box.

   Hold down both keys simultaneously for at least two seconds to lock the key buttons. (Orange key at the top right of window indicates locked status).

   To cancel key lock status, push both key again for at least two seconds.

   * Pushing these keys simultaneously with the ◀ key + ENTER + ▶ key enables password protection for the key lock operation.

9. **START/STOP (USB DRIVE MODE)**

   Push the [START/STOP] key to initiate start and stop of a recording when GL860 is in the Free Running mode.

   If the key is pushed while turning the power to the GL860 on, the unit will switch from the USB connection to USB DRIVE mode.

   * For more information about the Drive Mode of the USB, refer to the User's Manual.

10. **REVIEW**

    Push the [REVIEW] key to replay recorded data.

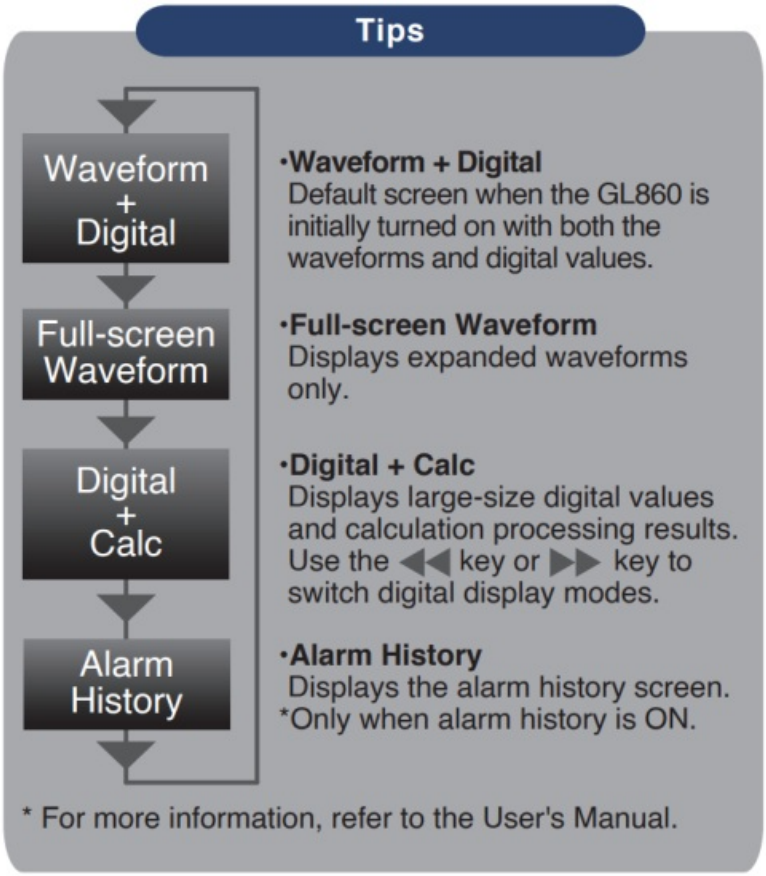
    If the GL860 is in the Free Running mode, data files that have already been recorded will be displayed.

    If the GL860 is still recording data, the data is replayed in a 2-screen format.

* A data replay operation will not be performed if data has not been recorded.

11. **DISPLAY**

    Push the [DISPLAY] key to switch the display.



12. **CURSOR (ALARM CLEAR)**

    Press the [CURSOR] key to switch between the A and B cursors during a data replay operation.

    If the Alarm setting has been specified as “Alarm Hold”, press this key to clear the alarm.

    The alarm settings are made in the “ALARM” menu.

    Press the [CURSOR] key to switch between the A and B cursors during a data replay operation.

    If the Alarm setting has been specified as “Alarm Hold”, press this key to clear the alarm.

    The alarm settings are made in the “ALARM” menu.

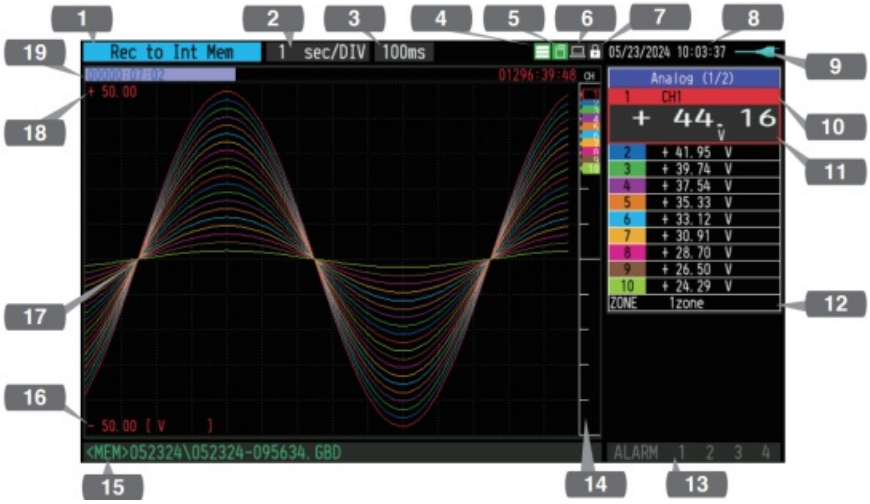
13. **FILE**

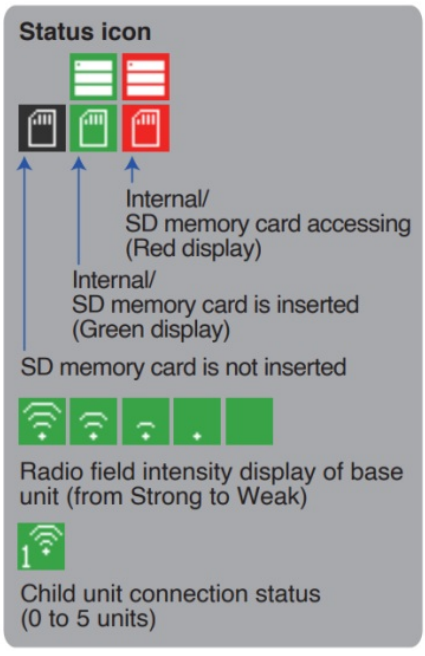
    This is used to operate the internal memory and SD memory card, or for file operation, screen copy and save/load current settings.

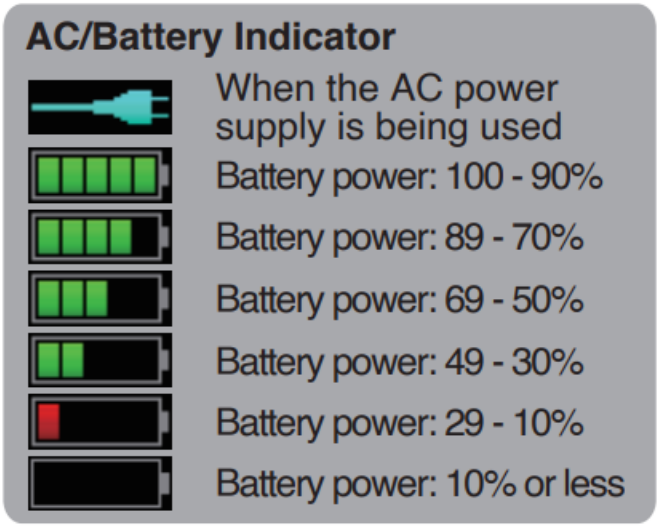
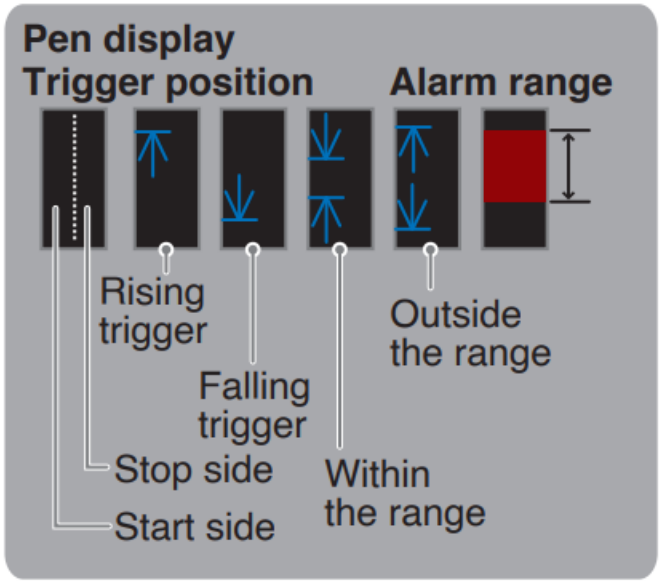
14. **FUNC**

    [FUNC] key allows you to perform frequently used functions every time.

About of the Menu Screens



1	Status message display area	: Displays the operating status.
2	Time/DIV display area	: Displays the current time scale.
3	Sampling interval display	: Displays the current sampling interval.
4	Device access display (Internal memory)	: Displayed in red when accessing the internal memory.
5	Device access display (SD memory card / wire less LAN display)	: Displayed in red when accessing the SD memory card. When the SD mem ory card is inserted, it is displayed in green. (In station mode, the signal strength of the connected base unit is displayed. Also, in access point mode, the number of connected handsets is displayed. It turns orange when the wireless unit is operating.) 
6	Remote lamp	: Displays the remote status. (orange = Remote status, white = Local status)
7	Key lock lamp	: Displays the key lock status. (orange = keys locked, white = not locked)
8	Clock display	: Displays the current date and time.

9	AC/Battery status indicator	: Displays the following icons to indicate the operating status of the AC power and the battery. Note: Use this indicator as a guideline because remaining battery power is an estimate. This indicator does not guarantee the operating time with battery. 
10	CH select	: Displays analog, logic, pulse, and calculation.
11	Digital display area	: Displays the input values for each channel. The ▲ and ▼ keys can be used to select the active channel (enlarged display). The selected active channel is displayed at the very top of the waveform display.
12	Quick settings	: Displays items that can be easily set. The ▲ and ▼ keys can be used to activate a Quick settings item, and the ◀ and ▶ keys to change the values.
13	Alarm display area	: Displays the status of the alarm output. (red = alarm generated, white = alarm not generated)
14	Pen display	: Displays the signal positions, trigger positions, and alarm ranges for each channel.
15	File name display area	: Displays the recorded file name during the recording operation. When data is being replayed, the display position and cursor information are displayed here. 
16	Scale lower limit	: Displays the lower limit of the scale of the currently active channel.

17	Waveform display area	: The input signal waveforms are displayed here.
18	Scale upper limit	: Displays the upper limit of the scale of the currently active channel.
19	Recording bar	: Indicates the remaining capacity of the recording medium during data record. When data is being replayed, the display position and cursor information are displayed here.

Accompanying Software

The GL860 comes with two Windows OS-specific software applications.
Please use them depending on the purpose.

- For simple control, use “GL28-APS”.
- For control of multiple models, use “GL-Connection”.

The latest version of the included software and USB driver can also be downloaded from our website.
GRAPHTEC Website: **https://www.graphteccorp.com/**

Install USB Driver
To connect the GL860 to the computer via USB, a USB driver must be installed on the computer.
The “USB Driver” and “USB Driver Installation Manual” are stored in the built-in memory of the GL860, so please install them according to the manual.
(Location of the manual: “Installation_manual” folder in “USB Driver” folder)

GL28-APS
The GL860, GL260, GL840, and GL240 can be connected via USB or LAN to control and operate settings, recording, data playback, etc.
Up to 10 devices can be connected.

Item	**Required environment**
OS	Windows 11 (64Bit) Windows 10 (32Bit/64Bit) * We do not support OSs for which support by the OS manufacturer has ended.
CPU	Intel Core2 Duo or higher recommended
Memory	4GB or more recommended
HDD	32GB or more free space recommended
Display	Resolution 1024 x 768 or higher,65535 colors or more (16Bit or more)

Installation Instructions

1. Use the USB drive mode function to copy the files stored in the main unit to your computer, or download the latest installer from our website.
2. To run the installation program, double-click “setup_English.exe” in the “GL28-APS” folder.
   *If you downloaded the installer from the website, decompress the compressed file before running the installer.
3. Follow the instructions of the installation program to continue.

GL-Connection
Various models such as GL860, GL260, GL840, GL240 can be controlled and operated via USB or LAN connection for setting, recording, data playback, etc.
Up to 20 devices can be connected.

Item	Required environment
OS	Windows 11 (64Bit) Windows 10 (32Bit/64Bit) * We do not support OSs for which support by the OS manufacturer has ended.
CPU	Intel Core2 Duo or higher recommended
Memory	4GB or more recommended
HDD	32GB or more free space recommended
Display	Resolution 800 x 600 or higher,65535 colors or more (16Bit or more)

Installation Instructions

1. Download the latest installer from our website.
2. Unzip the compressed file and double-click “setup.exe” in the folder to run the installer.
3. Follow the instructions of the installation program to continue.

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Specifications are subject to change without notice.
GL860 Quick Start Guide
(GL860-UM-800-7L)
July 16, 2024
1st editon-01
Graphtec Corporation

Documents / Resources

	GRAPHTEC GL860-GL260 Midi Data Logger [pdf] User Guide GL860, GL260, GL860-GL260 Midi Data Logger, GL860-GL260, Midi Data Logger, Data Logger

References

- User Manual

Manuals+, Privacy Policy

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