

Dataloggers for electrical and industrial purposes revolve around three major objectives: recording, monitoring, and testing.

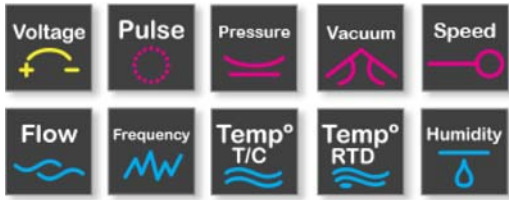
To automate the recording process, the triggering feature is used in setting up conditions. Graphtec's robust, independent start and stop triggering capability allows users to capture only the data of interest via event-based triggers or time-based triggers.

In this newsletter, we focus on the triggering feature for all Graphtec portable dataloggers-including the external triggering mechanism in automated testing, monitoring and recording processes.



In various datalogging testing scenarios, the ability to process the data files by utilizing the trigger will simplify the testing process. It eliminates down-time and automates the starts and stops for the datalogging application. For example, recording temperature data for heat treatment in an oven chamber can be initiated when a specified temperature is met per user's specification. Graphtec dataloggers provide several options for this triggering mechanism. They include threshold level, alarm, external input, date, weekly, and time stamp triggering variables.



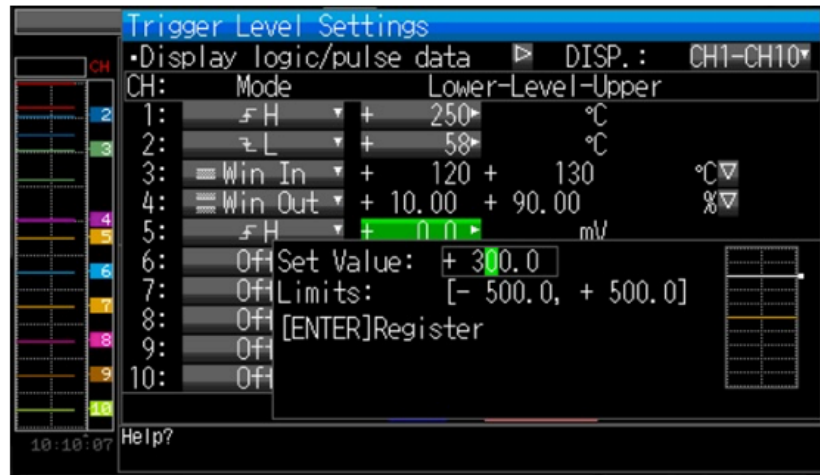


Selection Item	Description
Off	Starts capturing data unconditionally when you press the [START/STOP]key
Level	Starts capturing data when a specified level is reached. ->When Level is selected, the condition for each channel must be set. Refer to "Trigger Level Settings/Alarm Level Settings" described below.
Alarm	Starts capturing data when an alarm is generated in the specified alarm port.
External Input	Starts capturing data when an input signal is received from an external trigger terminal. A trigger is established at a transition from 5 V (open) to 0 V (shorted to the ground). A falling edge operation occurs.
Date	Starts capturing data when specified date and time reached.
Weekly	Starts capturing data at the specified time on days of week for which On is set. Example: On is set for Mon, Tue, Wed, Thu and Fri, Off is set for Sun and Sat, and 9:00 am is set as the time. Starts capturing data at 9:00 am on weekdays; Does not start capturing data on Sat and Sun.
Time	Starts capturing data when specified length of time elapses.

In another example, the trigger can be used for a light fixture application with heat resistance testing. It can test and record weekly, on work hours from Monday to Friday.

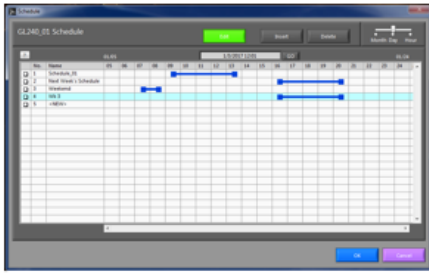


Temperature Mapping Application for Environmental Chambers

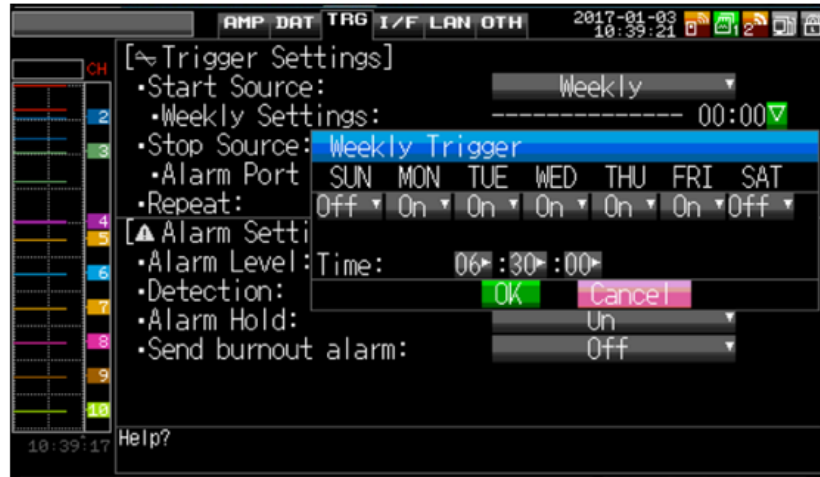


Set Trigger Conditions for Each Channel

High, Low, Win In, Win Out



New Automatic Scheduler Feature on APS



Set Triggering Schedule for Start and Stop Source

Additionally, the trigger can utilize start and stop sources based on the alarm threshold. Conditions can be applied to each of the input channels to set hourly or daily recordings to best suit the file management structure—suited for each user. Repeat function on the triggering setting will then convert the “Time” (or timer) feature into consistent repeatable test files. At the same time, the file is populated on the internal RAM drive or the external SD card. Wireless recording is also available on the GL100, GL240, and GL840s.



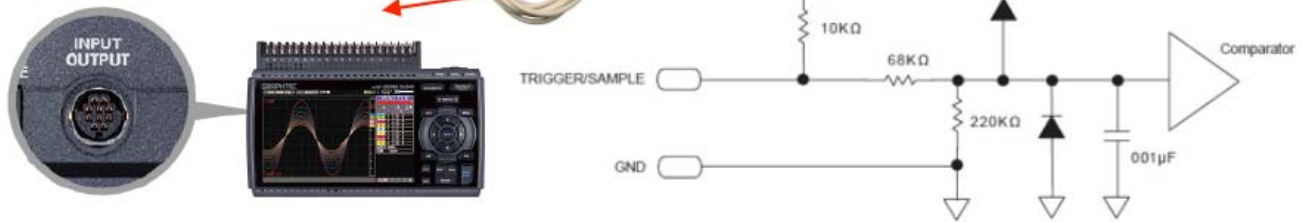
External Triggering

In some cases, Graphtec’s recording start and stop sources can be switched on and off using an external triggering feature using a power source from the switch button or power supply of your test fixture. For example: testing battery durability of the loads and temperature levels of the cells can be set to start and stop using the power switches of the battery. This step eliminates the need to switch on a datalogger to start recording—thus providing test engineers an automated datalogging options, eliminating this common human-error associated with test and measurement.

To utilize this feature, you will need the addition of the B-513 Logic/Pulse cable. Within one of the bare terminal leads, the external triggering cable with the ground connected to the ground wire at 0 to +24V single-ended input will directly feed signal to the datalogger for the external triggering feature. Graphtec’s B-513 cable is available through our authorized instruments distributors.



Digital Input/Output



Trigger Input/External Sampling Input Specifications

Item	Description
Number of input channels	1
Input voltage range	0 to +24V max. (single-ended ground input)
Threshold level	Approx. +2.5V
Hysteresis	Approx. 0.5 V (+2.5 to +3 V)

Scheduling Feature Using Graphtec's APS Software

All triggering features are available on the GL APS software for Graphtec portable dataloggers. In addition, the scheduling feature will appropriate customized test workload to individual test files in advance. Users will be able to set test plans beforehand and customize tests based on each user's requirements.

KEY FEATURES

VARIOUS TRIGGERING METHOD TO CONTROL TEST START AND STOP

GL portable dataloggers provide six different sources for starting and stopping the recording using the trigger functions. Level, Alarm, External Input, Date, Weekly and Time.

"Graphtec GL series provides a very intuitive triggering feature and gives test engineers a resource to eliminate the downtime and risk of losing the data due to human error."

- Light fixture manufacturing engineer

using the external triggering mechanism.

EXTERNAL TRIGGERING MECHANISM TO AUTOMATE TESTING

Utilize your power switches for your test fixture and automate the datalogging by



NEW SCHEDULE FEATURE AVAILABLE THROUGH APS SOFTWARE

Scheduling feature on the APS software provides in-depth organization of the test scenarios and scheduling for constant use of the datalogger in the field.

KEY VALUES

GL Series Dataloggers Triggering Features

- Automating your test recording setup
- Setting threshold levels to initiate and stop recordings
- Using process automation switches to automate start and stop
- Software scheduling feature