EL-GFX-2 Graphing Temperature and RH Data Logger

DATAQ® INSTRUMENTS

Features

- -30 to +80 °C (-22 to 176 °F) measurement temperature range
- 0 to 100% RH measurement range
- **Stand-alone operation**
    - Powered by replaceable batteries
    - Built-in temperature and RH sensors
    - Built-in date and time clock
    - Deep on-board memory of over 250,000 readings
    - Built-in graphics display for temperature and RH trending, high/low capture, and more
- IP67 construction resists dust ingress and water submersion up to 1 meter
- Programmable high/low alarm thresholds
- Both audible and visual alarm states

Total Record Times

Sampling Interval	Record Time
1 sample every 10 seconds	29 days
1 sample every 15 seconds	43 days
1 sample every 20 seconds	58 days
1 sample every 30 seconds	87 days
1 sample every 1 minute	174 days
1 sample every 5 minutes	349 days
1 sample every 10 minutes	> 2 years
1 sample every 15 minutes	> 2 years
1 sample every 20 minutes	> 2 years
1 sample every 30 minutes	> 2 years
1 sample every 1 hour	> 2 years

Programmable Elements

- Logger name
- °F or °C
- **Sampling interval**
    - 10, 15, 20, 30 seconds
    - 1, 2, 5, 10, 15, 20, 30 minutes
    - 1 hour
- **LCD control to maximize battery life**
    - LCD and backlight on for 15 sec after button press
    - LCD always on, backlight on for 15 sec after button press
- **Security setting**
    - Allow/disallow the viewing and the adjustment of settings when deployed
- High and low temperature/RH alarm thresholds
- Alarm delay – the number of consecutive samples after a threshold breech before an alarm is triggered
- Enable/disable status LEDS (sampling, alarm)
- Enable/disable audible alarm
- **Record trigger**
    - Immediate
    - When the logger button is pressed
    - Less or greater than a programmable temperature/RH value
    - At a specific date and time

EL-GFX-2 Description

The EL-GFX-2 data logger offers a cost-effective approach to temperature and humidity data logging. Its integrated USB interface allows the instrument to be configured by any Windows-based PC. Typical programmable parameters include a unique data logger name, °F or °C temperature scale, sampling interval (10 seconds to 1 hour), high and low alarm limits, security settings, triggered recording parameters, and more. The GFX-2 is powered by two replaceable (non-rechargeable) ½ AA lithium batteries, for long-life recordings typically up to one year.

Model EL-GFX-2 provides a security option that can prohibit tampering of the logger in any manner that would affect recorded data after deployment.

The GFX also supports a programmable alarm delay feature, from immediate to after 250 readings. This is useful where temperature or RH are known to fluctuate momentarily into an alarm threshold, but does not necessarily indicate an alarm condition. For example, the logger is placed inside a freezer or refrigerator. If the door opens the temperature will momentarily rise, but the logger can be configured to ignore that increase for a programmed number of samples before triggering an alarm.

During deployment, status LEDS provide continuous visual feedback of sampling events, battery status, and alarm states. In addition, three front panel function buttons allow you to view the memory consumed (0-100 %), the number of readings contained in the logger's memory, and the current battery capacity (0-100 %.) The last recorded temperature/RH reading can also be viewed, along with historical data in the form of minimum and maximum values logged during the current recording cycle, as well as an historical trend plot. Using front panel buttons you can also start and stop the logger and view pre-programmed alarm thresholds.

The GFX-2 is programmed using software that is provided with the instrument. The software programs all operating parameters and options. When a logging session is complete, the GFX logger is plugged into any computer onto which the software is installed using the supplied cable. Options in the software allow the GFX logger to upload time, date and recorded data to the PC where they can be graphed in a cursor-based chart that displays temperature/RH as a function of recorded time and date. A single mouse click can export the data to Microsoft Excel for detailed analysis and report generation.

The EL-GFX-2 is provided with everything you need to begin taking temperature and humidity measurements: USB cable for connecting it to a PC, batteries, and software (downloadable, no CD provided.) Also provided is a convenient wall clip that can be either permanently attached to a surface, or temporarily attached to a ferrous surface via the integrated magnet.
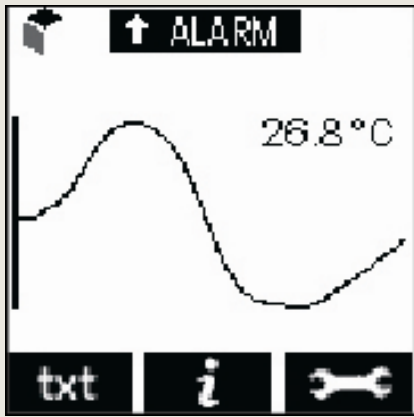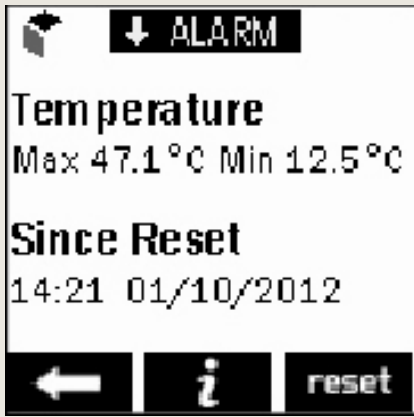
EL-GFX-2 Close-up

Status LED

Sampling LED

Sensor Window

Function Buttons (3)

88.0 (3.46)

48.5 (1.91)

USB port

Slots for mounting clip

Screw for battery access

30.5 (1.20)

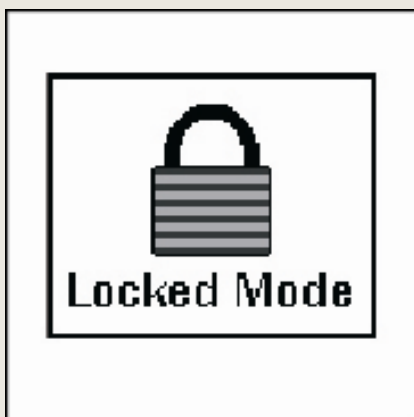All dimensions in mm (inches)

EL-GFX-2 Operating Modes (actual GFX screen images)

Start options (Immediate start not shown):

ARMED! Press button to start logging ✓	**DELAYED START** Starts logging at 10:30:00 04/03/12	**DELAYED START** Starts logging when temperature >36.2°C
Delayed manual start	Delayed time/day start	Delayed temperature/RH start

Data display options:

↓ ALARM **26.8** °C txt i 🔧	↑ ALARM 26.8°C txt i 🔧	↓ ALARM **Temperature** Max 47.1°C Min 12.5°C **Since Reset** 14:21 01/10/2012 ← i reset
Current temperature/RH (low alarm triggered)	Trend plot with current temp/RH (high alarm triggered)	Summary

General status and local control:

Memory 1% Readings 208 Battery 88% ←	↓ ALARM ● Mute Alarm ○ Stop Logging ○ Logger Settings ← ▼ ✓	Locked Mode
Logger status screen	General control	Locked mode prohibits local adjustments

EL-GFX-2 Specifications

Specification	Minimum	Typical	Maximum	Unit
RH Measurement Range	0		100	%RH
RH Resolution		±0.1		%RH
RH Accuracy (overall error)		±3.0*	±5.0	%RH
RH Repeatability		0.5		%RH
RH Long term stability		0.5		%RH/year
Temperature Measurement Range	-30 (-22)		+80 (+176)	°C (°F)
Temperature Resolution		0.1		°C (°F)
Temperature Accuracy (overall error)		±0.5 (±0.1)	±2.0(±4.0)	°C (°F)
Temperature Repeatability		±0.1 (±0.2)		°C (°F)
Dew Point Accuracy (overall error)		±1.1 (±2.0)**		°C (°F)
Logging Rate (configurable)	every 10 seconds		every 1 hour	
Operating Temperature Range***	-30 (-22)		+80 (+176)	°C (°F)
Battery Life†		1		Year

* This specifies the overall error in the logged readings, for relative humidity measurements between 20 and 80%RH.

** This specifies the overall error in the calculated dew point for relative humidity measurements between 40 and 100%RH at 25°C.

*** At temperatures below -5°C the LCD will exhibit slower response times. The LCD will be disabled at temperatures under -20°C and above 70°C.

† At 25°C and 10 minute logging rate, with no alarm LEDs or sounder and minimal LCD use.

WARNING: Do not exceed operating temperatures.

EL-GFX-2 Ordering Information

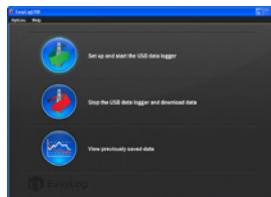| Description	Order Number
EL-GFX-2 Data Logger Includes data logger, two (2) batteries (preinstalled), USB cable (31-inches), mounting clip, downloadable configuration, review and Excel export software.	**EL-GFX-2**
Optional Accessories	
Spare Battery Please note: 2 batteries are required to run the EL-GFX-2 data logger.	**BAT-3V6**

Included

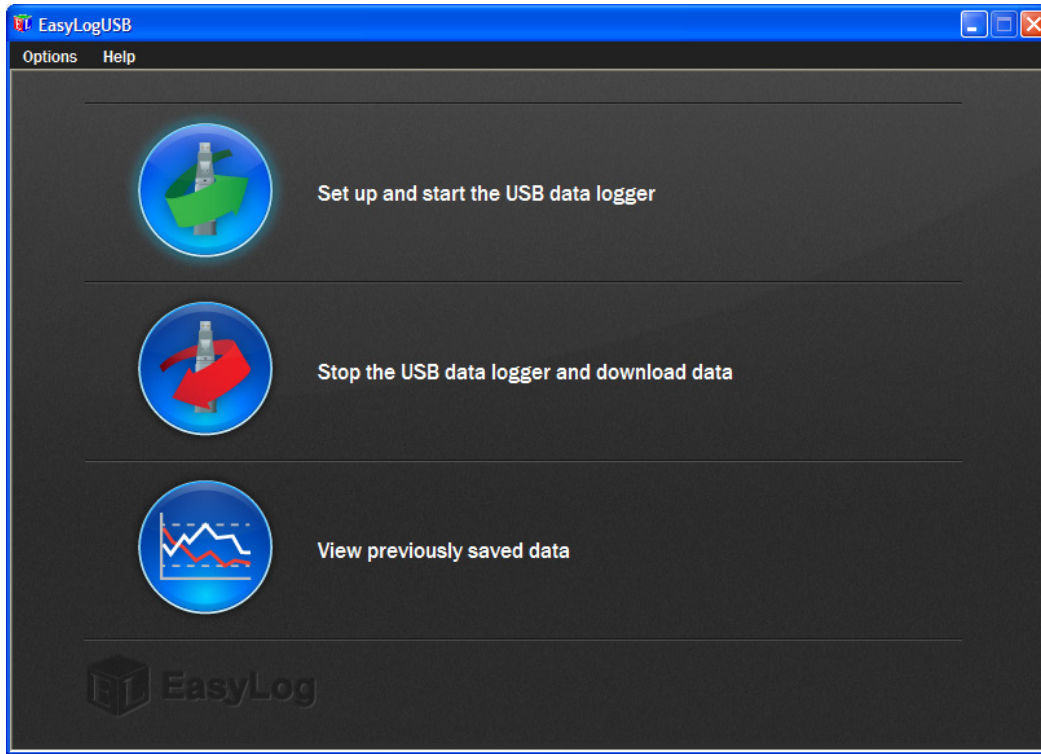**EL-GFX-2 Data Logger** | **Mounting Clip** | **Software (Via Download)** | **USB Cable (31 inches)** | **2 Batteries (preinstalled)**
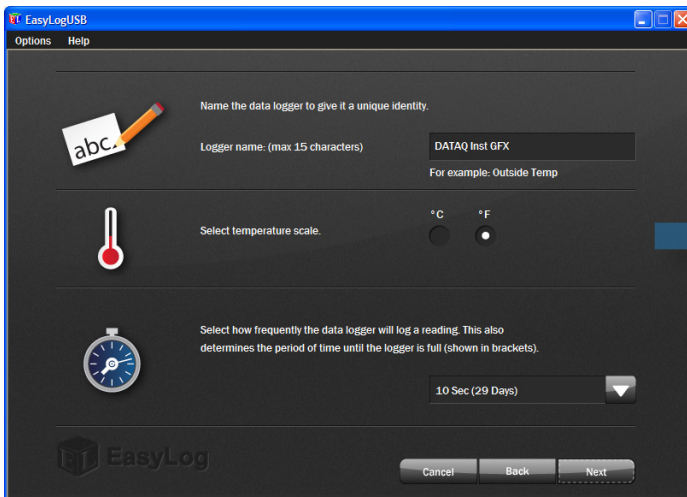
EL-GFX-2 Included Software Overview

Software included with EL-GFX Series instruments allows complete instrument configuration, data retrieval, review, and single-click export facility to Microsoft Excel.
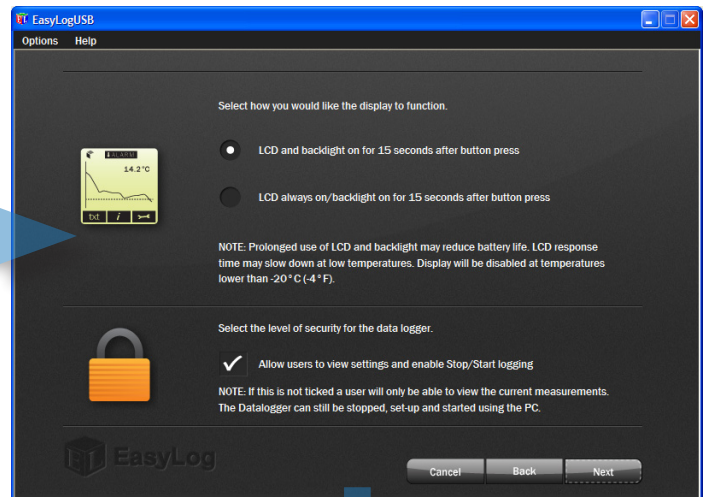
Top EL-GFX Software Menu

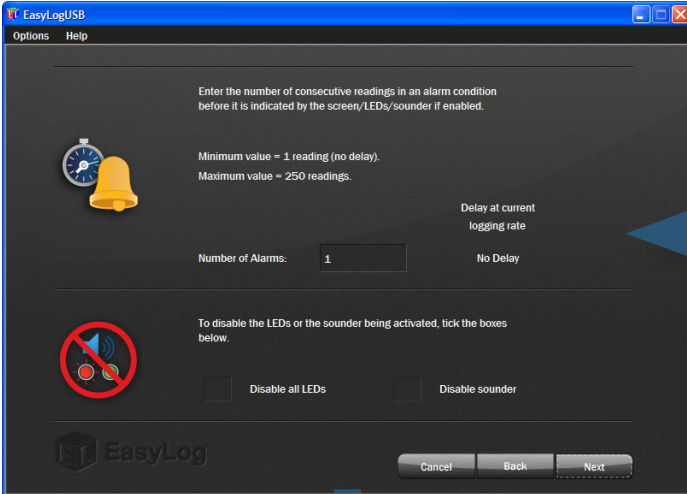## Typical EL-GFX Configuration Procedure:

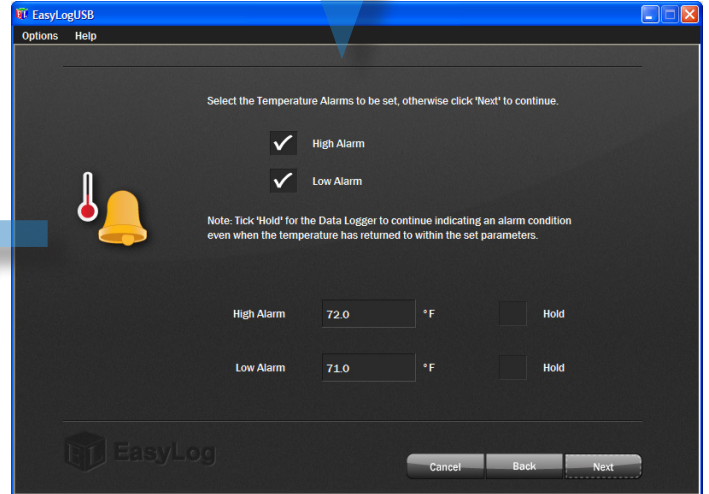Name the GFX logger and set its temperature/RH scale and logging interval.

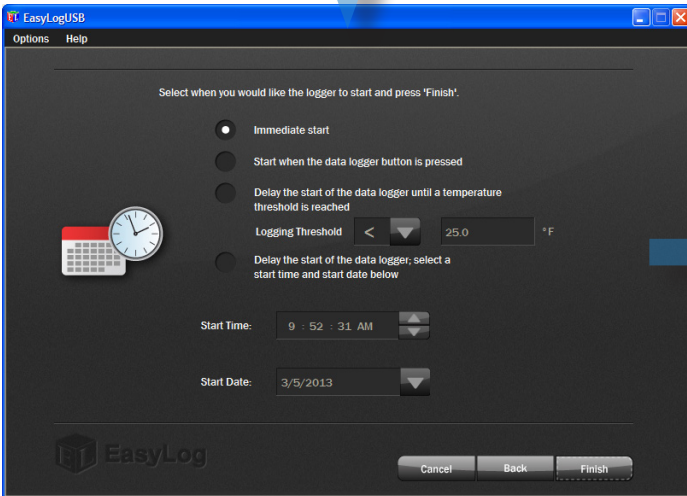Configure the logger's LCD behavior and security level.

Configure alarm delay time and methods

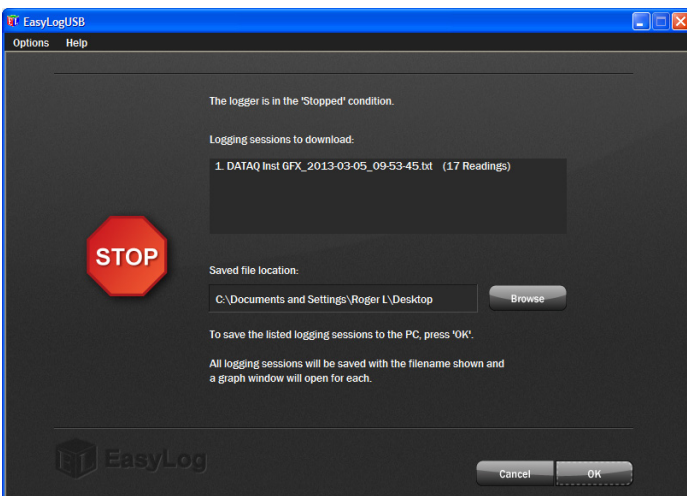Configure alarm thresholds and behavior

Configure logging start conditions
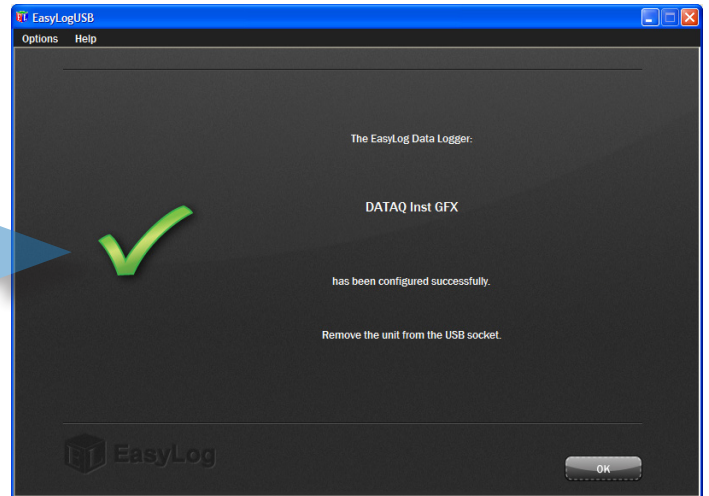
Configuration Complete!

Upload Logger Data

Review the stored logging sessions and define where they'll be saved.

Review Uploaded Logger Data

Cursor-based review of recorded data with time and date stamps

Single-click export to Microsoft Excel.

EL-GFX Series Graphing Data Loggers

EL-GFX Data Logger series products are a line of low cost, compact, battery-operated data loggers with a graphical display. Each product in the line offers a specific measurement function and range.

EL-GFX-1 Temperature Data Logger
Measures -30 to +80 °C (-22 to 176 °F)

EL-GFX-DTP Temperature Data Logger with Probe
Measures -40 to +125°C (-40 to +257°F)

EL-GFX-2 Temperature and Humidity Data Logger
Measures -30 to +80 °C (-22 to 176 °F) and 0-100%RH

EL-GFX-2+High Accuracy Temp and RH Data Logger
Measures -30 to +80 °C (-22 to 176 °F) and 0-100%RH

EL-GFX-DTC Thermocouple Temperature Data Logger
Supports K, J, and T type Thermocouples

EL-GFX-TC Thermocouple Temperature Data Logger
Supports K, J, and T type Thermocouples

EL-USB Data Loggers

Lascar EasyLog model EL-USB series products are a line of low cost, compact, battery-operated data loggers with built-in memory and a USB interface for easy setup and data download. Each product in the line offers a specific measurement function (including temperature, voltage, process current, and more).

EL-GFX Data Loggers

The EL-GFX line of data loggers is the latest release from Lascar Electronics with similar functionality of the EL-USB series with an added graphic display for data.

EL-WiFi Data Loggers

Lascar's EL-Wifi Data Logger series products are low cost, compact, battery-operated data loggers with wireless connectivity to any PC over a WiFi router. Each product in the line features a large, easy-to-read display of current measurements, and is purchased for specific measurement functions.

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