



MONARCH INSTRUMENT

Instruction Manual

Track-It™ Extreme Temperature Data Loggers



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SAFEGUARDS AND PRECAUTIONS



The Track-It™ Extreme Temperature Loggers are designed to be used in extremely hot or cold environments. **Use proper protective equipment.** Wait until the unit has reached typical safe-to-touch standards before touching with bare hands.

1. Read and follow all instructions in this manual carefully, and retain this manual for future reference.
2. Do not open the unit in a high humidity environment; it will cause condensation inside the unit.
3. Do not operate this device in flammable or explosive atmospheres.
4. This device has no power switch. It will be in operation as soon as power is connected or battery is inserted.
5. Do not use this instrument in any manner inconsistent with these operating instructions or under any conditions that exceed the environmental specifications stated.
6. There are no user serviceable parts in this instrument. Refer service to a qualified technician.



To comply with worldwide regulations such as the U.S. Environmental Protection Agency Resource Conservation and Recovery Act (RCRA) and EU Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE), you must not discard this electrical/electronic product in domestic household waste. The electronic components in this device may contain environmentally harmful substances. **DO NOT DISPOSE** of this product as unsorted municipal waste. This product needs to be **RECYCLED** and disposed of in accordance with environmental regulations in the country of use; contact your local authorities for more information. This product may be returnable to your distributor for recycling; contact the distributor for details.



Track-It™ Extreme Temperature Loggers contain lithium metal batteries which must be recycled and disposed of in accordance with Federal, State, & Local Regulations. Do not incinerate. Batteries should be shipped to a reclamation facility for recovery of the metal and plastic components as the proper method of waste management. Contact the distributor for appropriate product return procedures.

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Monarch Instrument's Limited Warranty applies.
See www.monarchinstrument.com for details.

Warranty Registration and Extended Warranty Coverage information is available online at www.monarchinstrument.com.

Track-It is a trademark of Monarch Instrument.

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1.0 OVERVIEW

The Track-It™ Extreme Temperature Data Loggers are battery-powered, stand-alone units that consist of a self-contained environmentally sealed (IP68) 316L stainless steel enclosure with one or two temperature channels using probes of various configurations. The loggers are designed to measure temperatures from -58° to +302 °F (-50° to +150 °C), and advanced temperature compensated RTD technology allows for extremely accurate measurement with the entire logger in the temperature environment. If the flexible probe is ordered, just the probe tip is capable of measuring temperatures from -94° to +572 °F (-70° to +300 °C).



⚠ CAUTION: Bending the flexible probe too many times or too sharp of a bend radius will damage/break the flexible probe.

The loggers record up to 30,000 temperature data samples, and the onboard data storage is nonvolatile, so data will not be lost in the event of a depleted battery.

The units are easily configured using the free downloadable Track-It™ DataLogger Software and Extreme Logger Reader (required additional item). Simply plug the logger into the Extreme Logger Reader, which connects to your Windows® PC with the provided USB cable. The logger communicates via the Extreme *Extreme Logger Reader* without opening the logger, so the housing's long-term integrity is ensured.



Once you open Track-It™ DataLogger Software on your PC and the Reader is connected, the software will automatically identify the logger, and you can change the default settings as desired. Set the unit up to start or stop recording immediately, at a predetermined time and date, or only at specific temperature values. The sample storage rate can be set from 1 sample every 2 seconds up to 1 sample every 24 hours.

2.0 GETTING STARTED

2.1 Install USB Driver and Track-It™ DataLogger Software

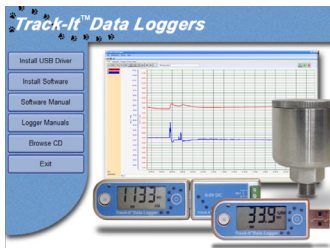
CAUTION: Do NOT plug the Reader into your PC USB port until AFTER the USB driver and Track-It™ DataLogger Software have been installed.

Download Track-It™ DataLogger Software from the link below:

http://www.monarchserver.com/Files/Software/Track-It_Software.zip

Unzip the file to a local directory on your PC. Double-click **CD_Start.exe**. This will launch the Track-It Data Loggers installations screen as shown right.

- Click **Install USB Driver**. Follow the prompts accepting any security warnings and the License Agreement.



Track-it Software's installation screen

- Click **Install Software**. Follow the prompts, accept the License Agreement, and select your desired settings/options to complete the installation. Once you click **Finish**, the software is now ready for use.

The Logger and Software manuals may also be accessed from the installation screen

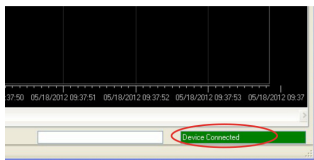
2.2 Connect Reader and Start Track-It™ DataLogger Software

Connect the Extreme Logger Reader to your PC USB port using the supplied cable. Refer to section [3.0 EXTREME LOGGER READER](#) for more details.

If the *Found New Hardware Wizard*  appears, follow the prompts to complete the installation.

- Insert the Track-It™ logger into the Reader.
- Start the Track-It™ DataLogger Software by double-clicking the Track-It icon  on your PC desktop or from the Start menu.

If the USB driver installed properly, you will see *Device Connected* displayed in the lower right-hand corner of the Track-It™ DataLogger Software window.



2.3 Configure Logger

- Select the **Device Setup** tab. The software will automatically retrieve and display the datalogger configuration.
- Review default factory configuration settings and make any necessary changes (i.e. sample rates, triggers, alarms, etc.). Be sure that the time and date are properly set.
- Click **Send Config** under the Device Configuration section of the window.

Congratulations, your datalogger is now operational!

3.0 EXTREME LOGGER READER

To configure or read data from the logger, you will need the Extreme Logger Reader. The Reader connects to your PC via the supplied USB A-Male to Mini USB cable. Power is supplied via the USB cable, or a 9-volt center-positive power supply can be plugged into the DC Power socket on the Reader.

- Plug the Reader into your PC. The ON LED will illuminate (Figure 1 below).
- Insert the logger into the Reader. The READY LED will light green (Figure 2 below).



WARNING: DO NOT INSERT THE LOGGER INTO THE READER IF THE LOGGER IS EXTREMELY HOT OR COLD.

Allow the logger to reach typical safe-to-touch standards before inserting the logger into the Reader.

- Run Track-It™ DataLogger Software. The software will automatically identify the logger. Whenever the software is communicating with the logger, the READY LED will light amber.



CAUTION: DO NOT remove the logger from the Reader when the READY LED is amber.



Figure 1: Reader is plugged into PC. Figure 2: Extreme inserted the Reader.

4.0 REPLACING THE BATTERY

To replace the battery, the top or “lid” of the logger enclosure must be unscrewed and separated from the bottom (Figure 3). There are two flats on the “lid” to facilitate the use of a wrench (one is supplied with the Extreme Logger Reader). Once exposed, the battery may be removed and replaced.

- Insert the battery following the battery polarity as shown in Figure 4.

⚠ Use only a 3B5700 ½ AA Lithium Sulfuryl Chloride 3.9V 800mAh High Temperature (150 °C) battery. (Monarch PN: 5396-9934)

- Refer to section [4.1 Battery Disposal](#) for proper disposal of the used battery.

If the new battery has been inserted correctly, the LED on the opposite side of the board will blink twice within 5 seconds (Figure 5).

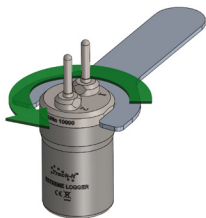


Figure 3: Unscrew lid counterclockwise

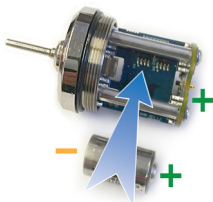


Figure 4: Battery polarity



Figure 5: LED blinking 2X

Screw the “lid” back onto the bottom making sure to tighten completely to ensure a good seal (Figure 6). The O-ring should not create a gap between the top and the bottom.



Figure 6: Proper sealing of the housing

4.1 Battery Disposal

Track-It™ Extreme Temperature Loggers use (1) 3B5700 ½ AA Lithium Sulfuryl Chloride 3.9V 800mAh High Temperature (150 °C) battery.



DO NOT DISPOSE of the lithium battery as unsorted municipal waste. The battery needs to be RECYCLED in accordance with local regulations. The battery should be sent to a recycling center or returned to the factory using appropriate shipping methods.



To remove the battery, see section [4.0 REPLACING THE BATTERY](#).

5.0 SPECIFICATIONS

Specifications*	Track-It Extreme Temperature Data Loggers
Measurement:	
Temp. Range (fixed probe)	-58° to 302 °F (-50° to +150 °C)
Accuracy	±0.2 °F from -22° to 302 °F (±0.1 °C from -30° to +150 °C) ±0.4 °F from -58° to -22 °F (±0.2 °C from -50° to -30 °C)
Temp. Range (flexible probe)	-94° to 572 °F (-70° to +300 °C) probe only
Accuracy	±0.2 °F from -22° to 302 °F (±0.1 °C from -30° to +150°C) ±0.5 °F from -22° to 572 °F (±0.25 °C from -70° to +300°C)
General:	
Record	Sample rates: user-configurable, 1 sample every 2 seconds to 1 every 24 hours
No. of Samples	30,000 stored in non-volatile memory
Record of Trigger	Two independent triggers Multiple trigger modes: Instantaneous, On Alarm, Time and Date (start and stop)

General:	
Record Mode	Fill to end of memory or cyclic, number of samples and time duration
Alarms	Two (2) user-programmable alarms (High or Low)
Real-Time Clock	Accuracy ± 1 minute/year at 77 °F (25 °C)
Communication	Reader with USB connection; no need to open Logger to read data or program
Software	Track-It DataLogger Software — program device, view data (historic or real-time), plot data, export to Excel™
Environmental:	
Temp. Range	-58° to 302 °F (-50° to +150 °C)
Humidity	0 to 100% condensing
Pressure	0 to 9 bar (0 to 130 psi)
Submersion	IP68 – 1.5m (~ 5 ft.) of static water indefinitely
Battery	3B5700 ½ AA lithium sulfuryl chloride 3.9V 800 mAh rated 150°C; field replaceable (Monarch PN: 5396-9934) Life: up to 2 years typical @ 1 minute sample rate (@20 °C)
Enclosure	Material: 316L stainless steel Dimensions w/out probe: 1.43 in. (dia.) x 2.30 in. [3.6 cm (dia.) x 5.5 cm]
Probe Lengths	Fixed: 1", 2", and 4" [3.6 cm, 5 cm, and 10 cm] Flexible: 22" [56 cm]

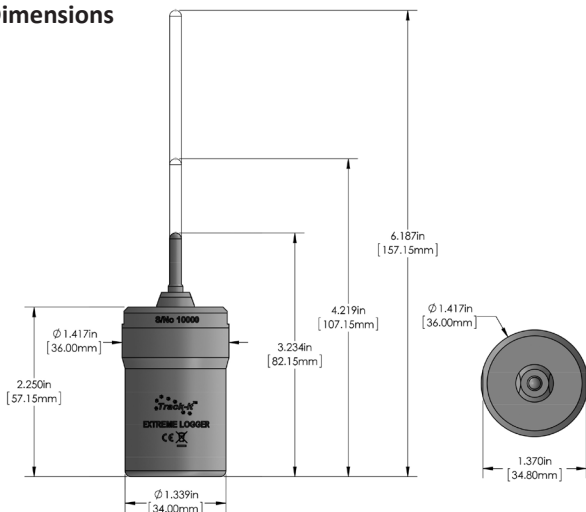
*Specifications are subject to change without notice.

5.1 Compliance

CE Compliant.

Please visit our website, www.monarchinstrument.com, to download our Declaration of Conformity for this product.

5.2 Dimensions



6.0 ACCESSORIES

For details, see [Accessories webpage](#).

Model	Part Number	Description
Extreme Logger Reader	5396-9930	Facilitates configuration and data transfer; includes Spanner Wrench
Extreme Logger Battery	5396-9934	Replacement battery with replacement o-rings
Spanner Wrench	5396-9933	For changing the battery
Replacement O-ring Seals	5396-9931	Set of 3 replacement o-rings
3 ft. USB Extension Cable	5396-9901	Extension cable for use with all Track-It loggers
Mini USB Cable	5396-9911	Replacement USB 2.0 to 2.0 mini 6 ft cable
Track-It Software on CD	5396-9902	Track-It DataLogger Software on CD
Kit Case for Track-It Loggers	5396-9918	Watertight, o-ring sealed protective case

Measure • Monitor • Maintain

Monarch Instrument is committed to excellence and quality in manufacturing, sales, and service.



*Portable
Tachometers*



Track-It™ Data Loggers



Panel Tachometers



*Fixed Mounted
Strobes*



Portable Strobes



*Frequency
Converters*



Speed Sensors



*DataChart™ Paperless
Recorders*



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