MARATHON PRODUCTS, INC.

microDL Operating Instructions:

- On the Install Hardware Device Drivers screen. The USB Reader Station will be identified as USB Device. Click next.

- Select Search for a suitable driver for my device (recommended). Click Next.

- On the Locate Driver Files screen, select Specify a Location and check CD-ROM. Click Finish on the next screen.

- Once the files have finished copying, the device will be ready for use. If the reader station is not installed correctly you will get a message "reader station not found" when you try to communicate with the logger.

Installing the Software

MDAS-Pro software runs on Microsoft Windows XP, Vista, Windows 7 and Windows 8, Windows 2008 and later operating systems.

- Follow the directions on the CD.

Getting Started

3. Turn on the display by pressing the black Start button. The display will stay on for four minutes before hibernating.

4. Place the micro-DL logger into the reader station while the display is still ON in order to communicate with the computer.

Configuring the micro-DL on Your Computer

- Double click on the MDAS-PRO, or go to Start, All Programs, MDAS-PRO.

- Click on MicroDL.

- Click on Logger Initialization.

The Logger Initialization screen allows you to set up your parameters for the micro-DL logger by using the four folders: SETUP, MEASUREMENT, ALARMS, & PROPERTIES.

Installing the Reader Station Hardware

1. Connect the USB retractable cable to a free USB port.

2. Connect the USB connector to the reader station

Installing the Reader Station Drivers

- Windows will automatically detect the USB Reader Station when it is connected to your computer through the USB cable.

- The Found New Hardware message will appear, followed by the Found New Hardware Wizard dialog. Click Next.

QUICK START GUIDE

SETUP TAB:

- **Description:** Enter alpha-numeric information, such as the location of the unit.

- **Tracking Number:** Enter numeric information, such as a record number for shipping or receiving.

- **Logger Clock:** Set the time manually in the window, or set the logger time based on the time on your PC.

- **Battery Status:** This displays the date when the battery was installed or replaced.
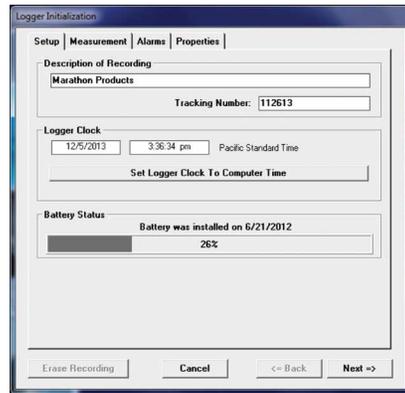
MEASUREMENT TAB:

- **Start Delay:** Set a time delay in either hours, minutes, or seconds before the micro-DL will begin to record.

- **Memory Configuration:**

  › Record to End of Memory: The logger will record data until the memory is full and then stop recording.

  › Custom Record Length: This option allows the user to specify the length of recording time and then increment the interval to meet the length of time. Different intervals will have a different number of measurements for a specified length of recording time.

  › Continuous Memory: The logger will record continuously. When the memory is full (reaches the Total Number of Measurements) it will wrap to the beginning of memory and start overwriting the oldest data. This will keep the most recent data in memory.

  › Programmable Memory Size: This option is only available for loggers with 64K of memory. The user can specify the amount of memory for each recording session.

- **Measurement Times:** Set the length of time in days or hours that you wish to record data. Please note that the Duration of Recording and Interval Between Measurements are dynamically linked. Setting the Duration of Recording will automatically calculate the interval.
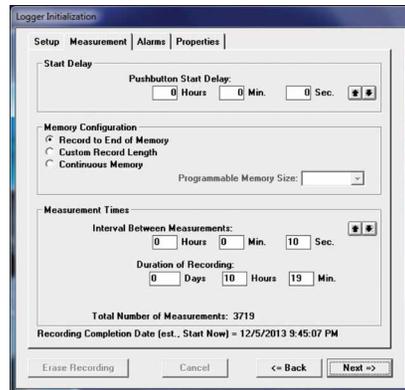
  Conversely, setting the Interval Between Measurements, will automatically calculate the Duration of Recording. For example, if you set the Duration of Recording to 3 Days, it will automatically calculate the Interval Between Measurements as 34 seconds. Or, if you set the Interval Between Measurements

at 15 minutes, it will automatically calculate the Duration of Recording to 79 days and 21 hours.

- **Mean Kinetic Temperature:** Note: this feature is only available with the silver micro-DL. 83.44kJ/mole is the default activation energy. The user can enter a different value, if known.

ALARMS TAB:

- **Temperature GREATER Than:** Set the maximum temperature for an alarm condition to be triggered.

- **Temperature LESS Than:** Set the minimum temperature for an alarm condition to be triggered.

- **Continuous:** Time over or under the alarm continuously.

- **Cumulative:** Total cumulative time over or under the alarm (this feature is available only with the silver micro-DL).

PROPERTIES TAB:

- **Stop Condition:** The Push Start button on the micro-DL logger may be enabled as a Stop button mechanism.

- **Sensor:** Indicates the source of the measurement source; internal or probe.
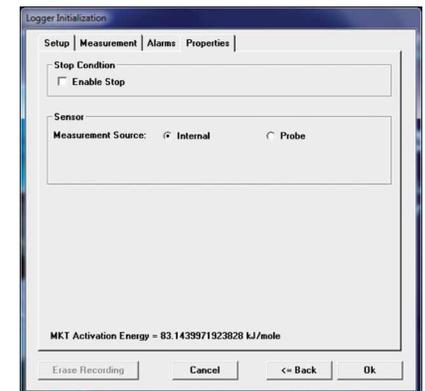
YOU ARE NOW READY TO BEGIN RECORDING!

- Simply detach the micro-DL unit from the reader station and press the Start button for 7 seconds until Run appears in the display.

Starting The Logger

- To start recording, press the black Start button and hold it for 7 seconds until the RUN displays three times.

- To confirm that that the logger has been started, REC will appear in the upper left of the display.

The microDL can now be placed where you want to record the temperature.

REC indicates that the microDL is recording

Start button