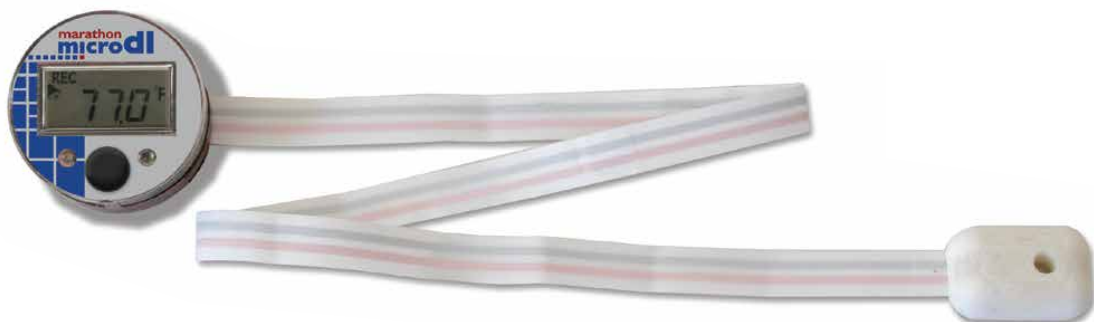


Initializing MicroDL Temperature Data Loggers



Initializing MicroDL Temperature Data Loggers

Initializing the Logger:

- 1) Start the MDAS-Pro software by double clicking on the icon.
- 2) Plug the MicroDL reader USB into your PC. Turn the MicroDL display on by pressing the black Start Button. The display will stay on for four minutes before hibernating.
- 3) Place the MicroDL into the reader station, with the display side down, while the display is still ON in order to communicate with the computer.



On the menu select **Logger** and click on **Logger Initialization** in the drop down menu.

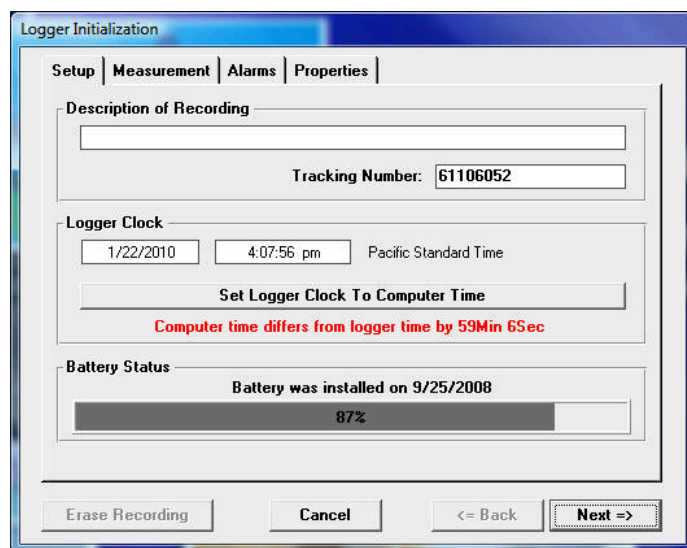


- 4) The Logger Initialization screen will appear.

Initializing MicroDL Temperature Data Loggers

Setup Tab:

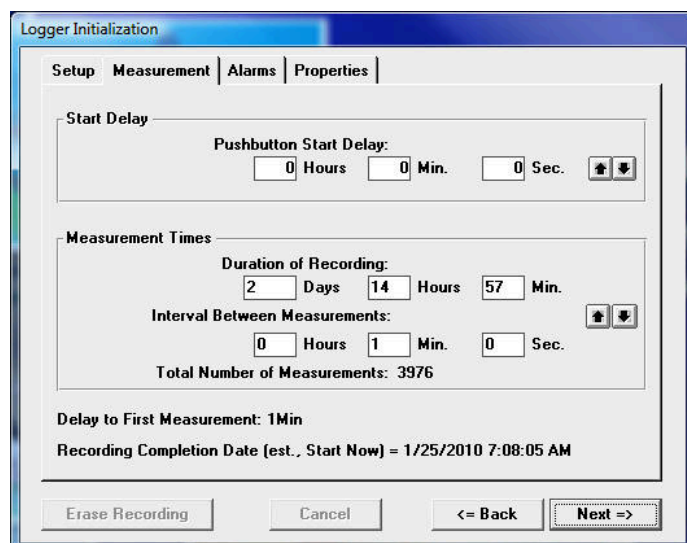
- **Description:** Enter alpha-numeric information, such as the location of the unit.
- **Tracking Number:** Enter numeric information, such as a record number for shipping or receiving.
- **Logger Clock:** Set the time manually in the window, or set the logger time based on the time on your PC.
- **Battery Status:** This displays the date when the battery was installed or replaced.



The screenshot shows the 'Logger Initialization' window with the 'Setup' tab selected. The 'Description of Recording' field is empty. The 'Tracking Number' is set to '61106052'. The 'Logger Clock' section shows the date '1/22/2010', time '4:07:56 pm', and 'Pacific Standard Time'. A button 'Set Logger Clock To Computer Time' is present, with a red message below it: 'Computer time differs from logger time by 59Min 6Sec'. The 'Battery Status' section shows 'Battery was installed on 9/25/2008' and a progress bar at '87%'. At the bottom are buttons for 'Erase Recording', 'Cancel', '<= Back', and 'Next =>'.

Measurement Tab:

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

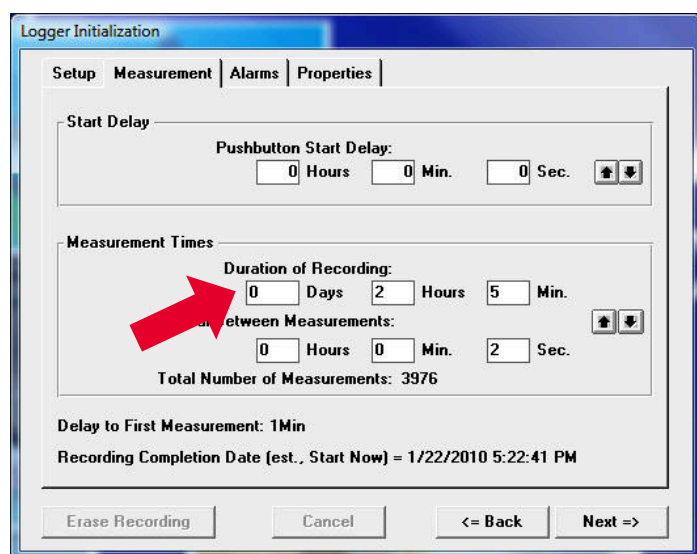


The screenshot shows the 'Logger Initialization' window with the 'Measurement' tab selected. The 'Start Delay' section has a 'Pushbutton Start Delay' with fields for '0 Hours', '0 Min.', and '0 Sec.', and up/down arrows. The 'Measurement Times' section shows 'Duration of Recording' as '2 Days', '14 Hours', and '57 Min.', and 'Interval Between Measurements' as '0 Hours', '1 Min.', and '0 Sec.', with up/down arrows. The 'Total Number of Measurements' is '3976'. Below these are 'Delay to First Measurement: 1Min' and 'Recording Completion Date (est., Start Now) = 1/25/2010 7:08:05 AM'. At the bottom are buttons for 'Erase Recording', 'Cancel', '<= Back', and 'Next =>'.

Initializing MicroDL Temperature Data Loggers

Setting the Duration:

Setting the Duration of Recording will automatically calculate the Interval Between Measurements. 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.



Logger Initialization

Setup Measurement Alarms Properties

Start Delay

Pushbutton Start Delay:

0 Hours 0 Min. 0 Sec. [Up] [Down]

Measurement Times

Duration of Recording:

0 Days 2 Hours 5 Min. [Up] [Down]

Interval Between Measurements:

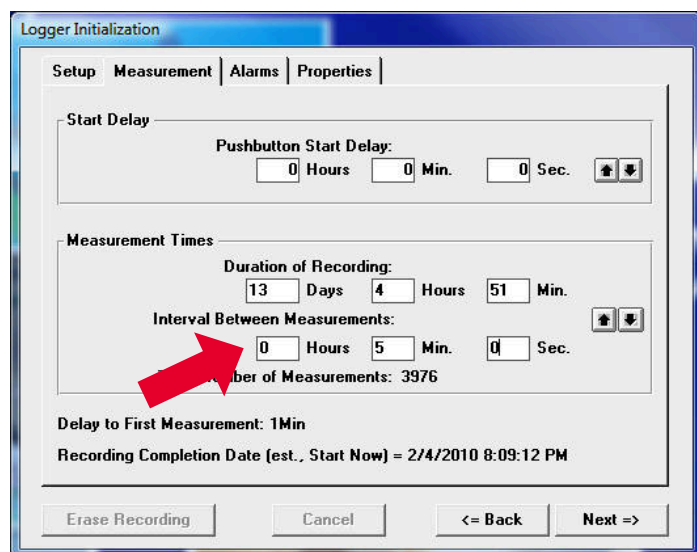
0 Hours 0 Min. 2 Sec.

Total Number of Measurements: 3976

Delay to First Measurement: 1Min

Recording Completion Date (est., Start Now) = 1/22/2010 5:22:41 PM

Erase Recording Cancel <= Back Next =>



Logger Initialization

Setup Measurement Alarms Properties

Start Delay

Pushbutton Start Delay:

0 Hours 0 Min. 0 Sec. [Up] [Down]

Measurement Times

Duration of Recording:

13 Days 4 Hours 51 Min. [Up] [Down]

Interval Between Measurements:

0 Hours 5 Min. 0 Sec.

Total Number of Measurements: 3976

Delay to First Measurement: 1Min

Recording Completion Date (est., Start Now) = 2/4/2010 8:09:12 PM

Erase Recording Cancel <= Back Next =>

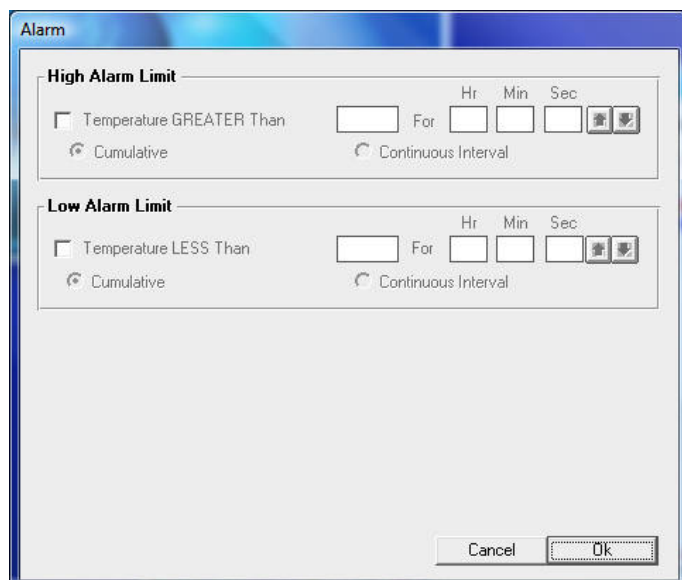
Initializing MicroDL Temperature Data Loggers

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.



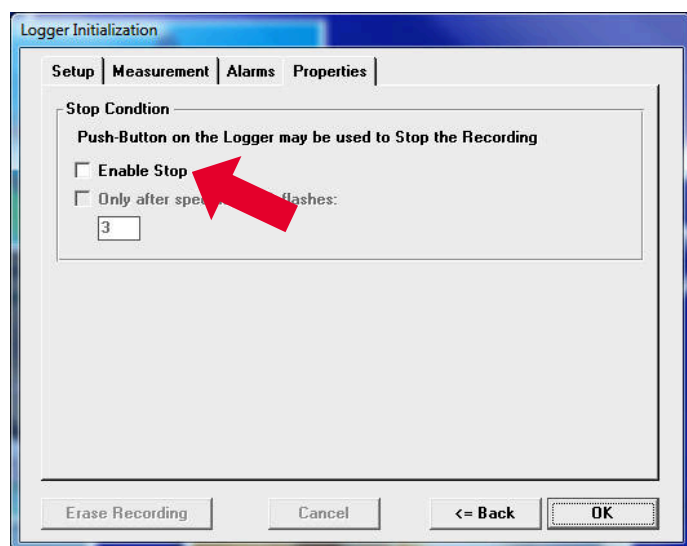
Check the High Alarm Limit or Low Alarm Limit if you want to enable the flashing LED alarm indicator.



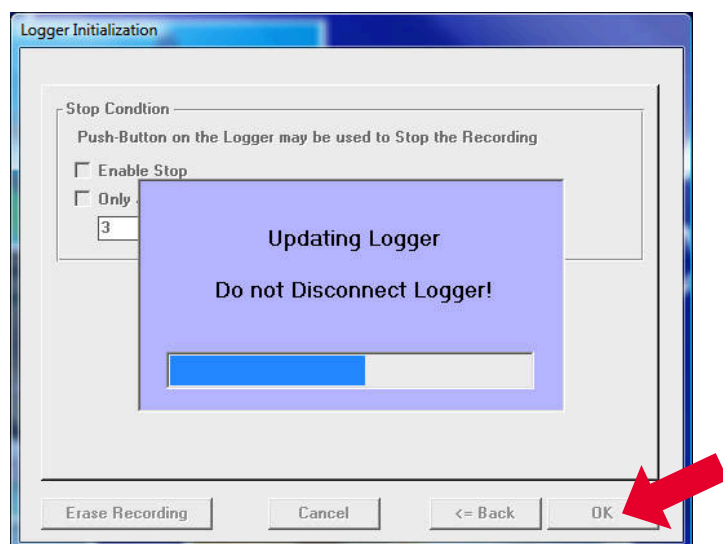
Initializing MicroDL Temperature Data Loggers

Properties Tab:

- **Stop Condition:** The Push Start button on the logger may be enabled as a Stop button mechanism. Check the Enable Stop box if you want to be able to stop recording. Note that the device cannot be restarted after pushing the Stop button.
- **Memory Configuration:** The memory may be configured two ways. The default is Record to End of Memory (recommended). The other is Continuous which writes over the oldest data.



Push **OK** to update the firmware in the logger. Wait until the updating is finished before disconnecting the logger.



Initializing MicroDL Temperature Data Loggers

Starting The Logger

Remove the device from the reader station and press and hold the black Start Button for 7 seconds until the RUN displays.

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

The MicroDL is now recording. The unit can be placed in the location that should be monitored.



DISPLAY EXAMPLES

Press the Start button to see the following information display with each press:



1. REC: 8.6°C
shows recording and current temperature



2. RUN: 11 D
shows elapsed time in days



3. MKT: 9.1°C
shows mean kinetic temperature



4. HI: 15.2°C
shows alarm has occurred and high temperature



5. LOW: 8.2°C
shows alarm has occurred and low temperature



6. HI HR: 0.3
shows alarm time hours over high threshold



7. LOW HR: 1.1
shows alarm time hours over low threshold



8. REC: 8.6°C
Push to return to current temperature