

Operating Instructions for Memo-Chip BL2 with RH BluePeg probe or MC/RH Tracker



Connection between BL2 and RH BluePeg Probe via Adapter RH. Monitor for ambient conditions.



Connection between BL2 and BluePeg Sensor via RH Cable. Monitor for drying of insulation behind sheetrock wall.

Memo-Chip BL2 with RH BluePeg probe records:

- Relative Humidity
- Temperature
- GPP and Dew Point
- EMC

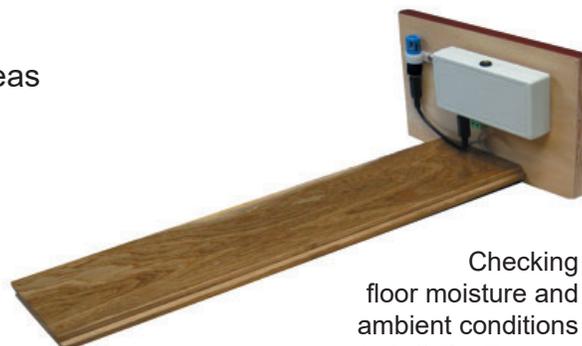
Memo-Chip BL2 with Tracker MC/RH records:

- 3 measurements of wood, drywall and other materials
- 1 measurement of RH, Temp, GPP, Dew Point and EMC

Applications include:

- Monitor for warehouses and other storage areas
- Monitor for floor installations
- Monitor lumber during transportation
- Monitor drying processes
- Monitor material testing in labs

The Tracker is used for all applications, where material moisture should be monitored in relation to ambient conditions. Wood moisture and relative humidity



Checking floor moisture and ambient conditions with MC/RH Tracker.

Important

The Memo-Chip BL2 is only compatible with Windows systems and has the optional capability of exporting to Microsoft Excel.

1. Installing BL2 Software on a PC

Install the software before connecting the Memo-Chip BL2 to the PC.

Go to:

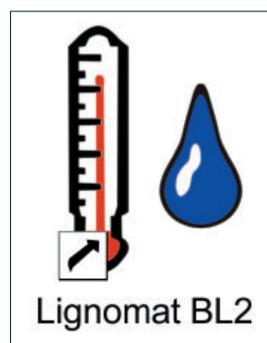
http://www.lignomatsystems.com/downloads_protected

Type in the password: lignomatDownloads

Once you have logged into the Lignomat Systems web page click on the **BL2 V 1.17** link to download the setup zip file.

Open the file and select “setup-bl2-v1.17.”

A pop-up will then appear, select “Extract all” and the “Extract” again. A new window will appear, click on the setup-bl2-v1.17 icon. Allow the app to make changes to your device and then the Lignomat BL2 Setup Wizard will appear.



Continue by selecting “next” and then install. The Device Driver Installation Wizard will appear, click on “next” and “finish.” Then, click “finish” again on the Completing the Lignomat BL2 Setup Wizard screen. Finally go to the desktop and open the program by clicking on the Lignomat BL2 icon (image above).

2. Before Starting a New Log

If you have not already saved all measured data from the last test on the PC, download and save the measurements on the PC as described in #5. Make sure the correction factors for M1, M2, M3 are correct for the data saved on the BL2.

You are now ready to start a new log. The BL2 is connected to the PC, the BL2 window is open and shows BL2 serial number and parameters from the last test. (To test all functions of the BL2 before shipping, we have already run a test.) If the BL2 window is not already open, connect the BL2, click **Detect and Read** and the BL2 serial number indicates, that the BL2 is connected to the PC.

3. Start a New Log

The BL2 window shows BL2 serial number and parameters from the previous test.

Click the Settings button.

- Change to Celsius if applicable. The default setting is °F.
- Choose DPT, GPP and EMC.
- If using a Tracker, use drop down list to set correction factors for MC1, MC2, MC3 for the new log.

Close Settings window.

Enter test parameters:

- Logging Interval from the drop down list between 30sec to 24hrs.
- Log Description.
- High Limits and Low Limits.
- Click Alarms Beep, if audible out of range warnings are desired.
- Click Hold Alarms, if the BL2 should indicate an alarm condition, even if the values have dropped back within the set parameters.

Next, click the Start New Log button. Clicking that button updates the Log Start Date and Time with date and time settings from your PC. Also, all data from the previous log will be deleted from the BL2. You will be prompted to confirm that **all data from the previous log will be erased from the BL2**. Make sure all data from the previous test has been saved on the PC, see #5. When you click Start New Log, the Storage Mode button appears, click to put the BL2 into storage mode to save battery.

4. Start Testing

Disconnect the BL2 from the PC. At the test site, install the RH BluePeg probe or the MC/RH Tracker and connecting cables. Connect the BL2 with the black cable (long reach) or the Adapter H (short reach). Connecting puts BL2 out of Storage Mode and measurements will now be recorded.

5. Download and Save Measurements on PC

- Disconnect the BL2 from the RH BluePeg probe or MC/RH Tracker. Connect BL2 to PC
- Start the program from the BL2 icon on the PC. The “empty” Lignomat BL2 window appears. If the MC/RH Tracker has been used, click the Settings button **before** clicking Detect and Read. Make sure the correction factors for M1, M2, M3 are correct for the data saved.
- Click Detect and Read. BL2 serial number and the parameters from the test series are displayed, indicating the BL2 is communicating with the PC. When clicking Detect and Read, all measurements are saved automatically in a log file on the PC.
- If a new test is to be started, follow #3. To continue testing, follow #6.

6. Save and Review Measurements Repeatedly Without Starting a New Log

If you want to review measurements while a test is still running, unplug the BL2. All cables, RH probe and Tracker can be left in place. Follow the steps described in #5. When finished, reconnect the BL2 to the RH probe or MC/RH Tracker. New data will be added with the correct time stamp. No data will be overwritten. The log file on the PC will also be updated.

7. Review Chart and Log Files

A. Chart

Open BL2 program on PC. Connect BL2 and click Detect and Read. BL2 serial number is displayed, click Show Chart button and the chart window appears. Go to 7C to review previous log files.

The chart window shows:

Date and Time

Temp - Ambient Temperature,

RH - Relative Humidity,

Dew - Dew Point Temperature

GPP - Grains per Pound

EMC - Equilibrium Moisture Content

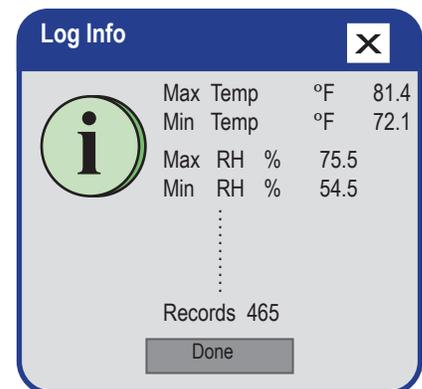
for Tracker only: MC1, 2, 3 - Moisture values are corrected for correction settings entered for MC1, MC2, MC3 and for temperatures measured by the temperature probe built into the Tracker.

Click anywhere on the traces, then date and time and all measured values for that time are listed.

- **Info** button will open the Log Info window, showing min/max values. These are not the pre-set min and max limits, but the actually measured maximum and minimum values.
- **Zoom** button cycles through four different zoom zones. After four clicks the original graph is shown again.
- **Open** button will show the Log File Library and allow access to review previous logs.
- **Print** button will send the chart to your default printer.
- **Close** button will return to main BL2 window.

B. Log

Connect the BL2, click Detect and Read. Click the "Show Log" button. If the BL2 is not connected and you want to review previous log files see 7C on next page. All measurements are listed with a time stamp. For button functions see 7A. (Open button allows access to the log file library).



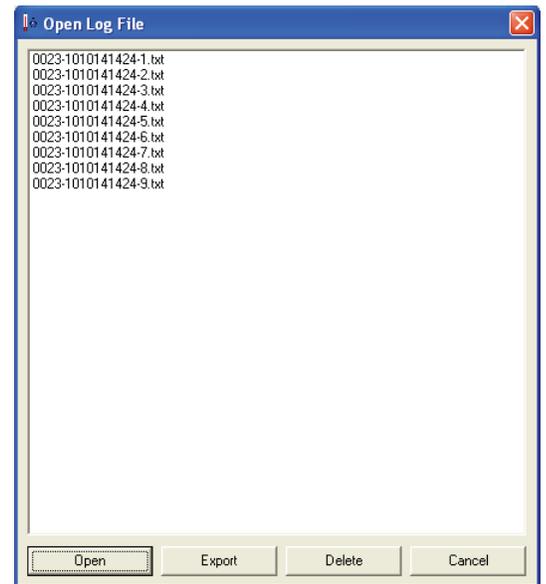
Time	Temp °F	RH %
10/19/2010 18:27	73.1	58.0
10/19/2010 18:28	73.1	58.6
10/19/2010 18:30	73.1	59.8
10/19/2010 18:31	73.1	60.4
10/19/2010 18:32	73.3	60.4
10/19/2010 18:33	73.4	60.3
10/19/2010 18:34	73.5	60.4
10/19/2010 18:35	73.5	60.2
10/19/2010 18:36	73.6	59.6
10/19/2010 18:37	73.6	59.9
10/19/2010 18:39	73.6	59.8
10/19/2010 18:40	73.8	60.2
10/19/2010 18:41	73.8	59.8
10/19/2010 18:42	73.8	60.3
10/19/2010 18:43	73.9	60.0
10/19/2010 18:44	73.9	59.6
10/19/2010 18:45	73.9	59.3
10/19/2010 18:47	73.9	59.2
10/19/2010 18:48	74.0	59.4
10/19/2010 18:49	74.1	59.4
10/19/2010 18:50	74.1	59.5
10/19/2010 18:51	74.1	60.0
10/19/2010 18:52	74.2	59.6

7C. Open Log File Library Review Saved Log Files

If you want to review any charts or logs saved on the PC, start the program from the BL2 icon. The BL2 does not need to be connected.

When the “empty” BL2 window is displayed:

- Click Show Chart or Show Log.
- Click Open, Log File Library is displayed.
- Select the file to review and click Open again.
- Chart or log are displayed.
- Click Close to return to the main BL2 window. Click Open to display the Log File Library again.



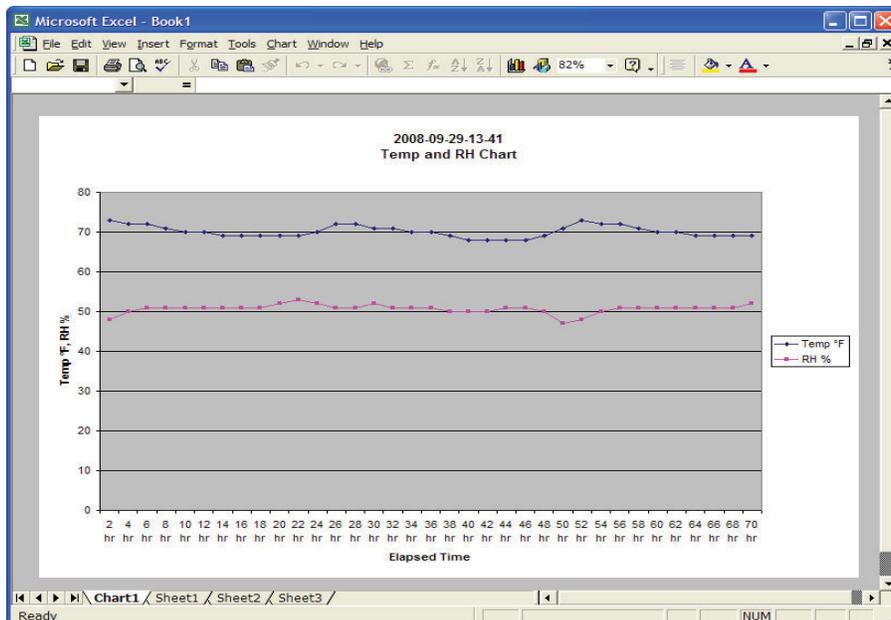
8. Export Data to Microsoft Excel

Any BL2 data log file can be exported to be included in reports and other documentation. Open Log File Library as described in 7C above, select the file and click Export.

This requires Microsoft Excel 2000 or newer to be on the PC.

The program will start Excel and export the data to an Excel sheet and chart. This may take a few seconds depending on the speed of your PC.

Important: The Excel workbook is not automatically saved. Make sure to save the workbook before closing Excel.



9. LED Indicators and Alarms

BL2 to PC:

Yellow steady light indicates the connection between BL2 and PC has been established.

Red light indicates low battery.

BL2 to RH or Tracker:

First blink blue indicates the connection between BL2 and RH BluePeg probe or MC/RH Tracker has been established. Red light for low battery.

Second blink green indicates the RH probe or the Tracker are functioning ok and measurements are recorded. Red light for RH probe or Tracker error.

Third blink green for RH within limits. Red light for RH Alarm.

Fourth blink green for Temp. within limits. Red light for Temp. Alarm.

The LED indicators are not always lit to save battery power. If you are on site to check if the limits have been exceeded, disconnect the BL2 and reconnect the BL2 again. This starts the light sequence listed above.

If Hold Alarms has been selected, the alarms (LED and audible) will continue even if the over the limit condition has gone away.

If Alarms Beep has been selected, an alarm will sound when any one of the selected ranges low or high has been exceeded.

10. Specifications

RH BluePeg Probe: Size: 1/2" by 1 3/4"

Accuracy of Humidity Readings: max $\pm 2\%$ for values between 10% and 90%, max $\pm 3\%$ below 10% and above 90%.

Accuracy of Temperature Readings: $\pm 0.5^\circ\text{F}$ for 32°F to 120°F ($\pm 0.3^\circ\text{C}$ for 0°C to 50°C)
up to $\pm 1^\circ\text{F}$ for 5°F to 32°F and 120°F to 160°F ($\pm 0.5^\circ\text{C}$ for 5°C to 32°C and 120°C to 160°C)

Memo-Chip BL2: 4 LEDs indicate active, low battery and out of range for RH and Temperature. Up to 32000 complete sets of measurements will be saved on BL2, before oldest measurements are overwritten. Battery: 3.6V Lithium Battery, rated for 8 years, replaceable.

Each BL2 Memo-Chip set is supplied with:

- BL2 unit with mounting bracket and wall attachments
- RH BluePeg Probe with mounting bracket
- 6 ft RH Cable black (long connection)
- RH Adapter (short connection)
- 3 ft USB Cable
- Manual

Software:

<http://www.lignomatsystems.com/downloads/> Click on **Protected Downloads**
Enter password: **lignomatDownloads** Then click on: **BL2 V 1.17. See page 1.**