



Introduction

The *Protimeter Timbermaster* is a conductivity moisture meter designed for use in wood. Moisture measurements can be taken using the integral pin electrodes, or using the meter in combination with moisture probes or hammer electrodes. When used with the temperature probe, the moisture measurements are automatically corrected with respect to temperature. This feature is particularly relevant for users testing wood that is significantly above or below 20°C (70°F). The Timbermaster is switched ON by pressing **⏻** momentarily and switched OFF by pressing and holding **⏻** for 2 seconds or more. The instrument will switch OFF automatically after 5 minutes unless the default setting is changed (see section 3).

1 Using the Protimeter Timbermaster without the Temperature Probe

The Timbermaster is calibrated for wood at 20°C (70°F). In general, timber that is hotter than 20°C will give higher readings and timber colder than 20°C will give lower readings. An approximate manual correction of 0.5% moisture content per 5°C may be subtracted from timber that is above 20°C. For timber that is below 20°C, a manual correction of 0.5% moisture content per 5°C may be added to the measured value.

1.1 Readings with Integral Electrode Pins

Remove the cap to expose the needle electrodes and switch the instrument ON by pressing **⏻**. Select the appropriate wood calibration scale (A, B, C, E, F, G, H or J) by referring to the enclosed Protimeter wood calibration tables and pressing **▶**. Push the pins into the surface of the wood and observe the reading.

1.2 Readings with Moisture Probe or Hammer Electrode

Connect the moisture probe or (optional) *Hammer Electrode* to the 3.5 mm socket on the right hand side of the Timbermaster and switch ON by pressing **⏻**. Select the appropriate wood calibration scale (A, B, C, E, F, G, H or J) by referring to the enclosed Protimeter wood calibration tables and pressing **▶**. Drive the moisture probe pins or hammer electrode needles into the wood and observe the reading.

2 Using the Protimeter Timbermaster with the Temperature Probe

If the timber being measured is significantly above or below 20°C (70°F) then the Timbermaster should be used in conjunction with the *Temperature Probe*. When this probe is connected, the Timbermaster automatically corrects the measured moisture value with respect to temperature.

2.1 Automatically Temperature Corrected (ATC) Readings

Switch the Timbermaster ON and select the appropriate wood calibration scale as detailed in sections 1.1 or 1.2. Using either a Hammer Electrode, or a hammer and nail of nominal 2 mm diameter, make a hole in the wood to be tested. Remove the Hammer Electrode or nail and push the Temperature Probe into the hole until the tip is at the required depth. Connect the Temperature Probe to the Timbermaster via the 2.5 mm socket.

To obtain the automatically temperature corrected (ATC) moisture value, take moisture readings as detailed in sections 1.1 or 1.2 while the Temperature Probe is positioned in the wood and connected to the Timbermaster. If the temperature of the wood is assumed to be equal to the ambient air temperature, ATC moisture values can be obtained by holding the connected temperature probe in air. Switch between temperature and moisture displays by pressing **▶**.

3 Setup Mode

The setup mode is entered by pressing **⏻** and **▶** simultaneously. This action displays the following information about the instrument in the following sequence:

1. Firmware version number, for example 1.08.
2. Product part number, for example bLd5601.
3. Firmware date in yy-mm-dd format, for example (00-05-28).

The user then has the option of changing the default setting for the temperature display (°C or °F) and the automatic switch OFF time (disable automatic switch OFF or set from 1 to 9 minutes) by changing the codes as detailed in the table below. The first code digit is changed by pressing **⏻** and the second digit by pressing **▶**. Confirm the new settings by pressing **⏻**.

Code	Description
0=0	No action
0=1	Resets all user settings to the defaults (°C, 5 minutes)
1=0	Selects °C for temperature display
1=1	Selects °F for temperature display
2=0	Disables automatic switch OFF
2=1	Set automatic switch OFF to 1 min.
2=2	Set automatic switch OFF to 2 min.
2=.	...and so on to ...
2=9	Set automatic switch OFF to 9 min.

4 Calibration Check

The calibration of the Timbermaster is checked by holding the electrode needles across the exposed wires of the 'calcheck' device (supplied) or across the terminals of the Protimeter Checkbox (optional accessory). When checking the calibration, the A scale should be selected and the temperature probe must be disconnected. Correctly calibrated Timbermaster will register a (%MC) value in the range of 17.8 to 18.3.

5 Care and Maintenance

When the Timbermaster is not in use, keep it in its pouch together with its accessories. Store the kit in a stable, dust-free environment out of direct sunlight. Remove the batteries from the instrument if it is to be stored for periods of more than four weeks, or when the low battery power symbol appears on the display. Check the condition of accessories used with the Timbermaster instrument on a regular basis and replace them if they become worn or damaged.

The information contained in this leaflet is given in good faith. As the method of use of the instrument (and its accessories) and the interpretation of the readings are beyond the control of the manufacturers, they cannot accept responsibility for any loss, consequential or otherwise, resulting from its use.

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