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## Protimeter Timbermaster



**Code: 354420**

## Operating Instructions

# Protimeter Timbermaster Moisture Meter

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).

## 1.0 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, D, 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 3.5mm socket on the right hand of the Timbermaster and switch the instrument on by pressing . Select the appropriate wood calibration scale (A, B, C, D, 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.

## 2.0 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 2mm 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 2.5mm socket.

To obtain the automatically temperature corrected (ATC) moisture value, take moisture readings as detailed in sections 1.1 or 1.2 whilst 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 .

## 3.0 Setup Mode

The setup mode is entered by pressing  and  simultaneously. This action displays the following information about the instrument in the following sequence: Firmware version number (example 1.08), product part number (example bLd5601), and firmware date in yy-mm-dd format (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 following table. The first code digit is changed by pressing  and second digit by pressing . Confirm the new settings by pressing .

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

## 4.0 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 Timbermasters will register a %MC value in the range 17.8 to 18.3.

## 5.0 Care and Maintenance

When not in use, keep the Timbermaster in its pouch 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.