

## M72-SC Moisture Scanner Instruction Manual



Version No. M72-1607-EN01

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- ▶ "+" and "-" are for increasing or decreasing the limit value. After the moisture limit value is set, press H for confirmation and it will go back to the measurement status.
- ▶ When the moisture value is greater than or equal to the limit value, icon "x" shall be displayed, otherwise, icon "✓" will be shown

### VII. Instrument Description

1. LCD display : as shown in (Figure 1)

- ① Measurement prompt
- ② Moisture setting prompt
- ③ Not exceed the upper limit
- ④ Exceed the upper limit
- ⑤ Measurement data holding symbol
- ⑥ Measurement reading
- ⑦ Gear
- ⑧ Temperature value
- ⑨ Battery level indication

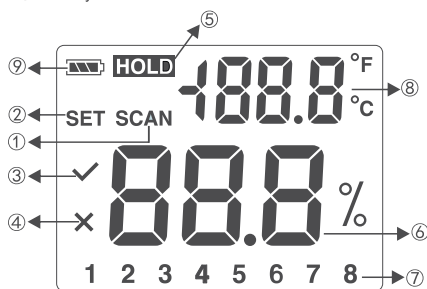


Figure 1

2. Part name: as shown in (Figure 2)

- Ⓐ LCD display
- Ⓑ Wood density select and moisture setting "-"

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### I. Introduction

This instrument is an induction humidometer which can measure moisture content by putting it on the wood surface closely without damaging the wood surface. You can choose different gears (8 in total) to measure according to the wood density. Measurement range is suitable for most kinds of wood.

M72-SC Specification:

Moisture Range	0~50%RH
Temperature Range	0~50°C (32~122°F)
Moisture Accuracy	±1.5
Temperature Accuracy	±2°C (±3.6°F)
Wood Density Range	0.27~1.05g/cm <sup>3</sup>
Measuring Depth Range	0~50mm
Power Supply	63.6 x 31 x 125.8mm
Weight	Approx. 142g (battery included)

### II. Features

1. Wood moisture measurement
2. Moisture limit value setting
3. Wood density selection
4. Temperature measurement and temperature unit conversion
5. Backlight control function
6. Data hold function
7. Battery level indication
8. Auto power-off function

### III. Description

1. SET/ - : Select wood density and set the moisture limit value as -.
2. T/+\* : Press to control LCD backlight; press and hold to complete temperature unit conversion; set moisture limit value as +.
3. H/⏻ : Press to lock the measurement data; press and hold to power off.

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- Ⓒ LCD backlight, temperature unit conversion and moisture setting "+"
- Ⓓ On/off and measurement data hold
- Ⓔ Battery door
- Ⓕ Wood moisture induction area

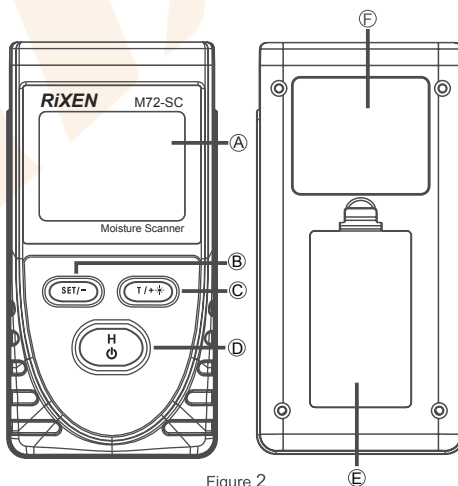


Figure 2

### VIII. Wood Density Tables

Gear	Density g/cm <sup>3</sup>	Wood Variety
1	0.27-0.38	Poplar, cathay poplar, fir, sago palm, Monterey pine, basswood, red wood, white pine, thalictrum, hard Chinese parasol.
2	0.38-0.45	Douglas fir, yellow cedar, pine wood, aspen, dyera, cotton wood, cypress, hemlock, spruce, rose wood, okoume, Okoumev, red pine, fir wood, African cordia, hemlock.

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### IV. Zero Calibration

Complete zero calibration in case of significant changes to environmental temperature or starting up for the first time.

1. Press power to start up.
2. HOLD icon shall be displayed after pressing H.
3. Press the SET key for about 2 seconds until the temperature reading area appears 000 then release the SET key.
4. Put the device in the air for about 2 seconds and press the H key and the temperature reading area enter into temperature display mode, press the H key again and the HOLD icon disappears on the LCD and the zero point calibration completes and enter into moisture measurement mode.

### V. Measurement Method

Different wood density corresponds to different gear position. There are 8 gears from the minimum to maximum density. Measurement steps are as follows :

1. This instrument is with temperature compensation. Before using, please put it at the same temperature as measured wood at least 5 minutes.
2. LCD displays measurement status after powering on.
3. Press SET to set wood density value. Please refer to appendix : wood density chart for gear selection.
4. After selection of wood density value, put induction zone closely against the wood surface to be measured for moisture.
5. The instrument real-time displays the moisture value.
6. Other operation : press H to lock the reading. Press H again to continue to measure.
7. Press and hold power to power off for 2 seconds. It will poweroff automatically in 5 minutes without any action.

### VI. Moisture Limit Value Setting

For each kind of wood with different density, moisture limit value can be set separately. Steps are the follows :

- ▶ Start up by pressing power.
- ▶ Press SET to select wood density gear.
- ▶ Press and hold SET for about 2 seconds, then "SET" will be shown on the screen. Then moisture limit value can be set.

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3	0.45-0.55	Douglas fir, yellow cedar, pine wood, fir wood, aspen, cotton wood, cypress, alder, African mahogany, Philippines mahogany, hard wood, stained wood, ramin, karuri, hoop pine, hemlock, kahikatea, ivy tree bark.
4	0.55-0.65	Birch, elm, red oak, black walnut, beech, rubber wood, Iroko, keruing, cashew.
5	0.65-0.75	Pecan, merbau, white oak, olive, lauan, beech, teakwood, Apocynaceae, Bangkirai, ash wood.
6	0.75-0.85	Wenge, bubinga, Philippines mahogany, palaquium spp, Australia mahogany, jatoba, garapa, beech, punah, ebony, copaifera religiosa, African buginga, regular buginga.
7	0.85-0.95	Hainan yellow pear wood, aspidosperma spp, beefwood, cumaru, dracaena goldieana.
8	0.95-1.05	Ebony, dipteryx spp, lapacho, logwood, red sandalwood, Xylia spp, Indian pterocarpus spp, dalbergia spp, Southeast Asian pterocarpus spp.

### IX. Wood Density Calculation

If the measured wood is not included in the above table, the density can be calculated by yourself with following formula :

$$\text{Density} = \frac{100 \times \text{weight} / \text{volume}}{100 + \text{wood moisture content}}$$

Weight unit : g

Volume unit : cm<sup>3</sup>

Such as : If a wood block is given with 200cm in length, 20cm in width and 5cm in thickness then its cubic volume amounts to 20000 cubic centimeters and 9000 grams in weight. the woods moisture rate is 13% (the data was obtained by the oven-drying method) :

$$\text{Density} = (100 \times 9000 / 20000) / (100 + 13) = 0.4$$

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