Moisture Meter Instruction Manual

Wagner Model BI 2200

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Introduction

The power of the Wagner Electronics brand speaks loudly of the company's strategy of building superior products. Over the years, Wagner Electronics has associated itself with some of the biggest names in construction materials. This means consistently delivering real value to customers. Wagner Electronics initial success resulted from the technical superiority of its moisture measuring equipment, sold to those who were frustrated by the lack of innovation in moisture measurement.

The Wagner Electronics Moisture Meter Defined

The basic concept underlying your moisture meter is its electromagnetic wave measurement feature technology. This allows you to perform a thorough survey quickly. The Basic Inspection Meter was specially designed to provide a quick general moisture indication for many different industries who only require relative readings.

Features

- Uses Wagner's non-invasive patented electromagnetic wave technology
- Selectable material range includes wood, tile, shingles, plaster, drywall, linoleum, fiberglass, veneer, synthetic stucco, roofing, siding, insulation materials, and more.

- Teflon® abrasion pad protects sensor plate from abrasive surfaces*
- Hold feature allows you to freeze readings on the display
- Large, bright digital display
- Smart autopower off saves battery life
- Compact pocket-size design
- Rugged design
- User-friendly 2-button operation
- Low battery indicator
- Complete with 9-volt battery and protective holster
- Factory-direct technical support
- Light weight and compact design

* Note that the meter sensor is covered with a self adhesive replaceable Teflon abrasion pad. Replace Teflon pad when worn through to sensor, or when edges or corners loosen. Do not use the meter with debris under a loosened edge or corner. Replacement Teflon pads are available by calling Wagner Customer Service (541) 582-0541.

On/Off Function

ON/ HOLD The ingenious 2 button control panel makes the operation of your moisture meter easy, especially if your hands are full.

Turn on the meter by pressing the left button. The firmware version 2.2.0 will appear briefly on the screen as the microcomputer is initializing.

You can turn off the meter by pressing down on the On/Hold button for 3 seconds otherwise automatic turn off will occur after one minute if the meter is not in use.

Inspection Function

(ON/ HOLD) Turn on the meter (the firmware version 2.2.0 will appear briefly).

Set the meter on the material to be scanned. Press down firmly on the center of the meter with approximately 3 pounds of force to ensure good sensor plate contact. Observe the number displayed on the screen.
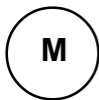
Hold Function

(ON/ HOLD) When the meter is in the inspection mode, and the On/ Hold button is momentarily pressed and released, it will enter Hold mode to allow the user to "freeze" the moisture reading.

A (÷) symbol will appear on the left side of the screen. This will indicate the hold mode. To clear the screen, press the On/ Hold button again.

Material Sensitivity Range

M There are three ways to use the material sensitivity range feature.

1. You can use the factory setting of :50 for the moisture measurement of many materials. No adjustment is needed.

2. Before you scan a very dense material such as concrete or cement, change the material setting to 1:00. Remember to reset the number to :50 when done measuring this type of material.

To operate the material sensitivity range feature, turn on the meter; when the firmware version 2.2.0 clears from the screen, press the M button. The meter display will show the current material setting.

The factory preset number is :50.

Press the M button a second time. The colon (:) will blink, indicating that you are in the change mode.

Next, hold the M button down to increment the material setting by :10. The value will go as high as 1:00, then will wrap around to :20 and continue incrementing. When the desired setting has been reached, release the M button and then press the On/Hold button to store the material setting and return to Inspection mode. For a list of suggested material settings, see the Material Settings Table section in this manual.

3. The BI 2200 meter has a feature to allow you to fine tune your moisture meters readings for many different materials. This is a feature that may not be needed by most users. If you would like

Material Sensitivity Range Continued...

to adjust the material sensitivity range anywhere between :20 to 1:00 for customized projects you may use the instructions outlined above. (Note: You may press the M button to increment the selected material setting by :01 or hold the button down to increment by :10).

A Reliable Method To Inspecting With A Moisture Meter
Compare dry to wet readings, one material at a time.

For example, before a wall stain is scanned by the meter establish a base line reading on the meter at a section of the same wall that is known to be dry. This reading is the base line of comparison.

Next, take readings at the stain area and compare to the base line reading. Elevated readings at the stain, compared to the base

line can indicate elevated moisture near the stain area.

False Alarms
Your moisture meter may respond to metal in a wall as it would to an increase in moisture content. To determine if the elevated readings are caused by metal, scan in the direction of a straight line, horizontally, then vertically away from the point where you obtained elevated readings. Notice if the meter is responding to what may be a piece of metal or wood stud rather than an area of elevated moisture. By observing the shapes of the elevated reading area you may obtain clues as to whether the readings are from moisture or from metal such as a pipe or copper wire.

Be aware of hidden metal objects that are

False Alarms Continued...

used in construction. Common examples are steel frames that join drywall at corners (bead and trim), fasteners, flashing and metal channels. You do not need to be concerned with metal at depths greater than 1 inch to $1\frac{1}{2}$ inch from the surface being scanned. Please note that as you scan across studs, the readings will be elevated due to the higher density of the stud vs. the void and the insulation space. The above guidelines also apply when measuring flooring material over concrete or plywood. Your meter may respond to these types of materials as it would to an increase in moisture content.

Auto-Shutdown
The meter will automatically shutdown in 60 seconds when the meter's moisture reading has not changed by more than 2, and none of the meter buttons have been

pressed. The shutdown timer will reset anytime the meter reading changes or a button has been pressed.

Low Battery Indicator
When the LO BAT indicator is on, you should replace the battery to insure the meter will function properly.   If the battery needs to be replaced, use a 9-volt alkaline battery. Be sure to observe proper battery polarity.

Meter Storage
For a long service life, it is important to store your meter properly. Avoid excessively hot or cold locations, and keep the meter in the case provided. Do not store the meter in an area with excessive electro-magnetic interference, such as near an electric motor, or where it could be crushed.

BI 2200 Meter Specifications

Size:

Length	$4 \frac{9}{16}$ inches
Width	$2 \frac{3}{4}$ inches
Height	$1 \frac{1}{16}$ inches

Scanning Area:

Length	$2 \frac{1}{2}$ inches
Width	$1 \frac{1}{2}$ inches

Scanning Depth:

$\frac{3}{4}$ inch

Weight: 0.37 pounds

Power: 9 volt alkaline

Auto Shut Down:

60 seconds

Materials Settings Table

These material settings are provided to give users general correction factors for various construction materials.

Material Setting	Material
:50	Boat Structures (Fiberglass)
1:00	Brick
:50	Ceramic Tile
1:00	Concrete
:50	Drywall/Sheetrock
:50	Engineered/Laminated Wood
:50	Fiberboard/Particleboard
:50	Flooring (Wood)
1:00	Gypsum
:50	Insulation Materials
1:00	Morter
:50	Plaster
:50	Roofing
:50	Siding (Wood)
:50	Stucco (Synthetic)
:50	Veneer
:50	Wood

FCC Compliance Statement

This equipment has been tested and found to comply within the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installations.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Move the equipment away from the receiver.

- Plug the equipment into an outlet on a circuit different from that to which the receiver is powered.

- If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

CAUTION: Only equipment certified to comply with Class B (computer input/output devices, terminals, printers, etc.) should be attached to this equipment. Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the

user's authority to operate such equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Canadian Department of Communications compliance statement

This equipment does not exceed class B limits per radio noise emissions for digital apparatus, set out in the Radio Interference Regulation of the Canadian Department of communications. Operation in a residential area may cause unacceptable interference to radio and TV reception, requiring the owner or operator to take whatever steps are necessary to correct the interference.

Avis de conformité aux normes du ministère des Communications du Canada

Cet équipement ne dépasse pas les limites de Classe B d'émission de bruits radioélectriques pour les appareils numériques, telles que prescrites par le Réglement sur le brouillage radioélectrique établi par le ministère des Communications du Canada. L'exploitation faite en milieu résidentiel peut entrainer le brouillage des réceptions radio et télé, ce qui obligerait le propriétaire ou l'opérateur à prendre les dispositions nécessaires pour en éliminer les causes.

Warranty

Wagner Electronic Products, Inc., warrants this product against defects in material and workmanship for one (1) year from the date of purchase, subject to the following terms and conditions:

Wagner's liability under this warranty shall be limited, at Wagner's option, to the repair or replacement of this product or any part thereof, which is demonstrated to be defective. To exercise this warranty, customer must telephone, fax or e-mail Wagner's Customer Service Department for an RMA (Return Materials Authorization) number and factory instructions for shipment. This limited warranty does not apply if the product has been damaged by accident, negligent handling, misuse, alteration, damage during shipment, or improper service. Wagner Electronic Products, Inc., shall in no event be liable for any breach of warranty or defect in this product, which exceeds the amount of purchase price of the product. Wagner Electronic Products, Inc., shall not be liable for incidental or consequential damages for the breach of any express or implied warranty with respect to this product or its calibration.

With proper care and maintenance, the meter should stay in calibration; however, because Wagner Electronic Products, Inc., has no control over the manner in which the unit will be used, it makes no

warranty that the meter will stay in calibration for any specific period of time. Wagner Electronic Products, Inc., recommends returning the unit to the factory for a diagnostic checkup and recalibration in the event the meter is dropped or otherwise damaged, or the meter accuracy is suspect.

This warranty is in lieu of all other warranties, whether oral or written, express or implied. Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are excluded. Agents and employees of Wagner Electronic Products, Inc., are not authorized to make modifications to this warranty or additional warranties binding on Wagner Electronic Products, Inc. Accordingly, additional statements, whether oral or written, except written statements from an officer of Wagner Electronic Products, Inc., do not constitute warranties and should not be relied upon by the customer.

This warranty is personal to the customer purchasing the product from Wagner Electronic Products, Inc., and is not transferable.

Repair Service

In the event of damage, failure, or if the unit requires re-calibration, contact the Wagner Electronics Technical Services Department for an RMA number prior to returning it for repair.