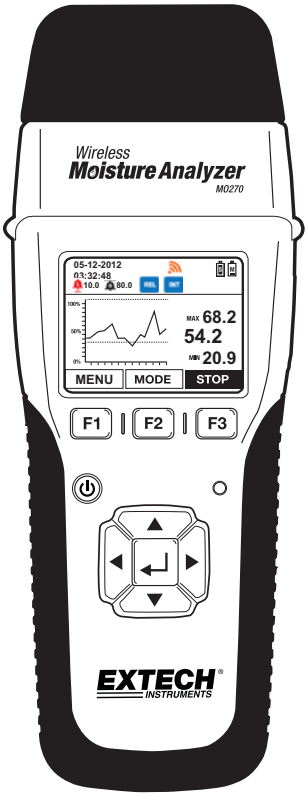
User Guide

EXTECH INSTRUMENTS
A FLIR COMPANY

Wireless Moisture Analyzer

Model MO270



Introduction

Thank you for selecting the Extech MO270 Moisture Analyzer with full graphical display. The MO270 detects moisture in wood, particle board, carpeting, and ceiling/bathroom tiles non-invasively (pinless); the MO270 also measures moisture in sheet rock and other building materials using pins that are driven into the material under test. The Sensor unit (transmitter) detaches from the Analyzer unit (receiver) for remote measurement operation. This analyzer is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

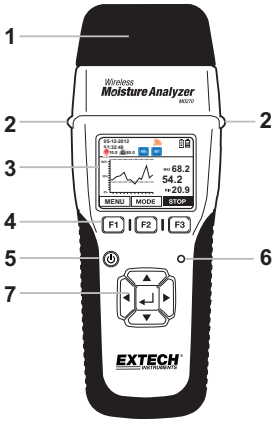
Features

1. Detachable sensors transmit data up to 20m (65ft) to the analyzer's display
2. Readings from up to eight (8) remote sensors can be viewed
3. Wireless sensor affixes to 1.2m (4 ft) telescoping handle; Longer handles optional
4. Wood Moisture equivalent (%WME) pin readings
5. Programmable visual and audible High and Low Alarms
6. 2-point calibration check built into protective cap
7. Bluetooth capability
8. Includes two (2) 3.7V rechargeable Li-Polymer batteries (one for Analyzer and one for Sensor), wireless moisture Sensor unit, external pin probe, replacement pins, telescoping handle, AC adaptor, protective cap, 2G SD card, all necessary interconnecting cables, and hard case

Description

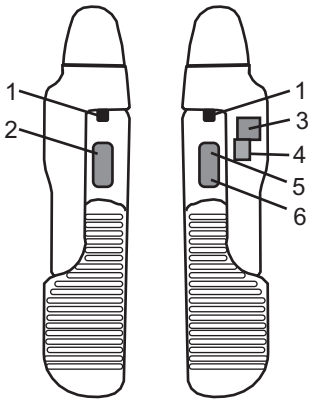
Analyzer Front View

1. Electrode pins and Protective cap with calibration check points
2. Sensor release buttons (one on either side of analyzer)
3. Graphical Display
4. Function buttons (F1, F2, F3)
5. Power button
6. Bluetooth status indicator lamp
7. Navigation (up, down, left, right) and ENTER ↵ buttons



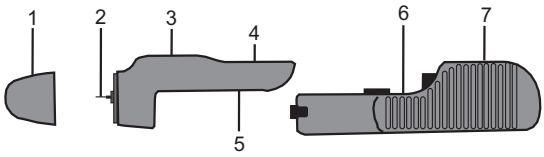
Analyzer Side Views

1. Sensor release buttons
2. Ports reserved for future options
3. RJ-45 remote probe port
4. Analyzer (receiver) mini-USB charge-port
5. Mini-SD card slot
6. Sensor (transmitter) mini-USB charge-port



Analyzer Components

1. Cap with built-in calibration check
2. Measurement contact pins
3. Non-Contact capacitive sensor (transmitter)
4. Power button for sensor (used only when sensor is disconnected from receiver)
5. Lithium polymer battery shut-off switch (used only when shipping or transporting the unit)
6. Lithium polymer battery shut-off switch for Analyzer (Receiver)
7. Analyzer (Receiver) unit



Display Icons

ICON	Name	Function
 (black)	Low Alarm set	Audible Low Alarm is set and active
 (black)	High Alarm set	Audible High Alarm is set and active
 (black)	Low Alarm set	Visual-only Low Alarm is set and active
 (black)	High Alarm set	Visual-only High Alarm is set and active
 (red)	Low Alarm triggered	Low Alarm has been triggered
 (red)	High Alarm triggered	High Alarm has been triggered
 (gray)	Transmitter ON	Transmitter is ON but not communicating with peripheral device via Bluetooth™
 (blue)	Active pairing	Active Bluetooth™ communication between receiver and peripheral device
 (gray)	(RF) Wireless	Wireless transmitter is ON; sensor communication is INACTIVE
 (orange)	(RF) wireless	Wireless transmitter is ON; sensor communication is ACTIVE
 (blue)	REL mode	Reading moisture using non-invasive sensor
%  (blue)	%WME mode	Reading moisture using ‘pin’ sensors
 (black)	External probe	Reading measurement from external probe
 (blue)	Internal probe	Reading measurement from internal probe
 (red)	Recording	Unit is actively recording (on-screen)
 (green)	Sensor (transmitter) battery	Sensor battery (shown here fully charged)
 (orange)	Analyzer (receiver) battery	Analyzer battery (shown here minimally charged)

Setup

Getting Started

Charge the Sensor and the Analyzer batteries if necessary (refer to the 'Charging the Batteries' section below). The battery icons on the upper right corner of the display provide battery status for the Analyzer and the Sensor units.

To switch the analyzer ON, press and hold the power button ⏻ for 3 seconds; the navigation buttons will illuminate, the speaker will chirp, and the display will switch ON.

To power OFF, press and hold the power button ⏻ for 3 seconds.

The F1, F2 and F3 buttons are 'soft keys'; their functions change with the specific mode or screen that is active.

The ▲, ►, ▼ and ◄ buttons are used to navigate the menu selections.

The center ↵ ENTER button is used to select the highlighted menu function and for accessing the setup mode (by pressing and holding).

Charging the Batteries

1. Charging the batteries using an AC outlet

Connect the USB cable between the mini-USB port on the Sensor (or the Analyzer) and an AC outlet. Charging will begin immediately. Note that connecting to the Analyzer's USB port charges both the Analyzer and the Sensor units simultaneously (while they are physically connected to each other).

2. Charging the batteries using a PC USB port

a. With Analyzer switched OFF, Connect the USB cable between the mini-USB port on the Sensor (or the Analyzer) and a USB port on the PC. Note that connecting to the Analyzer's USB port charges both the Analyzer and the Sensor simultaneously (while they are physically connected to each other).

b. Switch the Analyzer ON using the power button (hold it for 3 seconds) and the menu show directly below will appear.

- **PC CAM** (reserved for future use)
- **Disk Drive** (meter behaves essentially as an external hard drive where stored readings can be viewed and organized)
- **Charger** (selected when connection to PC is to be used for charging purposes)

Note: The PC may return a driver error when the CHARGER option is selected as a result of the PC sensing a new device connection; this can be ignored; the charging process will not be affected.

3. Checking Battery Status

When 'CHARGER' is selected from the menu as discussed above (with the meter connected to the PC), the battery icons will animate in a rising and falling motion indicating that charging is taking place. To check the battery status, the meter must be disconnected from the PC. Once disconnected, the display will show the two battery icons in the upper right. The M (Analyzer) and S (Sensor) icons will be completely filled when the batteries are fully charged and progressively emptier as the batteries weaken.

Operation

Basic Operation for Pin Measurments % WME

CAUTION: The electrode measurement pins are extremely sharp, use care when handling this instrument. Cover the pins with the protective cap when the instrument is not in use.

1. Remove the protective cap to expose the electrode pins.
2. Press and hold the ⏻ key for 3 seconds to switch the analyzer ON.
3. If the REL icon is displayed, proceed as follows to switch to the % WME icon.
   a) Press the MENU (F1) button and navigate to the WME/REL box.
   b) Press ↵, select WME, press ↵ and then press EXIT.
4. Carefully push the electrode pins a minimum of 0.07" (2mm) into the material under test. Note that the pins should be inserted into wood perpendicular to the wood's fiber structure. For high moisture readings, several minutes may be required for readings to stabilize.
5. Take readings in several locations on the material under test for the best representation of the amount of moisture present.
6. Read the measurement value on the display.
7. Replace the protective cap when finished.

Using the Extender Probe Handle

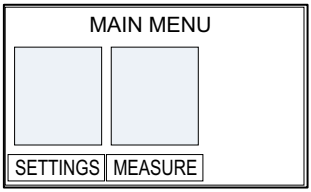
The supplied telescoping handle can be used to extend the sensor into areas that are difficult or unsafe to reach. Connect the sensor (transmitter) unit to the extender using the extender's mounting screw and the mounting screw hole on the sensor. Note that extender handles of various lengths are optionally available. Once connected, instructions for use match those provided above in the 'Basic Operation for Pin Measurements' section and below in the 'Basic Operation for Pinless Measurements' section.

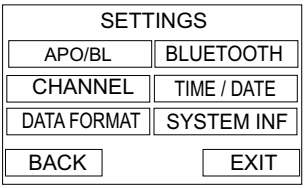
Basic Operation for Pinless Measurments REL

1. Press and hold the ⏻ key for three seconds to switch the analyzer ON.
2. If the % WME icon is displayed, proceed as follows to switch to the REL icon.
   a) Press the MENU (F1) button and navigate to the WME/REL box.
   b) Press ↵, select REL, press ↵ and then press EXIT.
3. Press and hold the ⏻ key for three seconds to switch the analyzer OFF.
4. Keep hands and other materials away from the rear sensor and then press and hold the ⏻ button to switch the analyzer ON. The analyzer will auto-zero during power-on.
5. The pinless moisture detector is located at the rear of the instrument, just behind the display.
6. Place the analyzer so that the sensor lies flat against the surface of the material under test.
7. Take readings in several locations on the material for the best representation of the amount of moisture present.
8. Read the measurement values on the display.

SETTINGS Menu Basics

1. Turn the analyzer ON.
2. Press and hold the ↵ button until the Main Menu appears
3. Press F1 (SETTINGS) to view the SETTINGS menu
4. Navigate the menu and sub-menus as desired. Each menu item is explained in the next section.

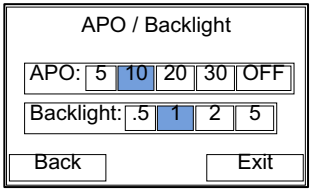




SETTINGS Menu in Detail

AUTO POWER OFF (APO) AND BACKLIGHT Settings

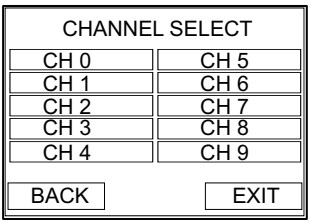
1. The APO or backlight timeout can be set in minutes.
2. Navigate to the APO/BL sub-menu in the SETTINGS menu and press ↵.
3. Scroll to the desired setting.
4. Press ↵ and then press EXIT or BACK when done.



CHANNEL Setting

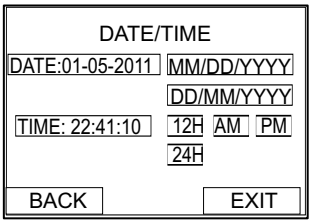
Select the common channel over which a transmitter and receiver will communicate. If several transmitters are owned, a unique channel number can be used for each. Note that the transmitter and receiver units must be interlocked when changing to a new matching channel number.

1. To set the channel, first navigate to the CHANNEL sub-menu in the SETTINGS mode and then press ↵.
2. Navigate to the desired channel and then Press ↵. The Channel number will highlight.
3. Press EXIT or BACK when finished.



TIME/DATE and FORMAT Settings

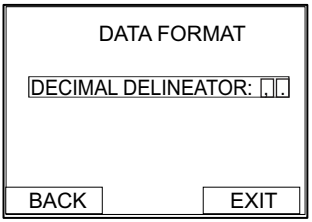
1. Navigate to TIME/DATE in the SETTINGS menu and then press ↵.
2. Scroll to the desired field and then press ↵.
3. To change the Date or Time, use the left/right arrow keys to move the triangle shaped pointer to the digit that is to be changed.
4. Use the up/down arrows to change the digit's value. Press ↵ to store the new value and to switch off the arrow pointer.
5. To select a time format, scroll to the desired field (MM/DD/YYY, DD/MM/YYY, 12H, 24H, AM, or PM) and press ↵. When in item is highlighted it is selected.
6. Press EXIT or BACK when finished.



DATA FORMAT Setting

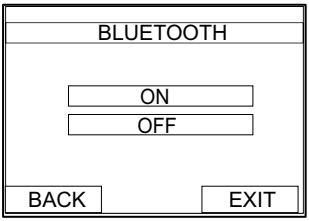
This allows the user to set the numerical delineator to a decimal point (.) or to a comma (,).

1. Navigate to DATA FORMAT in the SETTINGS menu and then press↵.
2. Scroll to the desired selection and then press↵.
3. Press EXIT or BACK when finished.



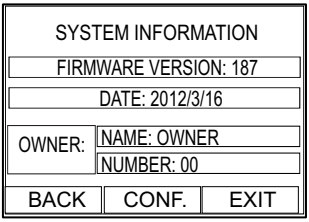
BLUETOOTH ON-OFF

1. To activate the Bluetooth™ function, select BLUETOOTH from the SETTINGS menu.
2. Scroll to ON or OFF and press ↵.
3. Software developers may contact Extech for the MO270 communication programming protocol.
4. Press BACK or EXIT when done.



SYSTEM INFORMATION (INF)

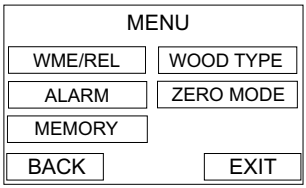
1. To view the System Information, navigate to SYSTEM INF in the SETTINGS menu and then press ↵.
2. The OWNER NAME and NUMBER can be changed by the user; all other fields are provided for informational purposes.
3. Scroll to the OWNER NAME or NUMBER field and press ↵.
4. An alpha-numeric utility will appear allowing the user to select text using the arrows buttons and the ↵ button.
5. To lock the Owner information so that it can not be overwritten, press the CONF (confirmation) button.
6. Press BACK or EXIT when finished.



Measure Screen Menus

F1 - MENU

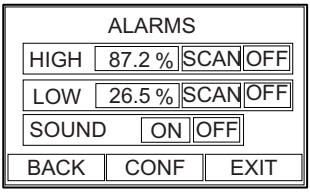
Press the F1 MENU button from the main analyzer display to open the sub-menu list:



WME/REL
The WME/REL menu allows for selecting either pin measurements, displayed as a 'wood moisture equivalent %' (WME), or pin-less measurements displayed as a relative measurement (REL) using the non-contact sensor.

ALARM

1. Navigate to the ALARMS box and press the ◄┘ button.
2. Alarm limits can be set manually by entering a numerical value or by using a measurement (scanned) value.
3. To set an Alarm limit manually, use the right arrow to scroll to the Alarm limit (%) box and press◄┘. An arrow will appear under one of the digits, use the up and down arrow buttons to change its value if desired. Use the left and right arrows to choose another digit to edit. When finished editing, press the ◄┘ button store the setting.
4. To use the real time measurement as the alarm limit, use the arrow keys to scroll over to the SCAN box (for either the HIGH or the LOW Alarm limit). When the SCAN box is highlighted, press the ◄┘ button to automatically transpose the real time measurement to Alarm limit value.



5. Note that the High Alarm limit cannot be set lower than 10.00% and the Low Alarm limit cannot be set higher than 10.00%.
6. To turn an Alarm ON or OFF: Use the arrow buttons to move the cursor to the Alarm limit OFF box. Press the ◄┘ button to toggle between ON (OFF) or OFF (OFF).
7. To set the audible Alarm beeper ON or OFF: Navigate to the SOUND ON or OFF box. Select the desired condition and the press◄┘.
8. Press F3 to store the values and to exit this mode.

WOOD TYPE
The WOOD TYPES menu allows for selecting various species of wood which are arranged in groups (1 through 8) according to hardness. Refer to Appendix A for the timber lists and associated group number settings. Select a group number that corresponds to the wood type under test using the arrow keys and the enter key in the Wood Type menu.

MEMORY
The MEMORY menu allows for viewing data and naming/clearing data for up to 10 memory groups. Refer to the dedicated 'Memory Logging Mode' section later in this guide.

ZERO MODE
The ZERO function allows measurements to be displayed as the difference between the actual reading and a stored reference reading. Follow the steps below:

1. From the normal measurement mode, take a moisture measurement that will represent the reference value.
2. With the meter continuing to take this reading press the MENU (F1) soft-key, scroll to the ZERO MODE field, and press the Enter key (the field color will change to blue indicating that the ZERO function is active). The current measurement has now been zeroed.
3. Return to the normal measurement mode by pressing the EXIT soft-key. Now, all subsequent readings will be displayed as on offset from the stored reference reading. For example, if the reference is 20 and a measurement of 50 is taken, the meter will display 30 (50 actual reading minus 20 reference reading = 30 displayed reading).

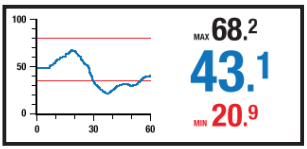
   Note: The REL icon will flash on the measurement display screen while the ZERO function is active.
4. To switch the ZERO function OFF, scroll to the ZERO MODE field again and press Enter (the field color will change to gray indicating that the ZERO function is switched OFF).

   Note: The default state is ZERO MODE OFF.

F2 - MODE

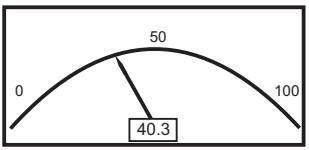
Repeated presses of the F2 MODE button allows scrolling through the three display modes: Digital display, Graphical Trend Analysis display, and Analog display. The digital display includes a bargraph at the bottom of the display. Note that the bargraph is color-coded where the alarm region is shown in red and the acceptable region in green. For more on the Trend Analysis display refer to the Trend Analysis section later in this guide.

TREND



DIGITAL

ANALOG



F3 - HOLD

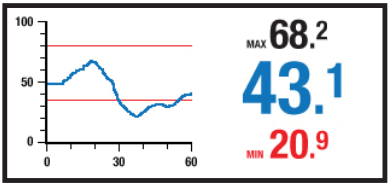
The HOLD menu freezes the displayed reading. Sub-menus allow for saving the data to memory or exiting the mode.

Alarm Operation

- The HIGH and LOW Alarm limits are user programmable as described in the SETTINGS section. Note that the HIGH alarm limit cannot be set to a value lower than 10.00% and the LOW alarm limit cannot be set higher than 10.00%.
- When an alarm is set to ON in the SETTINGS mode, the analyzer will indicate the alarm symbol (high or low) in black with the associated alarm value on the display (see the Display Icons section).
- Once the high and low alarm limits are set, the analyzer will audibly and/or visually alarm (in flashing red) when a measurement limit is exceeded. Note that if the SOUND setting is turned OFF in the SETTINGS mode, only the visual alarm will trigger.
- To silence an alarm, go to the ALARM sub-menu in the SETTINGS menu and select OFF for the alarm SOUND setting.

Trend Analysis Display Feature

- Press the F2-MODE soft-key once from the main analyzer display to access the Trend Analysis display mode. The Trend Analysis screen is shown below.
- The digits on the right side of the Trend Analysis screen show the actual measurement (center), the highest reading (top), and the lowest reading (bottom) for a given measurement session.
- The x-y graph on the left represents the measurements (vertical scale) over time (horizontal scale)
- To begin a Trend session, press the F3-START soft-key from the Trend Analysis screen (the red REC icon will be visible on the upper right hand corner of the display while the analyzer is trending).
- Press the F3-STOP soft-key to stop a trending session (the REC icon will switch off).



Memory Logging Mode

Store a reading

- To store a reading into one of the ten memory locations (known as Groups) press the F2-MODE soft-key from the main display screen. Note that stored readings are date/time stamped.
- Use the F2-MODE soft-key again to select the Analog pointer or the Digital display mode.
- Take a measurement and when the desired reading is displayed, press the F3-HOLD soft-key.
- Press the F1-SAVE soft-key to begin storing. The memory locations screen will appear.
- Select a memory Group using the arrow buttons. Press the ↵ button when the desired memory location is highlighted. The reading will now be stored in the selected memory group.

View stored readings

- To view data from a memory group, press the F1-MENU soft-key from the main display screen and navigate to the MEMORY sub-menu and press ↵.
- Highlight VIEW from the sub-menu and press ↵. The groups list will appear.
- Navigate to the desired group and press ↵.
- Use the up/down arrow buttons to scroll through the readings in the group. Use the CLEAR button to delete a displayed reading.
- Press F1-BACK to return to the Groups list or press EXIT to return to the normal operating mode.

Rename a Memory Group

- To rename a memory group, press the F1-MENU soft-key from the main display screen and navigate to the MEMORY sub-menu and press ↵.
- Highlight NAME from the sub-menu and press ↵. The groups list will appear.
- Navigate to the desired group and press ↵.
- An alpha-numerical screen will appear with the current group name shown at the top.
- Use the arrow keys to select the desired digit to change and then press ↵.
- Now scroll to the new digit using the arrow keys. When the desired new digit is highlighted, press ↵ and the old digit will be replaced by the new digit.
- When editing is complete, press CONF to save entries and to return to the Groups list.

Deleting Memory

- To delete stored data, press the F1-MENU soft-key from the main display screen and navigate to the MEMORY sub-menu and press ↵.
- Highlight CLEAR from the sub-menu and press ↵.
- Three sub-menus will appear: INDIVIDUAL, GROUP, and ALL. Select INDIVIDUAL to delete one reading from within one group; Select GROUP to delete an entire group; and select ALL to delete all readings in all groups. Click ↵ to clear the item.

Calibration Verification

Calibration Zero Check for Pinless Mode

1. Switch the analyzer to the Pinless mode of operation (REL mode) from the **F1-MENU**.
2. Ensure that the analyzer is not near any objects or surfaces. Hold the analyzer near the bottom to avoid contact with the pinless sensor.
3. The display should read zero.
4. If an error is displayed or if the analyzer reads other than zero, please return the unit for service.

Calibration Check for Pin Mode

1. Switch the analyzer to the Pin mode (%WME) from the **F1-MENU**.
2. The three calibration check points are located in the holes at the top of the protective cap.
3. The first measurement is made between the left test point and the center test point. The second measurement is made between the right test point and the center test point.
4. The display should read between 60 to 85 for the high measurement and between 17 and 19 for the low measurement.
5. If the readings are not correct, return the analyzer for service.

FCC Compliance

FCC-ID: IWK-EX3000
FCC-ID: IWK-MO270X

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with 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 a residential installation. 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 harmful interference to radio or television 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.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Battery Replacement

If the instrument does not switch ON or displays low battery symbols, recharge the batteries as detailed earlier in this guide. If the batteries require replacement, the unit must be returned for service.

Maintenance

- Always keep the instrument dry
- To clean, wipe the analyzer with a damp cloth. Use a mild detergent if necessary but never use abrasives or solvents.
- Prevent dirt from accumulating at the electrode pins

Specifications

Display	Full color graphical display
Measurement resolution	0.1
Measurement accuracy	Pin mode: ± (5% rdg + 5 digits)
	Pinless mode is a relative reading only
Measurement principle	Electrical resistance (pins)
	Electromagnetic sensor (pinless)
Measurement ranges	0.0 to 99.9 Relative (pinless)
	7.0 to 99.3 %WME (pins)
Electrode pin length	22mm (0.75”)
Electrode pin type	Integrated, replaceable
Transmission frequency	Analyzer/sensor communication frequency: 2.4GHz
Power supply	Rechargeable Li-Polymer batteries (not user replaceable)
Low Battery Indication	Battery symbols (for analyzer and sensor) displayed on LCD
Analyzer housing	Impact-proof plastic
Operating Temperature	0 to 50°C (32 to 122°F)
Operating Humidity	80% Relative Humidity maximum
Dimensions	203 x 58 x 43mm (8 x 2.3 x 1.7”); not including remote probe
Weight	204g (7.2 oz); not including remote probe

Appendix A – Wood Groups

Common names of timbers (BS888 & 589: 1973) with MO270 program group numbers

Abura	4	Fir, Douglas	2
Afara	1	Fir, Grand	1
Aformosa	6	Fir, Noble	8
Afzelia	4	Gegu, Nohor	7
Agba	8	Greenheart	3
Amboyna	6	Guarea, Black	8
Ash, American	2	Guarea, White	7
Ash, European	1	Gum, American Red	1
Ash, Japanese	1	Gum, Saligna	2
Ayan	3	Gum, Southern	2
Baguacu, Brazilian	5	Gum, Spotted	1
Balsa	1	Gurjun	1
Banga Wanga	1	Hemlock, Western	3
Basswood	6	Hiba	8
Beech, European	3	Hickory	5
Berlina	2	Hyedunani	2
Binvang	4	Iroko	5
Birch, European	8	Ironbank	2
Birch, Yellow	1	Jarrah	3
Bisselon	4	Jelutong	3
Bitterwood	5	Kapur	1
Blackbutt	3	Karri	1
Bosquiea	1	Kauri, New Zealand	4
Boxwood, Maracaibo	1	Kauri, Queensland	8
Camphorwood, E African	3	Keruing	5
Canarium, African	2	Kuroka	1
Cedar, Japanese	2	Larch, European	3
Cedar, West Indian	8	Larch, Japanese	3
Cedar, Western Red	3	Larch, Western	5
Cherry, European	8	Lime	4
Chestnut	3	Loliondo	3
Coachwood	6	Mahogany, African	8
Cordia, American Light	5	Mahogany, West Indian	2
Cypress, E African	1	Makore	2
Cypress, Japanese (18-28%mc)	3	Mansonia	2
Cypress, Japanese (8-18%mc)	8	Maple, Pacific	1
Dahoma	1	Maple, Queensland	2
Danta	3	Maple, Rock	1
Douglas Fir	2	Maple, Sugar	1
Elm, English	4	Matai	4
Elm, Japanese Grey Bark	2	Meranti, Red (dark/light)	2
Elm, Rock	4	Meranti, White	2
Elm, White	4	Merbau	2
Empress Tree	8	Missanda	3
Erimado	5	Muhuhi	8

Muninga	6	Redwood, Californian	2
Musine	8	Rosewood, Indian	1
Musizi	8	Rubberwood	7
Myrtle, Tasmanian	1	Santa Maria	7
Naingon	3	Sapele	3
Oak, American Red	1	Sen	1
Oak, American White	1	Seraya, Red	3
Oak, European	1	Silky Oak, African	3
Oak, Japanese	1	Silky Oak, Australian	3
Oak, Tasmanian	3	Spruce, Japanese (18-28%mc)	3
Oak, Turkey	4	Spruce, Japanese (8-18%mc)	8
Obeche	6	Spruce, Norway (European)	3
Odoko	4	Spruce, Sitka	3
Okwen	2	Sterculia, Brown	1
Olive, E African	2	Stringybark, Messmate	3
Olivillo	6	Stringybark, Yellow	3
Opepe	7	Sycamore	5
Padang	1	Tallowwood	1
Padauk, African	5	Teak	5
Panga Panga	1	Totara	4
Persimmon	6	Turpentine	3
Pillarwood	5	Utile	8
Pine, American Long Leaf	3	Walnut, African	8
Pine, American Pitch	3	Walnut, American	1
Pine, Bunya	2	Walnut, European	3
Pine, Caribbean Pitch	3	Walnut, New Guinea	2
Pine, Corsican	3	Walnut, Queensland	3
Pine, Hoop	3	Wandoo	8
Pine, Huon	2	Wawa	6
Pine, Japanese Black	2	Whitewood	3
Pine, Kauri	4	Yew	3
Pine, Lodgepole	1		
Pine, Maritime	2		
Pine, New Zealand White	2		
Pine, Nicaraguan Pitch	3		
Pine, Parana	2		
Pine, Ponderosa	3		
Pine, Radiata	3		
Pine, Red	2		
Pine, Scots	1		
Pine, Sugar	3		
Pine, Yellow	1		
Poplar, Black	1		
Pterygota, African	1		
Pyinkado	4		
Queensland Kauri	8		
Queensland Walnut	3		
Ramin	6		
Redwood, Baltic (European)	1		

Botanical names of timbers with MO270 program group numbers

Abies alba	1	Dipterocarpus zeylanicus	1
Abies grandis	1	Distemonanthus benthamianus	3
Abies procera	8	Dracontomelium mangiferum	2
Acanthopanex ricinifolius	1	Dryobanalops spp	1
Acer macrophyllum	1	Dyera costulata	3
Acer pseudoplatanus	5	Endiandra palmerstoni	3
Acer saccharum	1	Entandrophragma angolense	7
Aetoxicon punctatum	6	Entandrophragma cylindricum	3
Aformosia elata	6	Entandrophragma utile	8
Afzelia spp	4	Erythrophleum spp	3
Agathis australis	4	Eucalyptus acmenicides	3
Agathis palmerstoni	8	Eucalyptus crebra	2
Agathis robusta	8	Eucalyptus diversicolor	1
Amblygonocarpus andogensis	1	Eucalyptus globulus	2
Amblygonocarpus obtusungulis	1	Eucalyptus maculate	1
Araucaria angustifolia	2	Eucalyptus marginata	3
Araucaria bidwilli	2	Eucalyptus microcorys	1
Araucaria cunninghamii	3	Eucalyptus obliqua	3
Berlinia grandiflora	2	Eucalyptus pilularis	3
Berlinia spp	2	Eucalyptus saligna	2
Betula alba	8	Eucalyptus wandoo	8
Betula alleghaniensis	8	Fagus sylvatica	3
Betula pendula	8	Flindersia brayleyana	2
Betula spp	8	Fraxinus Americana	2
Bosquiera phoberos	1	Fraxinus excelsior	1
Brachylaena hutchinsii	8	Fraxinus japonicus	1
Brachystegia spp	2	Fraxinus mardshurica	1
Calophyllum brasiliense	7	Gonystylus macrophyllum	6
Canarium schweinfurthii	2	Gossweilodendron balsamiferum	8
Cardwellia sublimes	3	Gossypiospermum proerox	1
Carya glabra	5	Grevillea robusta	3
Cassipourea elliotii	5	Guarea cedrata	7
Cassipourea melanosana	5	Guarea thomsonii	8
Castanea sutiva	3	Guibortia ehie	2
Cedrela odorata	8	Hevea brasilensis	7
Ceratopetalum apetala	6	Intsia bijuga	2
Chamaecyparis spp (18-28%mc)	3	Juglans nigra	1
Chamaecyparis spp (8-18%mc)	8	Juglans regia	3
Chlorophora excelsa	5	Khaya ivorensis	8
Cordia alliodora	5	Khaya senegalensis	4
Croton megalocarpus	8	Larix decidua	3
Cryptomelia japonica	2	Larix kaempferi	3
Cupressus spp	1	Larix leptolepis	3
Dacryium franklinii	2	Larix occidentalis	5
Dalbergia latifolia	1	Liquidamper styraciflua	1
Diospyros virginiana	6	Lovoa klaineana	8
Dipterocarpus (Keruing)	5	Lovoa trichiloides	8

Maesopsis eminii	8	Quercus delegatensis	3
Mansonia altissima	2	Quercus gigantean	3
Millettia stuhimannii	1	Quercus robur	1
Mimusops heckelii	2	Quercus spp	1
Mitragyna ciliata	4	Ricinodendron heudelotti	5
Nauclea diderrichii	7	Sarcocephalus diderrichii	7
Nesogordonia papaverifera	3	Scottellia coriacea	4
Nothofagus cunninghamii	1	Sequoia sempervirens	2
Ochroma lagopus	1	Shorea smithiana	3
Ochroma pyramidalis	1	Shorea spp	2
Ocotea rodiaei	3	Sterculia rhinopetala	1
Ocotea usambarensis	3	Swietenia candollei	1
Octomeles sumatrana	4	Swietenia mahogani	2
Olea hochstetteri	2	Syncarpia glomulifera	3
Olea welwitschii	3	Syncarpia laurifolia	3
Palaquium spp	1	Tarrietia utilis	3
Paulownia tomentosa	8	Taxus baccata	3
Pericopsis elata	6	Tectona grandis	5
Picaenia excelsa	3	Terminalia superba	1
Picea abies	3	Thuja plicata	3
Picea jezoensis (18-28%mc)	3	Thujopsis dolabrat	8
Picea jezoensis (8-18%mc)	8	Tieghamella heckelii	2
Picea sitchensis	3	Tilia americana	6
Pinus caribaea	3	Tilia vulgaris	4
Pinus contorta	1	Triploehiton scleroxylon	6
Pinus lampertiana	3	Tsuga heterophylia	3
Pinus nigra	3	Ulmus americana	4
Pinus palustris	3	Ulmus procera	4
Pinus pinaster	2	Ulmus thomasii	4
Pinus ponderosa	3	Xylia dolabriformis	4
Pinus radiate	3	Zelkova serrata	2
Pinus spp	2		
Pinus strobus	1		
Pinus sylvestris	1		
Pinus thunbergii	2		
Pipadeniastrum africanum	1		
Piptadenia africana	1		
Podocarpus dacrydiodes	2		
Podocarpus spicatus	3		
Podocarpus totara	4		
Populus spp	1		
Prunus avium	8		
Pseudotsuga menzesii	2		
Pterocarpus angolensis	6		
Pterocarpus indicus	6		
Pterocarpus soyauxii	5		
Pterygota bequaertii	1		
Quercus cerris	4		