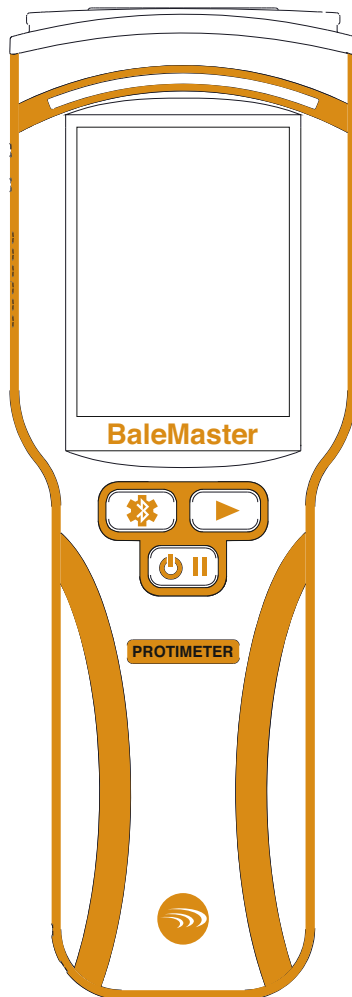


BaleMaster (GRN6170)

Protimeter Moisture Meter



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967 Windfall Road
St. Marys, Pennsylvania 15857, USA

1 Safety Considerations



Caution note for the Bale Probe- The Bale Probe point is extremely sharp and should be handled with due care. The point should be covered with the cap provided with the probe when not in use



Calibration of unit - The accuracy specifications of the product are generally valid for one year after the date of calibration. The product has an internal periodic calibration check to ensure the accuracy of the device and to warn customer whenever it goes out of calibration. Refer operation section for more details.



Only operate the measuring instrument properly, for its intended purpose and within the parameters specified in the technical data. Readings from moisture meters are not definitive but are used to help a professional make informed judgement to the material's moisture condition. Conductive material such as salts, carbon and metal can give false positive readings.



if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired


2 Introduction

The *Protimeter BaleMaster* is a conductivity moisture meter designed for measuring moisture level of baled products such as straw and hay. The instrument is calibrated for wheat straw and may be used to take relative measurements in other baled products.


3 Moisture Measurement in Bales

Measure moisture in bales as follows:



Note: Before using the stainless steel probe, be sure it is thoroughly clean and dry. The probe must not be wet when measuring moisture.

- a. Connect the *Bale Probe* to the instrument and switch ON by pressing and holding  button.
- b. Push the *Bale Probe* in to the bale to the required depth. Note the reading on the display.

Note: When assessing the moisture content (mc) of whole bales, it is recommended that the average value is obtained from numerous readings taken from different sides and at different depths.

- c. To obtain the correct average value, use the following moisture measurement ranges as a guideline:
 - Less than 15% mc: bales are in a safe condition for storage.
 - Greater than 15% mc: bales are not in a safe condition for storage. Additional drying is recommended.
- d. After use, switch the instrument OFF by pressing and holding the  button, or leave the instrument to switch OFF automatically.

4 Calibration Check


Calibration can be checked using the Calcheck function in the device. Press and hold  and  keys together while in measurement mode to do a calibration check. The device will let the user know if the unit passes or fails the calibration check.

Note: Ensure that no auxiliary probes are connected to the device before a calibration check is run. Connecting any probe to the right side Jack may cause interference in the calibration check value.

5 Care and Maintenance

When the BaleMaster is not in use, keep it in its pouch together with its accessories. Clean and dry the probe, and wrap it in the bubble wrap. Then store the probe for later use. Replace the batteries when the low battery power symbol appears on the display, or remove the batteries if the instrument is not going to be used for extended periods.

6 Reference Mode

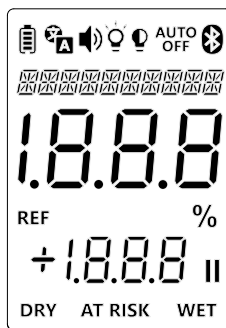
Measure the material until the meter reading is stable. Then, press  for 2 seconds. This will store the reading until the mode changes or the meter turns off. Now, all readings taken thereafter will be displayed as normal, and below you will see a second reading that shows if the material is measured above or below the original reading. Reference mode can be useful when trying to establish what materials are above or below a point of reference or dry standard.

7 Operating BaleMaster

Switch On:

Press and hold the  ON/OFF button till the unit turns ON.

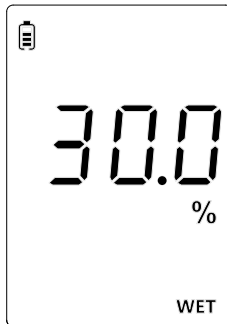
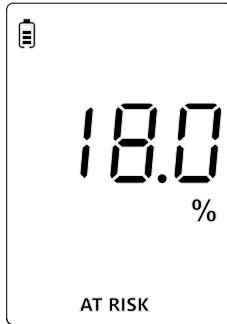
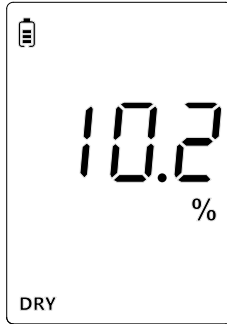
The unit turns on, with the LCD displaying all the segments and sweeping the LED bar graph.



Measurements:

The numeric measurement and color LED will be shown, as well as “DRY” (green) or “AT RISK” (yellow) or “WET” (red), based on the measurement shown.

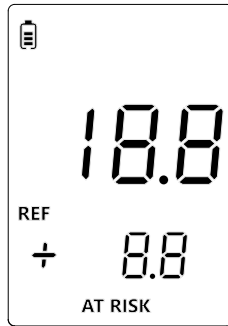
8.5-15 DRY (Green), 15.1-19.5 AT RISK (Yellow), 19.6-36.8 WET (Red)



Reference Mode of Measurement:

Take the first measurement, which needs to be taken as reference. This is useful when establishing a dry standard in the building and comparing other readings against this dry standard.

While the first reading is displayed on the screen, press and hold the ► button for 2 seconds to enter the Reference Mode. The display will be similar to the one shown on the next page.



To return to the normal measurement mode, press ► again.

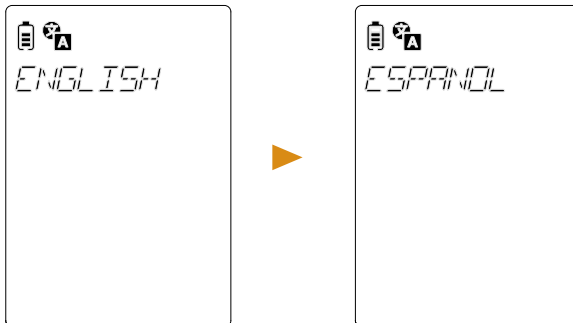
Settings:

Press the ⚙️ button to enter in to settings. Press again to return to measurement.

Device enters in to language settings as the first setup screen.


Setting up language:

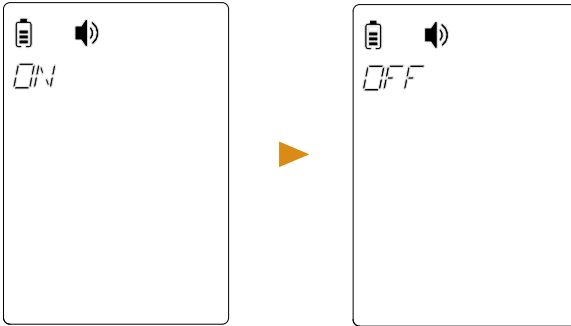
The first screen to appear in Settings is Language. User will see the last set language on the screen as below.





press ► to browse through the list of languages available. When the desired language is seen on the display choose it by pressing ⏻ key. This will set the language you selected and will move on to the next setting screen.

Buzzer ON/OFF Settings:

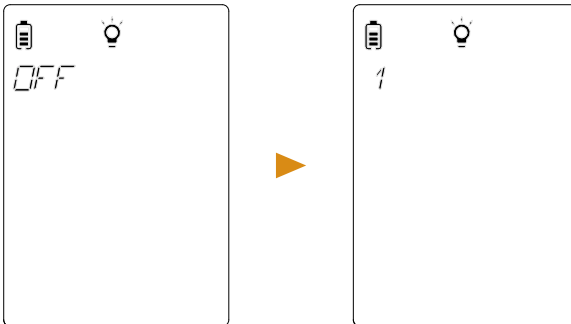
Pressing  key from the language settings will move on to Buzzer setting.





press  to toggle between on and off. Choose and go to the next setting by pressing .

Brightness settings (Back light):


Pressing  key from the buzzer settings will move on to brightness settings.

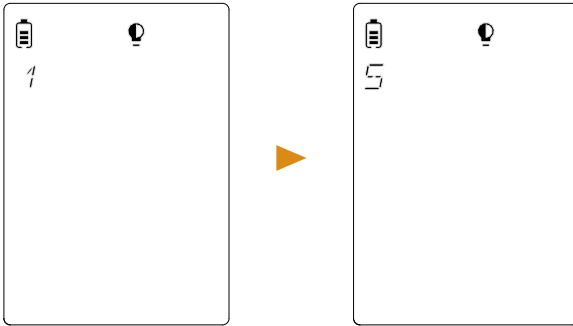




Press  to change the back light from off to 10 levels. When the desired brightness is set on the display save and move by pressing  key.

Note: Battery life is effected by the brightness setting. to maximize battery life keep on the minimum setting.

Contrast Settings (LCD segments):

Pressing  key from the brightness settings will move on to contrast settings.

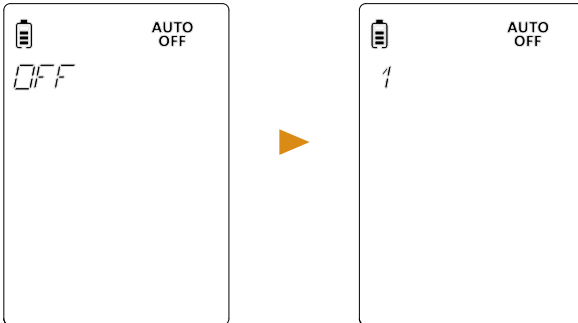


press  to change contrast from 1 to 5. Choose and go to the next setting by pressing .


Auto Off Time Settings:



When Auto Off is set, the unit will shut down automatically at a specified time between 1 and 10 minutes, if there is no key press detected within the set time.

For example, if the Auto Off time is set as 1, then the unit will automatically shut down after a minute when no key is pressed.




If the auto off time is set to be "Off", then the unit will not automatically turn off. Preserve battery life by lowering this setting to a minimum on time.

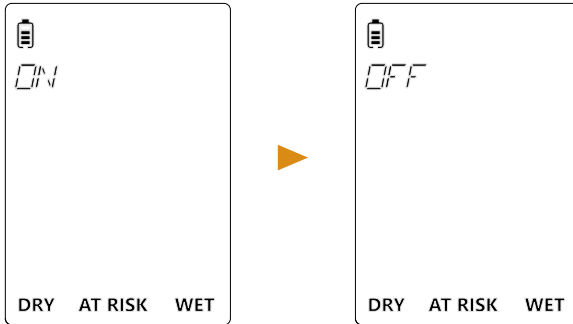
A user must manually turn it off by pressing and holding the  button for 5 Sec.


Turn off time can be changed from Off till 10 minutes by pressing  key. Pressing  key will move to the next screen

DRY, AT RISK and WET Settings:


Pressing  key from auto off setting will move on to DRY, AT RISK and WET setting screen.

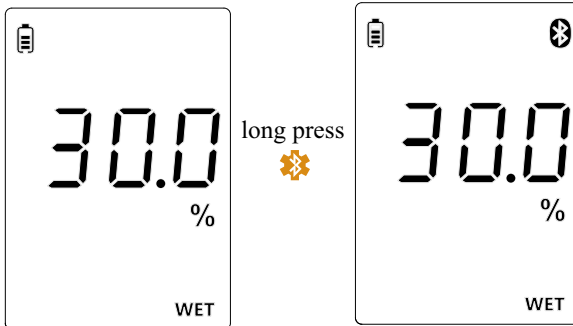
This screen sets whether the indication on the display needs to be switched ON or OFF. When it is ON, the moisture condition will be displayed on the screen. When it is OFF, no indication is displayed on screen.





Pressing  toggles the state from Off to On and vice versa.

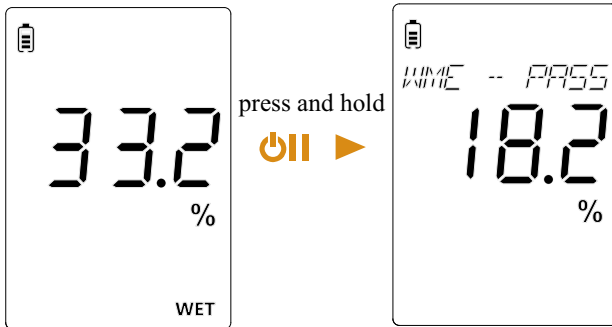
8 Turning Bluetooth On/Off:


To turn the bluetooth on or off at any point of time from the measurement screen, press and hold  key




9 calibration check:

When the device is in measurement mode, press and hold  and  keys. Device will check the calibration internally and display the reading along with the pass fail result.



press  key to exit the calibration check.

10 Battery Status:

Battery status is indicated in 5 levels.  symbol can be seen at the left top corner of the screen. Whenever the battery is low the symbol will blink (without any block inside). When the battery is low its better to replace them soon. The unit will continue to perform in battery condition within the specified accuracy, and turns off when the battery reaches the limit.



100%



80%



60%





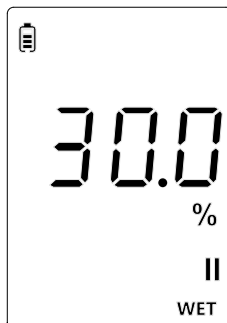
40%



20%

11 Holding / Freezing the Reading:

While measuring, if the reading needs to be frozen for any observation, press  during measurement. A symbol  will be displayed on the screen.

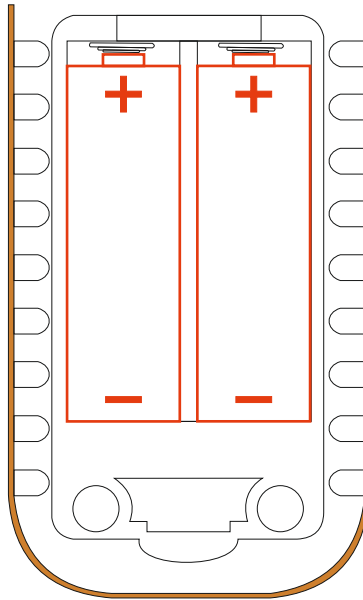


12 Battery Replacement

A 2700mAh battery will last continuously for more than 20 hours for a BaleMaster in operation. A Battery Low indication on the screen indicates that the battery needs to be changed in a short time.

Remove the battery lid to open the battery compartment.

Remove the batteries, and replace. Care must be taken to ensure that the polarity is correct as below. Place the battery inside the compartment.



13 Specification

Display(LCD)..... 35 X 50 mm With backlight(10 brightness level)

Battery.....3V(2 x AA) 2700mAh

Temperature

Operating..... 0°C to 50°C

Storage..... -40°C to 85°C

Operating Humidity..... 0 to 90% RH

Operating Altitude..... 2000m

Safety.....Pollution degree 4

Size.....18cm x 6.5cm x 5cm

Gross Weight (without battery)~228g

Measurement Specification.....

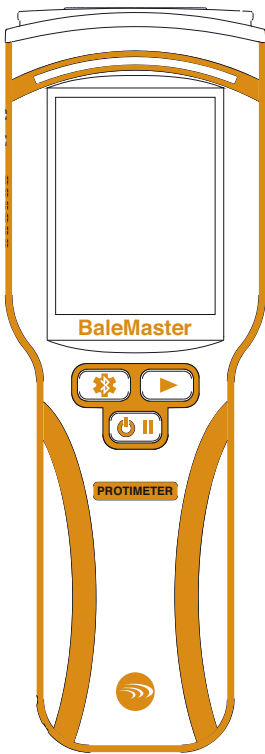
The Balemaster instrument is calibrated for Wheat Straw Measurement

Range: 8.5 - 36.8%

Regulatory Compliance

CE, RoHS, ETL, UKCA, FCC

MODEL: GRN6165



Meter



POL6148
Bale Probe

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