

# Digital Hay Moisture Meter 2188

WITH CALIBRATION CLIP



## OPERATION INSTRUCTIONS

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## 2.0 GENERAL INFORMATION

The FARMSCAN 2188 will read hay moisture between 8.0% to 45%. The Farmscan Hay Moisture Meter is most accurate from 10% to 30%. Readings should only be used as a qualitative indication of very high moisture.

**BELOW & ABOVE LIMIT INDICATORS:** Moisture readings **below 8.0%** will be displayed as **00.0**. Readings **above 45.0%** will be displayed as **99.9**. Temperature readings **below 0°C** will be displayed as **00.0**. Readings above **99°C** will be displayed as **99.9**.

The FARMSCAN 2188 will display 00.0% moisture in open air (if an open air reading of 8.0 is displayed, the tip probably needs cleaning, clean tip and re calibrate moisture meter).

*Your moisture meter is for reading moisture in hay (placing probe in 100% moisture ie water there will not be a reading of 100%).*

Temperatures can be measured from 0° to 99°C. Make sure to allow the metal tip of the probe to adjust to the bale temperature. This can take a minute or two.

The moisture meter measures only the hay in contact with the tip of the probe. Moisture and temperature may vary widely in different parts of the windrow and within each bale. Take readings in at least five (5) places in the windrow or bale, and use the highest reading as a guideline.

*Remember : Consult your local agricultural extension office for recommended baling moisture. Farmscan takes no liability for .....*

## 3.0 BATTERY INSTALLATION

The 9 Volt alkaline battery (included) must be connected before the moisture meter will work. Remove the battery door on the back of the handle and snap the leads onto the battery.

**NOTE:**

Your moisture meter will display 88.8 briefly just after the battery is replaced. This signifies that the moisture meter has re-initialised using its last calibration and backlighting (on/off status).

“LOBAT” will be displayed, if the battery is running low and needs replacing. Always use a **ALKALINE** 9 Volt battery.

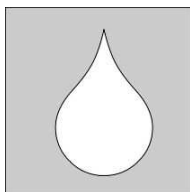
After the battery is replaced, always re-calibrate your tester using the self calibration clip supplied. See calibration.

## 4.0 OPERATION INSTRUCTIONS

### 4.1 OPERATION

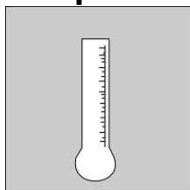
There is no on/off switch. Any of the buttons except backlighting will turn the FARMSCAN 2188 on and the unit will turn itself off after displaying the test value.

#### Moisture:



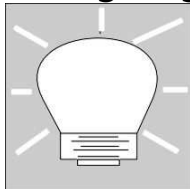
Press moisture button. The FARMSCAN 2188 will display continuous moisture readings when turned on. The 2188 reads moisture between 8% and 45%. Readings below 8% are displayed as 00.0. Readings above 45% are displayed as 99.9.

#### Temperature:



Press the temperature button. The unit will display the temperature at the probe tip, firstly in fahrenheit & then degrees.

#### Backlighting:



When the unit is on, press the light bulb button to turn on or off the backlighting of the display. When the module is turned off and later turned on, it will remember the backlighting mode of when it was last operating.

#### Note:

If two or more switches are pressed simultaneously, the moisture meter will not be harmed, but only a meaningless number will be displayed.

**For best results: INSERT THE PROBE INTO "TIGHT" SIDE AT A 45° ANGLE.  
Take readings in at least five (5) places, and use the highest reading as a guideline.  
DO NOT AVERAGE RESULTS!**

## 4.2 TESTING PROCEDURE & INFORMATION

### In the bale

Because the inside of each bale is not uniform in density or leaf to stem ratio, moisture readings with your FARMSCAN 2188 will vary from one part of the bale to another. It will read highest if the probe is inserted into the “tight” side. Your meter will give higher readings in tight bales than in loose bales.

### In the windrow

Check the windrows at several locations by turning the windrow up on its side and selecting a handful of hay from the bottom (hay from the bottom should contain the most moisture, since the top of the windrow will dry out first).

Twist the sample handful into a tight knot, trying to simulate the density of a bale. Insert the metal tip of the probe into the tightest part of the knot, so that both metal parts of the tip are within the knot.

There are more variables to testing moisture in the windrow than in a bale. For greater accuracy, several bales should also be baled and tested before the entire field is baled.

## 4.3 VARIABLES AFFECTING MOISTURE READING

Natural variations within the plant before proper curing: The higher the moisture content, the wider the variations. Greater uniformity can be expected as more curing takes place.

**SWEATING:** Higher readings may occur during the first couple of days after baling. Immediately after baling, moisture readings may be low and then climb during the “sweating process”. As the hay cures, moisture readings should drop and continue to decline, as the hay becomes progressively drier. It is important to continue to monitor moisture for several days.

**PRESERVATIVE:** Some preservatives increase conductivity initially, until the preservative is absorbed, usually in 1 to 2 days, it may cause the moisture reading to be 2 to 4 points above the same hay which is untreated.

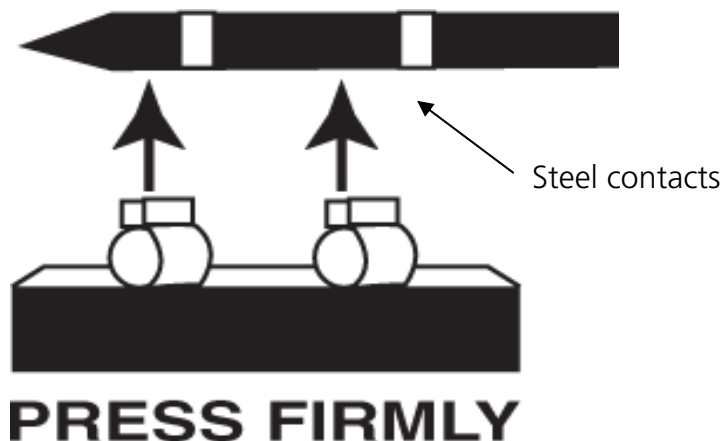
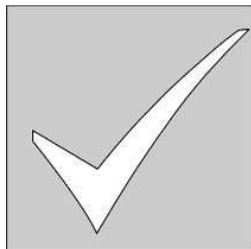
**% OF GRASS IN YOUR HAY:** Your FARMSCAN 2188 has been calibrated on 100% Alfalf hay. The more grass in the hay, the higher the moisture reading is compared to actual reading.

### IMPORTANT: PLEASE READ

**Because of the numerous variables which affect your FARMSCAN 2188's readings, the indicated moisture content should not be used as an absolute, quantitative measurement. Your moisture meter's readings are, however very useful guidelines for safely baling and storing hay.**

## 5.0 CALIBRATION

### Calibration Key:



### Calibration Check (Re-calibration)

1. Clean the probe tip. While holding the probe in the air, press and hold the 4 button. The tester will begin to count down on the display "5,4,3,2,1" and the tester will then display "00.0".
2. Release the 4 button.
3. Firmly place the calibration clip on to the probe tip as shown in the clip illustrations below and then press and hold the 4 button.
4. The tester will now display 24.8%, indicating that the unit is now calibrated.

\*\*If the tester displays "99.9" any time during the calibration process, this indicates an error has occurred. Try repeating the calibration procedure starting at Step 1.

## 6.0 CARE AND MAINTENANCE

- After each use, always store your moisture meter in a clean and dry place.
- The metal tip of the probe should be wiped clean between each use for best results. Clean both parts of the metal tip from time to time with fine steel wool and/or mineral spirits or alcohol. A dirty tip can cause lower readings. Keeping the brass shiny will give best results.
- Never immerse the probe in water.
- Remove the battery, if your Moisture Meter will not be used for several months.

## 7.0 TROUBLESHOOTING & WARRANTY

PROBLEM	POSSIBLE CAUSE/ REMEDY
Unit does not turn on	Check battery is connected properly.
The meter displays 99.9 at all times.	Clean probe tip and calibrate moisture meter.
"LOBAT" is displayed	Replace the battery with a new 9 Volt Alkaline battery. Re-calibrate moisture meter.
Hay moisture meter will not display 00.0 in open air. OR Open air reading of 8.0 is displayed.	Clean probe tip and calibrate moisture meter
Temperature not readings accurate.	Make sure you allow the metal tip of the probe to adjust to the bale temperature. This can take a minute or two.
Unit reading inaccurately	Read this manual again. Carefully.

### WARRANTY

Computronics Corporation Ltd guarantees to correct by repair or parts replacement, without charge, any defect arising from faulty workmanship or materials.

The period of this guarantee is (1) one year.

Computronics Guarantee is subject to the following conditions:

- Faulty equipment must be returned to Computronics or an authorised repair center at the owner's expense and at the owner's risk.
- If guarantee valid, Computronics will pay the cost of return freight using its nominated carrier at owner's risk.
- Commencement date of Guarantee will be from date of registration on the warranty card.
- Guarantee card must be lodged within ten days of purchase for registration to be accepted.
- Equipment returned for repair that is not registered for guarantee purposes will have the guarantee period calculated from the original date of despatch from Computronics.
- Repairs to equipment will be charged if the guarantee period has expired or if fault caused by damage or misuse.
- If equipment is tampered with by unauthorised persons, then this guarantee is void.

## 8.0 SPECIFICATIONS

Battery :	9 Volt Alkaline Type <b>ONLY</b>
Accuracy :	1%
Moisture Range :	8% to 45%
Temp Range :	0° C to 99° C
Weight :	400g (800g packed)
Dimensions :	W 90mm x D 40mm x L 210mm