OWNER'S MANUAL

MODEL G-34 MOISTURE DETECTOR FOR BALED HOPS

INTRODUCTION

Thank you for purchasing the Delmhorst model G-34 Moisture Detector. The G-34 is a rugged, reliable instrument that enables you to easily check moisture levels in baled hops to assure quality and safe storage. Features include:

- Easy-to-read analog display.
- Moisture Range: 7%-14%.
- Built-in battery and calibration check.
- Auto-shutoff timer to extend battery life.
- Sturdy plastic carrying case.
- 2-9V batteries (included)
- 1-year warranty on the meter, 90DD on all electrodes

OPERATION

1. To check battery voltage, push the switch down to the "OFF" position and hold. The batteries are OK if the needle moves beyond "11" (BATT OK"). The 9-volt batteries are located in the compartment on the case bottom.

2. To check the meter calibration, push the switch to the "ON" position and hold. The meter is in calibration if it reads "13.5" on the dial. A tolerance of ± 0.5 is acceptable. An optional external resistance standard (part no.MCS-44) is also available. Please contact Delmhorst or your local dealer to purchase.

   To turn the meter on, push the switch to the "ON" position and release. The meter remains on for 4 minutes. The auto-timer is reactivated for 4 minutes with each subsequent test with a reading of 8% or higher. If readings are below 8%, push the switch "ON" from time to time to prevent the meter from turning "OFF" automatically. The meter may be turned off manually by pushing the switch to the "OFF" position. When the meter is "ON", the needle rests below the 6% mark.

3. To check the %MC of bales connect the 830-2 (10 in) or 830-5 (12 in) prod to the H-4 handle. Connect the H-4 to the input connector marked “electrode” on the meter. Force the probe into the bale and read the moisture content on the meter scale. An optional electrode (30-E/C) with two 9-1/2in insulated pins is also available.

ABOUT YOUR READINGS

Electrical meter readings provide very useful guidelines to the producer when targeting the 8%-12% MC range for safe packaging and storage. The meter indicates the moisture level in the hops that is in contact with the un-insulated tip portion of the prod. Since moisture distribution usually varies in baled hops, an average of several tests will give greater validity to the data collected. It is important to pay particular attention to any high readings and the frequency at which they occur. Keep in mind that a few wet spots in the bale may cause considerable damage.

In an effort to minimize the effect of variability of moisture and possibly improve meter accuracy, it may be desirable to grind material and take readings on smaller samples. Use an ordinary household food chopper to grind and then stir cone petals and strigs for testing in a small container or bucket. The no. 831 short pin prod (with H-4 handle) or the 37-E/C multi-pin electrode can be used for this purpose.

Meter readings are affected by the temperature of the hops. The original calibration of the meter was developed on hops at a temperature of 80°F. Higher temperatures result in higher meter readings than actual MC; lower temperatures result in lower meter readings. For best accuracy apply a temperature correction to readings that are taken at temperatures at 70°F or below and at 90°F or above. The general rule is to subtract 1% from the meter reading for every 10°F greater than 80 and add 1% to the meter reading for every 10° less than 80.

CARE OF YOUR METER

- Store your meter in a clean, dry place. The protective carrying case provided is an ideal storage place when the meter is not in use. If the meter has been left in a hot or cold environment overnight or for an extended period, allow the meter to acclimate to the temperature conditions in which it will be used for minimum 1-2 hours, or as long as possible.

- Clean the meter and electrodes with any biodegradable cleaner. Use the cleaner sparingly and on external parts only. Keep cleaner out of the sensor input connector.

- Remove the batteries if the meter will not to be used for one month or longer.

SERVICE FOR YOUR METER

If your meter is not working properly, replace the batteries with new ones and check the calibration.

WARRANTY

Delmhorst Instrument Co., referred to hereafter as Delmhorst, guarantees moisture meters for one year from date of purchase and any optional electrodes against defects in material or workmanship for 90 days. If, within the warranty period of the moisture meter, you find any defect in material or workmanship, return the meter using the Return Form. This warranty does not cover abuse, alteration, misuse, damage during shipment, improper service, unauthorized or unreasonable use of the meter or electrodes. This warranty does not cover batteries, pin assemblies, or pins. If the meter or any optional electrodes have been tampered with, the warranty shall be void. At our option, we may replace or repair the meter.

Delmhorst 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; follow the instructions in Servicing Your Meter section.

UNDER NO CIRCUMSTANCES SHALL DELMHORST BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES OF ANY TYPE WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS OR DOWNTIME ARISING OUT OF OR RELATED IN ANY RESPECT TO ITS METERS OR ELECTRODES AND NO OTHER WARRANTY, WRITTEN, ORAL OR IMPLIED APPLIES. DELMHORST SHALL IN NO EVENT BE LIABLE FOR ANY BREACH OF WARRANTY OR DEFECT IN THIS PRODUCT THAT EXCEEDS THE AMOUNT OF PURCHASE OF THIS PRODUCT.

The express warranty set forth above constitutes the entire warranty with respect to Delmhorst meters and electrodes and no other warranty, written, oral, or implied applies. This warranty is personal to the customer purchasing the product and is not transferable.

Rev 10/13