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Instruction Manual



Agrometer™ Growing Degree Units Monitor

Agronomists know that solar heat from the sun plays a big role in corn growth. GDUs are a way to measure solar heat accumulation. The Agrometer™ Growing Degree Units Monitor calculates and stores GDUs daily for your area and then displays the result.

You can calculate or find GDU information from other sources, but the question still would be: How would you interpret and apply that information to manage your crop?

Syngenta Seeds, marketer of NK® Brand Seeds, built our GDU monitor to give Corn Belt farmers easy access to local GDU data, a crucial predictor of crop performance. Microchips enable the unit to collect accurate GDU, time and outdoor temperature data. This data becomes even more valuable to farmers as its impact on local crop performance are analyzed and reported by agronomists.

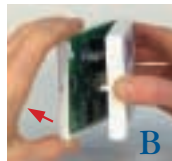
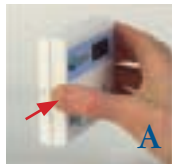
More information will be sent to you that will help you interpret GDU data and apply it to your crop. You can also view information at www.nk-us.com, or find document updates. In the Midwest, GDU accumulation generally begins April 1 and ends with harvest.

Installing Battery and Sensor Wire

Before programming your monitor, open its case, insert the battery and plug in the sensor wire.

Opening the Case

To open the case, squeeze firmly on the left end of front half of case with your thumb (A), then pull front face plate away from the back plate (B). When closing the case, make sure the buttons are lined up with the openings.



Connecting the Sensor Wire to Terminal:

Pull red terminal end of sensor wire through square opening (C) at lower left of case, and insert into the two wire prongs at (D).

Place Battery (E) into Slot (F):

Install battery with positive (+) side up. Slide it in from left. Be careful to get bottom under prongs on right. Program unit per pages that follow. Replace front cover. You should replace battery once a growing season. Use a CR2032 Lithium coin cell. If “Lo bAtt” is displayed during a growing season, write down the GDUs accumulated so they may be re-entered once the battery has been changed. The unit memory should restore the data when a new battery is installed. You can verify that against your written number.



Low battery indicator (1)



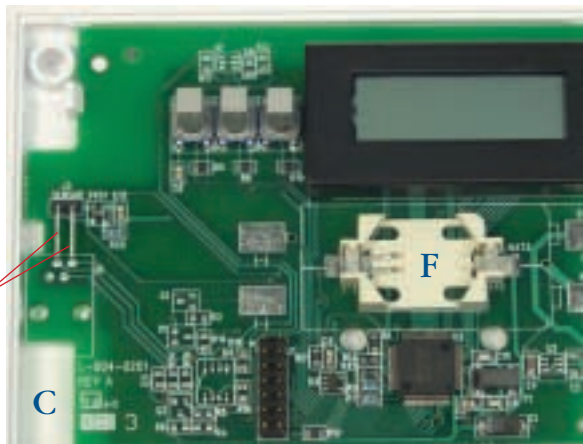
Low battery indicator (2)



Enlarged view showing end of sensor wire inserted into prongs (D)



E

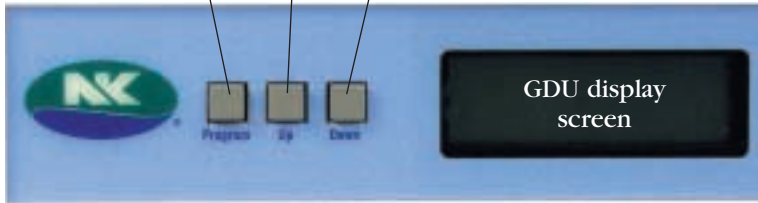


Inside of Agrometer

Using the Buttons to Set Up Monitor

3 Buttons:

Program Up Down



Program

This button will toggle through the three displays. After 10 seconds of inactivity, the GDU display will return.

1. GDU



GDU display
(NOT accumulating)



GDU display
(accumulating GDUs)

2. Temperature

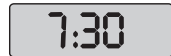


Temperature display (F)



Temperature display (C)

3. Time



AM display has two dots.



PM display has three dots.



Program (SET mode)

Pressing and holding this button (like a “Shift” key on a keyboard) while also pressing either “Up” or “Down” momentarily will allow you to set the field that is currently displayed. “Program” will then toggle between fields.



GDU set mode
(START selected)



Temperature set mode
(offset -2 deg. F)



Time set mode (11:59 PM)



Up and Down

These buttons will increase or decrease the numerical display in the SET mode. They will also toggle from “F” to “C” and from “START” to “STOP”.

Operating Instructions

To Set TIME:

Starting from the GDU display screen, press the “Program” button twice to display time. Then, press and hold the “Program” button while pressing either “Up” or “Down” momentarily. The hour will now be flashing. You can now adjust the hour using the “Up” and “Down” buttons. When finished, press the “Program” button again to adjust the minutes

in the same manner. Once the minutes have been set, press “Program” again to end time set mode. NOTE: While you’re setting the hour, 24-hour-based (military) time will be displayed. Once set, the display will show standard time with a PM indicator below the colon. It’s important to set this properly since GDUs are accumulated daily at midnight.

To Set TEMPERATURE (F or C):

Starting from the GDU display screen, press the “Program” button once to display the temperature (sensor must be plugged in). Then, press and hold the “Program” button while pressing either “Up” or “Down” momentarily. “F” or “C” will now be flashing in the upper right corner. Use the “Up” or “Down” button to toggle Fahrenheit or Celsius.

Temperature Offset:

If the temperature reading differs from other location readings

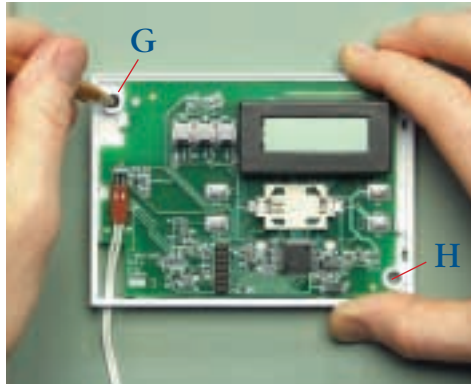
on your farm, adjust the temperature setting to compensate. Pressing the “Program” button again allows you to adjust the temperature sensor reading, up or down five degrees F or two degrees C. Press the “Program” button again to end set mode.

To START or STOP GDU Accumulation or Set GDUs:

While on the GDU display screen, press and hold the “Program” button while pressing either “Up” or “Down” momentarily. “START” or “STOP” will now be flashing on the right side of the display. Use the “Up” or “Down” button to toggle “START” or “STOP”. Pressing the “Program” button will then allow you to set GDUs, if necessary. Press the “Program” button again to confirm changes and return to the GDU display.

NOTE: If “STOP” is displayed on the GDU display screen (in normal run mode), the Agrometer will NOT accumulate growing degree units. Refer to page 7.

Mounting the Monitor



Inside wall of house:

Remove back. Place it where you plan to mount it, using 2 supplied screws and anchors. Put the sensor wire opening at the bottom left. Trace mounting holes (**G** and **H**) with a pencil.

Suggested mounting of sensor on outside of house, using the supplied holder.

Probe Placement: Put outside, not in direct sun. On north side of building is ideal. Or put under soffit or in shade with 20 foot cable. Call 1-800-655-6843 to buy extra 20 foot cable extensions.



Winland's Standard Limited Warranty

Winland Electronics, Inc. ("Winland") warrants to the buyer ("Buyer") that each product it manufactures for Buyer shall meet the written specifications provided by Buyer and agreed upon in writing by Winland and shall be free from defects in factory workmanship, when properly installed and operated under normal conditions, for a period of twelve (12) months from the date of delivery to a customer (the "Warranty Period"). This warranty does not include any batteries.

Winland's SOLE OBLIGATION for breach of this warranty shall be, at Winland's sole option, to repair or replace, or to refund the purchase price paid by Buyer for, any product returned by Buyer to Winland, transportation charges prepaid, within the Warranty period which upon examination are discovered to Winland's satisfaction to be defective due to improper manufacture. Correction of such defects by repair to, or supplying replacements for, defective parts, or the refund of the purchase price of the product, shall constitute fulfillment of all obligations of Winland to Buyer under this warranty. Winland shall charge Buyer a reasonable service charge for any repair services performed by Winland after the Warranty Period.

This warranty does not cover any design or related defect or any defect in the materials used in the manufacturing of the product. Winland hereby assigns to Buyer any and all warranties covering the materials used in the manufacture of the products. If a product is identified as a proprietary Winland product, Winland will warrant that the entire product for the full twelve (12) months of the limited warranty period

regardless of the time period of the manufacturer of any components of such proprietary product. This warranty does not apply to any products, which have been subject to misuse, negligence, accident, and acts of god, improper installation or which have been repaired, modified or altered outside of Winland's factory.

This warranty is intended solely for the benefit of buyer. All other warranties, express or implied, are hereby disclaimed and excluded, including, without limitation, any warranties of merchantability, non-infringement, fitness for a particular purpose, any warranties arising from course of dealing or usage of trade and any representations and/or warranties provided by buyer to its customers. No employee, representative or agent of Winland has any authority to provide any other warranty or representation on behalf of Winland or assume any other liability on behalf of Winland in connection with the products, except as expressly stated in this limited warranty.

Winland's SOLE OBLIGATION under this warranty shall be to repair, replace or refund the purchase price for a defective product delivered by Buyer to Winland during the Warranty Period. Winland shall not be liable to any person for indirect, special, incidental or consequential damages of any description, whether arising out of warranty or other contract, negligence or other tort, or otherwise. Under no circumstances shall Winland's liability hereunder exceed the purchase price paid by Buyer to Winland for the defective product.

Where to return a defective Agrometer™ Growing Degree Units Monitor: Contact Syngenta Seeds at 1-800-248-4767 (1-800-AGVISOR) for return information. Please include a written description of defect.