



Quick Start Guide

GAC™ 2700-UGMA

Grain Analysis Computer

Overview

Thank you for purchasing the GAC™ 2700-UGMA grain moisture tester, DICKEY-john's newest grain moisture analyzer. The GAC™ 2700-UGMA moisture tester quickly tests grain and automatically calculates moisture content, test weight (bulk density), and temperature of the sample using 149 MHz / UGMA technology.

Safety

Advisory identification and descriptions regarding operation of the GAC™ 2700-UGMA moisture tester can be found in the Operator's Manual.

Declaration of Conformity

The GAC 2700-UGMA moisture tester is in conformity with the provisions of many global directives and regulations. Consult the Operator's Manual for a complete list.

This product creates an RF signal for measurement purposes and meets the EMC requirements of the United States (FCC 47 CFR, Part 18.109.(c), ISM Class A and ANSI C63.4:2014) and Canada (ICES-001, CISPR11 Group 2, Class A).

The GAC 2700 product series is exempted from the Radio Equipment Directive 2014/53/EU as the RF signal internal to the product is not used for communications. The RF signal power is below the threshold limit to be of concern for EMF Directive 2013/35/EU and therefore no MPE calculation was determined necessary.

Liability

DICKEY-john® designed the GAC™ 2700-UGMA moisture tester to measure oilseed and grain moisture content. We rigorously test and calibrate each instrument before it leaves the factory. Use of the instrument in the field, however, is subject to environmental and operating conditions beyond our control. DICKEY-john® disclaims all liability for damages resulting from environmental and operating conditions beyond our control and for any damages that might follow incorrect results due to those environmental or operational conditions.

IN NO EVENT SHALL DICKEY-john® OR ANY OF ITS AFFILIATES, OFFICERS, DIRECTORS, SUCCESSORS OR ASSIGNS BE LIABLE FOR ANY DAMAGES WHATSOEVER, INCLUDING SPECIAL, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES OR DAMAGES FOR LOSS OF PROFITS, REVENUE, USE, OR DATA AS A RESULT OF CLAIMS, REGARDLESS OF THEORY BROUGHT, ARISING OUT OF OR CONNECTED WITH ANY USE OR RELIANCE THE GAC™ 2700-UGMA MOISTURE TESTER.

The operator is responsible for ensuring the results of the testing are as accurate as possible by following approved maintenance procedures on a regular basis, making sure the calibrations are up to date and the latest version is being utilized, by cleaning the instrument and its sensors on a regular and as-needed basis depending on the amount of dust, dirt, and debris encountered in the instrument's use, by monitoring performance using daily check samples and by adhering to the check procedures set forth in the manual. As with any kind of precision instrument, optimal results depend in part on proper cleaning and maintenance.

For questions concerning these issues, refer to the product warranty, or call your DICKEY-john® representative.

The complete Operator's Manual is available on our website.

Unpacking

Carefully unpack the GAC™ 2700-UGMA moisture tester.

Refer to the packing list below to verify that all items are present.

Contact DICKEY-john® if items are missing or broken.

Retain the packaging for use when shipping the instrument; use of other packaging for shipment may result in damage to the instrument.

Packing List

Qty	Description
1	Model GAC™ 2700-UGMA Grain Moisture Tester
1	Quick Start Guide
1	AC Power Cord
1	Allen Wrench
1	Cleaning Brush
1	Grain Drawer

Setting up the GAC™ 2700-UGMA Moisture Tester

Setting up the GAC™ 2700-UGMA moisture tester requires the following procedures:

1. Open the carton and remove the Allen wrench from the upper foam insert.
2. Remove the GAC 2700-UGMA unit from the plastic bag. Save the bag, the packaging material, and the carton to use for future transport of the instrument.
3. Ensure the installation location is level using the bubble level at the top of the instrument; adjust the feet if necessary. Unit must be kept level, making sure that there is sufficient clearance between the GAC 2700-UGMA moisture tester and the countertop so that the grain drawer is cleanly inserted into the instrument.
4. Remove the grain drawer and place the unit gently on backside to locate the shipping brackets on the left and right side walls.

IMPORTANT: Be careful when placing the unit on its backside to avoid damage to the security switch.



5. Loosen and then remove the hex bolt from the bracket on the left side wall.



6. Press down on the bracket to release.



7. Slide the bracket toward the bottom of the instrument.



8. Insert the hex bolt into the operating location hold and tighten using the Allen wrench.



9. Perform the same procedure to the bracket on the right side wall.

10. Once both brackets are tightened to the operating location, place unit upright.

Reverse the process to re-install the brackets for transportation. This locks the weighing mechanism to prevent damage when moving.


Initial Setup

Once the unit is powered up, the unit will already be logged into the default user profile. This default user can run samples and access most functions of the unit.


The default user will be logged into each time the unit is restarted.

There is also an Admin user profile installed on the unit with a blank password that can access all functions.

To access all functions of the unit:

1. Press  in the upper right-hand part of the screen.
2. Press the Log Out button to exit the default profile.

Note: Once logged out, you can only return to the default user by restarting the unit.

3. Press  again to access the Login page.
4. Select "Admin" from the list of user profiles.
5. Press the Login button to start using the instrument.

Note: Setup a custom user name and password, go to the Main Menu (upper left) and press "Users/Passwords". Refer to the Operator's Manual for additional information.

Register the instrument at the following website:

<http://www.dickey-john.com/gac2700reg>

Advanced Setup

Users should also consider using the Settings menu to configure the GAC™ 2700-UGMA moisture tester to specific application requirements:

- Data export via serial port communication
- Data printing

The Settings menus can be accessed via the drop-down menu icon .

Refer to the operator's manual for detailed explanation on the above configuration settings.

Conducting Grain Analyses

The GAC™ 2700-UGMA moisture tester is designed to provide minimal user interaction to run grain moisture measurements. From the Home screen:



1. Press the **Choose Product** button to select the grain or crop that will be analyzed.
2. Enter **Sample ID** (If desired).
3. Enter **Customer ID** (If desired).
4. Pour the sample into the Upper Hopper.
5. The **START** button will change to Green when there is enough grain in the hopper to properly run a sample.
6. Press the **START** button.

Maintenance

The GAC™ 2700-UGMA moisture tester utilizes an RF frequency of 149 MHz to make measurements within the machine. It is not a strong signal strength. If potential interference is determined to originate from the GAC™ 2700-UGMA moisture tester simple corrective steps can be taken; move the products further apart from each other, re-orientate the products to each other.

IMPORTANT: It is highly recommended the unit be regularly inspected and cleaned to ensure continued and consistent results.

For optimum performance, extensive cleaning should be performed weekly or more often, as needed, based on surrounding environmental conditions. Factors such as dust, temperature extremes, grain dust, and external humidity vary from location to location. If there are any questions about the cleanliness or instrument performance, contact your local authorized service center.

For customers that require a more extensive cleaning, contact and schedule your instrument for cleaning with your dealer or authorized service center.

Note: The following recommendations are provided as a guideline to maintain a robust and quality operating instrument. It should not be interpreted as an exhaustive maintenance program. Dust and debris may periodically accumulate in areas not specified in this manual. The owner is responsible for ensuring overall equipment cleanliness. If any questions arise regarding the maintenance or performance of the instrument, contact your dealer or local authorized service center.

EXTERNAL CLEANING

The LCD display may require periodic cleaning. Use a commercial cleaner for glass lenses to remove dust.

CAUTION

Do not apply water, organic solvent or chemicals, such as acid and alkali, to the LCD display.

The GAC™ 2700-UGMA moisture tester's surface can be cleaned with any cleaner designed for plastic and stainless-steel surfaces.

Periodically use a rag to wipe the grain hopper and the (2) upper grain hopper sensors.

Figure 1 Grain Hopper Sensors



INTERNAL CLEANING

Performing continuous tests can result in material accumulation around the critical internal components and adversely affect the measurement.


Two types of cleaning are recommended on an as needed basis:

- Daily clean
- Extensive clean (see Operator's Manual for instructions)

DAILY CLEAN METHOD

A daily clean method allows cleaning the cell and door using an automated process. During the cleaning sequence, the hopper door automatically opens.


To start the cleaning process:

1. Select **Device Information** from the Main Menu.
2. Press .
 - A pop up message will appear with the words “Cleaning Mode is Active”.
3. Remove the grain drawer.
4. Using the supplied brush, manually remove any loose or stuck grain or dust from the measuring cell.
5. Press the **CLOSE** button to return instrument to normal operation.

CAUTION

Hands should be clear from inside the instrument before pressing the CLOSE button.

6. Insert grain drawer.

Press  to return to the Home Screen.

Common Error Codes

ERROR CODE	ERROR
1	Empty Cell Measurement Out of Spec
2	Empty Cell Weight Out of Spec
3	No Products Installed
4	Fill Motor Jammed
5	Invalid Grain Calibration File
6	Moisture Too High
7	Moisture Too Low
8	Instrument Low Temp Limit Exceeded
9	Grain High Temp Limit Exceeded
10	Grain Low Temp Limit Exceeded
11	Sample Weight Too High
12	Sample Weight Too Low
13	No Communication
14	Instrument High Temp Limit Exceeded
15	Unit to Grain Differential
16	Internal Power Supply Out of Spec
17	Unable to Predict Moisture
18	Pre-Analysis Timeout
19	Instrument Needs Updated
21	File I/O Error
22	Error RF Interference
23	Invalid GAC™ 2700 Unit Model Number
24	No Locale
25	Could not Create Default Locale
50	Weight Measurement Device Error
51	Invalid Password
52	Date/Time Incorrect
53	Cold Sample Moisture Too High
55	Dump Motor Timeout
56	I/O Board Power Off Error
60	Network Unavailable
100	Unexpected Application Crash

Consult the Operator's Manual for more detailed information.

DICKEY-john® WARRANTY

Dealers have the responsibility of calling to the attention of their customers the following warranty prior to acceptance of an order from their customer for any DICKY-john® product.

DICKEY-john® warrants to the original purchaser for use that, if any part of the product proves to be defective in material or workmanship within one year from date of original installation, and is returned to DICKY-john within 30 days after such defect is discovered, DICKY-john will (at our option) either replace or repair said part. This warranty does not apply to damage resulting from misuse, neglect, accident, or improper installation or maintenance; any expenses or liability for repairs made by outside parties without DICKY-john's written consent; damage to any associated equipment; or lost profits or special damages. Said part will not be considered defective if it substantially fulfills the performance expectations. **THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE, AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED.** DICKY-john neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part and will not be liable for consequential damages. Purchaser accepts these terms and warranty limitations unless the product is returned within fifteen days for full refund of purchase price.

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