DIGI★STAR

TOPCON POSITIONING GROUP

# GT560 AUTOLOG

## Operators Manual




D4168-EN Rev A

April 28, 2016

Digi-Star LLC
W5527 Hwy 106
Fort Atkinson, WI 53538
USA
Tel: 800-225-7695
E-mail: sales@digi-star.com

Digi-Star International
Digi-Star Europe B.V.
J.F. Kennedylaan 235
NL-5981 WZ Panningen
The Netherlands
Tel: +31 (0)77 462 92 64
E-Mail: dsinfo@digi-star.com

D4168-EN GT560 Autolog Rev A SCC

All rights reserved. Reproduction of any part of this manual in any form whatsoever without Digi-Star's express written permission is forbidden. The contents of this manual are subject to change without notice. All efforts have been made to assure the accuracy of the contents of this manual. However, should any errors be detected, Digi-Star would greatly appreciate being informed of them. The above notwithstanding, Digi-Star can assume no responsibility for errors in this manual or their consequence.

© Copyright 2016 Digi-Star Fort Atkinson (U.S.A.)

# Table of Contents

GETTING STARTED ..... 6
1.0 INTRODUCTION ..... 7
2.0 GT560 FEATURES & OPTIONS ..... 8
3.0 ACCURACY STATEMENT ..... 10
4.0 TECHNICAL SPECIFICTIONS ..... 11
5.0 SAFETY DURING USE ..... 13
6.0 HARVEST TRACKER MANAGEMENT PC SOFTWARE ..... 14
7.0 HARVEST TRACKER APP ..... 15
8.0 GT560 INDICATOR OVERVIEW ..... 16
9.0 INDICATOR DISPLAY SCREENS ..... 19
9.0.1 Overview of Active Screen ..... 20
9.0.2 Overview of Data Record Screen ..... 21
9.0.3 Overview of Field Screen ..... 22
9.0.4 Overview of ID Screen ..... 23
9.0.5 Overview of GPS Screen ..... 25
9.0.6 Overview of Grain Moisture Screen ..... 26
10.0 OVERVIEW,LOAD SCREEN, MOISTURE AND GPS DATA. .. 27
11.0 CALIBRATING GRAIN MOISTURE SETTINGS ..... 28
12.0 OVERVIEW FOR DATA TRANSFER ..... 29
12.0.1 Transfer Field and ID data from USB to GT560 Indicator ... 30
12.0.2 Transfer Records from GT560 indicator to USB Drive ..... 30
13.0 OPERATION ..... 31
13.0.1 Record Data - Automatic Mode With AutoLog ..... 31
13.0.2 Record Data - Manual Mode Without AutoLog or AutoLog$_2$ 32
13.0.3 Record Data Preview ..... 33
13.0.4 GPS Coordinates Preview for Record Displayed ..... 33
13.0.5 Moisture Information Preview for Record Displayed ..... 33
13.0.6 Check Combine Yield Monitor ..... 34

14.0 AUTOLOG$_2$ ..... 35
14.0.1 To Enable Autolog$_2$ And Options ..... 36
14.0.2 Enable Relay Function ..... 36
14.0.3 Time To Continue Preset Active Signal ..... 37
14.0.4 Select Weight Or Percentage Method ..... 37
15.0 RE-CALIBRATING THE SCALE ..... 39
15.0.1 View Current Calibration Number ..... 40
15.0.2 Enter New Calibration Number ..... 40
15.0.3 Changing/Viewing Setup Number ..... 41
16.0 DAILY DATA COLLECTION ..... 41
16.0.1 To Store Data Records On A USB Drive ..... 42
16.0.2 Erase Data Records From GT560 Indicator ..... 43
16.0.3 Zero Accumulator Memory ..... 43
17.0 Other Functions ..... 44
17.0.1 Backlight Dimmer ..... 44
17.0.2 Unload Alarm ..... 44
17.0.3 Change Time ..... 45
17.0.4 Change Date ..... 45
17.0.5 Edit Sign On Message ..... 46
18.0 DIRECT ACCESS NUMBERS (D.A.N.) ..... 47
18.0.1 Options Changed By User ..... 47
19.0 PRESET ACTIVE SIGNAL FUNCTIONALITY ..... 66
20.0 12VDC OUTPUT DIAGRAMS ..... 69
20.0.1 PRESET Active Signal Diagram ..... 69
20.0.2 SEEDTD Active Signal Diagram ..... 70
20.0.3 PRNOPA Active Signal Diagram ..... 71
20.0.4 PREACT Active Signal Diagram ..... 72
21.0 WEIGHING ERROR MESSAGES ..... 73
21.0.1 OVRCAP ..... 73
21.0.2 +RANGE ..... 73
21.0.3 -RANGE ..... 73

22.0 TROUBLESHOOTING FLOW CHART ..... 74
23.0 INSTALLATION ..... 76
23.0.1 Indicator Mounting ..... 76
24.0 CABLE CONNECTIONS ..... 79
24.0.1 Indicator Connection Diagram ..... 80
24.0.2 GT560 Cable Connections ..... 81
24.0.3 Connecting Load Cells To Junction Box ..... 82
24.0.4 Load Cell Direction ..... 82
25.0 AUTOLOG TROUBLESHOOTING ..... 83
26.0 SENSOR INSTALLATION AS PROXIMITY SWITCH ..... 84
27.0 DECLARATION OF CONFORMITY ..... 86
DECLARATION OF CONFORMITY ..... 86
28.0 NOTES ..... 87
29.0 QUICK REFERENCE AID ..... 88
30.0 OPTIONS ..... 90

# GETTING STARTED

## Before Harvest

1. Install Harvest Tracker Software on PC and enter required data. See Page 14.
2. Install optional AutoLog Sensor on PTO shaft. See Page 35.
3. Install optional Grain Moisture Sensor on discharger chute of equipment and calibrate. See Page 28.
4. Install optional GPS Sensor on equipment.
5. Transfer data for Harvest Tracker software to GT560 Indicator.

## Before Loading

1. Select Field (See page 22)
2. Select ID (See page 23)
3. Select Grain (See page 26)

Refer to Section 13-Operation Page 31.

## Before Unloading

If AutoLog is not used

1. Press 

. UNLOAD should be flashing.
2. When done unloading press 

. The display will stay on for 10 seconds then return to active screen and is ready to load.

# 1.0 INTRODUCTION

Thank you for the purchase of a GT560 system. Your GT560 is the culmination of more than 30 years of agricultural weighing engineering and expertise. With proper operation and preventative maintenance it will last for many years.

The Digi-Star GT560 is designed for use with weighing, tracking, storing, and transferring related data regarding the weight of agricultural grains, forages, and other commodities on mobile weigh wagons, grain carts, forage boxes, and other agricultural conveyances.

The data collected by, and transferred from, the GT560 is designed primarily for use with Digi-Star's Harvest Tracker PC software. For maximum value from the GT560 indicator, Digi-Star recommends that Harvest Tracker PC software program be loaded on a computer. This program will allow the full initialization and personalization of the GT560 indicator to the operation. The manual for this software program is found within the program under the help tab.

The GT560 is not for use with applications for which the GT560 is not intended, or as outlined in this manual.

Use of the GT560 outside of its intended purposes may result in inaccurate weight measurement or damage to indicator.

Wi-Fi and Harvest Tracker App can be used with the GT560 indicator.

Reference Documents:
D4172-EN Grain Moisture Sensor Installation
D3908-EN AutoLog Installation Manual

Digi-Star website: www.digi-star.com

Technical Support: Toll Free 800-225-7695 (US & Canada); +1-920-563-9700

# 2.0 GT560 FEATURES & OPTIONS

## The GT 560 Indicator offers several unique features:

- Grain Moisture Data recording during unloading and Dry Bushel calculation (Option)
- GPS Location Data recorded for both Loading and Unloading locations (Option)
- Bright, clear, white backlit COG display that is easier to read
- Increased microprocessor power with firmware updatable via USB stick
- Hour Meter, Maintenance Message, and Custom Sign-On Message

## Hands off (AutoLog) Operation

The GT560 indicator has many features but it also boasts simple hands-off operation using a RPM sensor on the PTO shaft to trigger the start of the unloading process and the end of the unloading process. AutoLog aids in preventing operator mistakes and loss of load data due to the operator forgetting to push the “start/stop” key. Manual control using the “start/stop” key is possible should the sensor be damaged or not functioning by disabling AutoLog. See page 35 for instructions. Weight, date, time and additional information are stored automatically after each load is completed.

## AutoLog$_2$

AutoLog$_2$ is an optional function which allows the operator to set weight targets when unloading. The indicator will sound an alarm and/or activate a control signal when the preset unload weight is met.

There are 3 methods available to control the targeted unloaded weight:

**1. Weight set per Truck ID –** Each truck with a stored ID can have a preset weight; useful when working with trucks of various capacities.

**2. Stored Target Weight-** When the same amount is unloaded each time. The stored weight repeats until changed. Useful when all trucks have the same capacity.

**3. Load by Load-** With each unloading event the GT560 will prompt the operator to enter the required weight to unload. Useful when flexibility is required.

### USB Port

USB drive has capacity to hold thousands of data records and allows easy data transfer.

### Harvest Tracker PC Software

Harvest Tracker PC software provided with GT560 indicator allows generation of a variety of reports. Reports can be read by programs such as Microsoft Excel, Adobe Acrobat and Microsoft Internet Explorer.

### Wi-Fi ERM

The Digi-Star ERM-WIFI device allows Apple and Android devices to wirelessly communicate with Digi-Star GT560 indicator.

### GPS

A GPS receiver will also record the “where the load started GPS coordinates, the Field, the Crop” and the “where the unloading stopped GPS Coordinates, the unloaded weight, the Field, the Crop, the Moisture”.

### Grain Moisture Sensor

A grain moisture sensor mounted in the unloading system of the grain cart will monitor and record the average moisture of the grain when being unloaded. Grain must be moving over or across the Grain Moisture Sensor.

### Harvest Tracker App

Easily view and control the GT560 scale indicator remotely from Android and IOS phones or tablets. View weights, initiate check combine function, and edit field names from the combine.

# 3.0 ACCURACY STATEMENT

## ACCURACY:

## READ THIS SECTION BEFORE USING THE SCALE SYSTEM

Digi-star scale systems are manufactured to provide the greatest accuracy possible. To obtain the highest level of accuracy, proper design, installation and use are required.

- When using the scale system the following must be considered in order to realize the best possible performance and accuracy.

- Load cells must be installed with the proper orientation. Most Digi-Star load cells have a label indicating either the “top” or bending direction of the load cell. Inspect load cells to determine if installation is correct. Installation of any load cells with the orientation incorrect will result in inaccurate measurement.

- Load cell should not be subjected to any strains or loads other than the weight of the load. Stress or strain caused by misalignment or other factors when accurate weight readings are desired will negatively affect the accuracy.

- The weighing unit should be stationary, with minimal movement, and on level surface to insure that weight readings are as accurate as possible.

- The effect of movement on accuracy depends on the speed and roughness of the ground and application. Rougher terrain and faster and/or greater movement increase the degradation of accuracy.

- A level surface is defined as being less than a 5” (13cm) of run. As the slope of the terrain increases, degradation of accuracy will also increase.

# 4.0 TECHNICAL SPECIFICTIONS

| | |
|---|---|
| SIZE | 10.25” long x 8.0” high x 4” wide (260mm x 190mm x 105mm) |
| WEIGHT | 4.5 lbs. (2.04 Kg) |
| HELP MESSAGES | Context sensitive help messages in 10 languages, Long messages are scrolled |
| LOAD CELL EXCITATION | 8 volts D.C. Nominal, Capable of driving ten 350 Ohms transducers, Short circuit proof |
| AUTO TEMP COMPENSATION | Of internal circuitry for high accuracy weighing measurements |
| LOAD CELL SIGNAL | Compatible with Load Cells with greater than 0.25 mv/v |
| CONNECTORS | AMP plastic weather resistant circular connector. Gold plated contacts. |
| POWER REQUIREMENTS | 10.5 to 16.0 VDC 160 mA nominal with four 350Ω L.C. |
| SETUP & CALIBRATION | Via front panel or saved when downloading the setting files. |
| GROSS RANGE | 999,999 max-display |
| LOW BATTERY WARNING | Enabled at 10.5V nominal |
| POUND/KILO | Selectable |
| DISPLAY | LCD with 84 Character Display. |
| DISPLAY RESOLUTION | .01, .02, .05, .1, .2, .5, 1, 2, 5, 10, 20, 50, 100 |
| DISPLAY UPDATE RATE | Selectable: 1, 2, 3, 4 times/sec. |
| MAX. DISPLAY RESOLUTION | Adjustable to 40,000 counts max. |
| ZERO TRACKING | Selectable, On/Off |
| SPAN ACCURACY | ±(.1% + .005%/ °F) or (.1% + 0.009% °C) full scale ± 1 output count |
| MOTION DETECTION | Selectable, On/Off |
| ZERO ACCURACY | (.005%/ °F) or (0.009% °C) full scale ±1 output count for 0.5 mv/v transducer |
| ENVIRONMENTAL ENCLOSURE | IP65, IEC 529 |

| | |
|---|---|
| WEIGH ALGORITHM | 3 internally selectable digital filters to optimize performance (General, Slow, and Fast) |
| NON-VOLATILE MEMORY | Standard |
| OPERATING TEMP | -29℃ to 60℃ -20℉ to 140℉ |
| 2 REMOTE INPUTS (power/ remote ports) | Tare / Print / Hold / Net Gross / M+ / Zero / TR Hold / Re-enter Preset / Switch |

# 5.0 SAFETY DURING USE

**Danger:** Indicates an imminently hazardous situation that, if not avoided, could result in death or very serious injury.

**Warning:** Indicates a potential hazardous situation that, if not avoided, may result in death or very serious injury.

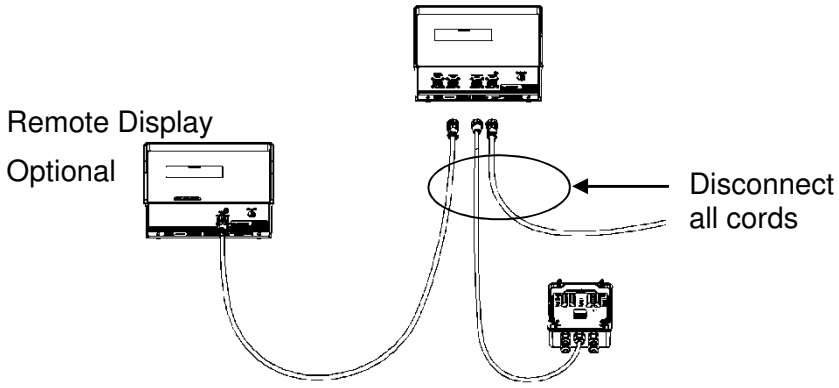
**Caution:** Indicates a potential hazardous situation that, if not avoided, may result in a minor injury.

**IMPORTANT**

**USB Port Function**—The USB port is only to be used to upload or download data from a USB Memory Stick. The USB Port is not to be used as a charging port for any type of electronic device. Use of the USB Port for any purpose other than for which it is designed may void the product's warranty.

**Cleaning:** Do not use running water, pressure washer or hoses to clean the indicator or touch screen.

**Charging Battery:** Disconnect all cables from the indicator and touch screen before charging the battery or welding on the machine. If cables are left connected, the indicator, touch screen and connected load cells could be damaged.



# 6.0 HARVEST TRACKER MANAGEMENT PC SOFTWARE

- Adding or Modifying Field Names and ID Names
- Using Harvest Tracker PC software:
- Upload data records from USB drive to PC.
- Delete field names that are already finished and clear their accumulators.
- Add/Modify new field names and ID names as needed.
- Transfer the new field names, accumulators and ID names onto the USB drive.

**Note:** To upload data to indicator, you must first create data files with field names, ID names and accumulator values using Harvest Tracker PC software.

# 7.0 HARVEST TRACKER APP

Easily view and control the GT560 scale indicator remotely from Android and IOS phones or tablets. View weights, initiate check combine function, and edit field names from the combine.

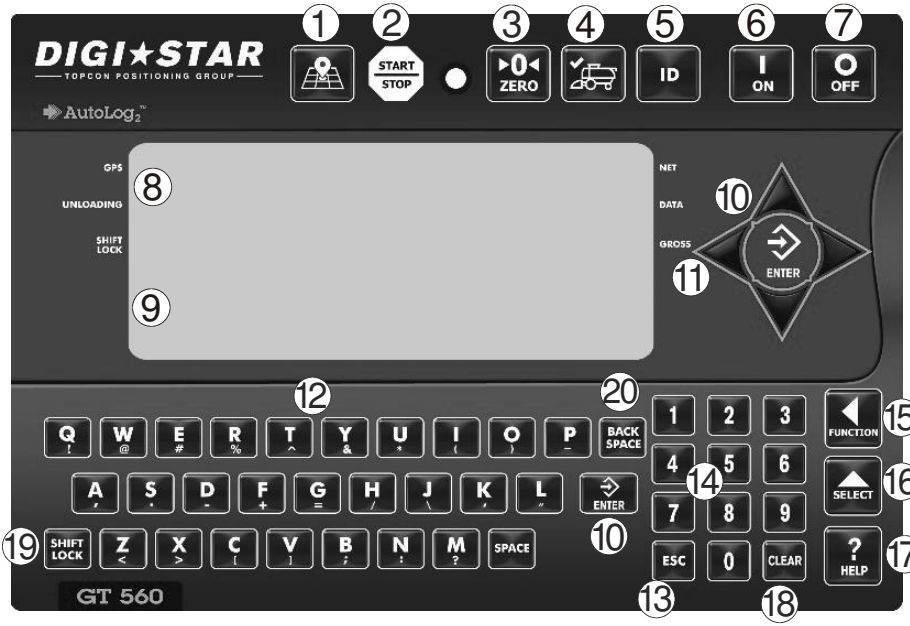
Harvest Tracker App Features:

- Field—View and edit field names
- ID—View and edit destination IDs
- SYNC—Sync records from to online Harvest Tracker or PC Harvest Tracker
- Check Combine—Check combine yield monitor
- Zero—Press and hold to zero balance the scale
- Start/Stop—Start or stop unloading operation




Digi-Star website: www.digi-star.com

# 8.0 GT560 INDICATOR OVERVIEW




① Enter and exit Field screen.

② Start or stop unloading operation.

③ Press and hold to zero balance the scale.

④ Check combine yield monitor.

⑤ Enter and exit ID screen.

⑥ Turn indicator on.

⑦ Turn indicator off.

⑧ "Upper Display"—Displays recorded data-26 characters x3 rows.

⑨ "Lower Display"—Displays recorded data-26 characters x3 rows.

⑩ Accept change or recorded to next item.




⑪ Direction Arrows-Left or right arrows move cursor inside data field. Up and down arrows move to previous or next data field. List scrolls faster the longer the Up/Down arrow is held down.

⑫ "Qwerty Keyboard"

⑬ ESC Escape or undo last data change.

⑭ Numbers Keypad

⑮ FUNCTION Performs task displayed by select

⑯ SELECT Scroll thru function key operation

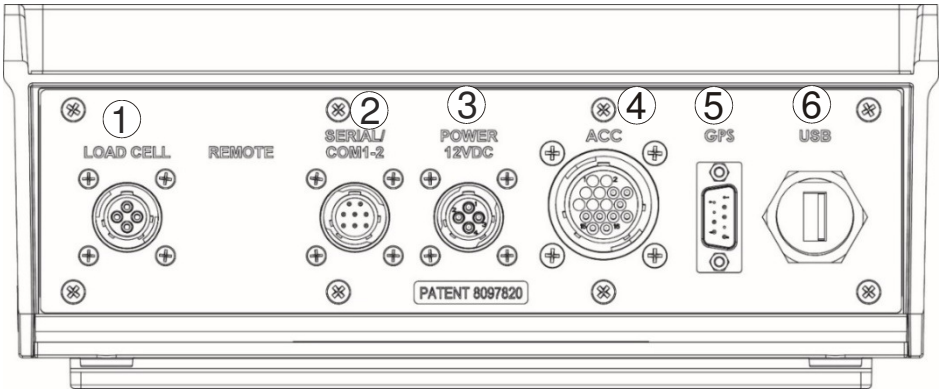
⑰ HELP For additional information

⑱ CLEAR Delete one character in data entry field. Press and hold to delete entire data entry field contents.

⑲ SHIFT LOCK Press and release. Press key with desired character.

⑳ BACK SPACE Press to backspace. Press and hold to backspace faster.

## BOTTOM PANEL CONNECTIONS




① Load cell port-- connection from J-Box

② Serial/com1-2 port--Computer connection

③ Power port--12VDC only

④ ACC port--Moisture, future functions

⑤ GPS port--for location tracking at load and unload

⑥ USB port—used for data transfer

# 9.0 INDICATOR DISPLAY SCREENS

**Six display screens can be shown on the indicator:**

### Active Screen
The active screen includes ID, Time, Gross Weight, Print Accumulator and Field Name. See page 20.

### Data Record Screen
The Data Records Screen includes Field Name, Net Weight, Print Accumulator, ID, GPS, Moisture, Date and Time. See page 21.

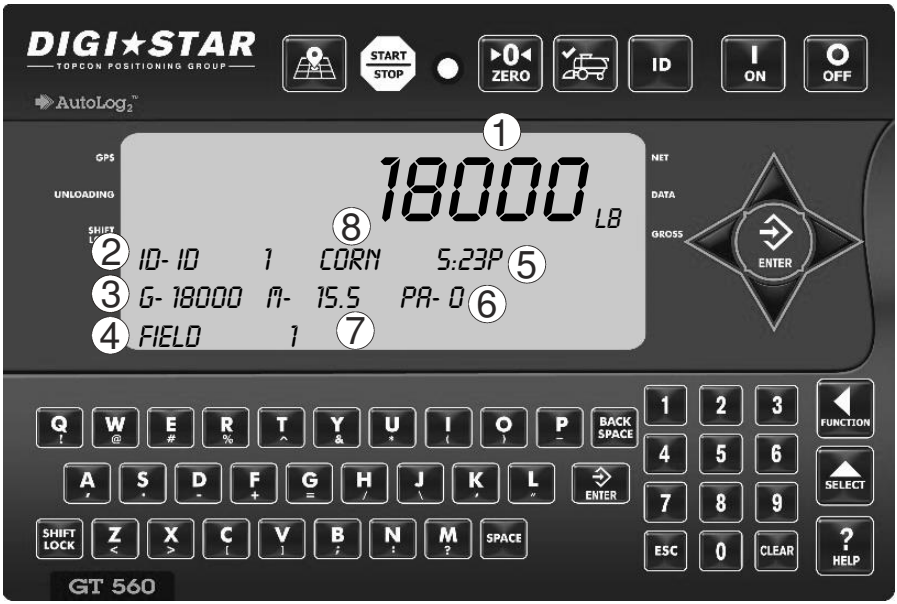
### Field Screen
150 field names are available and can be modified using the keypad. See page 22.

### ID Screen
150 ID names are available and can be modified using the keypad. See page 23.

### GPS Screen
GPS coordinates show where the load was started and where it finished unloading. See page 25.

### Moisture Screen
This screen shows the average moisture content of material being unloaded. See page 26.

### 9.0.1 Overview of Active Screen




① Current weight.
② Current ID name
③ Current gross weight.
④ Current field name.
⑤ Time (5:23 PM shown).
⑥ Print accumulator (PA) for current field.
⑦ Moisture percentage when grain is flowing.
⑧ Current grain

### 9.0.2 Overview of Data Record Screen

The GT560 indicator creates “data records” that contain data from the fields each time the operator completes a load.

- Press ESC to view last stored record.
- Press ▲ and ▼ arrows to scroll through all previously stored records.
- Press ◀ arrow to view GPS coordinates.
- Press ▶ arrow to view weight, grain and moisture percentage.




① Load Number.
② Field name (26 characters).
③ Net Weight (weight that was unloaded for this load).
④ ID name (6 characters) (use for “CART ID” or “TRUCK ID”).
⑤ Date
⑥ Time
⑦ Print Accumulator (total of all loads for selected field).

### 9.0.3 Overview of Field Screen

- Field names can be uploaded from a PC using a USB drive with Harvest Tracker PC Software.
- Field names can be a maximum of 26 characters long.
- Field names can be added or edited using the keypads before unloading.



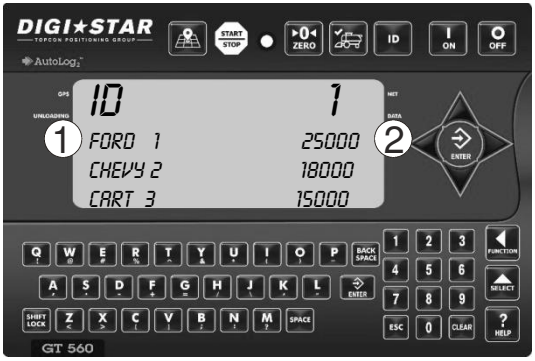

① Current field

② Current field name

1. Press  to modify or select field. Current field number is shown in first line of the display.
2. Three lines are displayed in lower display window. The top line of the three is current, editable and will be used for next data record.
3. Press ▲ or ▼ arrows to scroll through fields (150 maximum fields). Continue holding the arrow to scroll faster. Use ◀ or ▶ arrows to move cursor within data line.
4. Use keypad to enter or update field names. Press BACK SPACE to delete characters to left and press CLEAR to delete the selected character. Hold CLEAR for 2-3 seconds to delete entire line. Pressing ESC will reset line to last saved data.
5. To use special characters, press and release SHIFT LOCK. Then press key with desired special character. Repeat for each special character required.
6. Press ENTER or  to exit.

### 9.0.4 Overview of ID Screen

- Auto load preset (ALP—D.A.N. 6302) must be enabled (ON).
- ID names can be uploaded from a PC using a USB drive with Harvest Tracker PC Software.
- ID names and capacities are maximum of 6 characters long.
- ID names can change by using the keypad before unloading.
- ID screen has two columns with ID on left and capacity on right of 3 line display.




① Truck or grain cart identification

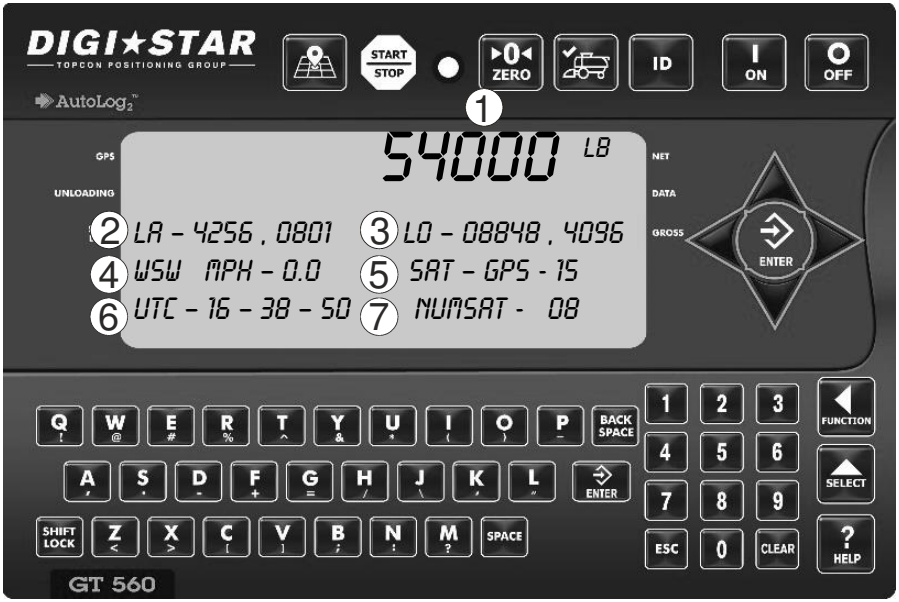
② Maximum load capacity of truck or cart

1. Press ID to modify or select ID name. Current ID number is shown in upper display.
2. The top line of the three lower lines is current, editable and will be used for the next data record.
3. Press ▲ or ▼ arrows to scroll through fields (150 maximum). Continue holding the arrow to scroll faster. Use ◀ or ▶ arrows to move cursor within data line.
4. Use keypad to enter or update ID names. Press BACK SPACE to delete characters to left and CLEAR to delete the selected character. Hold CLEAR to delete entire line. Pressing ESC will reset line to last saved name.




5. To use special characters press and release SHIFT LOCK. Then press key with desired special character. Repeat for each special character required.
6. The operator will see ID XXX while editing the ID and CAP XXX while editing the capacity. After editing the ID, press ENTER to move the cursor to capacity field to enter capacity data. The display will scroll to the next ID when pressing ▲ or ▼ arrows.
7. Press ENTER or ID to exit.

### 9.0.5 Overview of GPS Screen



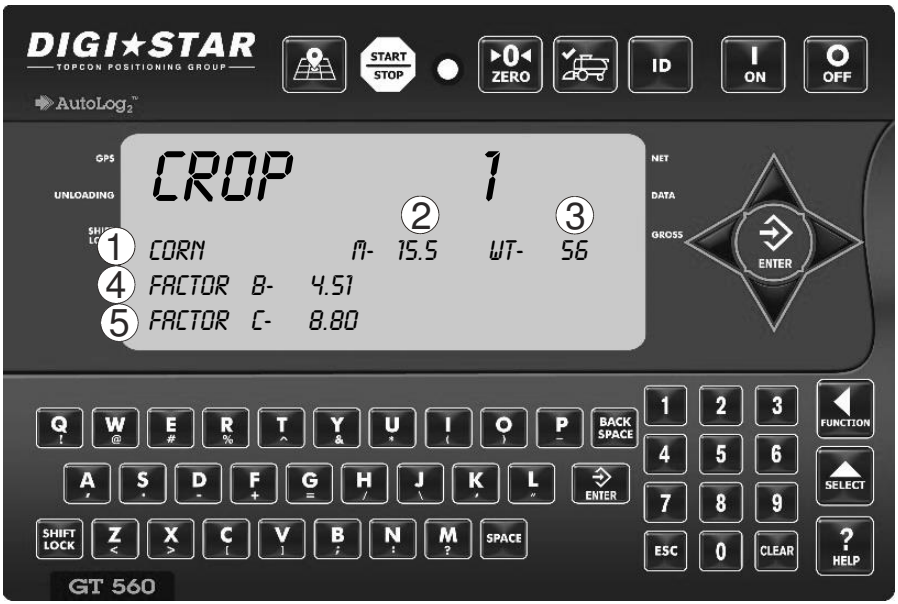

① Current gross weight
② Current latitude
③ Current longitude
④ Direction & MPH
⑤ GPS Fixed Quality of Signal
⑥ Coordinated Universal Time
⑦ Number of satellites

1. Press SELECT repeatedly until GPS is displayed.
2. Press FUNCTION
3. Press ESC to return to main display.

Note: This display shows current GPS coordinates, current weight, MPH, Satellite number and number of satellites found.

Note: After 10 seconds the display will return to the Active Screen.

### 9.0.6 Overview of Grain Moisture Screen




① Current grain

② Moisture percentage

③ Weight per bushel

④ No user significance

⑤ See information below

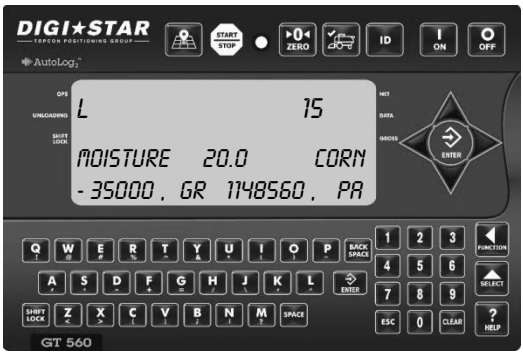
1. Press SELECT repeatedly until GRAIN is displayed.
2. Press FUNCTION
3. To edit the FACTOR C, press ENTER repeatedly until FACTOR C number is flashing.
4. Enter new number using keypad.
5. Press ENTER to store.

Note: For more instructions when editing FACTOR C, see page 28.

# 10.0 OVERVIEW,LOAD SCREEN, MOISTURE AND GPS DATA.




1. Press ESC to go to load screen.
2. Use ▲ and ▼ arrows to scroll through the different loads




3. When the load is chosen to view, press ▶ arrow.
   Use arrows to view moisture percentage, grain and weight data




4. Press ◀ arrow twice to view GPS coordinates data from load being viewed.

# 11.0 CALIBRATING GRAIN MOISTURE SETTINGS

The GT560 indictor can be calibrated to the reference moisture (example; Hand Held, Elevator, Combine) the customer chooses to compare too. Grain must be moving continually over the grain moisture sensor during unloading to achieve accurate average moisture data. Placing the grain moisture sensor in the grain cart where the most grain flow is during unloading is recommended.

Example: After unloading corn from grain cart, moisture reading on the GT560 reads: 26.5%. Take a sample from the unloaded corn and check the moisture using the customer's choice of reference grain moisture system (example; Hand Held, Elevator, Combine) to compare the GT560 reading. Reference is 25.5%. This is a difference of 1%. Calibrate the GT560 moisture reading by adjusting FACTOR C following the steps below.

**Examples of moisture changes;**

Moisture reading shown on the GT560: 26.5%.

Moisture reading from reference moisture: 25.5%.

Current Factor C is: 11.00.

Adjust Factor C too: 10.00, unload 2 or more loads from grain cart to verify moisture reading on GT560 with reference moisture used.

Moisture reading shown on the GT560: 20.0%.

Moisture reading from reference moisture: 21.5%.

Current Factor C is: 10.00

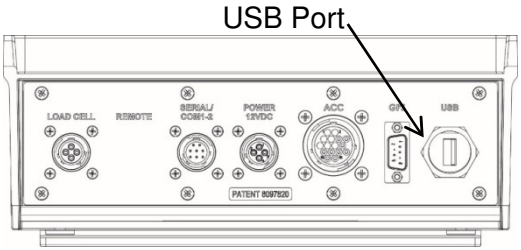
Adjust Factor C too: 11.50, unload 2 or more loads from grain cart to verify moisture reading on GT560 with reference moisture used.




1. Press SELECT repeatedly until the text GRAIN is displayed, then release key.
2. Press FUNCTION
3. Press ▽ and ▽ arrows to scroll through CROP names. Press ENTER once when desired crop name is listed.
4. (Example; CORN, WHEAT, SOY, RICE etc.)
5. Then press ENTER twice until FACTOR C number is flashing.
6. Using number keypad enter new number.
7. Press ENTER to store.

**Note: See Grain Moisture Sensor Installation document D4172-EN for more detailed information.**

## 12.0 OVERVIEW FOR DATA TRANSFER




The GT560 indicator is equipped with a USB drive port. The USB drive used with the indicator holds thousands of data records and allows for easy transfer to PC.

### 12.0.1 Transfer Field and ID data from USB to GT560 Indicator




1. Insert USB drive. Indicator will automatically detect the USB drive. USB IN will be display.
2. Using the number key pad, press 9 to transfer Field names and ID names from USB drive to GT560 indicator.
3. When data transfer is complete, the LCD display will return to the Data Transfer menu.

**Important:** This action will overwrite Field names, ID names and Accumulator on the GT560 indicator.

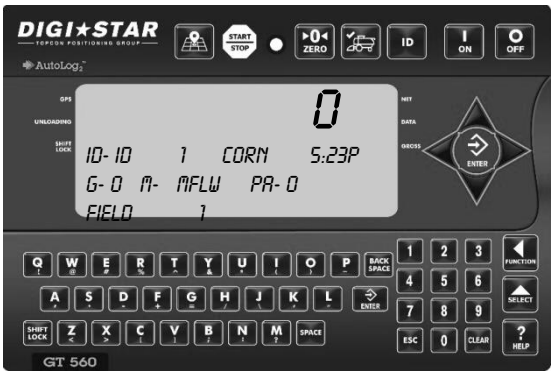
### 12.0.2 Transfer Records from GT560 indicator to USB Drive




1. Insert USB drive. GT560 will automatically detect the USB drive. USB IN will be display.
2. Press ENTER to save records from GT560 to USB drive.
3. Using number keypad, press 1 to transfer Field Names and ID names from GT560 to USB.
4. When data transfer is complete, the LCD display will return to the data transfer menu.

**Note:** This action appends values already on the USB drive. (Other saved data on the USB drive will not be over written.

# 13.0 OPERATION



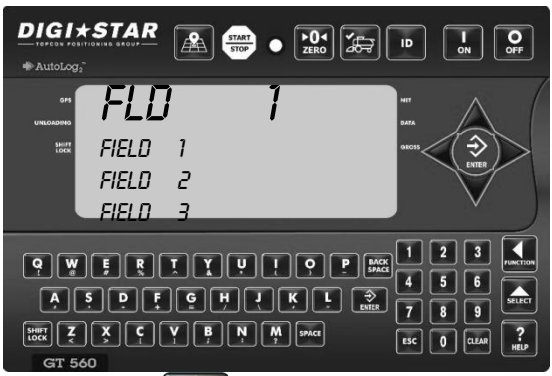

1. Press 

2. Press and hold 

for 2 seconds to zero balance the GT560 indicator if the container is empty. Active screen is displayed.

### 13.0.1 Record Data - Automatic Mode With AutoLog

**Note:** To operate GT560 with AutoLog the GT560 must be connected to a PTO or switch sensor. In addition, the GT560 AutoLog functionality must be turned on. Check that D.A.N. 6401 is set to RPM for PTO or SWITCH for door. Also, see manual **D3908** for sensor installation and page 35 and 84.




1. Press 
2. Press ▽ and ▽ to select required field name.
3. Press 

4. Press 

to select required ID.
5. Press ▽ and ▽ to select required ID name.
6. Press 

.

Note: Make sure the indicator has returned to active screen

7. If AutoLog is enabled, simply start the PTO or open the discharge door. The GT560 will read zero and enter the net mode.
8. Unload grain from cart. The upper display shows the amount unloaded. Gross value (total amount left on Cart) is displayed on second line of the lower display.
9. If AutoLog is enabled, simply stop the PTO or close the door. Data record will be stored and displayed.

**Note:** If AutoLog is not working correctly, see page 35 for set-up instructions.

**Note:** For information on how to use/ install the Sensor Installation as Proximity Switch on a grain or Forage container, see page 84.

### 13.0.2 Record Data - Manual Mode Without AutoLog or AutoLog$_2$

**Note:** If the equipment is not fitted with a PTO shaft speed sensor or a FSWITCH sensor, the GT560 indicator must be operated in manual mode.




1. Press  to select required field name.
2. Press  to select required ID.

   **Note:** Make sure the GT560 has returned to the active screen.

3. Press  before unloading grain from container. The GT560 indicator will read zero and enter the net mode.
4. Unload grain from grain container. The upper display shows the amount unloaded. Gross value (total amount left on container) is displayed on second line of lower display.
5. Press  once the unloading process is complete.

When the unloading process is complete:

- The data record is stored in memory of indicator.
- The data record screen will display the last data record for 10 seconds. Then the GT560 indicator will return to active screen.

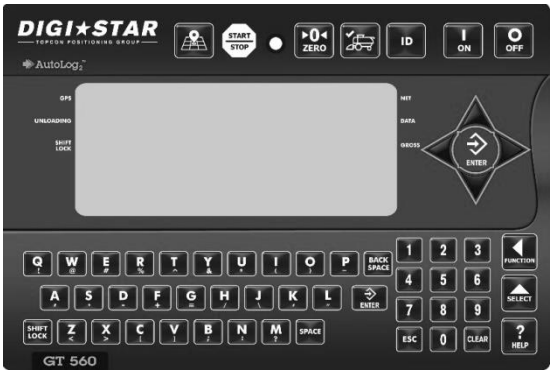
### 13.0.3 Record Data Preview




1. Press ESC to see last data record.
2. Press ▽ or ▽ arrows to scroll/view Data Records.

**Note:** After 10 seconds of no key pad activity, the GT560 indicator will return to the active screen.

### 13.0.4 GPS Coordinates Preview for Record Displayed




3. Press ◁ arrow to view GPS coordinates for selected record.

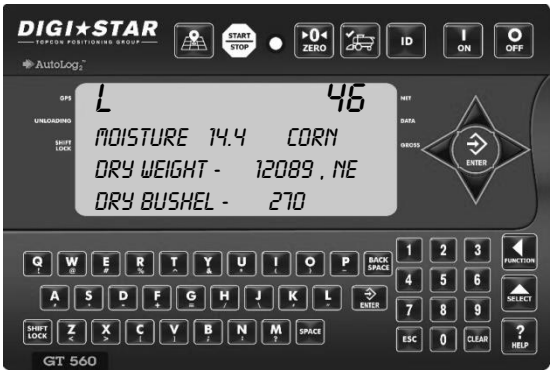
**Note:** After 10 seconds of no key pad activity, the GT560 indicator will return to the active screen.

### 13.0.5 Moisture Information Preview for Record Displayed




4. Press ▷ arrow to view Moisture value for selected record.
5. Press ESC to immediately return to the active

**Note:** After 10 seconds of no key pad activity, the GT560 indicator will return to the active screen.

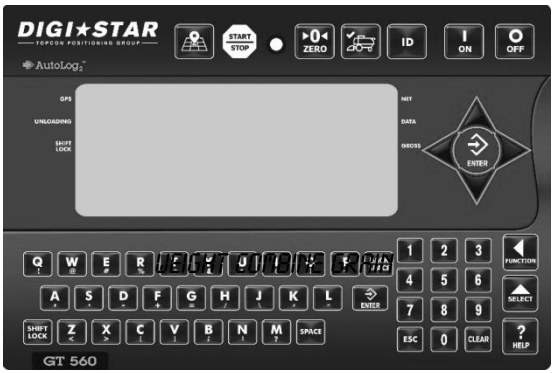



6. Press ▷ arrow to view Moisture value for selected record.
7. Press ESC to immediately return to the active screen.

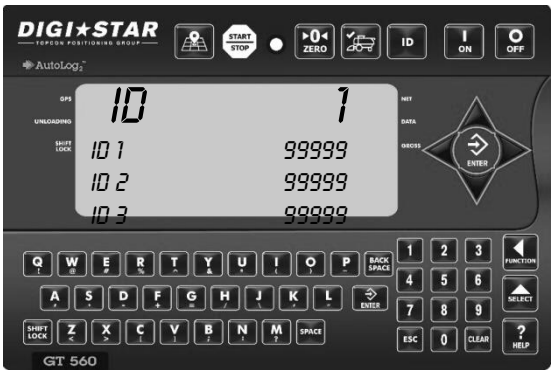
**Note:** After 10 seconds of no key pad activity, the GT560 indicator will return to the active screen.

### 13.0.6 Check Combine Yield Monitor

For best accuracy, park on a level surface when pressing START STOP.




1. Press
2. Bottom line displays WEIGH COMBINE GRAIN.




3. Press ID name.
4. Press START STOP and unload grain into container. Press START STOP again when unloading is complete to save data to GT560.

# 14.0 AUTOLOG$_2$

AutoLog$_2$ functionality is designed to provide assistance controlling the amount of grain unloaded from the grain cart or container. The operator can set weight targets to unload. The GT560 indicator will sound an alarm and/or activate a control signal to operate a switch or solenoid when the preset unload weight is met.

There are 3 methods available to control the targeted unloaded weight.

1. **Weight set per truck ID** – Each truck with a stored ID can have a preset weight. Useful when working with trucks of various capacities.
2. **Stored target weight** – When the same amount is unloaded each time. The stored weight repeats until changed. Useful when all trucks have the same capacity.
3. **Load by Load** - With each unloading event the GT560 will prompt the operator to enter the required weight to unload. Useful when flexibility is required.

Once set, preset control is activated by the AutoLog$_2$ functionality or by the 

button.

In addition AutoLog$_2$ provides additional functionality by allowing maximum capacities of individual trucks to be stored on the GT560 indicator as part of the ID functionality.

See page 37 for additional details for using the Preset Active Signal Functionality connected with setting the preset weight option below.

### 14.0.1 To Enable Autolog$_2$ And Options




(Enable--90019)

1. Enter 6302, then press SELECT.
2. Press SELECT again to change ALP setting other than OFF.
3. Press ENTER to store.

This setting allows preset weight values to be entered with the keypad, so that GT560 can control other functions based on a target weight. Turn this setting OFF for normal grain cart mode.

### 14.0.2 Enable Relay Function




1. Enter 4005
2. Press SELECT to change the RELAY function.

   PRESET:

   SETPNT: Select control for 12V DC alarm.
3. Press ENTER to store.

The RELAY function defines what function the GT560 performs when the preset weight is activated during the unloading process. This can be held at 12 VDC while the Preset is active (PREACT), or activate 12 VDC once the Preset weight is reached during unloading (PRNOPA).

### 14.0.3 Time To Continue Preset Active Signal




1. Enter 6303(Enable 90019).
2. Press SELECT.
3. Enter time for PAST settings, if needed.
4. Press ENTER to store.

The PAST setting is the time (0.0 to 99.9 seconds) for the RELAY function to timeout. If RELAY is set as PREACT and is held at 12 VDC output during the entire unload process, this setting extends the time at which the relay Remains at 12 VDC output. If RELAY is set as PRNOPA and activates 12 VDC output at the end of the unload cycle, this setting determines how long the output stays on after the target weight is reached.

### 14.0.4 Select Weight Or Percentage Method




1. Enter 4201.
2. Press SELECT.
3. Press SELECT to choose WEIGHT or PRECENT; WEIGHT is preferred choice for this application.
4. Press ENTER to store.
5. Next type in TOLER (Tolerance) value.
6. Press ENTER to store.

   This is normally the weight/percent value of grain still unloading; this is set to help prevent overfilling the truck. If the implement unloads by 1000 pounds too high each time, the TOLER value should be set to 1000.
7. Enter preset weight to be unloaded.
8. Press ENTER. If 5000 pounds is entered, this is the range at which the relay functions above will activate.

**Example Application 1:** Grain cart with GT560 AutoLog$_2$ system is to activate an external alarm or light to notify truck driver that cart is unloading. Truck is allowed to hold 40,000 pounds. Grain cart operator opens and closes doors, and wants to make sure an additional 30 seconds are allowed for cleanout before truck drives away.

(Preset Active (PRA) has to be enabled, Service/Options Setting: 90019). Set 6302 ALP to ON, press 

to store. Set 4005 RELAY to PRESET, press 

to store. Set 6303 PAST to 30.0 (seconds), press 

to store. Using key pad enter 40000, then press 

to store preset weight value. To install, Connect green DC Output wire to external alarm or light +12V, black to - /Ground.

**Operation:** Start PTO, GT560 automatically loads 40,000 pound preset, external alarm light flashes for truck driver. Open door to unload grain, then close door when near 40,000 pounds. Target weight is reached; 30 second delay time begins to give cart operator time to clean out the auger and turn off the PTO. After 30 seconds, external alarm light turns off, data is logged, and the truck drives away.

**Example Application 2:** Grain cart with GT560 AutoLog$_2$ system is to activate an alarm in tractor cab for 10 seconds to notify operator once 35,000 pounds is unloaded, so that the door can be closed. The operator has a history of overloading the truck by 5000 pounds each time.

Set 6302 ALP to ON. Set 4005 RELAY to PRNOPA. Set 6303 PAST to 10.0. Set 6003 to WEIGHT; TOLER to 5000. Press 35000 then 

to store preset weight. Connect green DC Output wire to alarm +12VDC, black to ground.

**Operation:**

- Start PTO, GT560 automatically loads 35,000 pound preset.
- Open door to unload grain. Target weight is reached 5000 pounds early, sounding alarm for operator to close the door. The preset is deactivated at 30,000 pounds to correct for overfill, and the data is logged when the PTO is stopped.

# 15.0 RE-CALIBRATING THE SCALE

To change set-up and calibration numbers see page 63.

To re-calibrate the scale and make it even more accurate, document at least 3 to 6 loads of varying sizes and measure the actual weight of all loads on a certified scale.

- It must be assured that each truck is not losing grain transit to a certified scale.
- Weigh the truck immediately before unloading and immediately after unloading to minimize errors due to changes in fuel etc.

In this example, six carts of grain are unloaded into four semi-trucks.

Example:

| | | | |
|---|---|---|---|
| Cart Load A | 51560 | | |
| Cart Load B | 33240 | Truckload #1 | 51920 |
| Cart Load C | 17620 | Truckload #2 | 51320 |
| Cart Load D | 50520 | Truckload #3 | 50720 |
| Cart Load E | 38200 | Truckload #4 | 51070 |
| Cart Load F | 12360 | **Total Certified Weight** | **205030** |
| **Total Indicator Weight** | **203400** | | |

### Reading Too High

If the GT560 indicator is reading higher than the certified scale weight, then the calibration number is high and should be decreased proportionally.

### Reading Too Low

If the GT560 indicator is reading lower than the certified scale weight, as shown in the example above, then the calibration number is low and should be increased proportionally.

### 15.0.1 View Current Calibration Number




1. Enter 8712
2. Press SELECT.

   The calibration (**CAL**) number will display. Example **CAL = 24280**.
3. Press ENTER.

**TOTAL CERTIFIED WEIGHT / TOTAL INDICATOR WEIGHT X CURRENT CAL NUMBER=NEW CAL NUMBER**

Using the previous example your results would be: **205030 / 203400 X 24280 = 24475**

### 15.0.2 Enter New Calibration Number




1. Enter 8712
2. Press SELECT.
3. Existing calibration number will display.
4. Enter new number using keypad.
5. Press ENTER to store.

For best results, unload on level ground. Make sure no grain is lost in trucking the grain to a certified scale.

### 15.0.3 Changing/Viewing Setup Number




1. Enter 8711
2. Press SELECT.

   Current setup number will be displayed.
3. Enter new setup number using keypad.
4. Press ENTER to store.

# 16.0 DAILY DATA COLLECTION

Insuring data is secure from theft, fire or equipment failure, requires a small effort each day to store data on a USB drive.

### Mid-Season Name Changes

During the season, you may wish to delete and add field names or ID names to the GT560 indicator memory. This may be done in one of two ways;

Front Panel:

For a small number of changes, edit field names and ID names using the keypad on the front panel. See page 22 to edit field names and ID names. See page 43 to erase accumulator memory.

Upload New Field Names, ID Names and Accumulator Using USB Drive:

For a large number of changes, perform the changes on your PC using Harvest Tracker software and then transfer the new information to the GT560 indicator using a USB drive.

NOTE: Before making any changes to field entries always transfer your existing field accumulator data from the GT560 indicator to the USB drive and onto your PC. This keeps the proper accumulator values on partially finished fields.

### 16.0.1 To Store Data Records On A USB Drive




1. Insert a USB drive into the USB port located on the bottom of the GT560 indicator. Wait for the GT560 to acknowledge the USB drive. USB IN will be displayed.
2. Press ENTER to transfer the data record onto the USB drive.
3. Press 1 to transfer the field and ID names onto the USB drive.
4. Press ESC
5. Remove the USB drive from the USB port.

**NOTE:** All of the load records stored in the GT560 indicator are appended to the data in the USB drive each time you save records to the USB drive. **No data is ever lost.**

**USB Port Function**—the USB port is only to be used to upload or download data from a USB Memory Stick. The USB Port is not to be used as a charging port for any type of electronic device. Use of the USB Port for any purpose other than for which it is designed may void the product's warranty.

Clear the GT560 indicator memory before starting a season. Before starting the harvest each year, delete previous year's data records and accumulators. This is also a good time to add new field names and ID names to be stored.

**Important: Before erasing the data records, be sure that the data records have been safely stored.**

### 16.0.2 Erase Data Records From GT560 Indicator

Important: This action will erase all data records.




1. Enter 8211
2. Press SELECT
3. Press SELECT again to choose NO or YES.
4. Press ENTER to erase all records if YES was selected.

### 16.0.3 Zero Accumulator Memory




1. Press SELECT until ACCUM is displayed.
2. Press FUNCTION

   Press ZERO to erase field 1 ACCUM.

   Press to erase all.

   Press ESC to Exit.
3. Press ON to return to main screen

PRESS ZERO TO ERASE FLD 1 ACCUM PRESS FIELD TO ERASE ALL – ESC TO EXIT

**Note:** This operation only erases the accumulator Data, Field Names. ID names and data records are not affected.

# 17.0 OTHER FUNCTIONS

## 17.0.1 Backlight Dimmer




1. Press SELECT until DIMMER is displayed.
2. Press FUNCTION (Within 2 seconds) once to dim backlight on the LCD. <u>Repeat steps 1 and 2 to brighten LCD back light.</u>

## 17.0.2 Unload Alarm




The unload alarm beeper can be set to:

Off – no sound.
1 – 10: Duration of sound (seconds).

To change unload alarm with active screen:

1. Enter 4004
2. Press SELECT
3. Press SELECT until desired setting is shown.
4. Press ENTER to store setting and return to active Screen.

### 17.0.3 Change Time




1. Enter 1202
2. Press SELECT
3. Press ◀ or ▶ arrow to move cursor, and choose digit to edit.

   **Note:** Press and hold CLEAR to clear all digits. HH/MM/SS
4. Press ▼ or ▼ arrow to edit time.
5. Press ENTER to store.
6. Press SELECT to choose time format; AM/PM or 24 HOUR
7. Press ENTER to store.

### 17.0.4 Change Date




1. Enter 1204
2. Press SELECT
3. Press ◀ or ▶ arrow to move cursor, and choose digit to edit.

   **Note:** Press and hold CLEAR to clear time.

   Date format **ddmmyy**.
4. Press ▲ or ▼ arrow to change number.
5. Press ENTER to store.

### 17.0.5 Edit Sign On Message




1. Enter 8002
2. Press SELECT

   Sign on message can be enter in three sections using letter keypad. 6 characters per section can be entered. (Example; JIMS GRAIN FARM). Up to 7 six character section are available.

3. Press ENTER to store after each section

Note: When GT560 is powered cycled, this message will scroll across display.

# 18.0 DIRECT ACCESS NUMBERS (D.A.N.)

### 18.0.1 Options Changed By User.

1. Use key pad to enter D.A.N. (direct access number) listed below.
2. Press 

3. Press 

to select options for each setting/display.
4. Press 

to store setting.

| SETTING [*DISPLAY*] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| MENU 1 – GENERAL SETTINGS | | | |
| LANGUAGE (*LANGAG*) | 1001 | English (***ENGLSH***)<br>Portuguese (*PORT*)<br>Spanish (*ESPAN*)<br>Danish (*DANSK*)<br>Hungarian(*MAGYAR*)<br>Spanish (*VESTA*)<br>Dutch (*NEDERL*)<br>French (*FRANCS*)<br>German (*DEUTSH*)<br>Italian (*ITAL*) | Select language to be displayed. |
| DISPLAY RATE (*DRATE*) | 1002 | 1,2,**3**,4,6,7,8,9,10 | Update display times per second. |
| SCALE ID SETUP (*SCALID*) | 1003 | **560WFI** | Identity of scale location (truck id or Mixer number). |
| ZERO TRACK (*ZTRACK*) | 1004 | ON/**OFF** | If ON -zero track adjust balance for buildup of snow & mud. |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| WEIGH METHOD (W MTHD) | 1005 | **1=General**<br>2=Fast<br>3=Slow | Select weigh method. The speed the weight changes as shown on the LCD. |
| 1 PRESS ZERO (1 ZERO) | 1006 | **ON**/OFF | If ON -press and hold Zero key to Zero/Balance scale. |
| AUTO OFF (AUTOFF) | 1007 | **OFF**, 15, 30, 45, 60 | Indicator turns off after selected minutes of stable weight. |
| DISPLAY UNIT (LB-KG) | 1008 | **LB**/KG | Display pounds – LB or Kilograms - KG |
| SCROLL DELAY (SCROLL) | 1101 | 0,1,2,3,**4,** 5, 6, 7, 8, 9 | Scroll rate for cold temperatures<br>0=normal 9=slowest |
| SAVE TARE (SAVTAR) | 1102 | ON/**OFF** | Saves tare weight to non-volatile memory. |
| PRELOAD TARE (PRETAR) | 1103 | ON/**OFF** | Tare weights can be entered using the numeric keypad. |
| TIME FORMAT (TIME F) | 1201 | 24 HR<br>**AM/PM** | Select time format - AM/PM or 24 hours |
| TIME (TIME) | 1202 | HH:MM:SS, AM/PM | Enter changes HH:MM:SS (use numeric keypad) use function key to change between HH:MM:SS then choose AM/PM. |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| DATE FORMAT (DATE F) | 1203 | 1-mm-dd<br>2-mm/dd/yy<br>3-mm/dd/yyyy<br>4-dd-mm<br>5-dd/mm/yy<br>6-dd/mm/yyyy<br>**7-ddmmyy**<br>8-ddmmyyyy | Select date format |
| DATE (DATE) | 1204 | Enter ddmmyy | Select key changes date or numerical keys -function key chooses DD/MM/YY. |
| DATE CHECK (DT CHK) | 1205 | **ON**/OFF | Verifies the real time clock has a valid date at power up. |
| REMOTE INPUT 1 (RMINP1) | 1401 | **MIXCTR, ,** ST STP FSWITCH OFF, PRESET, SWITCH, PRINT, HOLD, M+, ZERO | Sets function of remote input line on the power cord. |
| REMOTE 1 SWITCH STATE (R1STAT) | 1403 | OPEN/**CLOSED** | Set remote input line state that displays message and/or illuminates alarm lamp. **D.A.N. 1401 set to "switch".** |
| REMOTE 1 SWITCH MESSAGE TIME (R1TIME) | 1404 | 1...**2**-9 | Set how often the remote switch message is displayed. Once every 1-9 seconds. **D.A.N. 1401 set to "switch".** |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| REMOTE INPUT 2 (RMINP2) | 1411 | TARE, PRINT, HOLD, NETGRS, M+, ZERO, TR HLD, **OFF**, PRESET, SWITCH | Sets function of remote input line on the remote port. |
| REMOTE 2 SWITCH MESSAGE (R2MSG) | 1412 | **OPEN**,--,+,*,0, 1,2,3, 4,5,6,7,8,9,A,B,C,D,E ,F,G,H,I,J,K,L, M,N,O,P,Q,R,S,T,U,-V,-W,-X,-Y,-Z | Message that is displayed for remote input condition. **D.A.N. 1411 set to "switch".** |
| REMOTE 2 SWITCH STATE (R2STAT) | 1413 | OPEN/**CLOSED** | Set remote input line state that displays message and/or illuminates alarm lamp. **D.A.N. 1411 set to "switch".** |
| REMOTE 2 SWITCH MESSAGE TIME (R2TIME) | 1414 | 0...**2**-9 | Set how often the remote switch message is displayed. Once every 1-9 seconds. **D.A.N. 1411 set to "switch"** |
| PROGRAM ID (PRG ID) | 1998 | Example: 15FE16 | Displays current software version |
| ESTIMATED WEIGHT (EST WT) | 1999 | Enter weight value using key pad. Then press enter, then "ON" to continue. | Manually adjust Gross weight of scale by changing zero/balance. Press "on" to continue. |
| MENU 2 – COMMUNICATIONS FEATURES | | | |
| REMOTE (REMOTE) | 2001 | **MLTLNE**, OFF, ON | If ON indicator communicates with Cab Control Display |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| SCALE NUMBER (SCL NO) | 2002 | **1**,2,3,4,5,6,7,8,9,10,11,12, 13,14,15,16,17,18,19,20, 21,22,23,24 | Select scale number for cab control communication |
| EXTERNAL RADIO (EXTRAD) | 2003 | **ON**/OFF | Enables external radio to be connected to the J905 port. |
| DDL ATTACHED (DDL) | 2004 | YES/**NO** | Enables connection of a DDL (Data Down-Loader) |
| SCORE BOARD MODE (SCOREM) | 2101 | **0**,1,2,3,4,5,6,7,8,11,12,15,27,37,38,39 | Select scoreboard output |
| ZERO OUTPUT (ZEROUT) | 2102 | Weight displayed= Then press ZERO key and hold for three seconds. | Allows zero/balance for SCOREM #11 serial gross weight. |
| FRONT PANEL ZEROUT (ZEROFP) | 2103 | **OFF**/ON | Allows use of the zero key to zero/balance the serial gross weight. |
| OPERATION STATUS (OPSTAT) | 2111 | **0**, 2 | Select operating data to be sent to a Remote Terminal |
| COM 1 BAUD RATE (C1 BD) | 2201 | 1200,2400, 4800, **9600**, 14400, 19200, 38400, 57600, 115200 | Sets baud rate for com port #1 |
| COM 1 PARITY (C1 PA) | 2202 | NONE, ODD, **EVEN** | Sets parity for com port #1 |

| SETTING [*DISPLAY*] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| COM 1 DATA BITS *(C1DATA)* | 2203 | **7** , 8 | Sets data bits for com port #1 |
| COM 1 DELAY *(C1 DLY)* | 2204 | **0**, .10, .25, .50, .75, 1-5 | Selects seconds to delay before advancing to next line. |
| COM 2 BAUD RATE *(C2 BD)* | 2211 | 1200,2400, 4800, **9600**, 14400, 19200, 38400, 57600, 115200 | Sets baud rate for com port #2 |
| COM 2 PARITY *(C2 PA)* | 2212 | **NONE**, ODD, EVEN | Sets parity for com port #2 |
| COM 2 DATA BITS *(C2DATA)* | 2213 | 7 , **8** | Sets data bits for com port #2 |
| COM 2 DELAY *(C2 DLY)* | 2214 | **0**, .10, .25, .50, .75, 1-5 | Selects seconds to delay before advancing to next line. |
| TARE AUTO PRINT (*TAREAP*) | 2301 | ON/**OFF** | If ON -tare auto-prints displayed weight. |
| ONE LINE PRINT (*1L PRT*) | 2302 | ON/**OFF** | If ON -indicator data prints on one line. |
| AUTO PRINT (*APRINT*) | 2303 | ON/**OFF** | If ON -pressing keys auto-prints weight values. |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| PRINT FORMAT (PRTFMT) | 2304 | PRTAC1, PRTAC2, PRTAC3, PRTAC4, **PRTAC5**, PRTAC6, 10K TA, GT560A, RECINF, AUTO, WTONLY, DOWLD, DT + TM, ID + TM, IDWTTM, BATCH1,PRWTRC, WTRCTM, 3200-A, 3200-B, SCL ABC | Select alternate & comma (CSV) formats. |
| PRINT ACCUMULATION (PRTACC) | 2305 | **0** | Shows a running total of weights printed. |
| REMOTE DISPLAY (RMDISP) | 2401 | **EZ2,** EZ3MUX, COG,NONE | Select type of remote display |
| REMOTE TERMINAL (RMTERM) | 2402 | ON/**OFF** | Sends display data to serial remote terminal interface |
| BAR GRAPH MODE (BARGRP) | 2411 | OFF, **RIGHT**, LEFT, MIDOUT, MID IN | Selects output for a bar graph display when used with an RD4000 Remote Display |
| WEIGHT GRAPH (WTGRPH) | 2412 | **ON**/OFF | Enables graph to be used with weight when used with a RD4000 Remote Display. |
| BAR WEIGHT (BAR WT) | 2413 | **12000** | Enter the full scale gross weight for the bar graph display. |
| PRESET GRAPH (PRGRPH) | 2414 | **ON**/OFF | Enables graph use with presets when used with an RD4000 Remote Display. |

| SETTING [*DISPLAY*] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| TIMER GRAPH (*TMGRPH*) | 2415 | **ON**/OFF | Enables graph use with timers when used with an RD4000 remote display. |
| MENU 3 - MOTION & WEIGHT | | | |
| DISPLAY COUNT (*COUNT*) | 3001 | .01,.02,.05,.1,.2,.5,1, 2,5,10,20, 50,**100** | Select display count size of weigh values. |
| CAPACITY (*CAP*) | 3002 | **120,000** | Enter MAXIMUM weight measurable on scale. |
| WM1 ADJUST 1 (*WMA1-1*) | 3003 | **10** | Increase this number to smoothing weighing |
| WM1 ADJUST 2 (*WMA1-2*) | 3004 | 4 | 0=off. Use value less than WMA1-1 for quick response weight. |
| WM1 ADJUST 3 (*WMA1-3*) | 3005 | **4000** | Enter the weight to active quick response weight<br>Default-10% of scale capacity |
| WM2 ADJUST 1 (*WMA2-1*) | 3006 | **30,** value must be less than 100 and more than 2. | Increase this number to smooth out weighing |
| WM2 ADJUST 2 (*WMA2-2*) | 3007 | **10,** value must be less than 100 and more than 0. | 10=off. Use value less than WMA2-1 for quick response weight. |
| WM2 ADJUST 3 (*WMA2-3*) | 3008 | **4000** | Enter the weight to active quick response weight<br>Default-10% of scale capacity |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| MOTION (MOTION) | 3101 | ON/**OFF** | ON = Motion arrow flashes with unstable weight. Prevents: Print, Zero, Tare, Advance |
| MOTION WEIGHT (MOT WT) | 3102 | **0** | Enter weight used to detect motion. 0=Standard detection |
| MENU 4 - PRESET, ALARM, and TIMER | | | |
| PRE ALARM METHOD (P MTHD) | 4001 | **WEIGHT,** PERCENT | Select weight or percentage method for pre-alarm |
| PRE-ALARM (P-ALM) | 4002 | **100** | Enter a value to activate an early warning that indicator is reaching the preset. |
| ALARM OUTPUT (AL OUT) | 4003 | OFF, **PRESET**, TR | Select preset or TR to control relay, horn & lamp. |
| BUZZER (BUZZER) | 4004 | OFF, ON, **1**-10 | ALARM BUZZER - allows user to turn off alarm horn when loading/unloading |
| RELAY (RELAY) | 4005 | OFF, **PRESET**, SETPNT,SSPRAST | Selects the behavior of the +12VDC alarm output |
| PRESET DELAY (PRTDLY) | 4006 | **0, MANUAL** | Set time to automatically advance/print entered preset |
| GROSS SET PNT OUTPUT [SETOUT] | 4101 | **OVER**/UNDER | Select when the +12VDC Alarm Output becomes active. |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| GROSS SET POINT CHNG (SETCHG) | 4102 | **500** | Set required weight change to turn off +12VDC Alarm Output. |
| GROSS SET POINT DELAY (SETDEL) | 4103 | **0** | Set time delay before the +12VDC Alarm Output can Turn On/Off. |
| GROSS SET POINT (SETPNT) | 4104 | **5000** | Set a gross weight in long form that will activate +12VDC Alarm Output on Power cord. |
| SET POINT COUNT (SETCTR) | 4105 | **0** | Counts how many times set point is activated. |
| SET POINT WEIGHT SOURCE (STWTSC) | 4106 | SERIAL/**NORMAL** | Sets weight source for use with set point feature. |
| TOLERANCE METHOD (T MTHD) | 4201 | **WEIGHT,** PERCENT | Select weight or percentage method for preset tolerance |
| TOLERANCE (TOLER) | 4202 | **0** | Select tolerance weight percentage to accept preset. |
| TOLERANCE OVERLOCK (OVERLK) | 4203 | **OFF**/ON | Prevents auto-advancing if preset exceeds tolerance |
| DRIVE RATIO (DRATIO) | 4302 | **1.00** | Enter the number of input pulses that equal 1 mixer revolution. REVCTR needs to be enabled in the setup options. **D.A.N. 4301 set to COUNTER.** |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| MENU 5 - COM PORT SETU MENU | | | |
| REMOTE DISPLAY PORT (RMDPRT) | 5001 | OFF, COM1, **COM2**, COM3, COM4 | Sets serial remote display output |
| RADIO PORT (RADPRT) | 5002 | OFF, COM1, COM2, **COM3,** COM4 | Sets internal radio port |
| EXTERNAL RADIO PORT (EXRPRT) | 5003 | OFF, COM1, **COM2**, COM3, COM4 | Sets external radio port |
| PRINTER PORT (PRPORT) | 5005 | OFF, **COM1**, COM2, COM3, COM4 | Sets printer port |
| SCORE BOARD PORT (SCPORT) | 5006 | OFF, **COM1**, COM2, COM3, COM4 | Sets scoreboard port |
| OPSTAT PORT (OPSTAT) | 5007 | OFF, **COM1**, COM2, COM3, COM4 | Sets op-stat port |
| DDL PORT (DDLPRT) | 5009 | OFF, COM1, **COM2**, COM3, COM4 | Sets DDL port |
| 20MA MIRROR PORT (20MAMR) | 5011 | OFF, **COM1**, COM2, COM3, COM4 | Sets port for 20MA signal to mirror |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| DEBUG PORT (DBGPRT) | 5999 | **OFF**, COM1, COM2, COM3, COM4 | Sets debugger port |
| MENU 6.3 - AUTOLOG –PRESET ACTIVE SIGNAL | | | |
| UNLOAD WEIGHT DISPLAY (UNWEDI) | 6301 | **NET**, LOAD, GROSS | NET= weight from zero, LOAD= weight from preset, GROSS= total weight (90019—Enabled) |
| AUTO LOAD PRESET (ALP) | 6302 | **OFF**, STORED, TRUCK, PARTCP | Load stored preset weight when load/unload begins. (90019—Enabled) |
| PRESET ACTIVE SIG. TIMEOUT (PAST) | 6303 | ADD NUMBER OF SECONDS | Time in seconds between 1.0 – 99.9 to timeout the preset signal. (90019—Enabled) |
| UNLOAD ALARM (U ALRM) | 6304 | **OFF**, 1, 2, 3, 4, 5 | Select OFF or time to sound buzzer in seconds. (90019—Enabled) |
| UNLOAD ALARM (U ALRM) | 6304 | **OFF**, 1, 2, 3, 4, 5 | Select OFF or time to sound buzzer in seconds. (90019—Enabled) |
| OUTPUT TOLERANCE METHOD (OTMTHD) | 6305 | **WEIGHT**, PERCNT | Select tolerance method weight or percentage. (90019—Enabled) |
| OUTPUT TOLERANCE (OTOLER) | 6306 | ENTER VALUE | Enter value greater than zero to use tolerance. (90019—Enabled) |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| MENU 6.4 - AUTOLOG | | | |
| RPM START/STOP CONTROL (RSSCTL) | 6401 | **RPM**, SWITCH, MANUAL | ON enables AUTOLOG feature (RPM automatic start/stop control feature) |
| RPM STOP SPEED (RSSNIN) | 6402 | **300** | Set to 20-50% of PTO operating PRMs. Stop is activated using this value. |
| RPM START TOL SPEED (RSSTOL) | 6403 | **100** | Set to 10% of PTO operating RPMs. Start is activated using this value + D.A.N. 6402. |
| RPM START DELAY (RSSPDY) | 6404 | **2.0** | Start activated when RPMs above D.A.N. 6402 + D.A.N. 6403 for this time in seconds. |
| RPM STOP DELAY (RSSPDY) | 6405 | **2.0** | Stop activated when RPMs below D.A.N. 6402 for this time is seconds. |
| RMT CC STRAT STOP ENABLE (RMCEN) | 6406 | **ON,** OFF | If ON – Enables Cab Control start/stop control. |
| GPS TRIGGER TOLERANCE (GPSTOL) | 6408 | **1000** | Enter weight change that will trigger GPS recording. |

| SETTING [*DISPLAY*] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| GPS STARTUP ENABLE (*GPSHOW*) | 6409 | **SHOW**, HIDE | Enables GPS Satellite screen upon startup. |
| FEEDBOX STRT/STP POLARITY (*FSPOL*) | 6411 | **CLOSE**, OPEN | Select Open or Close to activate automatic Start/Stop. |
| MENU 6.8- MOISTURE | | | |
| MOISTURE WEIGHT TOLER (*MWTHRD*) | 6801 | **300** | Enter unloaded weight to indicate flow over sensor. |
| SHOW CURRENT MOISTURE (*SHOWMT*) | 6802 | Example; 14.44 | Displays current moisture value. |
| SHOW MOISTURE TEMP. (*SHOTMP*) | 6803 | Example; 70.00 | Display current temperature in Fahrenheit. |
| SHOW BUSHEL WEIGHT (*BUSHOW*) | 6804 | **OFF, ON** | Shows bushel weight on active screen. |
| CLEAR VOLTAGE MEMORY (*CLRMV*) | 6894 | **NO**, YES | Clears all moisture voltage data. |
| MOISTURE VOLT. RECORDS (*MVNREC*) | 6896 | **NO**, YES | Displays the number of voltage records in memory. |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| SAVE MOISTURE VOLT. REC. (SAVMOV) | 6897 | **NO**, YES | Save moisture voltage records to USB. |
| SAVE ALL MOIST. RECORDS (MODUMP) | 6898 | **NO**, YES | Saves all moisture data to USB. |
| MOISTURE DEBUG (MOEBUG) | 6899 | **OFF**, ON | If ON – output debug messages through serial port. |
| CLEAR VOLTAGE MEMORY (CLRMOV) | 6894 | **NO**, YES | Clears all moisture voltage data. |
| MOISTURE VOLT. RECORDS (MVNREC) | 6896 | **NO**, YES | Displays the number of voltage records in memory. |
| SAVE MOISTURE VOLT. REC. (SAVMOV) | 6897 | **NO**, YES | Save moisture voltage records to USB. |
| SAVE ALL MOIST. RECORDS (MODUMP) | 6898 | **NO**, YES | Saves all moisture data to USB. |
| MOISTURE DEBUG (MOEBUG) | 6899 | **OFF**, ON | If ON – output debug messages through serial port. |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS[displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| | | SETUP FEATURES | |
| SIGNON SETTING (SIGNON) | 8001 | **OFF**,ON | Enables continuous display of sign-on message |
| SIGNON MESSAGE (SIGMSG) | 8002 | SIGMSG 1,2,3 | Enables editing of the sign-on message |
| MAINTEN MESSAGE (MANTMG) | 8011 | MANTMG 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 | Enables editing of the maintenance message |
| MAINTEN MESS. TIME (MANTTM) | 8012 | **200**, Time is entered using key pad. | Time for maintenance message to be triggered. |
| DEAD WEIGHT CAL (WT CAL) | 8121 | Follow instructions shown on LCD | Calibration method using weights |
| TEMP CALIB (T CALB) | 8123 | OFF/**ON** | On=Scale adjusts for temperature changes |
| INDICATOR SETUP INFO (DS>SER) | 8299 | **DS>SER** | Downloads all setup information to the serial port |
| KEYTEST | 8888 | | Enables front panel key test |

| SETTING [DISPLAY] | D.A.N NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| SETUP & CALIBRATIION | | | |
| SETUP NUMBER (SETUP) | 8711 | **146040** | Quick entry method selects weigh method 1-4lbs, 5-8 kg, gain 1-9, display counts 1-9 and capacity *1000 |
| Calibration Number (CAL) | 8712 | **32640** | Weight displayed at 0.4mV/V |
| **Entering the service menu is required to use the 9000 series numbers. Contact service department for assistance.** | | | |
| RS232 OPTION ENABLE (RS-232) | 90003 | **RS OFF,** RS-232 | Enables/disable serial port |
| HOLD OPTION ENABLED (HOLD) | 90007 | **HOLD,** HLDOFF | Enables the HOLD key functionality |
| MEMORY OPTION ENABLED (MEMORY) | 90008 | **MEMERY,** MEMOFF | Enables/disables the M+, RM, CM options in the SELECT/FUNCTION key menu. |
| TIMER OPTION ENABLED (TIMER) | 90011 | **TMR MX,** TMROFF | Allows countdown timer to be set using the TIMER key. |
| INTERNAL RADIO ENABLED (RADIO) | 90012 | **RA OFF,** RADIO | Enables/disable radio—requires radio hardware |

| SETTING [DISPLAY] | D.A.N. NO. | OPTIONS [displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| ROTATION COUNTER (REVCTR) | 90016 | **REVCTR**, REVOFF | Enables/disable rotation counter |
| GPS ENABLED (GPS) | 90017 | **ENABLES**/DISABLES | GPS |
| GRAIN MOISTURE SENSOR ENABLE (MOISTR) | 90018 | **ENABLES**/DISABLES | Moisture Functionality |
| PRESET ACTIVE SIGNAL (PRACTV) | 90019 | **ENABLES**/DISABLES | Preset active signal functionality |
| NUMBER KEYPAD ENABLED (NUMKEY) | 90051 | **NUMKEY,** NUMOFF | If ON—Enables front panel number pad. |
| MODEL IDENTIFICATION (MODELID) | 90201 | **3610** | Allow entry of specific model ID to be display at power up. |
| CLEAR PEAK WEIGHT (CLRPKW) | 90302 | **NO** / YES | If ON—Allows clearing of stored Peak weights |
| CLEAR ROTATION COUNTER (CLRREV) | 90303 | **NO** / YES | Allow clearing of stored rotation counts |
| CLEAR HOUR METER (CLRHRS) | 90304 | **NO** / YES | Allows clearing of hour meter |

| SETTING [DISPLAY] | D.A.N. NO. | OPTIONS[displayed] **BOLD**=DEFAULT | DESCRIPTION |
|---|---|---|---|
| REINITIAZE (REINIT) | 99999 | **NO** / **YES** | Reset indicator to factory default settings. 3 |
| GAIN CALIBRATE (GN CAL) | 100001 | **Starts Calibration Timer** | Enters gain calibration |

# 19.0 PRESET ACTIVE SIGNAL FUNCTIONALITY

Detailed below are different 12 VDC outputs available with the GT560.

**D.A.N. 4005 Settings:**

- OFF – No 12VDC output will be activated.

- SETPNT – Set Point
  - Uses the weight threshold to activate and deactivate the 12VDC output.
- PRESET – Standard preset relay, lamp, and alarm functionality.
  - Uses the preset to determine the pulses of the light, buzzer, and 12VDC output.
- SEEDTD – Seed Tender
  - During unloading the 12VDC output is activated and once the preset is reached the light, buzzer, and the signal deactivates. The light and buzzer also pulse when the pre-alarm is active.
- PRNOPA – Preset No Pre Alarm
  - Uses the preset and pre alarm for the light and buzzer, but the 12VDC output is only activated by the preset being reached.
- SSPRST – Start/Stop Preset
  - Uses an entered or stored preset to activate the relay and also has the added functionally of (PAST-D.A.N. 6303)
- PREACT – Preset Active Signal
  - During unloading the 12VDC output is active before the preset weight is reached and the output deactivates when the preset is reached. The light and buzzer are linked to the pre-alarm and active until unloading is complete.

**D.A.N. 4101 Settings:**

This setting sets the state of the 12VDC output when PRESET, SEEDTD, PRNOPA, SSPRST or PREACT is selected in the D.A.N 4005 menu. The SIG 12V setting will configure the indicator to activate the 12VDC output when a preset weight is reached. The normal state of the signal will be 0V. The SIG 0V setting will maintain a 12VDC output when the preset is not active and will switch to 0V when the preset is active. The default mode is SIG 12V.

**D.A.N. 6303 Settings:**

This setting determines the behavior of the 12VDC output when D.A.N 4005 is set to PRESET, SEEDTD, PRNOPA, SSPRST or PREACT. When a time between 0.1 to 99.9 seconds is entered, and D.A.N 4005 is set to PRESET the indicator will activate the 12VDC output when the preset is reached, delay for the specified time, and set the output to 0VDC after the delay period. When this is set to zero the 12VDC output will activate when the preset is reached and stay active until the preset is cleared. The preset is cleared when unloading stops. The default time is zero.

When unloading is stopped through the Start/Stop button or through AutoLog$_2$ the 12VDC output deactivates.

**D.A.N. 6003 Settings:**

This setting allows the 12VDC output to activate before the preset is reached. It can be utilized in any D.A.N 4005 mode, other than OFF. The TOLER setting allows the operator to tune in the preset signal based on the intended equipment. The TOLER can be set to WEIGHT or PERCNT. This setting creates a window, based around the preset weight, and will activate the 12VDC output, according to the selected D.A.N 4005 configuration, when the measured weight is within that window.

**D.A.N 6301 Settings:**

This setting is used to change the normal view of the weight during the unloading process. There are three modes, NET, GROSS, and LOAD. Default mode is NET.

NET is the normal grain cart unloading method where the indicator counts down from zero and displays negative weight throughout the unloading.

GROSS allows the display of the actual or gross weight of the indicator and counts down from the total loaded weight.

LOAD displays the active preset weight and counts down from that value. If more than the prescribed preset is unloaded, the display will begin to count down from zero and show a negative number.

**D.A.N 6302 Settings**:

Determines if the preset is loaded when unloading begins, default is OFF. Every unloading cycle will use the loaded preset.

- OFF – No preset active.

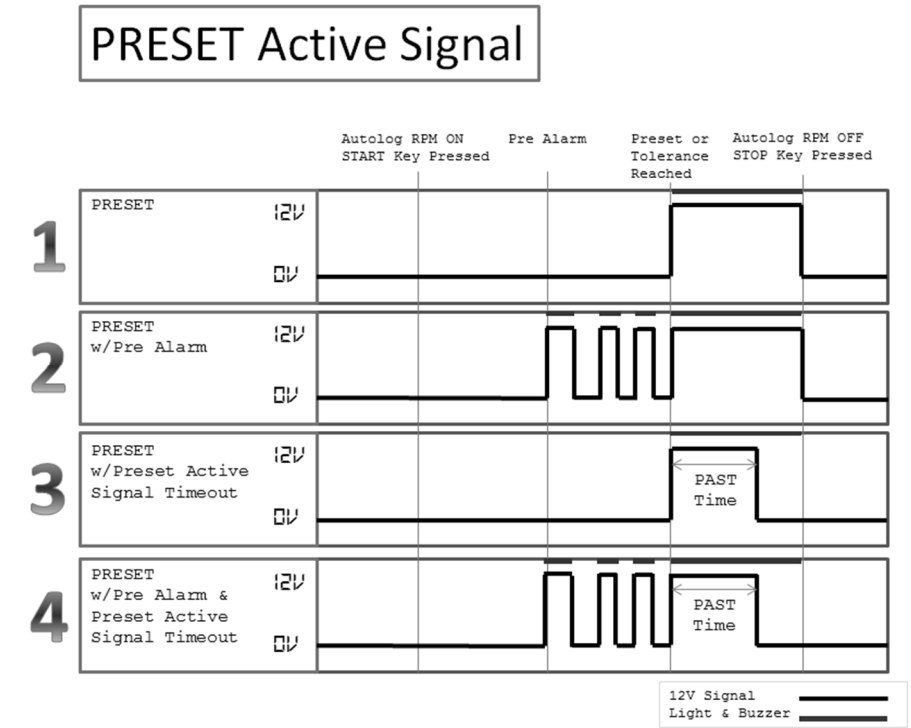
- STORED – Enter an amount for the maximum truck capacity
  - Used every time no matter if different trucks with different capacities are used.
- TRUCK – Enter an amount for each truck
  - Used to enter a different preset amount depending on each trucks capacity.
- PARTCP – Enter any amount
  - Used if a less than full load is required.

To keep the 12VDC output signal deactivated during the unloading process when any D.A.N. 6302 setting is ON, press  before starting PTO.

# 20.0 12VDC OUTPUT DIAGRAMS

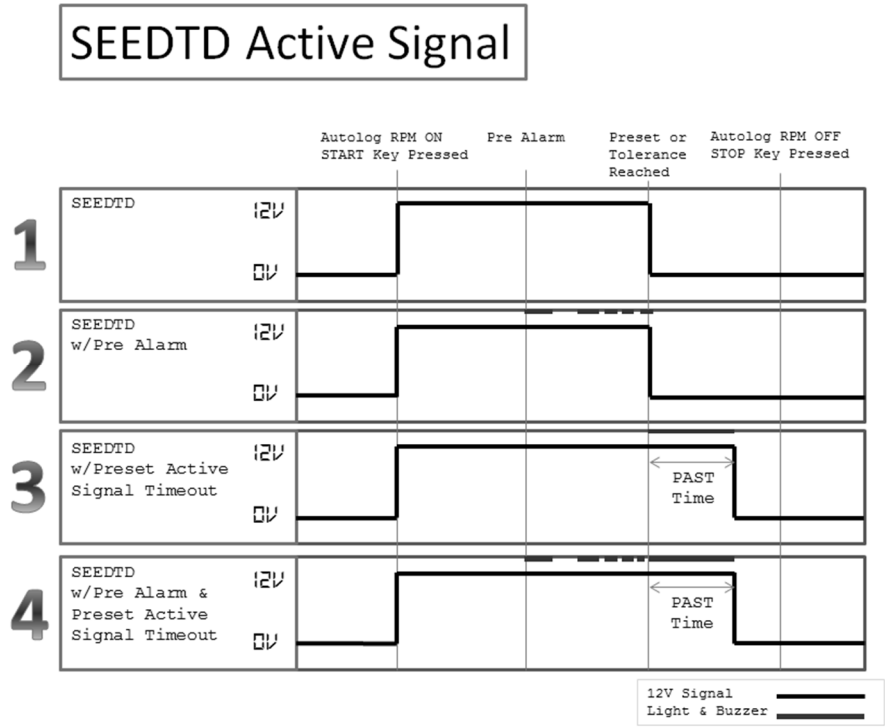
The diagrams on the following pages show the functionality of the 12VDC output when D.A.N 4101 is set to SIG 12V. SIG 0V reverses the output.

### 20.0.1 PRESET Active Signal Diagram



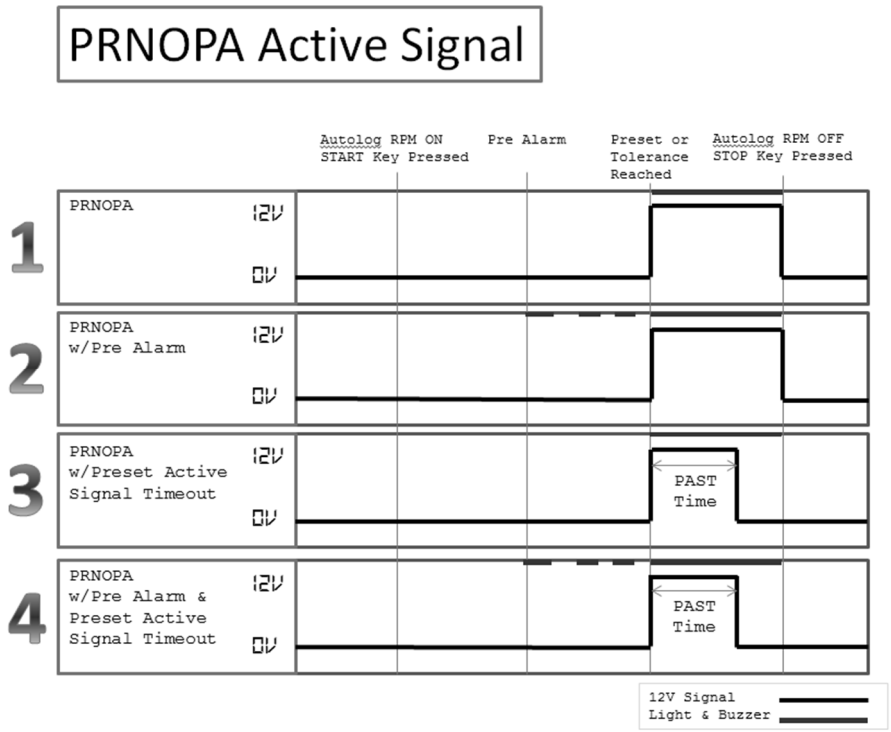

| | | | |
|---|---|---|---|
| 1) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 0.0 | All modes require D.A.N. 6302 to <u>be Enabled.</u> |
| 2) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 0.0 | |
| 3) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 5.0 | |
| 4) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 5.0 | |

### 20.0.2 SEEDTD Active Signal Diagram



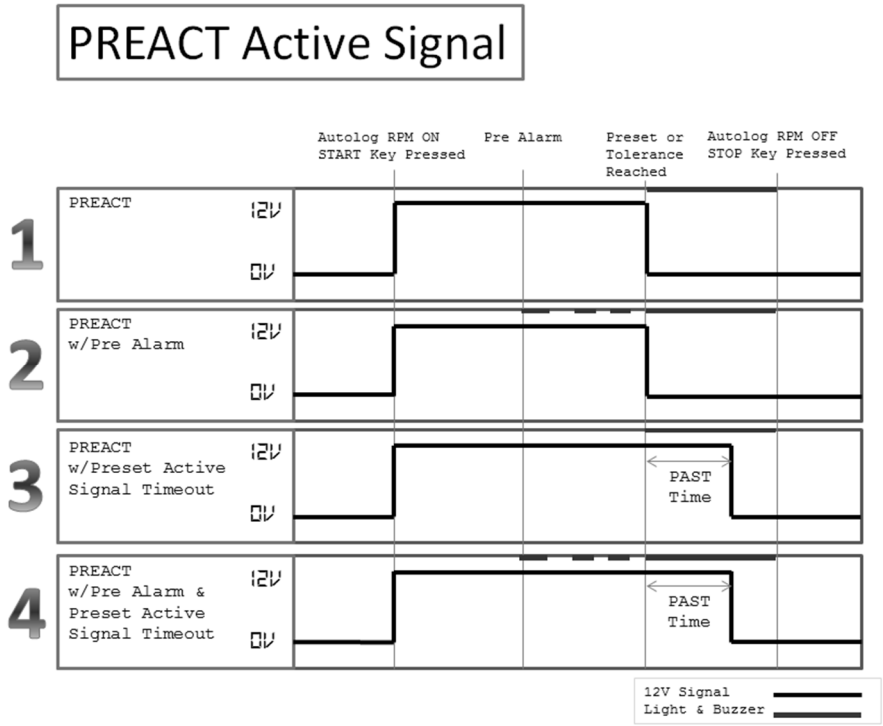

| | | | |
|---|---|---|---|
| 1) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 0.0 | All modes require D.A.N. 6302 to <u>be Enabled.</u> |
| 2) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 0.0 | |
| 3) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 5.0 | |
| 4) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 5.0 | |

### 20.0.3 PRNOPA Active Signal Diagram




| | | | |
|---|---|---|---|
| 1) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 0.0 | All modes require D.A.N. 6302 to <u>be Enabled.</u> |
| 2) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 0.0 | |
| 3) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 5.0 | |
| 4) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 5.0 | |

### 20.0.4 PREACT Active Signal Diagram




| | | | |
|---|---|---|---|
| 1) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 0.0 | All modes require D.A.N. 6302 to be Enabled. |
| 2) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 0.0 | |
| 3) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - P ALM = 0<br>- PRESET<br>- SIG12V<br>- 5.0 | |
| 4) PMTHD<br>RELAY<br>SETOUT<br>PAST | D.A.N. 4001<br>D.A.N. 4005<br>D.A.N. 4101<br>D.A.N. 6303 | - PERCNT OR WEIGHT-PALM>10<br>- PRESET<br>- SIG12V<br>- 5.0 | |

# 21.0 WEIGHING ERROR MESSAGES

### 21.0.1 OVRCAP

Capacity Limit:
Weight on scale system exceeds capacity limit.

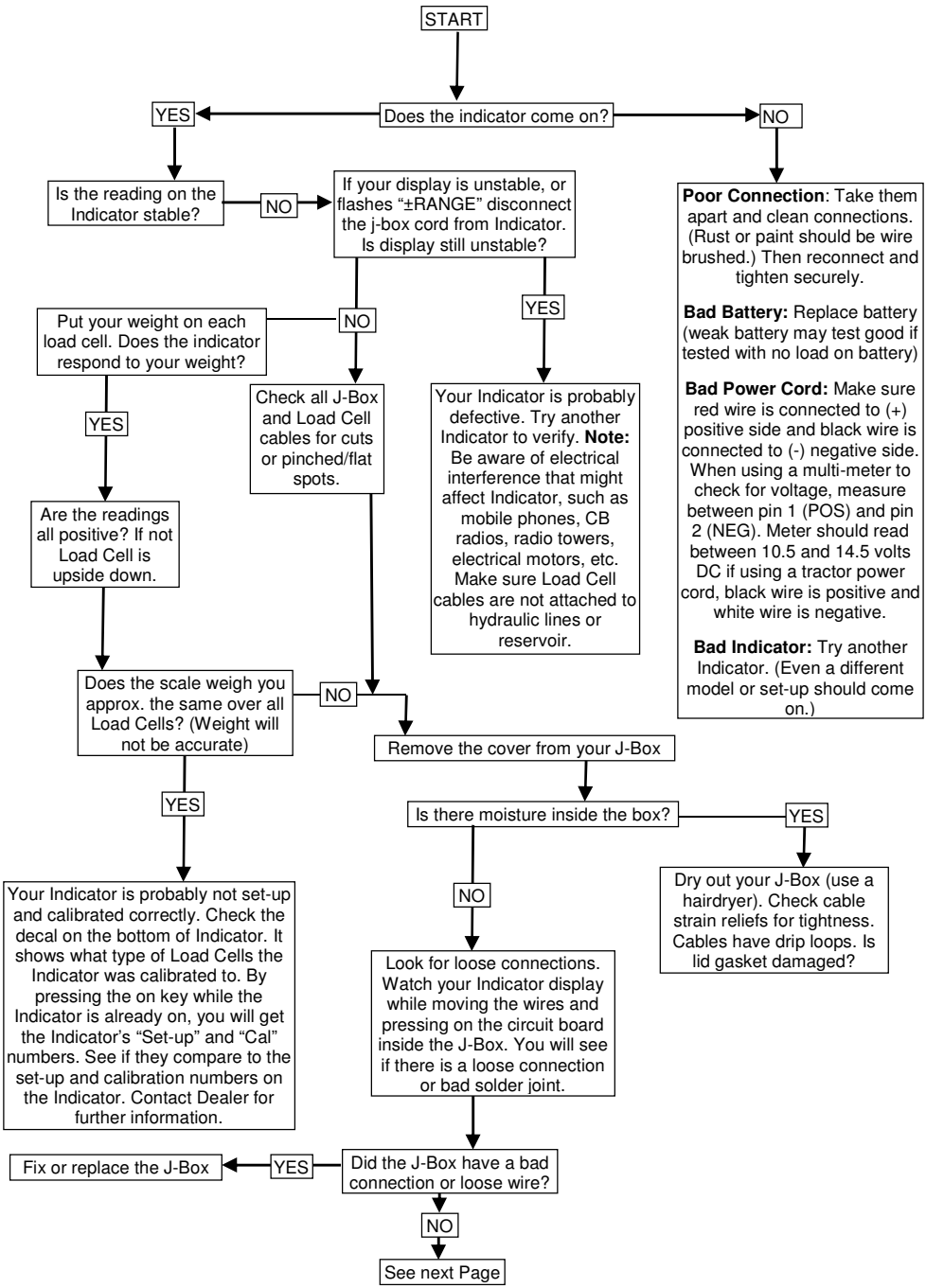
### 21.0.2 +RANGE

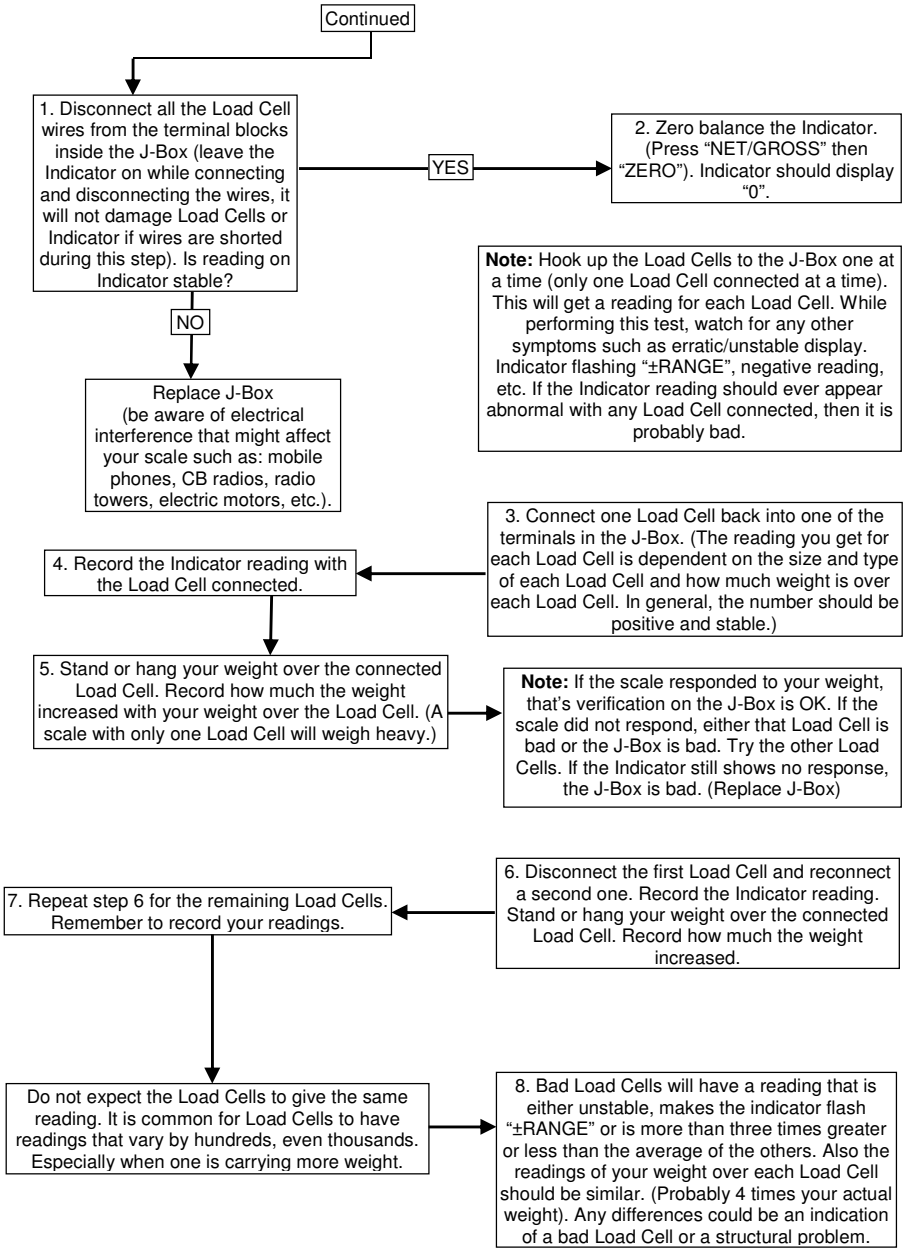
Over Range:
Weight on scale system exceeds maximum weight.

### 21.0.3 -RANGE

Under Range:
Weight on scale system less than minimum weight.

# 22.0 TROUBLESHOOTING FLOW CHART




Continued
1. Disconnect all the Load Cell wires from the terminal blocks inside the J-Box (leave the Indicator on while connecting and disconnecting the wires, it will not damage Load Cells or Indicator if wires are shorted during this step). Is reading on Indicator stable?
YES
2. Zero balance the Indicator. (Press "NET/GROSS" then "ZERO"). Indicator should display "0".
NO
Replace J-Box (be aware of electrical interference that might affect your scale such as: mobile phones, CB radios, radio towers, electric motors, etc.).
Note: Hook up the Load Cells to the J-Box one at a time (only one Load Cell connected at a time). This will get a reading for each Load Cell. While performing this test, watch for any other symptoms such as erratic/unstable display. Indicator flashing "±RANGE", negative reading, etc. If the Indicator reading should ever appear abnormal with any Load Cell connected, then it is probably bad.
3. Connect one Load Cell back into one of the terminals in the J-Box. (The reading you get for each Load Cell is dependent on the size and type of each Load Cell and how much weight is over each Load Cell. In general, the number should be positive and stable.)
4. Record the Indicator reading with the Load Cell connected.
5. Stand or hang your weight over the connected Load Cell. Record how much the weight increased with your weight over the Load Cell. (A scale with only one Load Cell will weigh heavy.)
Note: If the scale responded to your weight, that's verification on the J-Box is OK. If the scale did not respond, either that Load Cell is bad or the J-Box is bad. Try the other Load Cells. If the Indicator still shows no response, the J-Box is bad. (Replace J-Box)
6. Disconnect the first Load Cell and reconnect a second one. Record the Indicator reading. Stand or hang your weight over the connected Load Cell. Record how much the weight increased.
7. Repeat step 6 for the remaining Load Cells. Remember to record your readings.
Do not expect the Load Cells to give the same reading. It is common for Load Cells to have readings that vary by hundreds, even thousands. Especially when one is carrying more weight.
8. Bad Load Cells will have a reading that is either unstable, makes the indicator flash "±RANGE" or is more than three times greater or less than the average of the others. Also the readings of your weight over each Load Cell should be similar. (Probably 4 times your actual weight). Any differences could be an indication of a bad Load Cell or a structural problem.

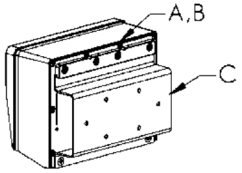
# 23.0 INSTALLATION

### 23.0.1 Indicator Mounting

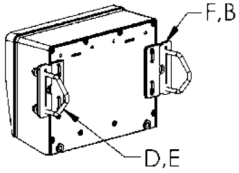
For most applications the equipment manufacturer provides the necessary mounting system and hardware, and mounts the indicator for the end user.

Digi-Star provides a number of mounting options that allow the end user to customize the location and placement of the Indicator. The following section provides a list of the optional mounts.

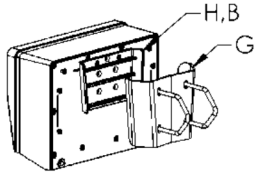
In all cases the Digi-Star Indicator must be securely mounted to the equipment. Loose, or unsupported, indicators can be damaged.




**STD UNIVERSAL MOUNT TALL**

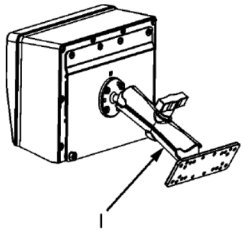


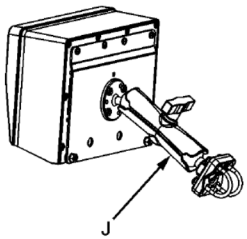

**WING MOUNT**

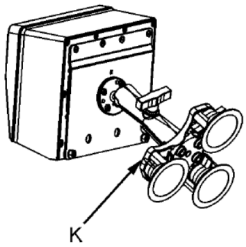



**WEDGE MOUNT**

| KEY | PART NUMEBR | DESCRIPTION |
|---|---|---|
| A | 404353 | Bracket-EZ3 Plastic Rail * |
| B | 403780 | SCR-#10 X 5/8 FHSTS Black ZP |
| C | 840459 | Support-Hat Bracket |
| D | 405069 | U-Bolt ¼-20 X 3.25 ZP |
| E | 405084 | Nut-1/4-20 Top Locking Flange |
| F | 403770 | Bracket- Wing Mount * |
| G | 405124 | Pack-Wedge Mount Bracket With U-Bolts & Flange Nuts |
| H | 405244 | EZ3 Wedge Mount |

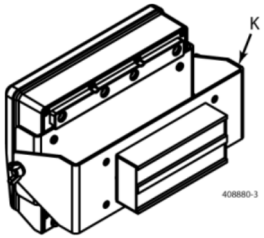


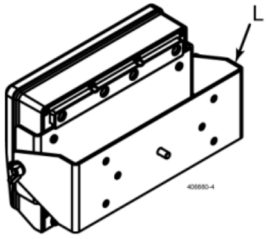



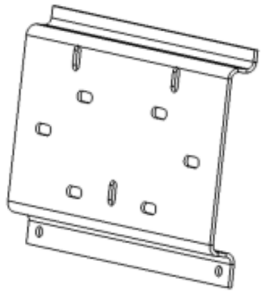




## RAM MOUNT

| KEY | PART NUMBER | DESCRIPTION |
|---|---|---|
| I | 404799 | Kit-1.5” Ram Mount With Bolt-On Base With Hardware |
| J | 407544 | Kit-1.5” Ram Mount With Dual U-Bolts (Fits 0.5”-1.5” Round) |
| K | 407434 | Kit-1.5” Ram Mount With Triple Suction Cup Base |



## SIDE & UNIVERSAL MOUNTS

| KEY | PART NUMBER | DESCRIPTION |
|---|---|---|
| K | 408880 | Mount For Large Indicators With Hardware and Magnet |
| L | 408828 | Mount for Large Indicators With Hardware Without Magnet |
| M | 408199 | Universal Mount Short |

# 24.0 CABLE CONNECTIONS

For accurate and reliable operation care should be taken when routing and connecting cables to the Digi-Star Indicator.

Cables should be secured and protected from damage and abrasion.

Long cables should not “hang” by the cable connector at the Indicator but should be secured to a structure close to the Indicator leaving a short “tail” to connect to the Indicator.

Special Considerations for Power (+) and Ground (-):

The Digi-Star Indicator is designed to operate at a continuous voltage ranging from 10.5 to 16.0 volts.

Intermittent voltage drops to as low as 9.0 volts, such as when starting an engine, will be tolerated. Continuous low voltage will result in a Low Voltage warning on the display or the Indicator will power off.

Voltage spike above 16 volts will damage the Indicator. Never weld or charge the battery on the equipment that the Indicator is mounted to without disconnecting the Indicator power cord. Never operate an Indicator on equipment with an engine charging circuit when the battery has been removed.

Digi-Star recommends that the red power (+) and black ground (-) are connected as follows:

Power (+) can be either switched or keyed ON & OFF, or un-switched and always on.

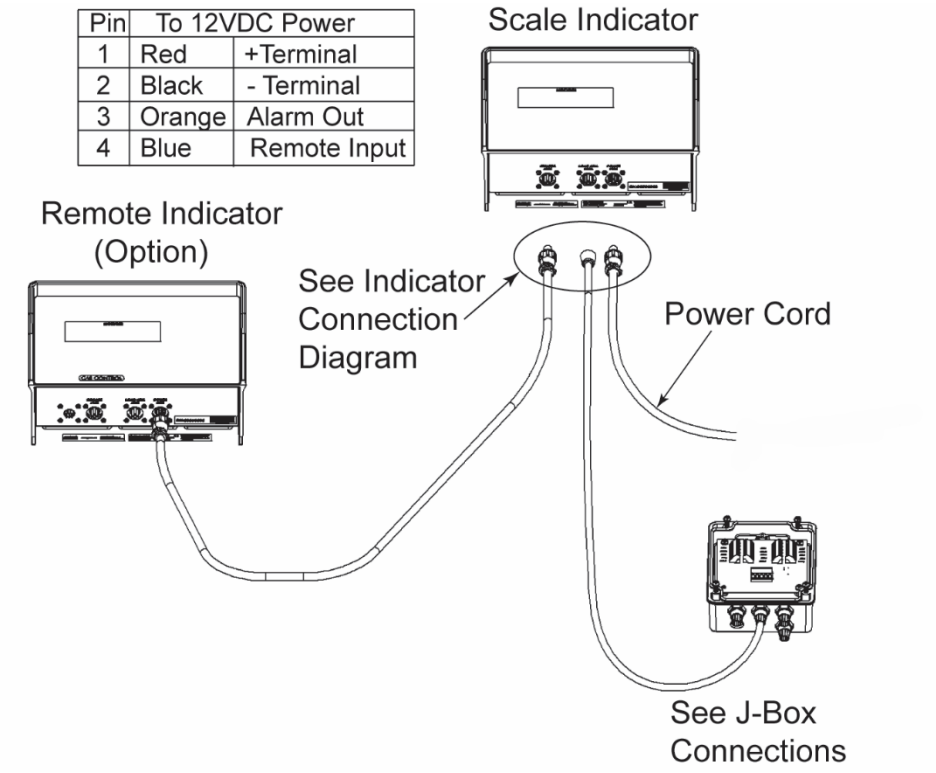
Power (+) and Ground (-) should come from a dedicated auxiliary power source when provided. When auxiliary power sources are not provided power should come from the main power distribution system.

Fuse or circuit protection of at least 5 amps, but no more than 10 amps, should be provided. Although the indicator is protected internally by an internal fuse a fuse or circuit protection is required to protect the power cable and equipment.

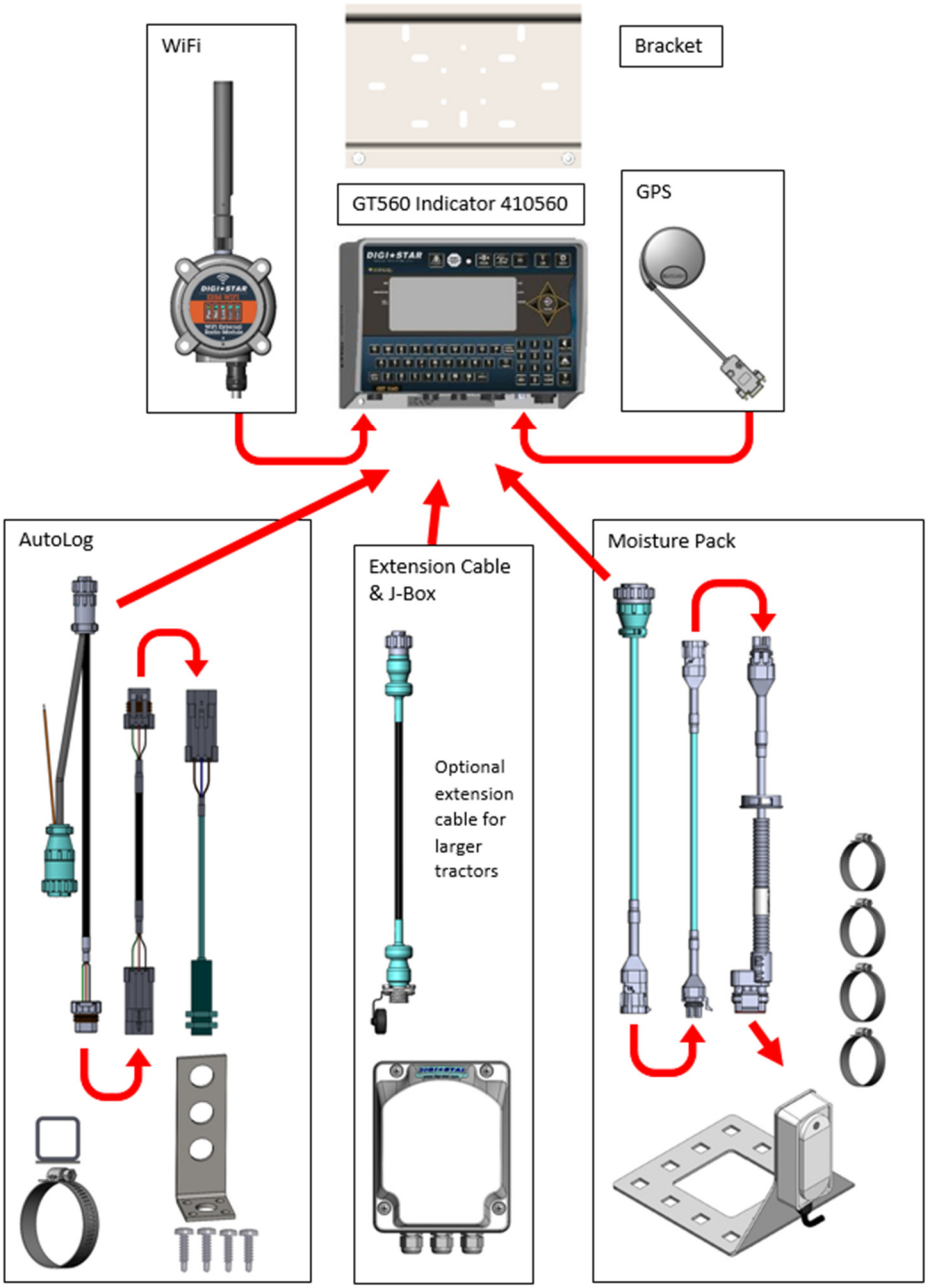
Ground (-) connection should be made to a main ground (the battery ground (-) is often connected to this location). Do not use the chassis or frame of the equipment as a ground.

### 24.0.1 Indicator Connection Diagram

| Pin | To 12VDC Power | |
|---|---|---|
| 1 | Red | +Terminal |
| 2 | Black | - Terminal |
| 3 | Orange | Alarm Out |
| 4 | Blue | Remote Input |



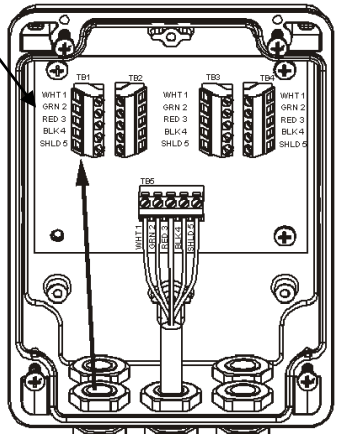
## 24.0.2 GT560 Cable Connections



### 24.0.3 Connecting Load Cells To Junction Box

Connect load cell wires to terminal blocks. See wire color chart

Junction Box Illustrated for 4 Load Cell Installation




| Wire Color Key | | |
|---|---|---|
| | Color | Description |
| 1 | White | Signal + |
| 2 | Green | Signal - |
| 3 | Red | Excitation + |
| 4 | Black | Excitation - |
| 5 | Shield | Shield |

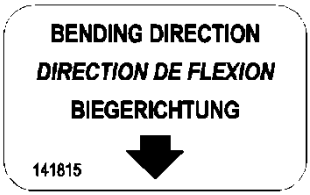
Tighten Nuts

Junction Box Cable

Connect to J902 Load Cell Port on Indicator bottom panel

Load Cell Cable

### 24.0.4 Load Cell Direction




Observe direction of arrow when installing load cell.

# 25.0 AUTOLOG TROUBLESHOOTING

If your system has been operating, execute the following sensor diagnostics to verify the RPM sensor is sending pulses to the indicator.

## RPM Sensor Diagnostics




1. Enter 7008 press SELECT
2. Press SELECT to select ON
3. Press ENTER
4. Press SELECT until DIAG is displayed.
5. Press FUNCTION

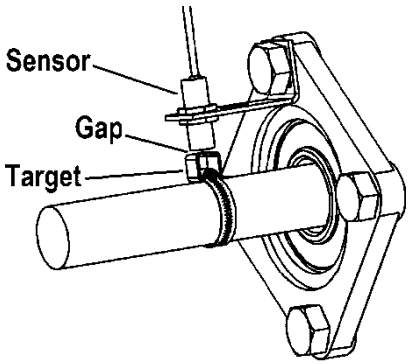
Display will show value from RPM sensor.

Note: The RPM value should be close to the actual RPMs of the shaft.

For best results adjust the distance between the sensor and the target to between 0.1” and 0.2” (2mm to 5mm). This is equal to the thickness of one to two quarters.

Sensor has yellow LED indicator on rear to indicate target in range of the sensor.

DIAG is to be used as a diagnostic tool. Repeat steps 1 and 2 to select OFF once troubleshooting is complete.




**SENSOR AND TARGET INSTALLATION**

# 26.0 SENSOR INSTALLATION AS PROXIMITY SWITCH

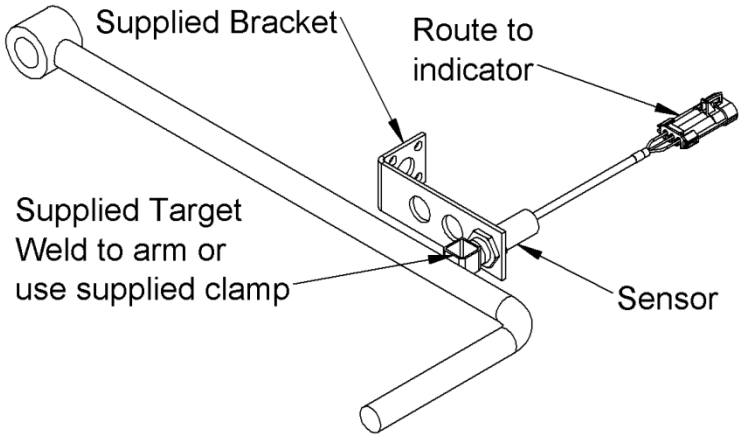
AutoLog sensor can now be used as a proximity switch on a door, gate, and door position indicator instead of a PTO. Mount sensor & target alongside the door while it is closed and change 3 D.A.N. settings on the GT560 (Listed below). When the door is opened, AutoLog starts recording the grain or forage being unloaded.

This feature allows AutoLog to be used in applications where no PTO is used, or where it is difficult to access. Since there are no high speed moving parts in this installation method, it is a highly reliable alternative to PTO mounting.

1. Determine location for mounting AutoLog sensor at door, gate, and door position indicator, or similar grain release control.
2. Sensor should be aligned with target when door is closed. **Shown in Figure 1**.
3. Mount metal target to door or gate.
4. Mount bracket to a fixed position next to door, aligned with target while the door is closed.
5. Mount sensor to bracket, about 1/8” from target (The thickness is approximately two quarters put together).
6. Route 3 pin AutoLog sensor cable toward GT560.
7. Connect sensor cable to 3 pin cable from GT560.
8. Verify yellow light of sensor is on with door closed.
9. Open door/ gate, verify light turns off, close door (light on).
10. Turn on GT560.
11. Change these settings on the GT560 indicator:
    a. Enter D.A.N. 1401. Press SELECT. Repeatedly press SELECT until FSWITCH is displayed. Press ENTER to store setting.
    b. Enter D.A.N. 6401. Press SELECT.Repeatedly press SELECT until SWITCH is displayed. Press ENTER to store setting.
    c. Enter D.A.N. 6411. Press SELECT Repeatedly press SELECT until OPEN is displayed. Press ENTER to store setting.

12. Open door & verify GT560 displays START then UNLOAD.

Figure 1 shows an example of a proximity switch installation.



# 27.0 DECLARATION OF CONFORMITY

**EMC**

DECLARATION OF CONFORMITY

**Application of Council Directive(s)** 2004/108/EC
**Manufacturer's Name:** Digi-Star, LLC
**Manufacturer's Address:** W5527 State Hwy 106
Fort Atkinson, WI 53538
**European Representative Name:** Digi-Star International
**European Representative Address:** J.F. Kennedylaan 235
5981 WX Panningen
The Netherlands

**Model Name:** GT560

**Conformance to:** $ EN 61326-1 electrical equipment for measurement, control, and laboratory use (See Report Number 316064)
$ EN 55011, for Class B ISM equipment for industrial, scientific, and medical equipment. (See Report Number 316064.)

**Equipment Type/Environment**: Electronic weighing scale systems; not legal for trade.
For agricultural, commercial and industrial use.
**Beginning Serial No.:** 00001001
**Year of Manufacture:** 2016
We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

**Manufacturer** **Legal Representative in Europe**



Signature
**Full Name**: Peter Nelson
**Position**: Engineering Director
**Place**: Fort Atkinson, WI U.S.A.
**Date:** March 14, 2016

Signature
**Full Name**: Wim de Wit
**Position**: Managing Director
**Place**: Panningen, The Netherlands
**Date:** March 14, 2016

# 28.0 NOTES

SETUP NUMBER_____

CALIBRATION NUMBER_____

# 29.0 QUICK REFERENCE AID

## FIELD SCREEN

① Press  to modify or select field. Current field number is shown in upper display.

② Three lines are displayed in Lower Display Window. The top line of the three is current, editable and will be used for next data record.

③ Up/Down Arrows – Press  or  to scroll through fields (150 maximum). Hold arrow to scroll faster. Use  or  to move cursor within data line.

④ Use keypad to enter or update field names. Press  to delete characters to left and  to delete the selected character. Hold  to delete entire line. Pressing  will reset line to last saved data.

⑤ To use special characters press and release  . Then press key with desired special character. Repeat for each special character required.

⑥ Press  or  to exit.

## ID SCREEN

① Press  to modify or select ID name. Current ID number is shown in upper display.

② Three lines are displayed in Lower Display Window. The top line of the three is current, editable and will be used for next data record.

③ Up/Down Arrows – Press  or  to scroll through ID names (150 max.). Hold arrow to scroll faster. Use  or  to move cursor within data line.

④ Use keypad to enter or update ID names. Press  to delete characters to left and  to delete the selected character. Hold  to delete entire line. Pressing  will reset line to last saved name.

⑤ To use special characters press and release  . Then press key with desired special character. Repeat for each special character required.

⑥ The operator will see ID XXX while editing the ID and CAP XXX while editing the capacity. After editing the ID press 

to move the cursor to capacity field to enter capacity data. The display will scroll to the next ID when pressing  or .

⑦ Press 

or 

to exit.

# MOISTURE SCREEN

① Press 

repeatedly until the text **GRAIN** is shown on the display, then release key. Press 

key to enter.

② Up/Down Arrows – Press  or  to scroll through CROP names. When desired crop name is listed. Press 

to select crop and return to weight screen.

# 30.0 OPTIONS




GPS Antenna

Optional GPS “Puck” antenna with magnetic base and 17 feet of cord



WiFi External Radio Module

Optional module for use with Android or IOS phone or tablet.



IPC Thermal Printer

Optional printer a RS232 serial port is required which is labeled as SERIAL, J904 or J905 depending on model of indicator



Moisture Sensor

Option sensor used with the GT560 to determine grain moisture and calculated dry bushels.

AutoLog Sensor (not shown)

Optional sensor kit for PTO or discharge gate.