


Thank you for purchasing the Gallagher TWR-1 Weigh Scale unit. The Gallagher range of weighing systems is simple, tough, innovative and reliable.

BONUS OFFER

Register your product online at www.gallagherams.com to **extend your warranty to two years for free.**

Follow these instructions for the setup and first use of the TWR-1.

Further information can be obtained by tapping  when displayed on screen.

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BOX CONTENTS

The Gallagher TWR-1 box contains:

- Carry Bag
- TWR-1 weighing unit
- 110V - 230V Mains AC adapter
- USB cable
- USB flash drive
- 12V battery cable with alligator clips
- Mini Serial Adapter (2M1709)
- Mounting bracket and mounting hardware

SPECIFICATIONS

Operating Temperature	-20° to 50°C	
	-5° to 120°F	
Environmental Protection Rating	IP67	
Input Voltage	12 V DC	
Estimated battery run time	at 100% brightness	at 60% brightness
Weigh only	12 hours	16 hours
Weigh/Read	6 hours	8 hours
Read only	3 hours	4 hours

CHARGING THE BATTERY

To ensure optimum performance of the TWR-1, the internal battery may need to be charged for up to 16 hours before first time use.


Important: If the TWR-1 is to be stored for an extended period, this should be in a cool dry place with a fully charged battery.

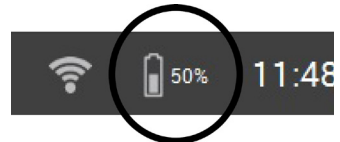
1. Connect the power adapter at the base of the unit and plug the TWR-1 into a power outlet and switch **ON**.



2. The charging icon will display on the screen.
When the charge shows 100% the TWR-1 is ready to use with or without the power adapter.

Note:

- When the TWR-1 is in use, the battery icon will display and show remaining charge.
- When using the scale and the charge level falls below 10% the battery icon will flash with a red outline. You will have about 30 minutes to complete the weighing session before the TWR-1 must be charged.
- When the charge level becomes critical the unit will shut down.
- To check remaining run time at current settings, from the Home screen, go to **Settings**  **> About > Battery**.



UNDERSTANDING THE TWR-1 WEIGHING UNIT

English

Find animal
Look up and add animal to a session

Remove animal

On-screen Help
Touch to display information about the current screen

Touch Screen
Tap the screen icons, field names or buttons to view or enter data.

Weigh screen

Weigh button
Records animal weight

Zero button
Sets the displayed weight to zero.

Navigation keys
These buttons can be used to navigate the functions of the scale as an alternative to the touch screen.

Footer bar

Power button
Turn TW-1 On/Off

Home Button
Return to the Home screen

Change mode from numeric to alpha text entry

Backspace/Delete Space bar

Footer bar detail

Bluetooth status

Battery charge indicator

Weighing mode
AUTO - Automatic weight lock
MAN - Manual weight lock

Panel reader status

WiFi status

Antenna connection
(for panel reader antenna)

Battery charger

USB port
(connect to PC)

USB port
(for memory stick)

Serial port
(mini adapter supplied to change connector sex)

Loadbar connections

INSTALLATION

English

Installing the TWR-1

The TWR-1 can be placed on a table top or mounted on the bracket supplied.



Installing the Scale bracket

The bracket can be mounted on a flat vertical surface, a round post, or a rail.

To mount the bracket on a flat vertical surface, or a round wooden post, use the 4 x tek screws included with the unit.



To mount the bracket on either a vertical or horizontal bar, use the 'U' bolts included with the unit.



Important:

It is not recommended to mount the TWR-1 bracket on the weighing crate or chute as interaction with the scale can impair weighing performance.

Installing the loadbars

If using loadbars, follow these steps:

1. Select a weighing site that provides a solid, level and well drained surface.
2. Ensure the loadbars and platform are well secured and clear of any obstructions.
3. Either bolt the loadbars to the concrete pad or locate them on studs set into the concrete. It is important that the loadbars and platform sit flat without any rocking or twisting to avoid weighing inaccuracies.

Note: It may be necessary to shim the loadbars or platform to ensure there are no twisting pressures within the platform. Weights should be evenly distributed over the top of the weigh bars.

4. Connect the loadbar cables to the base of the TWR-1.

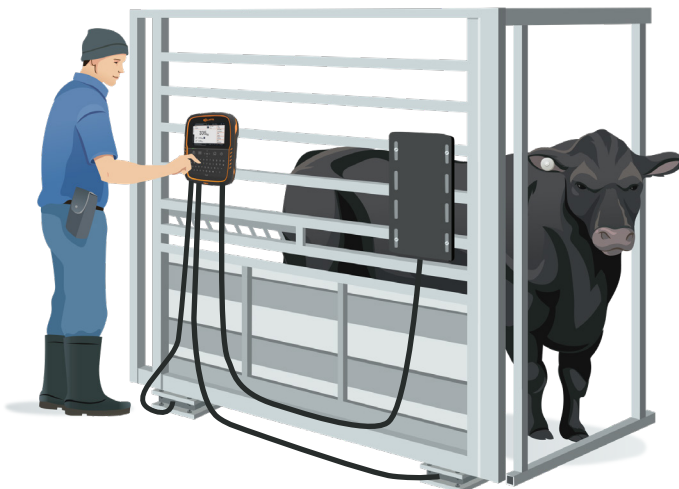
A beep will sound indicating a successful connection/ disconnection of the loadbars.



WARNING – Do not weld the loadbars or any structure that they are attached to. Loadbars contain sensitive electronic devices which will be damaged by welding. **Damage caused by welding will void warranty.**

Position the TWR-1:

- clear of the platform to ensure it does not interfere with the flow of animals during the weighing cycle
- within easy reach of the loadbar leads
- within easy reach of the operator (for manual weighing)



Installing the Antenna Panel

The TWR-1 has an internal reader, that when connected to a Gallagher Antenna panel will capture the Electronic ID tag data.

To weigh animals in a crush, you will need:

- Gallagher Antenna Panel kit
- 4m Antenna Extension Cable G05600 or
6m Antenna Extension Cable G05602

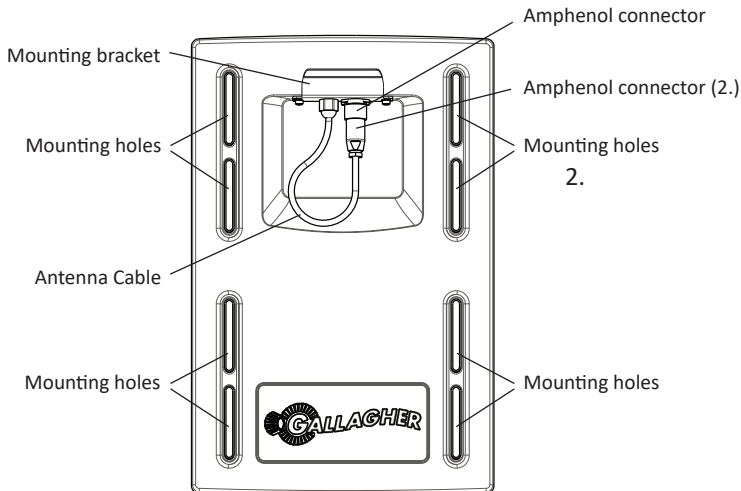
Note: A short adapter cable G05601 may be required on early versions of the Sheep Auto Drafter made prior to 2018.

To mount your Antenna panel, refer to the instructions included with the panel.

Important: Use the defined mounting holes, because drilling through the Antenna Panel will damage the antenna.

Attaching the TWR-1 to the Antenna Panel

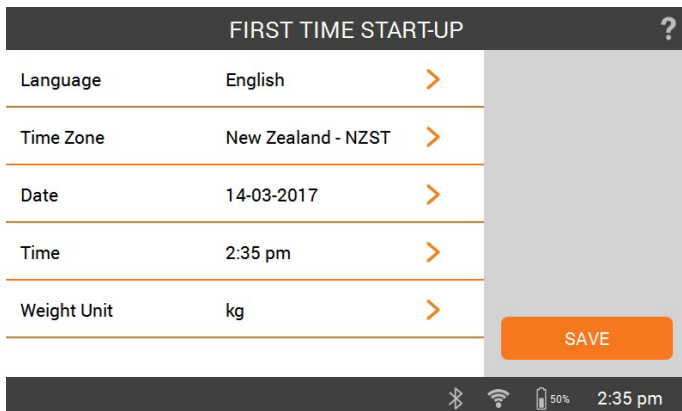
1. Ensure the TWR-1 is turned OFF.
2. On the Antenna Panel, unscrew the Amphenol connector locking nut from the Amphenol socket and pull it down to unplug from the Antenna Panel.





3. Connect the extension cable to the Amphenol connector and tighten, then connect the other end of the extension cable to the Antenna connector on the base of the TWR-1.
4. Tighten the locking nut.
5. Refer to *Connecting Equipment to the TWR-1* (p. 8) to complete the EID Reader connection on the TWR-1.

FIRST TIME START-UP

The first time the TWR-1 is powered on, the **First Time Start-Up** screen will display. Tap the screen to update the language, time, date and weight fields as required and then tap **Save**.



To change any of these settings later, they can be accessed via **Settings**  on the right of the **Home** screen.

For more information about this screen or any TWR-1 screen, tap  displayed in the top right corner of the screen. This will display the On-screen Help with more information about what you see on the screen.

Note: The navigation keys on the keypad can be used at any time to select the TWR-1 functions, as an alternative to the touch screen.


Auto Shutdown

When the TWR-1 is left idle for more than 30 minutes it will automatically shutdown to preserve the battery.

Press the **Power** button to turn the unit back on.

CONNECTING EQUIPMENT TO THE TWR-1

Connecting an EID Reader

- The TWR-1 internal reader can be used with or without loadbars connected. To use the internal reader, you must first connect the antenna panel. Refer to *Attaching the TWR-1 to the Antenna panel* (p. 6)
 - A Hand-held EID Reader or permanent reader can be connected to the TWR-1 by either a serial cable or via Bluetooth®.
1. If using a hand-held reader or permanent reader, turn **On** the EID Reader.
 2. For all readers, turn **On** the TWR-1.
 3. On the TWR-1, tap **Settings**  > **Equipment Connections** > **EID Reader**.
 4. Select how the Reader is being connected. This will be by **Bluetooth**, **Serial** cable or using the internal reader (**Panel**).

If using the internal reader, a successful connection will show as **R** in the footer bar.


Note: A mini serial adapter is included with the TWR-1 if a female serial connection is required.

Important: The TWR-1 can also be connected to via Bluetooth as a “Slave”, by initiating the connection from the reader. A pass-code of “0000” may be required to complete this connection.

Refer to *Bluetooth – Connect EID Reader* in the TWR-1 On-screen Help or your *EID Reader User Manual* for further information on pairing the reader.

Connecting to a Drafter/Sorter

To connect the TWR-1 to a drafter, use the data cables supplied with your drafter. Refer to your *Drafter User Manual* for more information.

1. Turn On the TWR-1.
2. On the TWR-1, tap **Settings**  > **Equipment Connections** > **Drafter**.
3. Specify the type of drafter that is being connected, to complete the setup.

If your drafter is not listed, tap **Create Custom** and follow the configuration wizard set up your drafter.

START A SESSION

When you gather information about an animal, it is recorded in a Session. Each event such as weighing, adds a record to the current session.

A template using pre-determined defaults can be set up and used each time you start a new session.

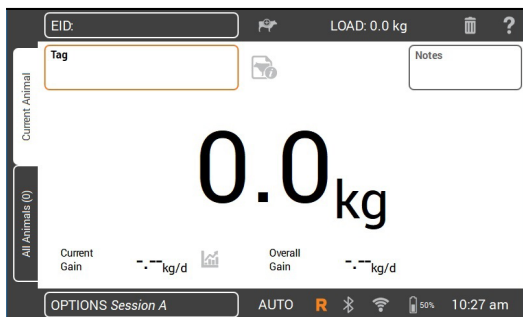
Note: It is recommended a new session is opened for a new day's activity or for a new group of animals. An animal cannot appear within the same session more than once.

To start a new weighing session:



1. From the **Home** screen, tap **New**. The **New Session** screen is displayed.
2. Tap **Quick Start** to open the Weigh screen with the scale default settings.

Note: To set up and use templates, refer to the TWR-1 On-board Help.



To customize the session:

click on the **OPTIONS** button at the lower left of the screen. Here you can set up the weighing mode, drafting options and name for the session. Refer to *Session Options* (p. 11) for more information.

Note: Before weighing, **0.0** should be displayed. If not, press .

3. Load the animal onto the platform.
4. If using the internal reader, the animal's Electronic ID will be scanned, or you can scan with a hand-held reader and record the animal's Visual Tag Number.

Note: The internal reader will only read a tag when loadbars are connected and weight is detected on the weighing platform.

5. If weighing in **AUTO - Automatic weight lock**, the scale will lock on to the weight and hold it on the screen until the animal leaves the platform.


If weighing in **MAN - Manual weight lock**, you must first press **Weigh** . When the weight becomes stable, it will lock.

6. Move the animal off the platform.

Important: If the weight displayed does not always return to **0.0** after weighing, check for dirt or manure that may have been left on the platform.

The TWR-1 can be re-zeroed by pressing .

Notes:

- When the weight locks, there will be a beep (if turned on in Settings) and a red light above the Weigh button displays briefly.
- Other information, for example: Notes, can be entered once the weight has locked or an ID has been entered.
- In either mode, you can re-weigh an animal by pressing **Weigh**  after a successful weight lock.
- If drafting is turned on, the gate number and group will display, in top right corner of the screen, indicating the drafting category. Tap this box to override the drafting decision.
- By default the scale will automatically zero any debris left on the platform between 2-5kg depending on the capacity of your loadbars. This can be altered in the connected loadbar settings.

Reading tags with the Internal Reader

When the internal reader is connected it will display as **R** in the screen footer.

- If no loadbars are detected, the internal reader will always be active, ready to read a tag and will display as **R** .
- If loadbars are connected, the footer will display **R** until a weight is detected on the platform.

The symbol will then change to **R** , as it reads the tag. The internal reader will go in and out of active mode as it detects weight on the weighing platform.

Session Options

SESSION OPTIONS		?
Date	22-05-2018	>
Name	Session A	
Traits	0/9	<
Drafting	Off	
Weight Lock	Automatic	

ADVANCED

SAVE

R Bluetooth Wi-Fi 44% 10:44 pm

The Session Options menu is used to configure settings for the current session.

From this screen, tap the required option to change the session name, turn drafting On or Off, change the weight lock mode and configure **Advanced** settings.

Tap **Save** to keep any changes.

Note: Use the *On Screen Help* ? for step by step information to set up drafting a or to configure the Advanced settings.

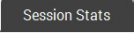
VIEW ANIMAL INFORMATION

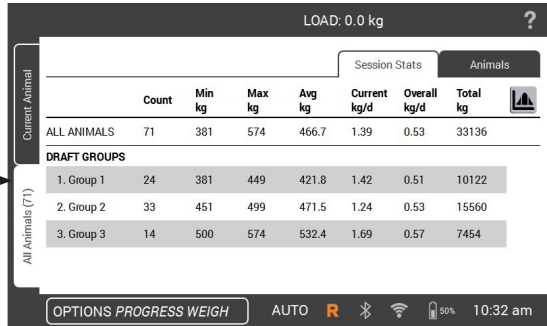
English


The information collected during a session can be viewed from the session's Weigh screen.

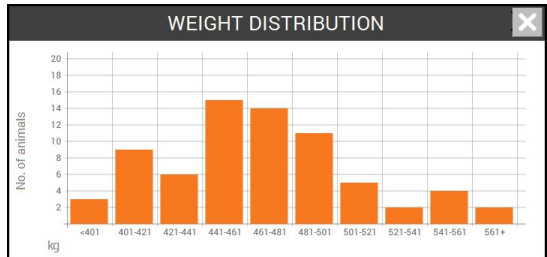
To view information about **all the animals** in the session;

tap **All Animals**,

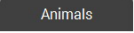
tap .

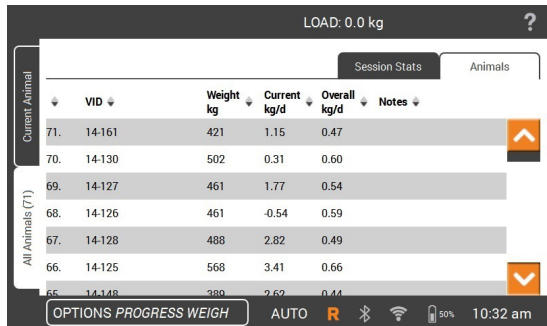


Tap  to view weight range of animals.




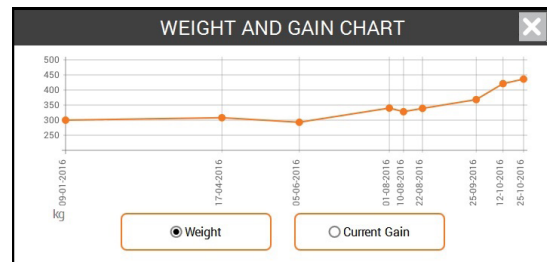
To view information about an **individual animal** weighed;

tap .



Tap an animal VID to view this animal on the **Weigh** screen.

Tap  to view the history of weights for the selected animal, from the **Weigh** screen.



CARE AND MAINTENANCE

The TWR-1 is a tough and reliable product designed for use in typical livestock environments. Proper care and maintenance can extend its life.

Listed below are guidelines for keeping the TWR-1 in good condition.

- Do not submerge the TWR-1 in any liquid.
- Store in a cool, dry place. Avoid storing in direct sunlight.
- After use, clean with a damp cloth. Take care not to scratch the display.
- If storing the TWR-1 for a long time, store with the battery charged.

Software Updates

It is important to update the TWR-1 software from time to time to ensure you have the latest enhancements. Updates are regularly released to enhance the features of the scale or to correct issues.

These updates can be accessed from the following website:

<https://am.gallagher.com/downloads/>

Follow the steps below to update the Weigh Scale software:

1. **Download** the updater file from the website and **save** to a USB flash drive.
2. Turn the TWR-1 off.
3. **Insert** the **USB** flash drive and turn on the TWR-1.

The scale will recognise there is a USB stick inserted and begin the upgrade process.

4. Follow the instructions on the screen to complete the update.

CONNECTING THE TWR-1 TO A COMPUTER

In order to transfer data on or off the TWR-1, you need to establish a connection between the TWR-1 and a PC/laptop that has Animal Performance Software (APS) software installed.

- Plug the USB cable supplied into the TWR-1.
- Plug the other end of the cable into a USB COM port on your computer.
- Turn on the TWR-1.
- Use APS to complete the connection and transfer information to and from the TWR-1.

See the *APS Standard User Manual* for further details.

Note: It is also possible to connect the TWR-1 to a PC using a WiFi connection. Firewall settings may need to be adjusted to allow this connection.

APPROVALS AND STANDARDS

English



This symbol on the product or its packaging indicates that this product must not be disposed of with other waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved by Gallagher Group Limited could void the user's authority to operate the equipment

**Industry
Canada**

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter (IC: 7369A-G0260X) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna Types:

- BR600 Small Antenna Panel (G03121)
- BR1300 Large Antenna Panel (G031424)
- Sheep Auto Drafter Antenna Panel (G05714)



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