



# GALLAGHER TWR-5 Weigh Scale and Data Controller User Guide

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QUICK START GUIDE  
TWR-5



Thank you for purchasing the Gallagher TWR-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](http://www.gallagherams.com) to extend your warranty to two years for free.

Follow these instructions for the setup and first use of the TWR-5.

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

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## BOX CONTENTS

The Gallagher TWR-5 box contains:

- Carry Bag
- TWR-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 Rang 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-5, the internal battery may need to be charged for up to 16 hours before first-time use.

**Important:** If the TWR-5 is to be stored for an extended period, this should be in a cool dry place with a fully charged battery. Always charge the battery indoors.



1. Connect the power adapter at the base of the unit and plug the TWR-5 into a power outlet and switch ON. The charging icon will display on the screen.

**⚠ Warning:** The power adaptor is intended for indoor use only. Do not expose to rain or dampness.

2. When the charge shows 100% the TWR-5 is ready to use with or without the power adapter.



**Note:**

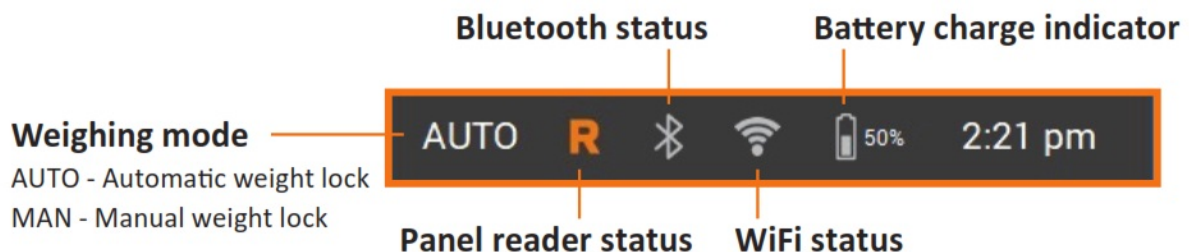
- When the TWR-5 is in use, the battery icon will display and show the remaining charge. \_
- When using the scale and the charge level falls below 10% the battery icon will flash with a red outline. You will have about 30 minutes to complete the weighing session before the TWR-5 must be charged.
- When the charge level becomes critical the unit will shut down.
- To check the remaining run time at current settings, from the Home screen, go to Settings  > About > Battery.
-  The battery error icon will display if the battery is too hot (above +45°C) or too cold (below 0°C). The Scale will keep operating while plugged in but will not charge properly until at room temperature.

Gallagher TWR-5Weigh Scale Quick Start Guide

## UNDERSTANDING THE TWR-5 WEIGHING UNIT



## Footer bar detail



## Connections



## INSTALLATION

### Installing the TWR-5

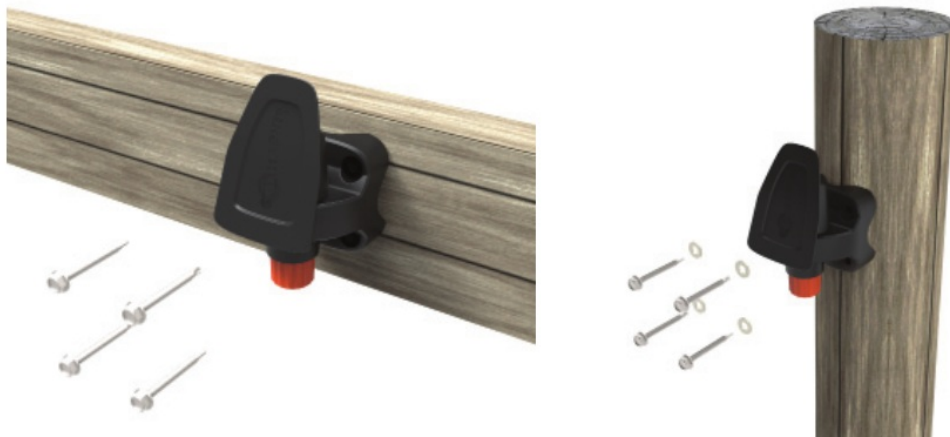
The TWR-5 can be placed on a tabletop or mounted on the bracket supplied.



### 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 around the 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-5 bracket on the weighing crate or chute as interaction with the scale can impair weighing performance.

### Installing the loadbars

If using load bars, follow these steps:



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

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

4. For Wired Loadbars: Connect the load bar cables to the TWR-1. For Wireless Loadbars: The TWR-1 must be within 8-10m of the load bars. Refer to the Gallagher Loadbars Instructions for further installation information. A beep will sound indicating a successful connection/disconnection of the load bars.

**Warning** — Do not weld the load bars 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 the warranty.

**Position the TWR-5:**

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



**Installing the Antenna Panel**

The TWR-5 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:**

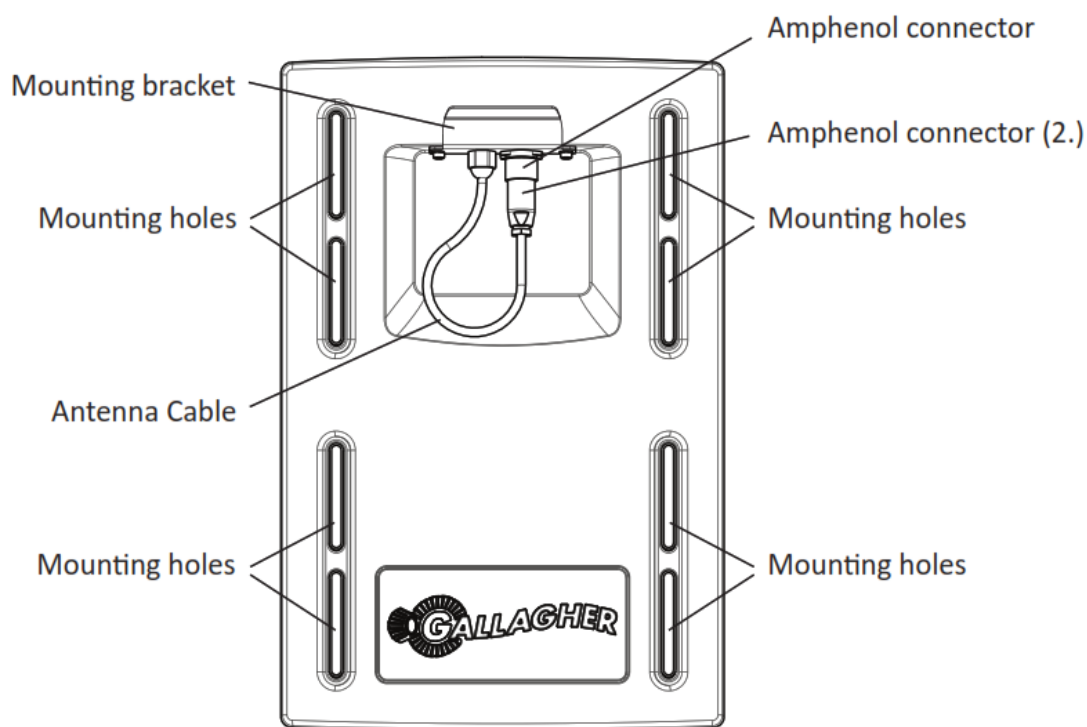
- Gallagher Antenna Panel kit
- 4m Antenna Extension Cable G05600 or 6m Antenna Extension Cable G05602

**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-5 to the Antenna Panel**

1. Ensure the TWR-5 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-
4. Tighten the locking nut.
5. Refer to Connecting Equipment to the TWR-5 (p. 8) to complete the EID Reader connection on the TWR-5.

## FIRST TIME START-UP


The first time the TWR-5 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.

FIRST TIME START-UP			?
Language	English	>	
Time Zone	New Zealand - NZST	>	
Date	14-03-2017	>	
Time	2:35 pm	>	
Weight Unit	kg	>	
			SAVE

Bluetooth, Wi-Fi, 50% battery, 2:35 pm

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-5 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-5 functions, as an alternative to the touch screen.

#### **Auto Shutdown**

When the TWR-5 is left idle for more than 30 minutes it will automatically shut down to preserve the battery. Press the **Power** button to turn the unit back on.

**Note:** When the battery charger is connected, the TWR-5 will not shut down after the inactivity period. The screen will remain active.

## **CONNECTING EQUIPMENT TO THE TWR-5**

### **Connecting to Wireless Loadbars**

1. On the TWR-5, tap Settings > Equipment Connections > Loadbars > Wireless.
2. The TWR-5 will search for the load bars. When the load bars have been located, tap to select them from the list, then tap Connect. Note: As per the Wireless Loadbar Installation instructions, your load bars must be switched on and in range to display in the search list.
3. The connection process will take up to 30 seconds while pairing occurs between the load bars and the TWR-5. Once completed, tap Done.
4. Create a new session, by tapping New > QuickStart. The current weight will display as 0.0kg. If it's not 0.0, press the Zero button. Apply some weight to the bars to confirm the connection is working.

**Note:** After 15 minutes of inactivity, wireless load bars will disconnect as TWR-5 goes into sleep mode. Press the Power button and go to the Weigh screen to re-connect.

#### **Connecting an EID Reader**

- The TWR-5 internal reader can be used with or without load bars connected. To use the internal reader, you must first connect the antenna panel. Refer to Attaching the TWR-5 to the Antenna panel (p. 6).
  - A Hand-held EID Reader or a permanent reader can be connected to the TWR-5 by either a serial cable or via Bluetooth®.
5. If using a hand-held reader or permanent reader, turn On the EID Reader.
  6. For all readers, turn On the TWR-5.
  7. On the TWR-5, tap Settings > Equipment Connections > EID Reader.
  8. Select how the Reader is being connected. This will be by Bluetooth, Serial cable, USB, or using the internal reader (Panel).

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

**Note:** A mini serial adapter is included with the TWR-5 if a female serial connection is required.

**Important:** You can also connect to your TWR-5 by initiating a Bluetooth® enabled connection from your reader. A passcode of "0000" may be required to complete this connection.

Refer to Bluetooth — Connect EID Reader in the TWR-5 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-5 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-5.
2. On the TWR-5, 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 to set up your drafter.

## START A SESSION

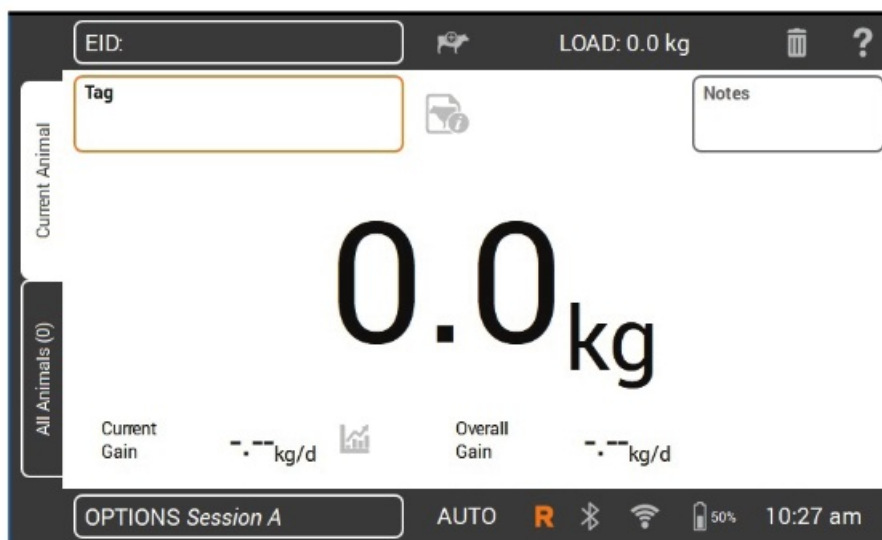
When you gather information about an animal, it is recorded in a Session. Each event such as weighing, adds a record to the current session. A template using pre-determined defaults can be set up and used each time you start a new session.

**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-5 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, traits, 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 load bars 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-5 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 the 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 load bars. This can be altered in the connected load bar settings.
- If using traits within a session, the selected traits will appear down the right side of the screen. A maximum of 9 traits can be used in any one session. Once an animal is identified, simply tap the trait box to assign a value.


## Reading tags with the Internal Reader

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

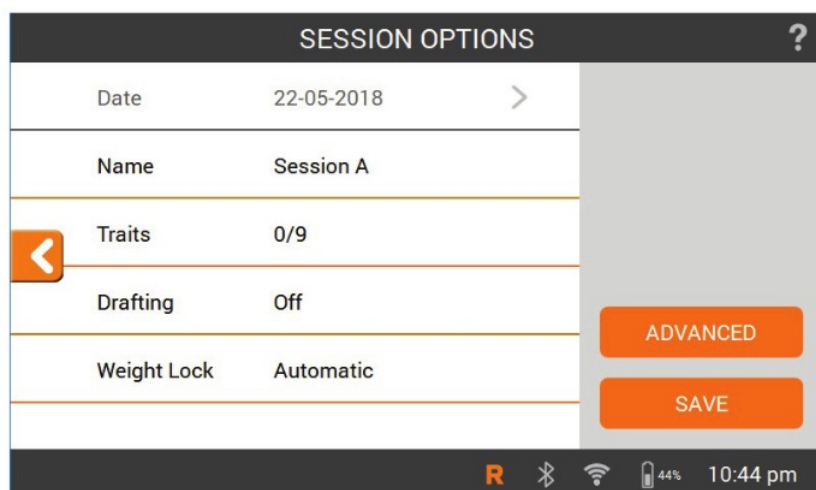
- If no load bars are detected, the internal reader will always be active, ready to read a tag, and will display as



- If load bars are connected, the footer will display  until weight is detected on the platform.

- The symbol will then change to,  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

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 to draft On or Off, add traits to the session, 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, add traits to the session, or configure the Advanced settings. New traits are set up in the Settings menu before they can be added to a session.

## VIEW ANIMAL INFORMATION

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


tap **All Animals**,

tap .

LOAD: 0.0 kg ?

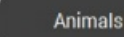
		Session Stats				Animals	
	Count	Min kg	Max kg	Avg kg	Current kg/d	Overall kg/d	Total kg
ALL ANIMALS	71	381	574	466.7	1.39	0.53	33136
<b>DRAFT GROUPS</b>							
1. Group 1	24	381	449	421.8	1.42	0.51	10122
2. Group 2	33	451	499	471.5	1.24	0.53	15560
3. Group 3	14	500	574	532.4	1.69	0.57	7454

OPTIONS PROGRESS WEIGH AUTO R 100% 10:32 am

Tap  to view weight range of animals.



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

tap .

LOAD: 0.0 kg ?

Current Animal

All Animals (71)

Session Stats


Animals

	VID	Weight kg	Current kg/d	Overall kg/d	Notes
71.	14-161	421	1.15	0.47	
70.	14-130	502	0.31	0.60	
69.	14-127	461	1.77	0.54	
68.	14-126	461	-0.54	0.59	
67.	14-128	488	2.82	0.49	
66.	14-125	568	3.41	0.66	
65.	14-118	380	2.69	0.44	

OPTIONS PROGRESS WEIGH

AUTO R 100% 10:32 am

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.



## TRANSFER SESSION DATA

Download the Gallagher Animal Performance app from Google Play or the App Store.



If required, follow the prompts and create a Gallagher Account.



- On the TWR-5, press the Synchronise icon on the Home screen.

**Note:** The first time you sync data from the TWR-5 you will be prompted to enter your registration credentials on the scale.

- The Syncing process will automatically begin and any differences in session and animal data on the TWR-5 or in Gallagher Animal Performance will be updated. After syncing, the same data will be present on the TWR-5 and Animal Performance.
- To view your animal data, open the Gallagher Animal Performance Mobile App and sync your data or log in to the Gallagher Animal Performance Web App: <https://am.app.gallagher.com/amc/dashboard>

## CARE AND MAINTENANCE

The TWR-5 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-5 in good condition.

- Do not submerge the TWR-5 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-5 for a long time, store it with the battery charged.

### Software Updates

It is important to update the TWR-5 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 by signing into Gallagher Animal Performance on your PC: <https://am.app.gallagher.com/amc/dashboard>



1. Select Software from the Animal Performance navigation pane.
2. Follow the on-screen instructions, and select the device to be upgraded.
3. Press Download to begin the software update for your selected device.
4. The software upgrade file will be saved to your Downloads folder. Copy it to a USB flash drive.
5. Turn off the TWR-5 and Insert the USB flash drive.
6. Turn on the TWR-5. The USB stick is recognized and the upgrade process begins.
7. Follow the instructions on the screen to complete the update.

## APPROVALS AND STANDARDS



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 MS 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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# DECLARATION OF CONFORMITY

We, Gallagher Group Ltd  
Kahikatea Drive  
Hamilton  
New Zealand  
[www.gallagher.com](http://www.gallagher.com)



Declare that the products:

**G02602**      **TWR-1 WEIGH SCALE AND READER**  
**G02606**      **TWR-5 WEIGH SCALE AND READER**

conform to the Radio Equipment Directive:	2014/53/EU
conform to the EMC Directive:	2014/30/EU
conform to the RoHS 2 Directive:	2011/65/EU

Compliance has been demonstrated by testing the product to the following standards, which have been published in the Official Journal of the European Communities:

<b>ETSI EN 300 330 v2.1.1 (2016-11):</b>	Report
Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	1730.0

<b>ETSI EN 301 489-1 v1.9.2 (2011-09):</b>	1730.0
Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements	

<b>ETSI EN 301 489-3 v2.1.1 (2017-03):</b>	1730.0
ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonized Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	

<b>EN 55032:2012:</b> Incorporating corrigenda December 2012 and September 2013 Electromagnetic compatibility of multimedia equipment – Emissions requirements	1730.0
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RFID transmit frequency:	134.2 kHz:	transmit power less than 90mW
Bluetooth transmit frequency:	2.4 GHz:	transmit power less than 15mW
Wifi transmit frequency:	2.4 GHz:	transmit power less than 60mW

This declaration is issued under the sole responsibility of the manufacturer, Gallagher Group Ltd.

Authorized Representative:

Ronald Wassink

Position in Organisation:

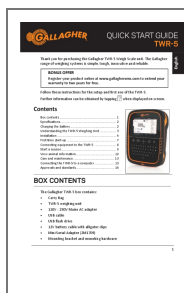
Operations Manager  
Gallagher Europe B.V.  
[www.gallagher.eu](http://www.gallagher.eu)

I hereby declare that the products defined above comply with the above standard and all products supplied under this Declaration will be identical to the sample tested.

Signature:

Date:

	11 <sup>th</sup> September 2018
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