



SmartScale 200

PUBLISHED BY
Gallagher Group Limited
Kahikatea Drive, Private Bag 3026
Hamilton, New Zealand

Copyright© Gallagher Group Limited 2005.
All rights reserved. Patents Pending.

SmartScale 200 User Manual

3E1042 - September 2009

DISCLAIMER Whilst every effort has been made to ensure accuracy, neither Gallagher Group Limited nor any employee of the company, shall be liable on any ground whatsoever to any party in respect of decisions or actions they may make as a result of using this information.

In accordance with the Gallagher policy of continuing development, design and specifications are subject to change without notice.

Developed and manufactured by Gallagher Group Limited, an ISO 9001:2000 Certified Supplier.

Contents

Introduction	1
Installation	2
Installing the Scale bracket.....	2
Installing the loadbars	3
Installing the Scale	3
Power and batteries	4
Charging the battery	4
Battery charge status	6
Low battery warning	6
Low voltage shutdown.....	6
Getting started	7
Loadbars	7
Scale	8
Units of Weight	8
Automatic Weighing	9
Overview	9
Using Automatic Weighing	10
Manual Weighing	11
Overview	11
Using Manual Weighing.....	12
Fine Weighing	13
Overview	13
Using Fine Weighing	13
At the end of the Weighing Session	14
Weight on Scale Memory	15
Zero Tracking	16
Care and maintenance	17
Loadbar and platform options	18
Gallagher Standard Loadbars	18
Gallagher Heavy Duty Loadbars	19
Gallagher Super Heavy Duty Loadbars	19
Gallagher Suspension Load Cell 250 kg	20
Gallagher Suspension Load Cell 500 kg	20
Specifications	21
SmartScale 200 Dimensions	21
General.....	21
Weight increments.....	22
Suspension load cell weight increments.....	23
Waste Electrical and Electronic Equipment	24

Introduction

Thank you for purchasing the Gallagher SmartScale 200 Scale. Gallagher Group Limited have been making agricultural weighing equipment for over 20 years and in that time have earned a reputation for quality equipment that withstands tough agricultural conditions.

The Gallagher SmartScale range of weighing systems is simple, tough, innovative and reliable.

All of the Scale in the SmartScale range can be matched to a choice of loadbar systems, as well as a range of platforms and crates to make an accurate and reliable weighing system.

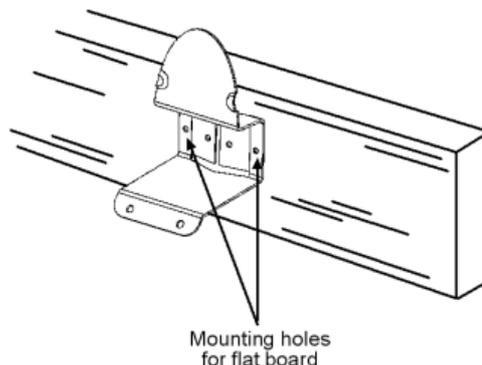
Although designed specifically for agriculture, the SmartScale range is also suited to many industrial applications.

Installation

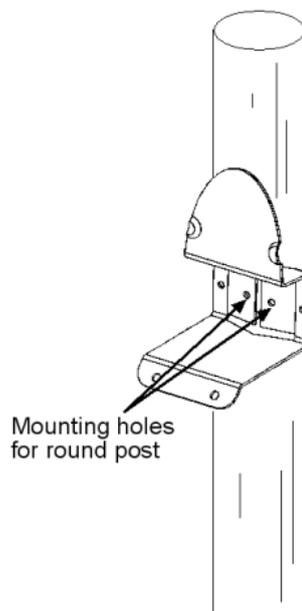
Installing the Scale bracket

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

To mount the bracket on a flat vertical surface, for example a square post or board, use the outer holes.



To mount the bracket on a round post, use the inner holes.



Don't mount the Scale bracket on the weighing crate or chute.

Installing the loadbars

To install the loadbars, follow these steps:

Note: Fit the loadbars as per the manufacturer's instructions.

1. Bolt the platform to the loadbars.
2. Ensure the platform is placed on a flat and level surface. Make sure it is not touching any rails or gates.
3. Either bolt the loadbars to the concrete pad or locate them on studs set into the concrete. This will prevent the platform from moving during the weighing session.
4. Connect the loadbar cables to the Scale.

Note: If you are using non Gallagher loadbars ensure the loadbars are correctly calibrated.

Installing the Scale

The Scale can be either placed on a table top or mounted on the bracket supplied.

Position the Scale:

- away from the platform, cage or chute so that it does not interfere with the flow of animals;
- within easy reach of the loadbar leads;
- in a position convenient for the operator; and
- in a well-lit area.

Power and batteries

During a weighing session, the Scale can be powered by its internal battery alone or by its internal battery and either the battery charger or an external 12 volt battery.

The battery charger connects between an AC outlet and the Scale.

If either the battery charger or an external 12 volt battery is connected to the Scale, the Scale's internal battery will be charged while the Scale is in use.

For optimum performance, switch off the Scale and charge its internal battery for at least five hours. When fully charged, the internal battery on its own will power the Scale continuously for a minimum of eight hours.

Charging the battery

The battery in the Scale can be recharged using either a battery charger or an external 12 volt battery.

Recharging the battery will take up to five hours depending on the level of charge already in the battery. The Scale can be in use or can be switched off while the battery is being charged.

Using the battery charger

To charge the battery using the battery charger, follow these steps.

1. Connect the lead between the battery charger and the Scale.

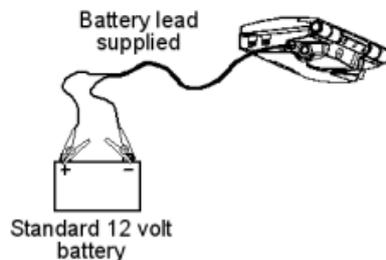


2. Plug the battery charger into an AC outlet and switch on.
3. Open the Scale case and make sure the battery charge icon  on the main screen is flashing. This indicates that the battery is charging and will be displayed whether the Scale is turned on or off.

Using an external 12 volt battery

To charge the Scale's internal battery using an external 12 volt battery, follow these steps.

1. Connect the supplied black and red battery leads to the Scale.
2. Connect the other end of the battery leads to the 12 volt battery.



Connect the **Red** clip to the **Positive** terminal

Connect the **Black** clip to the **Negative** terminal

3. Open the Scale case and make sure the battery charge icon  on the main screen is flashing. This indicates that the battery is charging and will be displayed whether the Scale is turned on or off.

Battery charge status

The amount of charge left in the battery is shown by the battery icon located in the bottom left corner of the Scale's top screen.

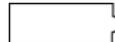
Fully charged



Partially charged



Battery low



The battery icon shows the charge level in the battery under these conditions.

- The Scale is switched on.
- The battery is not being charged.

While the battery is charging, the battery icon cycles between low and full charge.

Low battery warning

When the charge remaining in the battery drops to a very low level, the Scale will beep and the battery charge icon will start to flash. At this stage, about 15 minutes remain before the Scale shuts down.

Low voltage shutdown

When the battery charge drops to a critical level, the Scale will shut down. At this stage it is necessary to recharge the battery.

Getting started

For best performance, charge the internal battery for at least five hours before use.

To obtain the most accurate results:

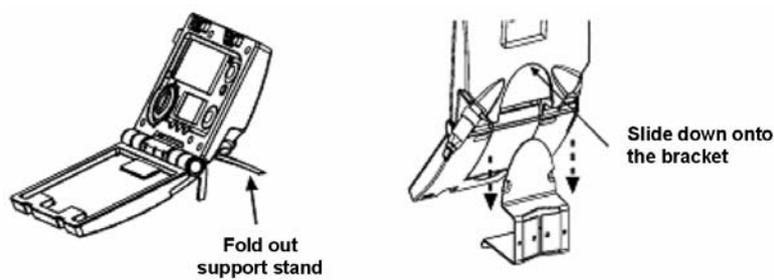
- ensure that the animal is completely on the platform; and
- ensure that the underside of the platform is kept clear of stones, dung, etc.

Loadbars

- Bolt the platform to the loadbars.
- Ensure platform is placed on a flat and level surface, making sure it is not touching any rails or gates.
- To prevent the platform from moving during weighing, either bolt the loadbars to the concrete pad or locate them on studs set into the concrete.

Scale

1. Release the catches on the front of the Scale and open the case.
2. Either slide the Scale onto the bracket, or fold out the support stand and place the Scale on a flat surface.



3. Connect the leads from both loadbars to the Scale.
4. If necessary, connect either the battery charger or an external 12 volt battery.
5. Select the weighing mode. The SmartScale 200 comes with three different weighing modes. To select the required weighing mode, rotate the mode select switch located on the left side of the Scale.

A is the automatic mode

M is the manual mode

F is the fine mode.

6. Press the blue **Zero** button to zero-out any weight that is on the platform.

Units of Weight

The SmartScale can display weights in either kilograms (kg) or pounds (lb).

To choose either unit of weight measure;

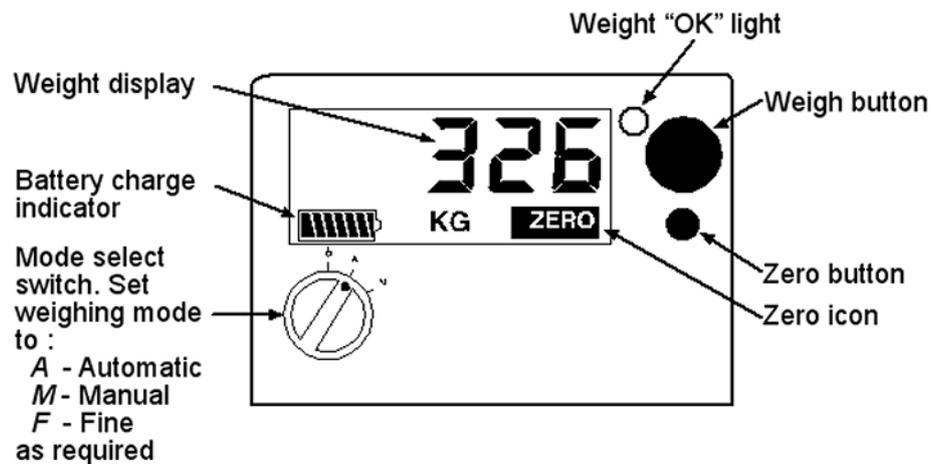
1. Turn the Scale off.
2. Hold down the green Weigh button and turn the Scale from Off to Fine Mode.
3. The word "Unit" will display on the screen.
4. Press the green Weigh button to toggle between "kg" and "lb".
5. When the unit of weight measure that you wish is being displayed, turn the Scale Off.
6. The unit of weight will be saved.

Automatic Weighing

Overview

Automatic mode is recommended for facilities that allow a smooth flow of animals across the platform.

In Automatic mode, the Scale starts weighing the animal as it steps onto the platform. After the Scale has determined an accurate weight, it will lock on to the measurement and display it on-screen. The weight will continue to display on-screen until the next animal steps onto the platform.



Using Automatic Weighing

1. Check that the mode select switch is set to **A**.
2. Check that the weight displayed is zero and that the **ZERO** icon is displayed. If it is not, press the blue **Zero** button.
3. Load the animal onto the platform. Ensure the animal is entirely supported by the platform — no hooves on the ground — and that no object is resting on the animal.
4. The Scale will automatically start weighing the animal. When the Scale has determined an accurate weight, it will lock on to the measurement and display it on-screen.

When the scale has locked on:

- the measurement will remain on-screen;
 - the **Weight OK** light will glow;
 - **OK** will display on the screen; and
 - the Scale will beep.
5. If the weight has locked on and you want to re-weigh the animal, press the green **Weigh** button. The scale will again weigh the animal and lock on to the measurement.
 6. Write down the weight of the animal if desired.
 7. Move the animal off the platform. The measurement will continue to display on-screen.
 8. The Scale will attempt to compensate for any accumulation of mud or dung left on the platform. If it is successful, the **ZERO** icon will display.

If the zero icon does not display, or it flashes, press the blue **Zero** button.

9. Load the next animal onto the platform. The Scale will start weighing the animal as it steps onto the platform.

Manual Weighing

Overview

Manual mode is recommended for facilities that do not allow a smooth flow of animals across the platform or where the animals are restless. This mode allows the operator to decide when the measurement is made.

In Manual mode, the Scale starts weighing the animal after the operator presses the green **Weigh** button. When the Scale has determined an accurate weight, it will lock-on to the measurement and display it on-screen. The weight will continue to display on-screen until the green **Weigh** button is again pressed.

Using Manual Weighing

1. Check that the mode select switch is set to **M**.
2. Check that the weight displayed is zero and that the **ZERO** icon is displayed. If it is not, press the blue **Zero** button.
3. Load the animal onto the platform. Ensure the animal is entirely supported by the platform — no hooves on the ground — and that no object is resting on the animal.
4. Press the green **Weigh** button. After the Scale has determined an accurate weight, it will lock on to the measurement and display it on-screen.

When the Scale has locked on:

- the measurement will remain on-screen;
 - the **Weight OK** light will glow;
 - **OK** will display on the screen; and
 - the Scale will beep.
5. If the weight has locked on and you want to re-weigh the animal, press the green **Weigh** button. The Scale will again weigh the animal and lock on to the measurement.
 6. Write down the weight of the animal if desired.
 7. Move the animal off the platform. The measurement will continue to display on-screen.
 8. The Scale will attempt to compensate for any accumulation of mud or dung left on the platform. If it is successful, the **ZERO** icon will display.

If the zero icon does not display, press the blue **Zero** button.

9. Load the next animal onto the platform.

Fine Weighing

Overview

Fine mode is recommended for weighing small static loads such as fleeces or produce. In Fine mode, the Scale uses finer weight increments and zero tracking is automatically switched off.

In Fine mode, the Scale operates like a bathroom scale. It displays the weight when a load is placed on the platform and displays zero when the load is removed.

Using Fine Weighing

1. Check that the mode select switch is set to **F**.
2. Check that the displayed weight is zero. If it is not, press the blue **Zero** button. This will reset the Scale to compensate for the weight of any dung or dirt that has accumulated on the platform.
3. Place the load onto the platform.
4. Write down the weight of the load if desired.
5. Move the load off the Scale. The weight indication should return to zero. If it does not, press the blue **Zero** button.

At the End of the Weighing Session

1. To switch off the Scale, set the mode select switch to .
2. Disconnect the loadbar cables.
3. Fit the protective caps to the loadbar cables.
4. Fit the protective caps to the Scale.

Weight on Scale Memory

The Scale will remember the weight on the platform at the time it is switched off. The weight will be restored to the display when the Scale is switched back on.

For example, suppose a wool bale is being packed on the platform and the Scale is turned off when the bale is half full. If the Scale is switched back on while the same bale is still on the platform, the Scale will remember the weight prior to being switched off and display the same weight.

Zero Tracking

During a weighing session, mud, dung and other matter can accumulate on the weighing platform. After each animal leaves the platform, the zero tracking feature attempts to compensate for the weight of this accumulation and, if it succeeds, sets the Scale to zero. If the accumulation weighs more than the Scale's zero tracking range, zero tracking will not work and the **ZERO** icon will flash.

To restore zero, press the blue **Zero** button.

If the Scale consistently fails to restore to zero, check that there are no obstructions under or around the platform or crate.

Note:

The zero tracking feature is enabled when the Scale is set to the Automatic and Manual modes. It is disabled when set to the Fine mode.

Care and maintenance

The SmartScale 200 is a tough and reliable product designed for use in typical livestock environments. However proper care and maintenance can extend its life.

Listed below are guidelines for keeping the SmartScale Scale in good condition.

- Don't submerge the Scale in any liquid.
- Store the Scale in a cool, dry place. Avoid storing it in direct sunlight unless it is housed in the purpose-built outdoor housing.
- After use, clean the Scale with a damp cloth. Take care not to scratch the display.
- Fit the connector caps to keep the connections clean and dry.

Loadbar and platform options

It is recommended that you use Gallagher loadbars with the SmartScale 200.

The SmartScale 200 will recognise most commonly available loadbar sets. To connect to some loadbar sets, adapter cables may be required.

If you are not using Gallagher loadbars, a calibration check will be required prior to first use.

Gallagher Standard Loadbars

Features

- 2000 kg weighing capacity - Available in 600mm (23") and 1000mm (39") lengths
- Tough rugged steel loadbars
- Bottom feet mounting holes extend beyond top covers for ease of bolting down
- Slotted top mounting holes fit all sizes of platforms and crushes
- 6m (18') long tough loadbar cables fitted with high quality connectors
- Fully waterproof
- No rubber mounts

Talk to your Gallagher dealer about the best platform and/or crate for your requirements.

Gallagher Heavy Duty Loadbars

Features

- 3500 kg weighing capacity
- 1000 mm (39") rugged steel loadbars
- Bottom feet mounting holes extend beyond top covers for ease of bolting down
- 6 m (18') long tough loadbar cables fitted with high quality connectors
- Fully waterproof
- No rubber mounts
- High capacity load cells withstand large shock loads
- Heavy steel chassis construction absorbs the harshest of impacts
- Set them and forget them for permanent installation under large crushes.

Talk to your Gallagher dealer about the best platform and/or crate for your requirements.

Gallagher Super Heavy Duty Loadbars

Features

- 4500 kg weighing capacity
- 1000 mm (39") rugged steel loadbars
- Bottom feet mounting holes extend beyond top covers for ease of bolting down
- 6m (18') long tough loadbar cables fitted with high quality connectors
- Fully waterproof
- No rubber mounts
- High capacity load cells withstand large shock loads
- Heavy steel chassis construction absorbs the harshest of impacts
- Set them and forget them for permanent installation under the largest crushes

Talk to your Gallagher dealer about the best platform and/or crate for your requirements.

Gallagher Suspension Load Cell 250 kg

Features:

- 250 kg capacity loadcells
- Replaces mechanical scale for hanging crates
- Compact sturdy design
- No rubber to delaminate or rot
- Spiral spring metal reinforced cable
- High quality moisture proof connectors

Gallagher Suspension Load Cell 500 kg

Features:

- 500 kg capacity loadcells
- Replaces mechanical scale for hanging crates
- Compact sturdy design
- No rubber to delaminate or rot
- Spiral spring metal reinforced cable
- High quality moisture proof connectors

Specifications

SmartScale 200 Dimensions

	Metric	Imperial
Length	232 mm	9.25"
Width	212 mm	8.5"
Height	90 mm	3.5"
Weight	2 kg	4.4 lb

General

Operating Temperature	-20° to 50° C -5° to 120° F
Accuracy	± 1%
Environmental protection rating	IP67

Weight increments

For Gallagher Loadbar sets, the weight increments are preset as shown in the table. For other loadbar sets talk to your Gallagher dealer.

Weight Range	Gallagher Standard Loadbars (2000 kg)	Gallagher Heavy Duty Loadbars (3500 kg) and Gallagher Super Heavy Duty Loadbars (4500 kg)
---------------------	--	--

Automatic or Manual modes:

0 - 49.9 kg	200 g increments	500 g increments
50 - 199.9 kg	500 g increments	500 g increments
200 - 499.9 kg	1 kg increments	1 kg increments
500 - 1999.9 kg	2 kg increments	2 kg increments
2000 - 4999.9 kg	Not Applicable	5 kg increments

Fine mode:

0 - 49.9 kg	100 g increments	200 g increments
50 - 199.9 kg	500 g increments	500 g increments
200 - 199.9 kg	1 kg increments	1 kg increments
500 - 1999.9 kg	2 kg increments	2 kg increments
2000 - 4999.9 kg	Not Applicable	5 kg increments

Suspension load cell weight increments

For a suspension load cell, the weight increments are preset as shown in the table.

Weight Range	Gallagher Suspension Load cells (250 & 500 kg)
---------------------	---

Automatic or Manual modes:

0 - 49.9 kg	200 g increments
50 - 499.9 kg	500 g increments
500 - 1999.9 kg	2 kg increments

Fine mode:

0 - 49.9 kg	100 g increments
50 - 499.9 kg	500 g increments
500 - 1999.9 kg	2 kg increments

WEEE



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.



ONE YEAR WARRANTY

**REGISTER ONLINE AT www.gallagherams.com TO EXTEND YOUR WARRANTY TO TWO YEARS
FOR THIS PRODUCT FROM DATE OF PURCHASE**

<p>MODEL</p> <hr style="border-top: 1px dotted black;"/> <p>SERIAL NO</p> <hr style="border-top: 1px dotted black;"/> <p>DATE PURCHASED</p> <hr style="border-top: 1px dotted black;"/>	<p>SELLING DEALER STAMP</p>
---	-----------------------------

This product is guaranteed free from defects in material or workmanship for a period of one year from date of purchase by the end user. Gallagher will repair or replace at their option any faulty product returned to them or their Dealer within this time period. Freight/forwarding costs incurred by the Customer in the warranty process remain the responsibility of the Customer.

This warranty does not cover damage (including subsequent corrosive damage) due to:

- Unauthorised repairs
- Modifications
- Failure to follow care and maintenance guidelines described in the User Manual
- Physical Mishandling
- Lightning Strike
- Floods, fires or acts of God
- Use of an arc welder on loadbars or equipment or steelwork attached to loadbars while a WeighScale is connected

Gallagher, their Distributors, and their Dealers accept no responsibility for the misuse of this product.

Gallagher, their Distributors, and their Dealers accept no responsibility for any accident caused subsequently to any tampering with or modification to or for the misuse of this product.

Gallagher, their Distributors, and their Dealers accept no liability for consequences and/or secondary

damages or losses of any kind sustained directly or indirectly, a result of failure or defect in any product, material, installation or service.

AUSTRALIA

Gallagher Australia Pty Ltd,
14 Somerton Park Drive, Campbellfield,
Melbourne, Victoria, 3061

EUROPE

Gallagher Europe Bv,
Heksum 9, 9774 TH, Adorp (Gn),
Netherlands

IRELAND

Gallagher Power Fence Systems (IRL),
Kinsale Road,
Cork

NEW ZEALAND

Gallagher Animal Management Systems,
181 Kahikatea Drive,
Private Bag 3026, Hamilton 3240

SOUTH AFRICA

Rudd Products,
Bush Willows, 24 Begonia Road,
Kyalami Agricultural Holdings
Kyalami, Johannesburg, Gauteng, 1684

USA / CANADA

Gallagher USA Inc,
130 W 23rd Avenue,
North Kansas City,
MO 64116 Missouri

**PLEASE READ INSTRUCTIONS CAREFULLY BEFORE USE.
PLEASE COMPLETE DETAILS AND KEEP WITH YOUR RECEIPT — IT IS YOUR PROOF OF
WARRANTY**