



WEIGH SCALE
W610 v2

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Weigh Scale W610 User Manual USA
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INTRODUCTION

Thank you for purchasing the Gallagher Weigh Scale W610.

Gallagher has been making agricultural weighing equipment for over 75 years. In that time we have earned a reputation for the manufacture of quality equipment that is simple, tough, innovative and reliable.

The Weigh Scale range of Weigh Scales is specifically designed to accurately weigh live animals. However the Gallagher range is also well suited to weighing static loads and can be used for this purpose in industrial applications.

As well as weighing, Weigh Scale W610 includes the following features;

- You can type animal management information in plain text using the QWERTY keyboard.
- You can identify animals using Electronic IDs and/or Visual Tag Numbers.
- You can record a condition score or note for each animal.
- You can use graphs as an aid to analyzing changes in animal weight over time.
- You can sort up to 5 ways by weight.
- You can view session statistics, analyzed by sort group for the current session.
- You can view statistics for closed sessions.
- You can edit the Visual Tag Number in the current session.
- You can store sorting limits with the session. These sorting limits are sent back to APS with the session.

CARE AND MAINTENANCE

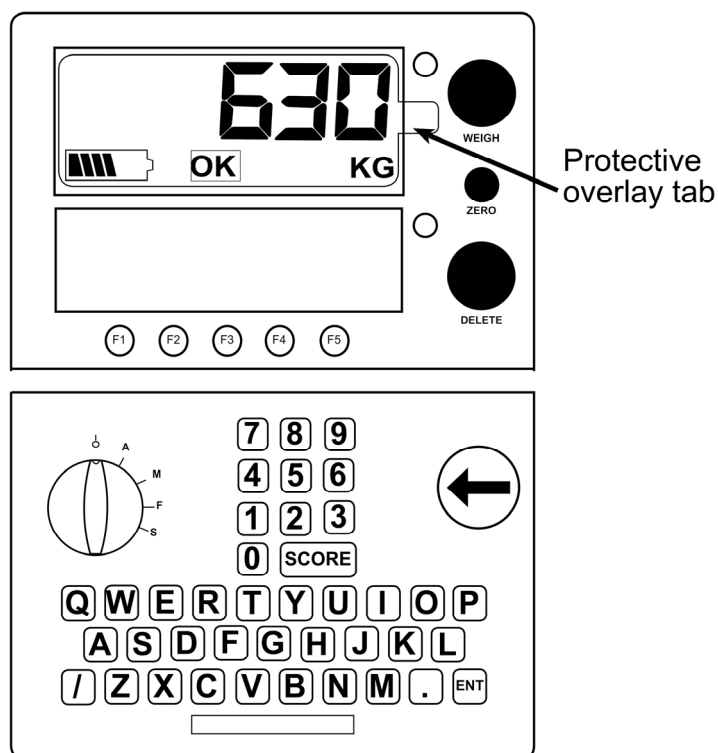
The Weigh Scale W610 is a tough and reliable product designed for use in typical livestock environments. However, proper care and maintenance can extend its life.

Listed below are guidelines for keeping the Weigh Scale in good condition:

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

First-time use

When you open the Weigh Scale the first time, you will find that the display screen is covered with a transparent overlay. The overlay is printed with the number 630 and other characters.



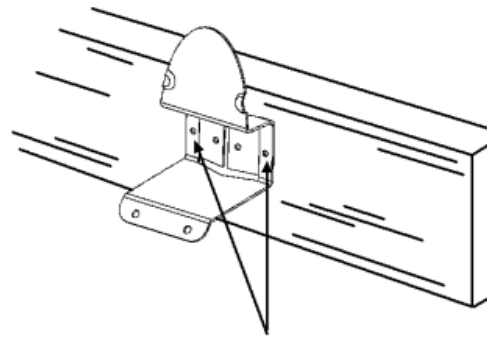
Remove this overlay before starting to use the Weigh Scale. The overlay is easily removed after first grasping the tab.

INSTALLATION

Installing the Weigh Scale bracket

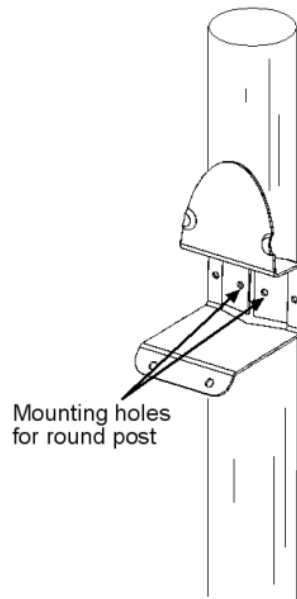
The bracket can be mounted on a flat vertical surface, or on a round post.

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



Mounting holes
for flat board

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



Mounting holes
for round post

Don't mount the Weigh 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 Weigh Scale.

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

Installing the Weigh Scale

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

Position the Weigh Scale:

- 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), and
- in a well-lit area

POWER AND BATTERIES

During a weighing session, the Weigh 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 Weigh Scale.

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

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

Battery life may be reduced if the Weigh Scale is being used to power an Electronic ID reader.

Charging the battery

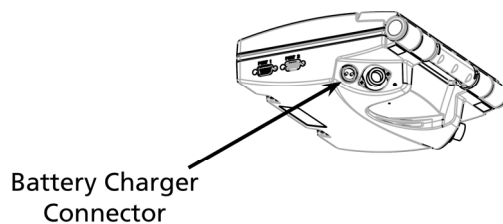
The battery in the Weigh Scale can be recharged using either a battery charger or an external 12 volt battery.


Recharging the battery will take up to sixteen hours depending on the level of charge already in the battery. The Weigh 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 Weigh Scale.

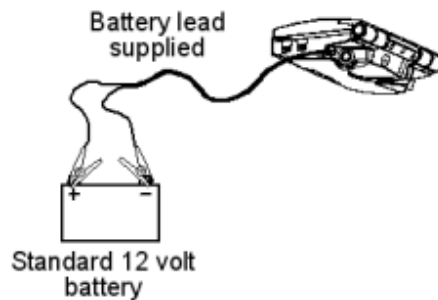


2. Plug the battery charger into an AC outlet and switch on.
3. Open the Weigh Scale case and make sure the battery charge icon  on the main screen is flashing. This indicates that the battery is charging and will be displayed whether the Weigh Scale is turned on or off.

Using an external 12 volt battery


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

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



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



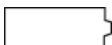
Connect the **Black** clip to the **Negative** terminal.

3. Open the Weigh 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 Weigh Scale is turned on or off.


Battery charge status

The battery icon displays in the bottom left corner of the Weigh Scale's upper screen.

It is important to note that the battery icon will only ever show the actual amount of charge left in the battery when the Weigh Scale is turned on and disconnected from external power.

Fully Charged		Battery Icon bars are all displayed constantly.
Partially Charged		Battery Icon shows first four bars constantly.
Battery Flat		No Battery Icon bars are displayed.

When the Weigh Scale is connected to the external power supply the battery icon will display the charging status.

Charging		Battery Icon shows all the bars constantly filling and then disappearing.
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Low battery warning

When the charge remaining in the battery drops to a very low level, the battery charge icon on the Weigh Scale will start to flash and four beeps will sound every 30 seconds. After about 15 minutes, the Weigh Scale will shut down.

Low voltage shutdown

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

Battery voltage warning

If the voltage supplied from the charger to the Weigh Scale is not within the required range (10.5V - 15V) or the battery temperature rises above 120° F the Weigh Scale will beep and the battery charge icon will start to flash. It is important that you remove the charger from the Weigh Scale immediately.

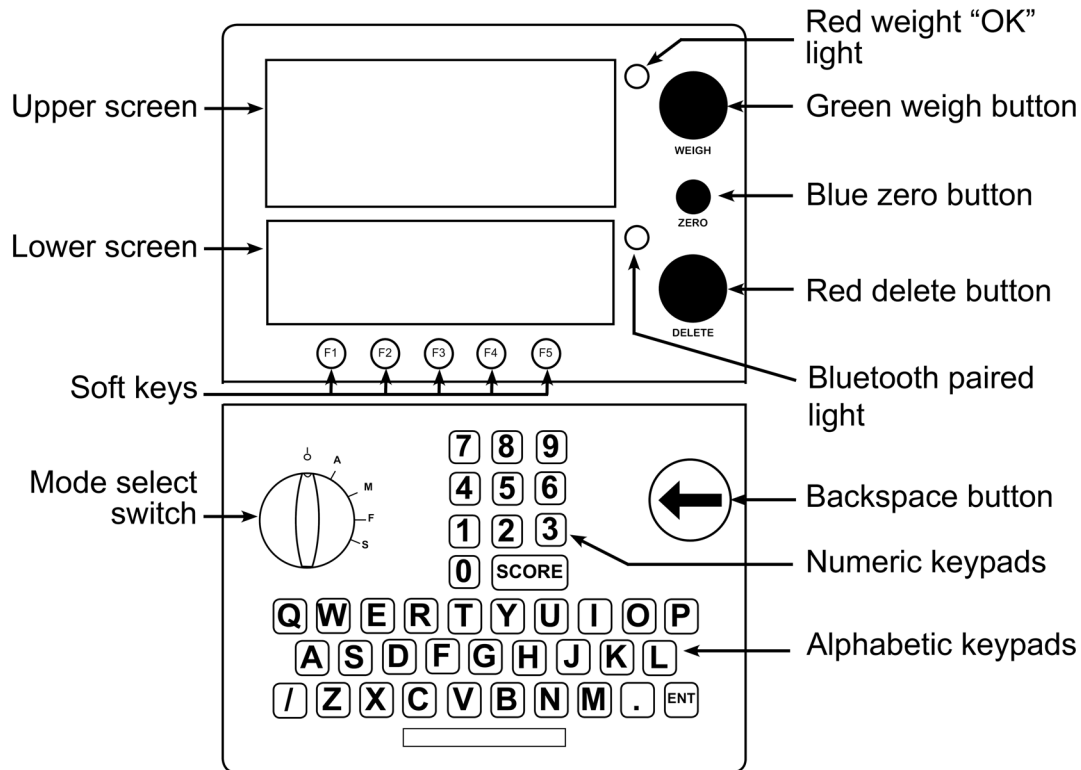
Battery conditioning

When the Weigh Scale detects the battery voltage is very low, it will perform a battery conditioning charge process. This process will protect the battery by limiting the amount of current that is used to recharge the battery cells. Due to the current limitation, the charge cycle will take 16 hours to complete. By performing a full conditioning charge, the life of the battery will be greatly extended.

The Weigh Scale can be used while the battery conditioning is in progress. The remaining charge time will be displayed on the lower screen when the Weigh Scale is switched off.

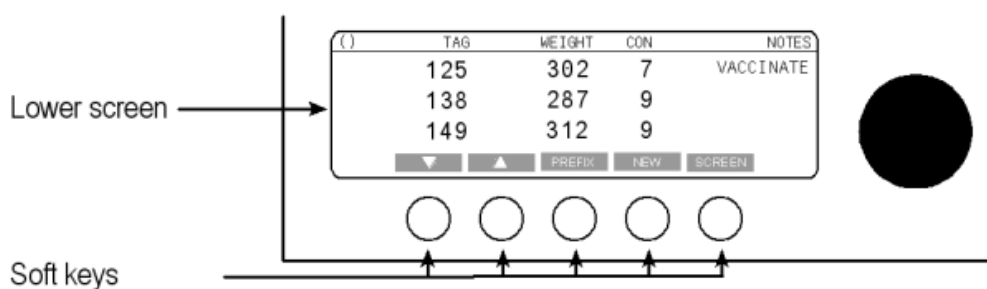
Note: If the charge cycle is interrupted, the Weigh Scale will attempt a conditioning cycle the next time it is plugged into a charger.






THE WEIGH SCALE'S CONTROLS



Soft Keys

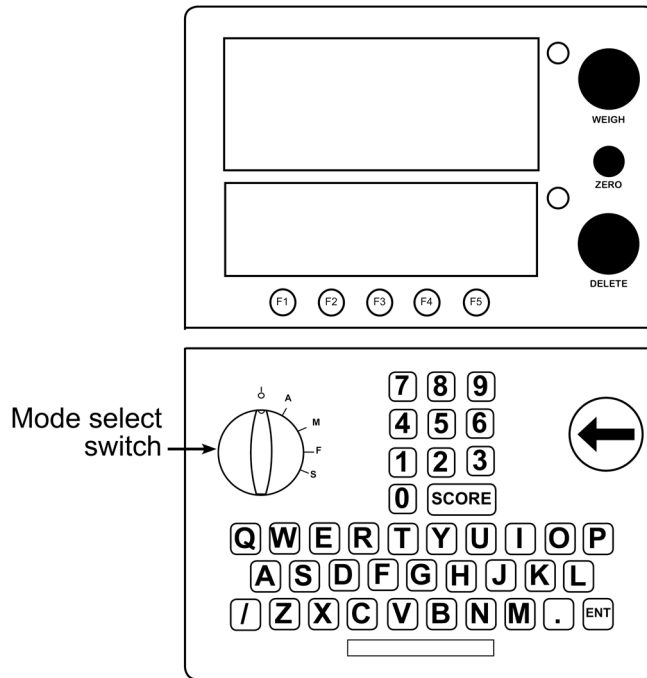
Five soft keys are arranged along the bottom of the lower screen. The function of these soft keys changes depending on what the lower screen displays. For any given screen, not all soft keys have a function. Those that do are labeled in the screen.






- Buttons like ,  and  allow movement vertically up and down the screen.
- Buttons like  and  allow movement horizontally across the screen.
- The function of other buttons is described elsewhere in this user manual.

The mode select switch

The Weigh Scale can operate in three weighing modes and a setup mode. The mode select switch is located on the left hand side of the Weigh Scale.



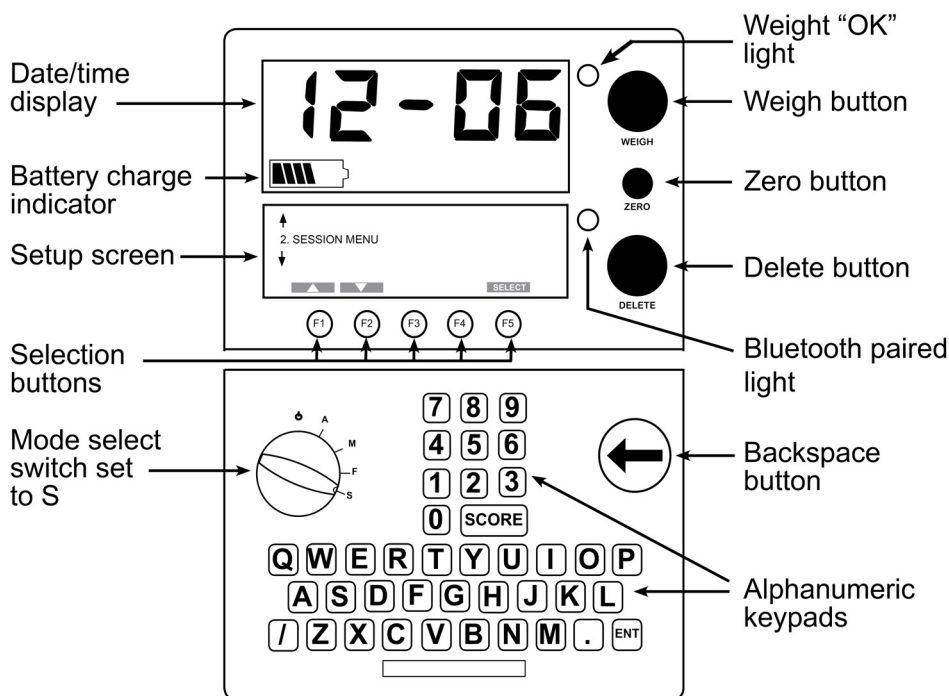
The mode select switch has five positions: , **A**, **M**, **F** and **S**. Immediately after you turn the switch to any position except , explanatory information will display on the lower of the two Weigh Scale screens. The explanatory information will display only for a few seconds; after it disappears, the screen displays information relevant to the selected option.

	This position turns the Weigh Scale off.
A	This position selects weighing in Automatic mode. You can also store Electronic IDs and update the Weigh Scale's cross-reference table when there are no loadbars connected.
M	This position selects weighing in Manual mode. You can also record animal information, without weighing, when there are no loadbars connected.
F	This position selects weighing in Fine mode. It is designed for static-load weighing. .
S	This position accesses the setup options.

SETUP

To access the Setup menu, turn the mode select switch to **S**.

The setup menu displays on the lower of the two screens on the Weigh Scale. In setup mode, the main screen normally displays the time in 24 hour format. Every minute the main screen momentarily displays the date, then automatically reverts to displaying the time again.

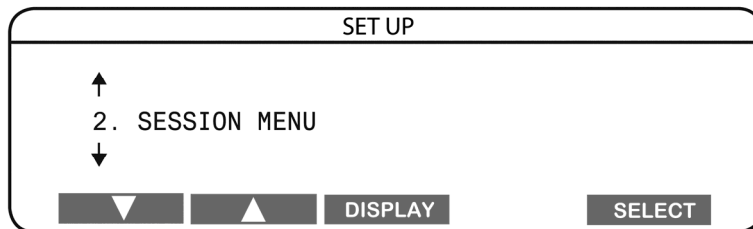


The setup menu contains six options:




1. SORT MENU - select the sorting mode and specify the sorting limit(s).
2. SESSION MENU - select a session and view, print or delete the session.
3. SET TIME AND DATE - set the current time and date.
4. USER OPTIONS - select weight units, turn Visual Tag Number checking on or off, turn live printing on or off, turn ADG display on or off.
5. COMMUNICATIONS - set up a connection to a computer, printer, Electronic ID reader or other external device and enable sorting via the auto Sorter.
6. SELECT COUNTRY - for a specific country, selects a language and country-specific terminology and weight unit.

Selecting a setup option

When you turn the mode select switch to **S**, one of the setup menu options is displayed.



To select an option from the Setup menu:

1. Press the  or  soft key to display the required menu option.
2. Press .




Alternatively, using the keypad, you can press the number of the menu item that you want to select.

For example:

- to select the Session Menu, press **2**,
- to select Communications, press **5**.

To change the screen contrast:

The contrast on the screen may need to be made lighter or darker for ease of viewing.

1. Press  once.
2. Follow the on-screen instructions to alter the contrast.
3. Press  again to change the backlighting. See *Backlighting* (p 12) for further details.
4. Press  a third time to return to the Setup menu.

For more information about each of the setup menu items, refer to:

- *Sort Menu* (p 14)
- *Session Menu* (p 17)
- *Set the Time and Date* (p 23)
- *User Options* (p 24)
- *Communications* (p 28)
- *Select Country* (p 32)

Backlighting

The default setting for this option is OFF. When backlighting is turned on, both the upper and lower LCD screens are backlit for added visibility.

Using backlighting:

1. From a Setup menu option, press **DISPLAY** twice.
2. Press **TIMER** repeatedly to scroll through the list until you find the backlight option you require.
3. Press **DISPLAY** again to return to the Setup menu.

The options for backlighting are as follows:

Options	Description
<p>DISPLAY BACKLIGHT</p> <hr/> <p>To change the backlight of the screen Press GREEN key for darker Press RED key for lighter Current Setting: Off</p> <p>DISPLAY TIMER</p>	Backlighting is switched off.
<p>DISPLAY BACKLIGHT</p> <hr/> <p>To change the backlight of the screen Press GREEN key for darker Press RED key for lighter Current Setting: 50% - On for 30 seconds</p> <p>DISPLAY TIMER</p>	The backlighting will automatically turn off after 30 seconds of inactivity. The backlight will switch back on in the event of further activity.
<p>DISPLAY BACKLIGHT</p> <hr/> <p>To change the backlight of the screen Press GREEN key for darker Press RED key for lighter Current Setting: 50% - On for 60 seconds</p> <p>DISPLAY TIMER</p>	The backlighting will automatically turn off after 1 minute of inactivity. The backlight will switch back on in the event of further activity.
<p>DISPLAY BACKLIGHT</p> <hr/> <p>To change the backlight of the screen Press GREEN key for darker Press RED key for lighter Current Setting: 50% - On for 120 seconds</p> <p>DISPLAY TIMER</p>	The backlighting will automatically turn off after 2 minutes of inactivity. The backlight will switch back on in the event of further activity.
<p>DISPLAY BACKLIGHT</p> <hr/> <p>To change the backlight of the screen Press GREEN key for darker Press RED key for lighter Current Setting: 50% - On for 300 seconds</p> <p>DISPLAY TIMER</p>	The backlighting will automatically turn off after 5 minutes of inactivity. The backlight will switch back on in the event of further activity.

Options	Description
<p style="text-align: center;">DISPLAY BACKLIGHT</p> <hr/> <p style="text-align: center;">To change the backlight of the screen Press GREEN key for darker Press RED key for lighter Current Setting: 50% - Always On</p> <p style="text-align: center;"> DISPLAY TIMER </p>	<p>If the backlight option is switched to Always On, and the Weigh Scale is using an external power supply, the back-lighting will stay on until;</p> <ul style="list-style-type: none"> • the Weigh Scale is switched off, or • the backlight option is changed to OFF, or • the Weigh Scale changes to battery power, followed by 5 minutes of inactivity.

Note: User activity is determined as:

- User input on keyboard, pushbuttons or rotary dial
- Any Electronic ID data received from RS232 or Bluetooth ports
- A weight change greater than 5kg or 11lb.

Sort menu

The Sort menu lets you set:

- the sorting mode,
- the sorting limits,
- the sorting gate number (if you have set up auto sorting), and
- a sorting gate for when sort limits are turned off.

Sorting can be completed:

- **Manually**
For manual sorting the Weigh Scale displays the appropriate sorting gate to open.
- **Automatically**
Using an autosorter.

Manual & Automatic sorting

To set up the Weigh Scale for manual or auto sorting, complete the following:

1. **Manual Sorting:** Ensure that no port is set for sorting.

For further details see *Communications* (p 28).

Automatic Sorting: Configure the connection between the Weigh Scale and the Sorter. For further details see *Communications* (p 28).

2. Set the required sort mode.

- a) Turn the mode selection switch to **S**.


- b) Select **1. DRAFT/SORT MENU** and press the **SELECT** soft key.

The current mode displays at the top of the screen.

- c) Press the **MODE** soft key until the required sorting mode is displayed.


The sorting mode cycles between Sorting Off and Sorting from **2-way** up to **5-way**.

3. Set the required sort limits and gate number.


- a) Press the  soft key to select the sort limit you wish to change.

To change a gate number:

Note: If no sorter is enabled in the Communications menu (Manual sorting), then gate numbers are not displayed.

- Press  to delete the existing gate number.
- Use the keypad to enter the new gate number (0 to 5).

To change a sort limit:

- Press  to delete the existing sort limit.
- Use the keypad to enter the new sort limit.

Sort limits can be set using one decimal place up to 999.9kg.

Note:

Set up the sort limits so that the smallest is at the top and the largest is at the bottom. If you enter the sort limits out of order, the Weigh Scale reorders them once you press **OK**.

- b) Repeat steps for all required changes.

4. Press **OK** to save the changes and return to the **SET UP** menu.

Notes:

- To select a default sorting gate when sort limits have been turned off:
 - a) Press the OFF soft key.
 - b) Press CHANGE to scroll through the options either selecting OFF or a gate number for animals to be sorted to, if a sorter is connected when sorting is turned off.

- On the 2 WAY SORTING screen, gate numbers are shown against the H Gates and L Gates labels.
 - **H Gates** sets the gate number for animals that weigh anything **H**igher than the Sort Limit.
 - **L Gates** sets the gate number for animals that weigh the Sort Limit or anything **L**ower than the Sort Limit.
- On the 3 WAY SORTING screen, gate numbers are shown against the H Gates, C Gates and L Gates labels.
 - **H Gates** sets the gate number for animals that weigh anything **H**igher than the Upper Limit.
 - **C Gates** sets the gate number for animals that weigh anything higher than the Lower Limit and inclusive of the Upper Limit.
 - **L Gates** sets the gate number for animals that weigh the Lower Limit or anything **L**ower than the Lower Limit.
- On the 4 WAY or more SORTING screen, gate numbers are shown as numbers, with gate 1 as the lowest limit.

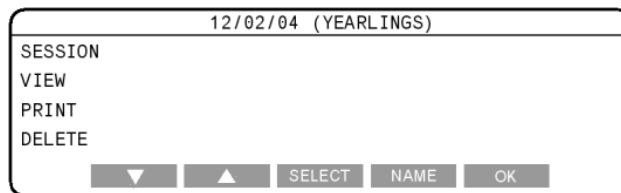
Session menu

The **SESSION MENU** lets you select and then view, print, rename or delete sessions.

To display the Session Menu screen:

1. Turn the mode selection switch to **S**.
2. Select **SESSION MENU**.

The following screen displays:






The currently selected session displays in the title bar of the screen.

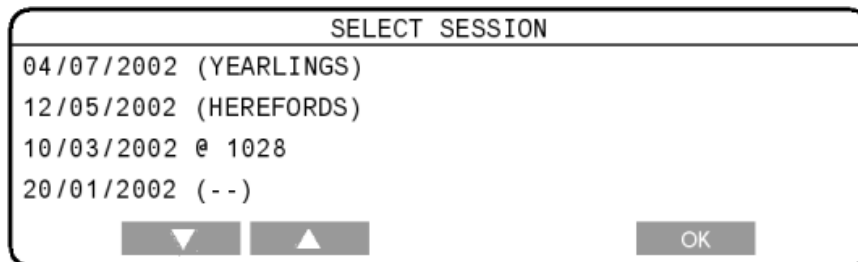
You can use the  and  buttons to move between the options.

Selecting a session




To select a particular session, complete the following steps:

1. Turn the mode selection switch to **S**.
2. Select **SESSION MENU**.
3. Press the  or  soft keys to highlight **SESSION**.
4. Press .

A list of the stored sessions in the Weigh Scale displays.



Each session is identified by the date the session was created and by the session name (if one was entered). If the session has no name, the time (using the 24 hour clock) the session was created displays (preceded by the "@" character).

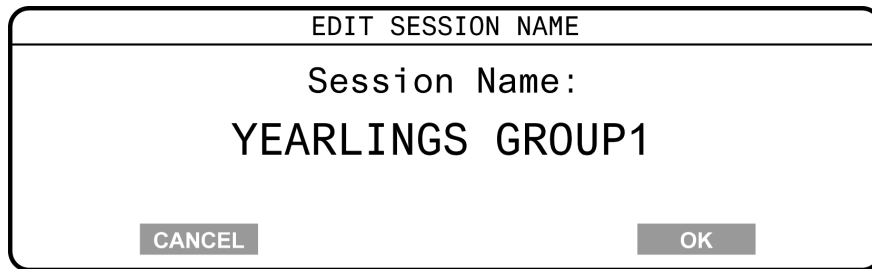
5. Press the  or  soft keys to highlight the required session.
6. Press  to select the session and return to the Session menu.

Renaming a session


You can rename any of the Standard sessions stored on the Weigh Scale from the Session menu.

To rename a session, complete the following steps:

1. Select the session, see *Selecting a Session* (p 18).
2. Press the **NAME** soft key.



The existing session name displays on the screen.

3. Press the  button to delete characters, as required.

Type in the new name, using the Weigh Scale keypad.




The session name can contain up to 17 characters.

4. Press **OK** to save the new session name and return to the Session menu.

The new session name is displayed in the title bar of the screen.




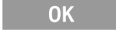
Viewing a session



To view the details of a session, complete the following steps:

1. Select the session, see *Selecting a Session* (p 18).
2. Press the  or  soft keys to highlight **VIEW**.
3. Press the  soft key.

The details of the session display.

TAG	WEIGHT	CON
189	250.6	1
145	270.8	2
168	280.0	2

4. Press the  and  soft keys to scroll through the details of the session.




The details include the Visual Tag Number, weight, or condition score for each record.

5. Press  to return to the Session menu.

Note: You cannot edit the weight records.




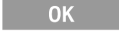
Displaying statistics for a closed session

To display the statistics of a closed session, complete the following steps:

1. Select the session, see *Selecting a Session* (p 18).
2. Press the  or  soft keys to highlight **VIEW**.
3. Press the  soft key.

The details of the session display.

TAG	WEIGHT	CON
189	250.6	1
145	270.8	2
168	280.0	2

4. Press the  soft key.






Depending on the method of sorting (by weight or not) one of the following screens displays:

- Weight Stats
- Sort Stats

For details on these stats screens see *Statistics screen* (p 38).

Printing a session





Make sure a serial printer is connected to the Weigh Scale. To configure the port that the printer connects to on the Weigh Scale, see *Communications* (p 28) later in this section.


1. Select the session, see *Selecting a Session* (p 18).
2. Press the  or  soft key to highlight **PRINT**.
3. Press  to print the session details or press  to return to the Session menu.
4. Press  to print the session on the attached printer.

Note: If a printer is not installed the Weigh Scale displays "No Printer Available".

Deleting a session

Note: Deleting a session removes it permanently from the Weigh Scale's memory. Before deleting a session it is recommended that you copy weighing sessions to your computer using the APS software supplied with the Weigh Scale. Using APS, you can restore the deleted session to the Weigh Scale, by copying it from the computer at a later date. See *Interfacing Software: APS* for more information.

1. Select the session, see *Selecting a Session* (p 18).
 2. Press the  or  soft keys to highlight **DELETE**.
 3. Press .
- A screen displays asking you to confirm you want to delete the session.
4. Do you want to delete the session?
 - If yes, press .

The session is deleted and the Session menu displays.
 - If no, press .

The Session menu displays. The session is not deleted.

Set the time and date

The **SET TIME AND DATE** screen lets you set the current time and date on the Weigh Scale's internal clock.

The system time and date is recorded each time you create a new weighing session. You can view the current system time on the Weigh Scale's main screen when it is in Setup mode.

Note: The date format changes depending on how the country options are set up, see *Select a country* (p 32). In New Zealand and Australia the date format used is DD-MM-YYYY. In the USA the date and time format is MM-DD-YYYY. In French Canada the date format used is YYYY-MM-DD.

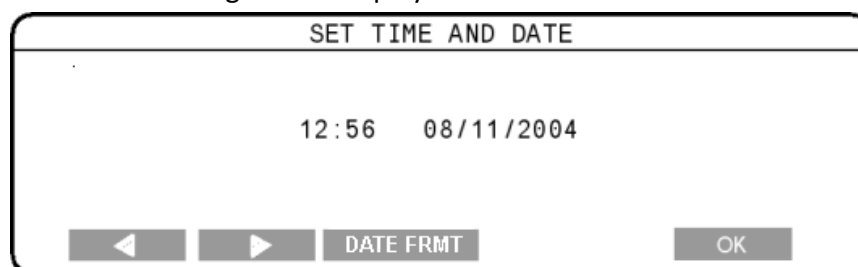
The time must be entered in 24-hour format i.e.

- 8:35 pm would be 20:35
- 8:35 am would be 08:35.

To change the time or date, complete the following steps:

1. Turn the mode selection switch to **S**.
2. Select **SET TIME AND DATE**.

The following screen displays.




1. Press the  or  soft keys to move to the digit that you want to change.

The currently selected digit flashes.

2. Enter the new digit using the keypad.

The flashing digit is replaced with the typed number and the cursor moves to the next digit.

3. Press the **Date Frmt** button to change the display and format of the date.
 - Press the **Format** button to scroll through the 3 options.
 - To change the forward slash (/) that separates the day, month and year, press the **Separator** button to scroll through the options.
4. Press  to save the new time and date format and return to the Setup menu.

Note: The colon that separates the hours and minutes is not able to be changed.

User options

This screen enables you to see the following user options:





- Weighing Mode
- EID required
- Weight Units - to use when weighing animals.
- Live Printing
- Tag Checking
- Average daily weight gain (ADG)

Changing a user option

To change a user option, complete the following steps:

1. Turn the mode selection switch to **S**.
2. Select **USER OPTIONS**.

USER OPTIONS	
Weighing Mode	Max speed (Sheep Only)
EID Required	NO
Weight Units	kg
Live Printing	ON
▼	CHANGE OK

3. Press the  or  soft keys to highlight the option you want to change.
4. Press  to toggle between the available options.
5. Press  to save the changes and return to the Setup menu.

See the following sections for more information on each of the user options.

Weighing Mode (p 25)

EID Required (p 25)

Weight Units (p 26)

Live Printing (p 26)

Tag Checking (p 27)

ADG Display (p 27)

Weighing Mode

Weighing Mode allows you to select the speed at which the scale will lock a weight.

Max Accuracy mode will take longer to lock a weight but will calculate a weight within ~99% of the animal's true weight. This is well suited to weighing larger animals such as cattle or deer, where the speed of weight lock is less critical.

The **Max Speed (sheep only)** mode has been specifically developed to increase the throughput of sheep in an Auto sorter. While less accurate at ~97% of the animal's true weight, this mode is significantly faster and well suited to applications where mob average weights are of interest, or where a high throughput is required.

The **OPTION** soft key allows you to specify when the animal data is recorded in the scale. By default, this will occur once 30% of the animal's locked weight has been removed from the load bars, however there are some applications where this may need to be set higher (so that more weight must be removed) or lower (so that less weight must be removed).

EID required

No

If you do not require an EID to be read by the Weigh Scale, the **EID Required** is set to **NO** (default setting). This option enables the configuration of a sort override gate and a time delay, to which, an animal without an Electronic ID will be sorted to, after the selected time delay has elapsed.

1. From the User Options screen, select **EID Required** and press the **Change** softkey.

The following screen will be displayed:

EID REQUIRED SETUP	
EID Required	NO
Sort Override Gate	None

▼ CHANGE OK

2. Use the arrow key to select **Sort Override Gate** then press the **Change** softkey to select the override gate number. Pressing the **Change** key, cycles through gates 1-5 and back to None.
If no gate is selected (**None**), the animals with no Electronic ID will be sorted

according to their weight, as soon as the weight locks. (The same as those with an EID.)

When a gate is selected (1-5), a further option to configure the time delay before being sorted out (non ID animals) becomes available.

EID REQUIRED SETUP	
EID Required	NO
Sort Override Gate	1
Delay Sort/Weight lock	4 seconds
<div style="display: flex; justify-content: space-between; align-items: center;"> ▼ CHANGE OK </div>	

- Select the Delay Sort / Weight lock and press the **Change** button to select a time for the delay.

The values available are 0, 2, 4, 8, 16 seconds.

Note: The value selected is the time allowed for an EID to be read before the animal is sorted out to the override gate or locking a weight.

Note: These settings only have an effect when the scale is set up for weighing. i.e. the loopback cable is plugged into the scale not the Autosorter.

Yes

When **EID Required** is set to **YES**, and an animal doesn't have a successful read of an EID or it does not have an EID, then it is not released from the sorter. The animal will need to be manually sorted out using the remote control or by other means, depending on the sorter type, as the Scale will have no further communication with the sorter for the current animal.

Note: When sorting and weighing, the weight will not be locked until an Electronic ID is received, no information for the animal will be recorded in the session file. If you apply an Electronic ID tag to the animal, and scan that Electronic ID tag, then the animal will be released, and information will be recorded in the session file.

Weight units

You can specify whether the Weigh Scale uses kilograms (kg) or pounds (lb) for displaying and storing weights.

Live printing

When Live Printing is turned on, the Weigh Scale prints the weight, tag number and condition score each time it locks onto a weight.

Live Printing only occurs if you have connected a serial printer to the Weigh Scale and set the port to Printer. See *Communications* (p 28).

To print the weights at the end of the session, see *Session menu* (p 17).

Note: This feature does not work with a standard computer printer, you need a serial (or ASCII) printer.

Tag checking

If **Tag Checking** is on, the Weigh Scale checks for duplicate Visual Tag Numbers. If a duplicate occurs within a weighing session, the Weigh Scale lets you edit either the current Visual Tag Number or the one that occurred earlier in the session.

A duplicate Visual Tag Number can occur for any of the following reasons:

- The same Visual Tag Number is entered twice during a session.
- A Visual Tag Number is entered using the keypad and an Electronic ID is scanned that has the same Visual Tag Number assigned in the Weigh Scale's cross-reference table.
- Two Electronic IDs are scanned and each has the same Visual Tag Number assigned in the Weigh Scale's cross-reference table.

Note: The Weigh Scale checks for a duplicate Visual Tag Number, not a duplicate Electronic ID. This means duplicate Electronic IDs can occur in a session, provided that the Electronic ID does not have a Visual Tag Number linked to it in the Weigh Scale's cross-reference table.

See *Checking for Duplicate Visual Tag Numbers* (p 60) for instructions on editing duplicate Visual Tag Numbers when they occur.

ADG Display

With **ADG Display** turned on, the Weigh Scale calculates the average daily gain (kg/day or lb/day) of the animal being weighed. It is calculated between the animal's current weight and the most recent previous weight recorded for that animal.

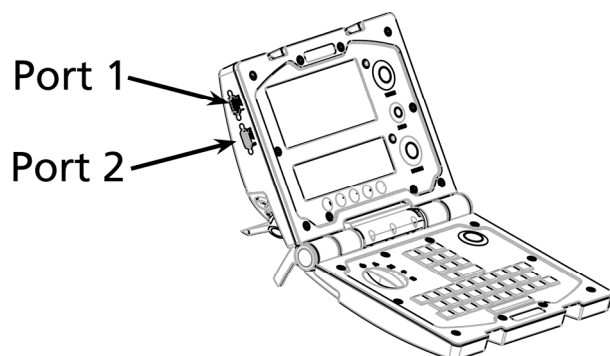
The default setting for this option is ON.

When ADG Display is turned OFF, the indicator does not display the ADG nor recalculate it.

Note: If you do not use the ADG information, it is recommended this option is set to OFF, for improved performance from your Weigh Scale.

Communications

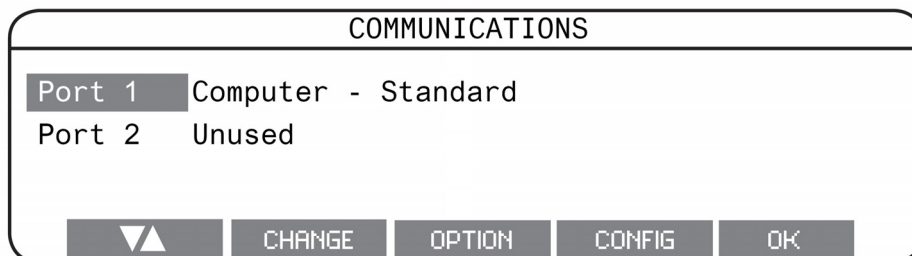
The Communications menu enables you to tell the Weigh Scale what device is connected to each port. The ports are located on the upper left hand edge of the Weigh Scale. Once you attach a device to a port, you must configure the port to suit.



To display the Communications menu, complete the following steps:

1. Turn the mode selection switch to **S**.
2. Select **COMMUNICATIONS**.

A screen similar to the following displays:




Note: Depending on the current settings - different buttons may be displayed.

To connect a device by cable, refer to *Setting up a port* (p 29).

Setting up a port



To select the device to attach to the port, complete the following steps:

1. In the Communications menu, press the  soft key to select the port the device is connected to.
2. Press the **CHANGE** soft key repeatedly until the device that is attached to the port is displayed.

Note: You cannot select a device for one port if it is already selected for the other. For example, you cannot select **Computer - Standard** on Port 2 if it is already selected on Port 1.

3. Press the **OPTION** softkey repeatedly until the correct option for the selected device is displayed.

E.g. Press **CHANGE** to select Sorter, then press **OPTION** to select the type of sorter that is connected, for example, Sorfter - Sheep Auto Sorter (Drafter).

4. Press **CONFIG** to view the advanced options for the port set up. This is not usually needed by most users.
 - a) Press the  or  soft keys to highlight the option you want to change.
 - b) Press **CHANGE** to toggle between the available options.
 - c) Press the **PORT** softkey to set up the selectable baud rate.
 - d) Press **OK** to save the Port settings.

Note: When connecting to Port 2, an extra menu option, **External Port Power** will be displayed. Select ON or OFF for this option which enables voltage between Pin 5 (Ground) and Pin 9 (RI - Ringing Indicator).

5. Press **OK** to save settings and return to the Setup menu.

See the following table for the Port options available on the scale:

Device	Options	Description
Unused		The port is unused (this is the default option).
Computer	Standard	Enables the connection of a computer. Used to copy weighing sessions to or from the computer.
	ASCII	Used for third party applications.

Device	Options	Description
EID Reader -	Standard	Enables the connection of a Gallagher/Standard Electronic ID stick reader with a set baud rate. See <i>Using electronic tags</i> (p 33).
	Destron	Enables the connection of a Destron Electronic ID reader.
Sorter	Sheep Auto Sorter	Enables the connection of a Gallagher Sheep Auto Sorter.
	H-Dale / CWC	Select the type of Auto Sorter connected to the scale.
	Heenan	
	Prattley	
	Racewell	
	Custom	Allows the sorter protocol to be adapted for custom applications.
Data-Output	Printer	Enables the connection to a serial (ASCII) printer. Used to print weighing session data either during or after the session.
	Data Logger	Enables the connection of a data logger. Used to log weight records during a weighing session. Press the CONFIG soft key to select the type of information to be captured.
	Ruddweigh	Enables the connection of devices using the Ruddweigh protocol. Not available in some countries. (NZ/AU only) Press the CONFIG soft key to select the type of information to be transmitted by the scale.

Autosorter

The Weigh Scale can interface directly with autosorters. There are six sorter options for communicating with the connected port.

The Weigh Scale sends sorting commands to the autosorter during the weighing session.

To connect an autosorter with the Weigh Scale, complete the following steps:

1. Turn on the Weigh Scale.
2. Ensure the autosorter is turned off.
3. Connect the autosorter to one of the ports on the Weigh Scale.
4. Set the port to the required option. See *Communications* (p 28) for more information.
5. Turn the autosorter on.

Note: For information about setting up the autosorter into three-way sorting, see *Sort menu*. (p 14)

Power feed to Electronic ID readers

The Weigh Scale can supply power to an Electronic ID reader. Power is supplied only if the reader is connected to Port 2 and if either one of the Electronic ID reader options is selected.

With Port 2, if you nominate a device other than an Electronic ID reader, the power feed is disabled but can be manually configured via the advanced setup menus. If the Electronic ID Reader you are using does not require power from the Weigh Scale, you can connect it to either Port 1 or Port 2.

Select country

The Select Country menu lets you select the required country settings. The Weigh Scale country settings determine the following:

- the language used with the screens and prompts;
- some country-specific terminology; and
- some default options.

To display the Select Country menu, complete the following steps:

1. Turn the mode selection switch to **S**.
2. Select **SELECT COUNTRY**.

The following screen displays:

SELECT COUNTRY	
Canada	TIME AND DATE FORMAT
Ireland (Éire)	dd/mm/yyyy hh:mm
Mexico (México)	LANGUAGE
New Zealand	ENG-NZL
▼ ▲	LANGUAGE DATE FRMT OK

Changing the country and language

1. To change the country, press the ▲ or ▼ soft key to select the desired country.
2. To change the language, press the **Language** soft key.

The following screen displays:

SELECT LANGUAGE	
ENG-NZL: English (NZL)	
ENG-USA: English (USA)	
▼	OK

- Press the ▲ or ▼ soft key to select the desired language.
- Press **OK** to save the language.

The selected language will be displayed on the Select Country screen.

3. Press **OK** to save the changes to the Select Country screen.

IMPORTANT: Ensure that the country set on your Weigh Scale is the same as the country set in APS.

To obtain further language files, refer to *Change APS's language* in your APS User Manual.

USING ELECTRONIC IDS

The Weigh Scale can be used with an electronic ear tagging system. During a weighing session an animal can be identified by reading its Electronic ID. You can use Electronic IDs on their own, or the Weigh Scale can also link and store the Visual Tag Number that identifies the same animal. The Visual Tag Number is whatever alpha numeric (up to 15 characters) code that you choose to enter against an Electronic ID for a given animal. It might be based on the visible number printed on the ear tag or a combination of the number and the color of the ear tag: "1234" or "123RED" etc.

Setting up the Weigh Scale to use Electronic IDs

The Electronic ID reader connects to one of the serial ports on the Weigh Scale. As described in *Communications* (p 28), this port must be set to read **EID Reader - Standard**.

Cross-referencing Visual Tag Numbers

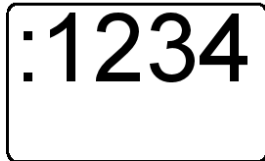
The Weigh Scale maintains a cross-reference table that links an animal's Electronic ID with the animal's Visual Tag Number. Once it makes this link, the Weigh Scale remembers the Visual Tag Number the next time the Electronic ID is read.

The Weigh Scale can store up to 12000 links between Electronic IDs and Visual Tag Numbers. If the limit is exceeded, new links between an Electronic ID and its Visual Tag Number cannot be stored. In this case, the next time the Electronic ID is read, its Visual Tag Number will not display. Warnings will appear leading up to this. See *Memory full warning* (p 64).

Linking an Electronic ID to its Visual Tag Number

The first time you use an Electronic ID, follow these steps:

1. Read the animal's Electronic ID. You can read the Electronic ID before the animal steps on the platform or while the animal is on the platform.
2. The last four digits of the Electronic ID, preceded by a colon, display on the Weigh Scale's screen:



3. If you want to assign a Visual Tag Number to the Electronic ID, enter the number now, using the keypad. You must not enter the Visual Tag Number until the Electronic ID is displayed on the Weigh Scale's screen. The Visual Tag Number must also be entered before the animal leaves the platform.
4. After the animal has left the platform, the Electronic ID and Visual Tag Number will be linked together in the cross reference table in the Weigh Scale's memory. A record is also stored in the current session according to normal Weigh Scale behavior.

If you do not assign a Visual Tag Number, each time you read the Electronic ID in future, the last four digits of the Electronic ID, preceded by a colon, will display on the Weigh Scale's lower screen. Each time the Electronic ID is displayed you have the opportunity to enter, and link it to, a Visual Tag Number.

Once you have linked an Electronic ID with a Visual Tag Number, only the Visual Tag Number will display on the Weigh Scale's screen each time the Electronic ID is read in a future weighing session. See *Assigning Visual Tag Numbers to Electronic IDs* (p 48).

You can follow these steps during a weighing session or without having to weigh. In the latter case, you must use Manual mode with no loadbars connected. See *Recording standard animal information* (p 49).

Updating Incorrect Visual Tag Numbers in the Cross-Reference Table

Once a link between an Electronic ID and its Visual Tag Number has been made, you can edit it if it is incorrect using one of the following methods:

1. Editing the weight record in the current session. See *Editing weight records* (p 58).
2. Using APS to update the cross-reference table. Refer to the *APS User Manual* for detailed instructions.

SESSIONS

A session is a collection of weight records for which the Weigh Scale displays statistics.

Sessions have a start date but can remain open for a period of time. Each weighing event adds a record to the current session. To keep weight gain calculations accurate, it is recommended that you start a new session whenever you weigh a new group of animals.

Each time data is collected a record is created. The date on which a new record is created is stored within the session but is not displayed on the Weigh Scale. This date is used to calculate the weight gain for an animal and is copied to APS with the session.

Note: Session files on the Weigh Scale should be closed regularly - generally at the end of a weighing session. If sessions are left open for longer than 2.5 years the oldest record dates may become inaccurate.

Sessions overview

The Standard sessions allow recording of standard animal information (note and condition score).

The Weigh Scale also works in three different modes: Automatic, Manual and Fine. Another variable that affects the operation of the Weigh Scale is whether loadbars are connected. The Weigh Scale is able to perform different functions depending on the mix of these variables. Those function capabilities are summarized in the following table:

Loadbars Connected - Standard Session

Automatic Mode	Manual Mode	Fine Mode
<ul style="list-style-type: none"> • Store Animal Weights Automatically • Record Animal Information • Sort by Weight 	<ul style="list-style-type: none"> • Store Animal Weights on Key Press • Record Animal Information • Sort by weight 	<ul style="list-style-type: none"> • Store Animal Weights on Key Press • Record Information (two fields)

No Loadbars - Standard Session

<ul style="list-style-type: none"> • Store Electronic IDs • Update Cross-Reference Table 	<ul style="list-style-type: none"> • Record Animal Information • Update Cross-Reference Table 	Not Used
--	---	----------

Definitions

Record Animal Information	Condition Score and the animal's Electronic ID and Visual Tag Number.
---------------------------	---

Session naming formats

Each session file name has the following format:

YYYY-MM-DD hh-mm NAME

Where...	Is the...	Example...
YYYY	4 digit year	2003
MM	2 digit month	06
DD	2 digit day	24
hh	2 digit hour in 24 hour format	13
mm	2 digit minutes	15
NAME	Name of the weighing session that will display on the Weigh Scale. The name varies depending on session type, as below;	
STANDARD SESSION NAME	The name can contain up to 17 characters and is chosen by the user. All letters will be upper case. Note: When the Weigh Scale creates an unnamed session file, the name is automatically set to -.	STEERS

Examples of valid formats

The following are examples of valid Weigh Scale session file names.

2004-01-25 15-20 STEERS

2003-12-04 16-30 @1630

Note: Although you didn't see the session start time on the Weigh Scale (unless the session has no user-entered name) it is always stored with the session name.

The following are examples of valid Reader session file names.

2006-03-07 15-21 Session01

2005-03-07 15-21 Session02

2005-03-07 15-21 Session03

Storage capacity

The information gathered each time the Weigh Scale makes a measurement is called a record.

The Weigh Scale can store up to 12000 records. These include the records of all sessions including the current one. See *Memory Full Warning* (p 64).

For information about the maximum number of cross references the Weigh Scale can store, see *Cross-referencing Visual Tag Number's* (p 33).

Session statistics

The Weigh Scale gathers statistics as it weighs.

Statistics can be presented in four ways:

- a summary of weights. See *Statistics screen* (p 38).
- a summary of weight-gains. See *Weight gain screen* (p 40).
- a list of all the weights recorded. See *Weight records screen*. (p 41)
- a summary of carcass weights. See *Carcass weight screen* (p 42).

The Weigh Scale displays statistics of the current session in the lower screen. As weighing progresses, the statistics screen updates.

Selecting a view

To select a different data view during a weighing session:

1. Turn the mode select switch to either **A**, **M** or **F**.
2. Press **SCREEN** to cycle through the available screens.

The data displayed on each of the screens is described in the following sections.

Statistics screen

The **Weight Stats** or **Sort Stats** screen displays summary weight data for animals in the current weighing session. The screen that is displayed depends on the weighing mode that you are using and whether sorting is turned on or off.

Statistics can be displayed for closed sessions, see *Displaying statistics for a closed session.* (p 21)

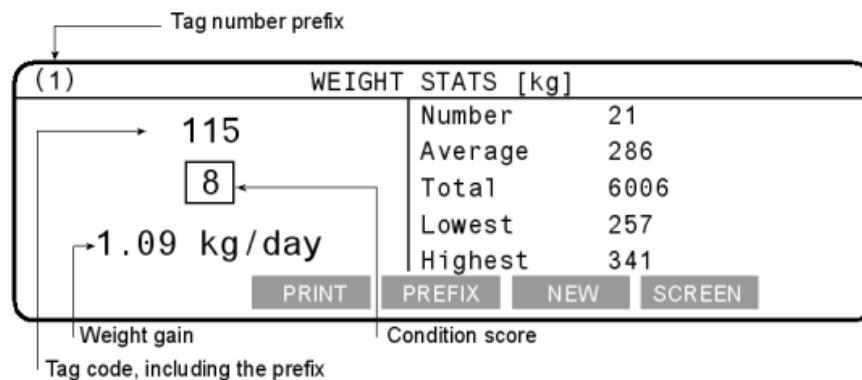
Weight statistics

The **Weight Stats** screens displays if:

- sorting is switched off, or
- you are weighing in fine mode.

This **Weight Stats** screen shows the number, average, total, highest and lowest weights for all the animals in the current session.

The left hand side of the lower screen displays information about the animal **currently** being weighed.



Note: If the ADG Display is turned to Off in User Options, the weight gain will not be displayed on the screen.

Sort statistics

The **Sorting Stats** screen displays if:

- sorting is turned on, and
- you are in either automatic or manual weighing modes

The details on the lower screen change depending on the sorting mode selected. The screen shows the number, average and total weight of the animals in each sorting category as well as the gate through which the animal was sorted. The following screen shows the details for three way sorting.

(Q)	DRAFT STATS			
	Lim	250	300	
	Gate	Low	Mid	High
	Num	12	8	10
	Ave	241	269	312
	Tot	2892	2152	3120
		PREFIX	NEW	SCREEN

If you are sorting four ways or more, the statistics screen displays as shown:

(Q)	DRAFT STATS			
	Lim	250	300	350
	Gate	1	2	3
	Num	12	8	10
	Ave	241	269	312
	Tot	2892	2152	3120
		▶	PRINT	PREFIX
			NEW	SCREEN

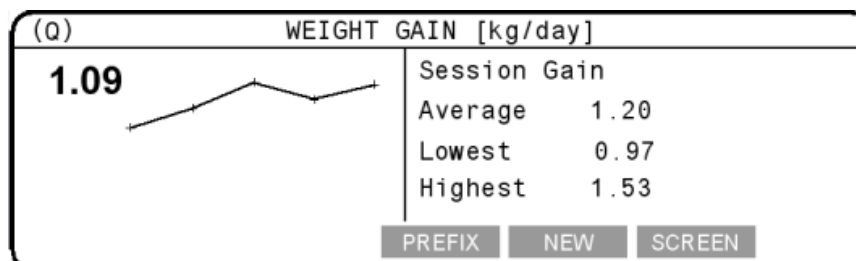
Note:

The **PRINT** soft key is only displayed if one of the Weigh Scale's ports is configured for a printer. For information on connecting a printer to the Weigh Scale see *Communications* (p 28). With a printer connected and configured you can print the statistics on this screen.

- Pressing the **▶** soft key allows you to scroll through the sort statistics for the other gates.
- Pressing the **SCREEN** soft key changes which statistic screen displays.

Weight gain screen

The Weight gain screen shows weight gain data for the animal being weighed and weight gain statistics for all animals in the session.



The weight gain graph on the left side of the screen shows the change in an animal's weight gain from one session to the next. The vertical axis represents weight gain, the horizontal axis represents time. Each point on the graph represents the weight gain (in lb/day) that occurred between two weighing sessions.

For example, if the graph slopes upward, the rate of weight gain has increased. If the graph slopes downward the rate of weight gain has decreased.

Note: Provided the weight gain figure is positive the animal has gained weight. The graph plots changes in weight gain not changes in weight. A downward slope in the line on the graph indicates a decrease in the rate of weight gain, not a decrease in actual weight.

The weight gain (in lb/day) for the animal currently being weighed is displayed in the top left corner of the screen. This is also the last point on the graph. For example, in the screen shown above, the weight gain for the current animal and the last point on the graph is 1.09 lb/day. The graph shows that only one of four previous sessions has matched this weight gain.

For the graph to be displayed:

1. There must be at least two previous sessions with a weight recorded for this animal (i.e. with the same tag number).
2. The sessions must have been created on different dates.

The weight gain is calculated from the weight recorded in the most recent session for the same tag number. If there is no previous data for an animal, the screen displays "--" in place of the weight gain figure.



Note: The session statistics (average, lowest and highest weight gain per day) displayed on this screen only include those animals for which weight comparisons can be made. The statistics do not include animals which are being weighed for the first time and therefore have no weight gain comparison.

Weight records screen

Weight records screen for a standard session

During a Standard weighing session, the Weight Records screen shows the data recorded for each animal:






- Visual Tag Number
- Weight
- Condition score
- Notes

You can use  and  to scroll up or down the list and view other weight records in the current session.

The last weight to be recorded is displayed at the top of the screen.

Tag count
↓

()	0: TAG	WEIGHT	CON	NOTES
	149	564.0	9	IA 27/08
	138	486.0	9	IA 25/08
	125	414.0	7	IA 25/08

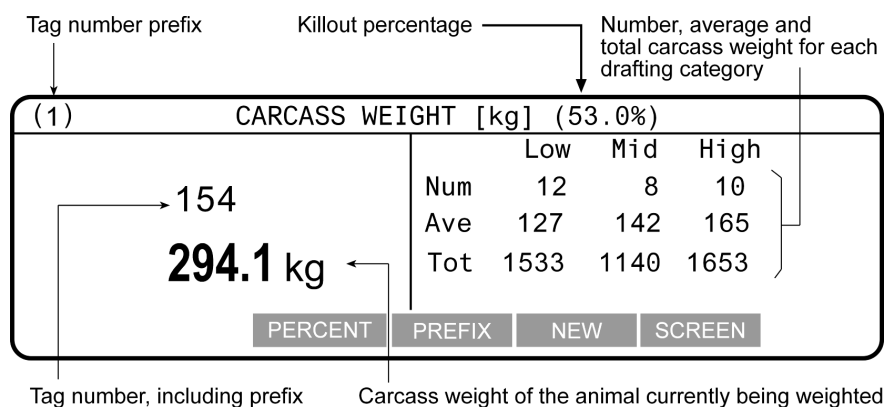
    

This screen can also be used to edit the weight records in the current session. For further information see *Editing a weight record in a standard session* (p 58).

The **Tag Count** value represents the number of Electronic ID tags read when the loadbars are **not** connected.

Carcass weight screen

The Carcass Weight screen displays the carcass weight of the animal. The carcass weight is calculated using the kill-out percentage that you enter. The carcass weight statistics are displayed on the right hand side of the screen. The format is the same as that used in the WEIGHT STATS or SORTING STATS screens.



The carcass weights on the screen shown above are based on a kill-out percentage of 53%. Within each sorting category, the average and total carcass weights displayed will be 53% of the average and total weights recorded for the session. The number of animals in each sorting category is displayed. If sorting is turned off, the lowest and highest carcass weight is also displayed.

Note: If the kill-out percentage is changed during the weighing session, the carcass weights are recalculated.

Kill out percentage

To change the kill-out percentage:

1. Press **PERCENT**.
The current kill-out percentage screen displays.
2. Press to delete the current kill-out percentage.
Each time you press one character is deleted.
3. Enter the new kill-out percentage using the keypad.
4. Press **OK** to save the change and recalculate the carcass weights based on the new kill-out percentage.

PREPARING TO WEIGH

Weighing modes

Automatic

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

In Automatic mode, the Weigh Scale automatically starts the weight measurement process as soon as the animal steps onto the platform. After the weight has been captured, the Weigh Scale beeps and displays the captured weight. The captured weight continues to display until the next animal steps onto the platform.

After the animal leaves the platform, the Weigh Scale attempts to compensate for the weight of any accumulation of mud or dung left on the platform. If it succeeds, the Weigh Scale displays a zero icon. If it does not you can manually restore zero by pressing the blue zero button.

Manual

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

In manual mode, the operator presses the green weigh button to start the weight measurement process. After the weight has been captured, the Weigh Scale beeps and displays the captured weight. The captured weight continues to display until the next animal steps onto the platform.

After the animal leaves the platform, the Weigh Scale attempts to compensate for the weight of any accumulation of mud or dung left on the platform. If it succeeds, the Weigh Scale displays a zero icon. If it does not you can manually restore zero by pressing the blue zero button.

Fine

Fine mode is recommended for weighing static loads such as fleeces or produce.

In Fine mode, the Weigh Scale displays the weight on the platform in the same way as a bathroom scale.

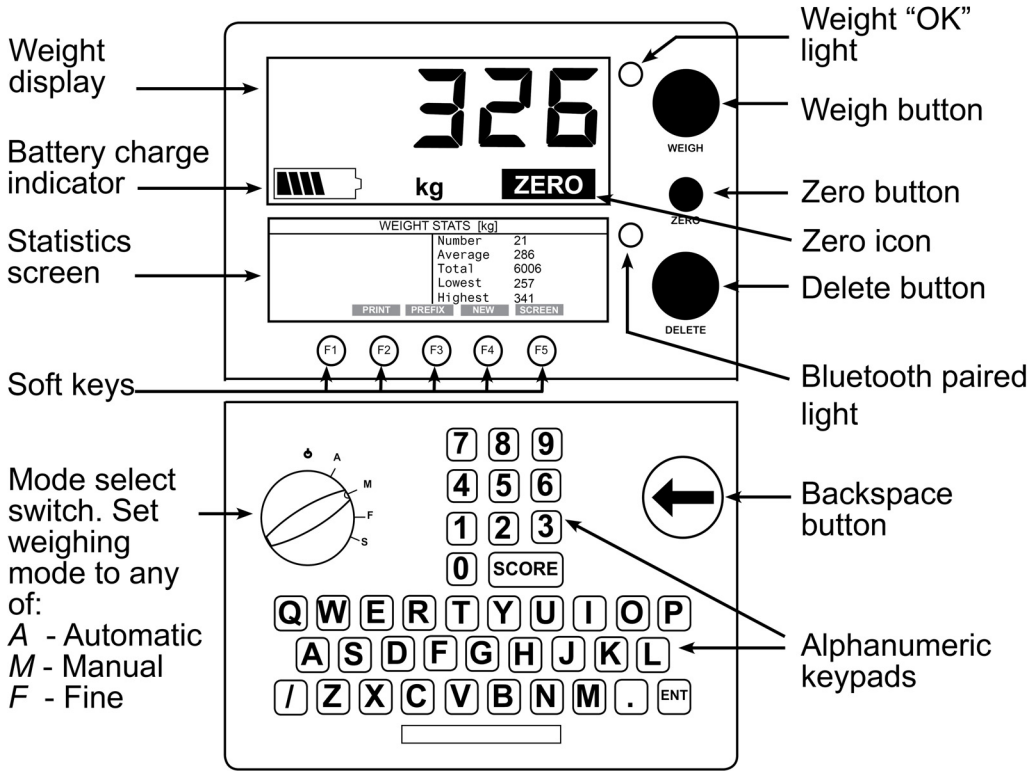
If a weight measurement is to be added to the session statistics, the operator presses the green weigh button. The weight is captured at this point, but it is not stored in the weight record until the weight is removed from the platform. After the weight has been captured, the statistics are updated. For information about statistics, see *Session statistics*. The displayed weight continues to reflect the actual weight on the platform.

In Fine mode, automatic zero tracking is switched off. This means the Weigh Scale does not automatically compensate for the weight of objects left on the platform after the load has been removed. For more information, see *Zero tracking* (p 63).

The blue zero button has a function in Fine mode if you want to make net-weight measurements of a load inside a container. For example, you could place an empty container on the weighing platform and press the blue zero button. If you then filled the container, the weight indication will be only that of the container's contents.

Note: In Fine mode, after the blue zero button has been pressed, the weight indication shows zero but the **ZERO** icon does not display.

Weigh Scale layout

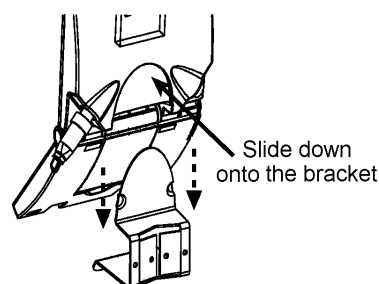
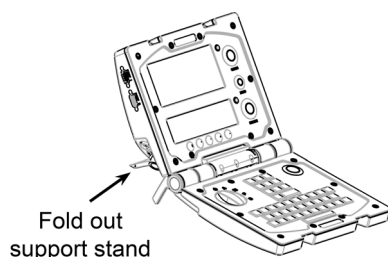


Note: If you are using the Weigh Scale without connection to an external power source, ensure that the battery has been charged overnight before use.

Connecting the Weigh Scale to the loadbars

Before you begin the weighing session, complete the following steps:

1. Open the Weigh Scale case.
2. Mount the Weigh Scale on a flat surface or clip it onto the Weigh Scale bracket.



3. Ensure all required accessories are connected and setup, for example:
 - Loadbars
 - Sorters
 - Electronic ID readers

4. Determine if you require additional power for the Weigh Scale.

Either connect to an AC outlet via the battery charger or connect to a 12 volt battery.

If you are not connecting to an external power source, the Weigh Scale's internal battery should be fully charged. See *Charging the Battery* (p 5), if required.

5. Check and update the setup options, as required. See *Setup* (p 10) for further details.

Setting the tag prefix

Tag numbers can have common prefixes. Once you configure a tag number prefix on the Weigh Scale it is inserted at the start of any Visual Tag Number you enter during the session.

To set the tag number prefix, complete the following steps.

1. Turn the mode select switch to **A** (Automatic) or **M** (Manual).
2. Press **PREFIX**.
3. Type in the prefix, using the keypad. The prefix can contain up to four characters.
4. Press **OK** to save the prefix.

RECORDING ANIMAL INFORMATION WITHOUT WEIGHING

The Weigh Scale W610 lets you record details about animals against animal tags (electronic or visual) without needing to record a weight. The information is added to the current session (Standard only) in the same way as a normal record, but with the weight set to zero.

Note: Only records that contain a weight are added to the session statistics.

Automatic storing of Electronic IDs

You can use the Weigh Scale in a hands-free mode, to record the Electronic IDs for a group of animals. The Electronic IDs are stored in the current session. This can be used, for example, as a method of recording which animals arrived or left your farm on a particular day. In this case, it is recommended that you start a new standard session before storing the Electronic IDs.

The procedure for storing Electronic IDs automatically is:

1. Make sure there are no loadbars connected to the Weigh Scale W610.
2. Turn the mode select switch to **A**.
3. Read each Electronic ID.

Each Electronic ID is stored in a separate record in the current session. The weight is set to zero. The session statistics do not change. A count of scanned Electronic IDs displays next to the tag field. This will recount tags that are scanned for a second or subsequent time in the same session.

Note: If the Weigh Scale's cross-reference table already stores a Visual Tag Number linked to an Electronic ID you have read, the weight record on the Weigh Scale will display the Visual Tag Number, not the Electronic ID. When you copy the session to the computer, both the Electronic ID and Visual Tag Number will be visible.

Assigning Visual Tag Numbers to Electronic IDs

In the current Weigh Scale session, you can assign a Visual Tag Number to an Electronic ID once. To change an assigned Visual Tag Number in the Weigh Scale's cross-reference table, you must transfer the cross-reference table to APS.

To assign a Visual Tag Number to an Electronic ID:

1. Make sure there are no loadbars connected to the Weigh Scale W610.
2. Turn the mode select switch to **M**.
3. Scan the Electronic ID.
4. Enter the Visual Tag Number using the keypad and press the green **Weigh** button.

The Visual Tag Number you entered is now linked to the Electronic ID in the Weigh Scale's cross-reference table.

A record is added to the current session containing the Visual Tag Number and with the weight set to zero. The session statistics are unchanged.

For information on editing weight record in the current session, see *Editing weight records* (p 58).

Generally, the Visual Tag Number is assigned to the Electronic ID

- during the normal weighing process, or
- via the tag bucket file.

Note: Copying a Session file from the computer to the Weigh Scale will always update the Cross Reference Table in the Weigh Scale for any animals contained in that Session. This will be regardless of the date that the weighing Session was conducted. If multiple sessions are copied, the most recent session that each animal appeared in will be that animal's new record in the Weigh Scale's Cross Reference Table.

Recording standard animal information

To store condition scores and notes about animals without recording a weight, follow these steps:

1. Make sure there are no loadbars connected to the Weigh Scale W610.
2. Turn the mode select switch to **M**.
3. Ensure you are in a standard session (not a trait session). If you are not, you will need to start a new standard session. See *Creating a new standard weighing session* (p 50).
4. If you are using Electronic IDs to identify the animal, scan the animal's Electronic ID.
5. Enter the animal's Visual Tag Number using the keypad, if it is not already displayed.

Note: If you read an Electronic ID that was already linked to a Visual Tag Number in the Weigh Scale's cross-reference table, it will be displayed and you will not be able to edit it.

6. Press **SCORE** and enter a one or two digit condition score.
7. Press **ENT** and enter the note (up to 13 characters) using the keypad.
8. Press the green **Weigh** button to save the record.

A text record is added to the current session containing the information you entered and with the weight set to zero. The session statistics do not change.

None of the fields are compulsory (Electronic ID, Visual Tag Number, Condition Score or Note), however, you must enter some information before the record is saved. Normally, you will want to identify the animal (using the Electronic ID or Visual Tag Number) before saving information about the animal using the condition score or note.

WEIGHING IN A STANDARD SESSION


Creating a new standard weighing session

To create a new standard weighing session, complete the following steps:

1. Turn the mode select switch to **A** (Automatic) or **M** (Manual).
2. Press the **NEW** soft key.


The **NEW SESSION** screen displays:

The screenshot shows a rectangular dialog box with a title bar that reads "NEW SESSION". Inside the box, the text "Session Name:" is displayed in a large font. Below it, in a smaller font, is the instruction "Enter a Session Name or select from options below". At the bottom of the dialog box, there are two buttons: "CANCEL" on the left and "OK" on the right.

3. Type in the required session name using the keypad.
The name can be up to 17 alpha-numeric characters long.
Press the  key to delete characters.
Note: You can leave the session unnamed.
4. If prompted, type in the PIN (can be left blank). The previously entered PIN (Premise Identification Number) is displayed by default.

The screenshot shows a rectangular dialog box with a title bar that reads "NEW SESSION". Inside the box, the text "Session PIN:" is displayed in a large font. Below it, in a smaller font, is the instruction "Enter a Session PIN". At the bottom of the dialog box, there are two buttons: "CANCEL" on the left and "OK" on the right.

The PIN can be up to 7 alpha-numeric characters long.

Press the  key to delete characters.

Note:

- A setting in APS sets whether this prompt is displayed.
- The entered PIN is transferred to APS with the session data.

5. Press **OK**.
6. Press **OK** to save the session.

The new session is created and a statistics screen displays with all values set to zero.

The previous session is closed and stored in the Weigh Scale's memory and can be viewed using the Session menu. See *Session menu* (p 17).

Procedure for weighing animals in a standard session

To weigh an animal in a standard session follow this procedure:

1. Select the weighing mode that you want to use by turning the mode select switch to **A** (automatic) or **M** (manual).

When the Weigh Scale is switched on, the previous weighing session is still the current session.

You can choose to create a new weighing session, see *Creating a new standard weighing session* (p 50) for more details.

2. If required, you can enter an ear tag prefix for the animals being weighed. See *Setting the tag prefix* (p 46) for further details.
3. Check that the **ZERO** icon is displayed. If it is not displayed, press the blue "zero" button to zero off any weight (e.g. dirt or manure) left on the platform.
4. Load the animal onto the platform. Ensure the animal is contained on the platform (e.g. no hooves off the platform and no one holding the animal).
5. If required, you can record the animal's Visual Tag Number or scan an Electronic ID.

– **Using Electronic IDs:**

Scan the animal's Electronic ID.

The Electronic ID can be scanned at any time before or while the animal is on the platform.

If you are using Electronic ID numbers only, the last 4 digits of the tag number preceded by a colon (:) displays on screen.


If you entered a Visual Tag Number the first time the Electronic ID was scanned, the Visual Tag Number displays on screen.

If this is the first time you have scanned the Electronic ID and you want to enter an associated Visual Tag Number, you can enter it now. In future, each time you scan the Electronic ID, the associated Visual Tag Number will display on screen.

See *Using Electronic IDs* (p 33) for further details.

– **Using Visual Tag Numbers:**

Use the keypad to enter the Visual Tag Number. Up to 15 characters, alphabetic or numeric, can be entered.

If an incorrect Visual Tag Number is entered, press  to delete each incorrect character. Re-enter the correct tag number.


The Visual Tag Number can be entered at any time before or while the animal is on the platform.

Note: Please ensure that the **ADG Display** is switched **ON** in the **User Options** menu if you want to see the weight gain and last recorded weight which were recorded during a previous weighing session.

6. If required, you can store information about the animal being weighed using the "Condition Score" and "Notes" fields.

Refer to the following table for instructions on entering a condition score. You can enter this information before the animal steps onto the platform (i.e. when the platform is empty) or while the animal is on the platform.

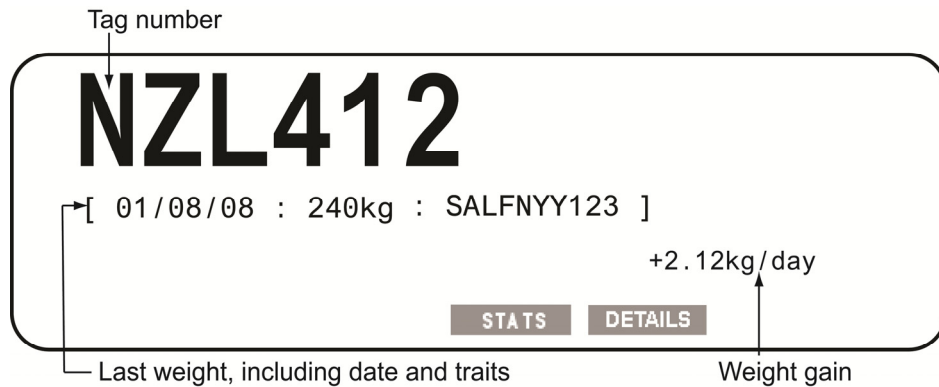
Field	What can be stored	How to use
Condition Score	One or two digits	Press the SCORE button on the keypad and type the score.
Notes	Up to 13 characters, alphabetic or numeric.	Press the ENT button on the keypad and type the note.

If an incorrect entry is made, press  to delete each incorrect character and then re-enter the correct information.

7. Follow the instructions for the weighing mode you have selected.
- **Automatic Mode** When the Weigh Scale has determined an accurate weight for the animal, it locks on to the weight and holds it on the screen. The time taken to lock on to the weight varies depending on the movement of the animal.
 - **Manual Mode** Press the green weigh button to start weighing the animal. When the Weigh Scale has determined an accurate weight for the animal, it locks on to the weight and holds it on the screen. The time taken to lock on to the weight varies depending on the movement of the animal.
8. When the Weigh Scale has locked onto the weight:
- the "Weight OK" light illuminates;
 - **OK** displays on the screen;
 - the Weigh Scale beeps;

If sorting is turned on, the gate number displays indicating the sorting category.

If available on the Weigh Scale, the last recorded weight for the identified animal displays:



Note: If the ADG Display is turned to OFF in User Options, the weight gain, last recorded weight and user entered note data, will not be displayed on the screen.

Note: If the weight gain statistics screen is displayed prior to an animal stepping on the platform, when the weight locks, the animal's weight gain will be displayed on the lower screen along with the Electronic or Visual Identification number, Condition Score and Note.

To view the statistics for the session **press and hold** the **STATS** soft key. The statistics displayed are:

- Weight statistics screen - if sorting is disabled.
- Sort by weight screen - if sorting by weight is enabled.

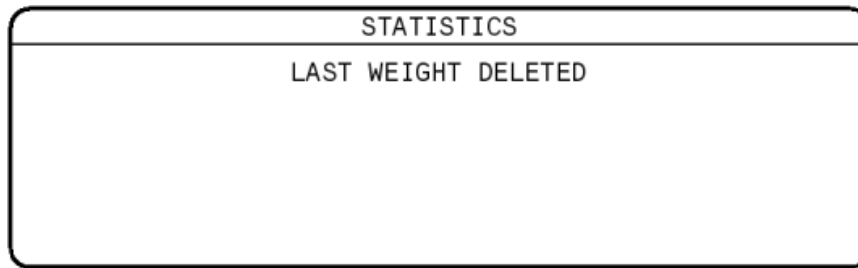
9. If the weight has locked on but you want to re-weigh the animal, press the green weigh key. The Weigh Scale re-weighs the animal and locks onto the weight again. The new weight replaces the original weight and the statistics are updated.

For example, if the animal was not completely on the weighing platform, the Weigh Scale may have locked onto an incorrect weight.

You do not need to re-enter the Visual Tag Number or condition score if you have re-weighed the animal.

10. Move the animal off the platform. The weight of the animal is recorded as soon as the animal leaves the platform (the weight decreases by 30% or more). At this point the record saves. To further edit the Condition Scores you have to use the process outlined in *Editing weight records* (p 58).

The weight remains on the screen until the next animal steps onto the platform. If the animal has left the platform and you want to delete the weight that has just been recorded, press the red delete button. The last weight entered will be deleted from the Weigh Scale's memory and the following screen will display.



11. The Weigh Scale automatically zero's off any weight left on the platform (e.g. dirt or manure). When this has occurred the **ZERO** icon is displayed on the screen.

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

The Weigh Scale does not need to return to zero before the next animal is loaded onto the platform. Once the weight has dropped by 30%, the display will unlock ready for the next animal to be loaded onto the platform. This is a useful feature when weighing sheep.

12. Repeat the process from step 4 until all animals are weighed.

Procedure for weighing static loads standard

1. Turn the mode select switch to **F** (Fine mode).
2. Follow the procedure outlined in *Creating a new standard weighing session* (p 50).
3. Ensure that the displayed weight is zero. To zero the scales, press the blue **Zero** button.

Note: The **ZERO** icon is not displayed in Fine mode.

4. Place the load onto the platform.
5. If you want to store information, enter desired values into the "Tag Number", "Condition Score" and "Notes" fields.


For example, you may want to enter a wool bale reference number or a note to identify specific bales.

Refer to the following table to select the field that you want to use. You can enter this information before the load is placed on the platform (i.e. when the platform is empty) or while the load is on the platform.

Field	What can be stored	How to use
Tag number (Reference number)	Up to 15 characters, alphabetic or numeric.	Use the keypad to enter the reference number.
Condition score	One or two digits.	Press the SCORE button on the keypad and type the score.
Notes	Up to 13 characters, alphabetic or numeric.	Press the ENT button on the keypad and type the note.

6. Press the green **Weigh** button, to record the weight.
The statistics screen updates immediately. The weight screen does not update until the load is removed from the platform.
7. Move the load off the platform. The weight screen updates.
8. Repeat the procedure from Step 3 for subsequent items to be weighed.

At the end of the weighing session

1. Switch the Weigh Scale off by turning the mode select switch to the  position.
2. Disconnect the loadbar cables.
3. Fit the protective caps to the loadbar cables.
4. Fit the protective caps to the Weigh Scale.

Sorting by weight

To sort animals by weight you need to set up the following:

1. Connect the loadbar to the Weigh Scale. See *Connecting the Weigh Scale to the loadbar.* (p 46)
2. Connect the Sorter to the Weigh Scale and set up the correct communications for the Sorter. See *Communications* (p 28).
3. Set up sorting limits on the Weigh Scale. See *Sort menu.* (p 14)
4. Create a standard session. See *Creating a new standard weighing session* (p 50).
5. Weigh and sort the animals.

EDITING WEIGHT RECORDS

About editing weight records

- Only records in the current session can be edited on the Weigh Scale. To edit records in other sessions you need to copy them to the computer. Refer to the *APS User Manual* for more information.
- The Tag Number, Condition Score and Notes can be edited during or after a standard session.
- Weights cannot be edited.
- Weight records cannot be edited while viewing the session in setup mode.

Editing a weight record in a Standard session

In a standard session;


1. Turn the mode select switch to **A** or **M**.

Note: You must have loadbars connected to edit the weight records in the current session.

2. Press **SCREEN** until the screen listing the individual weights is displayed.
3. Press **EDIT** to edit weigh records.

(EDIT MODE)	TAG	WEIGHT	CON	NOTES
	149	564.0	9	IA 27/08
	138	486.0	9	IA 25/08
	125	414.0	7	IA 25/08

▲ ▼ ▶ OK

4. Use the arrow soft keys to highlight the data you wish to alter.
5. Press the  button to delete characters, as required.
6. Type in the new data using the keypad.
7. When you have made all the required changes, press **OK** to save the changes and exit edit mode.

Deleting a weight record in the current session

1. Turn the mode select switch to **A**, **M** or **F**.
2. Press **SCREEN** until the screen listing the individual weights is displayed.
3. Press **EDIT** to edit weigh records.

(EDIT MODE)	TAG	WEIGHT	Trait Mature
	249	563.0	
	128	436.0	
	122	314.0	

▲ **▼** **▶** **OK**

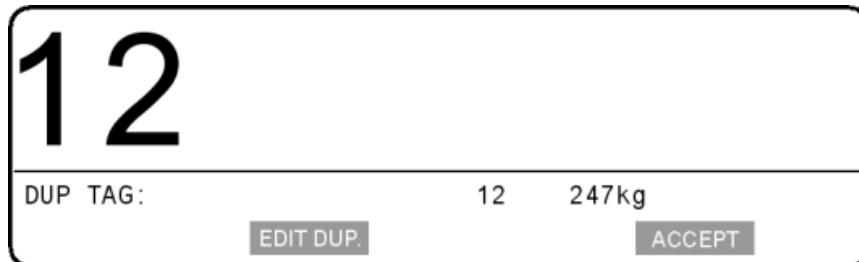
4. Use the arrow soft keys to highlight the weight record you wish to delete.
5. Press the red **Delete** button.

The selected record is deleted from the session and the statistics are updated.

CHECKING FOR DUPLICATE VISUAL TAG NUMBERS

The Weigh Scale lets you check for duplicate Visual Tag Numbers during a weighing session. Duplicates can occur if the same animal is weighed twice in a session. They can also occur because a Visual Tag Number has been entered incorrectly. In this case, you can edit the incorrect Visual Tag Number immediately. For instructions on turning Tag Checking on and information about when a duplicate can occur, see *User options* (p 24).

If a Visual Tag Number duplicate occurs within a session, a screen similar to the following displays. The duplicate Visual Tag Number is displayed and the Weigh Scale beeps three times.



The screenshot shows a rectangular display area. At the top, the number '12' is displayed in a large font. Below this, the text 'DUP TAG:' is on the left, followed by '12' and '247kg' on the right. At the bottom of the display area, there are two buttons: 'EDIT DUP.' on the left and 'ACCEPT' on the right.

This duplicate tag screen enables you to:

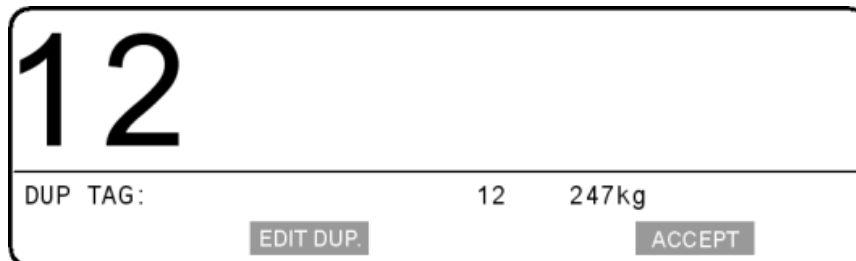
- accept both Visual Tag Numbers (i.e. the duplicate remains), or
- edit the Visual Tag Number just entered, or
- edit the Visual Tag Number recorded earlier in the session.

Notes:

- If you do not make a selection before the animal leaves the platform the duplicate Visual Tag Numbers remain.
- Some Electronic ID readers can be set up so that they are unable to read the same Electronic ID twice in a session. If you want to use the Weigh Scale's tag checking feature to prevent an animal being weighed more than once in a session, you need to set up the reader so that it can read the same Electronic ID more than once.
- To prevent multiple recordings of an Electronic ID, the Weigh Scale records the number once after the first reading. It will not record this Electronic ID again until after a different Electronic ID has been read.




Editing a duplicate Visual Tag Number

If a duplicate Visual Tag Number occurs, the following screen will be displayed and the Weigh Scale will beep three times.






This screen lets you change the current Visual Tag Number or the Visual Tag Number that was entered earlier in the session.

To change the current Visual Tag Number:

1. Use the backspace key  to delete the Visual Tag Number. If the Visual Tag Number is linked with an Electronic ID, pressing  deletes the entire number. If the Visual Tag Number isn't linked with an Electronic ID, pressing  deletes one digit.
2. Use the keypad to enter a new Visual Tag Number.

To change the Visual Tag Number that was entered earlier in the session:

1. Press the **EDIT DUP.** button.
2. Use the backspace key  to delete the Visual Tag Number. If the Visual Tag Number is linked with an Electronic ID, pressing  deletes the entire number. If the Visual Tag Number isn't linked with an Electronic ID, pressing  deletes one digit.
3. Use the keypad to enter a new Visual Tag Number.

Accepting duplicate Visual Tag Numbers

If you do not want to change either of the duplicate Visual Tag Numbers, press the **ACCEPT** button.

The lower screen will display the Visual Tag Number just entered and you can continue with the usual weighing process.

In this case, two records in the current session will contain the same Visual Tag Number.

Updating the Cross-Reference Table with Tag Checking

When a duplicate tag number occurs and you change a Visual Tag Number that is already linked to an Electronic ID, the cross-reference table in the Weigh Scale, as well as the current session, is automatically updated.


For more information about the Weigh Scale's cross-reference table or about linking a Visual Tag Number to an Electronic ID, see *Using Electronic ID* (p 33).

The following procedure provides an example of how duplicate tag number checking can be used to update the Weigh Scale's cross-reference table:

1. In different sessions you read two Electronic IDs. By mistake you assign both the same Visual Tag Number of 500. The cross-reference table in the Weigh Scale records this information as shown below.

Electronic ID	Visual Tag Number
90000000555	500
90000000444	500

2. You start a new session and read the first Electronic ID (90000000555). Later in the session you read the second Electronic ID (90000000444). The duplicate tag number screen displays with the Visual Tag Number 500 displayed.
3. You realize the Visual Tag Number linked with Electronic ID 90000000444 should be 600 not 500.

To correct the mistake, you press the  soft key to delete the 500 and use the keypad to enter the correct Visual Tag Number of 600.

When the animal leaves the platform the current session and the cross-reference table are automatically updated. The cross-reference table now records the information shown below.

Electronic ID	Visual Tag Number
90000000555	500
90000000444	600

ADDITIONAL FEATURES

Zero tracking

As animals pass through the weighing crate, an accumulation of mud and dung may build up on the weighing platform. The Weigh Scale can compensate for the weight of this accumulation by subtracting it from the total weight. The automatic subtraction of the residual weight from the total weight is called zero tracking.

Zero tracking ensures that the Weigh Scale captures the animal's weight and not the mess left on the platform.

The way zero tracking is initiated depends on the weighing mode.

Automatic and Manual modes

In the Automatic and Manual weighing modes, zero tracking is automatically implemented if, after the animal leaves the weighing platform, the residual weight is within a defined zero tracking range.

- If the residual weight is within the defined range, the **ZERO** icon displays.
- If the residual weight is outside the defined range, the icon does not display.

To manually compensate for the residue, press the blue zero button. The **ZERO** icon displays.

During a weighing session, if the Weigh Scale consistently does not restore to zero, check that there are no obstructions under or around the platform or crate.

Fine mode

In the Fine weighing mode, automatic zero tracking is disabled.

The **ZERO** icon does not display in the Fine weighing mode.

Memory full warning

The Weigh Scale can store up to 12000 records. This is a total of 12000 records across all weighing sessions, not just the current session.

When the record tally is 1000 records short of the limit, the Weigh Scale beeps and a memory full warning displays. The warning displays again 50 short of the limit accompanied by three beeps. When the record tally is only 20 short of the limit, the warning displays and three beeps sound each time a new record is added.

When the record tally reaches 12000, the Weigh Scale beeps four times and will not accept any more records.

To continue weighing, switch the Weigh Scale to Set Up mode and use the Session Menu screen to select and delete a previous session.

Before deleting a session, you can also copy the weighing sessions to a computer, so that you can keep a record of the data. Refer to the *APS User Manual*, for more information.

Printing

A serial printer can be attached to the Weigh Scale W610. If the printer is connected during a weighing session, you can configure the Weigh Scale to print each animal's tag number, weight and condition score when the Weigh Scale locks on to the weight.

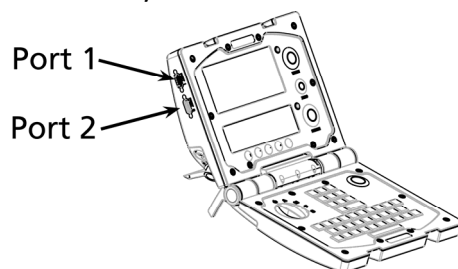
For instructions on printing weights at the end of the weighing session, or from a previous session, see *Session menu* (p 17).

Printing weights during a weighing session

To print each weight record during a weighing session, follow these steps.

1. Connect the printer cable to one of the two serial ports on the Weigh Scale.
2. Turn the mode select switch to **S** to display the setup menu.
3. Select **5. COMMUNICATIONS**.

Ensure the port to which the printer is connected is set to **Printer**. When the Weigh Scale case is open, Port 1 is on the top, left side of the Weigh Scale. Port 2 is directly below.



4. Press **OK** to return to the setup menu.
5. Select **4. USER OPTIONS** on the setup menu.
6. Ensure **LIVE PRINTING** is turned **ON**.

Each time the Weigh Scale locks on to a weight, the following information prints.

- Visual tag number, or if none exists, the last four digits of the Electronic ID number preceded by a colon.
- Weight.
- Condition score.
- the sorting gate, if sorting is turned on.

Invalid Session EID's

EID's received during a session download from APS to the Weigh Scale are now validated to ensure they are in the correct numeric format. If an EID does not pass the validation, the following error message is displayed on the lower screen of the Weigh Scale.

Store Animal Weight

Invalid EID
000004ABCDEFABC
in session
03/09/2007 STUD PDCK

To clear this message, turn the rotary dial to a different mode. e.g. Automatic, Manual, Fine, or Setup.

INTERFACING SOFTWARE: APS

Animal Performance Software (APS) is software that can be run on a personal computer. After a connection has been made between the computer and the Weigh Scale, APS can process information obtained from the Weigh Scale.

With APS you can:

- retrieve sessions from the Weigh Scale.
- copy sessions to the Weigh Scale.
- edit sessions.
- edit Electronic ID and Visual Tag Number links.
- prepare session statistics more advanced than those displayed by the Weigh Scale itself.
- view animal weight-gain graphs across sessions.
- email sessions to selected recipients.
- change Weigh Scale setup
- create reports.

Detailed instructions are contained in the *APS User Manual*.

LOADBAR AND PLATFORM OPTIONS

It is recommended that you use Gallagher Loadbars with the Weigh Scale W610.

The Weigh Scale W610 Scale recognizes 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 Alleyway Loadbars

Features:

- 4400 lb weighing capacity - Available in 23" length
- 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
- 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 Squeeze Chute Loadbars

Features:

- 7700 lb weighing capacity
- 39" rugged steel loadbars
- Bottom feet mounting holes extend beyond top covers for ease of bolting down
- 18' long tough loadbar cables fitted with high quality connectors
- Fully waterproof
- No rubber mounts
- High capacity loadcells 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 Squeeze Chute Loadbars

Features:

- 9900 lb weighing capacity
- 39" rugged steel loadbars
- Bottom feet mounting holes extend beyond top covers for ease of bolting down
- 18' long tough loadbar cables fitted with high quality connectors
- Fully waterproof
- No rubber mounts
- High capacity loadcells 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 Heavy Duty Weigh Feet

Features:

- 11000 lb weighing capacity
- High performance, high accuracy double ended sheer beam stainless steel loadcells
- Fifth loadcell supplied with kit
- Heavy duty stainless steel top and bottom mounting plates
- Offset holes in bottom plate for drilling in place
- Rodent and crush protectors on loadcell and loadbar cables
- Pre-wired waterproof junction box (terminate loadcells at time of installation)

Gallagher Suspension Load Cell 550lb

Features:

- 550 lb 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 1100 lb

Features:

- 1100 lb 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

Weigh Scale W610 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	-5° to 120° F
Environmental Protection Rating	IP65

Not for Trade

This Weigh Scale is not certified "Legal for Trade".

Weight increments

For Gallagher loadbar sets, weight increments are pre-set as shown in the table. For other loadbar sets talk to your Gallagher dealer.

Weight Range	Gallagher Alleyway Loadbars (4400 lb)	Gallagher Heavy and Super Heavy Duty Squeeze Chute Loadbars (7700 lbs or 9900lbs))
Automatic and Manual modes:		
0 - 99.9 lb	0.5 lb increments	1 lb increments
100 - 399.9 lb	1 lb increments	1 lb increments
400 - 999.9 lb	2 lb increments	2 lb increments
1000 - 3999.9 lb	5 lb increments	5 lb increments
> 4000 lb	Not Applicable	10 lb increments
Fine mode		
0 - 99.9 lb	0.2 lb increments	0.5 lb increments
100 - 399.9 lb	1 lb increments	1 lb increments
400 - 999.9 lb	2 lb increments	2 lb increments
1000 - 3999.9 lb	5 lb increments	5 lb increments
> 4000 lb	Not Applicable	10 lb increments

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT



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.

CONTACT INFORMATION

The Weigh Scale range of products is distributed by the following company:

UNITED STATES OF AMERICA

Gallagher North America Inc.
5005 NW 41st Street
Riverside, MO 64150

P.O. Box 681409
Riverside, MO 64168

Telephone: (877) 560 6308
Facsimile: (877) 421 3392