



Calf Weigh & De-horning Crate

Model 345ge

Instruction Manual & Operating Guide



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Calf Weigh & De-horning Crate - Model 345ge

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Safety Notes and Warnings

- Ensure the operator in charge of the Calf Weigh and De-horning Crate is an experienced stock person who can maintain a high standard of animal welfare.
- Ensure that there is sufficient space in the area designated for the crate to allow the operator to work safely and efficiently.
- The adjoining Race and Penning to the crate should be of sufficient build for the safety of both animals and operators.

Training

Do not attempt to carry out any procedure on a machine unless you have received the appropriate training or read the instruction manual.

Note: Check also the instruction leaflet provided by **Tru-test** (Electronic weigh head manufacturer) provided with this product for details on EMC compliance and declaration of conformity.

Retain all instructions in a safe place for future reference.



Introduction and Intended Use

Ritchie model 345ge is designed for, and is intended to be used by, the agricultural industry purely for the weighing and de-horning of calves. The cage is designed to give maximum safety and to minimise stress in both the animal and the operator.

The crate should only be used by an experienced stock person, who can maintain a high standard of animal welfare.

Features

- Strong tubular steel frame with fully sheeted sides.
- Entry gate hinges from either the left or right sides.
- Mesh type cage floor.
- Stable cage floor during animal entry and exit.
- Self locking hinged exit gate.
- Neck yoke with single lever operation.
- Fitted with handles and wheels for easy movement.
- Fitted with Trutest digital load cell.
- Hot dipped galvanised finish.
- 200 kg (440 lb) capacity.

Deviations from the intended use should not take place without the notice and approval of David Ritchie (Implements) Ltd.

Specifications

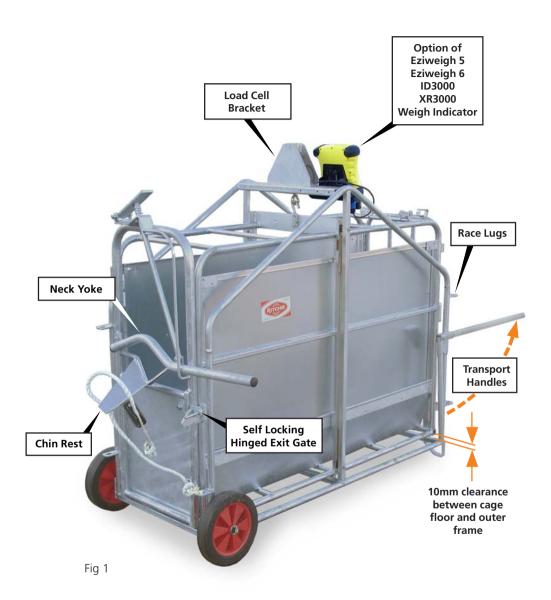
Internal Length (mm) 15.	30
Internal width (mm) 4	40
Internal height (mm) 10	00
Weight 125	kg

Weigh head options:-

Choice of Eziweigh 5, Eziweigh 6, ID3000 or XR3000 (supplied separately).



Overview





Preparation and Instructions for Use

The weigher should be positioned on an even level site, and may be joined to a race or pen system if required. Lugs are provided at the entry end of the weigher for this purpose, Fig 1.

Fold away transport handles are also provided for manoeuvrability.

Cage Floor Adjustment Screw - Adjust if necessary to allow 10mm clearance between the cage floor and outer frame of the weigher. Fig 1 and Fig 2.

The Ritchie Calf weigher can be easily operated from either end by one operator.

To admit an animal

Lift the catch and swing the gate open, Fig 3, to allow the animal to enter onto the floor of the weigh cage, then close and lock behind the animal

Note: The gate can be hinged on either side to suit the operator.

To release an animal

Lift the release handle clear of the retaining lug and push forward to open the exit gate, Fig 4.

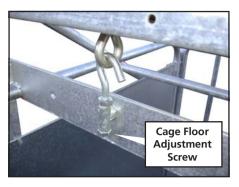


Fig 2

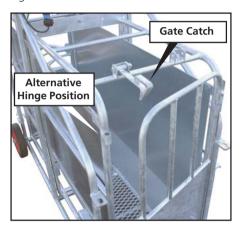
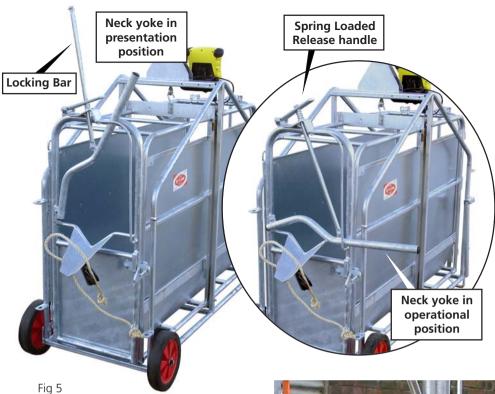


Fig 3



Fig 4



Neck Yoke

Figure 5 shows the neck yoke in both the presentation and working positions. Press down on the spring loaded release handle to raise the yoke bar.

Nose Rope

Tie a single knot in one end of the Nose rope provided and feed the rope through the rope retainers located on the door frame and on the chin rest, Fig 6. Knot the opposite end of the rope.

When the calf is admitted to the crate, restrain using the head yoke, loop the band over the nose of the animal and push the rope into the grip to hold in position.



Tru-test Weigh Indicators

Eziweigh 5, 6, ID3000 and XR3000 Tru-test indicators are the 4 options available for weighing using the Ritchie 345ge Calf weigher.

Fit the indicator mount bracket to the central support by first drilling two 6mm diameter holes through the bracket - in the positions shown in Fig 7, and fixing through the slotted holes using the bolts provided.

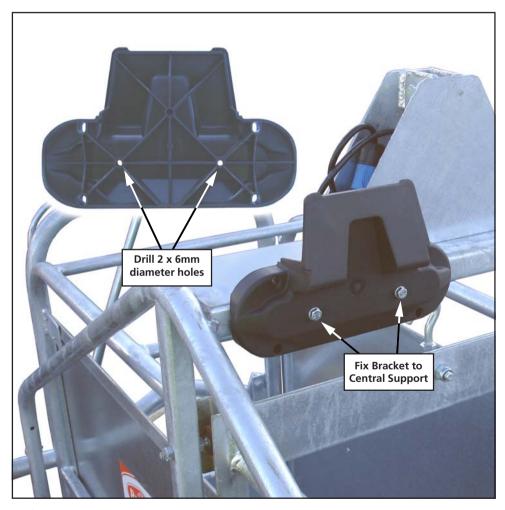


Fig 7

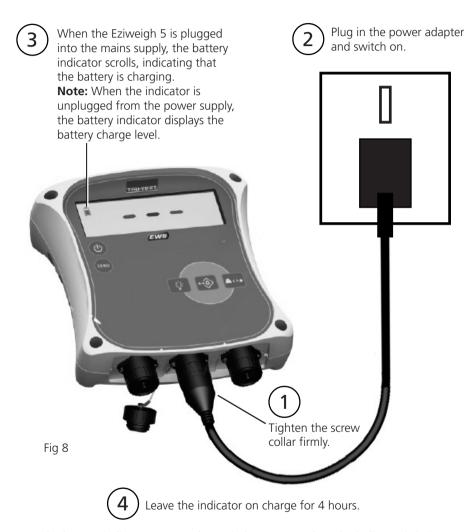


Quick Start Guide - Eziweigh 5

Before you start:-

Charging the internal battery

Note: Before using the indicator, ensure that the internal battery is fully charged.



Note: The battery indicator may not be entirely accurate when the indicator is being used in very cold conditions (below 5 $^{\circ}$ C / 40 $^{\circ}$ F).



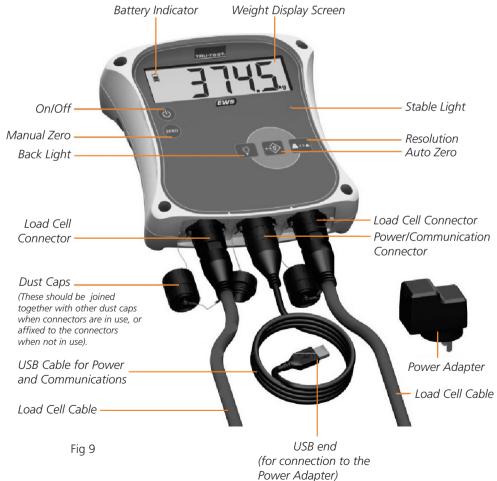
Installation

Note: Mount the indicator and secure the cables so they cannot be damaged by stock.

- 1. Remove the dust cap on the load cell connector and connect to either one of the two load cell sockets on the indicator.
- 2. If required, connect the indicator to the mains power using the power/communication cable and the power adaptor.

Tip: Connect the dust caps together to keep out dirt and moisture. Dust caps should remain in place at all times when the indicator is not in use.

Parts of the indicator



Weighing animals

- 1. Press (b) to turn on the indicator.
- 2. Move the animal into the weigh cage.
- 3. Note the animal's ID and weight.
- 4. Wait for the stable light to illuminate.

When the animal is released from the weigh cage, the indicator automatically returns to zero.

Tip: Ensure that the underside of the weigh cage is kept clear of dirt and stones.

Zeroing the scale manually

By default, the scale automatically zeroes itself when a load is removed from the weigh cage or when the indicator first powers up. Occasionally, you may need to use the manual zero to force the scale to return to zero, for example if there is a build-up of dirt or stones in the cage.

To zero the scale manually:



The scale displays zero.

Modifying the indicator settings

There are several settings which may be customised to suit the weighing application or the environmental conditions.

To view an indicator setting:-

Resolution =

or Backlight =

The current setting is displayed on the weighing display screen.

To modify an indicator setting, press the required button repeatedly to scroll through the options. Once the desired option is displayed, wait momentarily for the indicator to return to the weighing display.



Auto zero

By default, the scale automatically zeroes when a load is removed from the weigh cage or when the indicator first powers up.

Auto Zero should be **ON** when used with the 345ge Calf Weigher.

If for any reason you want to disable Auto Zero - consult the Tru-test manual or go to www.tru-test.com

Modifying the resolution

You can select from 0.1kg, 0.2kg, 0.5kg or 1kg weighing resolutions.

By setting the resolution to 1 kg, the indicator will weigh to the nearest kilogram and arrive at a weight more guickly. If you are weighing light loads, for example small animals, you may require more accurate measurements. By setting the resolution to 0.1 kg, the indicator will weigh to the nearest tenth of a kilogram, although it may take longer for the scale to stabilise.

To modify the resolution:



Press repeatedly to set the resolution.

Adjusting the backlight

You can adjust the backlight to suit the lighting conditions. Use of the backlight will affect battery consumption – the run-time will double if the backlight is set to Low instead of High.

To modify the backlight setting:



repeatedly to set the backlight to High, Off or Low.

Specifications

Total Capacity	2000kg
Resolution	Set to 0.5kg (fine mode 0.1kg) or 1lb (fine mode 0.2lb)
Accuracy	+/- 1% or 2 resolutions (whichever is greater)
Power Supply	5 V DC (power adapter)
Operating temperature	-10 to + 40° C (+ 14 to +104° F)
Storage temperature	-20 to + 35° C (-4 to +95° F)
Internal battery run time	Up to 20 hours
Environmental	IP67 (immersion in up to 1 m (3') of water



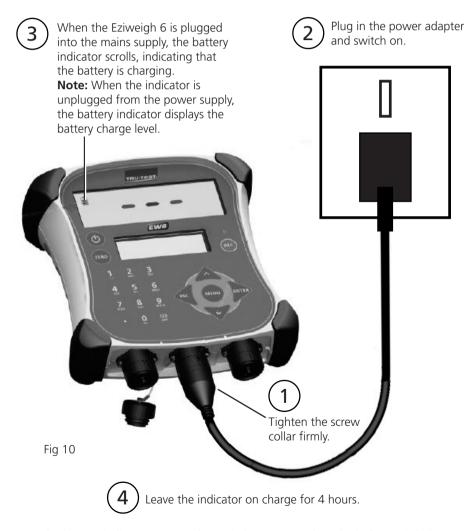
Quick Start Guide - Eziweigh 6

This quick start guide provides basic instructions for installing and using your EziWeigh6 indicator. For more detailed instructions, see the CD included with the indicator, or visit - www.tru-test.com.

Before you start:-

Charging the internal battery

Note: Before using the indicator, ensure that the internal battery is fully charged.



Note: The battery indicator may not be entirely accurate when the indicator is being used in very cold conditions (below 5 $^{\circ}$ C / 40 $^{\circ}$ F).

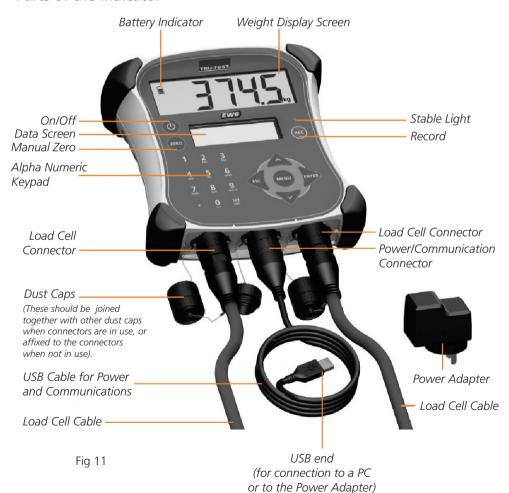
Installation

Note: Mount the indicator and secure the cables so they cannot be damaged by stock.

- 1. Remove the dust cap on the load cell connector and connect to either one of the two load cell sockets on the indicator.
- 2. If required, connect the indicator to the mains power using the power/communication cable and the power adaptor.

Tip: Connect the dust caps together to keep out dirt and moisture. Dust caps should remain in place at all times when the indicator is not in use.

Parts of the indicator



Weighing animals

- 1. Press (**b**) to turn on the indicator.
- 2. Move the animal into the weigh cage.
- 3. Enter the animals VID using the alpha numeric keypad, or scan the animals EID tag using an FID reader
- 4. Wait for the stable light to illuminate.
- 5. Press (REC

When the animal is released from the weigh cage, the indicator automatically returns to zero.

Notes:

- Entering the animals ID is optional.
- The animals VID or EID may be entered before the animal enters the weigh cage.
- When inducting new animals, both the VID and EID can be entered.

Tips:

 Ensure that the animal is fully on the weigh cage floor before pressing (REC • Ensure that the underside of the cage is kept clear of dirt and stones.

Using the indicator interface

Press (MENU) to view the menu items. The top level of menus includes:

Statistics	View Statistics for the current session, or for previously recorded sessions
Clear last record	Delete the last record in the current session.
Sessions	Start a new session, view statistics for the current session or for previously recorded sessions, delete a session or delete all sessions
Setups	Change indicator settings and enable extra features

Press ENTER to go deeper into a sub-menu or to select an option.

to scroll through a list of options.

Press CESC (to escape out of a sub-menu back to the next tier up.

Use the alpha numeric keypad to enter text or numbers.

to toggle between alphabet characters and numbers. **Press**

to type a decimal point or full-stop. Press

once to type a colon (:) or twice to type a hyphen (-). With alphabet characters set, press

With alphabet characters set, press to type a space.

Zeroing the scale manually

By default, the scale automatically zeroes itself when a load is removed from the weighing platform or when the indicator first powers up. Occasionally, you may need to use the manual zero to force the scale to return to zero, for example if there is a build-up of dirt or stones on the platform.

To zero the scale manually:

Press (zero

The scale displays zero.

Sessions

To create a new session:

1. Press MENU

2. Press v to display **Sessions**.

3. Press to display **Start New**.

4. Press Enter .

A message **Started** is displayed.

To view statistics for a particular session:

1 Press MENU

2 Press v, v to display **Sessions**.

3 Press ENTER

4 Press volume to display **Statistics**.

5 Press ENTER

A session date is displayed, followed by the count (number of records in the session).

Press ENTER to view the statistics for that session or, press to view statistics for a

different session.



Viewing statistics for a session

Statistics can be viewed for a particular session:

Count	Number of records in the session
Average	Average weigh recorded in the session Note: Records with no weighs are ignored in the average
Total	Total of all weighs recorded in the session
Min	Minimum of all weight recorded in the session
Max	Maximum of all weight recorded in the session
Low Count	Count of animals in Low range (only if Drafting is enabled)
Medium Count	Count of animals in Medium range (only if Drafting is enabled)
High count	Count of animals in High range (only if Drafting is enabled)

Note: Draft statistics can only be viewed for the current file.

To view statistics for the current session:

1 Press (MENU) to display **Statistics**.

2 Press ENTER

3 Press to scroll through the list of statistics.

To view statistics for another session:

1. Press (MENU) to display **Statistics**.

2. Press ENTER

3. Press repeatedly until **Other Sessions** is displayed.

4. Press ENTER

A session date is displayed.

5. Press to view the statistics for that session or, press to view statistics for a different session.



Deleting data

To delete the last record in the session:

1. Press (MENU)

2. Press volume to display Clear Last Record.

3. Press ENTER

To delete the oldest session on the indicator:

1. Press MENU

2. Press to display **Sessions**.

3. Press ENTER

4. Press to display **Clear Oldest Session**.

5. Press ENTER

Note: ID information remains in the indicator.

To delete all the sessions on the indicator:

1. Press (MENU)

2. Press to display **Sessions**.

3. Press ENTER

4. Press repeatedly until **Clear ALL Sessions** is displayed.

5. Press ENTER

Note: ID information remains in the indicator.

To delete all data on the indicator:

1. Press (MENU)

2. Press , to display **Sessions**.

3. Press ENTER

4. Press repeatedly until **Clear ALL Sessions & VID-EID Links** is displayed.

5. Press ENTER

Note: All data, including ID information is deleted.

Setups

The indicator can be customised to suit the weighing application or environmental conditions. The settings are accessed through the Setups menu.

Drafting

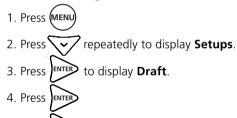
Drafting allows you to sort animals into two or three groups according to their weights. During weighing, the indicator displays the weight range the animal belongs in: <LOW>, MEDIUM> or <HIGH>.

There are two draft limit settings: a low limit and a high limit. The draft limits are the 'splitting points' for the groups.

For two-way drafting, enter a weight for one of the draft limits (leaving the other set to zero). For example, to draft animals below 75 kg into one pen and heavier animals into another, set the low limit to 75 kg and set the high limit to 0 kg.

For three-way drafting, enter a weight for both the low limit and high limit. For example, to draft animals into three pens 0-50 kg, 50-100 kg and 100+, set the low limit to 50 kg and the high limit to 100 kg.

To enable drafting:



To enter a range for the low and high limits:

5. Press enter to enable drafting.

Press MENU
 Press Press

to display Low Limit.

- 6. Type a value for the low limit range using the alpha-numeric keypad.
- 7. Press to display **High Limit**.
- 9. Type a value for the high limit range using the alpha-numeric keypad.
- 10. Press ENTER

Backlight

The backlight is set to Off by default, however you can set it to Low or High to suit poor lighting conditions. Use of the backlight will affect battery consumption – the run-time will double if the backlight is set to Low instead of High.

To modify the backlight setting:

- 1. Press MENU
- 2. Press repeatedly to display **Setups**.
- 3. Press ENTER
- 4. Press repeatedly to display **Backlight**.
- 5. Press once to change the Backlight to Low or twice to change it to High.

Resolution

You can select from 0.1kg, 0.2kg, 0.5kg or 1kg weighing resolutions.

By setting the resolution to 1 kg, the indicator will weigh to the nearest kilogram and arrive at a weight more quickly. If you are weighing light loads, for example small animals, you may require more accurate measurements. By setting the resolution to 0.1 kg, the indicator will weigh to the nearest tenth of a kilogram, although it may take longer for the scale to stabilise.

To set the minimum weighing resolution:

- 1. Press MENU
- 2. Press repeatedly to display **Setups**.
- 3. Press ENTER
- 4. Press repeatedly to display **Resolution**.
- 5. Press repeatedly as required to modify the resolution setting.

Auto zero 🙌

By default, the scale automatically zeroes when a load is removed from the weigh cage or when the indicator first powers up.

Auto Zero should be **ON** when used with the 345ge Calf Weigher.

If for any reason you want to disable Auto Zero - consult the Tru-test manual or go to www.tru-test.com.



Damp System

Damping is the length of time it takes in order for the indicator to settle on a weight. The damping system selected will depend on what you are weighing (sheep, produce, feed etc).

Superdamp III Cattle	Ideal weighing system for weighing cattle
Superdamp III Sheep	Ideal weighing system for weighing sheep
Fixed weighing time	You can specify the weighing time
Averaging	The average weight for a specific number of seconds is continually displayed. Used for non moving weights such as produce and feed. You can specify the weighing time.

To modify the damp system setting and set the weigh time:

- 1. Press MENU
- 2. Press repeatedly to display **Setups**.
- 3. Press ENTER
- 4. Press repeatedly to display **Damp System**.
- 5. Press repeatedly as required to modify the damp system setting.
- 6. Press to display **Weigh Time**.
- 7. Press repeatedly as required to modify the weighing time.

Note: The Weigh Time option is only available if Fixed Weighing Time or Averaging has been selected as the Damp System setting.

Specifications

Total Capacity	2000kg
Resolution	Set to 0.5kg (fine mode 0.1kg) or 1lb (fine mode 0.2lb)
Accuracy	+/- 1% or 2 resolutions (whichever is greater)
Power Supply	5 V DC (power adapter)
Operating temperature	-10 to + 40° C (+ 14 to +104° F)
Storage temperature	-20 to + 35° C (-4 to +95° F)
Internal battery run time	Up to 20 hours
Environmental	IP67 (immersion in up to 1 m (3') of water



Quick Start Guide - ID3000 & XR3000

Important: Follow the instructions below before using the indicator.

Note: Some of the information and features noted in the following pages may be applicable to the XR3000 model only.

Connections

(red to red).

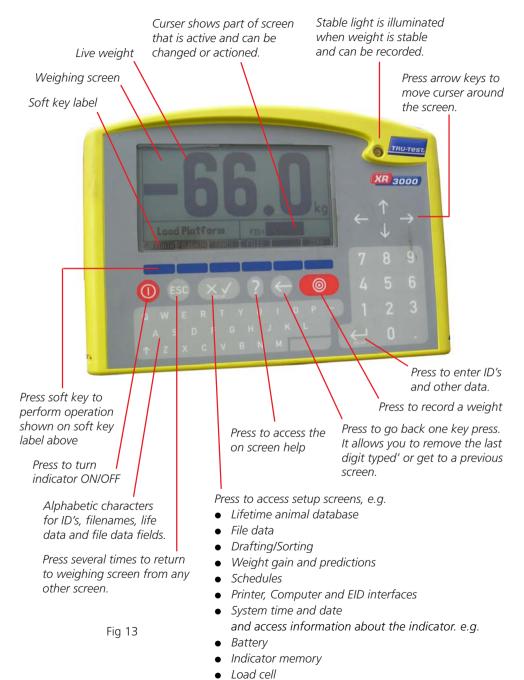
The indicator should be mounted on the central support using the holes provided. Position the indicator so that the screen is out of the sun if possible.

Connect the load cell cable to the indicator. Connect dust caps together to keep out dirt and moisture.

Connect the power cable (if using an external 12V supply)



Overview



Weighing Screen Soft Keys

Displays a list of files. each file typically represents one weighing session. There are 200 files

Displays information likely to remain the same during the lifetime of animals e.g. ID, breed. More than one ID can be entered for an animal. ID's are cross referenced, so that any ID can be entered in order to display animal information. Life data can be viewed and edited. There is one lifetime animal database.

Displays information recorded in the weighing session e.g. weights, measured data, drafting ranges, together with relevant life data. File data is linked to life data via the ID. File data can be viewed and edited.

Displays calculations for animals in the file e.g. average, total, minimum and maximum weights.

Zeroes the scale manually. Used if dirt builds up on the cage floor. Zeroing is usually automatic.

Getting Started

To start a file for a new weighing session:

- 1. Press **FILES** to go to the List of Files screen.
- 2. Select an empty file.
- 3. Enter a name for the file using the keypad. Press 📛
- 4. Press (ESC)

The file Start date is entered automatically when the first weight is recorded.

To record an animal ID and weight:

- 1. Press **ZERO** to zero the scales, if required.
- 2. Move the animal onto the cage floor.
- 3. Enter an ID using the keypad. Press —

 If the animal has not been weighed before a dialogue box appears.
- 4. Select 'Create a new lifedata record'. Press
- 5. Enter other data, if required.
- 6. Press when ready to record the displayed weight.
- 7. Repeat for each new animal.



To view all recorded data from the weighing session:

▶ Press **FILEDATA** to view weights and other data recorded in the weighing session.

To view statistics:

► Press **STATS** to view a summary of numerical data, for example, average weight, maximum weight and the number of file data fields recorded in the file.

To enable an option in a set up screen:

- 1. Place the curser on the option you want to enable or disable.
- 2. Press ←
- 3. Select an option using the arrow keys.
- 4. Press ←

TIP To change X to Y quickly, press 1
To change Y to X quickly, press 0

Weighing Screen Setup Tick the items you want on the m	FILE 1 nain weighing screen
LHS (FOR VIEWING)	RHS (FOR DATA ENTRY)
✔ Prompt message × Draft range × Carcass Weight × Value × Weight gain × Prediction × Days	 ✔ FID ■ EID ■ LID ■ Mob ■ Class × Breed × DOB ■ Spare
× FID ▼ ■ EID	× CODE 1
LIFEDATA FILEDATA DRAFT	W. GAIN SYSTEM ►►

Find out about any field, screen or feature, using the on screen help.

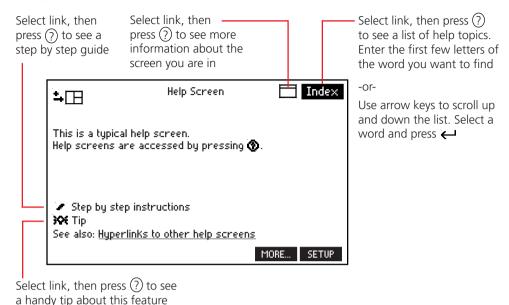
To view on screen help:

- 1. Place the curser on the field you want to find information about.
- 2. Press (?)

A help screen is displayed about the field you are on.

3. If required, move the curser to a link and press (?)

Help Screen



Weighing Tips

During weighing, make sure:

- The animal has four hooves on the weighing platform.
- Hands do not come into contact with the animal, or with part of the weighing cage.
- Another animal is not touching part of the weigh cage.
- The animal is not touching an unweighed part of the enclosure.

Battery Information

- The internal battery charger operates from the recommended Tru-test power adaptor or a 12 volt vehicle battery.
- The indicator switches off automatically after 15 minutes of inactivity. Auto power Off feature can be disabled by pressing then **SYSTEM**. Press **0** to change **4** to **X**
- The indicator should be charged for 12 hours before it is used for the first time.
- To view Battery information including charge (%) and Time to Run (hours and minutes), press , then BATTERY
- A flat battery takes 8 hours to charge at temperatures of 10°C to 35°C. For temperatures outside this range, charging times may be increased to 12 hours. In very extreme temperatures, the indicator may not charge.
- The indicator may be left on charge at all times and the scale can be used while charging.

Maintenance and Storage

- Make sure the underside of the crate is free from dung, dirt and stones.
- Store the indicator in a clean, dry place, out of direct sunlight and cover the load cell when not in use.
- Charge the indicator overnight before and after long term storage, and every three months during storage.

Latest Information and Software Downloads

For up-to-date information about Tru-test products and downloads of latest software versions for your indicator, visit the Tru-test website at www.tru-test.com

You can download Link3000 to transfer data from your indicator to your computer.

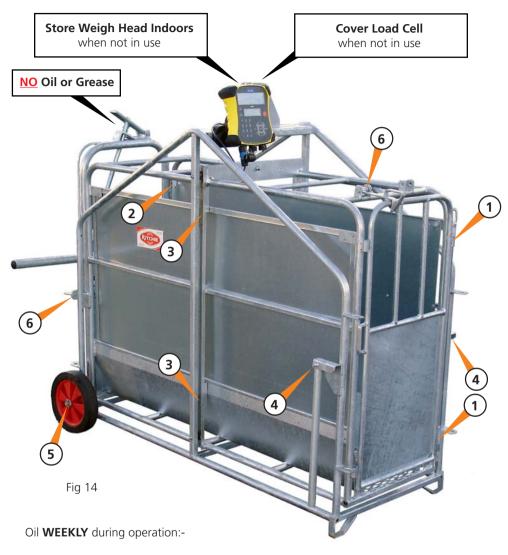
For repair and service information, contact David Ritchie (implements) Ltd. at the address on the back cover of this manual.

Specifications

Dimensions	270 x 190 x 71
Weight - ID3000	Battery option = 1.6kg (3½ lb), non battery = 1.4kg (3 lb)
- XR3000	1.6kg (3½ lb)
Accuracy	+/- 1% or 2 resolutions (whichever is greater)
	minimum base resolution 0.5kg (0.1lb) normal, 0.1kg (0.2lb) fine.
Battery	Charging time = 8 hours in normal conditions; Run time = 15 hours
	continuous use minimum with two load cells (8 hours with
	back light on). Auto turn off is 15 minutes.
Power requirements	AC adaptor (regulated) or battery, using crocodile clip
	11 to 16 V d.c., 400 mA.
Display	High contrast, wide temperature LCD module, 240 x 128 dots.
IP67 waterproof rating	The indicator is 100% water and dust proof. It can be submerged
	in water to a depth of 1 m for 30 minutes.
Environmental	Operating temperature:10 to + 40° C (+ 14 to +104° F)
	Storage temperature:20 to + 35° C (-4 to +95° F)
Loadbar Capacity	Power for up to 8 (350 •) load bars or load cells.
Communication	2 x D9, one interface RS485 or RS232, the other RS232 only.
	Allows for connection to a printer and/or computer.



Maintenance and Lubrication



- 1 Entry Gate Hinge Pins
- 2 Exit Gate Hinge Pin
- (3) Weigh Cage Bearing Slides

- (4) Transport Handle Pivot Points
- (5) Wheels
- (6) Entry & Exit Gate Latches

Note: Do not apply oil or grease to the release mechanism or locking bar - Figures 5 & 14.

These mechanisms must be dry in order to function correctly!

Warnings



Safe installation - Safety

For your protection all mains (110V or 230V) equipment used out of doors or in wet or damp conditions should be supplied from a correctly fused source and protected by an approved RCD to BS7071 or BS7288 or IEC1008-2-2 BS EN 61008: 1995.

The mains lead must be connected to a supply outlet with a **protective earth contact.** The electrical supply at the socket outlet must provide over current protection of an appropriate rating.

IF IN DOUBT SEEK THE ADVICE OF A OUALIFIED ELECTRICIAN.

Pluggable equipment must be installed near an easily accessible socket outlet. Permanently connected equipment must have a readily accessible disconnect device incorporated in the fixed wiring.



To avoid the possibility of electric shock or damage to the equipment, always switch off and isolate from the power supply before carrying out any routine maintenance

Cleaning the Indicator



Caution

Harsh abrasives, solvents, scouring cleaners and alkaline cleaning solutions, such as washing soda, should not be used especially on the display window. Under no circumstances should you attempt to wipe the inside of the weigh head.

The outside of the product is waterproofed to IP67 and should be wiped down with a clean cloth, moistened with water containing a small amount of washing up liquid or proprietary detergent.

Note: The Instructions given in this manual are intended to allow the operator to install and start using the indicator. More detailed instructions are available on the CD which accompanies the indicator, or you can go to www.tru-test.com.

Software Upgrade

The latest version of software can be downloaded from www.tru-test.com. Instructions for upgrading are provided with the download.









the perfect partner

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