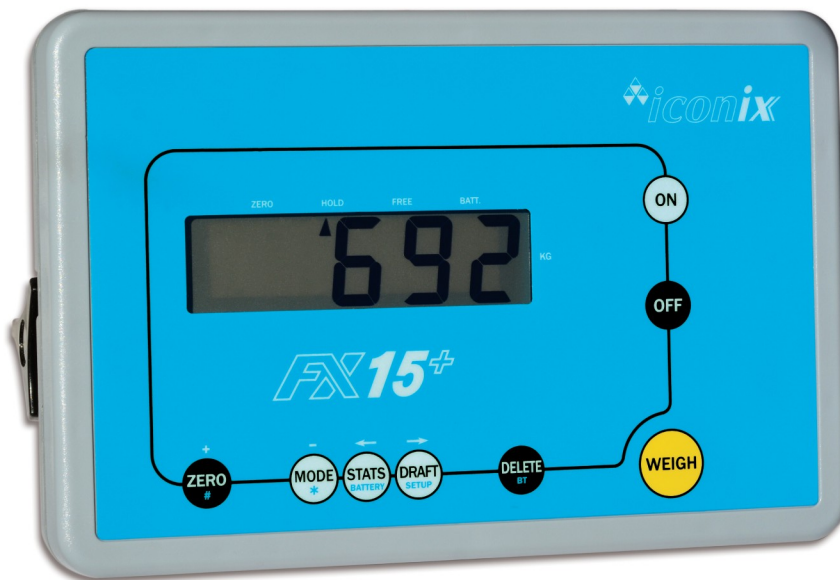


FX15+

LIVESTOCK WEIGHING SYSTEM

MANUAL



CONTENTS

1.	SYSTEM CARE	3
	Essential Care	3
	Battery Care.....	3
	Site Preparation	3
2.	OPERATING INSTRUCTIONS	4
	Getting Started	4
	Mode Key	5
	Weigh Key	5
	Delete Key	5
	Draft Key	5
	Stats Key	6
	Clearing Statistics.....	6
	Battery Voltage	6
	Bluetooth Connected	6
3.	USER SET-UP	7
4.	SPECIFICATIONS	9
	Steel Loadbar Set 2000kg	10
	Heavy-Duty Loadbar Set 3000kg	10



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1. SYSTEM CARE

The FX15+ weighing system has been designed to work reliably for long periods of time under adverse conditions. However like any equipment, common sense and care will assist in keeping it in good operating condition.

ESSENTIAL CARE

- ◆ Fit caps to cable ends and indicator sockets when not in use to protect from dirt and moisture. Hang the cable ends up, out of mud and dust.
- ◆ Damage may occur if the capacity of the scale is exceeded.
- ◆ Loadbar cables must be kept in good condition.

BATTERY CARE

**IMPORTANT !
BATTERY LIFE WILL BE CONSIDERABLY SHORTENED
IF IT IS NOT PROPERLY CARED FOR**

- ◆ Always recharge the battery with the *Iconix* AC Adaptor provided for 8 - 12 hours **AFTER USE** with the loadbars disconnected from the indicator.
- ◆ For long term storage, recharge ONCE PER MONTH with the loadbars disconnected.
- ◆ When the battery is low on charge (the BATT. pointer ▲ is on), weighing may continue by connecting the AC Adaptor if mains power is available or by using the battery clip leads to connect to an external 12V battery.
- ◆ The AC Adaptor should not be left plugged into the indicator for long periods of time.

SITE PREPARATION

- ◆ The choice of weighing site is important for accurate weighing and ease of use.
- ◆ A well chosen site that is level will ensure the best conditions for accurate weighing.
- ◆ The loadbars must be bolted to the platform or crate and be firmly attached to the ground or concrete pad.
- ◆ Any rocking or twisting of the platform could result in weighing errors.
- ◆ Adequate clearance around the platform is essential. Any binding or rubbing with posts or gates will produce weighing errors.
- ◆ The race bracket is best mounted on a fence or post and not the crate.
- ◆ Mount the indicator in a well lit position for best readability.
- ◆ A well chosen site will help animals flow smoothly through the system.
- ◆ Mounting the indicator away from the crate will help to keep hands free of the crate when the weigh cycle is started.

2. OPERATING INSTRUCTIONS

GETTING STARTED

- ◆ Connect the two loadbar cables to the loadbar sockets marked on the rear of the indicator.

Either: Use the internal rechargeable battery

or: Use the *Iconix* AC adaptor

or: Attach the optional battery cable to the FX15+ and clip onto a 12V DC battery (car, tractor battery etc.). ENSURE CORRECT POLARITY: red clip to +, black clip to –.

The internal battery cannot be recharged from an external battery, however it can be handy for continuing to weigh when the internal battery is flat.

- ◆ Press the **ON** key. The FX15+ initially displays the firmware version number e.g. 'P 6 . 0 3'.

- ◆ Then the FX15+ shows the type of loadbars attached:
' S C R L . 1 ' for standard loadbars or ' S C R L . 3 ' for heavy-duty loadbars.

- ◆ The scale will automatically return to zero. When complete, the ZERO pointer ▲ will show that the scale is at zero.

NOTE: If a large load (such as a partly filled wool bale in a wool press) remains on the scale from previous use, the last weight will be displayed. The operator can continue the weighing session from where last finished. Alternatively, press **ZERO** to return the scale to zero.

- ◆ If this is a new weighing session, the operator will probably want to start with cleared statistics (see *STATS KEY* section below).

- ◆ Check that the ZERO pointer ▲ is displayed. Load the animal onto the platform.

Press **WEIGH**. The animal is accurately weighed and the result locked on the display (in HOLD mode). A new weight record is added to memory and the statistics are updated.

- ◆ Remove the animal from the weighing platform. The last animal's weight remains locked on the display. Check that the ZERO pointer ▲ is displayed between animal weighings. If the ZERO pointer does not appear, hold the next animal back, keep hands etc. clear of the crate and press **ZERO**. The scale will be returned to zero and the weighing session can proceed.

- ◆ At the end of the weighing session, switch the indicator **OFF**.

- ◆ Recharge the internal battery overnight (see *BATTERY CARE* section above). It is very important for battery life to store the FX15+ with the battery fully charged.

IF THE FX15+ IS DETACHED FROM THE LOADBARS, ENSURE THAT THE WEATHERPROOF CAPS ARE FIRMLY INSTALLED ON ALL CONNECTORS

MODE KEY

The **MODE** key allows the operator to change the weighing mode to FREE mode or one of three types of HOLD mode, as indicated by the HOLD pointer ▲ on the display.

HOLD Mode 'HOLD'

Pressing **WEIGH** starts an averaging process, which then displays the accurate weight of the moving animal. Each weight is added to the statistics and locked on the display until the next key press.

RACE Mode 'RACE'

A version of the standard HOLD mode for weighing cattle in a race, where the weighing result may be affected by the animal leaning against the race. Wait until the animal has been clear of the race for about 1.5 seconds, then press **WEIGH**.

SPEED Mode 'SPEED'

A fast version of the standard HOLD mode with a 1.3 second weigh time. Only for use with special crates that restrict animal movement, allowing faster weighing.

FREE Mode 'FREE'

The display is continuously updated with the weight currently on the scale. If **WEIGH** is used, the averaged weight is briefly displayed and added to the statistics. FREE mode is suitable for static load weighing, not for weighing animals.

WEIGH KEY

To weigh an animal on the scale, press **WEIGH**. The animal is accurately weighed and the result locked on the display (in HOLD mode). A new weight record is added to memory and the statistics are updated. For a complete description of the weighing process, see the GETTING STARTED section above.

DELETE KEY

If there has been a problem with the weighing, press **DELETE** to delete the last weighing from the statistics. 'DELETE' is displayed as confirmation. It is only possible to delete the last weighing immediately after the animal has been weighed. 'non E' is displayed if deletion is not possible.

DRAFT KEY

A draft limit may be set to allow sorting of animals into high or low weight ranges. After weighing an animal, the display will show H (high) or L (low) alongside the weight. If drafting is not required, set the draft limit '0.0'.

To set the draft limit, press **DRAFT**. The display will show the current limit, for example '550'.

To change the draft limit, press **ZERO (+)** to increase or **MODE (-)** to decrease.

A single press of these keys will change the draft limit up or down by one step. Hold the keys down for rapid scrolling.

You may return the draft limit to '0.0', by pressing **DELETE**.

When the draft limit has been set, press **DRAFT** to return to the weighing mode.

STATS KEY

Statistics are stored in a single file in permanent memory. Normally statistics would be cleared at the start of a new weighing session. Alternatively the operator may wish to add new weighings to a previous weighing session.

Scroll through the statistics with the **STATS** key. Flashing digits indicate that statistics are being displayed.

They are displayed in the following order:

- `n o .` - number of animals weighed
- `R U G` - average weight
- `t o t` - first half of total weight (5 digits)
- `t o t` - second half of total weight (5 digits)

If the Draft Limit has been set, then draft numbers will also be shown:

- `H I` - number of animals higher in weight than (or equal to) the draft limit
- `L o` - number of animals lower in weight than the draft limit

A final press of the **STATS** returns the scale to the weighing mode.

Rather than scrolling through all statistics, you may exit at any point by pressing **WEIGH**.

CLEARING STATISTICS

All records in the file are cleared by pressing **DELETE** while any of the statistics are flashing on the display. The operator is then prompted with the message '`d E L . P`'. Press **DELETE** again within 2 seconds to confirm. '`d E L E t`' is displayed if the file has been cleared.

BATTERY VOLTAGE

To display the battery voltage, hold down **STATS** for 2 seconds until the voltage is shown, for example '`12.4 U`' for 12.4 volts. The normal operating range should be from 12.0 to 12.8V. Below 12.0V, the battery will soon need to be recharged.

Charging the battery will be faster if the FX15+ is switched off. However you may check that the charger is working correctly by switching the indicator on and checking the voltage. While charging, '`C H R G`' will be shown instead of the voltage.

BLUETOOTH CONNECTED

When a Bluetooth module is factory fitted, you may check whether the FX15+ Bluetooth is currently connected to another Bluetooth device. Hold down **DELETE** for 2 seconds until the following is shown:

- `[o n n . 1` if connected
- `[o n n . 0` if not connected

3. USER SET-UP

NOTE:

Most FX15+ settings apply only to the currently connected scale e.g. standard loadbars on Scale 1. Changing these settings has no effect on the other two scales.

Some settings apply to all possible scales (1: standard loadbars, 2: vet or other scale base, 3: heavy-duty loadbars). Changing these settings on one scale, will change the other two scales.

To enter User Set-Up, press and hold down **DRAFT** for 2 seconds.

When the display shows 'SEtUP', release **DRAFT**.

The user settings are as follows:

1. BLUETOOTH	(all scales)	bLUE.0	Off (default)
		bLUE.1	On

If the Bluetooth module has been enabled by the distributor/dealer, Bluetooth may be switched on or off. If it is not going to be used, it should be switched OFF.

To change the Bluetooth setting, press **ZERO (+)**.

To save this setting and step on to the next one, press **DRAFT (→)**.

To save this setting and exit Set-Up, press **WEIGH**.

2. BLUETOOTH MODE	bE.Std	Standard (default)
	bE.Con	Continuous
	bE.EId	EID reader

If the Bluetooth module has been enabled by the distributor/dealer, Standard, Continuous or EID mode may be selected.

The standard setting is "on-demand" output, where the weight string is transmitted after a press of **WEIGH** or in response to receiving the 'Q' or 'L' control codes (providing Bluetooth is switched ON).

"Continuous" output mode may be selected. The weight string is transmitted every time the weight on the FX15+ display is updated. DO NOT select this mode unless you have a good reason for doing so, such as continuously transmitting to a remote display.

EID mode may be selected, for use with a compatible Bluetooth equipped reader.

To change the Bluetooth Mode setting, press **ZERO (+)**.

To save this setting and step on to the next one, press **DRAFT (→)**.

To save this setting and step back to the previous one, press **STATS (←)**.

To save this setting and exit Set-Up, press **WEIGH**.

3. EID MODE

<i>Eid.OF</i>	Off (default)
<i>Eid.G1</i>	Gallagher HR5 reader
<i>Eid.E1</i>	not currently used
<i>Eid.R1</i>	not currently used

When Bluetooth Mode has been selected as EID, the EID reader type may be selected.

Please contact Iconix for further information on connecting to a Gallagher HR5 reader.

To change the EID mode setting, press **ZERO (+)**.

To save this setting and step on to the next one, press **DRAFT (→)**.

To save this setting and step back to the previous one, press **STATS (←)**.

To save this setting and exit Set-Up, press **WEIGH**.

4. RS232

(all scales)

<i>232.0</i>	Off (default)
<i>232.1</i>	On

RS232 is a legacy serial communications protocol. If it has been factory installed as an option and enabled by the distributor/dealer, RS232 may be switched on or off. Unless it is specifically required, ensure that it remains OFF.

To change the RS232 setting, press **ZERO (+)**.

To save this setting and step on to the next one, press **DRAFT (→)**.

To save this setting and step back to the previous one, press **STATS (←)**.

To save this setting and exit Set-Up, press **WEIGH**.

5. ZERO-TRACKING

<i>ZETr.1</i>	On (default)
<i>ZETr.0</i>	Off

Zero-tracking automatically restores the scale to zero, by “tracking out” small amounts of dung and dirt left on the scale. It should be ON for most weighing applications.

To change the Zero-Tracking setting, press **ZERO (+)**.

To save this setting and step on to the next one, press **DRAFT (→)**.

To save this setting and step back to the previous one, press **STATS (←)**.

To save this setting and exit Set-Up, press **WEIGH**.

6. DISPLAY RELEASE

<i>rEL5.0</i>	Off (default)
<i>rEL5.1</i>	On

The standard factory setting is Display Release OFF, which in HOLD mode keeps the last weighing locked on the display, until the next weighing.

For Display Release ON, when the weighed animal is removed from the scale, the weight will not remain locked on the display.

To change the Display Release setting, press **ZERO (+)**.

To save this setting and exit Set-Up, press **DRAFT (→)**.

To save this setting and step back to the previous one, press **STATS (←)**.

On exit from Set-Up, 'S A U E d' is displayed while the settings are being stored. The indicator then returns to the normal weighing mode.

4. SPECIFICATIONS

FX15+ Version 6.01 onwards (*P E . 0 1* is shown at switch-on), 2019 onwards

Supply Voltage: Nominal 12V DC
Maximum 19V DC
Reverse polarity protection diode fitted.

Low Battery Indication: Below approximately 11.6V the LOW BAT pointer ▲ will be on.
The FX15+ switches off at approximately 10V.

Supply Current: Approximately 150 mA including loadbar set.

Temperature Range: -5°C to +50°C

Zero Tracking: Small residual weights left on the scale between weighings (dirt build up) are automatically 'zero-tracked' out and the scale restored to zero. As this occurs the ZERO pointer ▲ will indicate that ZERO has been reached.

The zero-tracking amount is set to 0.5% of the weight displayed after the last press of **WEIGH**, with a 2.2kg maximum.

At switch-on the zero-tracking amount is initialised to 0.015% of capacity (0.3kg for 2000kg loadbar set).

Resolution: Autoranges in graduated steps from the zero point of the scale.

Scale 1:

Standard Loadbars	Metric Model	Resolution	Imperial Model	Resolution
	0 - 20 kg	0.1 kg	0 - 40 lb	0.2 lb
	20 - 50 kg	0.2 kg	40 - 100 lb	0.5 lb
	50 - 200 kg	0.5 kg	100 - 400 lb	1 lb
	200 - 500 kg	1 kg	400 - 1000 lb	2 lb
	500 - 2000 kg	2 kg	1000 - 4000 lb	5 lb

Minimum Capacity: 20kg (The 0-20kg range is available but is not part of the EMC specification).

Scale 2:

Vet Scale	0 - 100 kg	0.05 kg	0 - 200 lb	0.1 lb
	100 - 300 kg	0.1 kg	200 - 600 lb	0.2 lb

Scale 3:

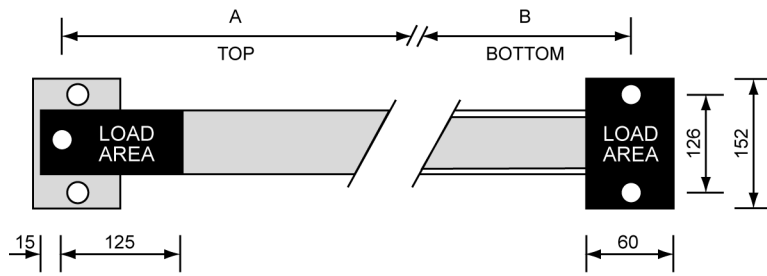
Heavy-Duty Loadbars	0 - 100 kg	0.5 kg	0 - 200 lb	1 lb
	100 - 200 kg	1 kg	200 - 400 lb	2 lb
	200 - 1000 kg	2 kg	400 - 2000 lb	5 lb
	1000 - 3000 kg	5 kg	2000 - 6000 lb	10 lb

Accuracy: ± 0.5% of Displayed Reading ± 1 Division (where 1 division is 0.1kg, 0.5kg etc. depending on weight range)

RF Immunity: Maximum additional error in a 3V/m RF field in the range 27 - 500 MHz is:
± 2 divisions for 20 - 50kg
± 1 division for 50 - 200kg
± 0 division for 200 - 2000kg

EMC Approvals: Meets or exceeds the following standards:
IEC801-2 Electrostatic discharge
EM50081-1 Free radiation measurements
EM50082-1 RF immunity

STEEL LOADBAR SET 2000kg



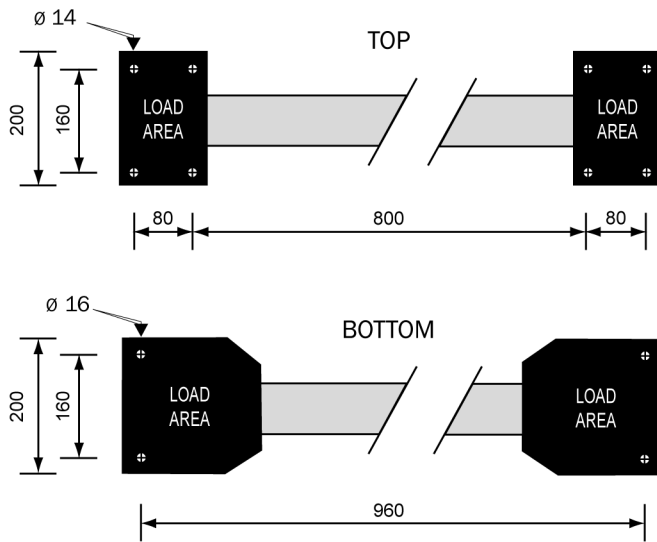
600mm

A: 570
 B: 546
 Length: 600
 Width: 152
 Height: 95
 Capacity: 2000kg

1000mm

A: 970
 B: 946
 Length: 1000
 Width: 152
 Height: 95
 Capacity: 2000kg

HEAVY DUTY LOADBAR SET 3000kg



Length: 1000 Width: 200 Height: 115
 Capacity: 3000kg



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