



EZ2500

User' s manual



Ft. Atkinson, Wisconsin USA



Panningen, the Netherlands

[www.digi-star.com](http://www.digi-star.com)



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## APPENDIX A1: EC DECLARATION OF CONFORMITY

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## TECNICAL SPECIFICATIONS

**SIZE**

260mm x 190mm x 70mm

**WEIGHT**

1.2 Kg

**HELP MESSAGES**

Context sensitive help messages in 10 languages

Long messages are scrolled

**TRANSDUCER EXCITATION**

8 volts D.C. Nominal

Capable of driving ten 350 Ohms transducers

Short circuit proof

**TRANSDUCER SIGNAL**

Compatible with transducers having full scale indicator transfer characteristics greater than 0.25 mv/v

**“AUTO RANGE”**

(Selectable) To increase display counts at weight values of 300 and 600 display counts.

**CONNECTOR**

AMP plastic weather resistant circular connector. Gold contacts.

**POWER REQUIREMENTS**

10.5 to 16.0 V.D.C.

160 mA nominal with four 350Ω L.C.

**SET UP AND CALIBRATION**

Via front panel

**GROSS RANGE**

999,999 max.display

**LOW BATTERY WARNING**

Enabled at 10.5V nominal

**POUND/KILOGRAM**

Selectable

**DISPLAY**

LCD 6 characters 43mm

**DISPLAY RESOLUTION**

.01, .02, .05, .1, .2, .5, 1, 2, 5, 10, 20, 50, 100

**DISPLAY UPDATE RATE**

Selectable: 1, 2, 3, 4 times/sec.

**MAX. DISPLAY RESOLUTION**

Adjustable to 40,000 counts max.

**ZERO TRACKING**

Selectable, On/Off

**SPAN ACCURACY**

$\pm(.1\% + .005\% / ^\circ\text{F})$  or  $(.1\% + 0.009\% / ^\circ\text{C})$  full scale  $\pm 1$  output count

**MOTION DETECTION**

Selectable, On/Off

**ZERO ACCURACY**

$(.005\% / ^\circ\text{F.})$  or  $(0.009\% / ^\circ\text{C})$  full scale  $\pm 1$  output count for 0.5 mv/v transducer

**ENVIRONMENTAL ENCLOSURE**

IP65, IEC 529

**WEIGH ALGORITHM**

4 internally selectable digital filters to optimize performance  
(General, Slow, Fast and Lock-on)

**HOLD MODE**

Used in mobile applications to stabilize displayed weight while moving the scale

**NON-VOLATILE MEMORY**

EEPROM for balance

**OPERATING TEMP**

-29°C to 60°C

-20°F to 140°F

## SAFETY DURING USE



Caution

### Check system before use

Before you are going to use the Digi-Star weighing system you need to check the proper working of the system by charging all weighing points with a known weight.

Digi-Star cannot be held responsible for deviations and problems arising from incorrect use of the weighing indicator, incorrect calibration or settings. Furthermore Digi-Star cannot be held responsible for deviations and problems arising from technical problems to the system.

During welding you need to remove the weighing bars to avoid damaging. If this is not possible, you need to place the "ground" clip as close to the welding point as possible, in order to avoid that current can flow through the weighing bars.

Digi-Star cannot be held responsible for problems arising from welding or charging of the battery.

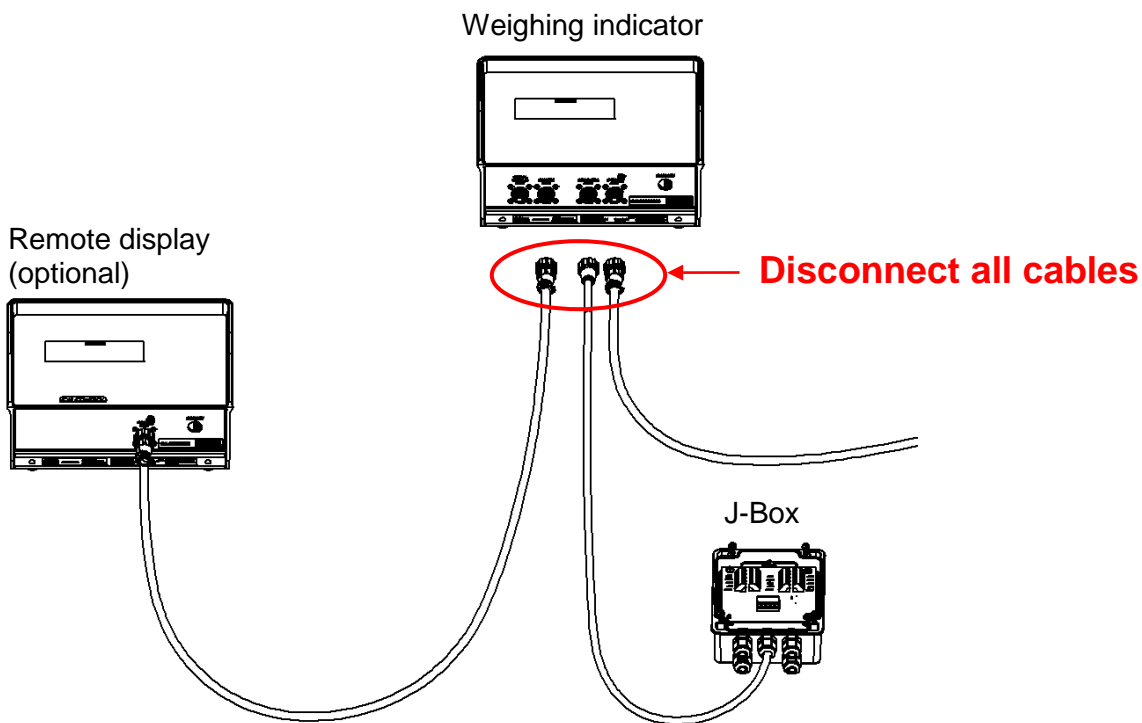
### Cleaning

Do not use running water (high pressure cleaners, hoses) to clean the indicator.

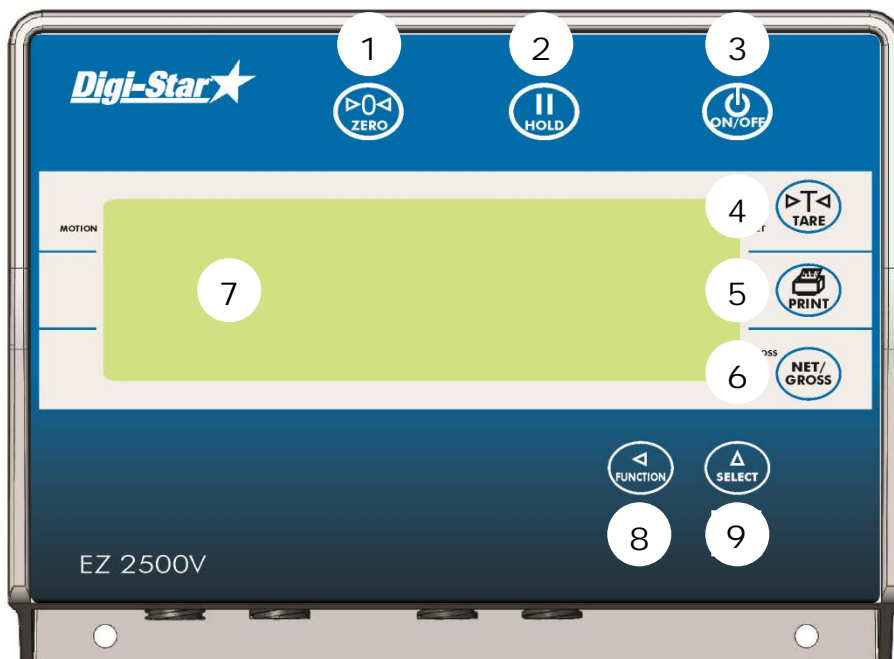
### Charging battery and welding









During welding you need to remove the weighing bars to avoid damaging. If this is not possible, you need to place the "ground" clip as close to the welding point as possible, in order to avoid that current can flow through the weighing bars.

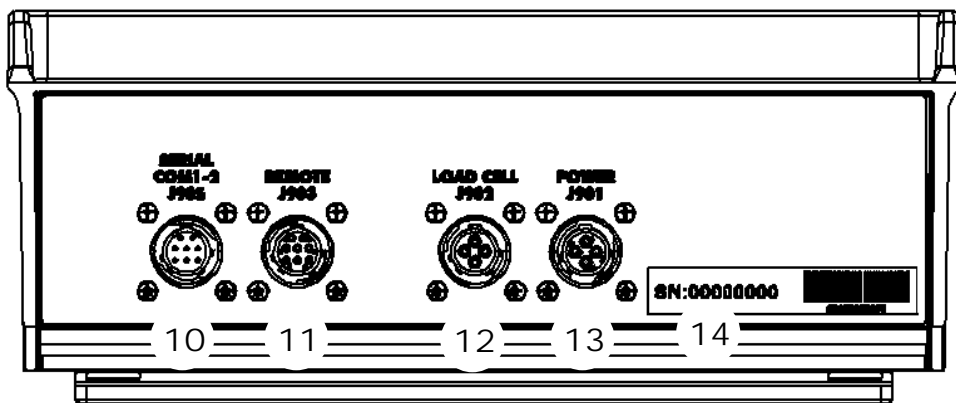
Digi-Star cannot be held responsible for problems arising from welding or charging of the battery.



## OVERVIEW WEIGHING INDICATOR



1.  – press and hold for 3 seconds to zero balance the weighing indicator.
2.  – to hold displayed weight when moving the machine.
3.  – to switch weighing indicator ON/OFF
4.  – to temporarily zero the weighing indicator [Net mode].
5.  – to register or print the displayed weight.
6.  – to toggle between net and gross weights.
7. Display – to display current value and setting.
8.  – to perform the selected task.
9.  – to display extra tasks.

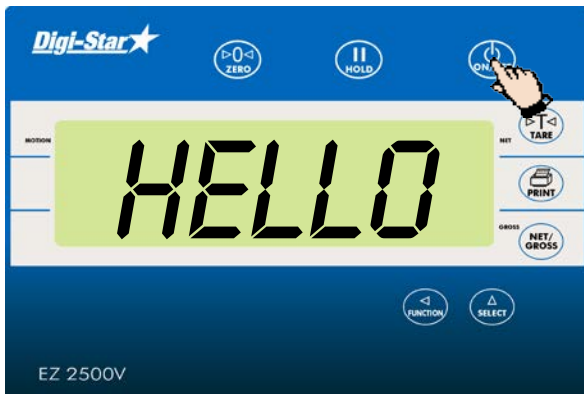



- 10. Serial port/printer port – communication with inputs and outputs of the computer and other digital devices (optional).
- 11. Port for remote display – to connect the remote display (optional).
- 12. Load cell port – to connect the J-Box cable.
- 13. Power supply port – to connect the power supply cable.
- 14. Serial number

>>See pages 16, 17 and 18 for installation instructions.

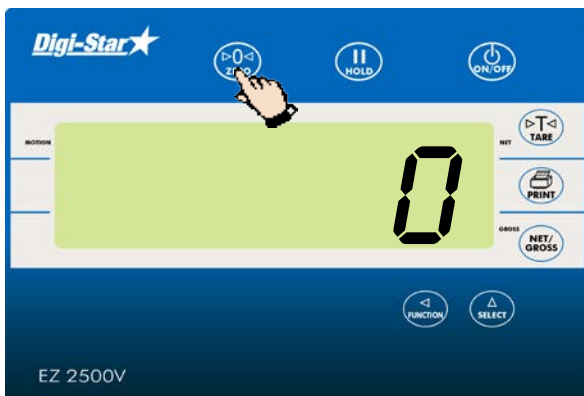
## OPERATION

### Switching on the weighing indicator



Press  to activate the weighing indicator.



### Zero balancing the weighing indicator




Press and hold  for 3 seconds to zero balance the weighing indicator.

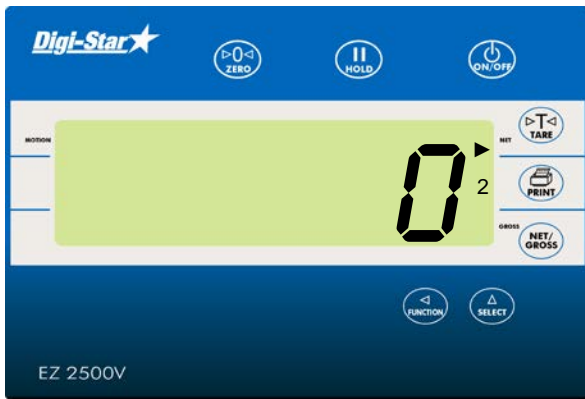
### Loading weights using Tare and Net/Gross



If you want to load more amounts, use  to set the system temporarily to zero. Press  to display the total weight of all individual amounts already loaded.

1. After the first product amount has been loaded, press  to set the weighing indicator temporarily to zero.





- The value 0 is displayed. In the upper right of the display a flashing arrow points towards NET (net weight).



- Add the next amount to be loaded.



- Press **NET/GROSS** to display the total amount already loaded. In this example: 2350 kg + 300 kg = 2650 kg. In the lower right of the display a flashing arrow points towards GROSS (gross weight).




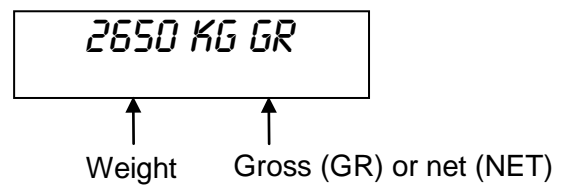
- Press **NET/GROSS** again to return to Net mode. In the upper right of the display a flashing arrow points towards NET (net weight).
- To add more individual loads repeat steps 1 thru 5.

Print key



ATTENTION! An optional serial (printer) port is required for printing.

7. Press . The weighing indicator sends data to the printer or PC. A sample output format is shown below:

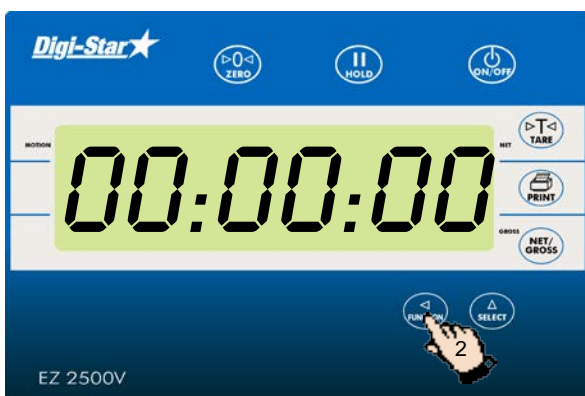



Timer option

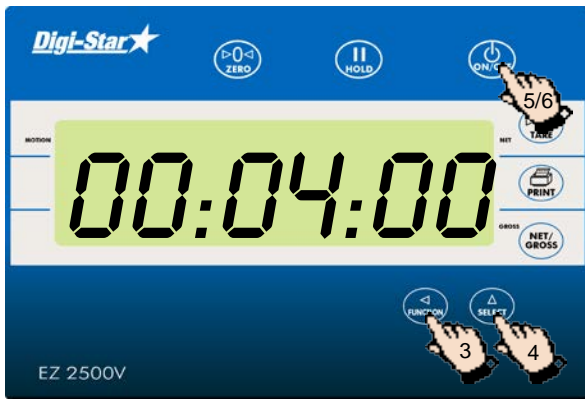






The timer option can be used to set a mixing time. After mixing (timer reaches zero) the weighing indicator gives a loud alarm.

1. Repeatedly press  until *TIMER* is displayed.



2. Press  to display hours, minutes and seconds (hh:mm:ss).



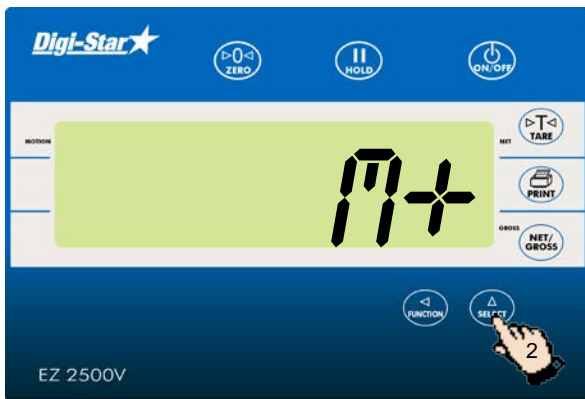
3. Use  to move to the section (hours, minutes or seconds) to be changed. The selected digit starts flashing.
4. Repeatedly press  to select the required digit.
5. Press  to start the timer.
6. When timer reaches zero, press  to stop the alarm signal and function.

Using M+, RM and CM options

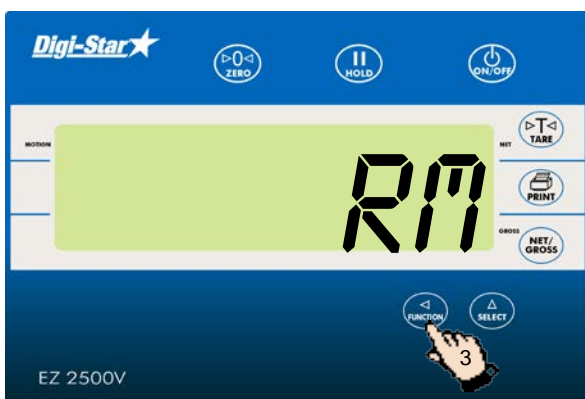



Use these options to weigh, for example, the axles of a truck or wagon one at a time.

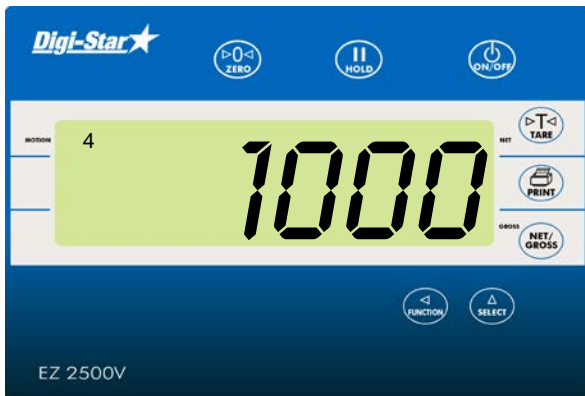
1. Put the first weight on the weighing platform. For example: 500 kg.



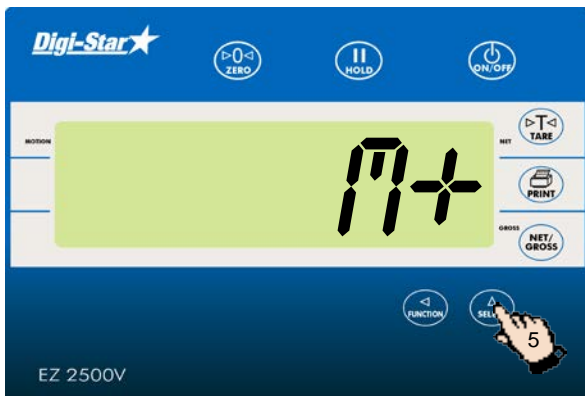
2. Repeatedly press  until *M+* is displayed.



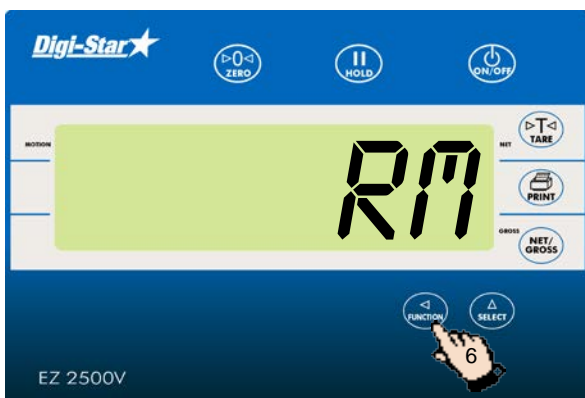
3. Press . *500 KG* and *RM* are briefly displayed. 500 Kg will be added to the memory and the weighing indicator returns to gross weighing mode.




- Put the next weight on the weighing platform. For example: 1000 kg.





- Repeatedly press , until *M+* is displayed.

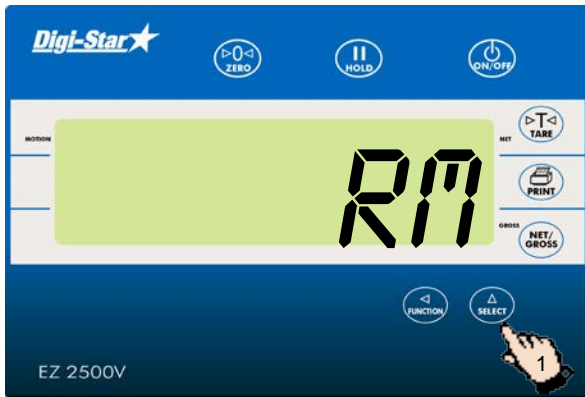


- Press . The weighing indicator adds 1000 kg to 500 kg in the memory. *RM* flashes on the display and the weighing indicator returns to gross weighing mode.



- Repeatedly press , until *RM* is displayed.
- Press .
- The total of both weights, 1500 kg, is displayed. The weighing indicator is in gross weight mode.



Printing weight from memory



ATTENTION! An optional serial (printer) port is required for printing.

1. Repeatedly press  , until *RM* is displayed.




2. Press  to display the weight in the memory. For example: 1500 kg.
3. Press  when the weight is displayed.

Determining average weight



1. Repeatedly press  , until *RM* is displayed.



2. Press  twice within three seconds to perform a weight average.
3. *COUNT 2* is displayed to indicate that the weight average is calculated from two individual weights. In this example, the weighing indicator calculates the average from 1000 kg and 500 kg.




4. *AVERAG* (average) is displayed.



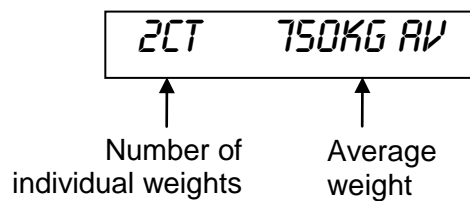
5. The display shows the calculated average of these two weights. After displaying the average weight, the weighing indicator returns to gross weighing mode.

Printing average weight



1. Press  when the average weight is displayed.

A sample output format is shown below:






## OTHER FUNCTIONS

### Holding the displayed amount

In Hold mode the displayed weight remains on the display while moving the feed mixer

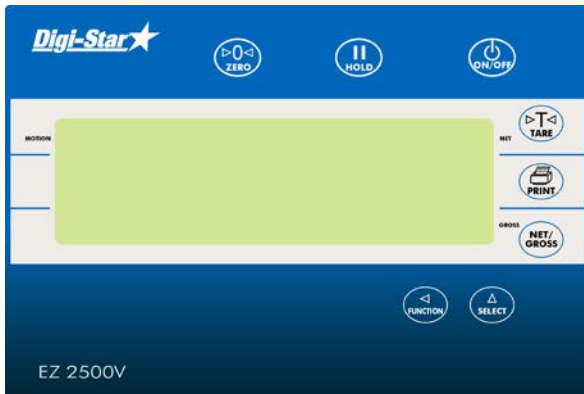


1. Press  to hold the displayed weight.
2. Press  to return to normal weighing mode.

If an amount is loaded while the weighing indicator is in Hold mode, press  to exit hold mode.

### PRINTING




Note: The serial port (optional) must be installed to print data.



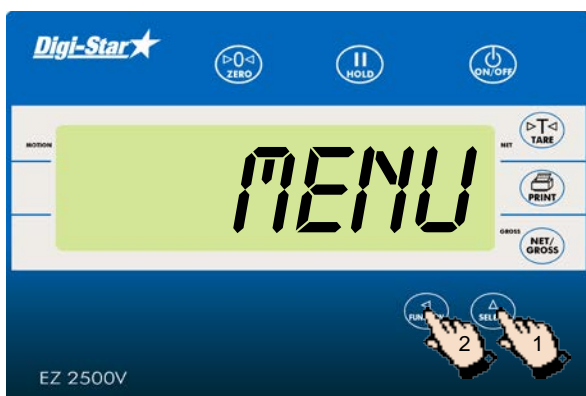
Reference: technical manual D3648 on [www.digi-star.com](http://www.digi-star.com)



### Backlight intensity



1. Press , until *DIMMER* appears on the display.
2. Press  to reduce the backlight intensity by 60%. Press  again to return to full intensity.

## Function and Select keys



1. Repeatedly press  to select following options:
  - Timer:** Stopwatch for mixing time
  - M+:** Adding new weigh to total weight in memory.
  - RM:** Displaying weight in memory
  - CM:** Clearing total weight in memory
  - Dimmer:** Decreasing intensity of the background light
  - Menu:** Viewing menus 1,2,3 and 4 and calibrating. See pages 14 and 15.
  - Setup:** Changing setup and calibration numbers See page 20.
  - Help:** Explains the function of the last key pressed.
2. When the required option is displayed, press  to activate this option.



## MENUS 1 THRU 4 AND CALIBRATION

1. Repeatedly press , until *MENU* is displayed.
2. Press and hold for 3 seconds.
3. Repeatedly press to select Menu 1,2,3, 4 or to calibrate.
4. Press to access the selected menu and display the first menu setting.
5. a) Press to move to the next setting without making any changes or,  
b) Press to select the required options for each setting.
6. Press to save the edited setting and to select the next setting in the menu.

Note: Press and hold Then press to exit the menu.

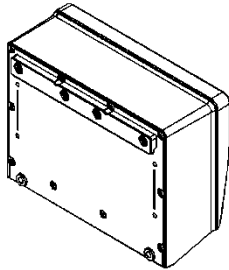
Setting [display]	Access N°	Options [displayed] (bold=default)	Description	
<b>MENU 1. BASIC FUNCTIONS IN MOST WEIGHING INDICATORS</b>				
LANGUAGE [LANGAG]	101	<b>English</b> Dutch French German Italian Portuguese Spanish Danish Hungarian Vesta	[ENGLISH] [NEDERL] [FRANCS] [DEUTSH] [ITAL] [PORT] [ESPAN] [DANSK] [MAGYAR] [VESTA]	Settings and texts will appear in this language on the display.
DISPLAY RATE [D RATE]	102	1,2,3,4	Update display times per second.	
ZERO TRACK [ZTRACK]	104	ON/OFF	If ON -zero track adjust balance for buildup of snow & mud.	
WEIGH METHOD [W MTHD]	105	1=General, 2=Fast, 3=Slow, 4=Lock-On	Select weigh method	
SCALE ID SETUP [SCALEID]	108	NEW EZ	Identity of scale location (truck id or Mixer number).	
1 PRESS ZERO [1 ZERO]	115	ON/OFF	If ON -press and hold Zero key to Zero/Balance scale.	

Setting [display]	Access N°	Options [displayed] (bold=default)	Description
<b>MENU 2. TIME, PRINT, COMMUNICATION &amp; WEIGHING FUNCTIONS</b>			
TARE AUTO PRINT (tareap)	211	ON/OFF	If ON -tare auto-prints displayed weight.
ONE LINE PRINT (1l prt)	212	ON/OFF	If ON -indicator data prints on one line.
AUTO PRINT (aprint)	214	ON/OFF	If ON -pressing keys auto-prints weight values.
PRINT FORMAT (prtfmt)	216		Select alternate & comma (CSV) formats.
REMOTE (REMOTE)	218	ON/OFF	If ON indicator communicates with cab control display
ZERO OUTPUT (zerout)	219		Perform Zero/Balance for SCOREM #11 weight output and analog output (4-20mA)
SCALE NUMBER (scl no)	231		Select scale number for cab control communication
REMOTE DISPLAY (rmdi sp)	234	EZ3MUX EZ2 COG	Select type of remote display
<b>MENU 3. CALIBRATION SETTINGS WEIGHING INDICATOR</b>			
DISPLAY UNIT [LB-KG]	303	<b>LB/KG</b>	Display in lb or kg.
CAPACITY (cap)	303		Enter MAXIMUM weight measurable on scale
<b>MENU 4. PRESET, RECIPE &amp; COUNTER FUNCTIONS</b>			
NOT USED WITH EZ2500			
<b>CALIBRATION</b>			
SETUP NUMBER [SETUP]	871		The unit of weight (1-4lbs or 5-8 kg), the gain (1-9), the sensitivity (display counts 1-9) and the capacity * 1000 can be entered using direct number entry.
CALIBRATION NUMBER [CAL]	872		Displayed amount at 0.4mV/V for these load cells.

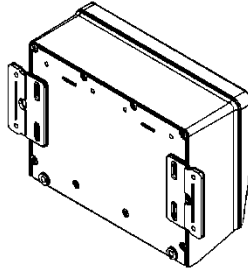
# INSTALLATION

## Mounting weighing indicator

Rail mounting  
included



Wing mount  
optional



RAM mount  
optional

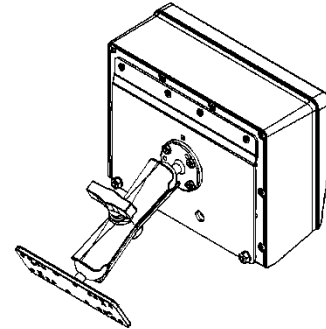
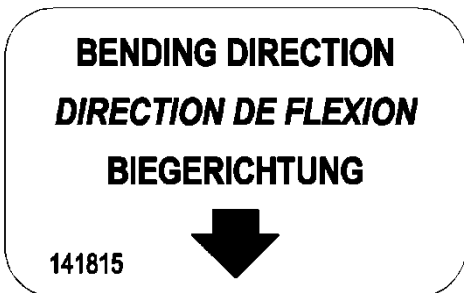


Figure 1: Mounting weighing indicator

Rail mounting standard included.

Wing mount optional. RAM mount (option); included with RAM mounting kit.

## Load cell direction



Observe direction of arrow when installing load cell.

Connecting the cables

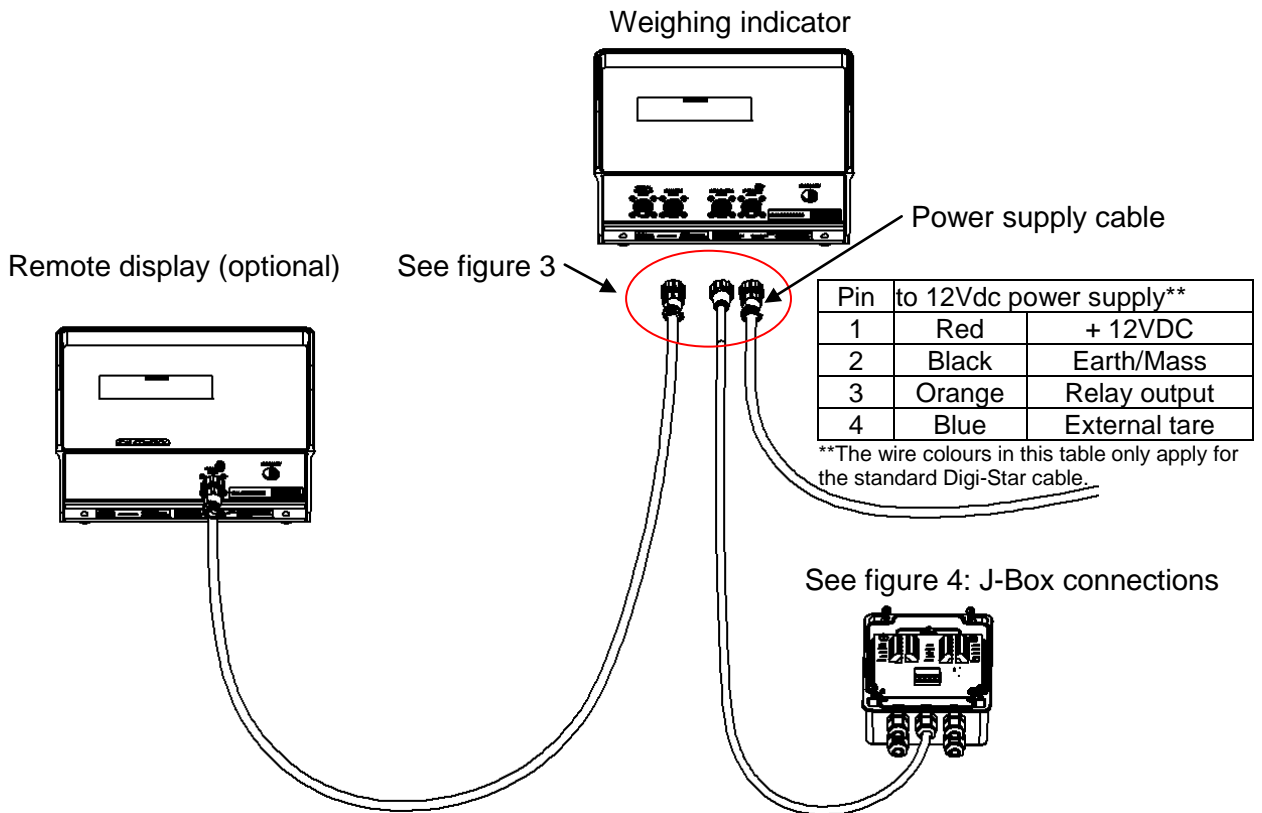


Figure 2: Connection diagram of weighing indicator

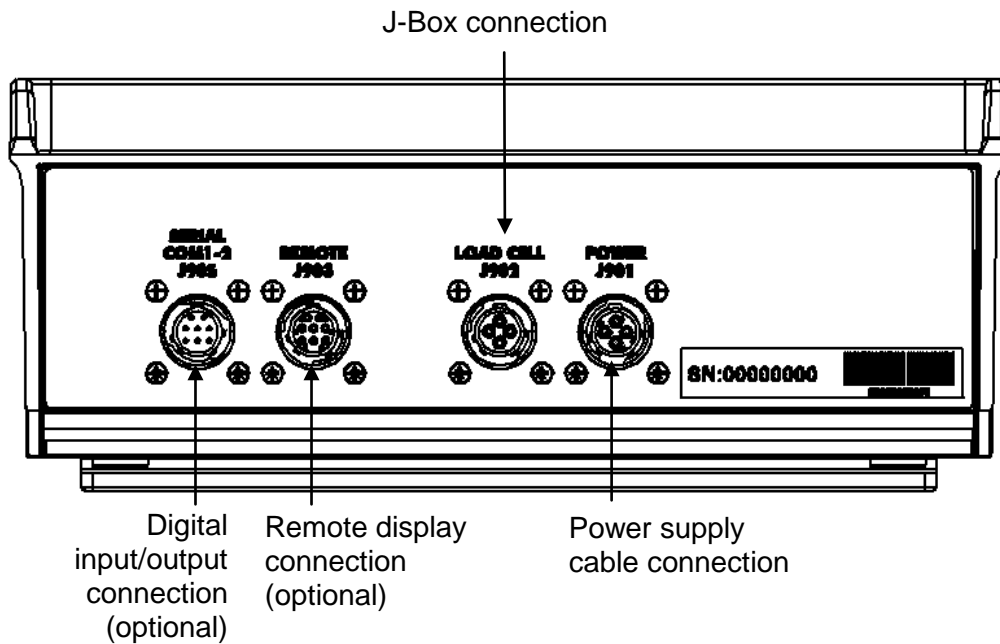


Figure 3: Bottom panel cable connections

Connecting load cells to J-Box

Connection of wires from load cell cable to terminals.

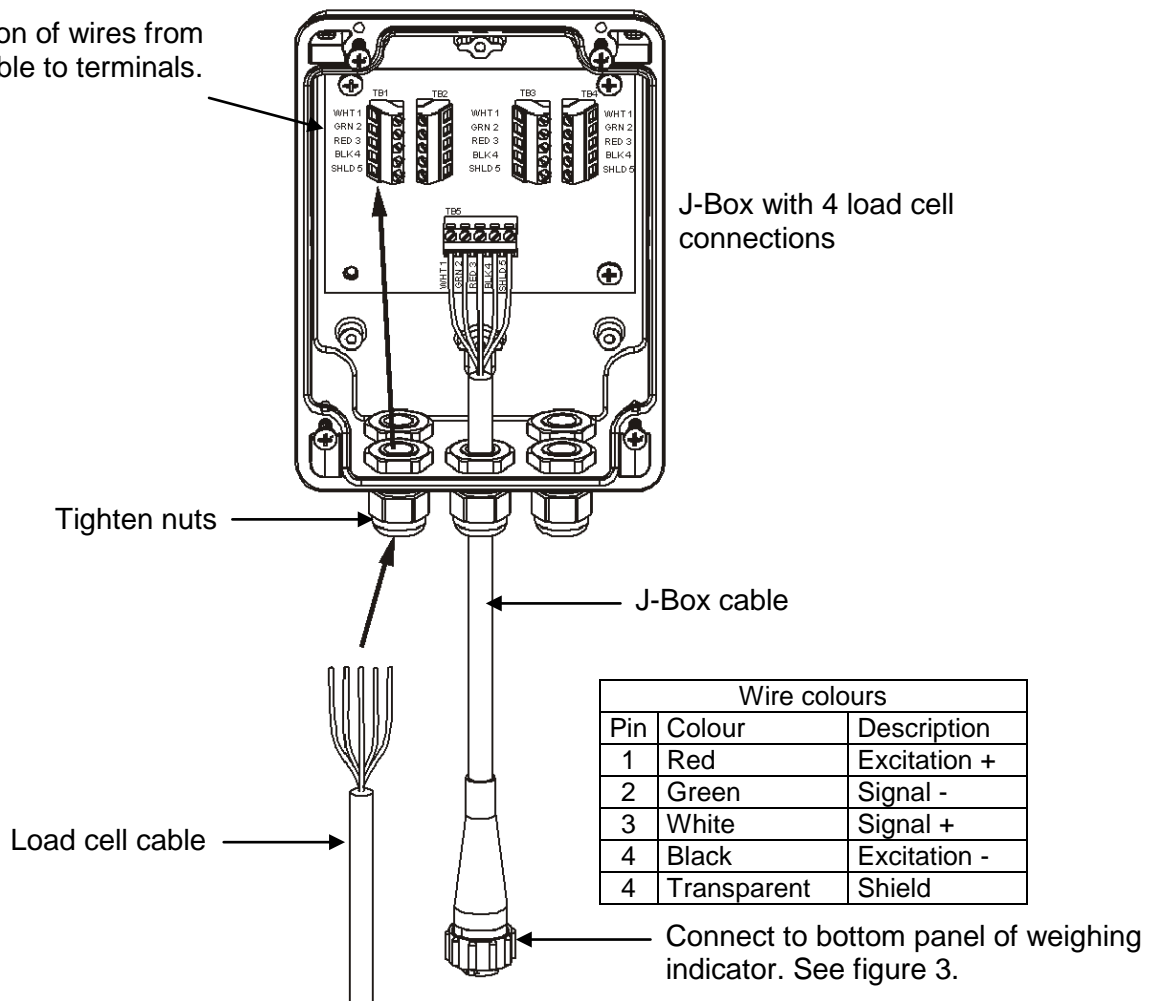










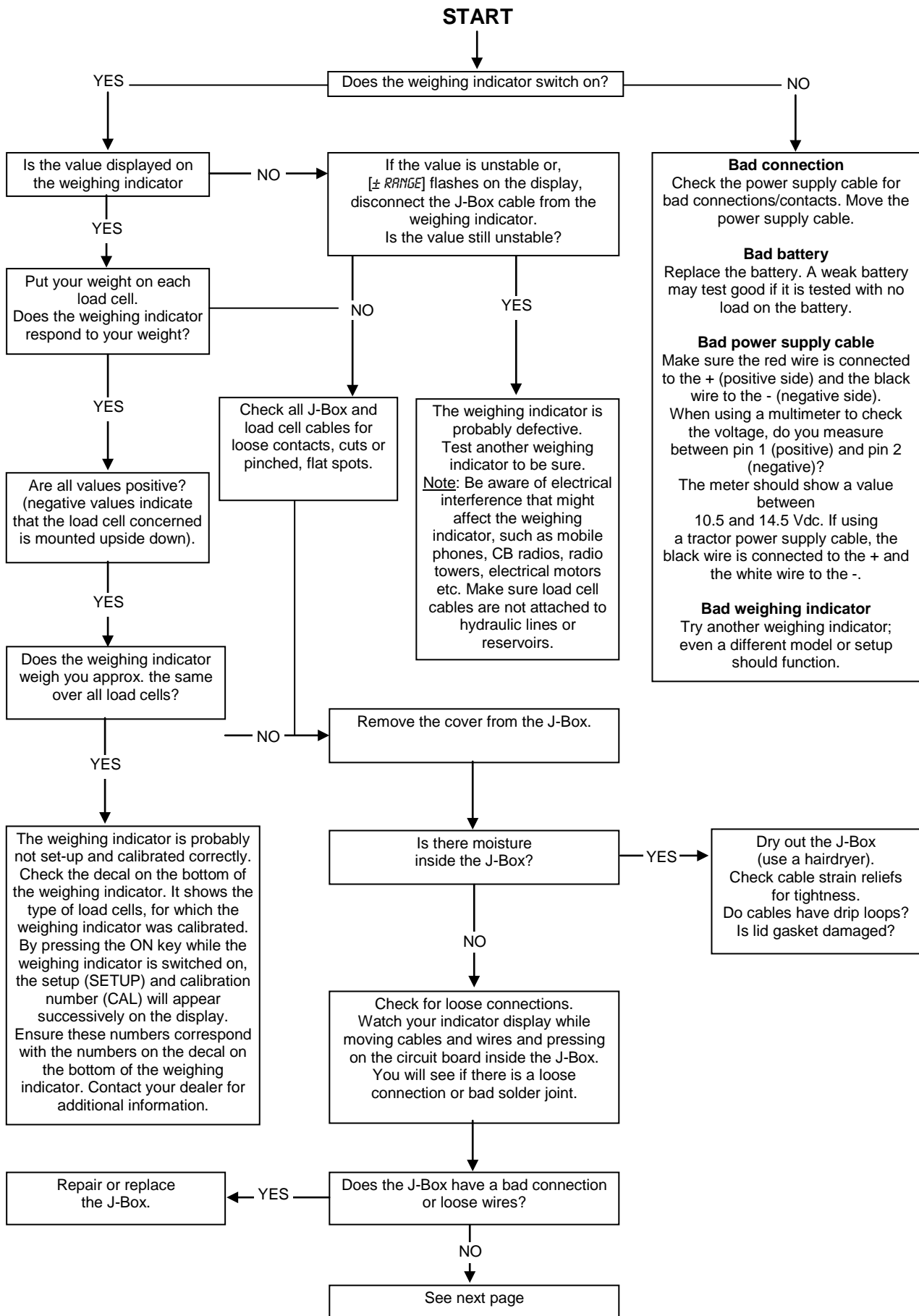
Figure 4: J-Box connections

Changing setup and calibration numbers  
[SETUP] & [CAL]

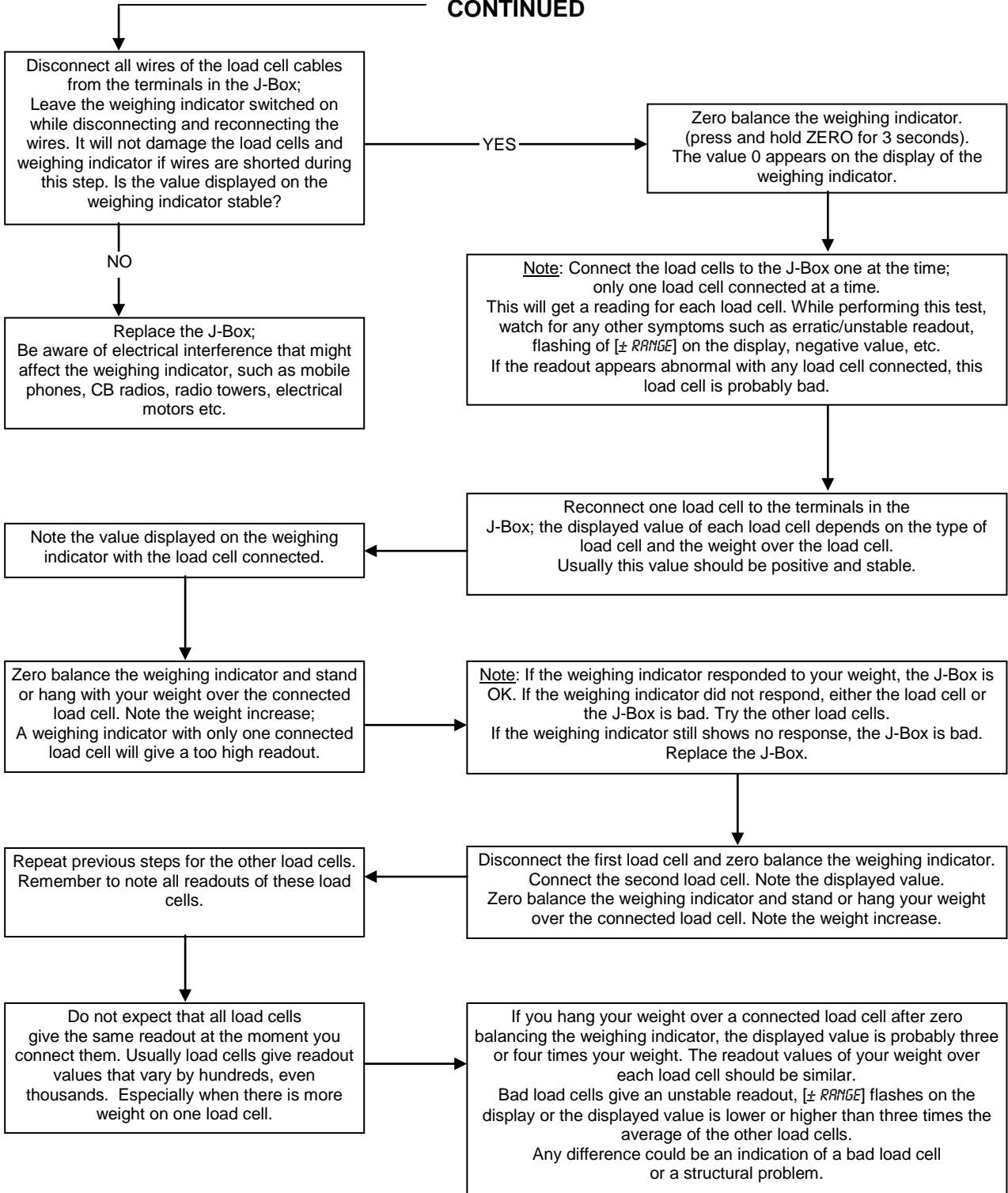


1. Repeatedly press  , until *SETUP* is displayed.
2. Press and hold  for 3 seconds .
3. The six digit setup number [*SETUP*] is displayed. Use  to select the digit to be changed. Press  to change the digit.
4. Press  to save the setup number. The calibration number [*CAL*] appears on the display. Use keys  and  change the calibration number [*CAL*].
5. Press  to save the calibration number and to return to gross weighing mode.

# TROUBLE SHOOTING



CONTINUED



## APPENDIX A1: EC DECLARATION OF CONFORMITY

Application of Council Directive(s)	2004/108/EEC
Manufacturer's Name	Digi-Star, LLC
Manufacturer's Address	W5527 State Hwy 106, Fort Atkinson, WI 53538
European Representative Name	Digi-Star Europe B.V.
European Representative Address	J.F. Kennedylaan 235, 5981 WX Panningen (NL)

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Model name    EZ2500, RD2500

Conformance to:

- EN 61326 - electrical equipment for measurement, control and laboratory use (see Report Number C-1136 311072.)
- EN 55011 - for Class B ISM equipment for industrial, scientific, and medical equipment (see Report Number C-1136 311072).

Beginning serial N°:        1001  
Year of Manufacture:        2012

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

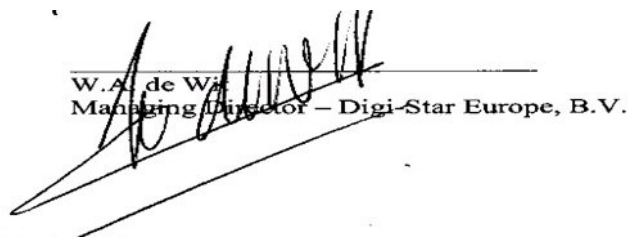
Manufacturer



**Signature**

Name:        Doug Evenson  
Position:    Director of Engineering  
Place:        Fort Atkinson, WI U.S.A.  
Date :        12 April 2012

Legal representative in Europe



W. de Wit  
Managing Director – Digi-Star Europe, B.V.

**Signature**

Name:        Wim de Wit  
Position:    Managing Director  
Place:        Panningen, the Netherlands  
Date:        12 April 2012