

# 920i<sup>®</sup> AC/DC Version

*Agricultural Multi-Animal Indicator*

## Operation Manual



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Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at [www.ricelake.com/training](http://www.ricelake.com/training) or obtained by calling 715-234-9171 and asking for the training department.



*Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit [www.ricelake.com/webinars](http://www.ricelake.com/webinars)*

# 1.0 Introduction

The 920i AC/DC Indicator can be installed on most Rice Lake Weighing Systems livestock scales. This system is manufactured with top quality components and is engineered using the latest technology to provide operating features and reliability unmatched for years to come.

This manual provides operating instructions and configuration information for the 920i AC/DC Indicator.



Manuals and additional resources are available from the Rice Lake Weighing Systems website at [www.ricelake.com](http://www.ricelake.com)

Warranty information can be found on the website at [www.ricelake.com/warranties](http://www.ricelake.com/warranties)

## Safety Signal Definitions:



**DANGER** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.



**WARNING** Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.



**CAUTION** Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.



**IMPORTANT** Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

## General Safety



**Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.**



**Failure to heed could result in serious injury or death.**

**Some procedures described in this manual require work inside the indicator enclosure. These procedures are to be performed by qualified service personnel only.**

**Do not allow minors (children) or inexperienced persons to operate this unit.**

**Do not operate without the enclosure completely assembled.**

**Do not use for purposes other than weight taking.**

**Do not place fingers into slots or possible pinch points.**

**Do not use this product if any of the components are cracked.**

**Do not exceed the rated specification of the unit.**

**Do not make alterations or modifications to the unit.**

**Do not remove or obscure warning labels.**

**Do not submerge.**

**Before opening the unit, ensure the power cord is disconnected from the outlet.**

## 1.1 FCC Compliance

### United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### Canada

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## 1.2 Front Panel

Front panel keys and annunciators are described in the following sections.

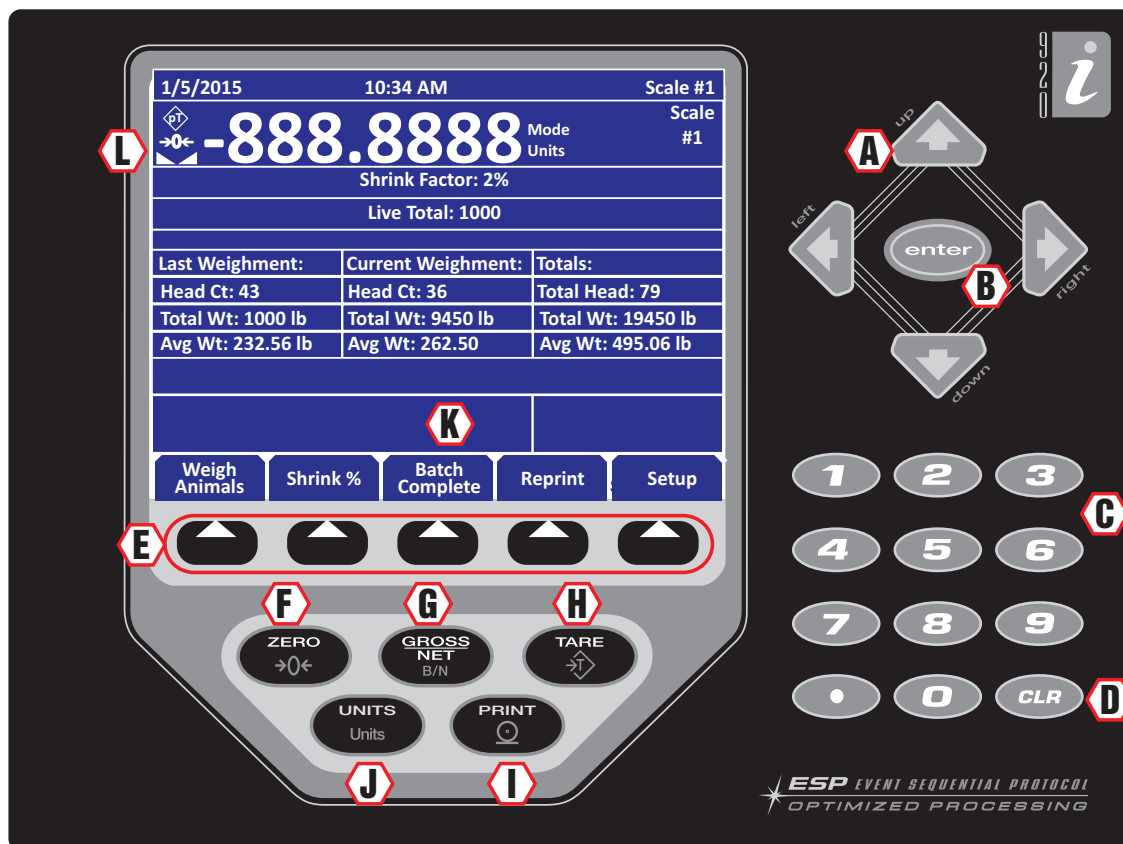


Figure 1-1. 920i Indicator Front Panel

### 1.2.1 Keypad Functions

Item No.	Description
A	Directional Arrows – Moves cursor to needed area and updates values
B	Enter – Saves entered data
C	Keypad – Allows input of numbers for head count and shrinkage
D	Clear Key – Clears data
E	Softkeys – Allows additional functionality (Figure 1-2 on page 4)
F	Zero – Sets scale to zero value
G	Gross/Net – Toggles between Gross and Net when tare is present
H	Tare – Non-functional
I	Print – Prints a Gross or Net Format ticket when not group weighing animals; Prints a summary report, if reports are enabled
J	Units – Non-functional
K	Display Area – Area to view weight and messages
L	Tare Annunciator — Used to zero out a known weight
	Center of Zero Annunciator — Indicates that the scale is zeroed
	Standstill Annunciator — Indicates that the load force has settled within the motion window

Table 1-1. Front Panel Display

## 1.2.2 Softkeys

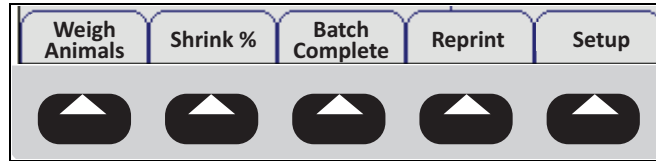


Figure 1-2. Softkey Assignments

Softkey	Description
Weigh Animals	Press each time a new group of animals is placed on the scale during a batch process
Shrink %	Allows input of a shrinkage value when weighing animals
Batch Complete	Press to complete the batch and print a summary ticket
Reprint	Prints the last stored ticket, until next batch is started
Setup	Displays the current pitch and roll angles and is password protected; Allows access to the setup softkeys

Table 1-2. Softkey Descriptions

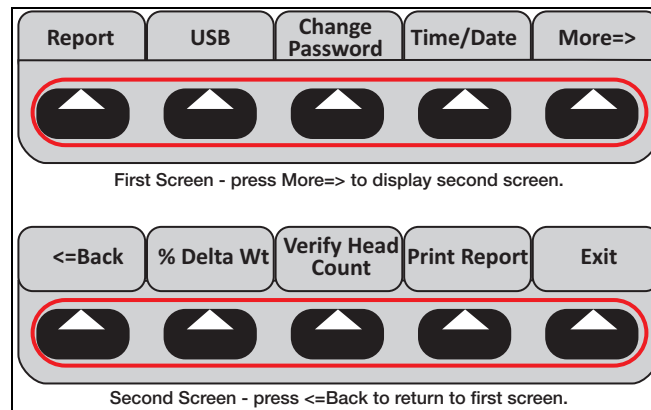


Figure 1-3. Setup Softkeys

Softkey	Description
Reports	Turns transaction storing and reports <b>ON</b> or <b>OFF</b> ; If <b>ON</b> , the batch totals will be stored for each batch in the transaction database; If <b>OFF</b> , batch totals will not be stored; For more information, see Print Report below
USB	Allows selection of a USB device, download of database files and adjusting the screen contrast ( <a href="#">Section 3.3.2 on page 12</a> )
Change Password	Allows the input of password protection; Default is none; When set to nothing no password is requested when Setup is selected
Time/Date	Sets the system time and date
More=>	Press <b>More</b> to display set 2 of the setup softkeys
<=Back	Returns display to previous menu
% Delta Wt	Set the percent change in the printed weight before the live total starts getting updated again; <i>Example: If 1000 lb is weighed and most of those animals leave the scale and the next batch starts coming on (scale does not go all the way to zero), when it is at 100 lb (default is 90% change in weight) or 1100 lb (either direction) it will start updating that weight again. The live total should show more than the regular total if they're getting close to weighing capacity (if the scale only holds 20,000 and their last total was 19,500, they will want to only add 500 worth of animals).</i>
Verify Head Count	Turns head count verification On/Off
Print Report	A summary report can be printed by pressing PRINT, showing the totals since the last time the database was cleared ( <a href="#">Figure 2-2 on page 7</a> ); After printing, the indicator prompts <b>Clear Transactions?</b> then displays <b>YES</b> and <b>NO</b> softkeys
Exit	Returns the display to the main screen

Table 1-3. Setup Soft Keys



## 1.3 Indicator Settings

### 1.3.1 Time and Date

The 920i AC/DC Indicator has a built-in time and date clock that automatically adjusts for leap years. The real time clock will run even if power is removed from the indicator. There is a battery inside the indicator that will keep the clock running continuously while there is no power to the indicator.



**Note** *There is no need to be in calibration mode to change the time and date.*

#### Setting Time/Date

Use the following steps to set up the time and date.

1. Press the **Setup** softkey.
2. Press the **Time/Date** softkey.
3. Use the directional arrows to enter the current time and date.
4. Press the **Enter** key to return to the setup menu.
5. Press the **Exit** softkey to return to the main menu.



**Note** *Press the Cancel softkey to exit without saving any changes.*

## 2.0 Operation

This section provides an overview of 920i AC/DC Indicator operation information.

### IMPORTANT

*A printer is optional, so all references only apply if there is a printer connected to the 920i AC/DC indicator.*





### 2.1 Weighing Multiple Animals

1. Press the power switch to turn on the indicator.
2. Insert a ticket into the printer (optional).
3. Press **FORWARD** on printer to secure the paper.



#### Note

*If paper does not feed into the printer under the print head, make sure the release light is on. If it is not, press **RELEASE** on the printer.*

4. Press  to re-zero the scale (if required).
5. Load the animals onto the scale.
6. Press . **Enter Head Count** is displayed.
7. Use the keypad to enter the number of animals to be weighed.
8. Press . The indicator captures a stable gross weight.
9. If Verify Head Count is turned on, **Re-key in Head Count** displays. Use the keypad to enter the number of animals to be weighed.
10. Press . The head count, total weight and average weight per head displays.




#### Note

*A line (ticket) prints out with the animal count, weight, units and average weight to the printer.*

Last Weighment	Current Weighment	Totals
Head Ct: 0	Head Ct: 0	Total Head: 0
Gross Wgt: 0	Gross Wgt: 0	Total Wgt: 0
Avg. Wgt: 0	Avg. Wgt: 0	Avg. Wgt: 0

Table 2-1. Weight Display

- **Last Weighment** – Provides information on the previous group of animals that were on the scale.
  - **Current Weighment** – Provides information on the number of animals currently on scale, their total weight and the average weight per animal.
  - **Totals** – Provides information on the total of all animals weighed in current weigh batch and their average weight.
11. Unload the scale.
  12. Repeat [Step 4-Step 10](#) until all animals from the current batch have been weighed.
  13. Press  to complete current batch of animals. Summary information is printed on a ticket (optional).

### 2.1.1 Weigh Ticket Print-Out (Optional)


Press **Batch Complete** to obtain the Weigh Ticket for the current batch of animals.

```


02/04/2016 05:52PM
#Hd  Weight  UM      Avg Wt
-----
25   7720   1b      309
22   7915   1b      360
29   8010   1b      276
-----
76   23645  1b      311 Gross
      23645  1b      311 Net
                        0.00% Shrink
    
```

Figure 2-1. Weigh Ticket Example

### 2.1.2 Last Ticket Reprint (Optional)

Press  any time prior to starting the next batch to reprint the last weigh ticket.

### 2.1.3 Summary Report Ticket (Optional)

Press  to generate the Summary Report Ticket.

This will printout a summary of all the batches stored in the Report memory, if **Report** function is enabled in the **Setup** menu. If enabled, this **Report** function will append and store the weigh ticket batches in the **Report** memory. Upon print-out, the operator has the opportunity to clear the report memory.




**Note** *If the reports function is enabled in the Setup menu, the summary information will also be stored to the transaction database where it can be printed or uploaded to a PC.*

```

Summary Report
Date/Time 05:54PM 02/04/2016
#Hd  Wgt  Shr
-----
02/03/2016 10:48PM
 2   550 1b 50.00%
-----
02/03/2016 10:49PM
 2   550 1b 50.00%
-----
02/04/2016 05:52PM
76  23645 1b 0.00%
-----
Tot Head: 80
Tot Wgt : 24745 lb Gross
    
```




Figure 2-2. Summary Report Ticket Example

### 2.1.4 Shrink

Press  at any time to change the shrink percentage (0.0–99.99%)

to be subtracted from the total gross weight. This is saved through power cycles. The default is 0.0%.

## 2.2 Weighing a Single Animal

1. Press  and enter a head count of 1.
2. Press  to print the summary information of a batch on the weigh ticket.
3. Press  to print a complete summary report of all batches in report memory.

## 2.3 Verify Head Count

### 2.3.1 Function OFF

If the **Verify Head Count** function is **OFF** in the setup menu, the program will operate as normal. It will only prompt the operator once to enter the **Head Count** prior to printing the weighment value.

### 2.3.2 Function ON

If the **Verify Head Count** function is **ON** in the setup menu, the program will require extra operator verification. It will prompt the operator to re-enter the head count value, immediately after the original **Head Count** value is entered. If the operator enters a different value, the program will store and print the latest value entered.

## 3.0 Configuration

This section provides an overview of 920i AC/DC Indicator configuration information.

### 3.1 Configuration Mode

The setup switch must be pressed to enter the configuration mode. If the indicator has an NTEP seal, it needs to be cut to access the switch.

**IMPORTANT**

*For continued NTEP certification the indicator must be resealed by an authorized agent.*

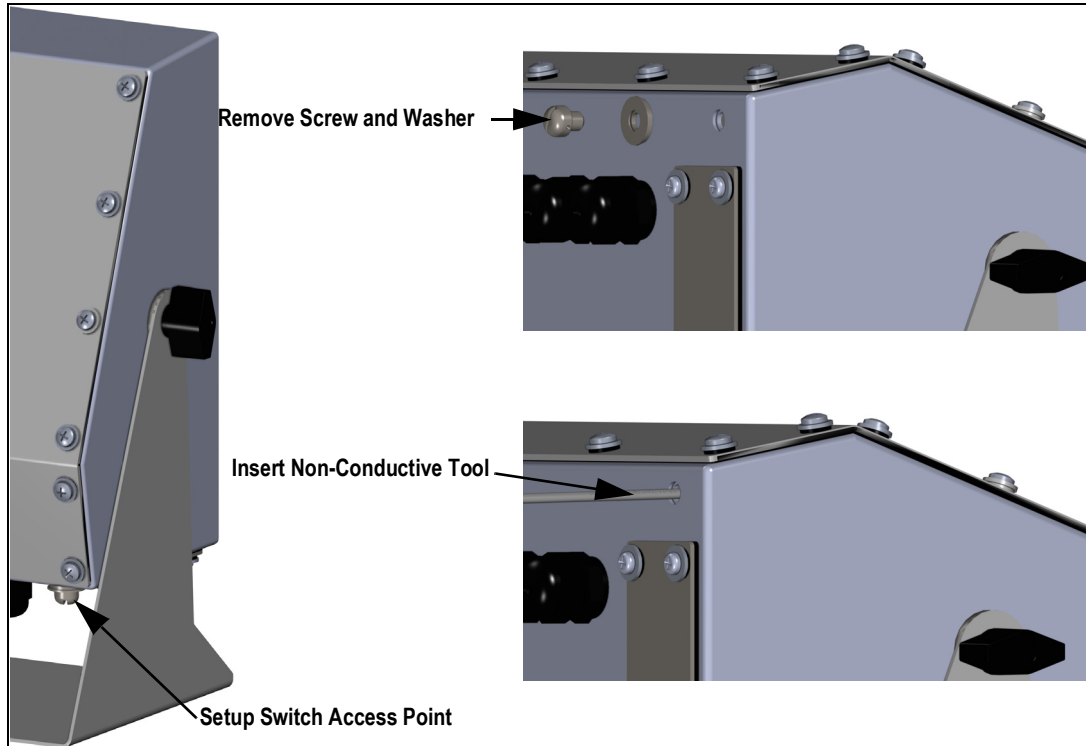


Figure 3-1. Configuration Screw Location

Use the following steps to place the indicator into configuration mode:

1. Remove the screw and washer. Retain for re-installation and resealing.
2. Insert a non-conductive tool into the hole until it engages the configuration switch. **CONFIG** displays.
3. Set the configuration parameters as desired.
4. Reinstall the screw and washer, have it resealed by an authorized agent according to NTEP standards.

## 3.2 Database and Stored Workbooks

Field	Type	Description
TD	TimeDate	Time and date of weighment
TotalWgt	Real	Total weight on the scale
HeadCnt	Integer	Head count entered
AvgWgt	Real	Individual gross weight (total divided by head count)
Units	String	Units string (lb, kg, etc) during weighment
Shrink	Real	Shrink Factor % entered 0.0-99.99%

Table 3-1. TRANS Database Table (1000 Records)

Slot	Type
1	Single Channel A/D Card
2	Not Used

Table 3-2. Option Card Locations

Slot	Bit	Type	Function
0	1-6	Off	Not Used

Table 3-3. Digital I/O

Port	Type	Description	Setup
1	INCLIN	Inclinometer Input	19200,8,N,1
2	USB	Flash Drive/Keyboard	N/A
3	CMD	Not Used	9600,8,N,2
4	CMD	TM295 ticket printer	9600,8,N,2

Table 3-4. Serial Port (PN 129998) for Mobile Scale with Inclinometer

Port	Type	Description	Setup
1	CMD	Not Used	9600,8,N,2
2	USB	Flash Drive/Keyboard	N/A
3	CMD	Not Used	9600,8,N,2
4	CMD	TM295 Ticket Printer	9600,8,N,2

Table 3-5. Serial Port (PN 132302) for Static Scale without Inclinometer

### 3.3 USB Flash Drive

The USB flash drive is located in the bottom of the indicator. There is a plate that needs to be removed to gain access to it.

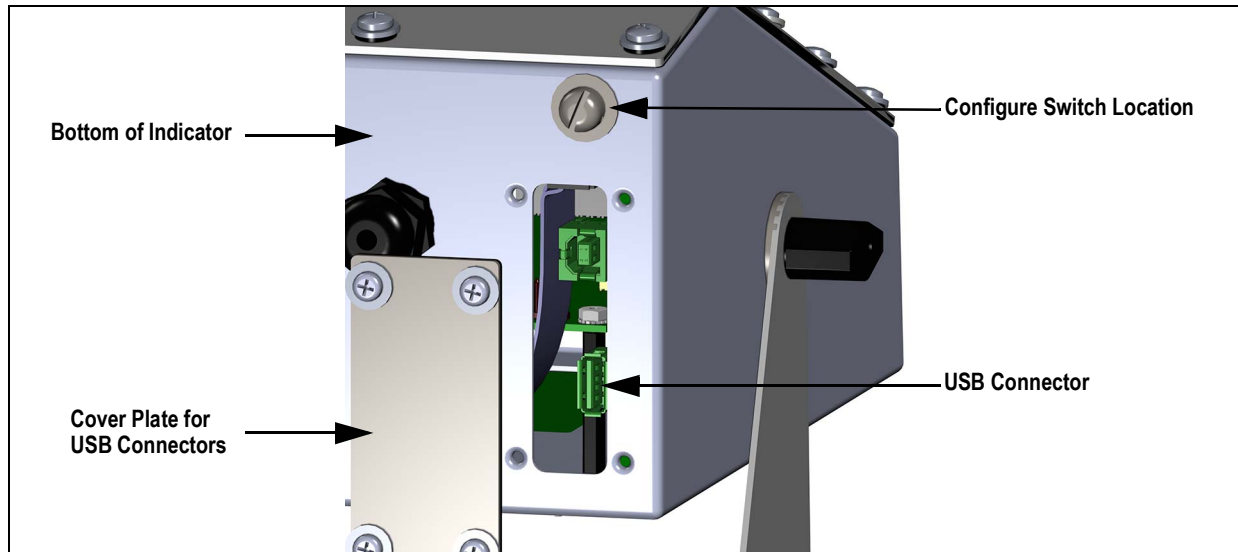


Figure 3-2. USB Drive Location

#### 3.3.1 USB Driver Installation

Before connecting the 920i AC/DC Indicator to a PC, the appropriate driver must be installed.

1. Open the Rice Lake website at [www.ricelake.com](http://www.ricelake.com)
2. Navigate to the 920i USB page.
3. Select **Resources/Downloads** tab under **Quick Links**.
4. Expand the **Software** category.
5. Locate the 920i USB Driver Installation entry and press **Download**.

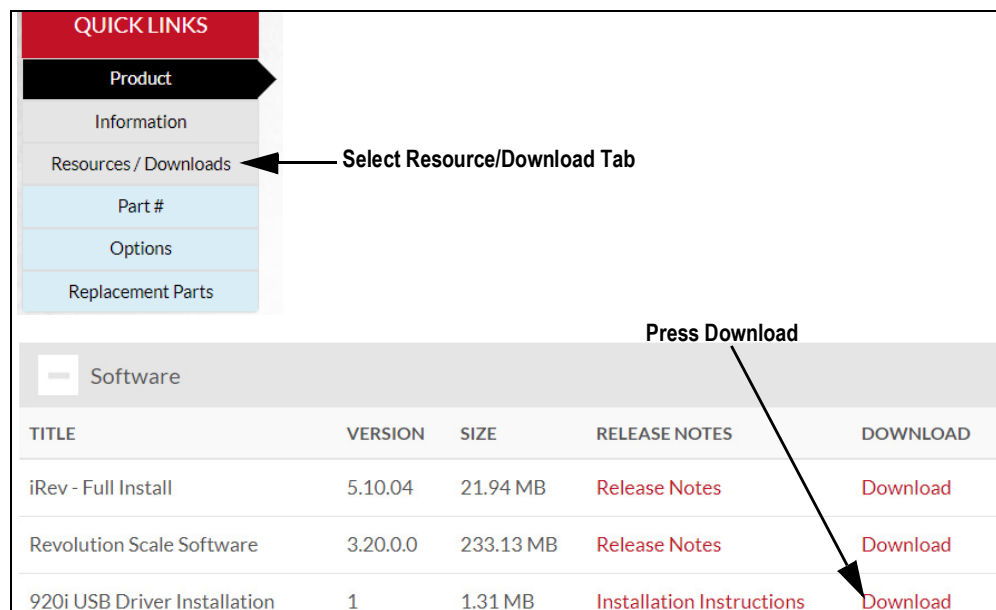


Figure 3-3. 920i USB Driver Installation

6. Save the zip file to the PC and extract.
7. Open the .exe file. The installer automatically detects the version of Windows and installs the appropriate driver.

### 3.3.2 USB Softkey

Softkeys can be defined to provide additional operator functions for specific applications. If the USB softkey is not displayed, it will need to be enabled. Enabling softkeys is done through the **Feature** menu.

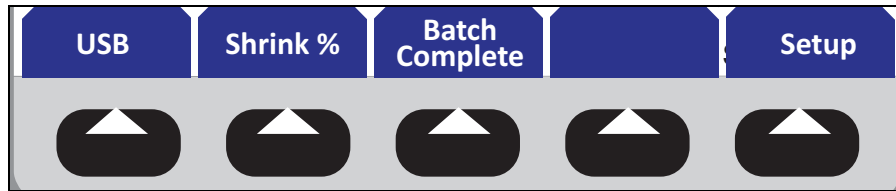


Figure 3-4. Softkeys

To enable/disable a USB softkey:

1. Navigate to the **Feature** menu.
2. Use the arrow keys to scroll through the softkey selections.
3. When USB is displayed, use the **Add** and **Remove** softkeys to enable/disable the USB softkey.

### 3.3.3 Connecting a USB Device

The 920i displays a list of connected USB devices. Devices include the following:

Device	Description
HOSTPC	Used when connecting directly to a PC; it automatically assigns a virtual comm port Check PC settings to determine which port is assigned
PRINTER1	Used if one printer is connected
PRINTER2	Used only if a USB hub is connected, allowing for more than one Type-B connection In this scenario, the lowest printer ID# will be Printer1
KEYBOARD	Supports USB keyboards
DRIVE	Supports USB 2.0 flash drives formatted to the FAT-32 or FAT-16 file system up to 4 G max

Table 3-6. USB Devices

Use the following to connect a USB device:

1. Attach the USB device to the proper USB connector on the indicator. USB connections use Port 2 on the 920i.
2. Press the **USB** softkey.



**Note** If the USB softkey is not displayed, see [Section 1.2.2 on page 4](#) and [Section 3.3.2](#).

3. Select the proper device type and press **Enter**.

### 3.3.4 Using USB Hubs

Hubs are necessary if multiple USB devices are desired to be simultaneously connected. To achieve best results, use a self-powered hub and follow the below instructions when connecting devices:

1. Connect all USB devices to the hub.
2. With the 920i disconnected from power, connect the hub to the 920i.
3. Connect power to the 920i. All USB devices should be recognized on power-up.

### 3.3.5 Disconnecting a USB Device

Prior to unplugging a connected USB device,

1. Press the **USB** softkey.



**Note** If the USB softkey is not displayed, see [Section 1.2.2 on page 4](#) and [Section 3.3.2](#).

2. Select **No Device** and press **Enter**. This also allows a user program to switch devices via APIs.
3. The USB device is now safe to disconnect.



### 3.3.6 Loading Configuration Files and Databases

Certain files may take extended periods of time to load directly from a PC to the 920i. A flash drive is recommended for fast loading times.

When using multiple 920i units, it is recommended to create a folder matching each ones unit ID number. When loading configuration files, the unit will load the file contained in a folder matching its UID# (the default UID# is 1). If a folder matching the UID is not found, the unit will load the first file found.

**IMPORTANT**

*If loading a configuration file from a UID subdirectory, ensure the configuration file does not change the unit ID. Otherwise, a .COD file in that subdirectory will not be recognized until the UID is manually reverted to its original number.*



**Note** File names are limited to eight characters.

1. Using a PC, copy the desired configuration file to the flash drive.
2. Insert the flash drive to the 920i's Type-A USB connector.
3. Press the **USB** softkey.
4. Select **Drive** and press **Enter**.
5. Place the indicator in setup mode and navigate to the **SERIAL » PORT2** menu.

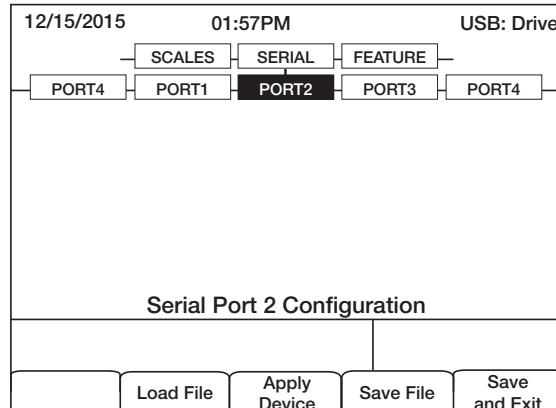


Figure 3-5. Port 2 Screen

6. Press **Load File**.

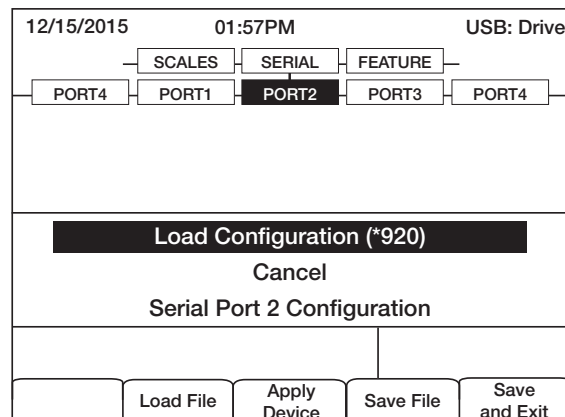


Figure 3-6. Load Configuration Selection

7. Select **Load Configuration** and press **Enter**.

### 3.3.7 Loading Database Files



**Note** File names are limited to eight characters. If loading a database file, be aware the indicator uses the alias name and a .db file extension when saving database files.

1. Using a PC, copy the desired database file to the flash drive.
2. Insert the USB flash drive into the 920i's Type-A USB connector.
3. Press the **USB** softkey.
4. Select **Drive** and press **Enter**.

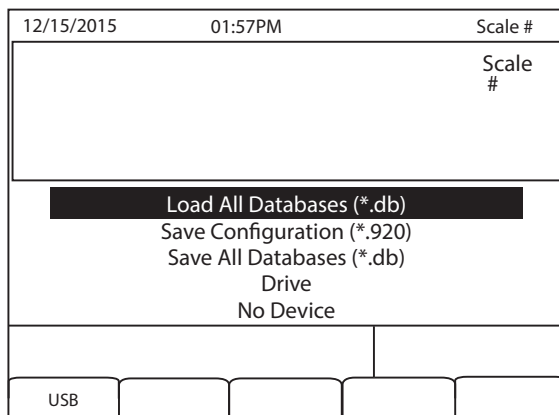


Figure 3-7. Load All Databases Selection

5. Select **Load All Databases (\*.db)** and press **Enter**.

### 3.4 Saving Configuration Files and Databases

Certain files may take extended periods of time to save directly from a PC to the 920i. For fastest save times, using a flash drive is recommended.

#### IMPORTANT

When saving a configuration file, the indicator will attempt to save to a folder matching its UID number (the default UID# is 1). If a folder is not found, the file will be saved to the drives root directory and overwrite any existing files matching its UID# followed by the .920 file extension i.e., 1.920i.



**Note** When the 920i AC/DC Indicator saves a database, it will use the alias name and a .db file extension.

1. Insert the flash drive into the 920i's Type-A USB port.
2. With the indicator in weigh mode, press the **USB** softkey.



**Note** If the **USB** softkey is not displayed, see [Section 3.3.2 on page 12](#) and [Section 1.2.2 on page 4](#).

3. Select **Save Configuration or Save All Databases (\*.db)** and press **Enter**.

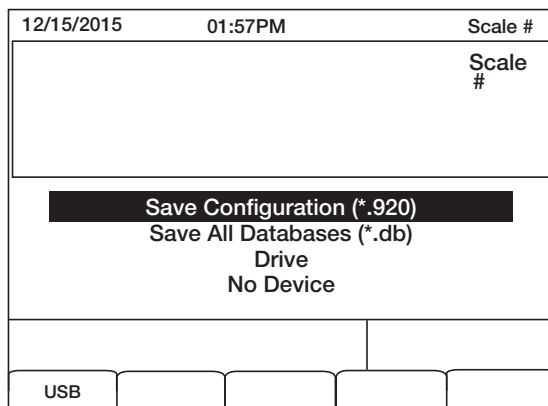


Figure 3-8. Save Configuration Menu

## 4.0 Front Panel Calibration

This section provides an overview of 920i AC/DC Indicator front panel calibration information.

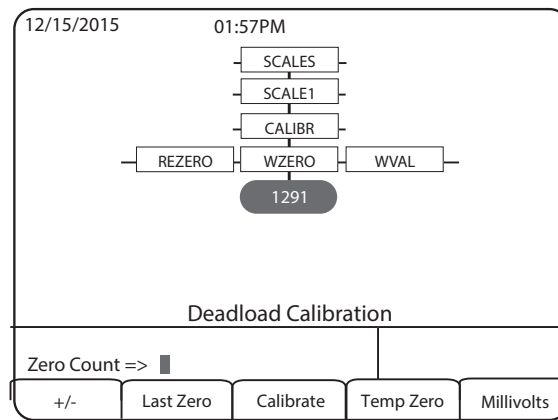


Figure 4-1. WZERO Calibration Display

The **CALIBR** sub-menu (under the **SCALES** menu) is used to calibrate the MAS-LC. The zero, span and linear calibration point displays provide a set of softkeys used specifically for calibration procedures.

Sub-menu Softkeys	Description
+/-	Toggle this key to allow entry of negative or positive values
Last Zero	This recalls the last established zero value to allow calibration without removing test weights or product from scale
Calibrate	This key performs a calibration for the selected point
Temp Zero	This key temporarily zeros the displayed weight of a non-empty scale; After a span calibration, the difference between the temp zero and the previously calibrated zero value is used as an offset
Millivolts (or Counts)	This key toggles between the display of captured A/D counts and captured millivolts values and allows entry of calibration values in mV or counts

Table 4-1. Calibration Submenu

Use the following steps to calibrate the 920i using the front panel.

1. Place the indicator in setup mode. The display reads **Scale Configuration**.
2. Remove all weight from the scale.
3. With the **SCALES** menu highlighted, press the **Down** key.
4. Select the scale to be calibrated.
5. Press **Down** again in order to highlight the **GRADS** parameter.
6. Press **Left** to highlight the **CALIBR** sub-menu.
7. Press **Down** to go to zero calibration (**WZERO**).
8. Ensure the scale is empty, then press **down** again to show the current **WZERO** value.
9. Press the **Calibrate** softkey to calibrate zero. When complete, the new A/D count for the zero calibration is displayed.
10. Press **Enter** to save the zero calibration value and go to the next prompt (**WVAL**).
11. With **WVAL** displayed, press **Down** to show the stored calibration weight value.
12. Use the numeric keypad to enter the actual value of the calibration test weights.
13. Press **Enter** to save the value and go to span calibration (**WSPAN**).
14. Place test weights on the scale.
15. Press **Down** again to show the current **WSPAN** value.
16. Press the **Calibrate** softkey to calibrate span. When complete, the new A/D count for the span calibration is displayed.
17. Press **Enter** again to save the span calibration value and go to the next prompt (**WLIN**).
18. Press **Up** to return to the **SCALES** menu, or press the **Save and Exit** softkey to exit setup mode.

## 5.0 Appendix

This section provides an overview of additional information for the 920i AC/DC Indicator.

### 5.1 Parts Kit

Part No.	Description
103610	Knob, Black 1/4-20
103988	Washer, Nylon 0.515 - 0.52
14626	Nut, KEP 8-32 NC Hex
14862	Screw, Mach 8-32 NC x 3/8
15133	Washer, Lock NO 8 Type A
15631	Cable Tie, 3" Nylon
15665	Gland, Reducing 1/2 NPT
15887	Terminal Block, 6 Position
174928	Label, NOM/NYCE 920i
19538	Post, Slotted Black Seal
30623	Screw, Mach 8-32 NC x 7/16
42149	Bumper, Rubber Grommet
53075	Clamp, Ground Cable Shield
70599	Conn, 6 Pos Screw Terminal
71125	Conn, 3 Pos Screw Terminal
71126	Conn, 4 Pos Screw Terminal
75062	Washer, Bonded Sealing SST
77180	Conn, 8 Pos Screw Terminal
94422	Label, Capacity 0.40 x 5.00

Table 5-1. Parts Kit List

## 5.2 Repair Parts

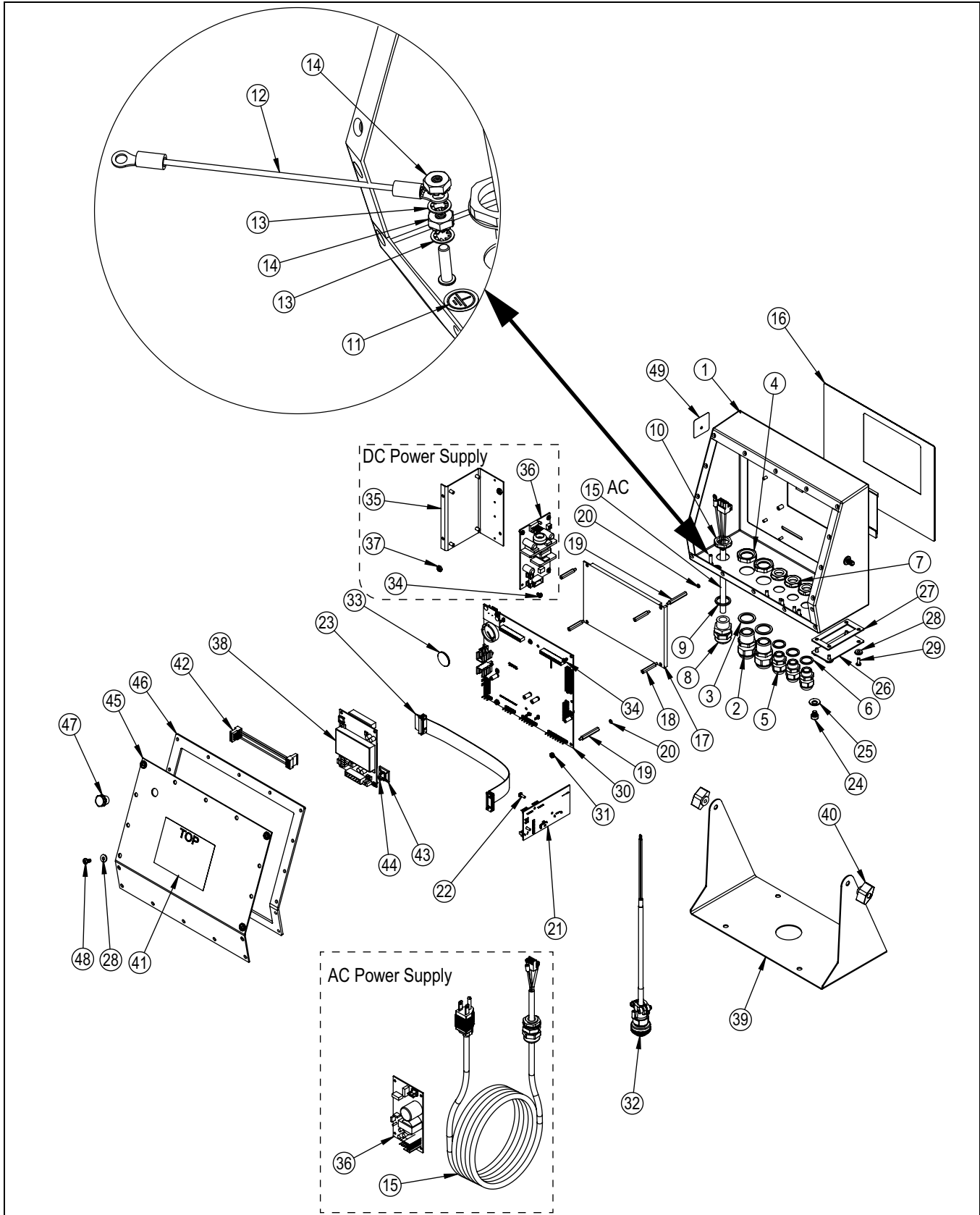


Figure 5-1. 920i AC/DC Animal Weigher Parts Illustration

Item No.	Part No.	Description	Qty.
1	67529	Enclosure, Universal 920i	1
2	15628	Cord Grip, 1/2-NPT	2
3	30376	Seal Ring, 1/2-NPT Nylon	4
4	15630	Lock Nut, 1/2-NPT Plastic	2
5	15626	Cord Grip, PG-9 Plastic	3
6	30375	Seal Ring, PG-9 Nylon	3
7	15627	Lock Nut, PG-9 Plastic	3
8	68600	Cord Grip, PG-11	1
9	68599	Seal Ring, PG-11	1
10	68601	Nut, PG11 Black Nylon	1
11	16892	Label, Ground Protective Earth Adhesive IEC 60417-5019	1
12	45043	Wire, Ground 4" w/ No.8 Eyelet Connectors	1
13	15134	Washer, Lock NO 8 Type A Internal Tooth Steel Zinc Plated	3
14	14626	Nut, KEP #8-32 NC Hex Ext. Tooth Lock Washer ST-ZP	3
15	119562	Cable, Power DC	1
	85202	Power Cord Assy, 120 VAC W/PG11 Cord Grip and SL-156 Conn AC	1
16	66502	Overlay, Membrane Switch Panel 920i	1
17	186276	Display Board, LED Back-light Transflective, 01/2018 and later	1
	186464	Wire Harness, PS Board to LED Back-Light display	1
18	67886	Standoff, Male-Fem 4-40 NC x 1.00	4
19	68661	Standoff, Male-Fem 4-40 NC	2
20	69898	Washer, Nylon ID=.112 OD=.206 Thickness=.05 (#4)	2
21	111109	Board Assy, 920i Plus USB	1
22	55708	Screw, Mach 4-40 NC x 3/8 Phillips Pan Head Internal Tooth Lock Washer SEMS STL-ZP	2
23	68662	Cable, Ribbon Interface Board to CPU	1
24	42640	Screw, Mach 1/4-28 NF x 1/4 Phillips, Drilled Fillister Head, 18-8 SST	1
25	44676	Washer, Bonded Sealing SST 1/4 ID x 5/8 OD	1
26	67530	Plate, Interface Board 920i	1
27	67535	Gasket, Interface Board Access Cover Plate 920i	1
28	75062	#8 Bonded Sealing Washer 7/16 OD SST	8
29	14845	Screw, Mach 6-32 NC x 3/8"	4
30	186272	CPU Board Assembly, LED Back-light, 01/2018 and later	1
	132302	Static Multi-Animal Software, must be loaded to CPU board at factory	NA
31	14618	Nut, KEP 4-40 NC Hex External Tooth Lock Washer	2
32	131670	Cable Assy, 4 Pin Male Ag Scale	1
33	69290	Battery, 3V Coin Lithium	1
34	14822	Screw, Mach 4-40 NC X 1/4 SEMS STL-ZP	13
35	94392	Bracket, 25W Power Supply (AC Power Supply Only)	1
36	132791	Power Supply, DC/DC +/- 6V 9-36 VDC	1
	67613	Power Supply Board, 6V 25W AC	1
37	58248	Lock Nut, #6-32 NC Nylon Insert ZI PLT (AC Power Supply Only)	2
38	67610	Card, A/D Single Channel 920i	1
39	67531	Stand, Tilt	1
	42149	Bumper, Rubber Grommet	4
40	103610	Knob, Black 1/4-20	2
	103988	Washer, Nylon 0.515 - 0.52	4
41	53307	Label, 4.000 x 2.875	1
42	67796	Wiring Harness, Power Supply Board	1
43	15650	Mount, Cable Tie 3/4"	1
44	15631	Cable Tie, 3" Nylon	1
45	68424	Backplate, Universal Enclosure 920i, 820i	1
46	67532	Gasket, Back Plate 920i, 820i	1
47	88733	Vent, Breather Sealed Gortex Membrane Black Plastic	1
	88734	Nut, Breather Vent	1
48	14862	Screw, Mach 8-32 NCx3/8 Phillips Pan Head	4
49	53308	Label, 1.25 x 1.25 8000T	1

Table 5-2. 920i AC/DC Animal Weigher Parts

## 5.3 Dimensions

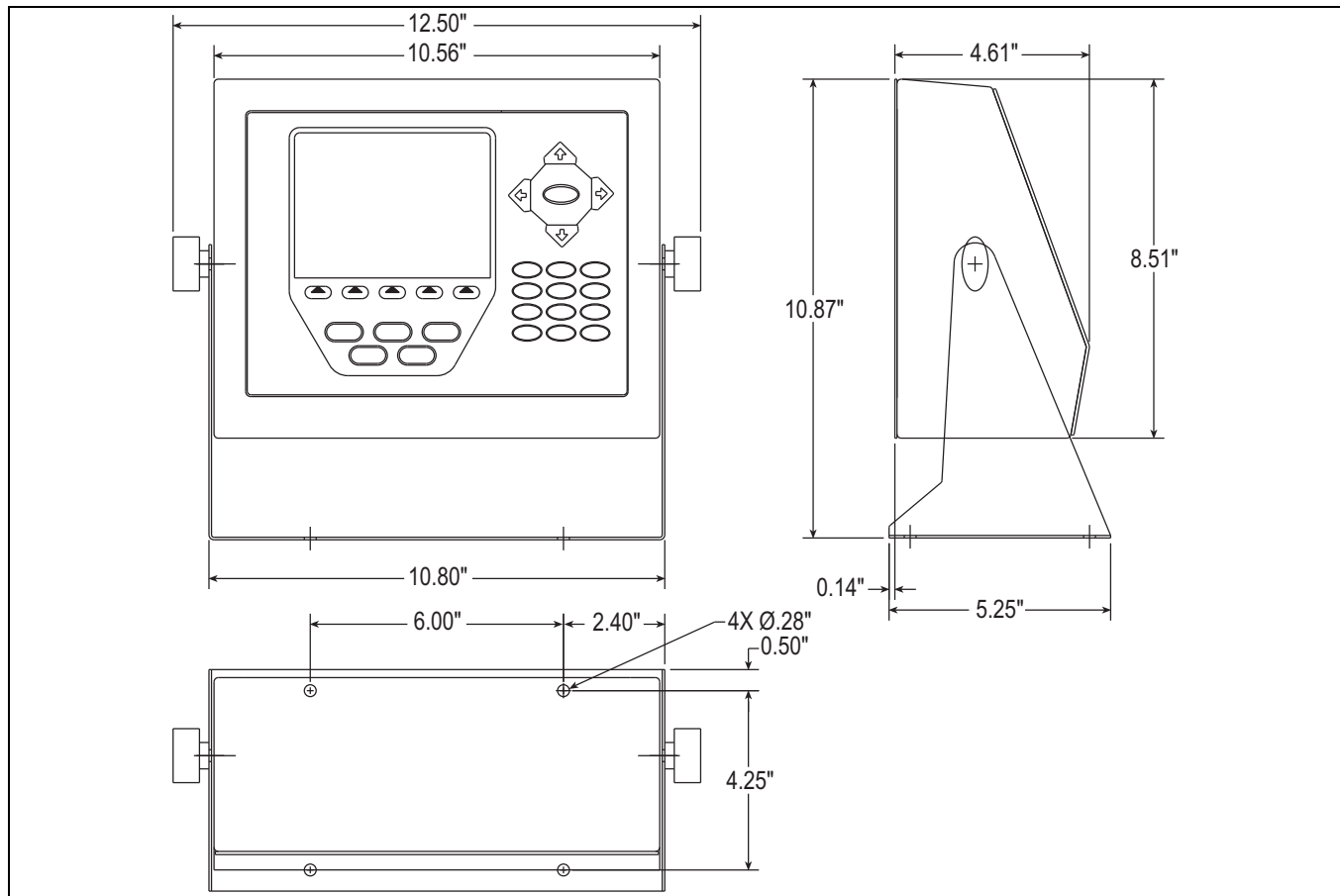


Figure 5-2. Indicator Dimensions

## 5.4 Troubleshooting

Symptom	Probable Cause	Action
The system will not weigh animal or batch complete	The weight reading is not stable enough	It may be too windy to get a stable weight, check the standstill icon on the display area on the indicator; The system can only start when the standstill icon is displayed
The weight reading on the indicator is unstable	The circuit board in the control panel may be wet or the junction box for the load cells may have moisture	Dry any areas that are contaminated with moisture; Check for leaks and reseal
	A load cell cable may be pinched or damaged	Contact Rice Lake Weighing Systems or a qualified dealer for support; Cutting the load cell cable will void the warranty; Special repair techniques are required
The scale has a positive error when loading or a negative error when unloading	Mechanical binding problem on the scale	Check for debris around or under the scale; Check each load cell location for foreign material; Check all items that run from on the scale to off the scale; Check all gates or gathering panels for contact
The scale has a negative error when loading or a positive error when unloading	Moisture is present somewhere in the electrical system	Dry any areas that are contaminated with moisture; Check for leaks and reseal
Dashes in weight display	Over-range or under-range scale condition	Check the scale; For out-of-range conditions in total scale display, check all scale inputs for positive weight values
Blue Screen	Possible corrupt core software	Reset or reload software Check LCD contrast control in indicator
Hangs in 888 display	Corrupt core software	Reset or reload software
The scale will not ZERO	Weight on scale larger than the allowable ZERO window	Clean the scale deck of debris, then zero the scale
		Zero Window parameter set incorrectly

Table 5-3. Troubleshooting

## 6.0 Specifications

<b>Power</b>	100 - 240 VAC, Range 90 - 264 VAC 12-24 VDC, Range 9 - 36 VDC
<b>Power Consumption</b>	340 mA @ 115 VAC (26W)
<b>Excitation Voltage</b>	10 ± VDC, 16 x 350 ohm or 32 x 700 ohm load cells per A/D card
<b>Analog Signal</b>	
<b>Input Range</b>	-45 mV to +45 mV
<b>Sensitivity</b>	0.3 µV/graduation minimum @ 7.5 Hz 1.0 µV/graduation typical @ 120 Hz 4.0 µV/graduation typical @ 960 Hz
<b>A/D Sample Rate</b>	7.5 to 960 Hz, software selectable
<b>Resolution</b>	Internal resolution: 8 million counts Weight display resolution: 9,999,999
<b>System Linearity</b>	± 0.01% full scale
<b>Digital I/O</b>	Six I/O channels on CPU board; optional 24-channel I/O expansion boards available
<b>Circuit Protection</b>	RFI, EMI, ESD protection
<b>Serial Ports</b>	Four ports on CPU board support up to 115,200 bps; optional dual-channel serial expansion boards available Port 1: Full duplex RS-232 Port 2: USB Type-A and Type-B connectors Port 3: Full duplex RS-232, 20 mA output Port 4: Full duplex RS-232, 2-wire RS-485, 20 mA output
<b>Display (W x H)</b>	4.6 inch x 3.4 inch (116 W x 86 mm H), 320 x 240 pixel VGA Liquid Crystal Display (LCD) module with adjustable contrast
<b>Keyboard</b>	27-key membrane panel, tactile feel
<b>Operating Temp</b>	Legal: 14°F to 104°F (-10°C to +40°C) Industrial: 14°F to 122°F (-10°C to +50°C)
<b>Warranty</b>	Two-year limited warranty

### Approvals Indicator



NTEP  
CoC Number 01-088  
Accuracy Class III/IIILnmax: 10 000







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