

## LOUP JP43 REMOTE SCALE INDICATOR



## OPERATION AND CALIBRATION MANUAL

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**Service and Technical Support**

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## 1.0 JP43 Remote Scale Indicator

The JP43 Scale Indicator is designed to be used as a compliment of the complete Loup II Drill Monitor System. The Indicator has the ability to connect up to 8 standard load cells and provide a weight scale interface as well as remote display functions for the Loup II Drill Monitor.

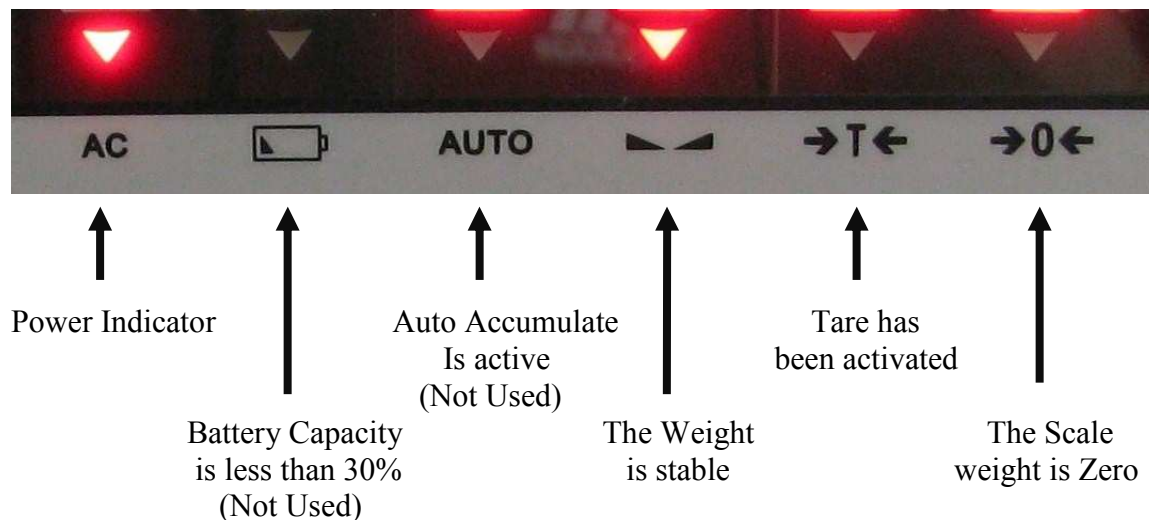
Calibration and initial setup of the remote scale system are performed using the JP43 Indicator. Once completed the indicator is controlled by the Loup II Drill Monitor. Weight information is displayed on the Loup II Display as well as on the JP43 Indicator, thus providing weight information while filling the tanks and while seeding with the drill.

### 1.1 JP43 Display Functions

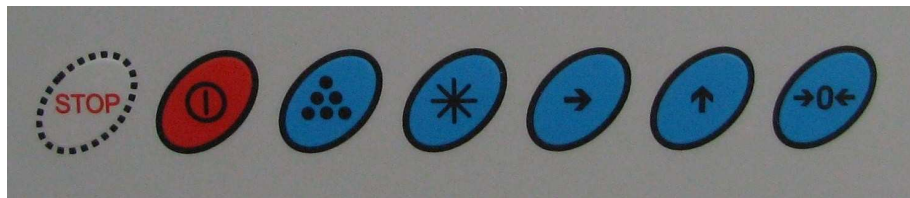
The JP43 Display has the ability to read in kg or lb. The Indicator comes standard reading in lbs. If you need to or would like to be able to read in kg, please contact Loup Electronics and we will advise.



In the following illustration, Indicators are lit when the corresponding descriptions are true.



There are several “Push” buttons on the front of the JP43 Indicator. These are only required for initial calibration or if the Indicator is used as a standalone system without the Loup II Drill Monitor.



#### “Stop Button”

This is an emergency shutdown button. Use this button to Power the Unit “Off” if the Indicator locks up due to an error condition.



#### “On/Off Button”

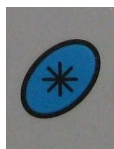
This is used to Power the Indicator On/Off when using as a standalone unit. When connected to a Loup II Drill Monitor, the unit is powered on and off automatically from the tractor.

**Note: If using this button to power on or off the button must be pressed for 2 seconds.**



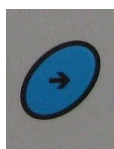
#### “Triangle Button”

This button is disabled and is not used in this application.



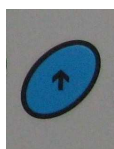
#### “Star Button”

This button is used for function selection. (Example: to access calibration)



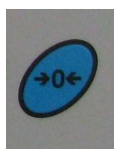
#### “Left Arrow Button”

This button is used to access menus. Additionally this button is used to move the flashing digit to the right during calibration.



#### “Up Arrow Button”

This button is used to increment the flashing digit during calibration.



#### “Tare Button”

This button is used to Zero the scale during calibration as well as a Tare key if the scale drifts off of zero when empty.

## **1.2 JP43 Installation**

### **1.2.1 Console Installation**

The JP43 Console should be mounted in a location so that it can be viewed and accessed when filling the tanks on the implement. Placement of the console is flexible because the JP43 indicator is enclosed in a grey ABS plastic housing and is sealed from dust and moisture. Additionally, the indicator is mounted on rubber isolators to minimize the effects of vibration.

### **1.2.2 Power Supply**

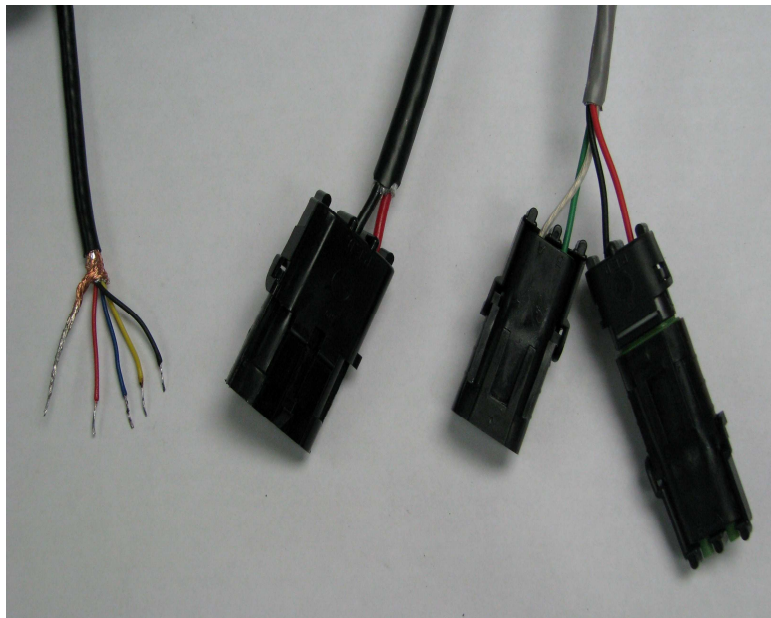
Harnessing has been included in the kit to supply fused power from the tractor ignition switch. The red wire on the 3 pin convenience plug has not been installed in the connector housing. The switched power terminal can vary depending on the tractor manufacturer. To determine the correct location to insert the connector terminal, measure the power between ground and terminals 1 and 2 on the tractor connector. Find the terminal that supplies power only when the ignition is on. The connector is properly connected when the JP43 Indicator will turn on when the ignition switch is turned on in the tractor.

### **1.2.3 Wire Connections**

The JP43 Indicator has 3 Cables exiting the back of the Console.

First Cable (see illustration) is a 4 Conductor Cable (Blue, Red, Yellow and Black with insulation). This cable is routed to the Load Cell Junction Box.

Second Cable (see illustration) is a 2 Conductor Cable (Red and Black) with a 3 Pin Weather Pack Connector. This cable attaches to the harness that runs to the cab to supply Power and Ground to the JP43 Console.

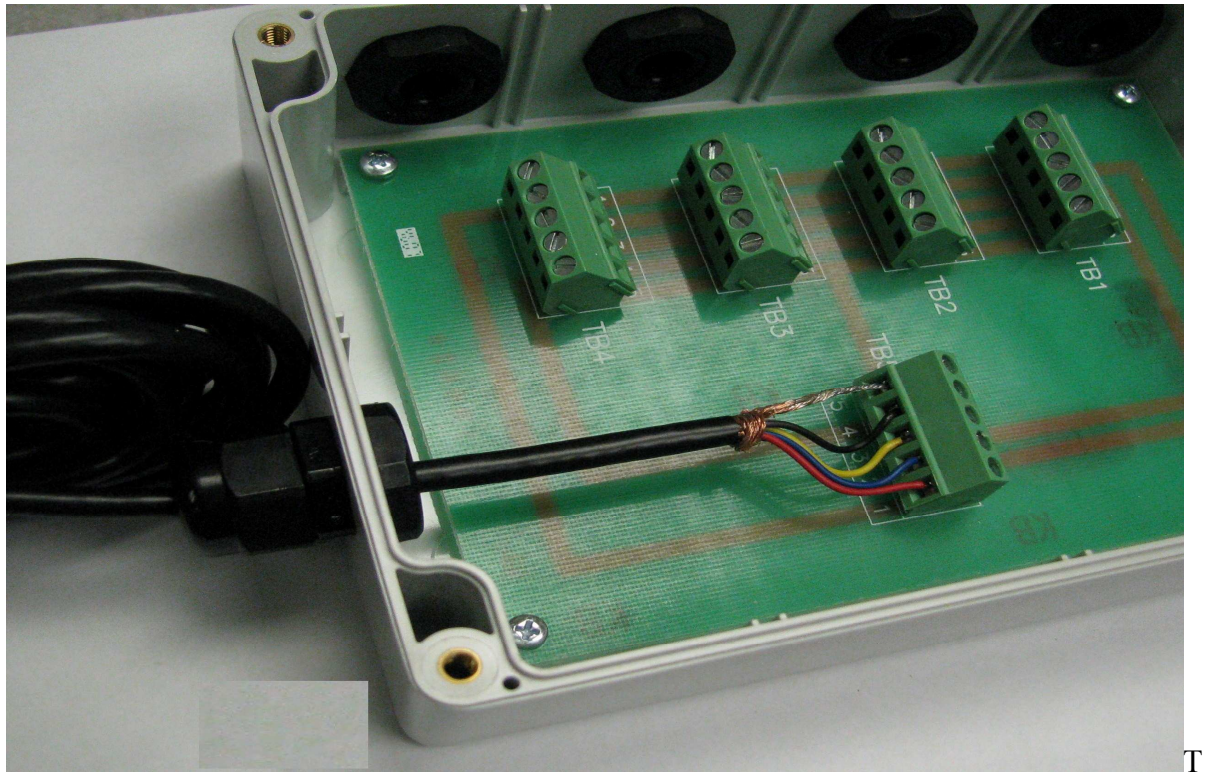


Third Cable (see illustration) is a 4 Conductor Cable (Green, White, Red and Black) with 2 Pin Weather Pack Connectors. The 2 Pin Connector (Green and White), is not used in the standalone application. The 2 Pin Connector (Red and Black), is cap plugged for future use of Remote Power or for use with harness runs in excess of 75'.

### **1.2.4 Junction Box Wiring**

The JP43 Scale Indicator is connected to the load cells through a Junction Box that is supplied with the load cells. The Load Cells also include the instructions for Junction Box Configuration for the Load Cells. The JP43 Indicator is wired as follows:





Feed the open end of cable from the JP43 Indicator into the side of the Junction Box that has only one Dome Nut.

Wires will be connected at the TB5 Connection Point.

### Junction Box Wiring for JP43 Indicator

<b>TB5 Location</b>	<b>JP43 Indicator Wire</b>	<b>Function</b>
<b>Pin 1</b>	<b>Red</b>	<b>+Power</b>
<b>Pin 2</b>	<b>Blue</b>	<b>-Signal</b>
<b>Pin 3</b>	<b>Yellow</b>	<b>+Signal</b>
<b>Pin 4</b>	<b>Black</b>	<b>-Power</b>
<b>Pin 5</b>	<b>Insulation</b>	<b>Insulation</b>

### Junction Box Wiring for Digi-Star Load Cell

<b>Digi-Star Load Cell</b>	<b>Function</b>
<b>Red</b>	<b>+Power</b>
<b>Green</b>	<b>-Signal</b>
<b>White</b>	<b>+Signal</b>
<b>Black</b>	<b>-Power</b>
<b>Shield</b>	<b>Insulation</b>

Once Load Cells and JP43 Scale Indicator have been properly wired, be sure to tighten all dome nuts on the Junction Box and reinstall cover plate.4.3 JP43 Calibration

### 1.3 JP43 Calibration

The JP43 Scale Indicator is pre-set for all of the required settings. Once installed it is necessary to perform a onetime calibration of the system. The scale system must be calibrated with a known weight. It is recommended that a minimum of 500 LBS be used for the calibration procedure. This can be in the form of bagged seed or a pre weighed amount of seed that is placed in the tank to be planted. It is important that an accurate weight be used as this will directly affect the accuracy of the scale system.

The tank must be completely empty to begin Calibration. Make sure nothing is leaning against or sitting on the tank as these could affect the accuracy of the weight reading.

**Note: Grain Drills, raise the drill to its turnaround height so that no mechanical forces such as down pressure springs or drive chain tension is applying a load to the tank.**

Turn the Loup II DM on. This will supply power to the JP43 Indicator.

Return to the JP43 Indicator. The remainder of the calibration process is completed at the JP43 Indicator.

Turn the scale indicator off by pressing the red power button (second from left).

To Access the Calibration Mode of the Indicator begin by holding the “Tare Button”(right most button) and then pressing the “On/Off Button” (see illustration below).



The indicator will power on, show the Software Version and complete a display test.



Once this display test has completed, press the “Star Button” to enter calibration. The indicator will show “CAL SP” (see illustration to right).



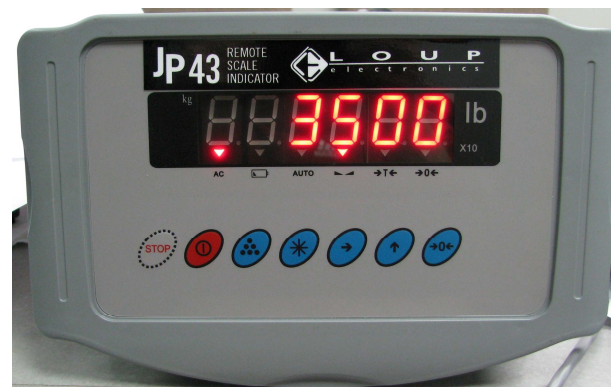
Press the “Right Arrow Button”. The Indicator will show “CAL00” (see illustration to right). The “Zero” weight of the Indicator has now been set.



Press the “Star Button”. The Indicator shows “-----” momentarily.



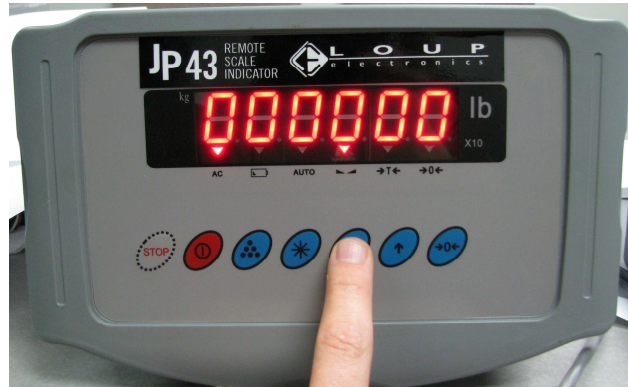
The Indicator will now display the maximum weight capacity. This number is Factory Programmed by Loup Electronics to be 3500lbs. If this number is not set to 3500 or if your tank capacity is higher than 3500lbs, Please call Loup Electronics and we will advise on changing this number.



Press the “Right Arrow Button”. The display will show “000000” with the left most digit flashing.

This is where you enter your known weight to be calibrated.

**Note: Your calibration “known” weight should be 500lbs or greater.**



Following along on the left in our example we are using 625lbs as our known weight.

Press the “Right Arrow Button” to move the flashing digit over one space. Continue until the first digit corresponding to the known weight value is flashing.



Use the “Up Arrow Button” to enter the value of this digit.

Once this number is set, Press the “Right Arrow Button” to proceed to the next slot position.



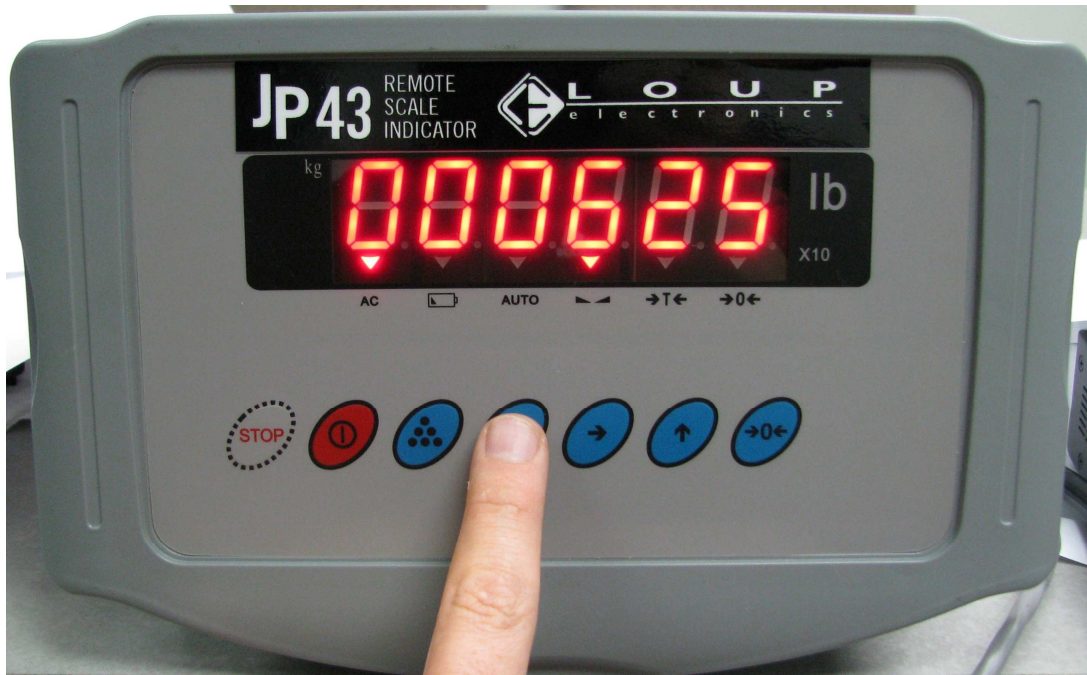
Repeat the process until your known weight is displayed.

Once your known weight is displayed,



Add your known weight to the tank.

Notice the Lighted Indicator below the 6 in our example(see illustration below). Be sure that your Indicator is lit before continuing. This indicator shows that you have a stable load weight. Once this indicator is lit you may proceed by pressing the “Star Button” to accept.



The display will go blank momentarily and then show the value of the applied weight.

Test: Apply an additional known weight (example 100lbs). The display should add that weight. In addition if you remove all weight, the indicator should return to zero.

At this point the scale system is calibrated and is ready to use.

**Note: After Calibration, when refilling the tanks, the JP43 Scale Indicator will display the amount of material added to the tanks in 5 pound increments.**

**Caution: Machine movements can affect the accuracy of the scale display readings. The readings are only accurate when the machine is not moving.**

Notes: