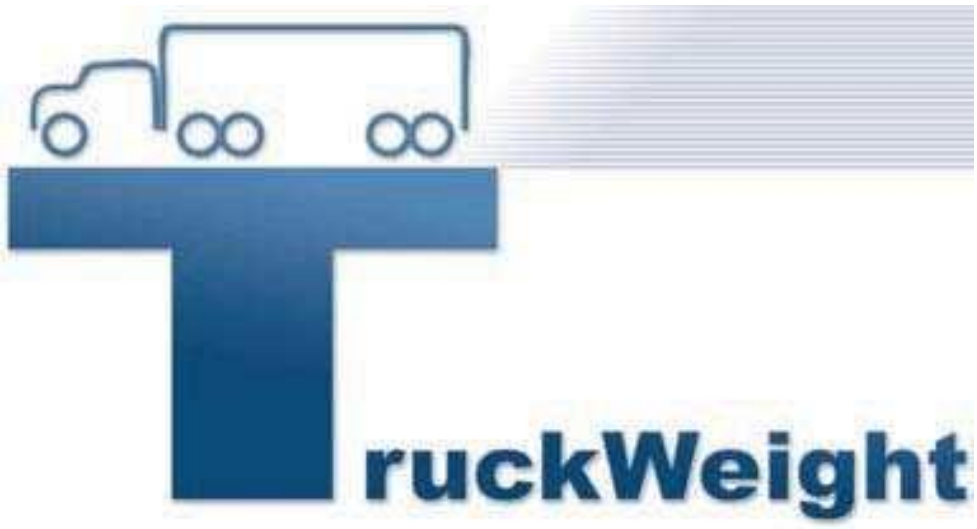


SMART SCALE
INSTALLATION & OPERATING MANUAL

Version V4.1

Smart Scale Technologies

INSTALLATION & OPERATING MANUAL FOR MECHANICAL SUSPENSION V4.0

www.truckweight.com

NOTE: For your safety, please read this manual thoroughly before installing and operating your TruckWeight Smart Scale system. The safety messages presented throughout this manual are reminders to the operator to exercise care when installing and using this unit.

A) PARTS LIST

A) Mechanical Sensor **MS-4**

Uses on drives, tandem and tridem Trailers.

Note: **MS-2** is the same as MS-4 above, except it has two cables instead of four.

B) Mechanical Sensor **MS-1**

Uses on Front Axle and Single Trailer Axles

C) Hand Held

D) Hand Held Case[1]

Installation Kit Components[2]:

E) 2 - Sensor Bolt Assemblies
(1 bolt, 1 nut, 2 washers)
DO NOT OVER TIGHTEN
Note, you may use tie-raps to secure transmitter to rig instead of bolts.

F) Loctite 5510 adhesive include 300 ml tube used to cover Stain Gauge after it is bonded to spring, walking beam or axle.

G) Loctite 430, 3 ml tube include to glue strain gauge to spring, walking beam or axle.

H) 2 – Batteries
Note sensors are shipped with AA alkaline batteries. When changed use Lithium AA batteries for longer life, and better performance in

cold temperatures.

1. **Hand Held Case** is included with Handheld purchase.
.
2. **Batteries** may not be supplied in certain regions due to regulatory restrictions.
3. Note, if sensors are hardwired, They can accept 9 volt to 25 volt power supply.

INSTALLATION INSTRUCTIONS

To install your Truckweight sensor please follow these steps:

A) HANDHELD SET-UP .

1. **Getting Started:**

Watch 14 minute installation video for Mechanical Suspension found at www.truckweight.com home page bottom right corner.

a. **Please read the "Important Safety Notices"** section of this manual before installing and operating the Truckweight Smart Scale system.

b. **Examine the parts** to familiarize yourself with the parts and to ensure that you have all of the required parts to begin installation of your Truckweight system.

c. **Install the batteries** provided into the battery chamber of all Air Sensors (Part A) and all Hand Helds (Part C). Note that the polarity of the battery is indicated inside the chamber. Be sure not to introduce moisture or foreign matter into the battery chamber.

d. **Turn on the Handheld** by pressing and holding any button until the screen comes on. The Main Screen will appear. To extend battery life, the power turns off automatically in ten minutes when not in use.

Main Screen

e. **Set Time**

- Press and hold **Center and Right** buttons together until the screen changes.
- Use the Up and Down buttons to set the time.
- Press the center button to save selection and return to Main Screen.

f. **Switching Between Kilograms and Pounds:**

- On the Main Screen, press and hold the **Up and Down** buttons together until the read out changes and release to switch between Kilograms and Pounds.

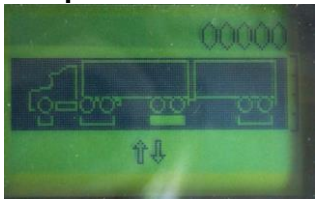
If you have any questions please send them via email to info@truckweight.com or call toll free at 1-877-757-7888 and speak with one of our technical service representatives.

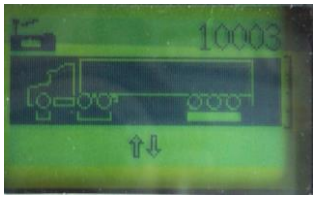
2. **Rig Set Up:** Prior to mounting the sensor(s), you must set up your rig in the handheld. To set up your rig do the following:

a. **To select your rig type**:

- Hold the Center and Left buttons until the screen changes to the Rig Selection Screen.
- Use the Up or Down button to select a picture of a rig that is similar to yours. If you cannot find a rig similar to yours simply select a rig that has the correct number of axle groups/sensors (the picture of the rig will not affect the operation).
- Once you have selected a rig hit the center button to return to the Main Screen.

Rig Selection Screen: Example of three of twenty-six rigs





b. **To enter sensor serial numbers**:

- On the Main Screen hold the Center and Up buttons until the screen changes to the Sensor Serial Number Screen.
- Use the Left or Right button to move the black curser under the different axel groups on the display picture.
- Use the Up and Down button to enter the serial number for the axle group.
- Enter the serial number for each of your sensors on the axle group in which you intend to install the sensor.
- When finished, press the Center button to confirm your selection and return to the Main Screen.

Sensor Serial Number Screen

NOTE: If you will not be installing a physical sensor on your steers then you will need to input the Truckweight virtual sensor on the steers. Virtual sensor are used on the front steer axle on most Tractor Trailers set-ups. Mechanical Sensors are used on most front axle set-ups on straight trucks, and car carriers that carry cars overhead of the tractor.

- On the Sensor Serial Number Screen, use the Left or Right button to move the black curser under the steer axle.
- Use the Up and Down button to enter the number 10001 (virtual sensor serial number).

3. **Signal Check:** Now that your sensors serial numbers are entered in the handheld it is time to check the radio connection between the devices:

   a. To **check the radio connection** do the following:
      - Keep the sensors and the handheld within several feet of one another with no obstructions between the devices. The sensors should automatically connect to the handheld. Establishing the first connection will usually take bewteen 30 seconds and
        3 minutes.
      - You will know when you are getting the signal when you see the pressure and temperature reading on the Main Screen for each sensor/axle group (pressure should read between 0 PSI to 1 PSI). If the signal is not received you will see **** on the top right hand corner instead of the pressure and temperature readings.
      - Use the Left and Right buttons to move the black curser and examine the signal coming from each axle group/sensor.

Main Screen: Receiving signal **Main Screen: NOT receiving signal**

c. **Mount Stain Gauge(s) on axle(s) as per instructions, then place the sensor transmitters (part with the antenna) in the planned mounting locations.** Sensor transmitters can be mounted anywhere on your rig with the exception of inside a metal casing.

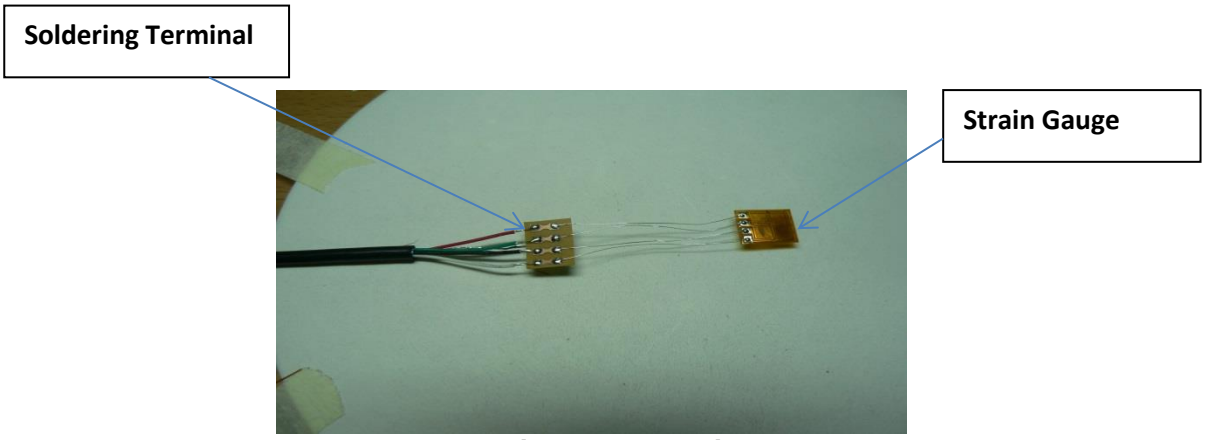
- Allow enough room for the battery cap to be removed so that the batteries can be changed.
- Check the signal in the cab of the tractor and/or on a loader and/or other locations where you will want to receive a signal.
- If you stop receiving a signal from a sensor, change the mounting location of the sensor to a location where you can receive the signal.

B) INSTALLATION INSTRUCTIONS

1. **Physical Installation of Sensors: Watch Installation Video at on home page bottom right corner at www.truckweight.com click mechanical "installation video" 14 min long.**

2. **Handle strain gauges with care. They are very fragile. Note, if you damage a strain gauge a replacement strain gauge lead can be replace quickly and easily.**

3. **Temperature should be 70 degrees or warmer prior to gluing strain gauges to metal. If installing out doors in winter axles will have to be heated prior to installing.**



Strain Gauge Lead

4. Measure and mark spring, walking beam or axle on the side marking the spot to sand and where strain gauge will be glued on the middle of the spring. Mark such that the strain gauges are symmetrical, see illustrations below.

5. Clean metal service where sensor will be glue with grinder or course sand paper, removing all paint, rust, rust pitting, Clear area about 2-3 inch around point where strain gauge will be glued exposing metal around it.

6. Sand area where strain will be glued about 1 inch square with fine sand paper about 200 grit.

7. Complete same preparation for all strain gauges on spring, walking beam, or axle locations where strain gauges will be glued.

8. Clean surface(s) with acetone or 99% Isopropyl alcohol. Wipe with clean white paper towel minimum of three times. After wiping surface, observe towel surface to ensure it is clean and white.

9. Keep Plastic cover on strain gauge for protection against dirt.

10. Do Not Touch Bottom of strain gauge. If touched gentle clean with acetone or Isopropyl.

11. Remove Plastic cover once you have run the cable and are ready to glue strain gauge onto prepared metal surface.

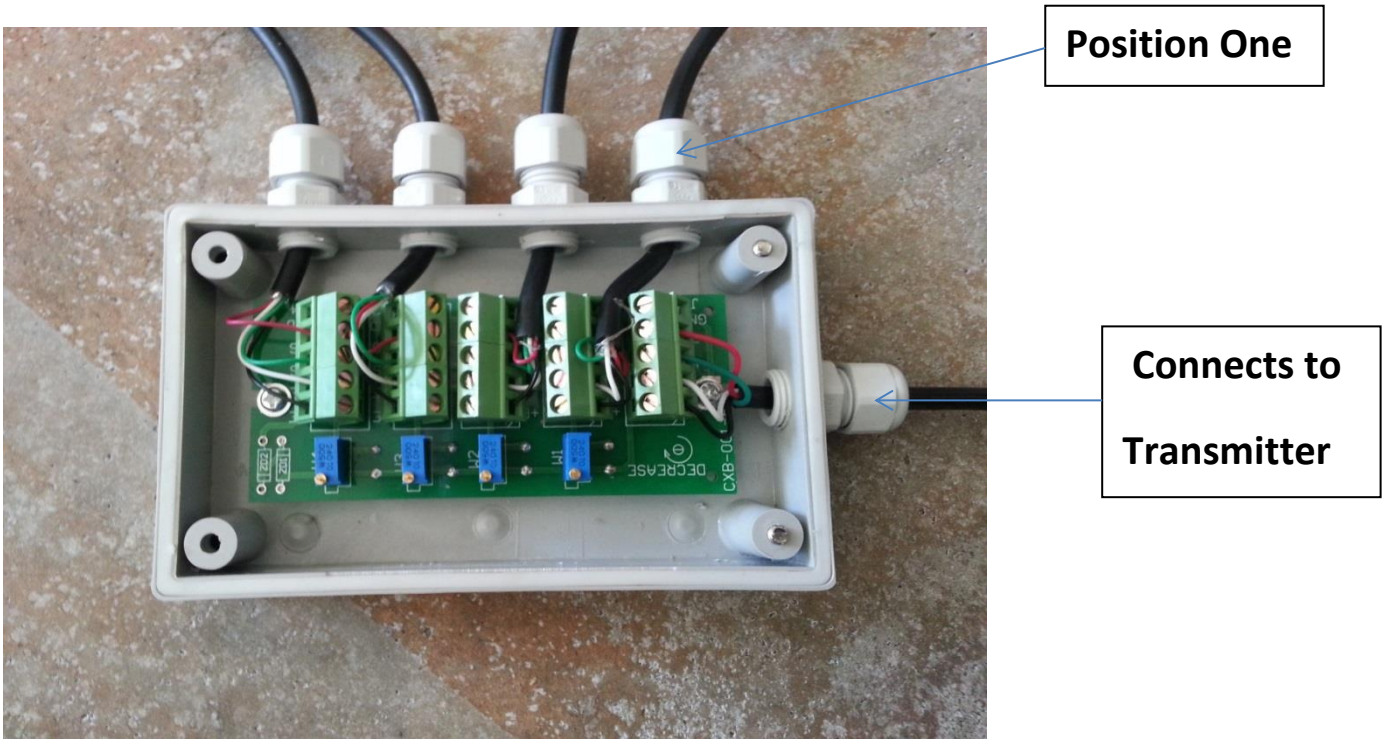
12. Position Strain Gauge cable and secure with loose fitting tie-wrap.

13. Peal 3M tape off the back of soldering terminal, then position strain gauge in position bending the wires on a 45 degree angle so that Loctite 430 glue can be swiped under the strain gauge prior to hold it down to set. Press 3M tape to metal surface after it is in the correct position.

14. Observe that the surface is clean and not dust or dirt has fallen of blown on to the surface. Swipe thin layer of Loctite 430 under the strain gauge making sure call the area is covered.

15. Carefully press stain gauge on to metal placing a small piece of wax paper between you thumb and the strain gauge. Holding you thumb steady, not sliding it, gently role you thumb left to right to ensure a solid contact with metal surface. Hold thumb into place for four minutes. Remove thumb and let stand for 15 min. All Loctite 430 should be complete dry.

16. Test Strain that bond was made correctly. If not bonded properly, sand surface, clean and glue a replacement strain gauge down. Test is performed by connecting transmitter four wires direct to each cable one at a time, then applying strain to the spring to confirm that reading move or and down or down and up when strain is applied to the spring. Once test is completed then box connect sensors into the junction box starting position one then second sensor on same axle in position two, the connect other sensors from other axle into the remain two positions.. (see junction box image below).



Note if using Mechanical Sensor on single drive axle, connect cables to position one and position two next to position one. Seal the remain two open ports in the junction box.

Test each strain gauge after the Loctite 430 sets as described above.

You can use a jack under the suspension section where it has been glued. Observe the handheld ensure the strain value in the top right corner of the handheld is move up and down when strain is applied. Once you have confirmed the strain is moving with strain, then you may proceed to cover the strain gauge with Loctite 5510 as shown in the video. If sensor strain reading is not moving up and down with strain (should move more than two to five points with strain, repeat strain to confirm) then sand, clean and glue down another strain gauge. Note, stainless steel cap in the image is no longer used, as Loctite 5510 provides able protection.

17. Carefully remove wax paper pealing from cable side to strain gauge. I any tears or remains glued to metal ignore it and proceed.

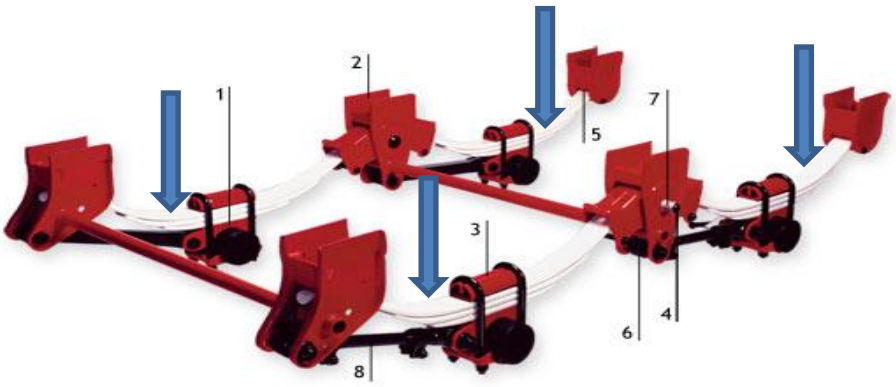
18. Gently spread Loctite 5510 over strain gauge, wires, soldering terminal, cable and surrounding metal area with a thin layer, being careful not to damage any of the delicate wires.

19. Carefully place 5510 over the strain gauge and soldering terminal. Spread excess Loctite 5510 over entire sanded surface to prevent rusting, and thick layer over strain gauge and cable area as shown in the video. You can now operate vehicle. Note it will take a few days before the Loctite 5510 is completely dry, but you may operate the vehicle in the meantime.

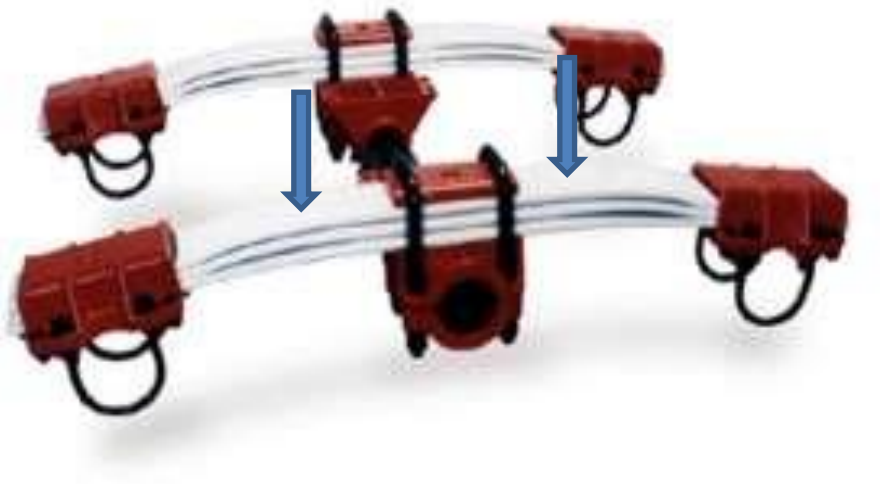
20. Secure cable with tie-wraps. Mount Junction box in a suitable location, and mount transmitter in a suitable location.

Where to glue sensors:

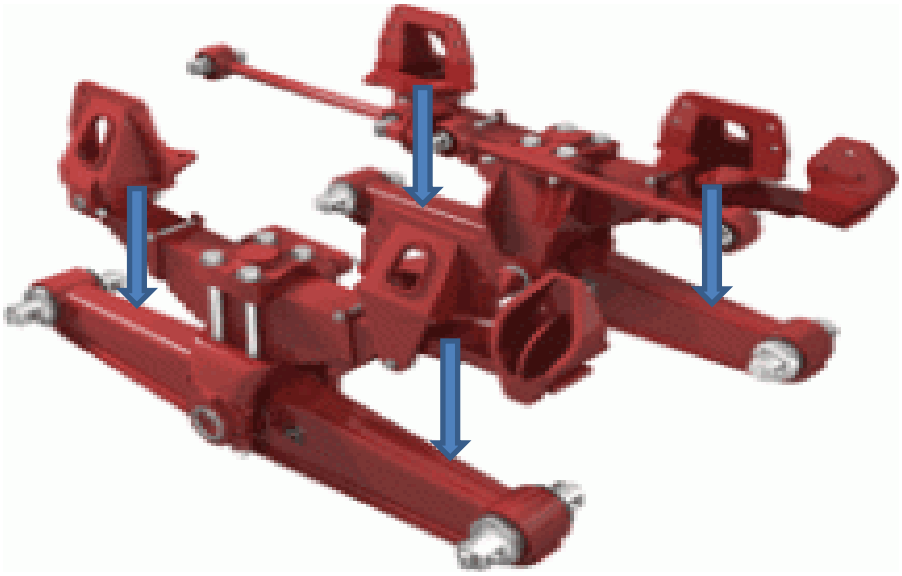
Hutch Type Tandem Axles MS-4



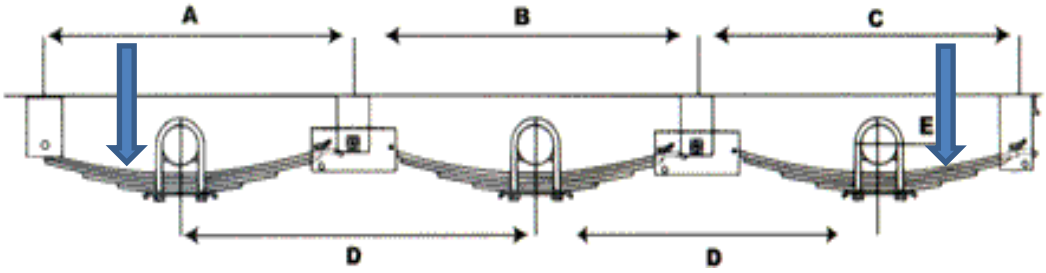
Single Point Suspension. Can glue on top or bottom MS-4



Walking Beam Suspension



Tridem Spring Suspension MS-4



Chalmers Suspension MS-4

Front Axle MS-1

Front Steer Axle

NOTE: The Lithium 1.5 volt batteries in the sensors should last approximately six months to one year, and when the batteries are nearing the end of their life a low battery signal is sent to the handheld. Information is not lost if batteries are dead.

- For greater protection use ¼ in hi-temp split loom protective cover to protect cable against chaffing etc... Mount the TruckWeight Transmitter in a suitable location. Route the Strain Gauge cable on the back side of the axle, around the outer shackle nut and up the aft side of the outer shackle U-bolt. Allow some slack between the top of the spring and the bottom of the frame. Secure the wire harness with tie-raps. NOTE: (make sure not to route the wire between the spring and the spring stop pad). In off road logging applications and other applications, where material can potentially hook cable the runs along the axle, take extra measures using extra tie-raps to better secure the cable to the axle.

C) CALIBRATION INSTRUCTIONS

1. **Calibration Steps for a Sectional Platform Scale:**

***** For more specific instructions on how to calibrate using a plain platform scale (non- sectional) section 2 of the Calibration Instructions. *****

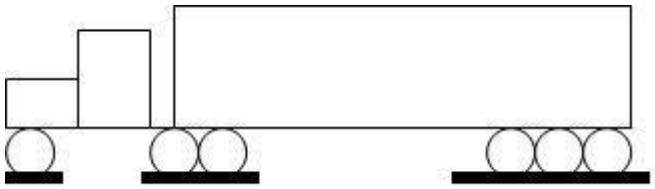
NOTE: For the calibration purposes only, ensure that your load per sensor is not heavier than 65,000 lbs. or 29,710 kg per axle group.

For the calibration load only, load must be as level as you can make it from left to right. After calibration you may not have to level it. Do your best to make the load level from left to right (equal weight on each side). Also avoid over hang on calibration load only.

a. Drive to an accurate set of scales. **You will need to do all steps twice (first with loaded and then with unloaded weights or visa-versa).**

b. Use an note pad or wright on weigh ticket, or use the Calibration Data Sheet supplied in this manual on Page 12 to record your calibration data.

c. When using a sectional platform scale, pull the truck onto the scale making sure that each section of the truck (steers, drives, and trailer) is properly on the scales as in the picture below.



- Check that brakes are off before taking a reading.

d. While on the scale, write down the pressure reading for each axle group/sensor from the handheld along with the weight for each axle group from the in-ground scale. The PSI reading is in the top right corner on the handheld display.

    - To switch between sensors use the Left and Right buttons on the handheld to move the cursor below the desired axle group.
    - Keep this written document for your records.
    - **Do this step for both the loaded and unloaded weights.**

e. To obtain the calibration information for the sensors on the trailer do the following:

    - Pull the whole rig on the scale and record the total rig weight. (GVW)

- While whole rig is on scale record the PSI value at the top right corner of the handheld for each sensor on the rig.
- Pull truck ahead till only the front axle is off the scale record that weight scale. Subtract this weight from the GVW which will equal the front axle weight
- Back up off the scale until the forward rear axel off the trailer is just off the scale. Record that weight which is your trailer weight.
- Subtract Front Axle Weight, and Trailer weight from GVW. This value is your Drive Axle Weight.

- **Do this step for both the loaded and unloaded weights.**

5. **Entering Calibration Data into the Handheld:**

a. Select a sensor/axle group to calibrate:

- On the Main Screen, use the Right and Left buttons to move the black curser underneath the sensor/axle group that you want to calibrate
- Hold the Center and Down buttons together until the screen changes to the calibration screen.

Calibration Screen

b. The first line on the Calibration Screen is for your **loaded weight and PSI (note the picture of the loaded truck to the far right of that line).**

- Use the Right and Left buttons to move the black cursor onto the weight on the first and second line.
- Use the Up and Down buttons to enter the loaded weight recorded on the Calibration Data Sheet for the sensor number shown in the upper right corner of the screen.
- Then press the right button to move the black box to the PSI reading on the top line.
- Use the up and down button enter the loaded PSI recorded for that sensor.

c. Press the right button again to move to black box to the **loaded weight data** on the second line.

- Input the empty weights and PSI on the second line.

d. Press the center button to save the calibration data and return to the Main Screen.

e. On the Main Screen, select your next sensor using the Left and Right Buttons.

f. Repeat the above steps for all sensors.

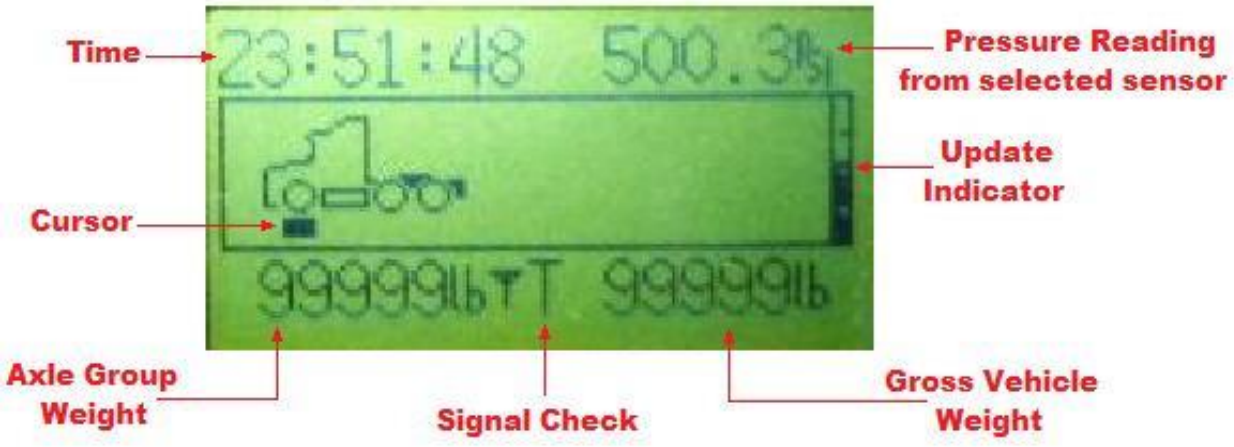
After all the data is inputted into the hand held the sensors are calibrated. Your gross vehicle weight is displayed in the bottom right corner of the home screen and the axel group weight is displayed on the bottom left of the home screen.

D) OPERATING INSTRUCTIONS

1. **Check that you are receiving a signal** from all sensors. On the Main Screen the Signal Check ("T" in the bottom center of the screen) indicates if a signal is being received by all installed sensors. If the "T" is solid the handheld is receiving all signals. If the "T" is flashing, the handheld is NOT receiving a signal from one or more of the installed sensors.

2. Review your weight on the hand held. The **gross vehicle weight** is always in the bottom right of your screen. The **axle group weight** is on the bottom left side of screen. You can switch between axle groups by using the Left and Right Buttons to move the black cursor underneath the desired axle group.

E) HANDHELD QUICK REFERENCE



- The truck in the middle of the screen represents the rig that you have selected. The **Cursor** indicates the currently selected sensor (the handheld will display the axle group weight from the selected sensor). If the black cursor is blinking, the handheld is

NOT currently receiving a signal from the sensor.

- The **Signal Check** ("T" in the bottom center of the screen) indicates if a signal is being received by all installed sensors. If the "T" is flashing, the handheld is **NOT** receiving a signal from one or more of the installed sensors. If the "T" is solid the handheld is receiving all signals.

- The **Update Indicator** indicates how much time remains until the next information update from the selected sensor (where the cursor is positioned) to the Hand Held. The weight information is normally updated once each minute, but automatically goes into "Quick- Response "mode during loading. In this mode, the weight information is updated every three seconds for fifteen minutes and will stay in that mode for a fifteen minute period from the last minute it sees a 2 PSI increase in a one minute interval.

- The reading in the top right corner of the screen alternates between the **temperature** reading and the **Pressure Reading** from the currently selected sensor on Air Sensors only, for strain gauges the strain gauge reading will appear only.

FUNCTION:	DETAILED DESCRIPTION
Turn ON Handheld	Press and hold **any button** until the screen comes on.
Return to Main Screen 	Press the **Center button**
Set Time 	Press and hold **Center and Right** buttons together until the screen changes. Use the Up and Down buttons to set the time. Press the center button to save selection and return to Main Screen.
Select a Rig 	Press and hold the **Center and Left** buttons together until the screen changes. Use the Up and Down buttons to select a rig. Press the center button to save selection and return to Main Screen.
Enter Sensor Serial Numbers 	On the main screen, use the Left and Right buttons to move the cursor and select the desired sensor. Press and hold the **Center and Up** buttons together until the screen changes. Use the Up and Down buttons to enter the serial number. Press the center button to save selection and return to Main Screen.

Enter Calibration Data 	On the main screen, use the Left and Right buttons to move the cursor and select the desired sensor. Press and hold the **Center and Down** buttons together until the screen changes. Use the Left and Right buttons to move the cursor and select the desired field. Use the Up and Down buttons to enter data in a selected field.
Switching Between LBS & KGS 	On the Main Screen, press and hold the **Up and Down** buttons together until the read out changes and release to switch between Kilograms and Pounds.
Deleting Sensors 	On the Main Screen, press and hold the **Left and Up** buttons together until the screen changes. Use the Left and Right buttons to select the sensor that you wish to delete. Press the Down button once to hi-light the “ERASE” command. Press the Right button to confirm the deletion **CAUTION: This is a complete deletion of the sensor from memory and you will loose your calibration information.** Press the center button to return to Main Screen.
Zeroing Function 	Zeroing is performed on mechanical sensors only to correct offsets that may develop from time to time. **THE ZERO FUNCTION IS PERFORMED EMPTY ON FLAT GROUND WITH BREAKS OFF.** From the main screen hold the left and right buttons down together for for about 5 seconds until the word “ZERO” appears at the top left corner of the screen. The screen will be frozen for a few seconds. Press the left of right button to move the cursor from to and different axle group to ensure the screen is not frozen prior to zeroing any axle group. Position the cursor over the axle group you wish to zero then press the up button. You will notice the axle group weight will change to the original empty calibration weight. Move cursor to next axle group if there are additional axle groups that require zeroing. Hold center button for about 5 seconds to return to the main screen. The zeroing function will have no effect on air sensors.

Trouble Shooting:

If the PSI reading after installation is changing more than +/- 1 or 2 PSI while the suspension system is at rest, then you need to remove the strain gauge and attached another. (Note, it is normal for the PSI to change +/- 1 PSI, like 501.3, 501.8, 501.5, 499.8 for example). Unacceptable changes could be caused by a bit of dust under the strain gauge prior to gluing. It can also be caused by a broken or loose wire connection.

To locate the problem strain gauge disconnect the strain gauge from the junction box. Observer the PSI reading if the changing stopped then you have located the problem strain gauge and replace it.

Connect the transmitter wires directly to the individual strain gauge to test it after installation.

To a problem transmitter disconnect the transmitter cable from the junction box. Observer the PSI reading, if the transmitter is working correctly the reading should be changing substantially as the signal updates. If it is not working correctly, the transmitter will stay at the same reading when disconnected. If this is the case the transmitter must be replaced. (note, once connect to a sensor reading should be stable and not changing substantially).

Note, if you see changes on more than one sensor, then check the power supply, as it could be noise coming from the power supply. It is unusually but it can be the cause.

Payloader Mode:

To enter payloader mode hold the down button for until the screen changes. To exist payloader mode hold the centre button until the screen changes to the main screen.

Hit the bottom button to zero. Start loading and net weight will appear on the bottom line. Then you can hit the up button. The weight will be added to the top right corner. Before lifting the next load hit the down button which resets the zero, the lift the load. Hit up button which add weight to the total and keep track of the number of lifts.

To clear the screen and start at new loading operation, hold the left and right arrows for five seconds then release, it will set all value back to zero:

F) CALIBRATION DATA SHEET

	Sensor #	Loaded Weights/ PSI	Empty Weights/ PSI
Steers[4]			
Drives			
Trailer 1			
Trailer 2			
Stinger			

6 If you do not have a physical sensor installed on the steer axle, use the virtual sensor number 10001. When calibrating the virtual sensor you only need to enter the weights from the in ground scale and will not be required to enter a pressure reading.

G) FREQUENTLY ASKED QUESTIONS (FAQ)

I can not receive a signal from one or more of my sensors. What can I do to fix the problem?

- ***Is the serial number for the sensor entered correctly?***

The serial number entered in the handheld must match the serial number on the sensor in order for a signal to be received. Refer to the Handheld Quick Reference on page 11 for instructions on entering a serial number.

- ***Have you waited long enough for the sensor to update?***

The system can take up to two minutes to update when not in quick response mode. Try waiting for the next system update.

- ***Is the serial number for the sensor entered more that once in the handheld?***

The handheld may display the correct sensor number, but the signal will not appear. Delete all entries of that sensor number from the handheld (Refer to Handheld Quick Reference on page
11). Re-enter the sensor number and it will work properly.
Note: deleting a sensor also deletes the calibration information for that sensor, so be certain to record the calibration information for that sensor prior to deleting.

- ***Are the sensors mounted inside a metal enclosure?***

Metal enclosures reduce the signal of the sensors. Remove the sensor from the enclosure and wait for 2 minutes to see if the handheld begins picking up the signal.

- ***Are the batteries properly installed?***

Rotate batteries with your thumb in the sensor, check battery orientation and check that there is nothing blocking the contacts of the batteries. If rotating the batteries does not work, try changing the batteries in Sensor with new AA lithium 1.5 Volt batteries.

- ***Do you receive a signal from the sensor when you move closer to it?***

If you are not obtaining a signal from a sensor in a particular location try changing the

mounting location or you may try switching the tractor sensor with the trailer sensor.

My handheld will not turn on. What is the problem?

- ***Did you hold down a key to turn the handheld on?***

Hold down each of the keys one at a time for at least 10 seconds each or until the handheld screen lights up.

- ***Are the batteries properly installed?***

Rotate batteries with your thumb in the handheld, check battery orientation and check that there is nothing blocking the contacts of the batteries. If rotating the batteries does not work, try changing the batteries in the handheld with new AA alkaline 1.5 Volt batteries.

The weight and PSI reading from my sensor is stuck on one number. What is the problem?

- ***Do you have a signal?***

On the Main Screen of the handheld, check for a blinking bar under the axle group on which the sensor is installed. If the bar is blinking you do not have a signal. See previous FAQ: “I cannot receive a signal from one or more of my sensors.”

The sensor weight and PSI reading at no load has changed significantly and now I do not get an accurate weight from my Smart Scale system. What should I do?

- ***Have you changed your rig configuration?***

Changing your rig configuration in any way can change the weight distribution on the axle groups of your rig. If you have made a change to your rig configuration, then you will need to recalibrate the sensors in your Truckweight Smart Scale system.

- ***Are you taking your reading correctly?***

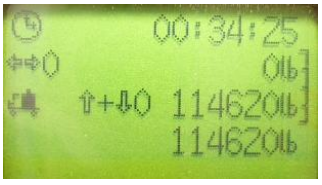
You must be on flat, level ground to obtain a correct weight measurement directly from your handheld.

I have entered a screen on the handheld that I do not recognize. What is the screen for? How do I get back to the main screen?

- ***Are you in pay loader mode?***

Truckweight is continually trying to improve and expand the functionality of its products. Currently Truckweight is working on developing a mode for pay loaders. The screen for pay loaders looks like the following picture.

Pay Loader Screen



To exit from this screen or any other screen and return to the Main Screen simply press the Center Button for five seconds.

How do I switch between kilograms and pounds?

- On the Main Screen, press and hold the **Up and Down** buttons together until the read out changes and release to switch between Kilograms and Pounds.

H) IMPORTANT SAFETY NOTICES

Always refer to and follow the safety messages and applicable service procedures provided by the manufacturer of the vehicle being serviced. Please read, understand, and follow all safety messages and instructions in this manual.

The TruckWeight handheld and sensor (also referred to as the TruckWeight wireless truck scale) are acceptable for use in Class I, Divisions 1, Groups A, B, C and D, Class II, Divisions 1, Groups E, F and G, and Class III Division 1 Hazardous Locations. Both the handheld and the sensor are ultra low-energy devices, which include energy limiting circuits and low-voltage batteries (2 X 1.5 V). Both devices feature very low power consumption (less than 18mA/54mJ/s peak).

The TruckWeight handheld units and sensors are intrinsically safe and suitable for use in explosive areas.

WARNINGS

- **DO NOT OPERATE HANDHELD SCALE WHILE DRIVING.**

1. **Beware of the risk of unexpected vehicle movement. Please take the following precautions.**
   - Block the drive wheels before installing the sensors.
   - Ensure the parking brake is set.
   - Do not leave a running vehicle unattended. A moving vehicle can cause injury.

2. **The engine has moving parts and there is a risk of entanglement. Please take the following precautions:**
   - Do not place tools on fenders or anywhere within the engine compartment.
   - Keep yourself, your clothing, adapters, and service hoses clear of moving parts such as fan blades, belts, and pulleys.
   - Users and bystanders should wear safety goggles when near a running engine. Moving components can cause eye injuries.

3. **Maintain your focus on the road. Do not use the handheld unit while driving.**

4. **Beware the risk of burns. Please take the following precautions:**
   - If at all possible, avoid working near hot truck components, and instead allow the truck to cool off before proceeding. However, if it is absolutely necessary to do so, ensure that protective gloves are worn.
   - Do not touch hot exhaust systems, manifolds, engines, radiators, etc. Hot components can cause injury or severe discomfort.

I) WARRANTY AND CONDITIONS OF SALE

All quotations and sales by Smart Scale Technologies Inc.,(Smart Scale) its subsidiaries or affiliates are subject to these terms and conditions.

1. Terms of payment are cash or equivalent; prices are CIF; and wireless truck scale prices do not include any taxes, insurance, handling, duty or other similar charges, payment of which will be the sole responsibility of customer unless otherwise specified on invoice.

2. Smart Scale may select a carrier. Truckweight responsibility for any loss or damage ends, and title passes, when Wireless Truck Scales are delivered to the carrier, to customer, or to customer's agent.

3. The Smart Scale Wireless Truck Scale is warranted against defects in material or workmanship for 2 years from the date of the original purchase. If the Wireless Truck Scale, which, because of a manufacturing mistake or malfunction, proves to be defective within the 2 year warranty period, it will be replaced Smart Scale with a handling and service charge to you, provided you have proof of purchase. Note handling and service charges may change from time to time and region to region. This warranty does not cover incidental or consequential damage to persons or property caused by use, abuse, misuse, failure to comply with installation or operating instructions, or damage caused by battery malfunction. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above warranty does not apply in those states. This warranty gives you specific legal rights and you may also have other rights, which vary state to state.

4. SmartScale SHALL HAVE NO RESPONSIBILITY FOR OVERLOAD FINES RECEIVED WHILE USING THIS WIRELESS TRUCKSCALE.

5. Wireless TruckScales are deemed accepted by customer unless customer notifies SmartScale in writing within 10 days of delivery of Wireless TruckScales hortages, damage or defect. **Nore turns may be made for any reason without obtaining a Return Authorization Number(RAN#) issued by SmartScale.** If customer refuses to accept tender or delivery of any Wireless TruckScales or returns any Wireless Truck Scales without authorization from SmartScale., such Wireless Truck Scales will be held by SmartScale awaiting customer's instruction for 20 days, after which SmartScale.may deem the Wireless Truck Scales abandoned and dispose of them as it sees fit, without crediting customer's account. Refunds are not permitted.

6. SmartScale will not be liable for any failure or delay in its performance or in the delivery or shipment of Wireless TruckScales, or for any damages suffered by customer by reason of

such failure or delay,when such failure or delay is caused by, or arises in connection with, any fire, flood, accident, riot, earthquake, severe weather, war, governmental interference or embargo, strike, shortage of labor, fuel, power, materials or supplies, delay in delivery by SmartScale suppliers or any other cause or causes beyond ScaleScale's reasonable control. SmartScale reserves the right to cancel without liability any order, the shipment of which is or may be delayed for more than 30 days by reason of any such cause. SmartScale reserves the right to allocate in its sole discretion among customers or potential customers, or defer or delay the shipment of, any Wireless TruckScale which is in short supply.

7. All quotations and sales are made only upon these terms and conditions and those on the invoice. The invoice and not any purchase order or other customer document (which, if construed to bean offer is here by rejected), will be deemed an offer or counter-offer and is a rejection of any other terms or conditions. Customer, by accepting any Wireless TruckScales, making any payments or ordering any WirelessTruckScales accepts these terms and conditions and will be deemed to have assented to these terms and conditions, notwithstanding any terms contained in any prior or later communication from customer and whether or not SmartScale will specifically or expressly object to any of customer's terms. SmartScale's failure to object to any document, communication or act of customer will not be deemed a waiver of any of these terms and conditions. Any addition or change to these terms and conditions must be specifically agreed to in writing by a duly authorized officer of SmartScale before becoming binding on SmartScale.

8. Unless specifically otherwise agreed in writing by SmartScale customer acknowledges that Wireless TruckScales sold by SmartScale are not intended for and will not be used in life support systems, human implantation, nuclear facilities or systems or any other application where Wireless TruckScale failure could lead to loss of life or catastrophic property damage. Customer will indemnify and hold SmartScale harmless from any loss, cost or damage resulting from customer's breach of the provisions of this paragraph.

9. Any or all Wireless TruckScales may be subject to export or resale restriction or regulation, and customer acknowledges that it will comply with such regulations or restrictions. Any or all Wireless TruckScales may have been imported. Country of origin information is as provided to SmartScale by its suppliers and is, where applicable, located on the Wireless TruckScales themselves or the supplier's innermost packaging thereof.

10. Except for the warranty coverage referenced in paragraph 3, above, NEITHER SMARTSCALE NOR ITS SUPPLIERS WILL HAVE ANY LIABILITY OR OBLIGATION TO CUSTOMER OR ANY OTHER PERSON FOR ANY CLAIM, LOSS, DAMAGE, OR EXPENSE CAUSED IN WHOLE OR IN PART, DIRECTLY OR INDIRECTLY, BY THE INADEQUACY OF ANY WIRELESS TRUCKSCALES FOR ANY PURPOSE, BY ANY DEFICIENCY OR DEFECT IN ANY WIRELESS TRUCKSCALE (WHETHER OR NOT COVERED BY ANY WARRANTY), BY THE USE OR PERFORMANCE OF ANY WIRELESS TRUCK SCALES OR BY ANY FAILURE OR DELAY IN TRUCKWEIGHT PERFORMANCE HEREUNDER,OR FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES, HOWEVER CAUSED, INCLUDING, WITHOUT LIMITATION, PERSONAL INJURY OR LOSS OF BUSINESS OR PROFIT, WHETHER OR NOT CUSTOMER WILL HAVE INFORMED TRUCKWEIGHT OF THE POSSIBILITY OR LIKELIHOOD OF ANY SUCH DAMAGES.

11. SmartScale may assign accounts receivable to an affiliate. In order to defray the cost of

customer account administration, any credit balance or other sum owed to customer who remains unclaimed by customer for a period of eighteen months will become the property of SmartScale.

12. No order may be cancelled, rescheduled or reconfigured without SmartScale's prior written authorization and, in such event; customer will be liable for any additional costs and expenses incurred by SmartScale.

13. Prices are subject to change by Smart Scale upon customer rescheduling or reconfiguration of orders.

Prices are also subject to change in response to supplier price increases.

Smart Scale Technologies Inc.

Contact Information:

Our office is open Monday through Friday 8am to 7pm Eastern Standard Time.

Call: +1-877-757-7888

Call: +1-902-404-3452

Fax: 902-431-9587

Email: **info@truckweight.com**