



SMART SCALE INSTALLATION & OPERATING MANUAL

WIRELESS FORKLIFT SCALE

Version V1.1



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INSTALLATION & OPERATING MANUAL FOR Forklift Scale V1.1

A. Parts List	Page 2
B. Installation Instructions	Page 3
1. Display Set-Up.....	Page 3
2. Signal Check & Display Mount	Page 5
3. Installing Hydraulic Sensor.....	Page 6
C. Calibration Instructions	Page 7
D. Operating Instructions	Page 9
E. Important Safety Notices	Page 10
F. Warranty & Conditions of Sale	Page 11

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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.

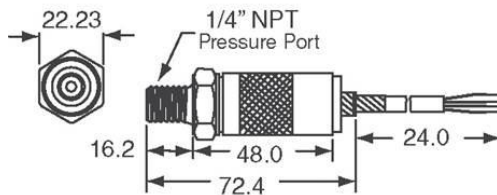
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A) PARTS LIST

A) Wireless Hydraulic Sensor HS-HW



B) Display with mount



Hydraulic fittings to line not included to T into main not included.

1. **Display Mount** is included with Display purchase.
2. **Batteries** may not be supplied in certain regions due to regulatory restrictions.
3. Note- sensor can accept 9 volt to 25 volt power supply.

B) INSTALLATION INSTRUCTIONS

Display SET-UP.

Getting Started:

1. Please **read the “Important Safety Notices”** section of this manual before installing and operating the ForkLift Scale system.
2. 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 Smart Scale forklift scale system.
3. **Install the AA batteries** provided into Display. 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.
4. **Turn on the Display** 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 30 minutes when not in use.

Main Screen



5. 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.

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2) Forklift Set Up: If the Display is not set to a picture of a forklift do the following:

1. **Select forklift:**



- 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 forklift.
- Once you have selected the forklift hit the center button to return to the Main Screen.

2. **Enter Sensor Serial Number:**



- Sensor serial number is a five digit number written on the outside of the sensor housing. On the Main Screen hold the Center and Up buttons until the screen changes to the Sensor Serial Number Screen.
- Use the Up and Down button to enter the five digit serial number on the outside of the forklift scale.
- When finished, press the Center button to register the number and return to the Main Screen.

Sensor Serial Number Screen



3) Signal Check: Now that your sensor serial number is entered in the Display it is time

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to check the radio connection between the devices:

Check the radio connection:

- Keep the sensor and the Display within 100 feet of one another with no obstructions between the devices. The sensor should automatically connect to the handheld when sensor is power connected from the forklift battery. Establishing the first connection will usually take between a couple seconds to 1 minute. Hydraulic pressure reading will appear on top right, if not signal ***** will appear. Not pressure is about 10:1 so 500 PSI will show 50.1.

Main Screen: Receiving signal



Main Screen: NOT receiving signal



4) DISPLAY INSTALLATION INSTRUCTIONS:

1. Do Not Drill any Holes in the Mast
2. Clean Surface with Acetone or Isopropyl Alcohol
3. Use Zip Ties and Loctite 5510 to mount the display bracket in a suitable Location on the Mast (See Image)
4. Allow to Dry Overnight



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5) Installation of Hydraulic Transducer:

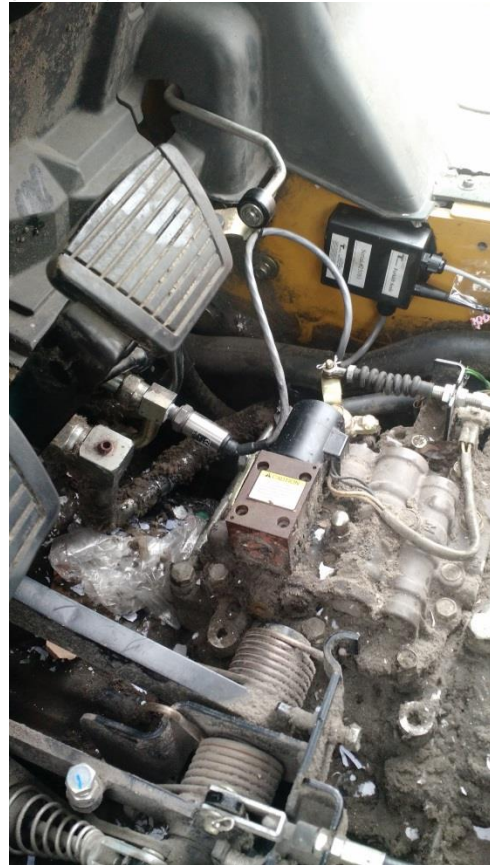
NOTE; Installation should be perform by your Forklift Maintenance Professional.

1. Prior to mounting the fork lift scale, a suitable location to T in the ¼ inch NTP fitting, or tap into an existing hydraulic fitting should be determined. (See two examples below).
2. Tighten the ¼ NTP hydraulic transducer fitting prior to mounting the housing it is connected to; as it needs to rotate while being tighten.
3. Once connected use a screw or bounding agent to mount the housing to the forklift wall or other location out of the way.

Teed in (Toyota)



Taped in (CAT)

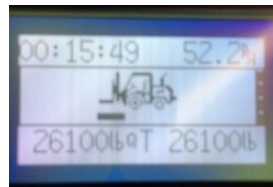


C) CALIBRATION INSTRUCTIONS

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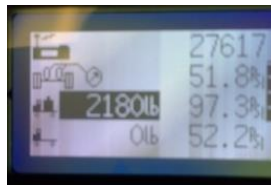
The calibration is a two part process. The initial calibration is performed, and then it is fine-tuned immediately thereafter as instructed below. For the calibration forklift mast should be in the vertical position.

- 1 Lift the forks off the ground with no load in the approximate position where most lifts will be held to obtain weight. Mast should be in a vertical position. Record the PSI reading in the top right corner about 3-5 seconds after the forks come to stop. (Note the psi may drop as time passes for a minute or so).



- 2 Lift up a known load of about 500 to 1000 Kegs, and Record the new higher PSI in the top right corner.

- 3 Enter the calibration screen by holding the center and down buttons together for five seconds.



4. 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).**

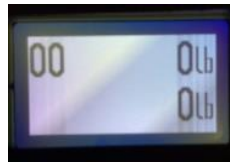
- Use the Right and Left buttons to move the black cursor onto the weight on the first and second line.
- Use the Up and Down buttons to enter the loaded weight recorded.
- Then press the right button to move the black box to the PSI reading on the top line.
- Use the up and down button enter the loaded PSI recorded for that sensor.

5. Press the right button again to move to black box to the **Empty weight data** on the bottom line. Enter zero lbs. or kg for the empty weight then press the right button to enter the empty PSI on the bottom line.

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

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- After the initial data is inputted into the Display hold the down button for five seconds to get into the forklift operation screen. This is the screen where forklift weight will be generated.



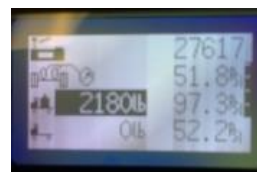
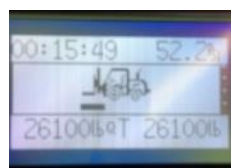
The bottom right corner weight is the current lift weight. The top right is the running total, as you can add lift after lift and see the running total. The top left number is the number of lifts.

Fine-tuning Calibration:

- Lift the same load used for the initial calibration, place forks in vertical position. The weight will appear in the bottom right corner. Then press the left arrow and the PSI will appear. Record the bottom PSI number.

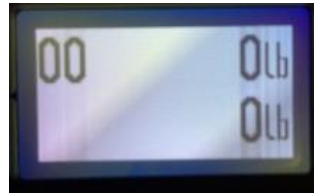


- Off load the lift weight, then Lift the forks off the ground with no load in the approximate position where most lifts will be held to obtain weight. Mast should be in a vertical position. Press the right button and record the PSI on the bottom line.
- To complete the fine-tuning press the center button for five seconds to return to the main screen. Then press the center and down button together for five second to re-enter the calibration screen. Then change the loaded and empty PSI values to the values recorded during the fine-tuning process. Do not change the weights. Once entered then press the center button to return to the main screen.



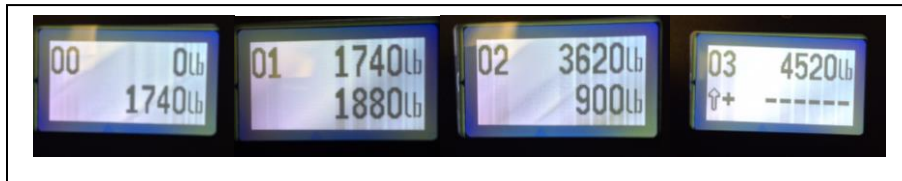
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- Then hold the Down button for five seconds to return to the forklift weight screen. Calibration completed!



D) OPERATING INSTRUCTIONS

Lift the load then hit 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:





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E) 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:**
 - 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. **Beware the risk of burns. Please take the following precautions:**
 - If at all possible, avoid working near hot components, and instead allow cooling 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.



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F) 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 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. Smart Scale responsibility for any loss or damage ends, and title passes, when Wireless 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 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. Wireless Scales are deemed accepted by customer unless customer notifies SmartScale in writing within 10 days of delivery of Wireless Scales, shortages, damage or defect. **No returns 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 Scales or returns any Wireless Scales without authorization from SmartScale. such Wireless Scales will be held by SmartScale awaiting customer's instruction for 20 days, after which SmartScale. May deem the Wireless Scales abandoned and dispose of them as it sees fit, without crediting customer's account. Refunds are not permitted.
5. SmartScale will not be liable for any failure or delay in its performance or in the delivery or shipment of Wireless Scales, 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 Scale which is in short supply.



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6. 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 be an 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 Scales, making any payments or ordering any Wireless Scales 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 Scales 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 Scale 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 Scales 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 Scales may have been imported. Country of origin information is as provided to SmartScale by its suppliers and is, where applicable, located on the Wireless Scales 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.



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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.

Contact Information:

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