

# HAUL WEIGH

ON - BOARD WEIGH SYSTEM



**HAUL WEIGH  
TRUCK AND TRAILER**

**INSTALLATION &  
OPERATION MANUAL**

**ANDROID COMPATIBLE**

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**TRUCKTRONIX PTY. LTD.**

Sydney, AUSTRALIA

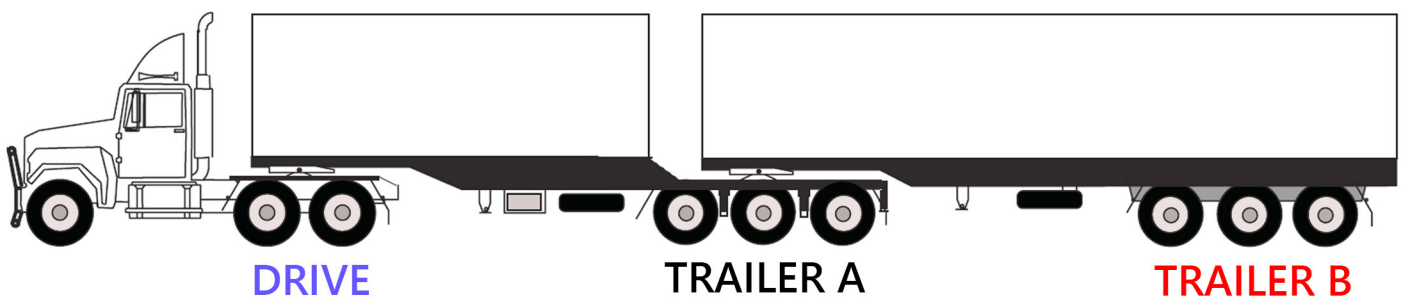
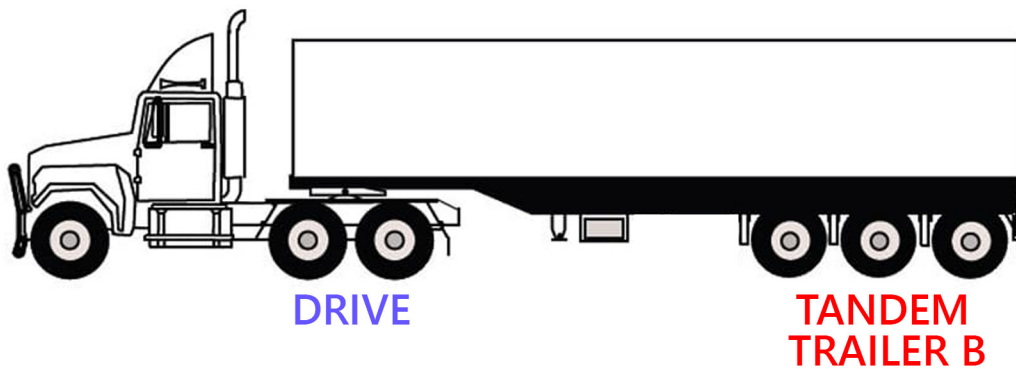
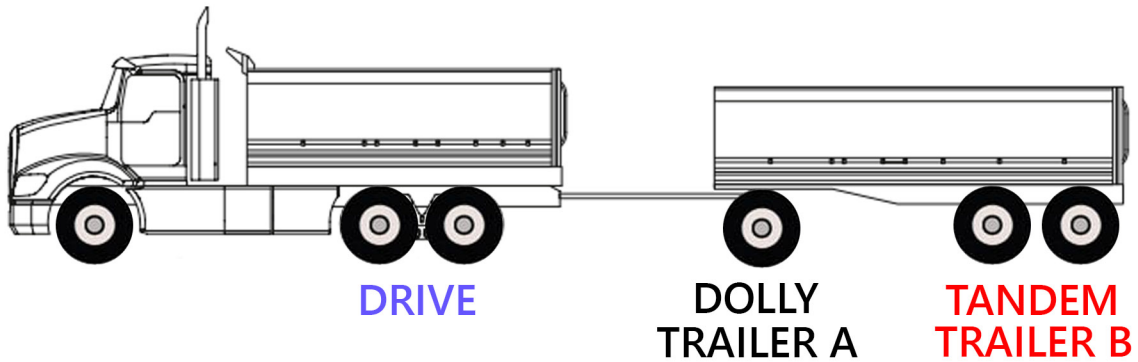
[www.haulweigh.com](http://www.haulweigh.com)

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# OVERVIEW

The HAUL WEIGH Truck & Trailer is a full digital truck scale with 3 built in air pressure sensors. The scale is designed for air suspension truck/tractor with trailer. If your truck has 2 Height Control Valve's (HCV) you can use either one for your scale.

The weight of the steer axle group can be estimated with this scale. Please refer to the Estimated Steer section for more information.



## TECHNICAL SPECIFICATIONS

<b>ACCURACY:</b>	0.5% - 1% $\pm$ FS
<b>AXLE GROUPS MONITORED:</b>	3, TRUCK, TRAILER A, TRAILER B
<b>SCREEN:</b>	4.3" TFT Touch Screen, 480 x 272 Resolution
<b>OPERATING TEMPERATURE:</b>	-20°C - 80°C or -4°F - 140°F
<b>STORAGE TEMPERATURE:</b>	-20°C - 80°C or -4°F - 140°F
<b>RESOLUTION:</b>	20 KG
<b>UNITS:</b>	KG or LBS (User Selectable)
<b>POWER:</b>	12V - 32V DC
<b>ADVANCED COMMUNICATION:</b>	RS-232 Printer
<b>PASSWORD PROTECTION:</b>	6 Digit Pin
<b>MODEL:</b>	HAUL WEIGH - Truck & Trailer / HW- TAT-2.0
<b>DIMENSIONS:</b>	L: 194mm x W: 91mm x H 72.5mm





# INSTALLATION

The Trucktronix HAUL WEIGH - Truck & Trailer is designed to be mounted inside the cabin of the truck. However the HAUL WEIGH - Truck & Trailer can still be mounted externally in a protective enclosure. Any external enviromental damage will void warranty.

Please note that mounting external accesories on to your truck chassis can void your truck warranty and is illegal in some countries.

## Step 1.

Mount the scale in a chosen location.



## Step 2.

Eject the air from the truck/trailer suspension system.

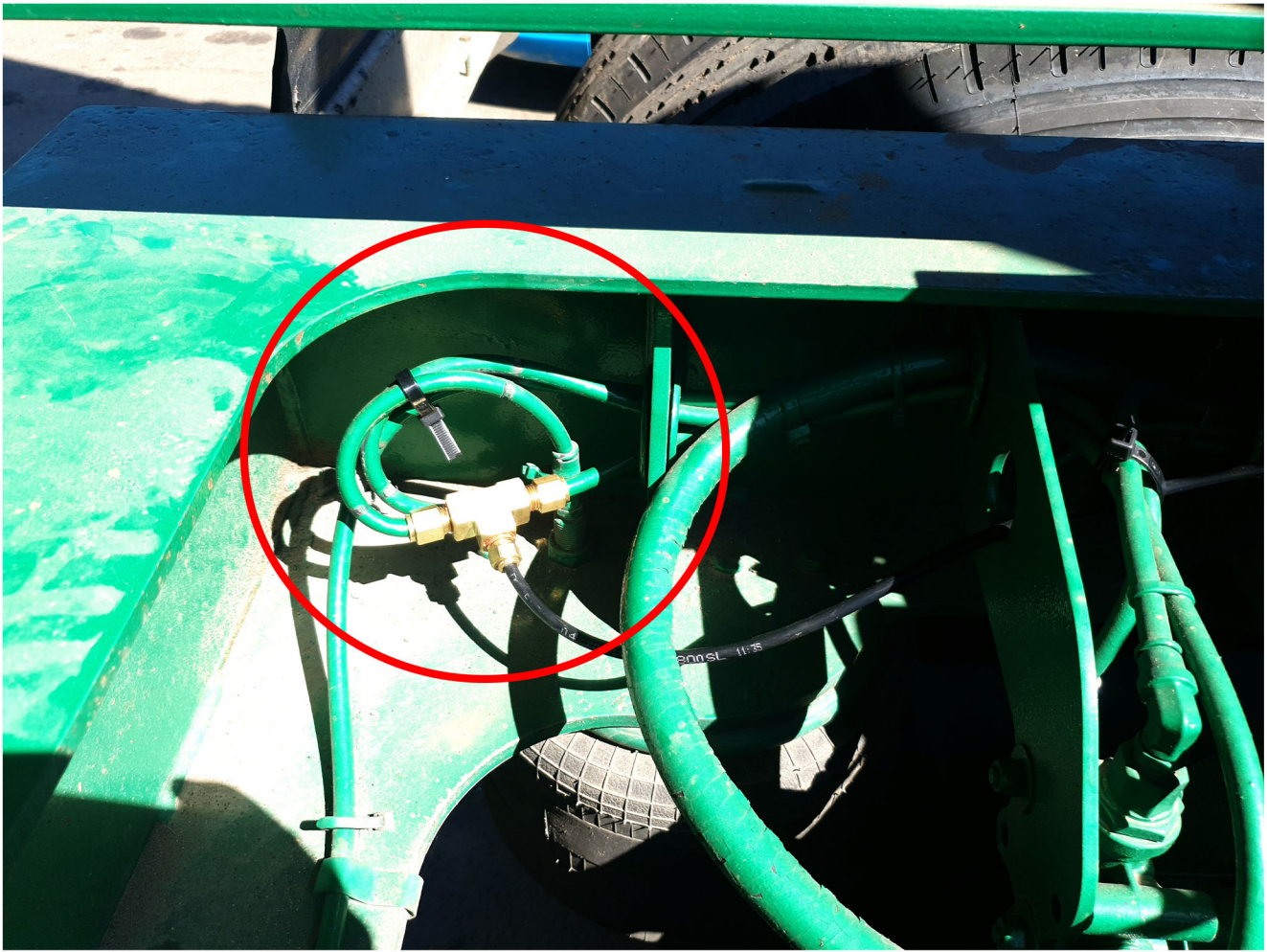
## Step 3.

Locate a airbag and cut the air line about 10cm away from the airbag.

## Step 4.

Connect a T fitting between the air line you just cut, T fitting sizes vary from truck to truck.

# INSTALLATION



## **Step 5.**

Install a new 1/4" air line to be used with the HAUL WEIGH Scale into the T fitting. Run the new air line from the T fitting, through the chassis and to the mounting location of the scale.

## **Step 6. (Trailer Connection)**

Repeat steps 2 - 4 for the trailer axle groups you wish to connect to the scale.

## **Step 7 (Trailer Connection)**

Run the air line(s) to the front of the trailer where it meets the truck, at this point you will need to mount air line connectors to connect the trailer air lines to the truck. (Note: It is important to have connectors between your truck and trailer for if you ever need to disconnect the trailer from the truck.

## **Step 8. (Trailer Connection)**

Run the trailer air line(s) from the connector through the truck chassis to the mounting location of the scale. Be sure to keep the air line(s) away from the exhaust and anywhere that could cause damage to the air line(s).



# INSTALLATION



## Step 9. (Trailer Connection)

Connect the air line(s) to the scale push to connect fittings in the appropriate order as specified. (NOTE: Scale air inputs are designated to each axle group and cannot be inter-changed. Refer to page 7 for diagram.)

## Step 10.

Attach the red wire of the supplied plug to a switched positive (+) power source or ACC (Do not connect the scale directly to the battery) and connect the BLACK wire to chassis ground (-). The required power supply voltage must be between the range of 12 and 32 volts DC.

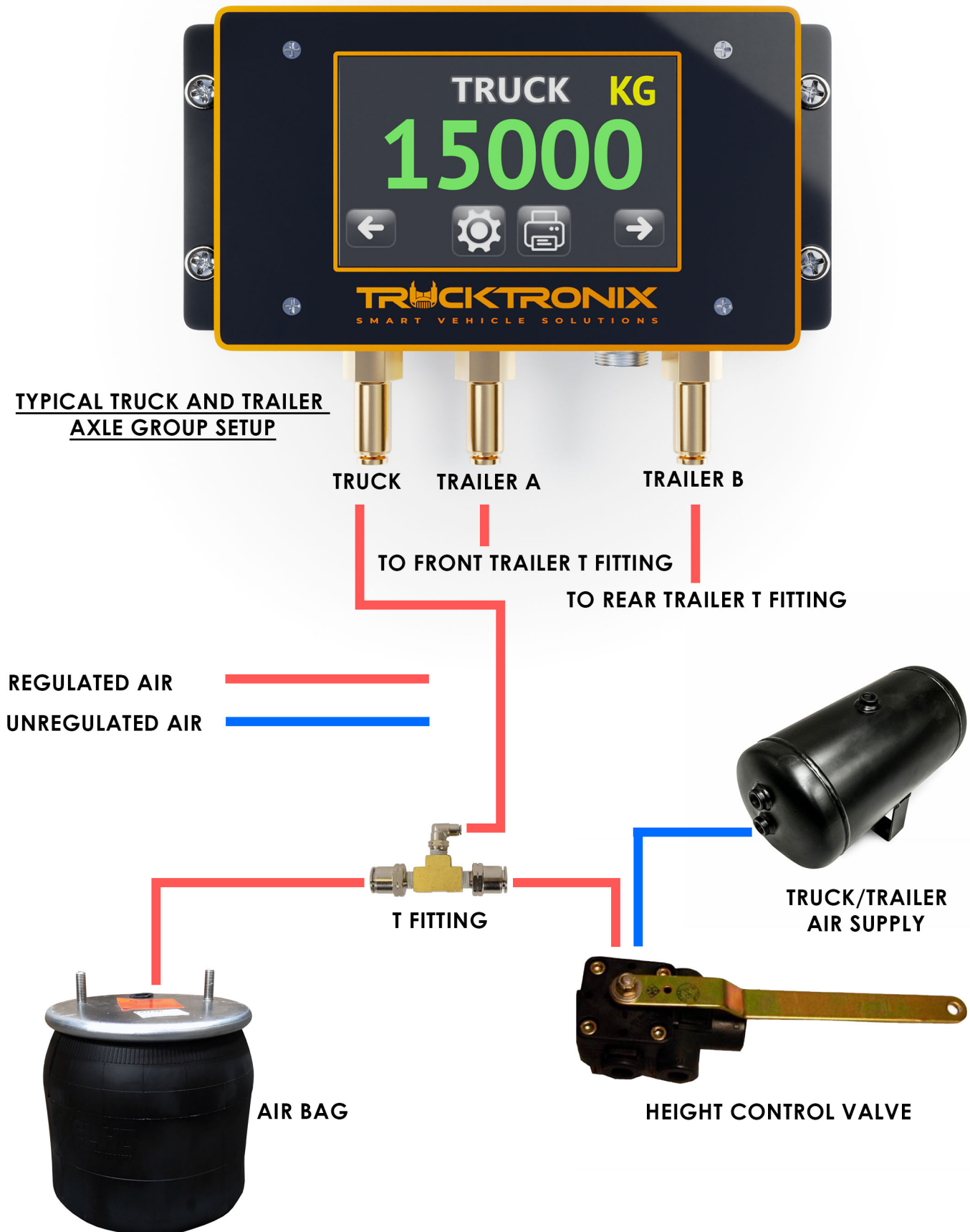
## Cable Colour Diagram

MAIN POWER (+) (12V - 32V DC SWITCHED)	RED
GROUND (-) ( TRUCK CHASSIS OR NEGATIVE )	BLACK
DEVICE TX COMMUNICATION LINE	YELLOW
DEVICE COMMUNICAION GROUND LINE	WHITE
DEVICE RX COMMUNICATION LINE	GREEN



**It is important to make sure all electrical connections and joins are insulated from the weather to protect the scale from any electrical damage.**

# INSTALLATION DIAGRAM



## PRE-CALIBRATION TRAILER SETTINGS

HAUL WEIGH load scale's trailer settings need to be set before the calibration process can begin. This process basically is to let the scale know if your truck is towing a trailer and what trailer axle groups it needs to display weight readings for.

### Step 1. (Pre-Calibration)

Go to the settings page by selecting the GEAR  button on the main page.



### Step 2. (Pre-Calibration)

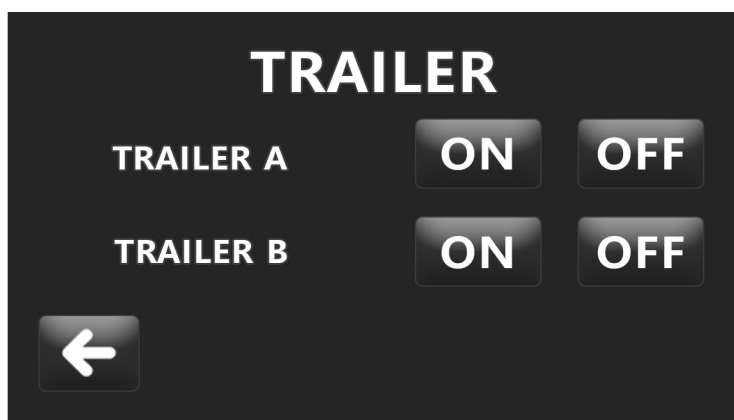
On the settings page, select the TRAILER button.

TRAILER

### Step 3. (Pre-Calibration)

On the trailer page, if you are towing a trailer, press the ON button for TRAILER SENSORS to turn on the trailer functionality.

If your trailer also has a front axle group or dolly, press the ON button for DOLLY or TRAILER A, otherwise select OFF.



## PRE-CALIBRATION STEER SETTINGS

HAUL WEIGH scales also have a estimated steer feature that can estimate the steer axle group weight. The scale must be calibrated both empty and loaded everytime you switch from ESTIMATED STEER to NO STEER.

### Step 1. (Pre-Calibration)

Go to the settings page by selecting the GEAR  button on the main page.

### Step 2. (Pre-Calibration)

On the settings page, select the STEER button.

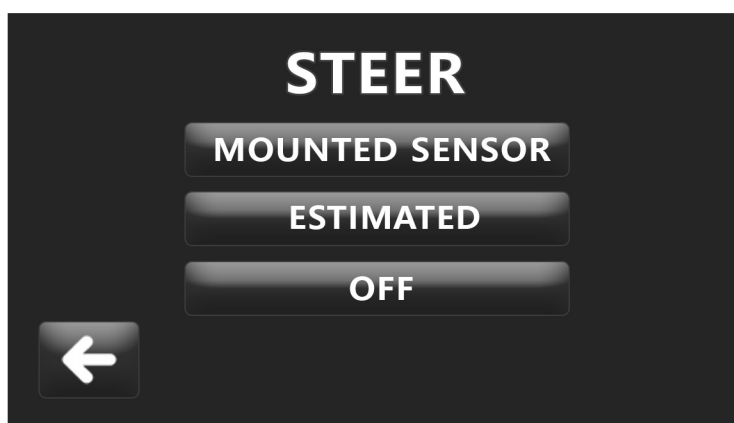


### Step 3. (Pre-Calibration)

On the steer page, if you have a front spring sensor connected to your scale select MOUNTED SENSOR.

If you would like to turn on the estimated steer feature select ESTIMATED.  
(PLEASE NOTE: ESTIMATED STEER IS NOT ACCURATE AND CAUSE INACCURATE READINGS, PLEASE USE WITH CAUTION.)

Otherwise if you would like to turn of the steer feature and use the truck overall weight select OFF. (Please note: this is the default settings of the load scale).





## PRE-CALIBRATION UNITS

With HAUL WEIGH scales you can choose between Kilograms or Pounds very simply. It is recommended that you set them before calibration.

### Step 1. (Pre-Calibration)

Go to the settings page by selecting the GEAR  button on the main page.

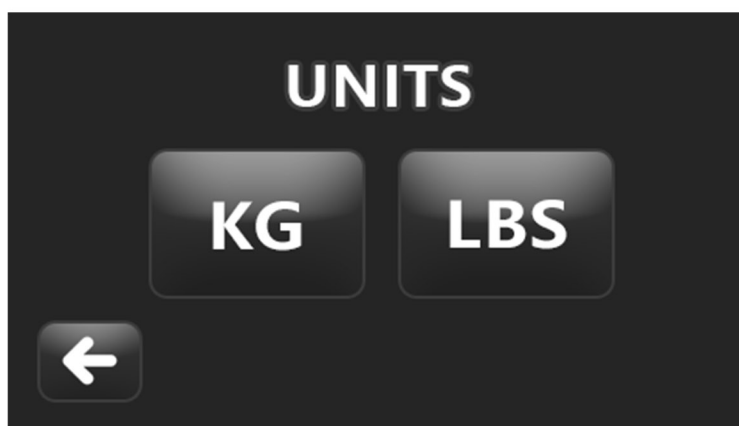
### Step 2. (Pre-Calibration)

On the settings page, select the UNITS button.



### Step 3. (Pre-Calibration)

On the units page select the appropriate unit.



## DIAGNOSTICS

The diagnostics page shows the stored PSI for axle groups and current PSI. This section is used for troubleshooting any problems you could have with the truck air system or load scale.

#### **CE: Calibrated Empty PSI**

View the saved empty air pressures for selected axle groups.

#### **CL: Calibrated Loaded PSI**

View the saved loaded air pressures for selected axle groups.

#### **CR: Current PSI Reading**

View the current air pressures for selected axle groups.

#### **V: Current Sensor Voltage Reading**

Shows the current sensor signal voltage.

DIAGNOSTICS				
	CE	CL	CR	V
STEER	999.99	999.99	999.99	9.99
DRIVE	999.99	999.99	999.99	9.99
TRAILER A	999.99	999.99	999.99	9.99
TRAILER B	999.99	999.99	999.99	9.99
PSI				
←				
VERSION		HW-TAT-2.1		

# CALIBRATION EMPTY

HAUL WEIGH load scale's must be calibrated both empty and loaded to work. The device links the air pressure in the air suspensions to the weight you enter at the time of calibration. You will need to calibrate one time when the vehicle is empty and again while the vehicle is loaded. This will be done for each axle group you would like to monitor.

Before you begin while the vehicle is empty, obtain a weight certificate from a certified in-ground weigh bridge for the specific axle group or groups required for calibration.

## Step 1.

Go to the settings page by selecting the GEAR  button on the main page.

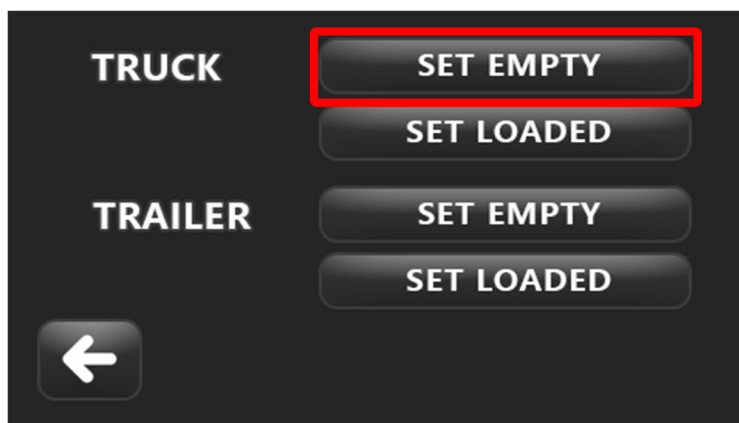
## Step 2.

On the settings page, select the CALIBRATE button.

**CALIBRATE**

## Step 3.

On the calibrate page select the first SET EMPTY button to calibrate the truck empty.



**At this moment the HAUL WEIGH scales will save the current air bag pressure reading. Make sure your wheels are chocked, air brakes are released, air bags are fully inflated, air supply stable with no leaks and truck is calibrated on flat ground.**

## CALIBRATION EMPTY

### Step 4.

If you have a mounted steer sensor or require a estimated steer reading enter your empty steer axle group weight and select the RIGHT ARROW button.



Otherwise select the NO STEER button.

NO STEER



The screen displays a numeric keypad (1-9, 0, C, <) and a 'STEER' label above a white input field. Below the input field is the text 'KEEP TRUCK EMPTY ON FLAT AND LEVEL SURFACE.' At the bottom, there are four buttons: a left arrow, 'NO STEER', and a right arrow.

### Step 5.

Enter your drive axle group empty weight and select the RIGHT ARROW.



The screen displays a numeric keypad (1-9, 0, C, <) and a 'DRIVE' label above a white input field. Below the input field is the text 'KEEP TRUCK EMPTY ON FLAT AND LEVEL SURFACE.' At the bottom, there are four buttons: a left arrow, a right arrow (highlighted with a red box), and a 'NO STEER' button.

**Your truck has been sucessfully calibrated empty.  
If you dont have have a trailer you can proceed to  
calibration loaded otherwise continue with empty  
calibration.**



### Step 6.

On the calibrate page select the second SET EMPTY button to calibrate the trailer empty.

# CALIBRATION EMPTY

## Step 7.

If your trailer has a front axle group, dolly or you need 2 trailer inputs, enter your TRAILER A axle group weight empty and select the RIGHT ARROW button. Otherwise leave this at 0 and select the RIGHT ARROW button.



The screenshot shows the 'TRAILER A' calibration screen. It features a numeric keypad with buttons for digits 1-9, 0, and a 'C' (clear) button. Below the keypad are two arrow buttons: a left arrow and a right arrow. The right arrow button is highlighted with a red square. To the right of the keypad is a white rectangular input field. Below the input field, the text 'KEEP TRAILER EMPTY ON FLAT LEVEL SURFACE.' is displayed.

## Step 8.

Enter your TRAILER B (rear) axle group empty weight and select the RIGHT ARROW.



The screenshot shows the 'TRAILER B' calibration screen. It features a numeric keypad with buttons for digits 1-9, 0, and a 'C' (clear) button. Below the keypad are two arrow buttons: a left arrow and a right arrow. The right arrow button is highlighted with a red square. To the right of the keypad is a white rectangular input field. Below the input field, the text 'KEEP TRAILER EMPTY ON FLAT LEVEL SURFACE.' is displayed.

**Your trailer groups have been successfully calibrated empty.**



# CALIBRATION LOADED

Before you begin make sure the vehicle is loaded evenly and legally, obtain a weight from a certified in-ground weigh bridge for the specific axle group or groups required for calibration.

## Step 1.

Go to the settings page by selecting the GEAR



button on the main page.

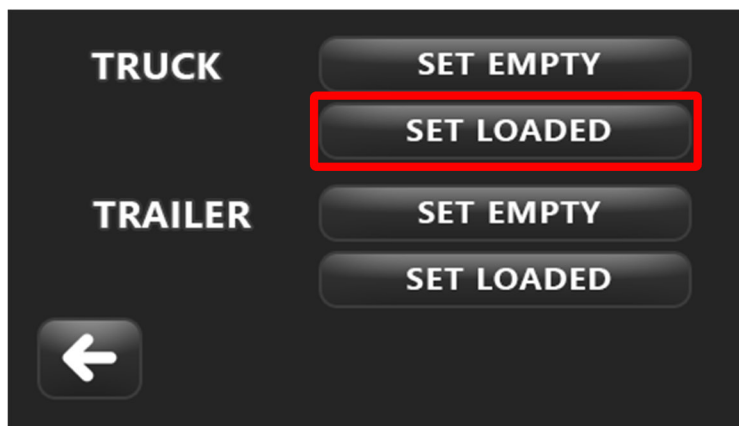
## Step 2.

On the settings page, select the CALIBRATE button.

**CALIBRATE**

## Step 3.

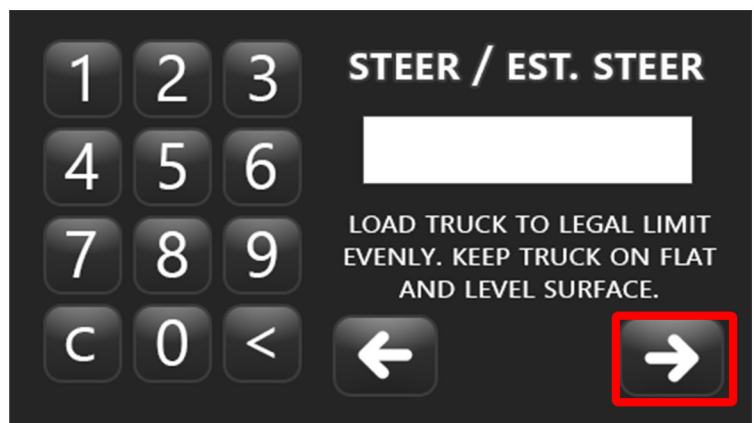
On the calibrate page select the second button SET LOADED to calibrate the truck empty.



**At this moment the HAUL WEIGH scales will save the current air bag pressure reading. Make sure your wheels are chocked, air brakes are released, air bags are fully inflated, air supply stable with no leaks and truck is calibrated on flat ground.**

## Step 4.

If you do not require any steer axle group reading, ignore this step and proceed to step 5. Otherwise If you have a mounted steer sensor or require a estimated steer reading enter your loaded steer axle group weight and select the RIGHT ARROW button.



## CALIBRATION LOADED

### Step 5.

Enter your drive axle group loaded weight and select the RIGHT ARROW.

A black rectangular screen with a numeric keypad on the left. The keypad has buttons for digits 1-9, 0, a 'C' (clear) button, and a '<' (back) button. To the right of the keypad is a white rectangular input field. Above the input field is the word 'DRIVE' in white. Below the input field is the text 'LOAD TRUCK TO LEGAL LIMIT EVENLY. KEEP TRUCK ON FLAT AND LEVEL SURFACE.' in white. At the bottom of the screen are two white arrow buttons: a left-pointing arrow on the left and a right-pointing arrow on the right. The right-pointing arrow button is highlighted with a red square border.

**Your truck has been successfully calibrated loaded. If you are not towing a trailer you can skip the rest of the calibration process otherwise continue with loaded calibration.**

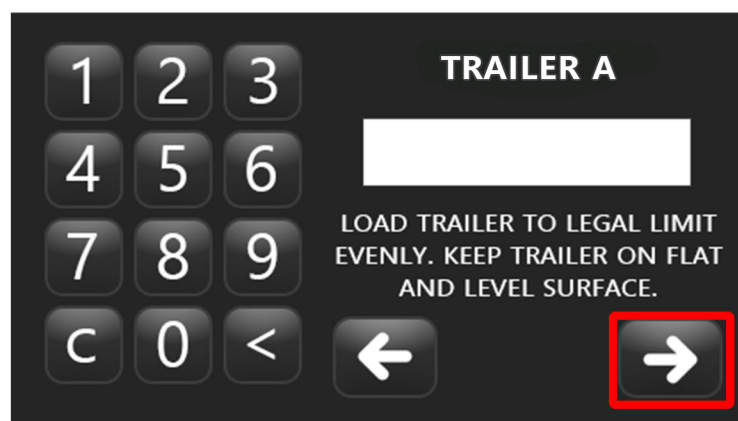


### Step 6.

On the calibrate page select the second SET LOADED button to calibrate the trailer loaded.

### Step 7.

If you have a front axle group or 2 trailers, enter your first axle group weight loaded. Otherwise skip this step and proceed to step 8.

A black rectangular screen with a numeric keypad on the left. The keypad has buttons for digits 1-9, 0, a 'C' (clear) button, and a '<' (back) button. To the right of the keypad is a white rectangular input field. Above the input field is the text 'TRAILER A' in white. Below the input field is the text 'LOAD TRAILER TO LEGAL LIMIT EVENLY. KEEP TRAILER ON FLAT AND LEVEL SURFACE.' in white. At the bottom of the screen are two white arrow buttons: a left-pointing arrow on the left and a right-pointing arrow on the right. The right-pointing arrow button is highlighted with a red square border.



# CALIBRATION LOADED

## Step 8.

Enter your TRAILER B axle group loaded weight and select the RIGHT ARROW.



The image shows a digital calibration interface for a TANDEM axle group. It features a numeric keypad with buttons for digits 1-9, 0, a 'C' (clear) button, and a left arrow button. To the right of the keypad is a white rectangular input field. Below the input field, the text reads: "LOAD TRAILER TO LEGAL LIMIT EVENLY. KEEP TRAILER ON FLAT AND LEVEL SURFACE." At the bottom right, there is a right arrow button, which is highlighted with a red rectangular border.

**Your truck and trailer have been successfully calibrated.  
Your scale should now be showing the truck and trailer weight.**



# OPERATING GUIDLINES

We recommend you always follow these general practices to ensure you get a accurate reading from your HAUL WEIGH device.

## CALIBRATION

- Be sure to use the same weigh bridge when weighing your truck empty and loaded. Weigh bridge's accuracy are slightly different to each other due to calibration timing.
- Make sure to check the truck/tractor for any air leaks. Sometimes a slight air leak will significantly affect the scales weight reading.
- When going through calibration process, leave the engine running and release the air brake. If the air brake is engaged at anytime during the calibration process it will lead to inaccurate measurements due to unstable air pressure and truck movement.
- If your lazy/lift axles are connected to your main suspension (HCV) Height Control Valve, they should be set to the lower position even when the truck is empty.
- When loading up truck for calibration. Load as close as possible to the legal limit to improve the accuracy of the scale system. Use calibration blocks if accessible.

## READING ACCURATE MEASUREMENTS

- Make sure you are always on even ground when trying to obtain your weight. If the ground is not level the scales will not read accurately due to airbag pressure changing on uneven road surfaces.
- Some trucks/tractors require the air brake to be released for the air to start flowing into the air bags.
- If you have automatic adjusting suspensions, deflate the air bags and inflate to drive height before reading the measurements.
- All lazy/lift axles have to be set to the position they were calibrated at.

## ACCESS PIN

You can set a access pin for your HAUL WEIGH device to keep the settings menu from opening up after the scale has been successfully calibrated. This feature is used to prevent accidental calibration over ride or scale reset by inexperienced users.

### Step 1.

Go to the settings page by selecting the GEAR  button on the main page.

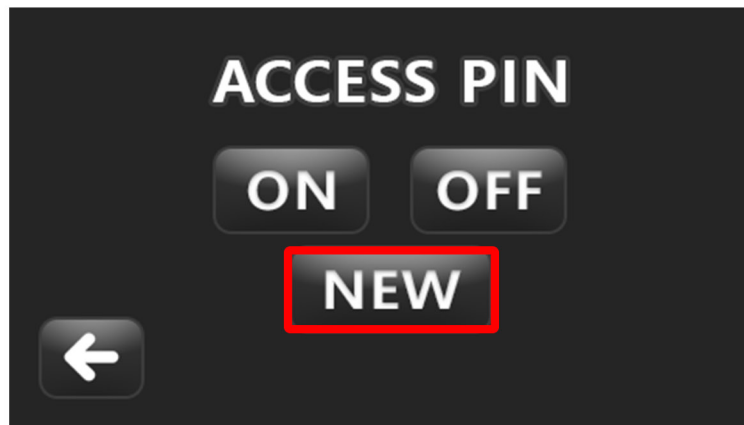
### Step 2.

On the settings page, select the ACCESS PIN button.

**ACCESS PIN**

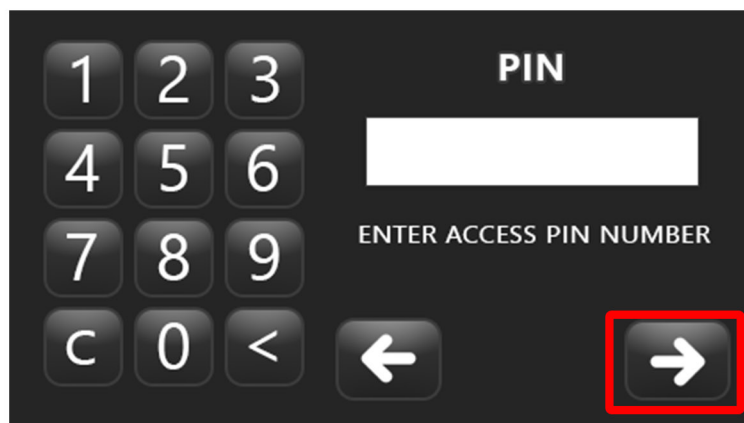
### Step 3.

On the access pin page select the NEW button to set a new access pin number.



### Step 4.

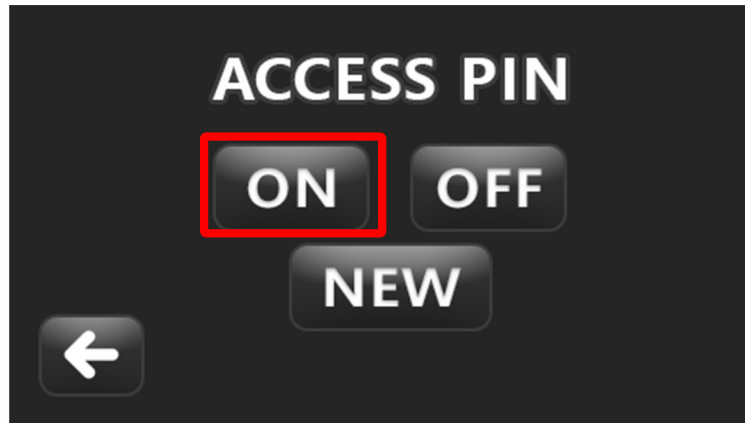
On the keypad page, enter your new pin number and select the RIGHT ARROW button.



## ACCESS PIN

### Step 5.

To turn on your access pin now, select the ON button in the access pin menu.



Your have succesfully turned on your access pin.



if you ever forget your access pin, the back up pin is 123456.

# HAUL WEIGH APP

HAUL WEIGH can be paired with HAUL WEIGH android app for weight viewing outside of the vehicle.

## Step 1.

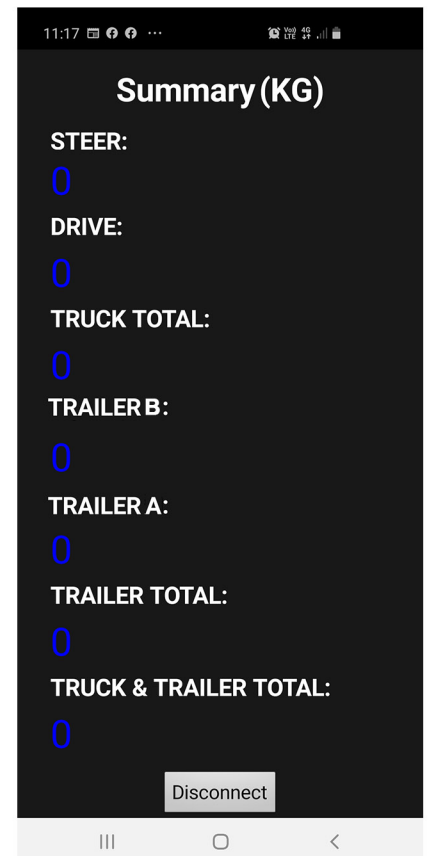
Go to the Google Play Store and search HAUL WEIGH, download the appropriate app for your HAUL WEIGH scale.

## Step 2.

Turn on your Bluetooth and pair with the HAUL WEIGH scale.

## Step 3.

Open the HAUL WEIGH app and select the Bluetooth logo to open drop down menu and select the HAUL WEIGH scale out of the phones paired devices.



**Your HAUL WEIGH scale needs to be paired with your Bluetooth device first before you can connect to it.**

# PRINTER

The HAUL WEIGH scale system is compatible with the HAUL WEIGH P20 printer .

## Printer Connection:

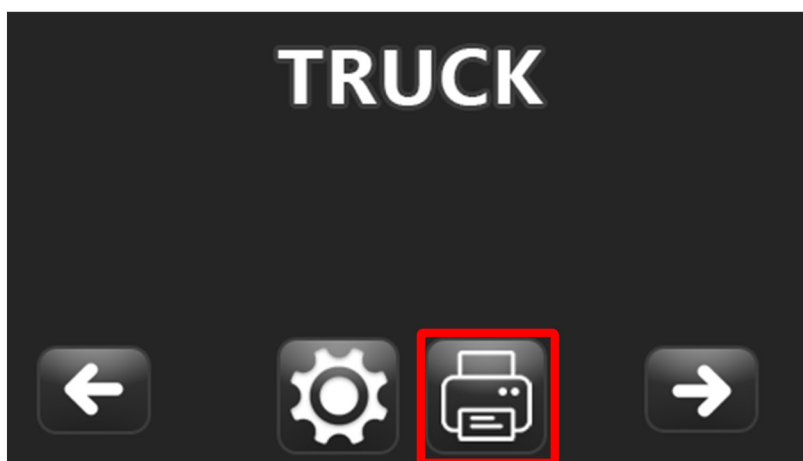
Printer RX > Scale TX

Printer TX > Scale RX

Printer Ground > Scale Ground (Only required if scale and printer are powered with different power supplies)

## Printing.

To print simply press the PRINT button on either the truck or trailer main screen.



**Note:** If the printer is on and not printing, inter-change the scale and printer RX and TX wires.



# TROUBLESHOOTING

## SCALE DOES NOT TURN ON

<u>REASON</u>	<u>INFORMATION</u>
The scale is not connected to the correct switched power source, scale must be powered by 12V-36V source with a ON-OFF switch.	If there is a bad connection in the wiring which causes voltage to drop below 9 volts, the scale will not power on. Test the power source with a multimeter.
Wiring polarity is not correct	The power wires must be connected correctly. The red wire to positive and the black wire to negative.

## SCALE SCREEN IS STUCK ON HAUL WEIGH PAGE

<u>REASON</u>	<u>INFORMATION</u>
The internal components of the scale have been damaged.	Contact the HAUL WEIGH team for repair or a replacement device.

## SCALE IS ALWAYS ON

<u>REASON</u>	<u>INFORMATION</u>
Scale is connected directly to the power source.	The scale is to be connected to a switch first before it is connected to the battery. Alternatively it can be connected to the vehicle ACC.

## SCALE IS COUNTING WEIGHT BACKWARDS TO 0

<u>REASON</u>	<u>INFORMATION</u>
Calibration has not been executed correctly.	If the scale is counting downwards when you are getting loaded, Recalibrate carefully and enter your empty and loaded weights correctly.

## INCORRECT AND UNSTABLE READINGS

<u>REASON</u>	<u>INFORMATION</u>
The truck is parked on an uneven surface.	If one side of your truck is parked unevenly for eg. parked on a road bump or pot hole, it will cause the air bags to build for more pressure or deflate to level the truck accordingly. This will dramatically affect your weight readings

## TROUBLESHOOTING

<p>The (HCV) Height Control Valve is not functioning correctly or is damaged.</p>	<p>If there is an issue with the HCV, the air pressure flowing through the suspension system will not be consistent. This will cause your weight reading to be different every time. To check for a HCV problem, park on flat level ground and write down the current weight reading. Drive the truck around block and return to the exact same location. Write down the weight reading again. If the first and second weight reading are different, then there is a high chance that the HCV has issues and needs addressing.</p>
<p>The truck/tractor brakes are on.</p>	<p>When the brakes are on, they can add more pressure on the air suspension system. This will cause the air bags to have different air pressure than what they actually normally need. This will affect the weight reading. Some trucks require you to also release the air brake for the suspension system to build up adequate air pressure.</p>
<p>The truck is not parked on a flat level surface.</p>	<p>When you are parked on a slope, the weight distribution will shift between the axle groups, this will affect the suspension air pressure and give you a false weight reading.</p>
<p>There is a large air leak in the air suspension system.</p>	<p>This will make the Height Control Valve (HCV) re-fill the suspensions with air more regularly to maintain the truck's set height. If this is the case the scale weight readings will be erratic and unstable as the HCV will try to keep the truck ride height level. Air leaks are a very common problem.</p>
<p>Water build up in air tanks.</p>	<p>After a while, water and sludge will start to build up in your air tanks. Air tanks need to be emptied daily. Water and sludge will go through your air system causing damage to your vehicle, and also adding extra unwanted pressure in the air suspension system. This will give you a false weight reading.</p>

# TROUBLESHOOTING

## SCALE WEIGHTS SHOW 0

<u>REASON</u>	<u>INFORMATION</u>
Calibration has not been executed correctly.	If the air pressure between empty calibration and loaded calibration is the same, the scale will show 0 on the screen. Check the scale diagnostics to make sure calibration has been done properly.
The scale has been reset.	If the scale has been reset, the weight will show 0. Check the diagnostics to see if the scale has been reset.

## CANNOT SEE TRAILER WEIGHT PAGE OR DOLLY (FRONT AXLE) WEIGHTS

<u>REASON</u>	<u>INFORMATION</u>
Trailer sensors need to be turned on.	The trailer sensors need to be turned on from inside the trailer settings page. Settings > Trailer > Trailer - ON
<u>REASON</u>	<u>INFORMATION</u>
Dolly sensors need to be turned on.	The dolly sensors need to be turned on from inside the trailer settings page. Settings > Trailer > Dolly - ON

## ADDITIONAL PARTS

The following is a compiled list of parts that are needed for the installation of the scale system. This list is just a may not be all of the parts needed for your specific truck or trailer. Check with your HAUL WEIGH dealer for optional installation kits.

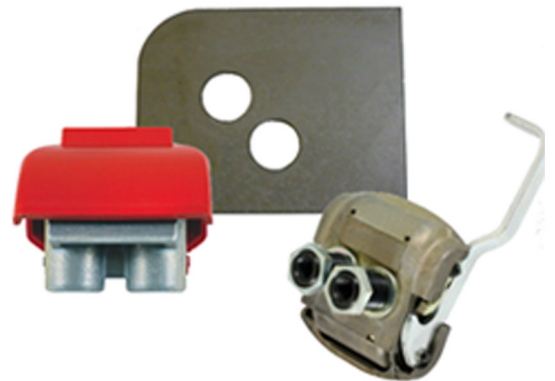
- Approximately 60m or more of 1/4" air line.



- 1, 2 or 3 T joiners depending on how many axle groups you are connecting to the scale.



- Duo-Matic couplings or simmlar. Used to connect the trailer air lines to the truck.



- 40 or more zip ties to secure the air lines and wiring inside the truck and/or trailer chassis.





# WARRANTY & RETURNS

All our manufactured scales come with a 3 year manufacturer warranty due to workmanship defects.

This warranty does not apply to problems resulting from the following listed:

1. Improper application, installation, incorrect wiring or operation outside of the manufactures instructions.
2. Accidents, faulty suspension parts, faulty air system, faulty air bags or power surges.
3. Inadequate maintenance or preparation by the buyer or user, abuse, misuse, unauthorized modification.

TRUCKTRONIX Pty. Ltd. does not assume any responsibility of liability for any loss or damages resulting from the use of our products. In no circumstance will TRUCKTRONIX Pty. Ltd. be held liable for direct, indirect, special, incidental or consequential damages (including loss of profits or loss of time) resulting from the operation and performance of a TRUCKTRONIX Pty. Ltd. product. In all cases, TRUCKTRONIX Pty. Ltd. liability will be limited to the original cost of the product in question. TRUCKTRONIX Pty. Ltd. reserves the right to make changes and improvements in the design, construction, and appearance of any of our products without any notice. TRUCKTRONIX Pty. Ltd. may at its sole discretion discontinue support, warranty, or repair of products which it deems are obsolete. No employee or agent of TRUCKTRONIX Pty. Ltd. has the authority to modify the terms of this warranty disclaimer in any manner at all without the written permission of TRUCKTRONIX Pty. Ltd.

## RETURNING PRODUCTS

Before returning any product, please request a return number by calling Customer Service at 1300 342 147 or email [support@haulweigh.com](mailto:support@haulweigh.com). All shipping costs for returns must be paid by the customer unless otherwise specified by TRUCKTRONIX Pty. Ltd. For your peace of mind, items should be carefully packed to prevent damage in shipment and insured against possible damage or loss. TRUCKTRONIX Pty. Ltd. will not be responsible for damage resulting from careless, inadequate packing or loss in transit.

## CANCELLING AND RESTOCKING

A Return number must be received by the original purchaser before any product can be returned. Only new and unused products may be returned. Credit will be issued to the original purchaser after evaluation of the product is deemed brand new.