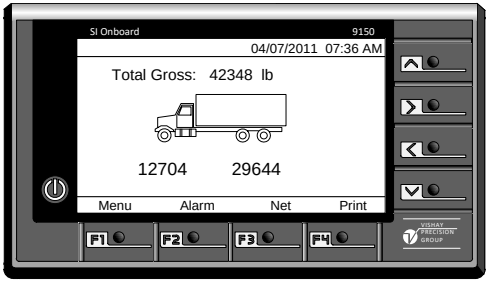
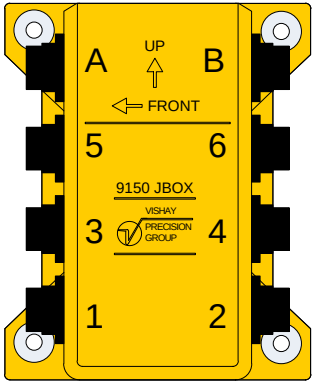
SI Onboard

9150 Owner’s manual





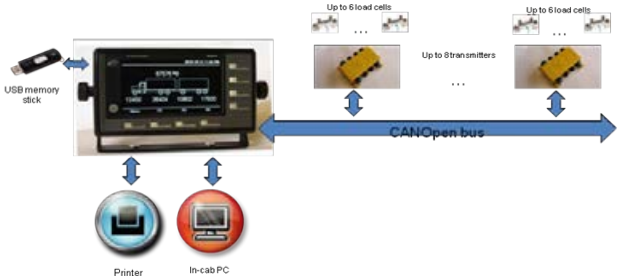
p/n 6190210 Rev B

5/5/21 JG

Contents

Overview

- The 9150 Weighing System is a digital weighing system based on the automotive CANOpen standard. It provides Gross or Net vehicle weight as well as axle group loading and overload alarms for the truck and trailers. Up to 8 trailers can be connected to the system. **Trailers can be swapped and the system automatically reconfigures and sets up the new connected trailer.**



- The meter's **4.3" bright graphic color** display with **LED backlight** allows wide viewing angle under all lighting conditions. It can be set to day or night display modes according to user selection.

- 4 arrow keys and 4 soft keys allow easy operation and navigation among the meter menus and modes. Password protected **setup wizards** makes the system calibration straight forward and intuitive.

- **Weight data is displayed graphically** on the system diagram, making it intuitive and easy to understand. Alphanumeric tabular display is available as well.

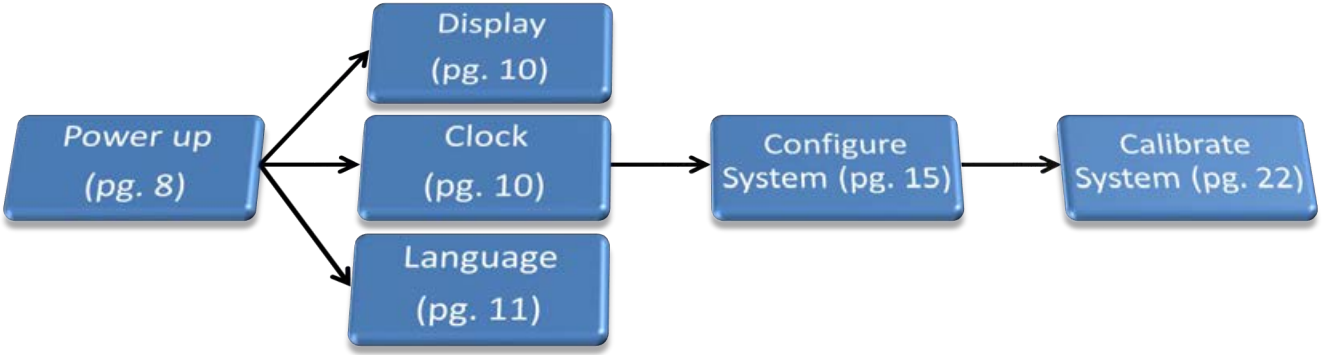
- The 9150 meter has **RS232 interface to a printer or in-cab PC**. The user can setup the printer formats. USB interface enable backup and restore of setup parameters and user data.

- Weight indications are **compensated and corrected for out-of-level conditions** of Trucks and Trailers.

- The system runs **real-time diagnostics of the load cells, transmitters and meter. Faults and alarms are graphically displayed** on the screen showing the operator where the problem is located for ease of maintenance.

Use this flowchart as a basic guide and reference for setting up your 9

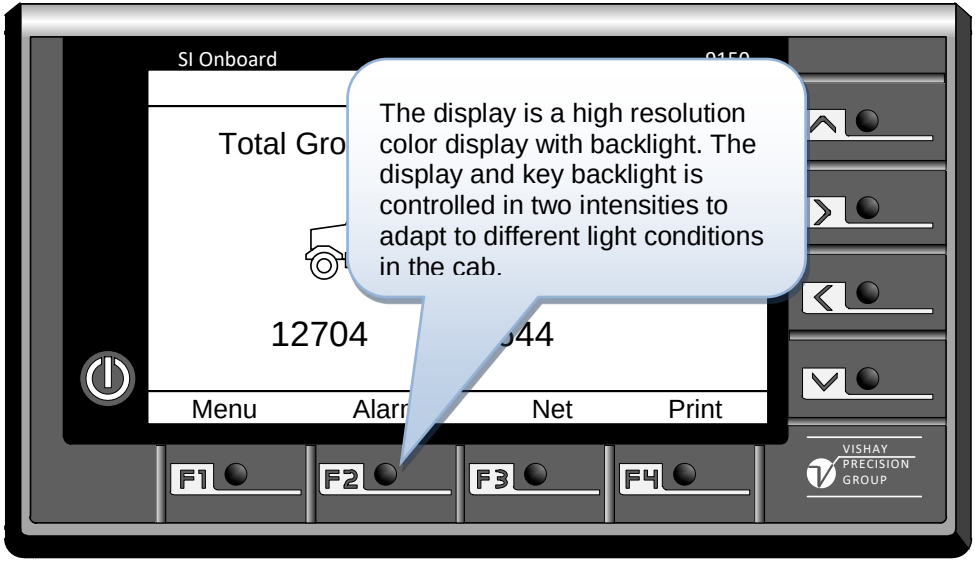
Use this flowchart as a basic guide and reference for setting up your 9150 system!



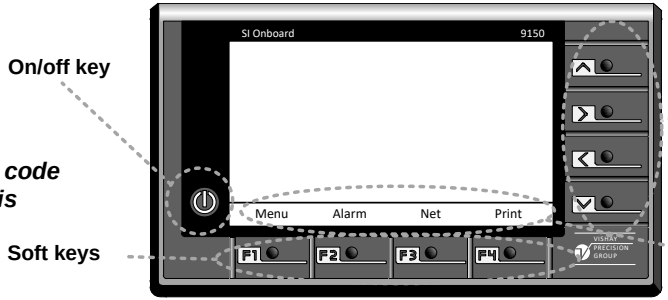
1. Meter front panel

The front of the 9150 instrument has four “soft keys” (F1 – F4), four “arrow keys” and one On/Off key. All keys are tactile and are backlit for greater visibility. In the center of each soft key and arrow key there is an embossment indicating where to press a key.

The function of the soft keys is shown at the bottom of the display close to the respective key. In the example below are the texts ‘Menu’, ‘Alarm’, ‘Net’ and ‘Print’.



“Soft Keys” and their uses



Key F1

Used to access the Meter menu - configuration, calibration and set-up ***(If PIN code is enabled the code will be required before entry to the menu system is allowed.)***

Key F2

Opens the alarm list - showing a list of alarms. If there are active alarms a red flashing symbol is shown in the upper left corner of the display. If there are acknowledged alarms the symbol will be black and white (not flashing).

Key F3

(Text ‘Gross’ or ‘Net’) is used to switch between gross and net total. Axle/channel weights are always gross.

Key F4

Will print Total weight and each axle/channel weight, together with date and time. The total weight will be Gross or Net as selected on the display. This key will not be available or shown unless print function is configured.

2. 9150 Basics

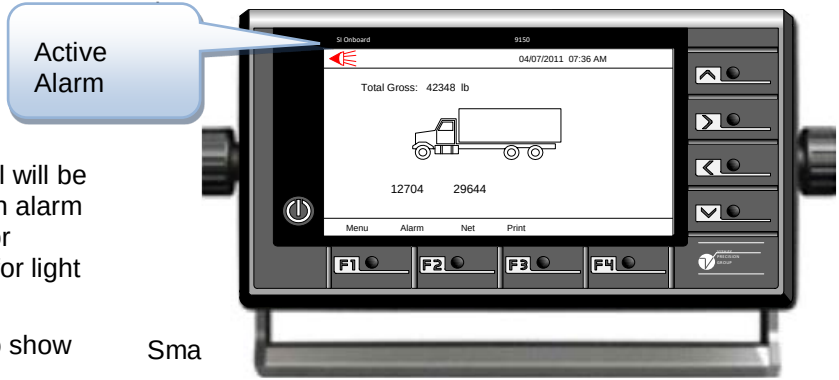
Alarms

If there are active alarms a red flashing symbol will be displayed. Depending on the alarm settings an alarm may also make the built in buzzer sound and/or activate meter outputs. Outputs are used e.g. for light and/or audible indications outside the cab.

If there is an alarm press the F2 (Alarm) key to show the alarm list. To silence the alarm press F4 (Acknowledge). If the cause of the alarm is already removed the buzzer will become silent, outputs will deactivate (if used), the alarm icon will disappear and the alarm list will be cleared.

If the alarm cause is still present the buzzer will become silent, outputs will deactivate (if used) and the alarm icon will change to black and white non flashing. The alarm list will still show the alarm.

If there is an alarm caused by an error and not by a weight alarm the key F3 (Troubleshoot) is available. Pressing F3 will open the diagnostics screen showing the Smart box that the error is related to. The color picture shows the status (Red – error / Green – OK) of



Sma

To acknowledge and silence Alarm

Press F2
(to display the list of alarms)

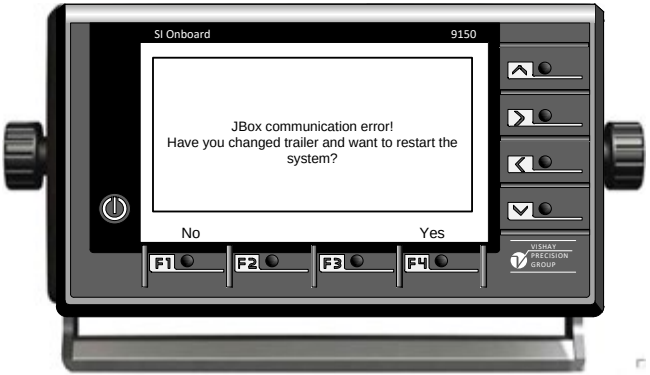
Press F4
(to acknowledge or silence the alarm)

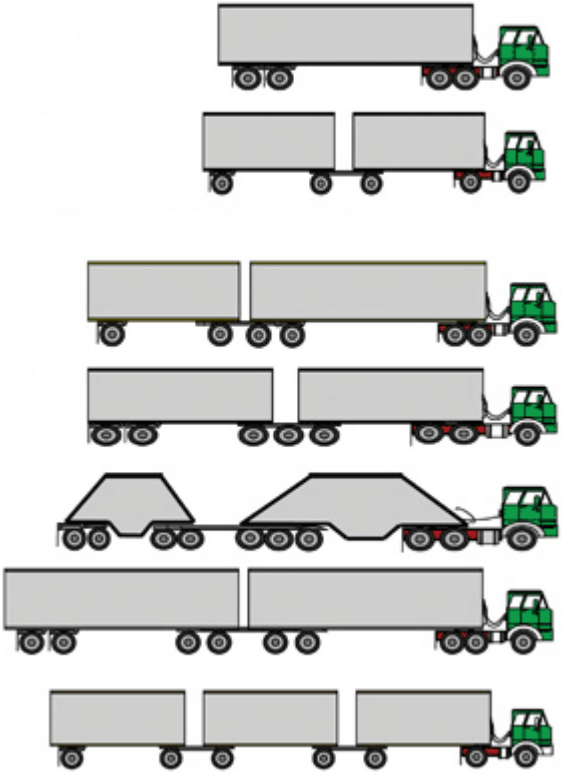
Changing trailers

If a trailer is coupled or uncoupled a message will be displayed asking if a trailer have been changed and if the user would like to restart the Meter.

If key F4 (Yes) is pressed the Meter will restart and automatically determine the new truck and trailer configuration adapting the display and weight information within a few seconds.

Pressing F1 (No) can be used if the trailer has not been changed or coupled/uncoupled and there is a need to troubleshoot the system.





Meter On/Off

The **on/off** key is used to turn on and off the system (including the connected Smart boxes. If the instrument is connected to a permanent battery voltage (not via ignition key) it is advisable to turn off the system when not in use to reduce current battery consumption.

To turn off the Meter the On/Off button should be pressed for more than 2 seconds. The display will go dark when the Meter is turning off.

The Meter is turned on again by pressing the On/Off button shortly. Within 5 – 10 seconds the system is operational.

Day / Night mode

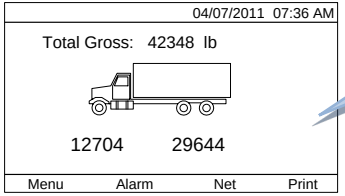
It is possible to use the Meter in two different modes to adapt to the different light conditions during day and night use. By pressing the On/Off button briefly (less than 2 sec) the display will alternate between day and night modes.

(Day and Night modes apply to the 9150 normal operation screens showing vehicle/axle weights. It does not apply to menus or alarm screen. It can only be changed when a weight screen is shown.)

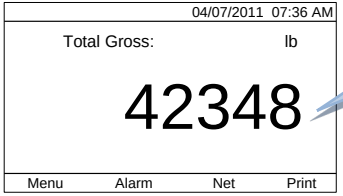
Weight screen functions

There are two main weight screens, one giving a graphical overview and one purely numerical showing one weight at a time in large digits.

The pictures below show both a graphical weight screen and a purely numerical screen showing a vehicle total and the axle/channel weights.



Graphical



Numerical

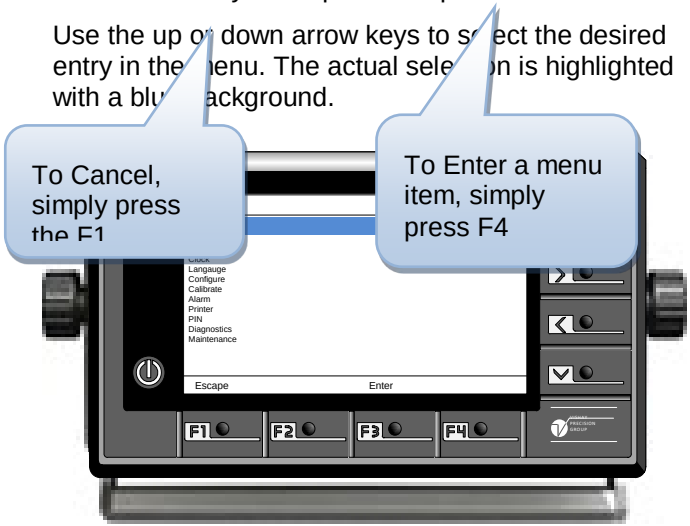
To alternate between a Graphical or Numerical screen just press left or right arrow key.

3. Set-up Menu

General

Setup of the 9150 is all done in the menu system. Press key F1 (Menu) when a weight screen is shown. A PIN code may be required to open the menu.

Use the up or down arrow keys to select the desired entry in the menu. The actual selection is highlighted with a blue background.



To enter the selected menu press F4 key (Enter).

Press the F1 key (Escape) to leave the menu and return to the weight display screen.

The same procedure to make selections or settings applies throughout the menu system. To accept a setting (changed or not) and proceed to the next item press the F4 key (Next).

MENU OPTIONS

Long/Short Log Mode

Display

Clock

Language

Configure

Calibrate

Alarm

Printer

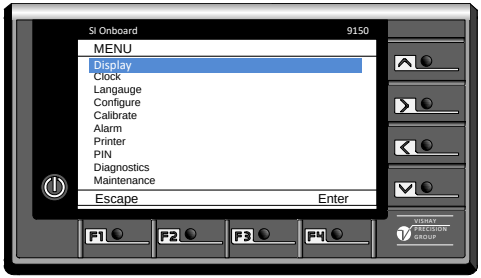
Pin

Diagnostics

Menu Description

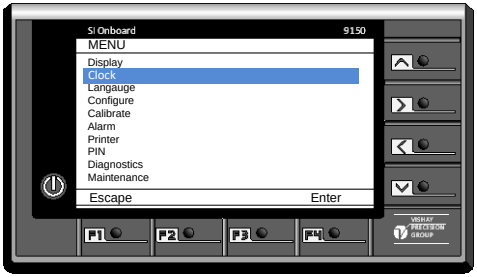
Display

Configuration of the Meter display functions. Displayed Unit, Weight Resolution, Tilt Compensation, Day Display and Night Display can be set-up.



Clock

The clock is shown on the main weight display and is also printed if a printer is connected and configured. Date and time can be adjusted using the arrow keys. Time format can be selected as either 12h or 24h. The date format can also be selected as US style, Europe style etc.



Language

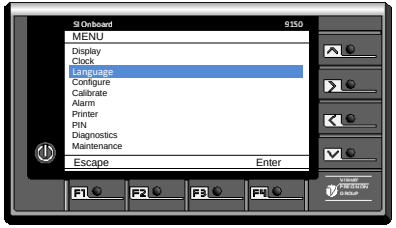
Selectable languages are English, Spanish, French or Portuguese. The language selection affects text shown on the 9150 Meter.

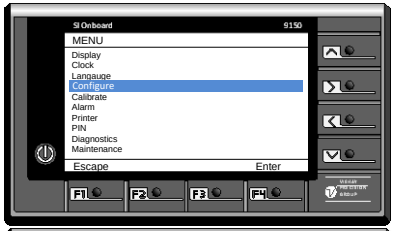
Configure

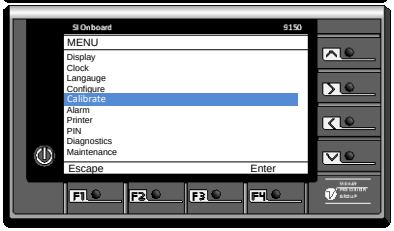
The configure wizard is used to define what kind of truck, number of Smart boxes and number of load cells used. If axle loads calculations are selected (only for truck and trailer combination) also some length measurements will be entered. This is used with a new installation and if a configuration needs to be changed. It is possible to step through the wizard without changing any settings to view current configuration.

Calibrate

This is used to calibrate the weight displays with a new installation. It can also be used to update the calibration if there are changes in the truck or trailer that affect the weighing result.

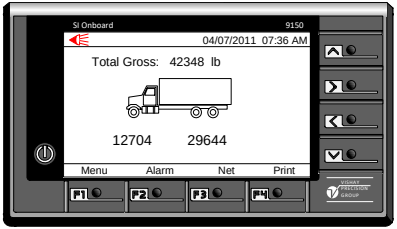






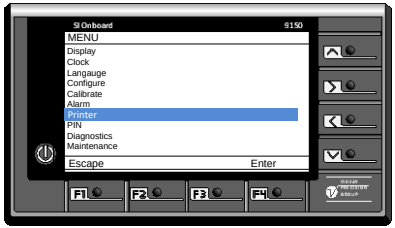
Alarm

Settings that control how the alarms are handled. The internal buzzer as well as digital outputs can be turned on or off. For each axle (channel), and for the total weight, alarms can be turned on or off and weight levels can be defined.



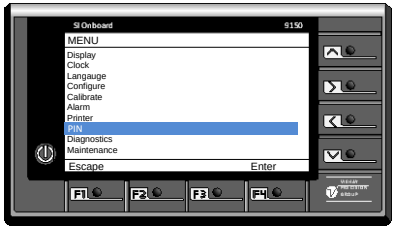
Printer

This menu contains printer serial (RS232) port setup parameters. These parameters control the serial communication and should be set to fit printer being used.



PIN

The 9150 setup can be protected from unauthorized access by a four digit PIN code. The PIN code protection can be turned on or off and the PIN code can be selected. Default is the PIN code turned off.



Diagnostics

With the diagnostics, the system can be examined in case there is a problem. It gives a graphical overview of each device in the system, Meter and all Smart boxes. By pressing the F3 key ‘Next’ some general info as S/N etc. together with possible error information is displayed.

The detail information is either general Smart box details (roll/pitch angle, internal temperature etc.) or per input details (weight, input signal exc. voltage and exc. current). This information can be used to aid during troubleshooting.

Choose what you want to troubleshoot

9150 shows the current state of all components.

✓ Green is good

× Red is BAD

In-depth detail of all Smart boxes, sensors and 9150 display

Maintenance

The Smart box restore function is used when a Smart box has been

Intuitive Diagnostics Designed to *Maximimize* efficiency and *Minimize* down time

replaced. With this function the user can select the backup file (stored in the Meter) that belonged to the replaced Smart box and download it to the new Smart box. After a restore is completed the system will automatically be restarted and the system is back in operation.

To be able to handle a restore the user needs to know the serial number of the replaced and the replacing Smart boxes. A serial number can be read on the Smart box and also be seen using the diagnostics menu option (pg.13). The serial number is an 8 digit number e.g. 11030056.

The Meter can hold up to 20 Smart box backup files. If changes are done in the setup of a Smart box its backup file will be updated next time the Meter is turned on. The old backup is then overwritten and no longer available. If more than 20 Smart boxes have been backed up the oldest backup file is deleted and no longer available.

There are also maintenance functions to revert a Smart box or the Meter to its default setup. This can be practical if a used Smart box or Meter will be used on a different type of truck or if the user would like to start from a factory defined state.

> ***Note that a restore operation cannot be canceled once executed!***

4. System Configuration

A system configuration is needed in order to:

- graphically display the type of truck – trailer configuration you have
- get the best accuracy possible
- Assign load cells to Smart boxes

When do you need to configure your system?

- A new installation
- There are changes in the system e.g. no. of load cells is changed.
- A Smart box is moved from one type of truck/trailer to another.

When doing a configuration one must know

- Type of truck / trailer combination.
- No of Smart boxes
- No of load cells to each Smart box

If a true axle load configuration is chosen the following data must also be provided during configuration:

- No of axles to show on the display.
- The distance to each axle.
- No of load cell pairs installed.
- The distance to each load cell pair.
- If the truck has two axles at rear or at front the rated capacity of each axle must be known provided that individual axle loads in the bogie shall be displayed.

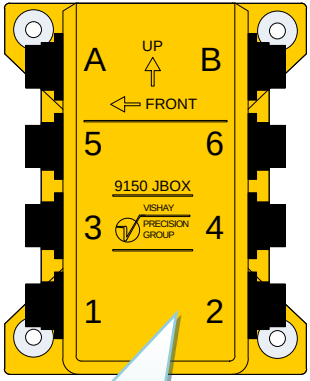
When doing the configuration make sure that the required Smart boxes and load cells are connected otherwise the configuration will be incorrect.

Load cells configured to the same channel must be the same capacity and output. This also applies to a true axle load truck. Mismatched load cells will reduce the accuracy of the weighing system.

Load cells should be connected to inputs starting with input 1 from the front and backwards and from left to right.

Example:
1 Smart box, 1 load cell at front axle and 2 load cells at rear axle.

Input	Load cell
1	Front axle
2	Rear axle, front left
3	Rear axle, front right
4	Not Used
5	Not Used
6	Not Used



Jboxes are available in 2, 4 or 6 inputs

Vehicle Configuration

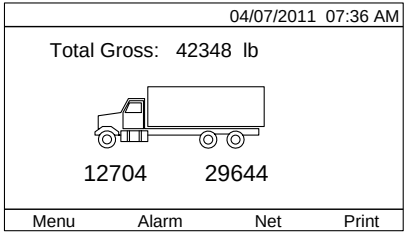
The following vehicle configurations are available. See Configuration details later in this section for more details on the different configurations.

- Truck
- Truck + Trailer (Short Log)
- Truck + Pole Trailer
- Tractor + Jeep + Pole Trailer
- Tractor + Semi Trailer
- Tractor + Jeep + Semi Trailer
- Truck + Trailer Long Log
- Truck + Trailer Long/Short Log
- B-Train
- Generic
- Truck (true axle load)
- Truck (true axle load) + Trailer

Configuration Details

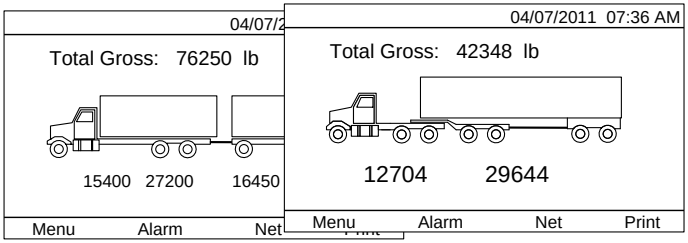
Truck

- A truck can have 1 or 2 channels using 1 or 2 Smart boxes.



Truck + Trailer (Short Log)

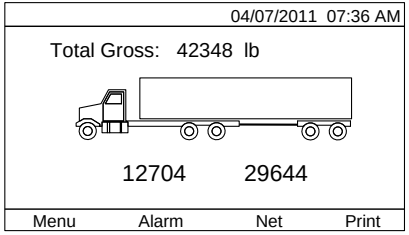
- A truck and trailer combination can have 1 to 4 channels using 1 to 4 Smart boxes. Maximum 2
channels per Smart box.



Tractor + Pole Trailer

Tractor + Jeep + Pole Trailer

- A truck and pole trailer combination can have 1 to 3 channels using 1 to 3 Smart boxes. 1 or 2 channels per Smart box.
- Channels are assigned from the pole trailer and forward. A one channel system is only pole trailer weight. Two channels will be pole trailer and truck rear. Three channels will also have truck front weight displayed.

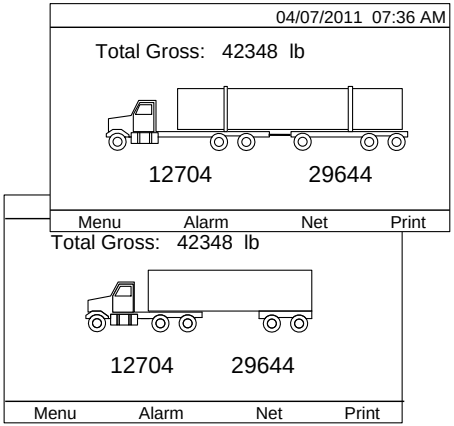


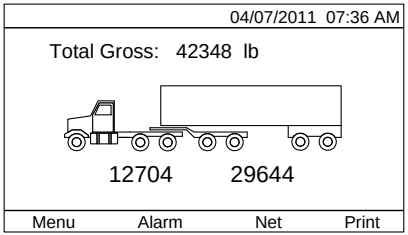
Truck + Semi Trailer
Tractor + Jeep + Semi Trailer

- A tractor and semi-trailer combination can have 1 to 3 channels using 1 to 3 Smart boxes. 1 or 2 channels per Smart box.
- Channels are assigned from the semi-trailer and forward. A one channel system is only semi-trailer rear weight. Two channels will be semi-trailer and truck rear. Three channels will also have truck front weight displayed.

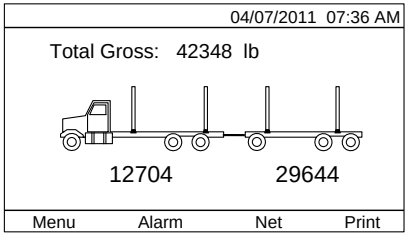
Truck + Trailer Long Log

- A truck and trailer combination can have 1 to 4 channels using 1 to 4 Smart boxes. 1 or 2 channels per Smart box.





Truck + Trailer Long/Shortog

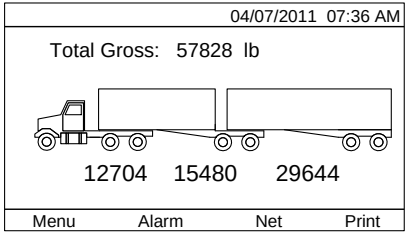


- This mode is a combination (dual mode) of short log and long log configurations. When selected there is a menu item added that is used to switch between short and long log configurations named “Long/Short Log Mode”.
- The truck and trailer must be calibrated in each mode.
- When the truck is reconfigured between short and long log mode the user just selects the correct mode under “Long/Short Log Mode”.

This configuration can only be used with 4 channels and 2 Smart boxes

B-Train

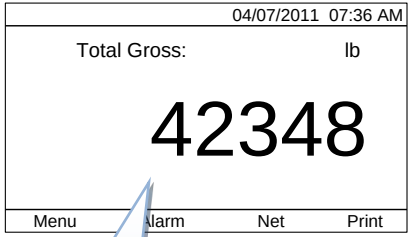
- A tractor with 2 semi-trailers can have 1 to 4 channels using 1 to 4 Smart boxes. 1 or 2 channels per Smart box.
- **Channels are assigned from the last semi-trailer and forward**. A one channel system is only last semi-trailer rear weight. Two channels will show both semi-trailer weights. Three channels will also have tractor rear weight and a 4 channel system will show tractor front weight as well.



- Up to 32 load cells are permitted totally.

Generic

- No graphic is shown in generic mode.
- 1 to 8 Smart boxes can be used.
- 1 to 16 channels can be used. 1 or 2 channels per Smart box.



Remember....

When ”GENERIC” is selected no graphic will be shown

Truck (true axle load)
Truck (true axle load) + Trailer

- The 9150 will show calculated axle weights rather than the sum of load cells for each channel.
- The truck can have 2, 3 or 4 axles.
- The truck can have 2, 3 or 4 pairs of load cells. Each load cell in a pair is located at the same distance from the front of the truck.
  If axle group load, instead of individual axle loads are desired, choose 2 axles instead of the real number of axles.
- Trailer channels weights is the sum of its inputs (load cells).
- During configuration the user will be prompted for number of axles, number of load cell pairs and the distance from a common reference

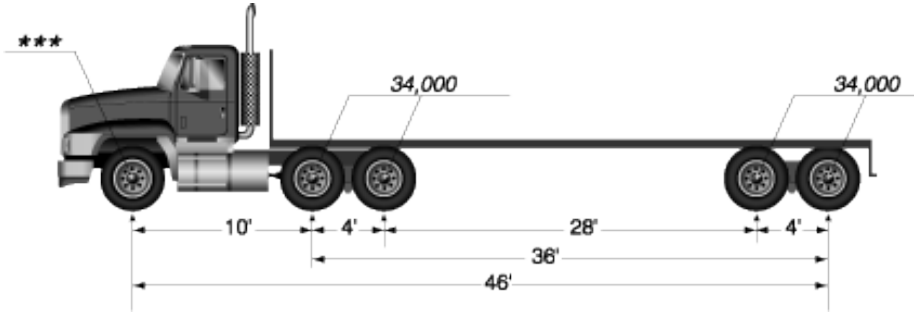
point (e.g. front bumper) to the respective axles and load cell pairs.

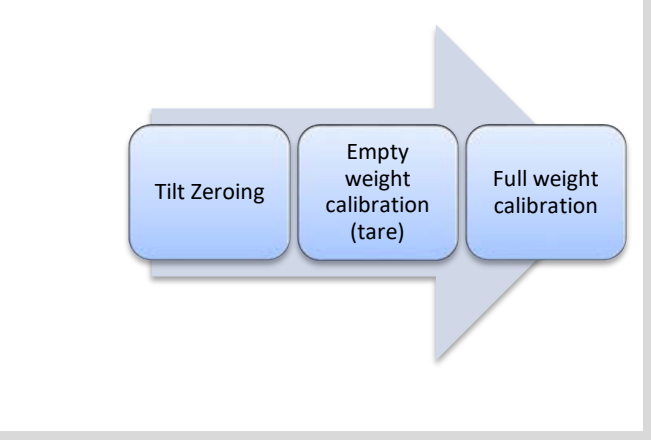
- If individual axle load is used and the truck has bogie(s) then must the rated capacity of these axles be given during configuration.
- If 2 axles are chosen the Meter will show 2 weights regardless of the actual number of axles. This means that if the truck has 2 rear axles (bogie/tandem) choosing 2 axles in the configuration will have the Meter show the axle group load of the rear bogie.
- The user must give all distances entered using the same unit. The distances may be given in inches, tenth of inch, cm etc. The value is given without decimals. If too low resolution is chosen it will reduce the accuracy of the axle load calculation.

5. Calibration

Calibrating a 9150 system is done in three steps:

- Tilt Zeroing
- Calibrating the tare weight (empty vehicle)
- Calibrating the full weight (loaded vehicle)





The zeroing of angular measurements is done for each Smart box that is used.

The tare and full weight calibrations are done for each channel / axle for the complete truck/trailer.

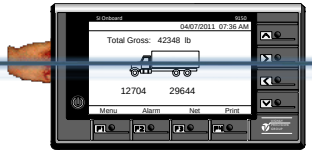
Note that there is a difference in calibrating between the std. configurations and the "true axle load" configurations described in the previous chapter. When using a standard configuration each channel is calibrated separately and independent of each other. When calibrating a truck using "true axle load" configuration the complete truck (2 – 4 axles) must be done before the actual calibration has taken place. If the calibration procedure is interrupted weight must be input for each axle once again.

Calibration wizard

From the weight display

Press F1 (menu) and then select Calibrate (use arrow up/down).

Press F4 (Enter) to open the Calibrate wizard. Three choices are presented, Tilt Zeroing, Empty Vehicle and Loaded Vehicle.

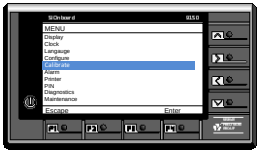


Tilt Zeroing

- Select Tilt Zeroing in the Calibration Wizard.

Make sure the vehicle is as level as possible. This step is preferably done when calibrating the tare weight with the truck/trailer on the platform scale.

Each Smart box must be zeroed. Make sure the truck or trailer that the Smart box is mounted on is level.



Select the Smart box (1, 2, 3 etc.) that should be zeroed by pressing F3 (Previous) or F4 (Next). Press F2 (Tilt Zero) to perform the zeroing. A

- “waiting” message is display during the few seconds it takes to zero the Smart box tilt measuring. *If zeroing is correctly performed the zeroing screen is shown again and next Smart box to zero can be selected.*

Press F1 (Escape) when all Smart boxes are zeroed to quit the Tilt Zeroing wizard.

.Before you calibrate!

Empty

- Make sure the truck or trailer is completely empty before beginning this procedure
- Be sure the weight includes a full load of fuel
- Note the weight value for each axle or channel weighed using a platform scale

Full

- Make sure the truck or trailer is loaded to capacity before beginning this procedure
- Note the weight value for each axle or channel weighed using a platform scale

Press F1 (Escape) to quit the calibration wizard. It is always possible to continue with calibration at a later occasion

Calibra weight

This sec le load truck configuration. See separate description below.

Select Empty Vehicle or Loaded Vehicle in the Calibration Wizard.

The display will show the current weight and the roll and pitch angles for the current Smart box.

Select the channel being calibrated using F3 (Previous) or F4 (Next).

Press F2 (Calibrate) and enter the weight noted from the scale. Use the arrow keys to set the weight value on the Meter.

Press F4 (Next) when the weight is entered.

The Meter will show a message “Calibrating, please wait!” during a few seconds while the channel is being calibrated.

If calibration is correctly performed the empty or loaded vehicle screen is shown again and next channel can be selected.

If there is any problem or error before or during calibration a message is displayed. Correct the error and try again.

Entering weight values true axle load

The display will show the current axle weights and the roll and pitch angles.

- Press F2 (Calibrate) and enter the weights for each axle noted from the platform scale. Use the arrow keys to set the weight value on the Meter.
- Press F4 (Next) when the weight is entered.

The next axle weight is requested by the Meter.

When all axle weights are entered the Meter will show a message "*Calibrating, please wait*!" for a few seconds while the axles are being calibrated.

If calibration is correctly performed the empty or loaded vehicle screen is shown again.

If there is any problem or error before or during calibration a message is displayed. Correct the error and try again.

- Press F4 (Next) to continue with first trailer channel if a trailer is used (configured). Otherwise press F1 (Escape) to leave the menu. The following part only apply to a possible trailer calibration.
- Press F2 (Calibrate) and enter the noted weight for the selected channel. Use the arrow keys to set the weight value on the Meter.
- Press F4 (Next) when the weight is entered.

The calibrating message is shown.

- Press F4 (Next), if available, to select the last trailer channel.
- Press F2 (Calibrate) and enter the noted weight for the selected channel. Use the arrow keys to set the weight value on the Meter.
- Press F4 (Next) when the weight is entered.
- Press F1 (Escape) to quit the calibration wizard.

6. Alarm setup

Under Alarm in the main menu are settings regarding alarms found. Alarms are generated if there is an error in the system e.g. a load cell cable break. An alarm is also generated if a weight is above an alarm level. Weight alarms are sometimes also called load limit or set point.

Alarm Buzzer

The Meter has a built in alarm buzzer that is used to alert the driver in case of an alarm. It can be turned on or off. It will sound both in case of an error and in case of a weight alarm level being exceeded.

Output x Source

The Meter has two solid state relay that can be used to control a warning light or an audible alarm device e.g. for alerting the driver outside the cab.

An output can be set to off or to activate if there is an error or to activate if there is a weight alarm and an error.

Weight Alarm

There is a weight alarm for the total weight and for each channel or axle weight.

The weight alarms can be individually turned on or off. If turned on there is also a weight level to be set.

Weight alarm function

When the set weight alarm level is exceeded the alarm is tripped. To “quiet” the alarm the driver needs to acknowledge it in the alarm list. If the alarm condition still exists it will remain in the list until it disappears.

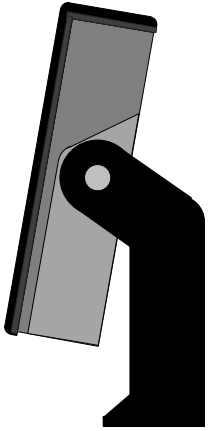
7. Installation

The 9150 Meter can be installed in three different positions. Remove the stand from the Meter.

Make sure the nuts in the meter and the knobs with nylon washers are not lost.

Place the stand at the desired mounting position and mark the screw holes. Drill holes for the self-tapping screws that are enclosed in the Meter delivery box. *Note. Make sure nothing is damaged when drilling.*

The viewing angle of the meter can be adjusted by losing the two knobs slightly and turn the Meter to the preferred angle. Tighten the knobs by hand firmly to secure the position.

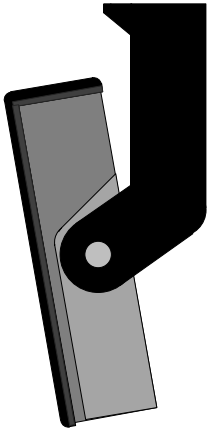


Dashboard mounted.

This is the standard position on top of the dashboard or other similar surface. The stand and Meter are delivered for this mounting position.

Roof mounted.

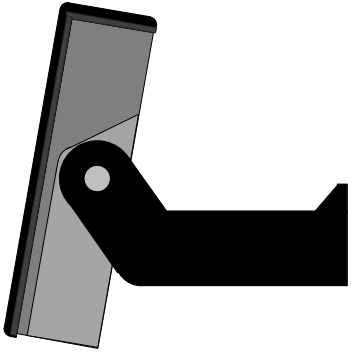
The Meter is mounted hanging below the mounting surface. See the picture below.



Wall mounted.

The Meter is placed in front of the mounting surface.

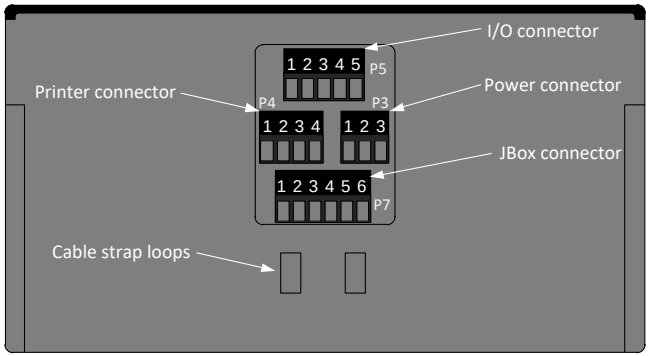
See the picture below. If the Meter needs to be angled downwards, more than the shown mounting position allows, the stand can be mounted with the top angled downward instead.



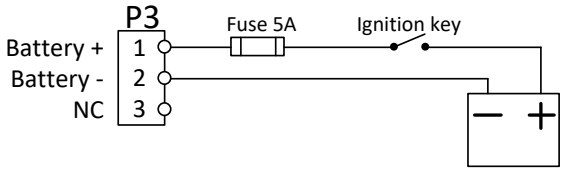
Connections

The picture below shows the rear view of the 9150 Meter with connectors. The screw terminal blocks are detachable to allow for easy replacement of the Meter and to allow for access to the terminal screws when connecting the wires.

To avoid the risk of connectors being pulled out of the Meter it is recommended to use cable straps to secure the cables to the cable strap loops at the rear of the Meter.



Meter power connection

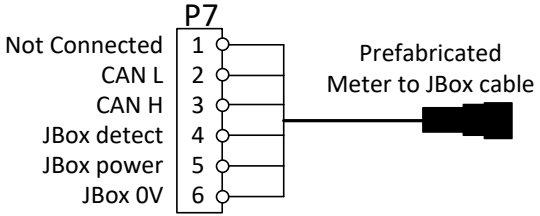


Use at least AWG 20 wires for the battery connection to the Meter. Maximum allowed wire size is AWG16 for the screw terminals. It is recommended that a 5A fuse is used to protect wiring and Meter. The meter itself is short circuit proof with internal current limitation at 5 - 6 A.

If the Meter is not connected to the ignition switch the driver must turn off the Meter using its On/Off button to reduce current consumption.

Smart box connection

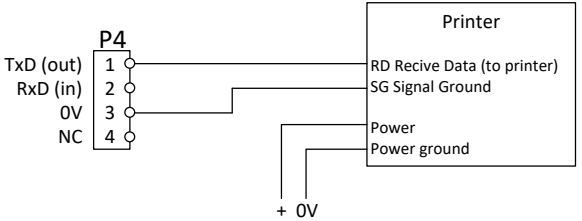
Always use the prefabricated cable with molded connector available from your dealer. There are cables for connecting directly to a Smart box and for connecting to a tractor to semi-trailer cable kit.



Printer connection

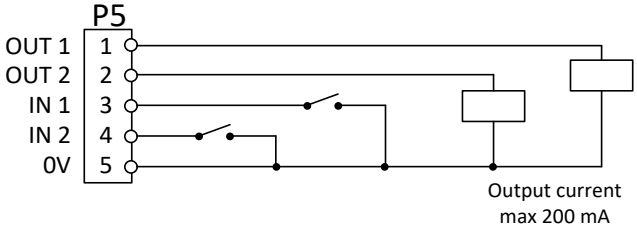
Read the printer instructions on connection details. Below is a principal connection outlined but different models may have different naming etc. Note that there are some settings that must be done to adapt the Meter to the printer.

Pin 4in connector P4 must not be connected.



I/O connection

Output load should be connected to common (0V) terminal of the I/O terminal block. Note that the outputs are current limited to 200 mA. If a load with larger consumptions is to be connected an intermediate relay must be used.



Smart box mounting

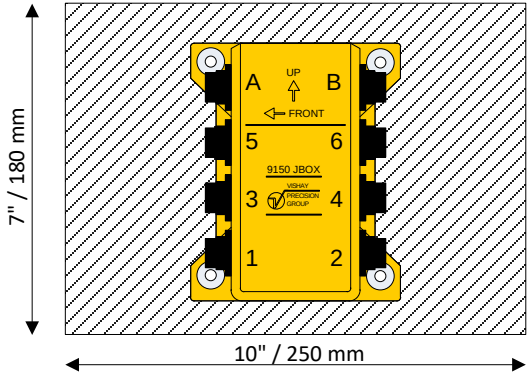
The Smart box should be mounted in a protected location.

Note: The Smart box should be mounted according to the direction arrows (up and front) on the Smart box pointing up and towards the front of the vehicle. This is absolutely necessary to have the roll and pitch measurement, and weight compensation, working.

Make sure that the mounting surface is flat and clean before the Smart box is fastened. A recommended position would be on the inside of the truck or trailer frame. Fasten the Smart box by firmly tightening all four screws. The tightening force of the screw will be applied to the bushing so there is no risk of damage to the high strength plastic enclosure.

All Smart box connectors must be removed before tightening or loosening any of the screws to avoid damage to the connectors.

To be able to connect and disconnect the cable connectors there must be at least 10” of space (horizontally) for the Smart box. About 7” of height is needed as well.



<u>Unused Smart box connectors must be covered with connector covers.</u>

Uncovered open connectors are soon ruined in the harsh environment under a truck.

8. Error codes

Note that for many of the texts below the Smart box number or channel / axle will be added.

Error #	Error text	Explanation
3	Instrument not in normal state! (Err.3)	This is a fatal error with your Smart box. Contact your dealer.
5	Input signal over range! (Err.5)	The mV/V input signal from the load cell(s) to the Smart box is above approximately 4 mV/V. Check wiring, load cell.
7	Input signal under range! (Err.7)	The mV/V input signal from the load cell(s) is below approximately -4 mV/V. Check wiring, load cell.
10	Low excitation voltage! (Err.10)	The load cell excitation voltage for the specified input is below approx. 3.8V. Check load cell and wiring.
16	No valid weight data! (Err.16)	Indicates a Meter to Smart box communication error. Check wiring between Meter and Smart boxes. Especially cables between truck and trailer with connectors should be checked.
17	Channel weight calc. error! (Err.17)	A channel/axle load calculation error occurred. Most likely due to errors in true axle load parameter values entered at configuration. Either typing error or a measuring error.
18	Channel weight out of range! (Err.18)	Channel weight is exceeding 6 digits (incl. sign). Probably due to calibration errors. Errors during tare or full load entry.

20	Too high excitation current! (Err.20)	The load cell excitation current for the specified input is above approximately 100 mA. Check load cell and wiring for this input.
21	Too low excitation current! (Err.21)	The load cell excitation current for the specified input is below approximately 2 mA indicating a cable break. Check load cell and wiring for this input.
30	Outside accelerometer zero setting limits! (Err.30)	When trying to zero the Smart box tilt measuring the roll and/or pitch zero adjustment was to large exceeding 20 degrees. Check that the Smart box is correctly mounted. If the Smart box is in its correct mounting position (check up and front indications on the Smart box) it may indicate an internal Smart box error.
31	Roll or Pitch angle too high! (Err.31)	Smart box roll and/or pitch values exceeding 30 degrees. See error 30 above for troubleshooting.
80	Meter set-up version error! (Err.80)	There is a mismatch between the setup version of the parameters stored in the Meter memory and the version required by the current SW. Likely to occur if SW is upgraded. Causes the Meter to set the parameters to default values. After restart the Meter is operational again. Check Display parameters, Language, Alarm settings, Printer settings and PIN settings.
81	Meter set-up data error! (Err.81)	There is a check sum error for the set-up parameters in the Meter. Causes the Meter to set the parameters to default values. After restart the Meter is operational again. Check

		Display parameters, Language, Alarm settings, Printer settings and PIN settings.
82	Meter factory parameter data error! (Err.82)	There is a fatal error within the factory set parameters of the Meter. The unit will need to be replaced.
107	Illegal weight gradient! (Err.107)	This error occurs if there is a severe calibration error. E.g. if tare and full load are switched during parameter entry. Check the calibration and correct the error(s).
111	CAN Communication error! (Err.111)	There is a communication problem between the Meter and the Smart boxes. Check wiring between Meter and Smart boxes. Especially cables between truck and trailer with connectors should be checked.
210	File data error! (Err.210)	Errors 210 to 215 could occur during Smart box set-up restore procedure showing a file handling error. It indicates some type of file memory problem. Try restarting the Meter. If the problem persists the unit will need to be replaced. This error only affects the backup and restore of Smart boxes. Weighing is not affected.
211	File open error! (Err.211)	See above.
212	File open/create error! (Err.212)	See above.
213	File close error! (Err.213)	See above.
214	File write error! (Err.214)	See above.
215	File read error! (Err.215)	See above.

Resetting your 9150

If the above troubleshooting tips do not correct the problem the following might help.

Restart the Meter by pressing the on/off key (2 sec).

- Switch connections between a faulty input and the nearby input a see if the problem follows the load cell or the input. Do forget to switch back the connections when the test is done.
- Replace the Smart box. Use the restore function (Maintenance) to give the new Smart box the same configuration and calibration as the old one.

Quick Start Guide

Power Up (pg 8)

- Press On/off key to turn on
- Press On/off for more than 2 seconds to turn off

1

Display (pg 10)

- Press the F1 button to access the "MENU"
- Select "Display" from the menu item by pressing the F4 button
- Use the up and down arrows to highlight your choice then press F4 continue ...

This is where you can select:

- lbs/kgs
- Graduations
- Tilt comp.
- Day/Night display options

2

Configure (pg 15)

- Press the F1 button to access the "MENU"
- Select Configure" from the menu item by pressing the F4 button
- Choose your vehicle configuration. If it is not represented then select the clostest match or select "generic".

From there your 9150 will then ask you how many load cells (sensors) you are using for each channel as well as determinig which jboxes are being used for which channels (this is done in the form of a walk through menu designed to make the configuration as easy as possible for you).

3

Calibrate (pg 22)

From the Weight Display Menu Press F1 (menu) and then select Calibrate (use arrow up/down).

Press F4 (Enter) to open the Calibrate wizard. Three choices are presented, Tilt Zeroing, Empty Vehicle and Loaded Vehicle

10. Technical Data