

SENTINEL

PS2

Wireless Edition, Pro Series



User Manual

April 2011



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Warning

Your Cleral onboard weighing system is a tool. Learning to work with it can only make it more efficient. Read this manual before using your Sentinel PS2.

Weigh bridge (certified)

Acquire the weights needed to calibrate using a certified weigh bridge (Platform scale). Whenever possible, record the weights while sitting on the weigh bridge.

Pneumatic connections

Make sure that all air connections be made according to the installation diagrams.

Lift Axles

Lift axles should always be in the UP position while acquiring and recording the weights in the PS2. If the vehicle is equipped with an automatic lift axle activation device, then you must acquire and record the weights while the lift axle is engaged (touching the ground) for both empty and heavy calibration. And use the system with lift axle down.

Fuel

To enhance the performance, fuel tanks must be full to acquire and record the weights.

Air leaks

A leak in the pneumatic system can cause erratic and false weight readings.

Recalibration

Recalibration is necessary if you have adjusted or replaced a leveling valve or if you've replaced a mechanical sensor, air transducer, or flexmeters.

Slopes

A slightly sloped terrain will not affect the accuracy of your scale, but the bigger the inclination the higher the error margin. Learning to work with your Cleral system

will ultimately give you better precision in these conditions.

Batteries (2 X AA)

Do not invert battery position. CLERAL recommends the following batteries:

Duracell : Power Pix TM

Energizer: Ultimate Lithium TM

Technical Support

For technical help, consult your local authorized Cleral dealer.

Warranty

Cleral products are warranted against defects in workmanship for a period of one year from the original date of purchase. The defective covered product will be repaired or replaced by the manufacturer. The defective product needs to be sent by your local dealer to Cleral with proof of purchase. This warranty does not cover injury or damages caused by the use of this product. It also does not cover all costs connected with the replacement part (labor, shipping and handling or other). Cleral will not be liable for fines issued for overweight violations while using its products.

Contact your local Cleral dealer for repairs and replacement parts.

Thank you for choosing and trusting CLÉRAL CANADA

To contact Cleral Inc.

CLERAL INC.

90, des Distributeurs
Val-d'or (Quebec) Canada
J9P 6Y1

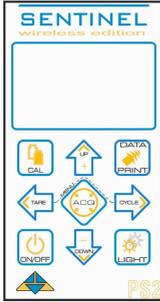
Tel: (819) 825-5553

fax: (819) 825-5556

email: info@cleral.com

Web: www.cleral.com

Keypad description



On/Off



Access calibration mode.
Confirm or advance in menus.



Tare when empty.
Back one step.



Decrease.
Scroll down.



Increase.
Scroll up



Change channel.
Advance in the menu



Back light On/Off



Print.
Transmit data.



Acquiring sensors.

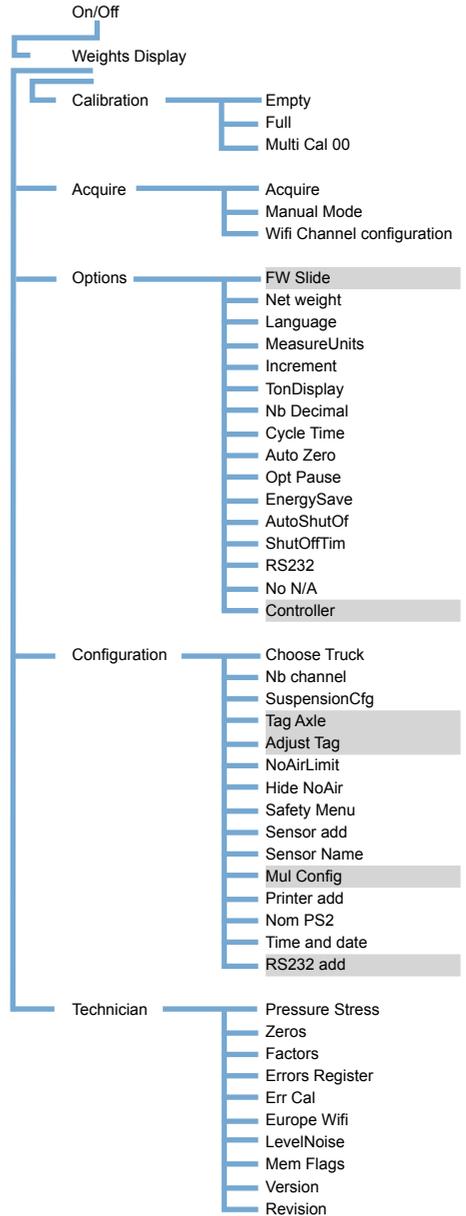


Simultaneously to
access menu.



Simultaneously to Freeze
or Pause.

Sentinel PS2 Flow chart



Not in all versions and revisions

Navigating in the menus

Sentinel PS2 allows easy access to menus and sub-menus. Refer to the flow chart on previous page.

Being familiar with the flow chart will facilitate the navigation and make your system comprehension better. Here is the principal behind the PS2 navigation.

To enter the menu, press Tare and Cycle simultaneously.



You will see:

→Acquire
Options
Configuration
Technician

The cursor indicates the position. The   arrows are used to scroll down or up as well as decreasing or increasing a given value.

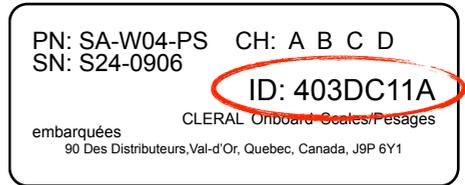
The right  arrow is used to enter (move forward) in the menu and the left  arrow to move one step backward.

Communication Address

Every PS2, and wireless components, have a unique communication address. This «ID» is indicated on the sticker on the back of your PS2 hand held unit.



The air transducer «ID» is located on the sticker that is on top of the devices.



The multiplexer «ID» is also found on the sticker on top of the device.



Automatic sensor acquiring

Before calibrating, each activated channel needs to be associated with a sensor (s). To do so you need to acquire the sensors or multiplexers that are connected to that specific vehicle. Each device has a unique address.

Automatic Acquiring

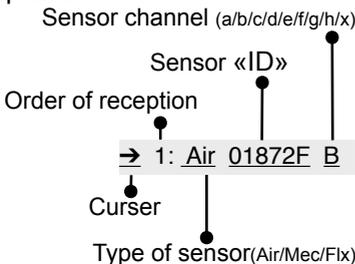
Press ACQ .

The PS2 will display «Search».

Here is an example of what the PS2 will have found. The cursor points to the first device found. Displayed is the type of device (Air-mechanical-or flexmeter), the «ID» and the channel associated with the given device.

→1: Air	4BCE56	A
2: Mec	4A11F8	C
3: Flx	DD1258	X

Explanation:



Note!

If the PS2 displays «None» this means that it has not found any device. If this happens, try an automatic acquiring again. If this fails, try a manual acquiring. In case nothing

has changed, refer to the Acquiring problems section.

Important!

If a sensor is Fixed on a channel, it does not appear in the search results when acquiring. To see if your channel is fixed, refer to the section Fixing a channel.

Acquiring procedures:

- ↳ Validate and anchor the channel
- ↳ Changing the channel
- ↳ Exit

Selecting and Validating the channel

→1: Air	4BCE56	A
2: Mec	4A11F8	C
3: Flx	DD1258	X

Use the Down and Up   arrows to select all the sensors that are associated to the appropriate channels, press the right  arrow to hi-light them.

→1: Air	4BCE56	A
2: Mec	4A11F8	C
3: Flx	DD1258	X

Changing channel

1: Air 4BCE56	A
→2: Mec 4A11F8	C
3: Flx DD1258	X

If a sensor is not associated to the correct channel, bring the cursor to select it and press Data/Print  until the channel is correct. Then press the right arrow to hi-light it.

Note!

When pressing Data/Print , you will only see the possible channels according to your configuration (A B C D E F G H X), can be displayed. The X means that it is not associated to any channel.

Important!

A configuration cannot have duplicated channels. The PS2 will not allow you to do so. In the example below, it is not possible to anchor the second sensor Air in A because channel A is already associated to a sensor. Every other channel is possible except channel A.

1: Air 4BCE56	A
→2: Air 4A11F8	C
3: Air DD1258	A

Note that sensor can be identified to a channel that is already associated to a sensor, but that is only displayed, it cannot be high lighted, thus it cannot be acquired.

Exiting the Acquire mode

Once you have selected and hi-lighted the appropriate sensors, press ACQ

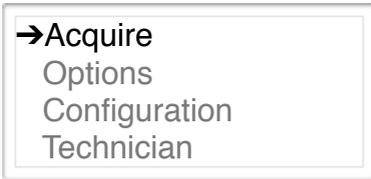


If you have made a mistake or you are not sure that you selected the correct sensors, press Tare  «Cancel». will be displayed and will take you back to the screen without validating any sensors.

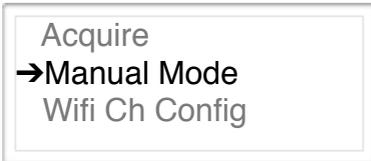
Once you press the Acquire button, the PS2 searches for the sensors and will display «**anchor data**» indicating that it has loaded the sensors with the corresponding addresses and channels.

Manual sensor acquiring

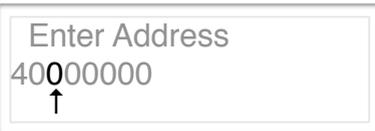
To manually acquire a sensor, press Tare and Cycle  simultaneously to access the menu. Scroll to select **Acquire**. Press Cycle  to enter.



Use the Up or Down arrow  to select **Manual Mode**. Press Cycle  to enter.



This screen will appear.



The address that needs to be entered is located on the sticker that is on the device. This number is preceded by «ID». The cursor points to the first digit that you may have to change. Using the Down and Up arrows , select the desired digit then using the Left and Right  arrows, move to the next digit.

Enter address



Once the last digit entered make sure to press the right arrow  or  to acquire. The PS2 will «Search» and then will indicate «Found 1» if it has found it and the device «ID» will be displayed.



To change the channel press Data .



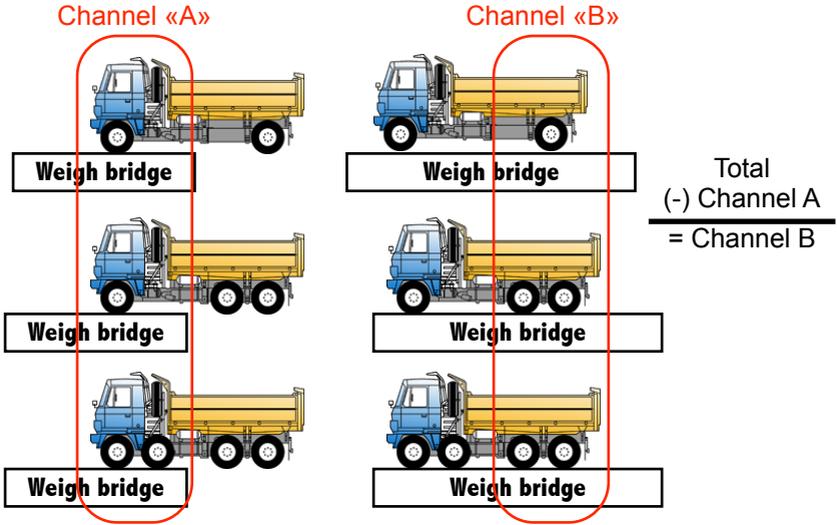
Once the device has the correct channel, press Cycle  to hi-light and confirm. Then press ACQ  to validate.



If no device is found, try again. If still no success, you may have entered the wrong «ID». There can also be no or not enough power to the device. Check trouble shooting section.

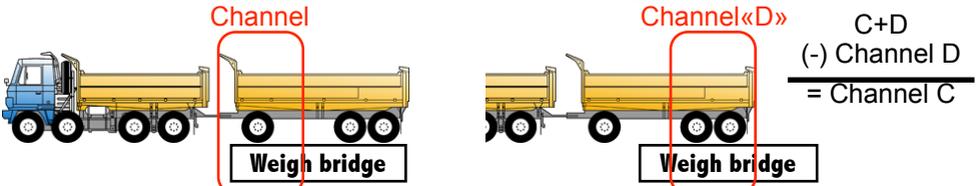
Acquiring weights for straight body trucks

The first step in calibrating your PS2 is getting the weight information for each axle groups. Get the steer axle weight for channel A and then weigh the entire vehicle and subtract the channel A weight from the total weight to get the channel B weight.

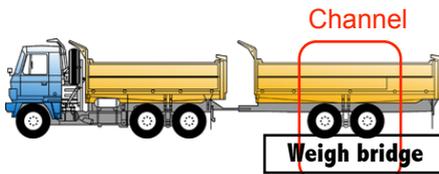


Acquiring trailer weights

Once the weights of the tractor are taken, the next step is to acquire the trailer axle group weights. Weigh the whole tractor and then the rear axle group (channel D) and subtract D from the whole trailer weight to get channel C weight.

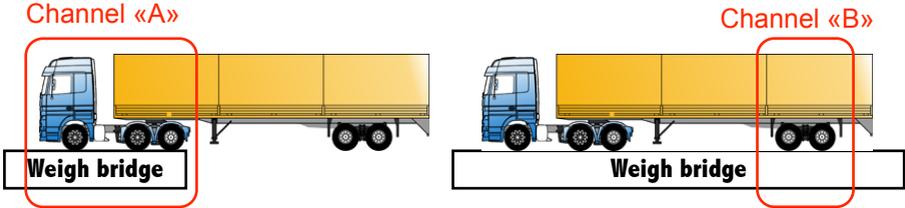


If the trailer has central axles, as illustrated below, just acquire the whole axle group weight only.



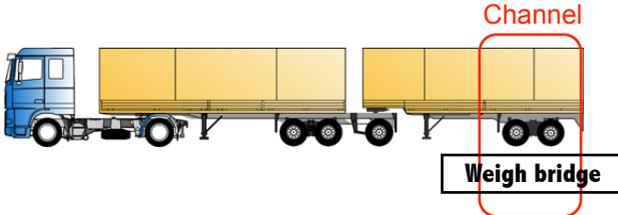
Acquiring tractor and semi-trailer weights

Weigh the tractor only (Channel A) then weigh the whole rig (Total). Subtract the tractor weight from the Total weight to determine the weight of the semi-trailer (Channel B).



Acquiring additional semi-trailer weights

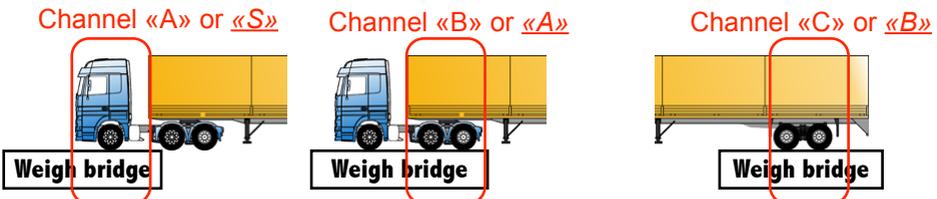
Any additional axle groups should be weighed individually.



Acquiring steering axle weights

In the case where the steering weight is required, acquire by making sure that only the steer axle is on the weigh bridge. To acquire the drive axle weight, weigh the whole tractor and subtract the steer axle weight.

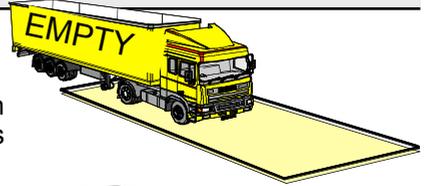
If the steer axle is instrumented : Channel A B C
If the steer axle is not instrumented (Virtual): Channel S A B



Calibration Empty

Acquire vehicle weights

Advance the empty tractor only on the weigh bridge. Make sure that the semi-trailer wheels are not on the weigh bridge.



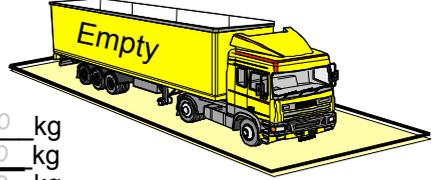
Note the tractor empty weight: Ex: 13000 Kg

Advance the entire rig on the weigh bridge.

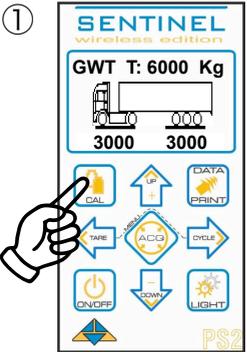
Total Empty weight :Ex: 20500 kg

Tractor Empty weight (-) :Ex: 13000 kg

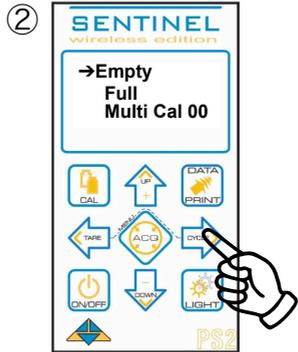
Note the semi-trailer empty weight :Ex: 7500 kg



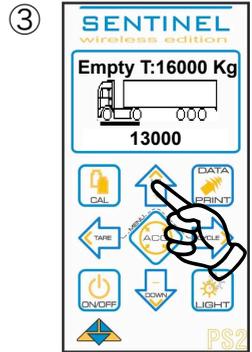
Recording the empty weights



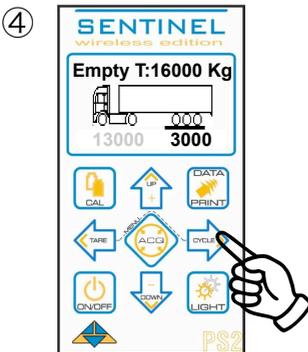
Press Cal to enter the Calibration menu



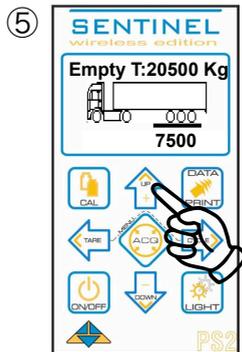
With the cursor pointing Empty, press the right arrow



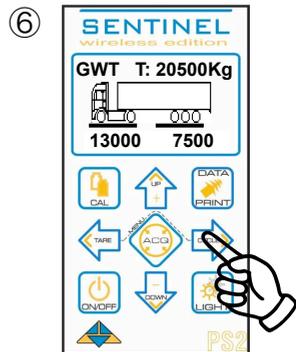
Use down or up arrow to record channel A weight



Press the right arrow to change channel



Use down or up arrow to record channel B weight

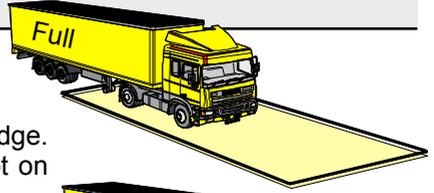


Press right arrow to exit

Calibration Full

Acquire vehicle weights

Advance the Full tractor only on the weigh bridge.
Make sure that the semi-trailer wheels are not on the weigh bridge.



Note the tractor empty weight: Ex: 23000 Kg

Advance the entire rig on the weigh bridge.

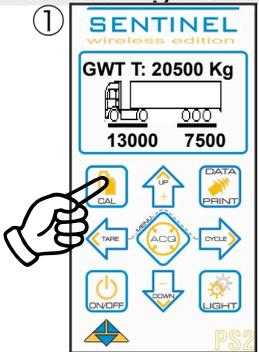


Total Full weight : Ex: 57000 kg

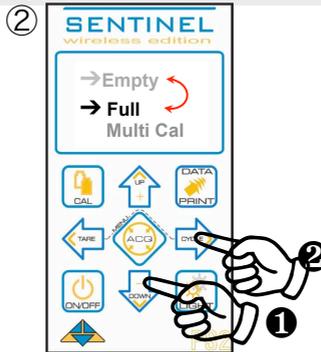
Tractor Full weight (-) : Ex: 23000 kg

Note the semi-trailer Full weight : Ex: 24000 kg

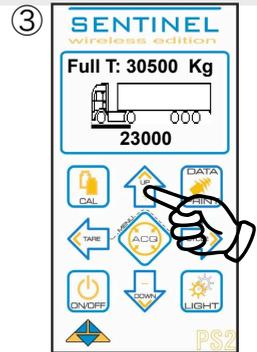
Recording Full weights



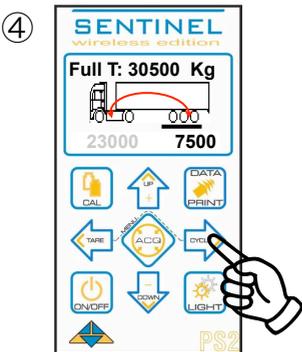
Press Cal to enter the Calibration menu



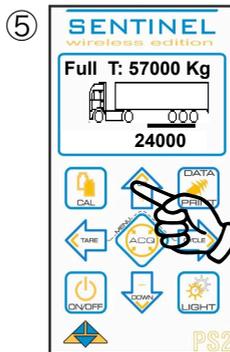
Use down arrow to move the cursor to Full
Press Right arrow



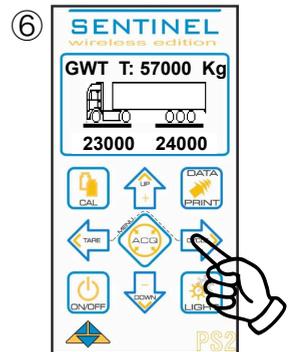
Use down or up arrow to record channel A weight



Press right arrow to change channel



Use down or up arrow to record channel B weight

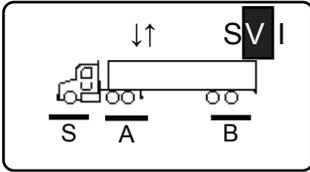


Press right arrow to exit

Slide FW

This option lets you see the live distribution of weight of channel A or S when moving the fifth wheel position. This allows weight distribution without having to recalibrate the system.

This option will only be available if you chose a truck configuration with virtual steer weight. (S).

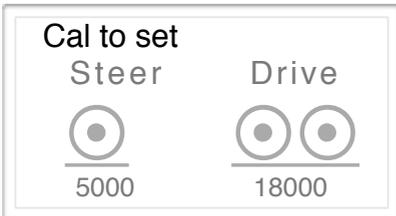


How to use this function:

Access Options and select SlideFW.



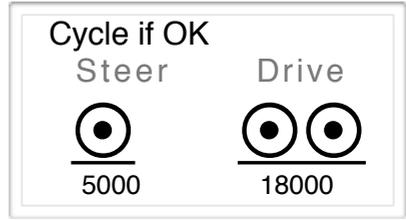
Press Cycle .



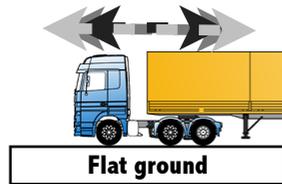
Note:

For optimum precision, stay on flat ground.

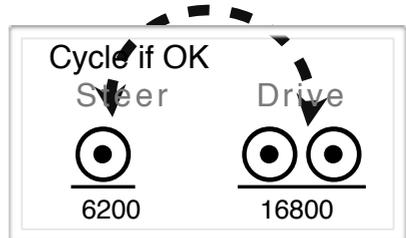
Once on flat ground, press Cycle  to start load distribution. The following will be displayed.



At this point you can start moving the fifth wheel forward or backward.



When moving the tractor under the fifth wheel, the weights of both channels will change live.



Once satisfied with the load transfer, press Cycle  to exit.

Net / Gross Weight

Net weight is the weight of the load only. The gross weight is the weight of the vehicle and the load together.

Note!

You can change from gross weight to net weight without the need to recalibrate.

→ Net weight	Off
Language	Eng
Unit Measure	lbs
Increment	10↓

When the cursor is on **Net weight**, press Cycle  to select **On** or **Off**.

Press ACQ  exit.

Language

IN this section, you can choose the language you want to work in. English, French, or Spanish.

Net weight	Off
→ Language	Eng
Unit Measure	lbs
Increment	10↓

When the cursor is on **Language** press Cycle  to select the language Fr, Eng or Esp. Press ACQ  to exit.

Units

You can work in either pound (lbs) or kilograms (kg).

Net weight	Off
Language	Eng
→ Unit Measure	lbs
Increment	10↓

When the cursor is on **MesureUnit** press Cycle  to select lbs for pounds or kg for kilograms. Press ACQ  to exit.

Increment

You can work either in increments of tens (10) or hundreds (100).

Net weight	Off
Language	Eng
Unit Measure	lbs
→ Increment	10↓

When the cursor is on **Increment** press Cycle  to select the 10 (tens) or 100 (hundreds). Press ACQ  to exit.

Displaying in tons

Weight can be displayed in Metric ton (1000 kg) tmet or Imperial ton (2000 lbs). timp

→ TonDisplay	Off↑
Nb Decimal	2
Cycle time	2
Auto Zero	On↓

When the cursor is on **TonDisplay**, press Cycle  to select Off, tmet (metric) or timp (imperial). Press ACQ  to exit.

Note!

Even if you chose to display in tons, you will need to calibrate in pounds (lbs) or kilograms (kg). TM or TM will be displayed on the main screen where kg or lbs would be.

Number of decimals

Choose the number of decimals that will be seen when you choose to display in tons. (0-1-2).

TonDisplay	Off↑
→ Nb decimal	2
Cycle Time	2
Auto Zero	On↓

When the cursor is on **Nb decimal** press Cycle  to select the number of decimals you want displayed 0, 1 or

2. Press ACQ  to exit.

Cycle time

Select how long you want the different channel weights will be displayed when in Cycle.

TonDisplay	Off↑
Nb Decimal	2
→ Cycle time	2
Auto Zero	On↓

When the cursor is on **Cycle time**, press Cycle  select between 1 and 15 seconds. Press ACQ  to exit.

Auto Zero

When performing an empty Cal, a zero must be done before recording the weights. This function will perform an automatic zero if the empty weight is changed.

TonDisplay	Off↑
Nb Decimal	2
Cycle Time	2
→ Auto Zero	On↓

When the cursor is on **Auto Zero** press Cycle  to turn auto zero On or Off. Press ACQ  to exit.

Pause Option

This function freezes the weights between the activation point and the deactivation point. If you activate Pause at 30000 lbs, whenever you deactivate the Pause, say the next morning, the weight will remain at 30000 no matter what, even if there has been temperature changes or other reasons that the weight should have changed..

→ Opt Pause	Off ↑
EnergySave	Off
AutoShutof	On
ShutoffTim	5 ↓

When the curser is on **Opt Pause**, press Cycle  to turn **ON** or **Off**

Press ACQ  to exit.

How to use this function:

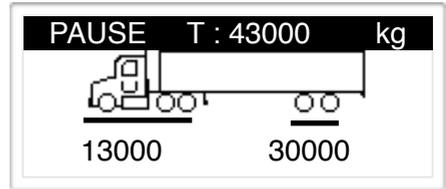
STEP : 1

Place your vehicle on flat ground.



STEP : 2

While on main screen, press Up and Down   simultaneously and hold for 5 seconds. Pause will be displayed. The weights are frozen.



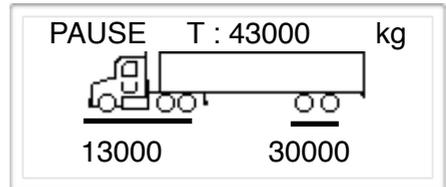
STEP : 3

You can move your vehicle. The weight will not change.



STEP : 4

Before deactivating Pause, place your vehicle on flat ground. press Up and Down   simultaneously and hold until Pause shuts off. The weight displayed will be the same as when it was frozen and are now live.



NOTE!

It is important to follow each step to prevent the need to recalibrate.

Tip!

If the Gage reading of pressure or stress (GA) is not equal to the sum of all the sensors on that channel, divided by the number of sensors, you need to perform an empty tare (Zero).

Battery saver

Wireless communication needs a lot of energy and drains batteries rather quickly. This function reduces the number of requisitions by half which helps save battery power. It does not affect precision.

Opt Pause	Off↑
→ EnergySave	On
AutoShutOf	Oui
ShutOffTim	5↓

When the cursor is on **EnergySave**, press Cycle  to select **On** or **Off**.

Press ACQ  to exit.

Auto Shut off

This function enables the unit to shut off automatically after a period of inactivity.

Opt Pause	Off↑
EnergySave	Off
→ AutoShutOf	On
ShutOffTim	5↓

Bring the cursor to **AutoShutOf**, press Cycle  to select **On** or **Off**. Press

ACQ  to exit.

Shut off time

This function lets you decide the delay at which your PS2 will automatically shut off if there is no activity. Make sure that the function is turned On. You decide between 1 and 10 minutes.

Opt Pause	Off↑
EnergySave	On
AutoShutOf	Oui
→ ShutOffTim	5↓

Bring the cursor to **ShutOffTim**, press Cycle  to select 1 to 10 minutes.

Press ACQ  to exit.

RS 232

This function activates the communication to a RS232 device. Don't forget to configure RS232.

→ RS232	On↑
No N/A	Off
Controller	
Off	

Bring the cursor to **RS232**, press Cycle  to select **On** or **Off**. Press

ACQ  to exit.

No N/A

This function hides the N/A (non applicable). N/A appears when a channel is activated but does not see a designated sensor.

RS232	Off↑
→ No N/A	On
Controller	Off

Bring the cursor to No N/A press Cycle



to select On or Off. Press ACQ



to exit.

Controller

Activating wireless controllers.

RS232	On↑
No N/A	Off
→Controller	Off

Bring the cursor to **Controller** press



to select On or Off. Press

ACQ

to exit.

Choose truck

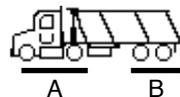
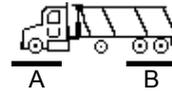
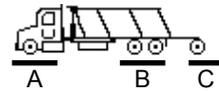
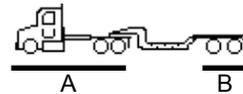
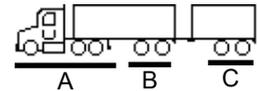
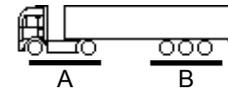
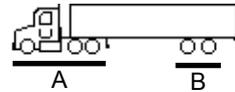
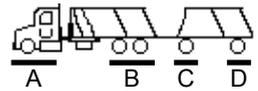
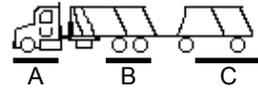
Choosing the image for your vehicle configuration.

→ Choose truck	
Nb channel	2
SuspensionCfg	
NoairLimit	1↓

Bring the cursor to **Choose truck** press Cycle  to enter image directory. Use the arrows   to select the vehicle that best suits your configuration. Press ACQ  to confirm.

IMPORTANT!

The image of the truck must match the type of vehicle and number of channels to display. At the right is the image directory stored in the PS2 memory. Below each image notice the truck channel (A & B). The image can be changed later but it must always match the number of channel and vehicle. An image change does not affect the calibration of sensors. If you are trying to acquire sensors C or D and that your image does not show C or D, you will not see them. The PS2 will only search for activated channels. MAN Mode (manual mode) is used when the configuration of the truck does not appear in images or to display no image. When you select a tractor-trailer, SVI will appear in the right corner of the screen. These letters determines the state of the steering axle. Refer you to the next section Choosing a steering axle.



Man Mode

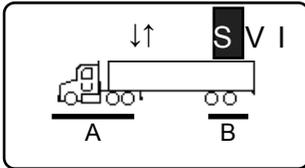
Steering axle

When you select tractor-trailer images, SVI appears in the top right corner of the screen. These letters determine how the weight of the steering axle is calculated.

Once you have selected the desired tractor-trailer image, press Cycle 

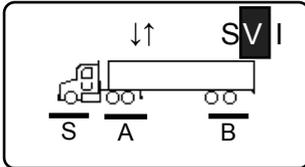
to select S, V or I. Press ACQ  to confirm.

S= Standard



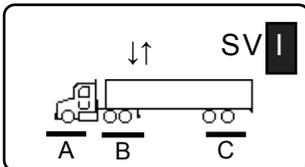
The axle is not instrumented and its weight is included in channel A.

V= Virtual :



The weight of the S channel is estimated from the weight applied to the drive axle group (Channel A)

I = Instrumented :

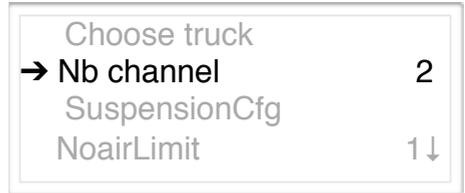


The steer axle is instrumented and becomes channel A.

Nb channel

This function displays the number of active channels based on the displayed image of the truck. This feature is only editable manually.

In MAN MODE (Manual mode) you can choose the number of activated channels. (1 to 7 channels)



Bring the cursor to **Nb Channel** press Cycle 

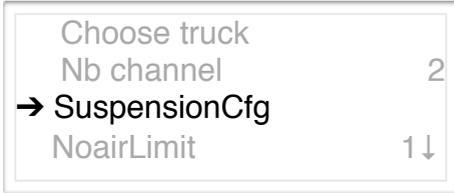
to select between 1 to 7 channels. Press ACQ  to confirm.

Tip !

The steering axle Virtual (S) and Man Mode can be activated in the Suspension Configuration menu.

Suspension Configuration

This indicates the type of sensor in each of the active channels.



Bring the cursor to **SuspensionCfg** press Cycle  to enter the menu.

Displayed will be:



In the first line where **Susp** is displayed, letters are descriptive of the sensor types and the number of letter indicates the number of channels in service (In the example there are 4 channels activated).

Description of sensor types:

- A = Air
- M = Mechanical
- F = Flexmeter
- H = Hydraulic
- 0 = Non activated channel

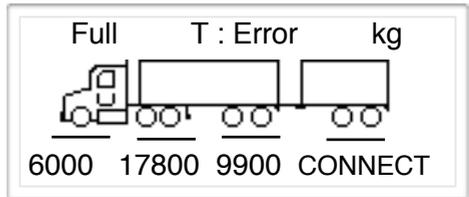
SoftChannel indicates if the virtual channel for the steer axle is in function.

Steer axle possibilities;

- X = Non activated channel
- S = Activated (S for Steering)

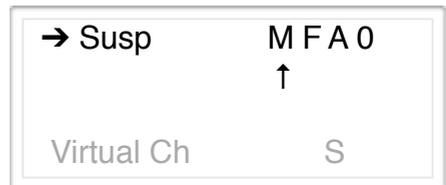
Tip !

If you decide to drop a semi-trailer, an error message will be displayed. You can change your configuration so the system ignores that specific semi-trailer and get rid of the error message.



Dropping a channel in a configuration

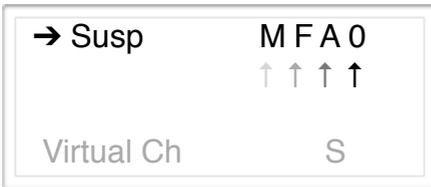
In **SuspensionCfg** menu, press Cycle . Another cursor appears under the first letter of the configuration.



Next 

Continued Dropping a channel

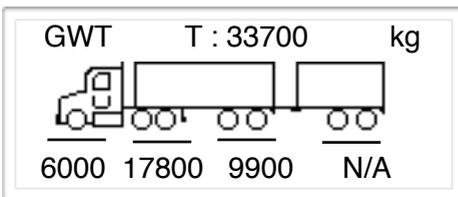
Use the arrows to select the channel to be dropped. Press the UP arrow to change the channel to 0. Press ACQ to confirm and exit the menu.



NOTE !

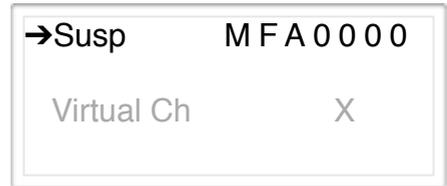
After confirmation you cannot return to this menu to re-activate this channel. To re-activate, you must reacquire this sensor.

In our example, you would see the following screen. You will notice that the dropped channel is now marked N/A.

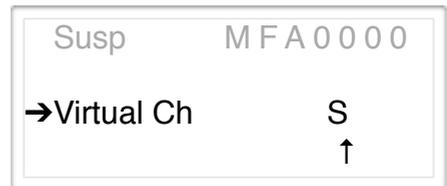


Suspension Configuration in MAN Mode

In manual mode, you can drop a channel as explained above but follow the following steps to enable the virtual steering axle mode (S).



While in **SuspensionCfg**, press the Down arrow . The cursor will point Virtual Channel. Press the right arrow another cursor appears under the letter.



Press the Up arrow to change the X to S to activate or S to X to deactivate. Press ACQ to confirm and exit.

NOTE !

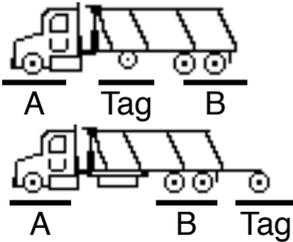
Remember that the (S) weight is estimated considering the weight applied on the drive axle group (A).

TAG Axle

The Tag Axle configuration enables the display of the weight of the rear axle down. The weight of the axle results from the calculation of the weight loss of channel A and B.

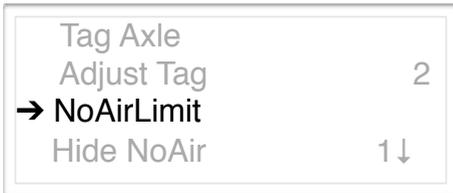
NOTE !

To use this function, you need to have selected one of the trucks shown below.

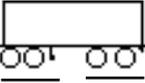
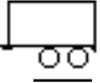


Note!

When the cursor is on **Tag Axle** press Cycle  to enter menu. The following screen appears:

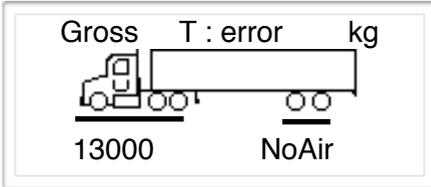


Before lowering the tag axle, press the Down arrow , the Tag Axle calculator goes into action. You can lower the Tag after the activation.

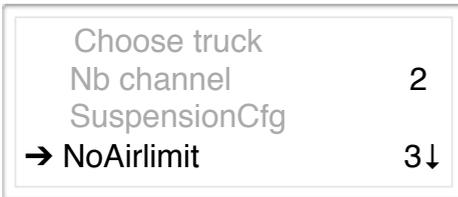
GWT	T : Error	kg
		
6000	17800	9900 CONNECT

No Air limit

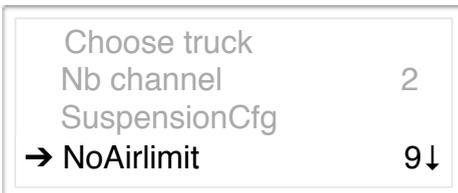
NoAirLimit is where you determine the pressure limit below which the NoAir message is displayed to warn you that there is no pressure in the air sensor. Factory set pressure is 3 psi.



For example, if you do not connect the air line between the tractor and the semitrailer, the weight of the trailer will not be shown. An Error message and NoAir will be displayed.

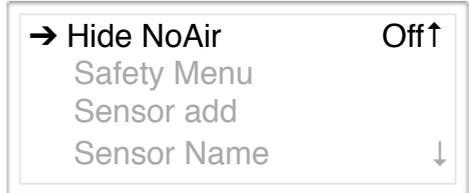


Bring the cursor to **NoAirlimit** press Cycle  to enter the menu. Use the arrows   to select between 1 and 15 Psi. Press ACQ  to confirm.



Hide No Air

When enabled, **Hide NoAir** will hide the **No Air** message and will not produce an error message. The Total weight will remain displayed.



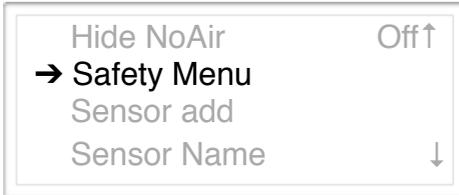
Bring cursor to **Hide NoAir**, press Cycle  to select On or Off. Press ACQ  to exit.

Tip !

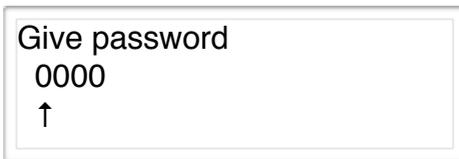
This function is very useful with air lift axles.

Safety Menu

You can lock multiple menus. As needed, a menu or a portion of the menus can be locked or all at once.



The following menu appears. Point the cursor on the first digit of the password if the locking was not enabled the password is 0000.



Use the arrows   to change the password. (Numbers only 0-9). Use the arrows   to move to the next digit or to the previous digit..

Once done, press Cycle  to enter lock menu.

If you have entered the correct pass word, the following message will be displayed:

PASSWORD OK!

Forgotten password or password error

If you do not enter the correct password the following message will appear;

**Password error
125000**

The code under the Password error message is used to get a new password from the manufacturer. Give this code to your local dealer.

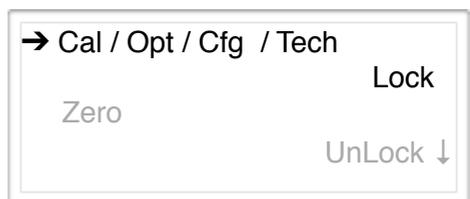
With a correct pass word, the following screen appears:



The first menus you can lock are:

- **Cal/** : Calibration.
- **Opt/** : Option modifications.
- **Cfg/** : Configuration modifications.
- **Tech/** : Technician mode modifications.

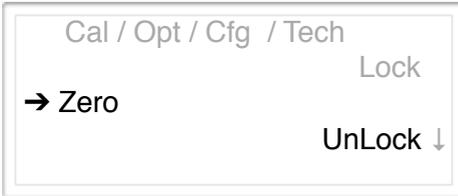
Bring the cursor to **Cal/Opt/Cfg/Tech** press Cycle  to select Lock or Unlock.



Next 

Continued Locking

To go to the next lock press the down arrow . Use the Up arrow  to go back one step.

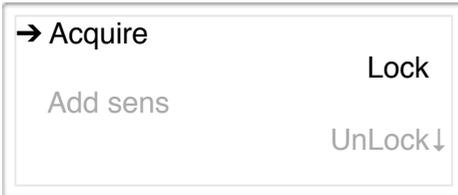


Zero, Locks the Tare button . Bring the cursor to **Zero**, press Cycle  to select Lock or UnLock.

Tip !

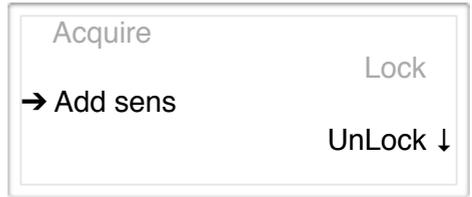
If the vehicle has mechanical sensors, there may be thermal drifts. In this case, being able to make the empty tares is necessary.

Locking Acquire prevents the acquiring of any additional sensors.



Bring the cursor to **Acquire**, press Cycle  to select Lock or UnLock. To go to the next lock press the down arrow .

Locking Add sensor will not allow the operator to change the a sensor channel.



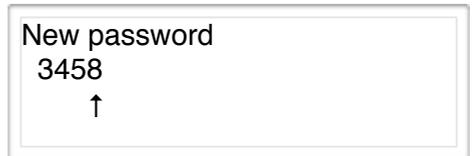
Bring the cursor to **Add sens** press Cycle  to select Lock or UnLock

To confirm and exit press ACQ .

The next message will ask you to confirm the pass word. If there are no changes, press Cycle  repeatedly until you exit the menu.



To change your password, use the arrows  . To go to the next digit and exit, press Cycle .



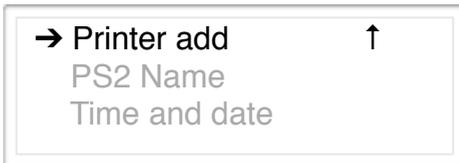
Printer address

To communicate with the wireless transmitter that transfers data to a printer or onboard computer, the device address need to be previously registered in the PS2.

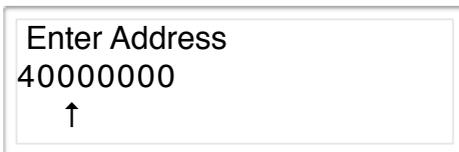
The address is located on the device sticker next to «ID». As illustrated below.



Bring the cursor to **Printer add** press Cycle  to enter.



Manually enter the device address.



Left and right arrows   are used to select the digit to edit. Down and Up arrows   allows you to change the number. Numbers 0-9 and

letters A to F inclusively.

Enter Address



Once the last digit is edited, press Cycle  to confirm and exit. At this point, the PS2 will initiate communication with the printer and will try to print a test ticket.



If successful, a weigh ticket with only the Cleral logo will be printed.

~~Billet de Pesage~~ Weigh Ticket



Next 

Continued Printer address

If not successful, the following message will be displayed.:

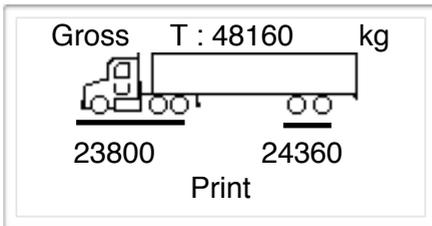
Printer test
Err

Trouble shooting !

- Check if you have correct address.
- Check connections
- Check power

Using the printer

While on main screen, press Data - Print  . Print will be displayed under the vehicle indicating that the data has been sent to the printer or onboard computer.

**NOTE !**

Press Data-Print  for additional tickets.

The following ticket example shows the information that will be printed:

**Sent.tne1**

Date A/M/J : 10/10/14
Heure : 14:34:27
Nombre de canaux : 2
Unite : Kg

Canaux BRUT

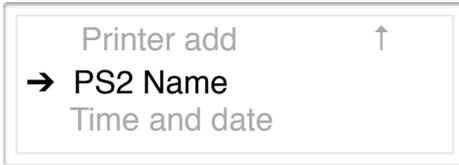
A 23800
B 24360

TOTAL 48160

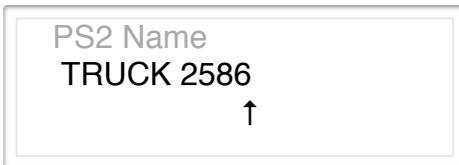
PS2 Name

This menu allows you to name your PS2. Preferably unique, choose a name that will differentiate it from other PS2's. This name will automatically be transmitted when printing a weigh ticket or when transmitting data.

The name can have a maximum of ten characters. Letters (A-F) and or numbers (0-9).



Bring cursor to **PS2 Name**. press Cycle  to enter.

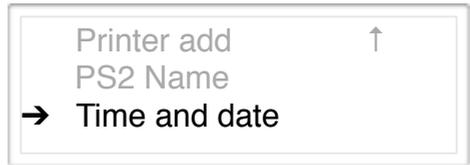


Use the left and right arrows   to move from left to right and use the down and up arrows   to select the desired character.

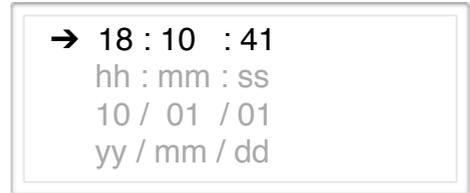
Press ACQ  to exit.

Time and date

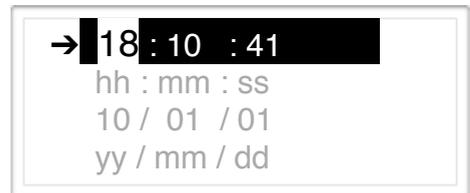
This section explains how to change the date and time in your PS2. This information will be transmitted when transmitting data.



Bring cursor to **Time and date**, press Cycle  to enter.



The cursor points to the time. Press Cycle . The time will be hi-lighted and the hour flashes. (hh).



You can now edit the hour using the Down and Up arrows  . Use the Left and Right arrows   to move to the minutes (mm) and then to the seconds (ss).

Repeat these steps to edit the date.

Note !

The PS2 does not have a back-up battery for the real time clock.

Technician mode

Technician menu provides access to technical data of the device. It is also in this mode that you can adjust the factors and zeros of the unit.

Gage A / B / C / D / E

Enter Gage menu to display live sensor readings per individual channel. The letter indicates the channel. If there are multiple sensors on one channel, the reading displayed is the average of all the sensors on that channel. To get a reading of individual sensors, you must enter the channel pressing one of the arrows.

Individual sensor readings

In Gage Menu, individual reading of the sensors is displayed. The first letter indicates the channel and the second letter indicates the sensor on the channel. So AB means sensor B of channel A. If there is just one sensor, the gage reading will be identical to the sensor reading. This is normal because the average is 1.

An asterisk (*) indicates that there is no activity on that channel.

? and ! are error codes. ? indicates that there is no communication with a sensors on that given input. ! indicates that there is communication but the sensor is out of range or broken or or its cable is damaged.

In the case of air transducers, pressure readings will be displayed in gage mode, even if there is a No Air message on the main screen.

Zero A / B / C / D

The 'Zero' is the Gage reading of a channel at the time the empty calibration is performed. Each channel has its Zero.

Note!

Once a calibration is completed, Empty and Full, the gage reading and the zero value should be the same or at least very close, when the vehicle is empty.

The Zero can be manually adjusted. It can be raised, lowered, or even brought back to 0.00. But keep in mind that by doing so you also change your calibration values and this is something that you may not want to alter.

Average sensor readings (Only use as reference)

The following are Zero, or **Empty** vehicle, sensor values.

Air Transducers: between 10.00 and 20.00 PSI
Mechanical Sensors : between 130.00 and 170.00
Flexmeter Sensors : between 20.00 and 40.00

Note !

These average values are for most vehicles. But some vehicles, or structures, may show higher or lower values.

The following are heavy, or **Full** vehicle, sensor values.

Air Transducers: between 50 and 150 PSI
Mechanical Sensors : between 200.00 and 325.00
Flexmeter Sensors : between 60.00 and 90.00

Cannot perform Full calibration?

If you mistakenly enter Full weight values in the Empty calibration mode, you will automatically perform a Zero. This will prevent you from entering your Full weights because the system now thinks that the current sensor values are EMPTY values, which is not the case. If this happens, you will need to empty your vehicle, redo the Empty calibration, and get another load to perform a Full calibration.

Error Codes

No AIR

This error code indicates that the sensor does not detect air pressure. No Air code is triggered if the pressure is below the set limit. See Limit No Air. Physically verify that there is air pressure that reaches the sensor. If there is no pressure, find the source of the problem. If there is pressure, check pressure reading in the Gage mode. If the sensor does not read pressure, there may be a problem. Consult your dealer.

Unstable air pressure readings

Enter the Gage menu and go to the problematic transducer. Refer to the gage section. If the reading stabilizes and then has a sudden drop, you are certainly facing a leak in the air line. The leak results in the reading decreasing. It will also ultimately engage the height valve to respond to the drop. So the readings will go down and up in a cycle.

Non repeatable air readings

In most cases a defective height valve will result in non repeatable transducer readings. To check the height valve, inflate and deflate the suspension at least ten times (10X), if the readings are not within +/-0.50 PSI, have your suspension checked by an expert.

Mechanical sensors : !A !B !C !D !E

An exclamation point followed by a letter !A !B !C !D !E can appear in the following conditions:

- The moulded cable end (nipple) is not properly attached to the sensor or is off centered.
- The sensor is under or over tensioned.

Mechanical sensors : ?A ?B ?C ?D ?E

A question mark followed by a letter ?A ?B ?C ?D ?E appears in the following conditions:

- The sensor cable is not connected the multiplexer.
- The sensor cable is damaged.

Code N/A

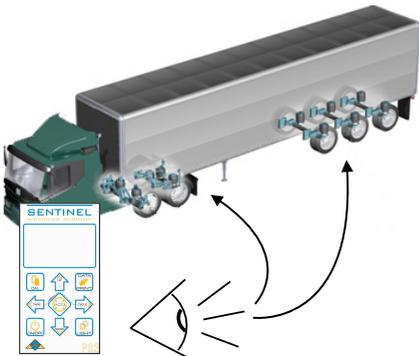
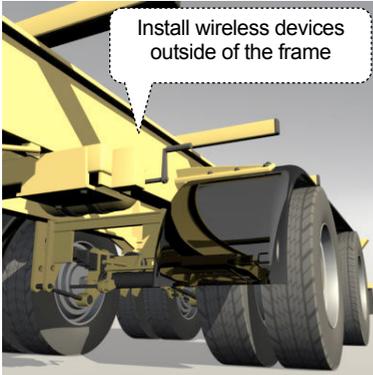
Indicates that the channel is not activated.

Code OVER

This code appears when the counter is over 99999. Theoretically, it is impossible to go over this limit. But if it does, check the zeros, empty weights, or the factors.

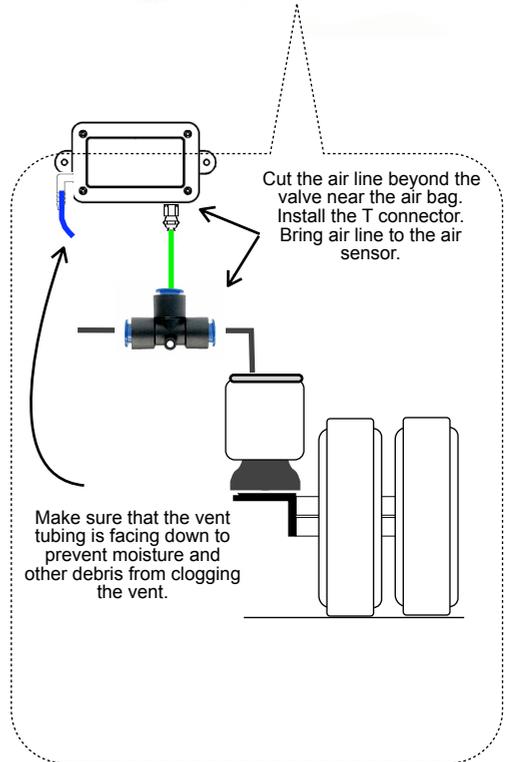
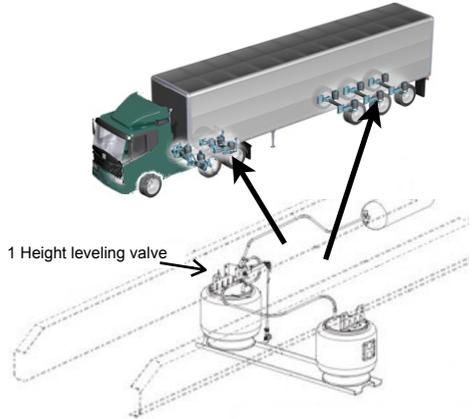
Positioning wireless devices

Always try to install air sensors, multiplexers, and transmitters on the outside of the vehicle frame and in the best line of sight as possible. The lesser the barriers, the better the communication between wireless devices.



Air connections

Single valve tractor connection is identical to a semi-trailer connection.



Recommended power supply

Voltage : 10 to 30 Vdc

- ▶ On power lighter cord

Voltage : 10 to 36 Vdc for:

- ▶ Air sensors
- ▶ Multiplexers
- ▶ Transmitters

Note!

Low or high power will result in erratic readings and can even damage wireless devices.

Batteries (2 X AA) Hand held

Batteries must generate;

Minimum: 3,00 Vdc together.
Amperage minimum : Amp

Only use batteries recommended for digital cameras and nothing less.

Note!

It is important not to invert the batteries.
Remove batteries when the hand held is not in use.

Do not use low voltage batteries as it will cause erratic readings and can also cause corruption of the internal memory.

Wire connections

The black and red wires are connected to the vehicle main power supply. The WHITE wire serves only for automatic acquiring procedures. The white wire should be connected to a temporary power supply that is only activated while the wireless device is being acquired. It can be connected to the break lights or back-up lights for example.



Break light installation

In America

Black wire : Ground (-)
Red wire : Positive (+)
White wire : Break light positive (+)

Back-up light installation

In Europe

Black wire : Ground (-)
Red wire : Positive (+)
White wire : Back-up light positive (+)

NOTE !

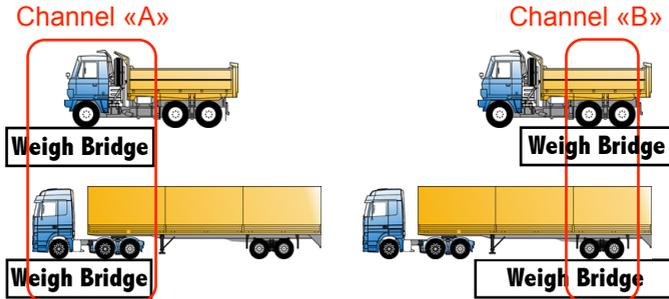
If the white wire is not powered, you will not be able to automatically acquire it.

NOTE !

If the white wire cannot be powered, only a manual acquiring procedures can be performed to acquire it.

Difficulty getting accurate readings

We can detect a precision problem looking at the total weight. However, to correct the problem, you need to find out exactly what channel is problematic.



Channel A Empty
Sentinel _____
Weigh Bridge _____

Channel B Empty
Sentinel _____
Weigh Bridge _____

Channel A Full
Sentinel _____
Weigh Bridge _____

Channel B Full
Sentinel _____
Weigh Bridge _____

The first step is to compare the weight of empty vehicle per channel on a weigh bridge. For each channel, one should note the weight of the Sentinel and that of the weigh bridge.

Note the empty weight of each channel of the Sentinel and those of the weigh bridge. If there are differences, we shall immediately correct the empty weight as explained in the preceding pages.

Subsequently, we compare the weight of the Full vehicle per channel. For each channel, one should note the weight of the Sentinel and that of the weigh bridge. If there are gaps, we must immediately correct the full weight as explained in the preceding pages.

If the error persists, repeat the same procedure to determine whether it originates from the same place always.

Note!

If you have multiple channels, do the same steps as described.

Noting the PS2 data

Before calling your retailer for technical service, make sure to note the following data so he can better serve you.

Channel	S	A	B	C
Suspension configuration				
Empty Weights				
Full Weights				
Zeros				
Factors				

Version	
Revision	