9100GW Digital Meter

OWNER'S MANUAL

SI TECHNOLOGIES®

LODEC®

EVERGREEN WEIGH

ALLEGANY TECHNOLOGY INCORPORATED

Revere Transducers®

6190008-20

Meter part number:
85-00570-10

Contents

Overview

The 9100GW is a highly versatile digital meter that enhances larger weighing systems made up of load cells, cables and transmitters. The meter can be used with on-board weighing systems mounted onto heavy vehicles or with stationary loading devices, such as tanks or wood-chip bays.

Key benefits of the 9100GW include:

- Dual channel operation for monitoring gross weight.
- Greater reliability because the two-wire construction reduces the chance of interference with signal transmission.
- An easy-to-read, extremely bright display panel.
- Versatile programs that allow the meter to be used in trucks that must meet a variety of industrial requirements.
- A post-calibration feature that makes it easy to calibrate loads without having a full load on the vehicle.
- The capability to use a variety of add-ons, including printers, scoreboards and RF remotes.
- An internal clock and calibration system that keeps track of individual truck or trailer.
- The ability to measure weights in pounds or kilograms, and in increments of 20, 50 and 100.
- A program that is easily started from the control panel and includes software that can test the working order of the complete weighing system.

 WARNING: Do not use sharp or pointed objects to press keys.

Setting Up the Meter

The 9100GW has three setup menus, each with various options.

A major benefit of the 9100GW meter is that setup changes can be made quickly and easily whenever the original choices need to be modified. This is helpful when certain setups do not provide as much information as others and need to be changed while using the weighing system.

Setup 1 Covers the calibration and set points.

Setup 2 Establishes the different weight increments.

Setup 3 Establishes the time, date and year.

To enter a setup menu

To enter **Setup 1**, press the <**SET**> key once.

To enter **Setup 2**, press and hold the <**SET**> key until "**Setup 2**" appears on the display.

To enter **Setup 3**, press and hold the <**SET**> key until "**Setup 3**" appears on the display.

The display will continuously cycle through "**Setup 1**," "**Setup 2**," "**Setup 3**," and "**Set Off**" until the <**SET**> key is released at the desired setup program.

When the correct setup menu appears in the display, press the <↑> key to move through the various setup options. To return to a previous collection of setup options, press the <↓> key.

REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Setting Up the Meter

Note

"**Set Off**" is for use with the locking feature, as explained on page 25.

The setup programs will lock if the display is stopped at "**Set Off**" and the **<OFF/ENT>** key is pressed. To move out of the "**Set Off**" display, press the **<SET>** key again to return to "**Setup 1**" or press the **<AUTO/CAN>** key to leave the Setup Mode.

See Appendix D for the options available from each setup menu.

 WARNING: Do not use sharp or pointed objects to press keys.

Specifying pounds, kilograms and grads

After powering up the meter, it's important to note whether **LBS** (pounds) or **KGS** (kilograms) is displayed. Weighing increments can be set to 20, 50 and 100.

It's necessary to set both the correct unit of measurement and the desired grad *before* calibrating the meter.

To set the unit of measurement and grad

Press the <**SET**> key to select "**Setup 2**."

Press the <↑> key to select **LBS**, **KGS**, **Grad 20**, **Grad 50** or **Grad 100**.

When the desired weight (in the desired increments) is displayed, press the <**OFF/ENT**> key to enter and store the selected value.

Calibrating the Meter

EXAMPLE Changing pounds to kilograms in 50 graduated increments before beginning calibration.

Press SET to select SETUP 2 → SEtuP 2

Press ↑ to select KGS → KGS

Press OFF/ENT to store the new display measurement → EntEr

Press SET to select SETUP 2 → SEtuP 2

Press ↑ to select grad size 50 → GrAd 50

Press OFF/ENT to store the new grad size → EntEr

Note

For the scales to work properly, the meter must be fully calibrated using the tare weight and full weight calibration procedures described on pages 8-12.

 WARNING: Do not use sharp or pointed objects to press keys.

Calibrating the tare weight

The tare weight refers to the weight of the vehicle when it's empty. Therefore, the truck must be completely empty before beginning this procedure.

Not all platform scales read the same, so using the same scales whenever possible will enhance accuracy.

Be sure the weight includes a full load of fuel.

Record the axle weights:

Ch. 1 tare (front axle) _____

Ch. 2 tare (rear axle) _____

To calibrate tare weight

Press the <**SET**> key to select "**Setup 1**."

Press the <↑> key until "**Tare 1**" or "**Tare 2**" is displayed.

Press the <**OFF/ENT**> key. The display will show a letter "**t**" at the left, followed by a series of numbers.

Press <↑> or <↓> to set the tare weight of channel 1 or channel 2.

Press the <**OFF/ENT**> key to enter and store new tare values.

Important Note

See "Resetting the TARE WEIGHT" on page 29 on how to reset the tare weight without getting into "**SETUP 1**" (to be used after complete calibration).

Calibrating the Meter

EXAMPLE Calibrating the tare weight at 19,500 for channel 1.

Press SET to select SETUP 1 → SEtuP 1

Press ↑ to select TARE 1 → tArE 1

Press OFF/ENT to set TARE 1 value → EntEr

Tare

Press ↑ or ↓ to set TARE 1 at 19500 → t 19500

Press OFF/ENT to enter and store new TARE 1 value → EntEr

Important Note

See "Resetting the TARE WEIGHT" on page 29 on how to reset the tare weight without getting into "**SETUP 1**" (to be used after complete calibration).

 WARNING: Do not use sharp or pointed objects to press keys.

Calibrating the full weight with a load

To calibrate the full weight, the truck or trailer needs to be loaded to capacity. Return to the same scale where the tare weight was calibrated. Note the axle weights for both the truck and trailer.

Note

For drivers operating in the NET mode, the tare weight equals 000000, and it's important that the full weight entered is the same as the net payload weight.

To calibrate full weight with a load

Press <**SET**> to select "**Setup 1**."

Press <↑> until "**Full 1**" or "**Full 2**" is displayed.

Press <**OFF/ENT**>. The display will show a letter "**F**" at the left, followed by a series of numbers.

Press <↑> or <↓> to match the number on the display with the truck or trailer's full weight. Press <**OFF/ENT**> to enter and calibrate the full weight.

Calibrating the Meter

EXAMPLE Calibrating the full weight of channel 1 at 45,000.

Press SET to select SETUP 1 → SEtuP 1

Press ↑ to select FULL 1 → FuLL 1

Press OFF/ENT to set FULL 1 value → EntEr

Press ↑ or ↓ to set FULL 1 at 45000 → F 45000 (Full)

Press OFF/ENT to enter and store new FULL 1 value → EntEr

 WARNING: Do not use sharp or pointed objects to press keys.

Calibrating full weight without a load (post-calibration)

Another way to calibrate the full weight is to use the post-calibration, or lock setup, feature.

This method is useful for operations that involve several trucks because it allows the calibration to be centrally controlled. The driver never needs to enter the setup programs, even for calibration.

After calibrating the tare weight, record two numbers:

- **The displayed weight** (what the meter displayed when the vehicle was fully loaded:

  _____

- **The actual weight** (what the certified platform displayed when the vehicle was fully loaded):

  _____

Once the truck or trailer is loaded and weighed, the driver only needs to give the operations manager the numbers. Then the meter can be calibrated whether or not a load is still on the truck.

To post-calibrate a load

Press <**SET**> to select "**Setup 1**."

Press <↑> until "**PCAL-1**" or "**PCAL-2**" is displayed.

Press <**OFF/ENT**>. The display will show a letter "**d**" at the left, followed by a series of numbers.

Press <↑> or <↓> to set the numbers to the **displayed weight**.

Press <**OFF/ENT**> to enter the displayed weight. The display will show a letter "**A**" at the left, followed by a series of numbers.

Press <↑> or <↓> to set the numbers to the **actual weight** from the certified scale.

Press <**OFF/ENT**> to enter the actual weight.

REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Calibrating the Meter

EXAMPLE Post-calibrating the full weight of channel 1 when the display weight is 43,500 and the actual weight is 45,000.

Press SET to select SETUP 1 → SEtuP 1

Press ↑ to select PCAL-1 → PCAL-1

Press OFF/ENT to set PCAL-1 value → EntEr

Display

Press ↑ or ↓ to set display weight at 43500 → d 43500

Press OFF/ENT to enter display weight of channel 1 → EntEr

Actual

Press ↑ or ↓ to set actual weight at 45000 → A 45000

Press OFF/ENT to enter actual weight of channel 1 → EntEr

 WARNING: Do not use sharp or pointed objects to press keys.

Recording Calibration Numbers

Reading and recording the calibration numbers, or "cal numbers," for each channel will save the time and expense of recalibration if the meter is replaced or if the numbers need to be available in an emergency.

The same calibration numbers can be used on the new meter as long as the same load cells or transducers and transmitters remain in place.

To read cal numbers from the current meter

Press <**SET**> to select "**Setup 1**."

Press <**↑**> until "**CAL 1**" or "**CAL 2**" is displayed.

Press <**OFF/ENT**>. The display will show a letter "**C**" at the left, followed by the cal number. Write it in the appropriate space below:

Cal number for channel 1 _____

Cal number for channel 2 _____

Press the <**AUTO/CAN**> key to cancel **SETUP 1** and return to the Normal Display Mode.

Recording Calibration Numbers

EXAMPLE Recording the cal number of channel 1.

Press SET to select SETUP 1 → SEtuP 1

Press ↑ to select CAL 1 → CAL 1

Press OFF/ENT to set CAL 1 value → EntEr

Cal

→ C 125000

Record Calibration number of channel 1

Press AUTO/CAN to cancel SETUP 1 → CAnCEL

Note

When reading the cal numbers, be sure not to touch the <↑> or <↓> key, or the entire system may have to be recalibrated.

 WARNING: Do not use sharp or pointed objects to press keys.

To enter cal numbers on a new meter

Press <**SET**> to select "**Setup 1**."

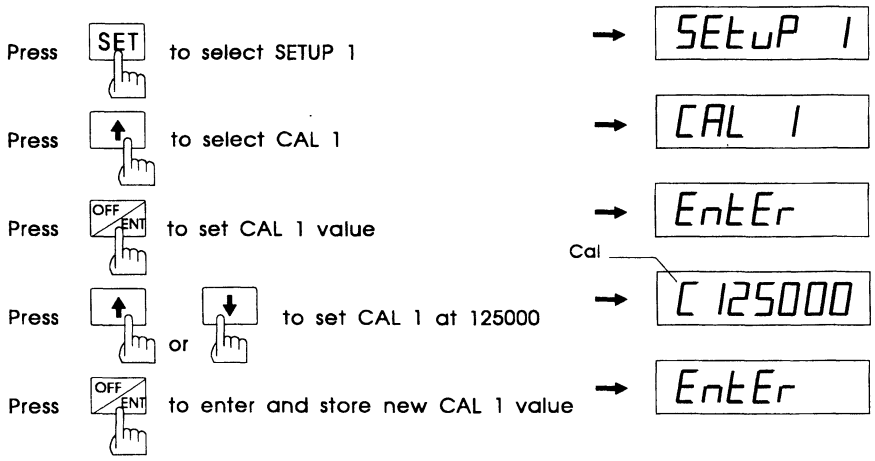
Press <↑> until "**Cal 1**" or "**Cal 2**" is displayed.

Press <**OFF/ENT**>. The display will show a letter "**C**" at the left, followed by a series of numbers.

Press <↑> or <↓> to set the cal number written on page 22.

Press <**OFF/ENT**> to enter and store the new cal number.

EXAMPLE Setting the cal number of channel 1 to 125,000.



REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Setting Load Limits (Set Points)

To create a visible reminder of load limits, establish a separate limit for each channel.

For example, if a truck needs to be emptied when the net payload reaches 40,000 pounds, set limit 1 at or just under 40,000. When the limit is reached, the display will alternate between showing the weight and showing the message "**L1 CH-1**" or "**L2 CH-1**," depending on the limits entered into the meter.

To establish an audible alarm, set limits and connect an optional external alarm or relay board. The alarm will be triggered when the limit is reached.

To set load limits

Press <**SET**> to select "**Setup 1**."

Press <↑> to select **L1 CH-1**, **L2 CH-1**, **L1 CH-2**, etc.

Press <**OFF/ENT**>. The display will show a letter "**L**" followed by the current limit.

Press <↑> or <↓> to select the desired limit.

Press <**OFF/ENT**> to enter and store a new limit. The display will show a letter "**h**" at the left, followed by a series of numbers.

EXAMPLE Setting the limit 1 of channel 1 to 44,500 and the hysteresis (or deadband) to 500.

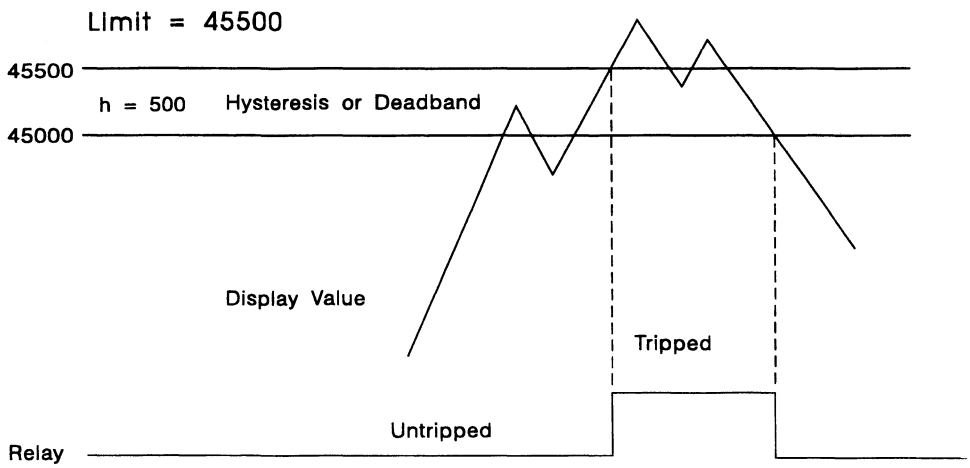
Press SET to select SETUP 1	→	SEtuP 1
Press ↑ or ↓ to select L1 CH-1	→	L 1 CH-1
Press OFF/ENT to set L1 CH-1 value	→	EntEr
Press ↑ or ↓ to set L1 CH-1 at 45500	→	L 45500
Press OFF/ENT to enter and store new L1 CH-1	→	EntEr
Press ↑ or ↓ to set Hysteresis at 500	→	h 500
Press OFF/ENT to enter and store new Hysteresis	→	EntEr

REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Setting Load Limits (Set Points)

A relay trip on a rising input signal is specified by the limit parameters **L1 CH-1**, **L2 CH-1**, **L1 CH-2**, **L2 Ch-2**, **L1 tot** and **L2 tot**.

The following figure illustrates a typical relay operation. A relay trips when the display is equal to or greater than the limit. The relay will be untripped if the display drops to a value that is less than the limit minus the **hysteresis** (**deadband**) value (**h**).



A typical relay limit operation

 WARNING: Do not use sharp or pointed objects to press keys.

Setting the Time, Date and Year

The time, date and year settings are all contained in the Setup 3 menu. These settings are useful to any driver using a printer or computer with the 9100GW meter.

To set the time of day

Press <**SET**> until "**Setup 3**" is displayed.

Press <↑> once. The word "**time**" will display.

Press <**OFF/ENT**>. The display will show the letters "**ti**" at the left.

To set the hour, press the <**1**> key, then use <↑> or <↓> to enter the correct time. Be sure the **A** (for a.m.) or **P** (for p.m.) is correct at the right of the display.

To set the minutes, press the <**2**> key, then use <↑> or <↓> to enter the correct time.

Press <**OFF/ENT**> to enter and store the correct time.

Setting the Time, Date and Year

EXAMPLE Changing the time of day from 06:45 p.m. to 07:30 a.m.

Press SET to select SETUP 3	→	SEtuP 3
Press ↑ to select Time	→	tI mI E
Press OFF/ENT to set Time	→	EntEr
Press 1 to set Hour	→	tI 0654P (Time)
Press ↑ or ↓ to set the correct Hour	→	tI 0754A
Press 2 to set Minutes	→	tI 0754A
Press ↑ or ↓ to set the correct Minute	→	tI 0730A
Press OFF/ENT to enter and store the correct Time	→	EntEr

 WARNING: Do not use sharp or pointed objects to press keys.

Setting the Time, Date and Year

To set the date

Press <**SET**> until "**Setup 3**" is displayed.

Press <↑> until the word "**date**" is displayed.

Press <**OFF/ENT**>. The display will show the letters "**dA**" at the left.

To set the month, press <**1**>, and use the <↑> or <↓> key.

Press <**OFF/ENT**> to enter and store the correct date.

Setting the Time, Date and Year

EXAMPLE Changing the date from September 08 to December 11.

Press SET to select SETUP 3 → SEtuP 3

Press ↑ to select Date → dAtE

Press OFF/ENT to set Date → EntEr

Date

Press 1 to set Month → dA0908

Press ↑ or ↓ to set the correct Month → dA 1208

Press 2 to set Day → dA 1208

Press ↑ or ↓ to set the correct Day → dA 1211

Press OFF/ENT to enter and store the correct Date → EntEr

WARNING: Do not use sharp or pointed objects to press keys.

To set the year

Press <**SET**> until "**Setup 3**" is displayed.

Press <↑> until the word "**year**" is displayed.

Press <**OFF/ENT**>. The display will show the letters "**Yr**" at the left.

Press <↑> or <↓> to set the correct year.

Press <**OFF/ENT**> to enter and store the correct year.

Setting the Time, Date and Year

EXAMPLE Setting year for 1993.

Press SET to select SETUP 3 → SEtuP 3

Press ↑ to select Year → YEAr

Press OFF/ENT to set Year → EntEr

Year

Press ↑ or ↓ to set the correct Year → Yr 1993

Press OFF/ENT to enter and store the correct Year → EntEr

 WARNING: Do not use sharp or pointed objects to press keys.

Locking the Setup

The 9100GW meter includes a feature that allows the setup to be locked once all three setup programs are in place and the calibration is complete. The setup can be locked with or without the addition of an ID number or password. The use of a password prevents tampering with the meter which may change the setup.

Note

When locked, the setup feature still functions in the Operate Mode. However, when the **<SET>** key is locked so that no one can make changes in the setup, an "**Err 1**" will briefly appear on the display if the **<SET>** key is pressed.

To lock the setup

Press **<SET>** until "**SEt OFF**" appears in the display.

Release **<SET>** and press **<OFF/ENT>** to lock the SETUP Mode. The display will flash "**SEt OFF**" three times.

The meter will now function normally for anyone reading weights and switching channels, but no one can affect the setup or calibration without first unlocking the meter.

EXAMPLE Locking the setup.

Press 

to select SET OFF → SEt OFF

Press 

to lock the SETUP mode → SET OFF will flash three times

The meter should return to the Normal Display Mode.

Setting the ID Number

Setting a new ID Number (Password)

Note

New meters are shipped from the factory with the ID number preset at "**n000000**."

To change the ID (Password) number to your own personal number, first turn the meter power off, then back on (with the power switch on the back of the meter). When the display shows either "**r32**" or "**r8**" (RAM SIZE), press the <**TOTAL**> and <**SET**> keys together and hold until "**Ent. id**" is displayed. "**Ent. id**" will display for 2 seconds and then be followed by "**n000000**".

Press <**OFF/ENT**>. The display will indicate "**Set id**" for 2 seconds and then be followed by "**n000000**". To set your ID number, select the digit you want to change by pressing the <↓> key, and the selected digit will flash. Adjust the value of the selected digit by pressing the <↑> (each digit ranges from 0 to 9). When the complete ID number is displayed, press the<**OFF/ENT**> key to store it.

Changing the Existing ID Number (Password)

*****IMPORTANT: Record the new ID number in a safe location after setting it.*****

Turn the power off, then back on (with the power switch at the back of the meter). When the display shows either "**r32**" or "**r8**" (RAM SIZE), press the <**TOTAL**> and <**SET**> keys together and hold until "**Ent. id**" is displayed. "**Ent. id**" will display for 2 seconds and then be followed by "**n000000**".

Enter the old ID number by selecting the digit you want to change by pressing the <↓> key, and the selected digit will flash. Adjust the value of the

Note

When the entered ID (password) number does not match the last entered number, the display shows "**Err 7**" for 2 seconds, then goes back to normal mode.

 WARNING: Do not use sharp or pointed objects to press keys.

selected digit(s) by pressing the <↑> (each digit ranges from 0 to 9). When the complete ID number is displayed, press the <**OFF/ENT**> key.

If the entered ID number matches with the stored ID number the display will show "**Set id**" for 2 seconds, followed by "**n000000**". To set a new ID number, select the digit(s) you want to change by pressing the <↓> key, and the selected digit will flash. Adjust the value of the selected digit by pressing the <↑>. When the complete ID number you desire is displayed, press <**OFF/ENT**> key to store it.

Unlocking the Setup

To unlock the setup

Make sure the meter is on.

Press the <**OFF/ENT**> key to turn the meter off.

Press the <**OFF/ENT**> key again and then quickly press the <**SET**> key when the meter shows "**9100 x.x**." At this point one of two messages will be displayed on the meter. If the ID was not previously changed from the factory default of **n000000**, the meter will show "**Set On**". If the ID was changed, the display will show "**Ent. id**" for two seconds followed by **n000000**.

If the meter shows **n000000**, the display will need to be changed to show the password ID before setup mode can be entered. To change the ID number, select the digit you want to change by pressing the <**↓**> key, until the desired digit flashes. Adjust the value of the selected digit by pressing the <**↑**> key. When the correct password ID number is displayed, press the <**OFF/ENT**> key to unlock the meter. The meter will now display "**Set On**".

If the ID number you entered on the meter does not match the stored ID number, the meter will show "**Err 7**" for two seconds and then return to normal mode.

Default ID = n000000

Resetting the Tare Weight

This procedure allows the resetting of the TARE WEIGHT without getting into SETUP 1.

Note

Make sure the truck or trailer is completely empty.

To reset the tare weight in channel 1

Push and hold the <**1**> key until the display shows "**TARE 1**," and then release the key. The proper tare will appear as long as the original display number is less than 2,000 from original tare.

To reset the tare weight in channel 2

Push and hold the <**2**> key until the display shows "**TARE 2,**" and then release the key. As above, the proper tare will appear as long as the original display number is less than 2,000 from original tare.

To reset the tare weight in the total of channels 1 and 2

Push and hold the <**TOT**> key until the display shows "**TARE 12**," and then release the key. As above, the proper tare will appear as long as the original display number is less than 2,000 from original tare.

Using Hand-Held Remotes

To turn on the Hand-Held Remote Mode, press and hold the <⬇> key until "**HHr On**" is displayed. To turn the mode off, press and hold the <⬇> key until "**HHr OFF**" is displayed.

Note

If a printer is connected and the Hand-Held Remote Mode is turned on, the resulting output to the RS-232 port may interfere with normal print functions. Turn off the Hand-Held Remote Mode before printing.

Printing Load/Weight Information

An external printer is required for printing information from the 9100GW meter.

Printing the current weight

To print the current weight from the Full Vehicle Weight Mode, press the <↑> key and release it when th display reads "**Print**."

```
================================
Gross Weight
    CH1: 20000 lb.
    CH2: 15500 lb.
    TOT: 35500 lb.
Date: 12/11/93 07:30 am
================================
```

Sample printout of gross weight.

Performing Tests of Channels 1 and 2

How to get in and out of test mode

Test channel 1 by holding down the **<1>** key and then pressing the **<OFF/ENT>**. The display will show "**test 1,**" followed by three numbers: "**0=XXXXX**," "**1=XXXXX**," and "**2=XXXXX**," where XXXXX is a five digit number. The display will continuously cycle among these five displays.

To get from the channel 1 test to the channel 2 test, simply hold the **<2>** key until "**test 2**" appears in the display. Test channel 2 by holding down the **<2>** key while pressing the **<OFF/ENT>** key. In the channel 2 test, you will see "**test 2**" followed by "**0=XXXXX**," "**1=XXXXX**," and "**2=XXXXX**."

Use this space to record the numbers you are testing:

Ch1 0= _____ 1= _____ 2= _____
Ch2 0= _____ 1= _____ 2= _____

To exit either test mode, press the <**CAN**> key. You will return to normal mode.

What the test numbers mean

Note

The information in these paragraphs applies to transmitters with the part number 81-00187-05 (or C152-5).

The test number "**0**" indicates test results for the transmitters for channels 1 and 2. The number for each of these should lie between **15000±5%** and **15500±5%**. If the displayed value is significantly outside of that range, the problem is likely to be in the transmitter rather than in the load cells.

 WARNING: Do not use sharp or pointed objects to press keys.

Performing Tests of Channels 1 and 2

If you are running the test on either channel with an empty truck, the value for 1, 2 should fall between **15000±5%** and **16000±5%**. If any one of the test values is significantly outside of that range while the truck is empty, and the transmitter for that channel is working normally, the corresponding load cell is likely to be malfunctioning.

For additional technical support, call your dealer or Structural Instrumentation at 1-800-638-5111.

Glossary and Appendices

 WARNING: Do not use sharp or pointed objects to press keys.

Glossary

Actual weight The weight measured by a legal and certified in-ground or platform scale.

Calibration Calibration is the process of accurately setting the scale system.

Calibration (cal) numbers Measurements of the tare weight, full weight and payload weight. Establishing the cal numbers is an essential first step to properly operating the meter.

Displayed weight The number on the display panel at any given time.

Full weight The gross or entire weight of the vehicle (or of each axle set) with its payload; one of the two weights used during calibration.

Grad Short for "graduation size"; an increment of weight, such as 5 kilograms.

Hysteresis (dead band) The allowable variance on a load's limit so that the load-limit alarm is not unnecessarily activated.

LED Light-emitting diode.

Limits (set points) The weights programmed into the system which set an upper limit for the truck or trailer's payload.

Net weight The weight of the payload only, not of the vehicle plus its payload.

Post-calibration A process of calibrating the weight once the weight has been removed from the truck. (This can be conducted only by authorized individuals.)

Tare weight The weight of an empty truck before the payload is added.

Transducer A mechanical device that's bolted to the suspension of the truck and that measures the bending of the suspension and converts that information into a weight reading.

Transmitter A device that sends a signal from the load cell and converts it to digital pulses that the meter can read and display.

Appendix A Error Messages

Err 0 Low input voltage. Check the battery; voltage must be more than 11.25VDC. Check all transmitter cables.

Err 1 Setup mode locked. See page 27 to unlock it.

Err 2 Insufficient RAM (random-access memory). Return the meter to the dealer or manufacturer for service.

Err 3 Meter recalibration required. If this error occurs every time the power is removed from the meter, servicing is required. Return the meter to the dealer or manufacturer.

Err 4 Defective ROM (read-only memory). Return the meter to the dealer or manufacturer.

Err 7 ID (password) number does not match with the ID (password) number stored in memory.

Err 10 Defective channel 1 transmitter. Disconnect cables at load cells; if **Err 10** still displays, replace transmitter.

Err 11 Faulty signal on the right of channel 1 transmitter. Check the right pig-tail or right load cell.

Err 12 Faulty signal on the left of channel 1 transmitter. Check the left pig-tail or the left load cell.

Err 13 Cable between the meter and the transmitter of channel 1 may be disconnected. Check for a secure connection.

Err 14 Cable of channel 1 has a short. Check cable.

Err 16 Channel 1 has a transmitter overload or load-cell short. Check cables, transmitter pig-tails and load cells.

Appendix A Error Messages

Err 20 Defective channel 2 transmitter. Disconnect cables at load cells; if **Err 20** still displays, replace the transmitter.

Err 21 Faulty signal on the right of channel 2 transmitter. Check the right pig-tail or the right load cell.

Err 22 Faulty signal on the left of channel 2 transmitter. Check the left pig-tail or the left load cell.

Err 23 Cable between meter and transmitter of channel 2 may be disconnected. Check cable for a secure connection.

Err 24 Cable of 2 channel has a short. Check cable.

Err 26 Channel 2 has a transmitter overload or load-cell short. Check cables, transmitter pig-tails and load cells.

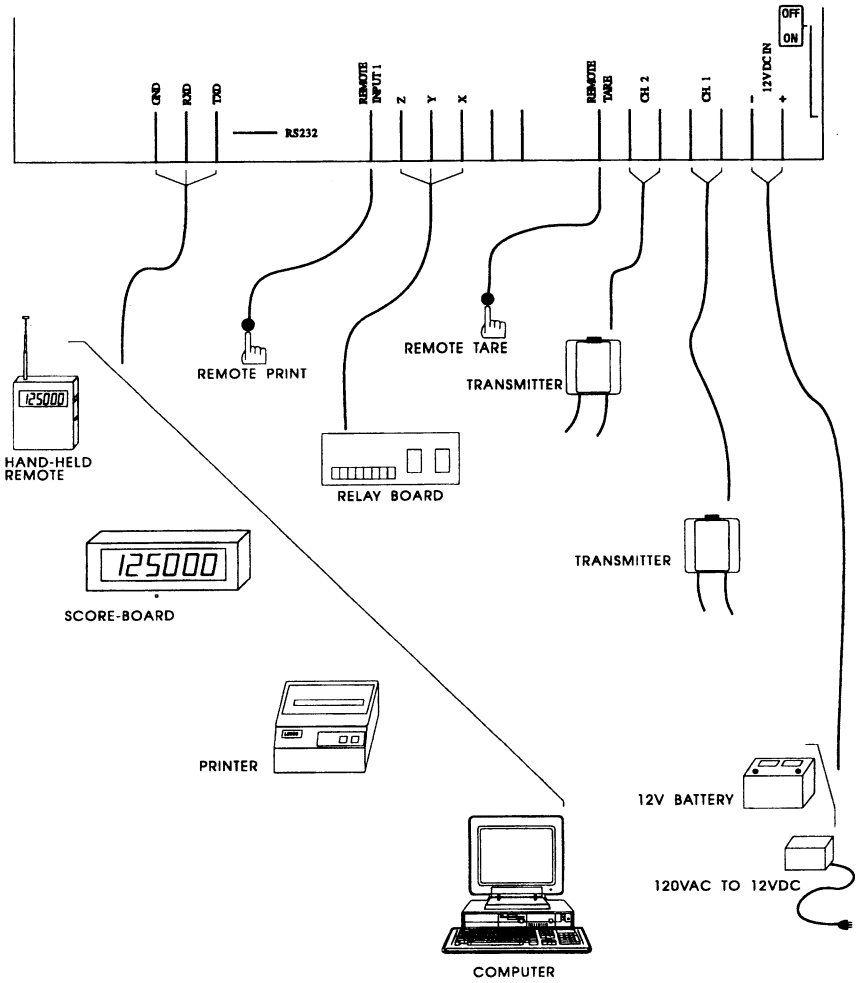
Err 30 The full weight calibration is smaller than the tare weight.

Err 31 Meter has been calibrated with no load or with too light of a load. Requires more load to calibrate full weight.

Err 32 Display must be less than 2,000 from original tare.

Err 33 The display weight or the actual weight is smaller than the tare weight.

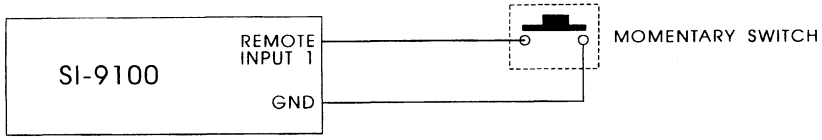
Appendix B Wiring Systems



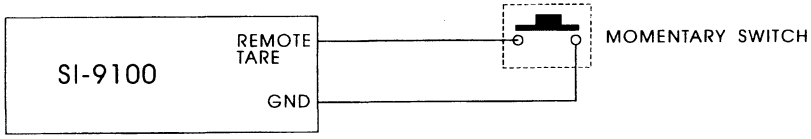
Typical 9100GW system wiring diagram.

WARNING: Do not use sharp or pointed objects to press keys.

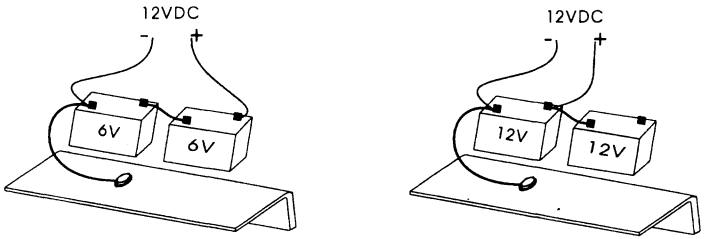
Appendix B Wiring Systems



Wiring diagram for remote print button.



Wiring diagram for remote tare button.



Battery connections.

REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Appendix C LED Display Symbols

SEtuP 1	Setup 1
tArE 1	Tare weight of channel 1
tArE 2	Tare weight of channel 2
FuLL 1	Full weight of channel 1
FuLL 2	Full weight of channel 2
CAL 1	Calibration number of channel 1
CAL 2	Calibration number of channel 2
PCAL-1	Post-Calibrate channel 1
PCAL-2	Post-Calibrate channel 2
L1 CH-1	Limit 1 of channel 1
L2 CH-1	Limit 2 of channel 1
L1 CH-2	Limit 1 of channel 2
L2 CH-2	Limit 2 of channel 2
L1 tot	Limit 1 of total
L2 tot	Limit 2 of total
SEtuP 2	Setup 2
LbS	Pounds
KGS	Kilograms

WARNING: Do not use sharp or pointed objects to press keys.

Appendix C LED Display Symbols

GrAd 20	Grad 20
GrAd 50	Grad 50
GrAd 100	Grad 100
SEtuP 3	Setup 3
tIME	Time
dAtE	Date
YEAr	Year

REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Appendix C LED Display Symbols

SEt On	Set on
SEt OFF	Set off
EntEr	Enter
CAnCEL	Cancel
Pr1 nt	Print

 WARNING: Do not use sharp or pointed objects to press keys.

Appendix C LED Display Symbols

HHr On	HHr on (Enables Hand-Held remote)
HHr OFF	HHr off (Disables Hand-Held remote)
rESEt	Reset
CH-1	Channel 1
CH-2	Channel 2
totAL	Total
Auto	Auto-Cycle
tESting	Testing

REMEMBER: Turn off the meter before charging the truck's battery or using jumper cables.

Appendix D Setup Menu Options

Setup 1

TARE 1	Set tare weight of channel 1
FULL 1	Set full weight of channel 1
CAL 1	Set calibration number of channel 1
TARE 2	Set tare weight of channel 2
FULL 2	Set full weight of channel 2
CAL 2	Set calibration number of channel 2
PCAL-1	Post-calibration of channel 1
PCAL-2	Post-calibration of channel 2
L1 CH-1	Set limit 1 of channel 1
L2 CH-1	Set limit 2 of channel 1
L1 CH-2	Set limit 1 of channel 2
L2 CH-2	Set limit 2 of channel 2
L1 TOT	Set limit 1 of total
L2 TOT	Set limit 2 of total

Setup 2

LBS	Display measurement in pounds
KGS	Display measurement in kilograms
Grad 20	Graduated increments of 20
Grad 50	Graduated increments of 50
Grad 100	Graduated increments of 100

Note

For Setup 2 the currently enabled feature will flash.

Setup 3

Time	Set time
Date	Set date
Year	Set year

 WARNING: Do not use sharp or pointed objects to press keys.

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