

# EWS31

## Electric Walkie/Rider Scale Kit Installation & User Manual





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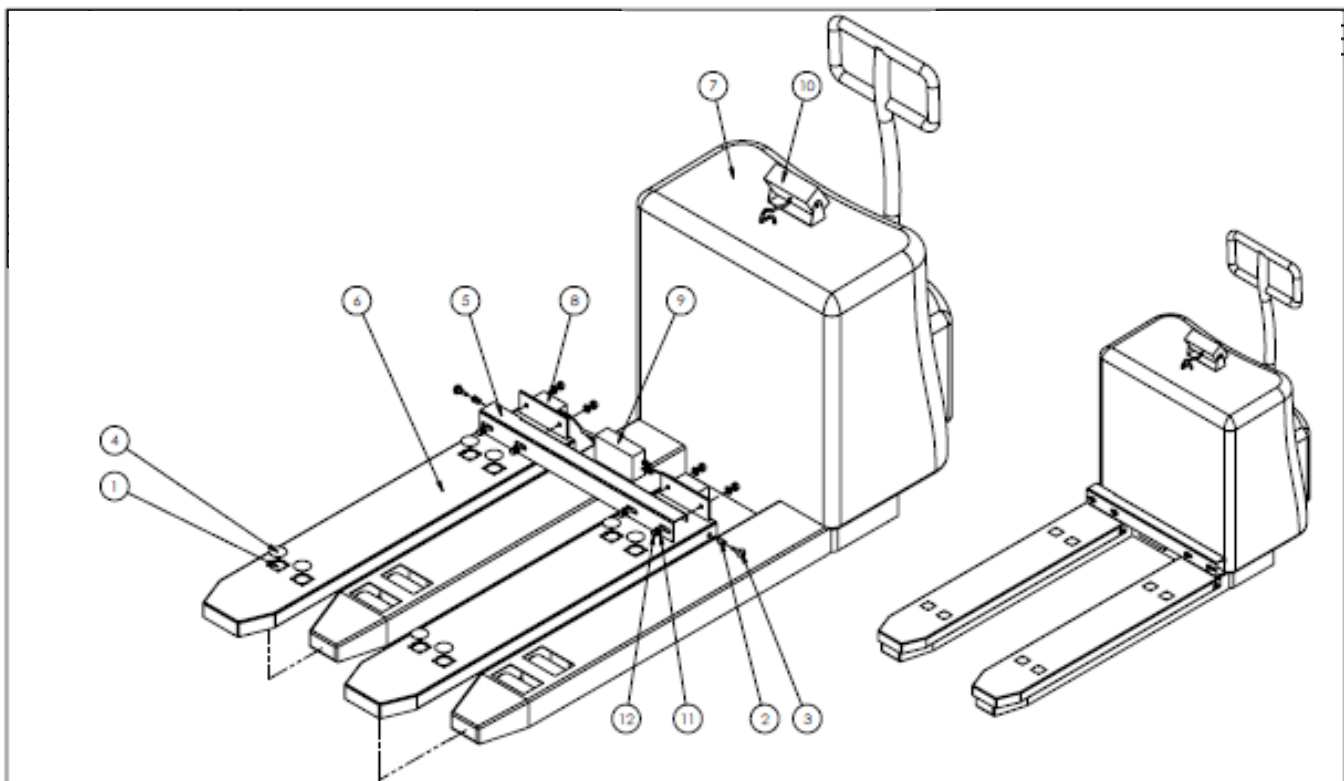
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# 1.0 GENERAL INFORMATION

## 1.1 System and Assembly Overview

The typical EWS31 utilizes eight metal film strain gauge load cells embedded into reinforced fork covers. These patented sensed covers add approximately 8mm (0.3") to the truck's normal lowered height. A lower height is achieved by reducing the load wheels diameter by machining.

- Includes one model WP9202 indicator (digital weight displayer) or optional displayer (i.e. WP9500)
- Includes 8 model 300-030 load cells, each 700  $\Omega$  impedance, 5-15 VDC excitation, full Wheatstone bridges 200,000 + PSI alloyed steel
- System accuracy based on evenly distributed load on 40" x 48" pallet 0 to 4,000 lb provides accuracy of 99.5% applied load +/- 10 lb
- For best accuracy, calibrate using a weight similar to typical loads
  - Example: if typical weight is approximately 2,000 lb then calibrate with 2,000 lb weight; consequently, the accuracy will be optimized at 2000 lbs.



Above picture shows a typical system parts. Picture may differ from actual product

Customer provides their data as requested on WPI data form

## 1.2 Best results guidance

**Caution;** Ensure the pallet has sufficiently large entry gap, a tight fit of the fork due to small gap will provide poor weight reading and can damage the scale

Best results are achieved by following these simple steps:

1. Calibrate and weigh loads centered on the forks and always utilize appropriate pallet for these procedures.
2. Keep a weighed object available for periodic weigh checks.
3. To verify scale accuracy, eliminate errors caused by binding by placing known weights onto the pallet placed above the truck's forks.

Note: the scale can be quickly removed from the walkie for non-weighing usage of walkie or to power wash walkie.

## 2.0 INSTALLATION

### 2.1 Wiring

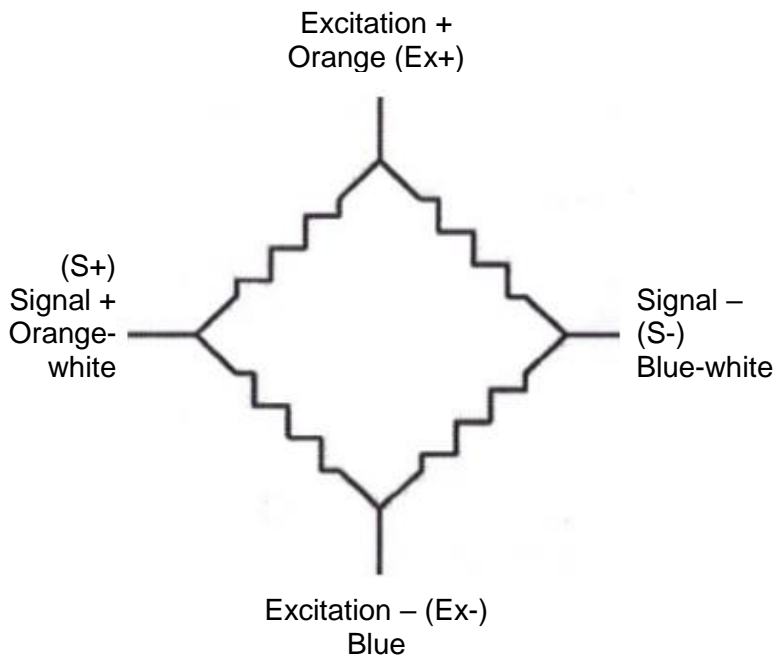
This system includes eight load cells (four per fork). Each load cell has two excitation lines and two signal lines. All similar wires of each load cell are paralleled.

Depending on truck design and technician preference, there are alternatives. Each of the eight load cells are junctioned in their boxes. The output cable of each box can either be paralleled for a single cable run to the digital display. Alternately, the cable from each junction box output can be wired to the display. Likely the two cable run is preferred for easier diagnostics.

Individual load cell specifications

|                   |                  |
|-------------------|------------------|
| Input resistance  | 700—750 $\Omega$ |
| Output resistance | 700 $\Omega$     |
| Temperature range | 10°C to 60°C     |

The walkie scale derives the power from the truck's battery pack



Resistance Test (Individual Cells)

0 – 750  $\Omega$  (nominal) EX+, Ex-

700  $\Omega$  S+, S-

All colours to ground resistance = Infinity

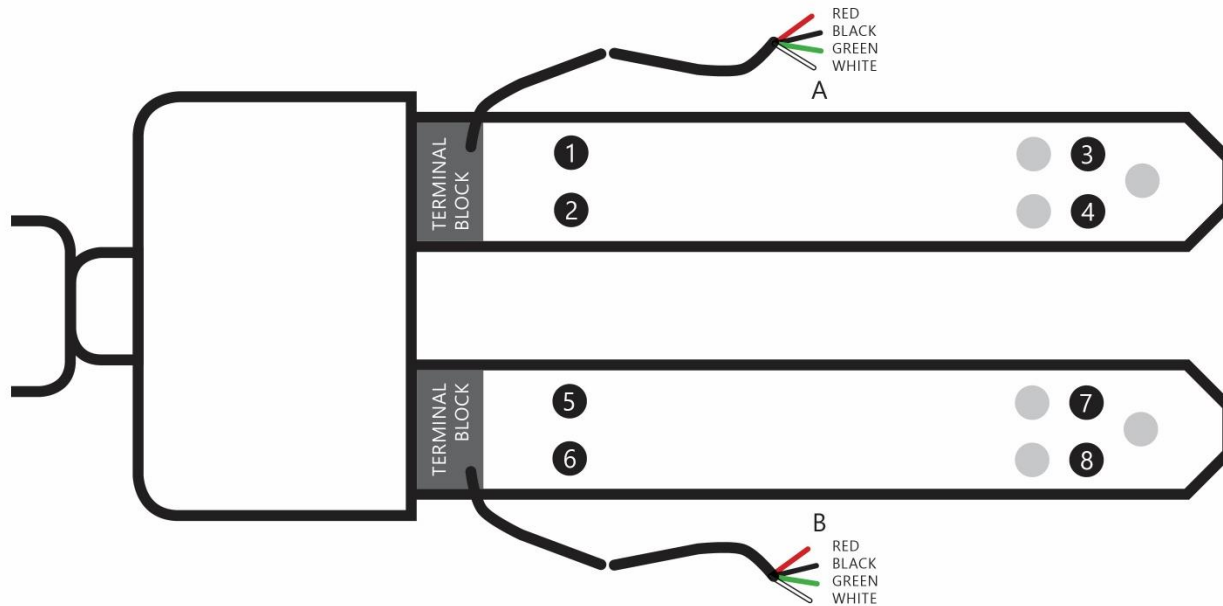
## 2.2 Circuitry Architecture

Similar to two parallel floor scales the dual fork covers are each equipped with 4 load cells. Each load cell is numbered from 1 to 8. Each bulkhead junction box located at the end of both fork covers contain a junction block that parallels the 4 load cells of each fork cover.

### Load Cell Specifications

|           |                            |
|-----------|----------------------------|
| Model     | 300-030                    |
| Capacity  | 1,500 lb @ 1.8 mV/V        |
| Circuitry | 700 ohm Wheatstone bridges |

## 2.3 Fork Cover Positioning



Note – A + B on drawing indicates lock location for spigot bolt(s). Junction box/terminal block location ohmage of combined (paralleled 5). Cell is Red to Black = 175  $\Omega$ , Green to White = 175  $\Omega$ . Each load cell is red to black 700  $\Omega$ , green to white 700  $\Omega$

System total resistance at display input

Red to Black = 88  $\Omega$

Green to white = 88  $\Omega$

## 2.4 How to Affix Weigh Covers to Electric Walkie Forks

Note: please assure that the forks are undamaged (straight) as warpage or bend in the fork will cause the system to malfunction.

Step 1: Slide the weigh cover assemblies onto the forks – make sure to butt the end of cover (the end being handled tight against the walkie’s fork toe).



Drawing may differ from product

Step 2: The socket drive setscrew has a pilot hole. Both outside threaded holes will house a swivel pin.

\*Some scale models use separate sensed covers that do not require the cross member shown in above photo.



## 2.4 How to Affix Weigh Covers to Electric Walkie Forks (continued)

Step 3: Insert set screw into outside threaded hole



\*Note: The junction box is not exactly as shown.

## 2.4 How to Affix Weigh Covers to Electric Walkie Forks (continued)

Step 4: With cover firmly in place (clamp if necessary) assure both fork toe and cover end butts. Then drill through pilot hole into sidewall of fork.



Step 5: Remove weigh cover to expose holes spotted into walkie fork. Use large drill; example 15/32" (12mm) or larger to open up spotted holes.

Step 6: Remove pilot hole set screws from weigh cover and reposition weigh cover upon forks.

Step 7: Insert swivel pins, into threaded holes, use lock washer to secure.

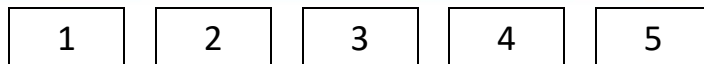
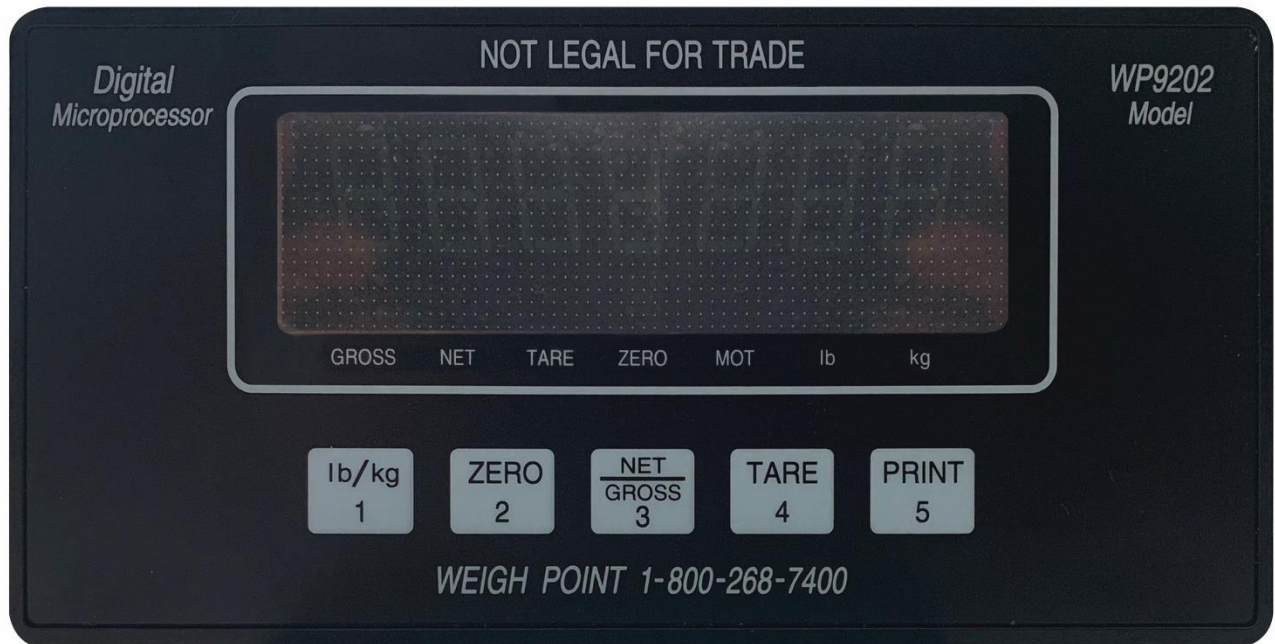
## 2.5 WP9202 Indicator

### Easy Operation

**ON:** Turn Indicator on (power switch at rear of indicator), 1 = ON, 0 = OFF

**TARE:** Place empty container on raised forks and press [4] (TARE) before weighing load.

**WEIGHING:** Raise load and read displayed weight.



Button position for operation

## 2.6 WP9202 calibration

The indicator is programmed at factory with appropriate parameter settings. To change parameters see EWS31 (WP9202) parameter sheet (page 21). Your Weigh Point system is custom programmed to work with the pallet truck by these simple steps in the event you wish to recalibrate system.

1. Slide the switch behind the rear inspection plate. (at the back of Display)
2. With key [1] depressed turn indicator on. See F1 displayed. Raise your forks off the ground. Ramp F1 to F15 with [5] to go forward, or [4] to go backwards.
3. With F15 displayed and no weight on forks press key [2] then press key [3]
4. Lift known load and press key [4] or [5] to display F16
5. With F16 displayed press [2]. Proceed with entering known weight using keys [4] (shift) and key [5] ramp numbers.
6. Press [3] to set weight,
7. Move slide Switch at rear of indicator to reset system.

Setting designate "A" are listed on page 22. These settings are accessed by powering the display, then slide switch to calibration mode whilst holding button 1 depressed, see A1 displayed (ramp button 4 or 5 to desired "A" position press button 2 to display "A" value. Alter "A" setting by ramping button 4 or 5, set "A" by pressing button 3.

Return to weighing by sliding switch to weigh mode position.

### 2.6.1 Calibration Weight

The most accurate procedure is to select a calibration weight at approximately normal load weights; example 2,00 lb (1,000 kg). Weighing on this system requires the load to be placed on a skid or pallet. Do not place the weight directly on the forks. Calibrating weight should be centered on the skid or pallet. Please refer to the WP9202 manual for calibration procedure.

Example: A 4500 lb. system will be utilized to capacity, however normal loads will be typically 2,300 lbs. Therefore, use weight of 2,300 lbs. or 1,500 lbs. This is simply a guideline; 1,000 to 2,000 lb. weights will work too.

Cautionary note: The pallet entry gap must allow sufficient fork clearance, any binding results in a weighing error.

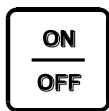
## 2.7 WP9500 Indicator



### 2.7.1 Keypad Functions Keys

The WP9500 has several function keys, all of which are selected via the front panel. The function key operations are discussed below. All the keys have audio feedback when a key is pressed. The sound volume can be set in calibration.

#### On/Off Key

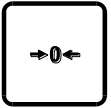


This is the ON/OFF button for the indicator. Pressing the switch once turns on the indicator. To turn off the indicator press the switch for 1 second. It is important to note that there is a power bypass switch option flag that can be set in calibration (parameter 10). If power bypass is enabled the indicator will always be on and cannot be turned off via the ON/OFF button. This option should be used if the indicator is used in process control applications where the indicator must power up running after a power outage.

When the indicator starts “WP9500 “ will scroll across the screen followed by the version number of the software. The indicator performs a full diagnostic of its internal circuits and will display any error messages if there is an internal problem with the indicator.

When the indicator is in calibration mode this key can be used to toggle between displayed weight and AD converter internal counts.

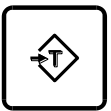
### ZERO Key



This key is used to zero the indicator. The scale cannot be zeroed if there is motion on the scale or the weight on the scale is out of the zero range. Three quick beeps will sound from the indicator if the zero key is unable to zero the indicator.

This key also functions as a ZERO key when the indicator is in calibration mode.

### TARE Key



This key is used for taring weight on the scale. A tare can also be entered from the keypad. To tare from the scale simply press the tare key and whatever the weight on the scale will be tared. The NET indicator light should be illuminated showing that the indicator is in net weight display mode.

To manually tare from the keypad enter the weight using the numeric keypad followed by the tare key. The indicator will only accept a tare from a stable and valid positive weight. An invalid tare will cause error message 41 to be displayed. Pressing the tare key will always overwrite any previously stored tare weight. Use the clear key to clear the tare weight.

It is important to note that the tare key can be disabled in the calibration menu using parameter 50.

### CLEAR Key



This will clear any previously entered tare values entered using the tare key. Clear will also function as an escape key to cancel any key entry operations.

### PRINT SELECT Key



Print select is a dual function key. Pressing the key will cause a ticket to be printed to a connected printer. If you have typed a numeric value from the keyboard followed by the PRINT SELECT key then the key acts as a function select key.

## 2.7.2 Special Keypad Functions

Keypad functions are selected by entering a numeric function code on the keypad followed by the PRINT SELECT key. Some functions are marked on the key itself. The most common functions are discussed below.

## Selecting scale channels

The WP9500 may have up to three independent scale channels. Press the channel number followed by the PRINT SELECT key as shown below.



To select channel 1 press 1 followed by the print select key.



To select channel 2 press 2 followed by the print select key.



To select channel 3 press 3 followed by the print select key.

Note: that by default only channel 1 is enabled. To enable channels 2 and 3 you must enter calibration mode and use parameter 98 to enable them. Trying to select a scale channel that is not enabled will display error message 40.

## Summing channels in TOTAL mode

Up to 3 channels may be summed together to display a total weight. An example of an application that may require this operation would be a truck scale with three sections. Each section would be a separate channel on the indicator allowing the operator to simultaneously record the total weight of the vehicle along with the individual axle weights of the truck.



To enter total mode press 4 followed by the print select key.

Total mode must be enabled before it can be used. Parameter 70 in calibration mode is used to enable the total mode function. Enter 1 followed by the TARE key to enable TOTAL mode. Total mode *cannot be used for legal for trade* applications in Canada.

Only channels that are enabled and calibrated with the same grad size, decimals and units of weight will be displayed in total mode. Total mode is indicated by illuminating more than one channel on the channel indicators. Channel 1 is always part of the total.

Example:

Ch1 and 3 are calibrated as 2000 x 2 lbs and Ch2 is calibrated to 500 x 0.2 lb .

When you press 4 followed by the PRINT SELECT key the CH1 and CH3 indicators will illuminate showing that the weight on the display is the sum of these two channels.

Channel 2 however is excluded from the total as it is calibrated in 0.2d instead of 2d for channels 1 and 3.

When the indicator is in TOTAL mode all the channel operations are combined. Pressing the ZERO button will zero all the channels that are part of the total. The TARE function will tare all channels simultaneously displaying the total net weight. The motion indicator and center of zero indicators will indicate the status of all the scales that are part of the total. For example scale 1 may be at the center of zero, but channel 3 might not be at zero. The center of zero indicator would then not illuminate reflecting that we are not at zero.

To set the indicator back to single channel mode, select a channel followed by the print select key.

### Scan mode

Scan mode allows the indicator to cycle between the scale channels that are enabled. The indicator will automatically switch the display to the next available channel and pause for 3 seconds before switching to the next channel. To stop scanning press a channel key followed by the print select key.



To enter scan mode press 5 followed by the print select key.

### Gross/Net



Pressing 6 followed by the print select key switches between displayed net weight and gross weight.

### Pound/Kilograms selection

To change the displayed units on the display press 7 followed by the print select key. The indicator will toggle the displayed units on the display from lbs to kgs or kgs to lbs. The units that the indicator uses as a default when turning on the indicator is determined by the power up setting set in calibration.



### TEST display

To test the display segments press 8 followed by the print select key. All the segments in the display will light up for a short period of time.





### 2.7.3 WP9500 calibration

The indicator is programmed at factory with appropriate parameter settings. To change parameters see EWS31 (WP9500) parameter sheet (page 13). Your Weigh Point system is custom programmed to work with the pallet truck by these simple steps in the event you wish to recalibrate system.

To calibrate a scale the indicator must be placed in calibration mode. Only qualified scale technicians should be performing these operations. The 3 scale channels are independent of each other and must be calibrated separately.

#### Placing the indicator into Calibration Mode



To calibrate channel 1 press 19 followed by the print select key.



To calibrate channel 2 press 29 followed by the print select key.



To calibrate channel 3 press 39 followed by the print select key.

The display will be showing a blinking “PASS” message. This prompts you to enter a 4 digit password. Key presses are not displayed on the display. If the 4 digit password sequence is correct then the indicator will automatically enter calibration mode.

The factory default for the password is 1111. This can be changed but we recommend keeping the password to the factory default. To change or view the password in calibration mode use parameter 96. Enter a 4 digit password followed by the TARE key.

(Note: to avoid using the password it is suggested you leave it at 1111 the factory default i.e. only setup your custom password if there is a security issue)

You have 30 seconds to enter calibration mode before the indicator cancels and returns back to normal weighing mode.

Calibration mode is indicated when there is a blinking 'C' displayed in the left most digit on the display.

## Exiting Calibration Mode



To exit calibration mode press 99 followed by the print select key. All calibration parameters will be saved and the indicator will restart in weighing mode.

Note: Channels 2 and 3 are disabled by default. Remember to enable them before exiting calibration mode by using parameter 98.

## Special Keypad function keys during calibration

### Selecting a calibration parameter.

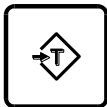
The WP9500 uses parameter numbers to access calibration functions. Each cal function has a unique number used to access that parameter.

In calibration mode the print select key now becomes the calibration function select key. Entering a calibration function number followed by the print select key selects a calibration parameter to edit.



Immediately after a function parameter has been entered followed by the print select key the value of that parameter will be displayed on the display for a short period of time.

### Editing a calibration parameter.



After selecting a cal parameter with the print select key a new value for that cal function can be entered. The TARE key now becomes an ENTER key for entering calibration parameters. Parameter values entered from the keypad must immediately follow with the TARE key to take affect.

Canceling a calibration parameter

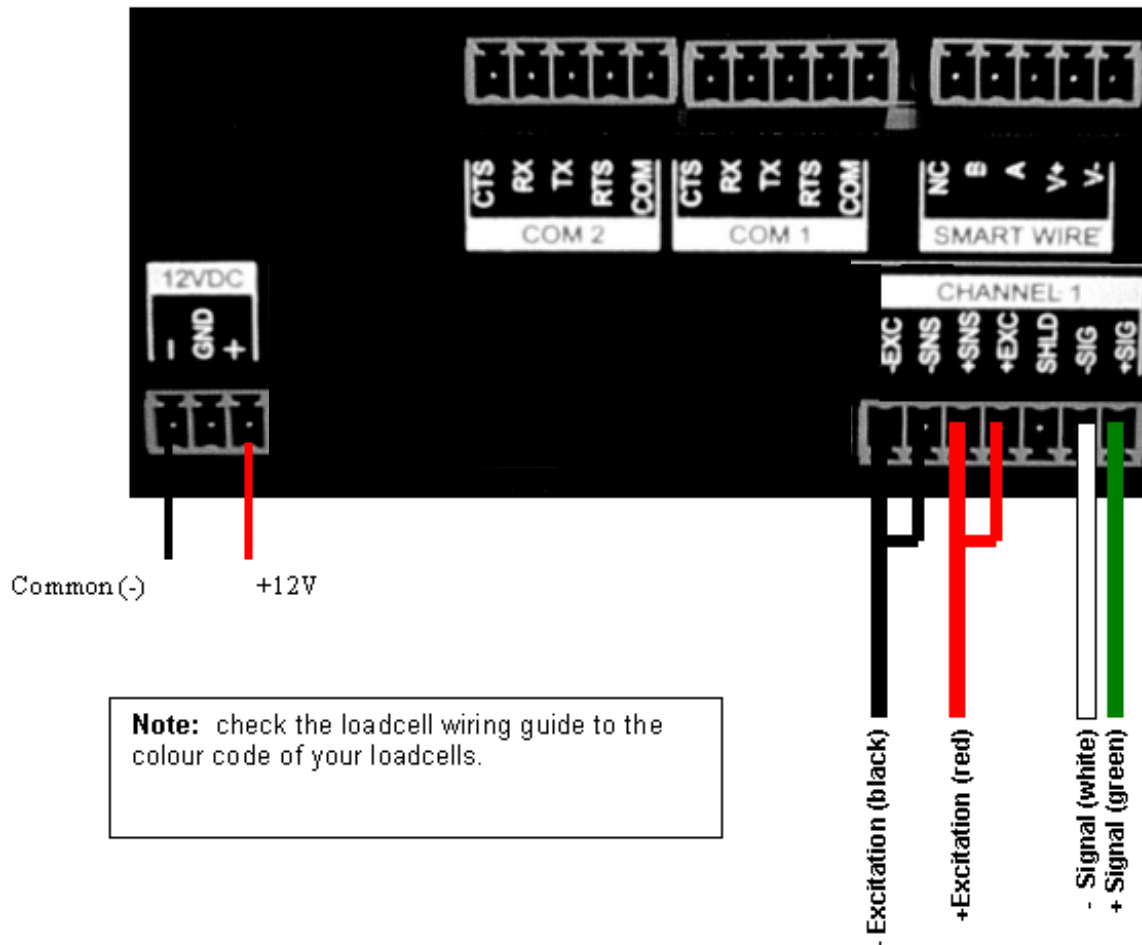


## 2.7.5 Power requirements

If you are using your own power supply, please note that the indicator requires a 12 VDC input. It will operate satisfactorily over an input range from 11.5 VDC to 17 VDC. Although the indicator has built-in voltage regulation, it most desirable that the input voltage be stable over the stated input range. Ensure that a fuse is installed and is of the correct size – AGC1 (1 amp fast blowing). No other fuse should be used.

## 2.7.6 Wiring of power and loadcells

Connect 12 VDC power and loadcells to WP9500 to terminal board as shown below.



## 3.0 SAFETY PROCEDURES

- Never overload your electric walkie more than 150% of capacity. Stay within rated capacity.
- Distribute the load evenly on the forks. Do not concentrate loads at one point or significantly load on one fork more than the other.
- Never put your feet, hands or any other body part under the frame assembly.
- Do not allow your walkie to drop from one level to another. Even a drop of 1" (25mm) more than doubles the effective load momentarily and results in a "Shock" which can bend or break components.
- Always ensure load is stable before moving to eliminate opportunity for load shift.
- Always use appropriate entry gap pallet.
- Always use a pallet to do weighing or quick test of your own weight. Do not stand or put weight on the fork covers directly.

## 4.0 MAINTENANCE

Performance of the walkie is generally non deteriorating, however, there are factors that affect accuracy and reliability. There are preventative maintenance procedures that can be performed by skilled technicians to revitalize the system and ensure trouble free operation of your system:

On a monthly basis, operators should fully raise the truck and visually inspect the following components:

- Front wheels for string, or any other debris caught in front wheel assembly.
- Ensure that the fork covers are secure and tighten swivels if loosened.
- Ensure that all dirt and dust is cleaned from the WP9202 display membrane (use only a soft cloth moistened with a non-abrasive cleaner for this procedure).
- Lift the covers and remove any debris found on the forks

Contact our sales department for more information about scheduled service checks.

### 4.1 Truck Maintenance

The scale covers can be removed to lubricate the fittings or simply raise the scale covers (these hinge).

There has been no alteration to truck, although the front drive wheels might have the diameter reduced to provide a lower height.

## 5.0 DIAGNOSIS & REPAIR

The system is akin to a standard commercial load cell weigh scale e.g. floor scale, truck scale, etc. Therefore your local scale service company will be able to diagnose and calibrate.

The scale company will note the following specifications of the weigh bridge. There are eight load sensors each 700 ohm impedance. These sensors are paired into the quick disconnect terminal strips. The digital indicator manual is provided for calibration procedures.

## 6.0 WARRANTY

Weigh Point provides free repair or replacement of faulty material and workmanship of the weigh system for one-year. Travel and shipping costs excluded. No other warranty is expressed or implied.

## 7.0 EWS31 (WP9202) PARAMETERS

| Code: | Name:                   | Description:  | Code/Value:   |
|-------|-------------------------|---|---|
| F1    | Full Scale              | Full Scale Number of Division x Value of Division   | 5000 1000 1500 2000 2500 3000<br>4000 5000 6000 8000 10000<br>15000 20000 30000 |
| F2    | Division                | Minimum difference between two weighing reading   | 1 2 5 10 20 50  |
| F3    | Decimal Pt.             | Decimal point position  | 0 , 0.0, 0.00, 0.000, 0.0000,<br>0.00000  |
| F4    | Overload Limit          | Display will show " _OL_" if the reading is greater than the value  | 100%F.S 110%FsS   |
| F5    | Zero Tracking           | Display maintain zero while the reading is less than this selection and stable  | 0.5d 1d 3d 5d OFF   |
| F6    | Zero Range              | The range of zero-setting operation is enabled  | 2%F.S 100%F.S   |
| F7    | Motion Band             | The MOT LED light out and the weighting operation (I.e. zero, tare) is enable while motive reading, is not exceeded the limit of this selection   | 1d 3d 5d 10d  |
| F8    | Digital Filter          | L- light, M-middle, H-heavy. Select heavier, the reading is stable but slower   | L M H   |
| F9    | Calibration Unit        | Select unit at calibration. You should use "lb." weights if you select "lb."<br><br>Select unit at calibration. You should use "kg." weights if you select "kg.".                         |   |
| F10   | Communication Mode      | 0-standard RS-232 output 1-printout   | 0 1   |
| F12   | Print Ticket            | Print ticket Mode:<br>0-Print "GROSS, NET,TARE"<br>1-Print displayed weight   | 0 1   |
| F15   | Zero Calibration        | Show internal codes at zero (no load on platform) and wait for MOT LED light out, press SET key to save zero calibration value.   |   |
| F16   | Span Calibration        | Enter the value of current test weights on platform via direction keys and wait for MOT LED light out, press SET key to save span calibration value. See appendix A if display show EER 1 |   |
| F17   | Manual Zero Calibration | Check or re-establish zero calibration value.   |   |
| F18   | Manual Span Calibration | Check or re-establish span calibration value.   |   |

To change these settings, place in calibration mode (see page 11)

### 7.1 Typical Settings "A" Scale

1. When the power is ON, press [1] and hold, then slide the switch behind the rear inspection plate. The displays shows A1
2. Ramp A1 to A8 with keys [5] to go forward, or key [4] to go backwards
3. Press key [2], shows value to change value use key [4] or [5]

4. To save/accept displayed data press key [3]

Parameter "A" Scale

| <b>Code:</b> | <b>Name:</b>          | <b>Description:</b>  | <b>Code/Value:</b>     |
|--------------|-----------------------|--|------------------------|
| A1           | Baud Rate             | Set baud rate of the RS-232 serial communication when F10 is 0   | 2400<br>4800      9600 |
| A2           | Communication Mode    | "c"=continous mode<br>"d"=command mode   | C d                    |
| A3           | Data Bits and Parity  | 8N: 8 data bits with no parity bit and 1 stop bit<br>7O: 7 data bits with odd parity bit and 1 stop bit<br>7E: 7 data bits with even parity bit and 1 stop bit   | 8N    7O 7E            |
| A4           | Disable the lb/kg Key | "0"= Disable the lb/kg key<br>"1"= Enable the lb/kg key  | 0   1                  |
| A5           | ID No. Enable         | "0"= Disable the ID No.<br>"1"= Enable the ID No.  | 0   1                  |
| A6           | ID No. Entry          | Pressing [←] and [→] key to input ID No. and pressing the [SET] key to store and return to A6. Displaying Axxxxx. Prints ID flashing.      No. Column after ID No. begin set, (see APPE. ) 6-bit ID No. can be inputted at most when |                        |
| A7           |                       | 0 – typical<br>1 – counting feature<br>2 – peakhold<br>3 – accumulation mode<br>4 – accumulation and peakhold  |                        |
| A8           |                       | Set threshold value  |                        |

Note: Factory values for A7 = 4  
A8 = 100

accumulation and peakhold  
peak detect threshold is 100 lb.

## 7.2 Error Codes

| ERROR CODE | PROBLEM  | SOLUTION  |
|------------|--|---|
| Err1       | Input signal of the load cell is too low.                                  | Examine whether there are items on the scale.                           |
| Err2       | EEPROM Error   | Change EEPROM   |
| Err3       | Key-in weight value in calibration mode is larger than full scale capacity | Reduce weight value in calibration mode or accrete full-scale capacity. |
| Err4       | Calibration yard is too large  | Reduce calibration divisions.   |
| Err5       | Unit selected is wrong   | Change F9 or F11  |
| Err6       | Decimal position selected is wrong   | Change decimal position in F3   |
| Err7       | The weight of one sample is too light                                      | Check a greater sample item until display is 1                          |
| __OL__     | Overload   | Materials too much  |
| =====      | A/D not working  | Examine the wire of the load cell, if well, change the print panel.     |

Date: \_\_\_\_\_ Indicator S/N: \_\_\_\_\_ System S/N: \_\_\_\_\_

Load Cell Type: \_\_\_\_\_ Load Cell S/N: \_\_\_\_\_

## 8.0 EWS31 (WP9500) PARAMETERS

The following parameters are standard for getting a scale up and running.

### Decimal Point Position - Parameter 2

Description: Sets the number of decimal places to correspond with Grad Size.

| <b>PARAMETER VALUE</b> | <b>DISPLAY EXAMPLE</b> |
|------------------------|------------------------|
| 0 (default)            | 123456.                |
| 1                      | 12345.6                |
| 2                      | 1234.56                |
| 3                      | 123.456                |
| 4                      | 12.3456                |

### Graduation size - Parameter 3

Description: The number the scale will count by.

| <b>PARAMETER VALUE</b> | <b>DISPLAY EXAMPLE</b> |
|------------------------|------------------------|
| 1 (default)            | 1, 2, 3, etc.          |
| 2                      | 2, 4, 6, etc.          |
| 5                      | 5, 10, 15, etc.        |
| 10                     | 10, 20, 30, etc.       |
| 20                     | 20, 40, 60, etc.       |
| 50                     | 50, 100, 150, etc.     |
| 100                    | 100, 200, 300, etc.    |



## Scale Capacity - Parameter 4

Description: True Scale Capacity. The Zero Range is calculated from this value.

Accepted Parameter Values: **Any number (weight) up to 999999.**

**EXAMPLE:** SET UP A 5,000 LB. CAPACITY SCALE WITH A GRADUATION SIZE OF 0.5 LB. ON CHANNEL 1.

1. Enter Calibration Mode for Channel 1.

19P →  → 1111 →

2. Select the weighing units for Set-Up by pressing **7** followed by the **[PRINT/SELECT]** key. Either the **lb** or **kg** LED indicator LED will illuminate.
3. To select Decimal Point Position, press **2** on the keypad followed by **[PRINT/SELECT]**. The display will show the current position (default: 0).

2P →

4. For 1 decimal place, press **1** on the keypad followed by the **[PRINT/SELECT]** key.

1P →

5. To select Graduation size, press **3** on the keypad followed by **[PRINT/SELECT]**. The display will show the current Graduation size (default: 1)

3P →

6. For a grad size of half a pound, press **5** on the keypad followed by **[PRINT/SELECT]**.

5P →

7. To select Scale Capacity, press **4** on the keypad followed by **[PRINT/SELECT]**. The display will show the current Scale Capacity.

4P →

8. For a Scale Capacity of 5,000 lb., enter **5000** on the keypad followed by the **[PRINT/SELECT]** key.

5000P

**The Scale is now ready for calibration and/or more advanced Set-Up.**

### *Scale Calibration Parameters*

The following parameters relate to basic Scale Calibration.

## **Scale calibration units - Parameter 7**

Description: Selects measurement units for calibration. Test Weight units should match Calibration units. Verify on indicator display.

- Toggle weighing units by pressing **7** followed by the **[PRINT/SELECT]** key.

## **Deadload Scale - Parameter 12**

Description: Identifies the weight of the scale itself. Before spanning the scale for the first time, the scale must be deadloaded.

### **EXAMPLE:**

1. Ensure that all test weights are removed from the weighing platform and that the weight is stable.
2. Enter **12** followed by the **[PRINT/SELECT]** key. The Indicator Password will be required (Factory default "1111").

**12P** → 

|      |
|------|
| Pa55 |
|------|

 → **1111** → 

|        |
|--------|
| -dead- |
|--------|

3. After the deadload is complete, the indicator will briefly display the Deadload Value in raw A/D counts before returning to weight display mode.

|      |
|------|
| 1933 |
|------|

 → 

|       |
|-------|
| c 0.0 |
|-------|

Older WP9500 software versions (1.44 and older) will not prompt for the Password when the scale is deadloaded. Instead, the “Reconfirm” screen appears.



r

At this point, press [1] followed by the [PRINT/SELECT] key to activate the deadload function.

1P → -dead-

## Set Span - Parameter 13

Description: Calibrates (Spans) the scale with a known Test Weight.

### EXAMPLE: IN CALIBRATION MODE, SPAN A SCALE TO 5,000 LBS.

1. Verify that scale is reading zero with the **Centre of Zero** LED illuminated.

C 0.0

2. Place Test Weights on the scale (**5,000 lbs**).
3. Enter **13** followed by the [PRINT/SELECT] key. Once activated, the current displayed weight will be frozen on the display.

13P → C4276.5

4. Enter the known test weight value followed by the [PRINT/SELECT] key. The display will show the new, corrected weight on the scale.

5000P → C5000.0

## 8.2 Error Messages

- 1 Invalid parameter number for calibration mode
- 2 Graduation size invalid
- 3 Decimal Position Invalid
- 4 Flag values must be 1 for 'ON' and 0 for 'OFF'
- 5 Push to Zero Window must be 0-99
- 6 Zero tracking must be 1-99 or 100, 200, 300.
- 7 Only 1 will reset parameters
- 8 Only 1 will reset span table
- 9 Span exceeds maximum capacity or span too small
- 10 IZSM value can be 1 for ON and 0 for OFF
- 11 Test Weight units must be 0=lb or 1=kg.
  - 12 Motion settle time out of range 1-100
  - 13 Power on units may only be 0=lb, 1=kg.
  - 14 Invalid Time entry HH.MM.SS
  - 15 Invalid Date entry YY.MM.DD
  - 16 Motion value is out of range
  - 17 Press tare to increment span table, any other key invalid
  - 18 Press tare to decrement span table, any other key invalid
- 19 Span table cannot be decremented passed 1
- 20 Parameter memory write error, indicator requires service
- 21 Parameter checksum error, Parameters have been lost.
- 22 Program check fault, indicator requires service
- 23 Invalid Serial Port speed setting.
- 24 Invalid Serial Port Parity parameter
- 25 Cannot increment Span Table any further
- 26 Entered offset larger than Capacity
- 27 Invalid String mode for com port
- 28 Power on Zero warning 0=Off, 1=On
- 29 Channel enable is 0=Off and 1=On
- 30 Only 1 will set the deadload
- 31 Sound Volume can be between 0-3
- 32 Keypress feedback can be 0=OFF or 1=ON
- 33 Invalid Com String mode parameter
- 34 Invalid Com Port Interface value
- 35 Scale must be at zero before entering a keyboard tare (see parameter 71)
- 36 Scale not ready to print
- 37 Channel 1 cannot be disabled
- 38 Invalid Print Select Function Number
- 39 \*
- 40 Scale channel is not enabled
- 41 Pushbutton Tare is invalid (Over, Motion, or disabled)
- 42 Keyboard tare available on channel 1 only
- 43 Tare greater than capacity
- 44 Invalid Password number range, can only be 0000-9999.
- 45 Parameter 1 to enable password, 0 to disable
- 46 Only a value of 0, 1 or 80 is accepted as a parameter
- 47 \*
- 48 Invalid Filter value
- 49 Invalid Filter Fast step value
- 50 Invalid Fast step Sensitivity
- 51 Invalid Fast step on/off
- 52 Invalid Tare Function Parameter 0-4

53 Invalid input for AD voltage range  
90 Calibration checksum failed  
100 SRAM failure  
110 RTC RAM failure  
112 Clock Reset  
115 Clock Failed

120 Battery flat or does not exist  
121 Battery must be removed  
130 COM1 loop back test failed  
131 COM2 loop back test failed  
133 COM driver chip failed

140 FLASH memory erase failed  
141 FLASH memory write failed  
151 Database CRC failed  
152 CAL copy CRC failed  
153 Ticket Buffer CRC failed  
150 Audit trail CRC failed  
154 DPAGE stack overflow

## **185 SMART wire COM link not responding**

SmartWire is enabled and is trying to find devices. This error will occur as a result of not having devices connected to the Smart Wire port or a bad wire connection. Hit clear to bypass this error message. To disable smart wire use parameter 59 in weight mode. Enter 0 to disable smart wire and 1 to enable it again.

186 SMART wire set-point checksum failed  
191 Channel 1 AD converter not responding  
192 Channel 2 AD converter not responding  
193 Channel 3 AD converter not responding

## **Error message “Cannot Print”**

*Note: If you try and print and there is motion, or the scale is overweight then a message will scroll across the display “Cannot Print”. It is important to understand that if you are in Channel 1 and Channel 3 is overweight, or not connected to a load cell then you still will get the cannot print message even if you are not on Channel 3. Make sure that unused channels are disabled in Calibration using parameter 98.*

## 8.3 Trouble Shooting WP9500

| SYMPTOM                           | POSSIBLE PROBLEM  | PROBABLE SOLUTION   |
|-----------------------------------|---|---|
| WP9500 will not power up          | <ul style="list-style-type: none"> <li>External power source failure</li> <li>12V Power Supply Failure</li> </ul>   | <ul style="list-style-type: none"> <li>Check circuit breaker, power outlet</li> <li>Replace Power Supply</li> </ul>   |
| WP9500 will not turn off          | <ul style="list-style-type: none"> <li>[ON/Off] key disabled</li> </ul>   | <ul style="list-style-type: none"> <li>The [On /OFF] key may be disabled for Process Control Applications.</li> <li>Consult service Technician 1-800-268-7400</li> </ul>  |
| Display shows: uuuuuu             | <ul style="list-style-type: none"> <li>The loadcell cable to WP9500 has been disconnected or possibly severed. No Signal Input.</li> <li>Sense lines from loadcell have not been terminated.</li> </ul> | <ul style="list-style-type: none"> <li>Check terminal for disconnection. If loadcell cable is damaged, call for service.</li> <li>Connect Sense wires or jumper +EXC to +SNS and -EXC to -SNS</li> </ul>                  |
| Display shows: AAAAAA             | <ul style="list-style-type: none"> <li>Loadcell voltage range problem</li> </ul>  | <ul style="list-style-type: none"> <li>Call for Service</li> </ul>  |
| Display shows: EEEEE<br>Or 888888 | <ul style="list-style-type: none"> <li>The scale has been overloaded.</li> </ul>  | <ul style="list-style-type: none"> <li>Remove weight from the scale immediately.</li> <li>Check for Service if necessary.</li> </ul>  |
| Display shows:<br>-----           | <ul style="list-style-type: none"> <li>Scale selections have not been allocated. (Digital System only.)</li> </ul>  | <ul style="list-style-type: none"> <li>Call for Service</li> </ul>  |
| Will not Print                    | <ul style="list-style-type: none"> <li>The Scale Channel you are trying to print on is in <b>MOTION</b> or <b>OVERLOADED</b>.</li> </ul>  | <ul style="list-style-type: none"> <li>Wait for scale to settle or remove excess load.</li> </ul>   |
| Cannot Zero Scale                 | <ul style="list-style-type: none"> <li>[ZERO] key disabled</li> <li>Scale in Motion</li> <li>Weight on Scale &gt; 2% of Scale Capacity</li> </ul>   | <ul style="list-style-type: none"> <li>Must be enabled in Calibration.</li> <li>Wait for scale to settle</li> <li>To zero more than 2% Zero Range must be increased in Calibration. Consult service technician</li> </ul> |
| Cannot Tare Scale                 | <ul style="list-style-type: none"> <li>Tare function disabled</li> <li>Scale in Motion</li> <li>Cannot tare a negative weight</li> </ul>  | <ul style="list-style-type: none"> <li>Must be enabled in Calibration</li> <li>Wait for scale to settle</li> <li>Remove weight, clear scale and re-enter tare.</li> </ul>   |
| Cannot Select a Scale Channel     | <ul style="list-style-type: none"> <li>Scale Channel is disabled</li> </ul>   | <ul style="list-style-type: none"> <li>Scale channels (other than CH 1 ) must be enabled in Calibration mode. Consult technician.</li> </ul>  |
| Display segments missing          | <ul style="list-style-type: none"> <li>LED may need replacement</li> </ul>  | <ul style="list-style-type: none"> <li>Use the TEST DISPLAY function to confirm. Call for service</li> </ul>  |
| No response to Key presses.       | <ul style="list-style-type: none"> <li>Keypad may need replacement</li> </ul>   | <ul style="list-style-type: none"> <li>Remember that some keypad functions may be disabled. Call for service.</li> </ul>  |





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