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1. Introduction

This manual contains installation and operation instructions for the JWI-700W Series weighing indicator. Please read the manual completely before installation and operation.

2. Precautions

- ⊙ Place the indicator on a flat and stable surface .
- ⊙ Verify that the input voltage and the plug type matches the local AC power supply, see 3-4.
- ⊙ Warm up for 15 minutes before using it the first time .
- ⊙ Keep the scale away from EMI noise, strong wind and vibration, which might cause incorrect reading.
- ⊙ Avoid sudden temperature changes (suitable operating temperature is between -5℃~40℃.)
- ⊙ Disconnect the power supply when cleaning the scale .
- ⊙ Do not immerse the scale in water or other liquids .
- ⊙ Service should be performed by authorized personnel only.

3. Product Introduction

3-1 Specifications & Features

Specifications

Model	JWI-700W
Input sensitivity	0.13uV/DIV
Input voltage range	-0.5mV to 16.5mV
Load cell excitation	DC 5V ,Up to 8 ×350 ohm load cells
System linearity	0.003% of full capacity
Input impedance	10M ohm or more
A/D conversion mode	Δ - Σ
A/D internal resolution	700,000 count
A/D conversion speed	8 times/second
External display resolution	15,000 count
Display	6 digits
Power supply	AC 110V/220V (AC \pm 10%) or Rechargeable battery (6V/4A)

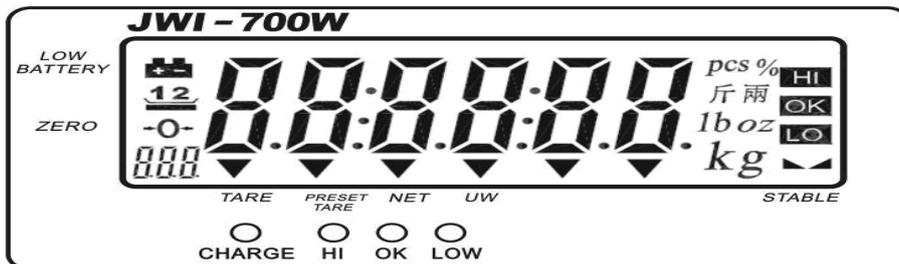
Features

- ⊙ Backlit LCD display with prominent 29mm high digits
- ⊙ Up to 1/30000 resolution
- ⊙ Supports up to eight 350 ohm analog load cells
- ⊙ Gross or net weight switchable

- ⊙ Low battery /Charging indication
- ⊙ Flexible unit switching: Kg, lb, 斤兩, g, oz, 斤, pcs
- ⊙ Adjustable stand for bench scale
- ⊙ Weight accumulation max 20 pieces
- ⊙ Manual tare, pre-tare, simple counting, PEAK HOLD Check weighing and accumulation
- ⊙ Adjustable filtering level for weighing under various conditions
- ⊙ Single point or linear calibration available
- ⊙ Rechargeable battery or AC power, with power-saving Auto-shut off function
- ⊙ Suitable for a wide range of bases and load cells
- ⊙ Adjustable capacities, Resolutions and parameters
- ⊙ Enclosed PVC dustproof cover
- ⊙ CE approved

3-2 Front Panel

3-2-1 Display



Low battery indication



Tare or Preset Tare Indication



Center of Zero Indication, The zeroing range is $\pm 2\%$ of scale capacity.



Auxiliary display (parameter, accumulated number of weighments)

TARE Symbol “▼” points at “**TARE**” when the weight of the container is tared .

Preset Tare Symbol “▼” points at “**Preset Tare**” when Tare value entered via keypad.

NET Net weight--Gross weight minus Tare. Symbol “▼” points at “**NET**” when Tare or Preset Tare action are done.

UW Symbol “▼” points at “**UW**” when calculated unit weight is lower than 4/5 of scale division. Unit weight is too small for ensuring accurate quantity calculations.

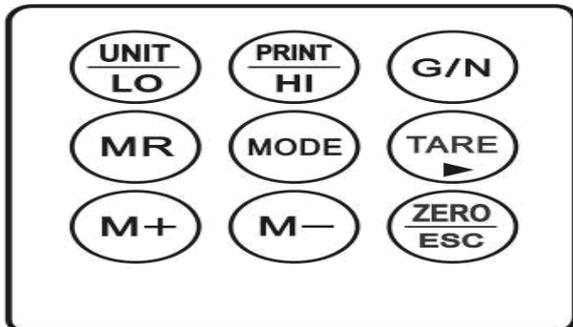
PCS %
斤兩
lb oz
kg Units of measure

- HI** The weight on the weighing pan is greater than the upper limit(with HI lamp on)
- OK** The weight on the weighing pan is between upper and lower limits.(with OK lamp on)
- LO** The weight on the weighing pan is smaller than lower limit. (with LOW lamp on)
- ◀▶ Stable indication



CHARGE Charge Lamp

3-2-2 Keyboard



UNIT/LO key

- ☆ Short press steps through activated weighing units, release on desired one.
- ☆ Long press lower limit initials lower limit setting
- ☆ Shift key(shift leftwards)

PRINT/HI key

- ☆ Short press sends data a RS232 port
- ☆ Long press lower limit initials lower limit setting
- ☆ Shift key (shift rightwards)

G/N key

- ☆ Displays gross and net weight by turns
- ☆ Stores current condition

MR key

- ☆ Memory recall
- ☆ Switches on /off check weighing function
- ☆ Long press enters max. Capacity setting mode

MODE key

- ☆ Long press to initial function setting.

TARE key

- ☆ Tares the weight of the container or accepts the keypad tare entries
- ☆ Shift key (shift rightwards).

M+ key

- ☆ Adds the indicated weight into Accumulation memory
- ☆ During editing selects the next higher option or increases setting values.

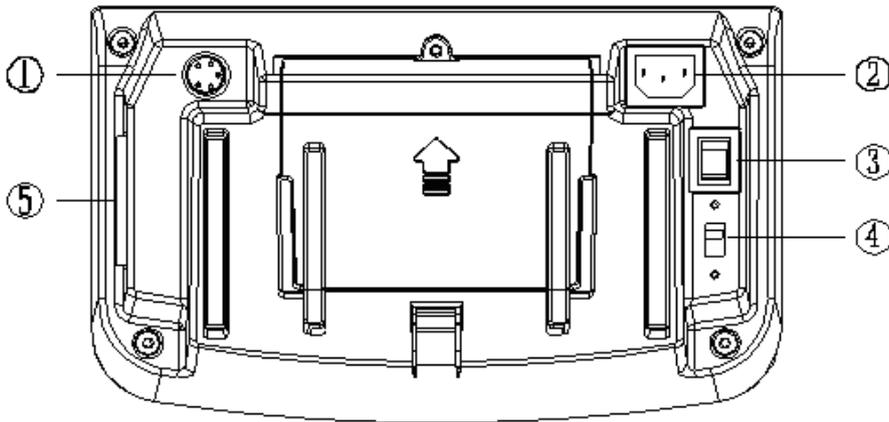
M- key

- ☆ Deletes accumulation records
- ☆ During editing, selects the next lower option or decreases setting values.

ZERO/ESC key

- ☆ Zeros the display (within 2% of max.capacity)
- ☆ Exits from setting mode.

3-3 Rear Panel



- 1) Port for connecting load cell.
- 2) Power socket
- 3) Power ON/OFF switch
- 4) Two-stage switch (110V or 220V)
- 5) RS-232 port : Serial interface port (computer, printer, Light Tower and Large LED display)

3-4 Power supply

Please verify the local AC power source and switch the two-stage switch to the proper place before plugging into the power outlet.

Alternative power supply

- 1) AC 110V/220V (AC±10%)
- 2) (6V/4A) Internal Rechargeable Battery

Power Consumption

About 300 mW without backlight

About 380 mW with backlight

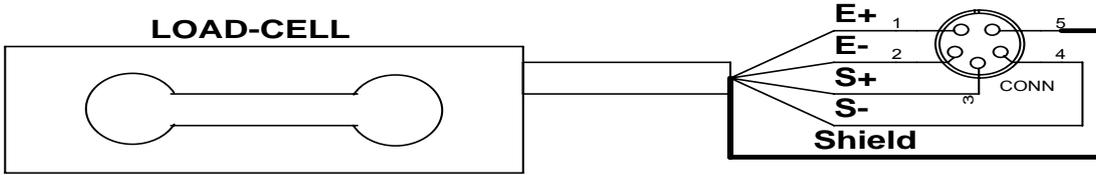
Low battery warning

When “+ -” appears in the upper left corner of the weight window, the battery power requires recharging. The charge lamp turns green from red when the recharging is completed (which takes about 8 hours). Disconnect the scale from power supply when it is fully charged. A full charged battery can operate the scale for approximately 65 hrs with backlight, 80hrs without backlight.

Note: Battery is to replaced only by an authorized service dealer .Risk of explosion can occur if replaced with the wrong type or connected improperly.

4. Installation

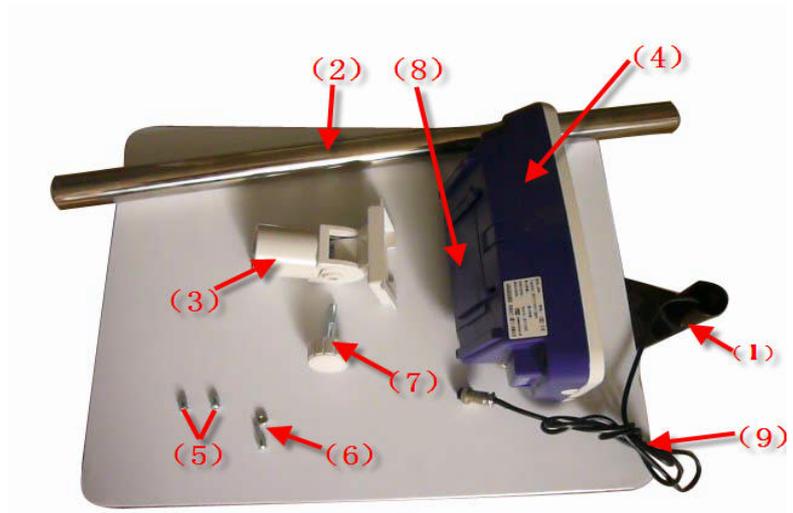
4-1 LoadCell connection



<i>LOAD CELL CONNECTION</i>	<i>PIN</i>	<i>SIGNAL</i>
	1	<i>E+</i>
	2	<i>E-</i>
	3	<i>S+</i>
	4	<i>S-</i>
	5	<i>SHIELD</i>

4-2 Assembly Description of Upright Pole

- (1) Rod seat
- (2) Upright pole
- (3) Bracket
- (4) Indicator
- (5) Screw (for fixing the upright pole)
- (6) Screw (for fixing the Bracket)
- (7) Knob pole
- (8) Bracket slot
- (9) Load cell wire



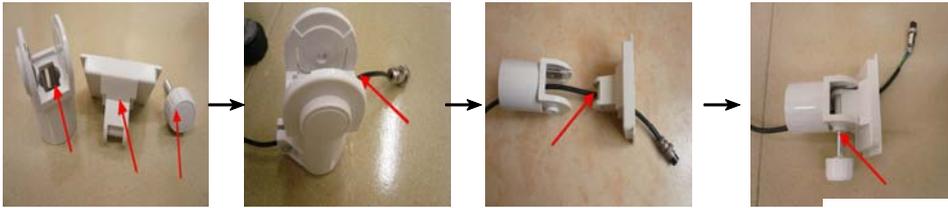
Step 1: Thread the wire of the Load Cell (9) on the Rod seat (1) through the upright pole (2), insert The upright pole into the rod seat and then Lock it with two screws (5).



Step 2: After threading the Load Cell wire Through the bracket (3), attach the bracket to the Upright pole and then lock it with the screw (6).



Note: if the load cell connector is too big to thread through the bracket, separate the Bracket by Removing the Knob pole (7), see the following pictures.



Step 3: Install the Indicator (4) on the bracket, With the bracket aligning with the bracket slot (8) Of the indicator.



Step 4: After connecting load cell connector to load cell port, the installation is completed.



Note: Use the knob pole (7) to adjust the inclination angle of indicator and the screw (6) to adjust direction of the indicator. After adjusting the indicator to an optimal position and lock the screw.

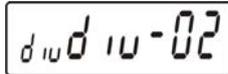
5. Setting Mode

5-1 Maximum Weighing Capacity & Division Setting

Example for setting capacity 30kg/division 2g

1) Turn on the power while pressing key **MR** . Do not release key pressing till "0000000" appears and with the right-most digit blinking. Use key **UNIT/LO** to shift leftwards, key **PRINT/HI** to shift rightwards, key **M+** to increase setting values and key **M-** to decrease setting value. 

Note: settings from 1 to 999999 are available.

2) Press key **G/N** to advance to division setting, Use key **UNIT/LO** or key **PRINT/HI** to steps through available setting and release on desired one. 

3) Press key **G/N** to accept the current setting on the display and advance to decimal place setting. Use key **UNIT/LO** (leftwards) or key **PRINT/HI** (rightwards) to move the decimal point. 

4) Press key **G/N** to save all the settings and return to weighing mode. 

5-2 Function Setting & Description of Parameter Values

Function Setting

1) Press key **MODE**, Setting item P00 displays momentarily. There are 14 available setting items (P00-P13), indicated by Auxiliary display in the Lower Left corner.

P00 Aut.30

2) Press key **M+** or key **M-** to step through all the available setting items.

P01 Prt-5t

3) Press key **UNIT/LO** or key **PRINT/HI** to set the content values of setting items.

P01 Prt-Co

4) Press key **MODE** to save the settings and go back to the weighing mode.

Description of Parameter Values

1) P00 Set the period of inactivity before the scale automatically turns off. Options are Aut.off =non power-off, Aut.5, Aut.10, Aut.30 , Aut.60 and Aut.90 (minutes).

2) P01 Set Check Weighing buzzer beep. Options are b-up, b-in, b-out and b-low

b-up = There will be a warning sound when the weight of articles exceeds the upper limit.

b-in = There will be a warning sound when the weight of articles is between the upper and lower limit (including the upper and lower limits).

P-out = There will be a warning sound when the weight of articles is beyond the upper & lower limit, and the weight is more than 20 divisions.

b-low = There will be a warning sound when the material quantity is less than the lower limit and the weight is less than 20 divisions.

3) P02 Set the desired external devices .Options are PC, ET, SH-24 , BP545D , Godex , ZEBRA and PCSCA

Et = Large LED display

PC = Computer output;

SH-24= SH-24 printer output (dot-matrix)

BP545d=BP545D printer output (Automatic-sticking), paper size: 5cm*3cm.

Godex=Godex printer output (Automatic-sticking), paper size: 5cm*3cm.

Zebra=ZEBRA printer output (Automatic-sticking), paper size: 5cm*3cm.

PCSCA= JADEVER WEIGHING SYSTEM

4) P03 Set RS-232 Serial Transmission Rate. Options are bA-96(9600), BA48(4800) and BA24(2400).

5) P04 Set check weighing memory.

bii-no = Previously set checkweighing values are not retained when the unit is turned on.

bii-yes = Previously set checkweighing values are retained when the unit is turned on.

6) P05 Enable or disable RTC function.

rtc on = enable RTC function

rtc off = disable RTC function

7) P06 Set the activation mode of backlight. Options are ONOFF (Auto on with items greater than 9d placed on the weighing pan or any key is pressed), ON (Backlight on) and OFF (No backlight)

8) P07 Set Print mode.

prt-prt = manual print *prt-st* = Stable print *prt-co* = Continuous print

9) P08 Set the filtering level in which the stable indication turns on .The higher the setting, the slower stabilization time. Options are Fil 1, Fil 2, Fil 3 and Fil 4.

10) P09 Set the range in which the Zero indication turns on . Options are Zero.0(1 division) , Zero.1(2 divisions), Zero.2(3 divisions), Zero.3(4 divisions) , Zero.4(5divisions) and Zero.5(6divisions) .

11) P10 Initial Setup (not available)

12)P11 Unit setting (refer to section 7-3).

13) P12 Set the peak value display period (refer to section 7-7)

14) P13 In the peak hold & weighing mode, select to display value of peak weighing or value of stable weighing.

PH = display value of peak weighing

BU = display value of stable weighing.

6. Calibration mode

6-1 Single point calibration

1) Press and hold key **M-** while powering on the scale. The screen displays “*ERROR*”, then release the keys.

2) Press key **TARE** to enter the zero point calibration mode, with “*Zero*” appears then flashes. (Please put no load on the weighing pan at the moment.)

3) Wait till "000000" appears and with the right-most digit blinking, set the calibration value by pressing key **M+** to increase setting values, key **M-** to decrease setting value, key **UNIT/LO** to shift leftwards and key **PRINT/HI** to shift rightwards.

4) Put the corresponding weights on the weighing pan and press key **N/G**, the calibration procedure starts, with "CAL" flashing on the screen.

5) A few seconds later, the calibration procedure is completed with a "PASS" displayed on the screen. Remove all the weights and press key **TARE** to return to normal weighing mode.

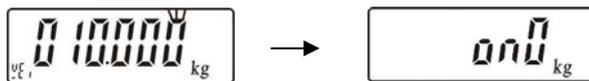
6-2 Linear calibration

1) Press and hold key **TARE** while powering on the scale, the screen displays "LINE".

2) Set the value 1/3 full capacity

Press key **TARE**, "000000" appears (with the right-most digit blinking).

To set the value 1/3 full capacity, press key **M+** to increase setting values, key **M-** to decrease setting value, key **UNIT/LO** to shift leftwards and key **PRINT/HI** to shift rightwards. (e.g. selected capacity 30kg, 1/3 full capacity is 10kg) Press key **G/N** to save the and step to zero point calibration mode.



3) With no load on the scale, press key **TARE**, to establish zero point. "0n 0" is flashing.

4) Wait till "0n 1" appears put weights of 1/3 of full capacity on the weighing pan and press down key **TARE**. (E.g. selected capacity 30kg, 1/3 full capacity is 10kg)

5) Wait till "0n 2" appears, put weights of 2/3 of full capacity on the weighing pan and press down key **TARE**. (E.g. selected capacity 30kg, 2/3 full capacity is 20kg)

6) Wait till "0n 3" appears, then put weights of full capacity on and press key **TARE**.

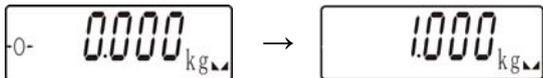
7) The calibration Procedure is completed with a symbol of "PASS" flashing, and then take away the weights.

8) Press key **TARE** to return to weighing mode.

7. Operation

7-1 Weighing

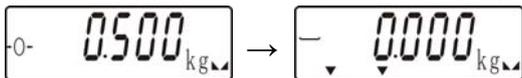
Begin with no load on the scale, the display reading zero. Place item(s) to be weighed on the scale. The display shown is 1.000kg, gross weight. (The desired weighing unit should be selected before weighing, refer to section 5-5.)



7-2 Manual Tare & Preset Tare

When weighing a sample that must be held in a container, tare stores the container weight into memory.

- 1) Under the weighing mode, place the container on the weighing pan, wait till stable symbol appears, then press the key **TARE**. The container is tared.



- 2) Place the item(s) to be weighed into the container. The weight displayed is the net weight.



- 3) Remove all items from the weighing pan, the screen displays the tare value.



- 4) To clear tare with an empty pan, Press down key **TARE** or key **ZERO/ESC**.

Preset Tare

- 1) Long press key **TARE** for 3 seconds. The scale is now in Digital inputting mode with the right-most digit blinking.



- 2) Press key **UNIT/LO** to shift leftwards, key **PRINT/HI** to shift rightwards, key **M+** to increase setting values and key **M-** to decrease setting value. E.g. here we set the Preset Tare value as 0.500kg.



- 3) Press key **G/N** to save and return to weighing mode, the screen display "FAWPT" before reverting to preset tare value.



- 4) Put the load on the container, the scale will automatically deduct the value of the container from the total value.

NOTE: Press Key **G/N** to display gross and net weight by turns.

7-3 Unit setting menu

1) How to enter Unit setting menu?

Method 1: Press and hold key **UNIT/LO** while powering on the scale.



Method 2: Press key **MODE** for under normal weighing mode, setting item P00 is displayed.

(There are 14 available setting items ---p00-p13, indicated by Auxiliary display at the Lower Left corner.) Press key **M+** or key **M-** to choose setting item p11, then press key **UNIT/LO** to start the unit setting menu.



2) How to set the init weight unit?

Use key **UNIT/LO** to set initiate weight unit and press key **G/N** to save and move to the next setting menu---set the active weight unit.

4) How to set the active weight units?

Press key **UNIT/LO** to step through all the available weight units, press key **M+** switch ON/OFF the displayed weight unit.

U- ON -- enable

U-OFF -- disable

Press key **G/N** to save and move to the next setting menu--- whether to retain the last used weight unit when the unit is turned on.

5) Whether to retain the last used weight unit when the unit is turned on?

Press key **M+** to set whether to retain the last set weight unit when the unit is turned on.

U. YES -- Last used weight unit is retained when the unit is turned on.

U. NO -- Last used weight unit is not retained when the unit is turned on.

Press key **G/N** to save and return to normal weighing mode.

Note: if enter the Unit setting menu by method 2, press key **G/N** to save and then press key

ZERO/ESC to return to normal weighing mode.

7-4 Check Weighing

Use this mode to compare the weight of an item to Lower, and Upper limits. When the check weighing mode is enabled, the “▼” indicator will turn on.

Lower limit setting

- 1) Began by pressing down key **UNIT/LO** for 3 seconds. The scale is now in Digital inputting mode with the right-most digit blinking. 
- 2) To set the value of lower limit, press key **M+** to increase setting values, key **M-** to decrease setting value, key **UNIT/LO** to shift leftwards and key **PRINT/HI** to shift rightwards. 
- 3) To save the Lower limit and return to weighing mode, Press key **G/N**.

Upper limit setting

- 1) Began by Pressing down key **PRINT/HI** for 3 seconds. The scale is now in Digital inputting mode with the right-most digit blinking.
- 2) Press key **M+** to increase setting values, key **M-** to decrease setting value, key **UNIT/LO** to shift leftwards and key **PRINT/HI** to shift rightwards.
- 3) To save the upper limit and return to weighing mode, Press key **G/N**.

Place the sample on the weighing pan, if the sample weight is under the lower weight range, the LOW lamp will light up. If the sample is within the lower and upper weight range the OK lamp will light up. If the sample is over the upper weight range, the HI lamp will light up. Press key **MR** switches on /off check weighing function.

7-5 Accumulation , Accumulation Display and Accumulation clear

- 1) Under the weighing mode, put the item on the weighing pan. Press key **M+** at the appearance of "▲▲". "Addont" is displayed momentarily before the display reverts to

the weight of the item.  → 

- 2) Remove the item and the display goes back to zero before the next accumulation can register. (The maximum is 20 pieces. When adopting PC or SH-24 printer as the external device, each accumulation record will be output everytime key **M+** is pressed down .)



Accumulation Display

Press key **MR** to display total accumulation data and each accumulation event in detail.

The number of weighments is indicated by Auxiliary display at the Lower Left corner.

Note: When adopting PC or SH-24 printer as the external device, total accumulation data will be output everything key **MR** is pressed down.

Accumulation Clearing

To clear accumulation data (total accumulation data or one of the accumulation events), press key **M-** while the data is displayed. To exit and return to normal weighing mode press key **ZERO/ESC**.

7-6 Simple Counting

1) Press key **UNIT/LO** to select the unit “PCS”.



2) Press key **G/N**, the ex-factory default sample size (10 pcs) is displayed.



3) Use key **M+** to choose the sampling amount. Available options are 10, 20, 50, 100, 200, 500, 1000 (pieces).



4) Put the corresponding samples on the weighing pan, and then press key **G/N**.

“5.00 20” is displayed momentarily before the display reverts to the sample size.



5) Remove the samples and put the load on, the scale calculates the amount of the load.

6) To go back to the normal weighing mode, Remove the load and press key **UNIT/LO** to select the proper weighing unit.

Note:

1. The larger the sample size, the more accurate unit weight.
2. Symbol “▼” points at “UW” when calculated unit weight is lower than 4/5 of scale division.

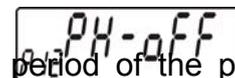
7-7 Peak hold function

Set the peak value display period

1. Press key **MODE** under normal weighing mode, the screen displays setting item p00.

(There are 14 available setting items ---p00-p13, indicated by Auxiliary display at the Lower Left corner.) Press key **M+** or key **M-** to choose setting item p12.

2. Press key **UNIT/LO** or key **PRINT/HI** to set the display period of the peak value. Available setting are: PHOFF= Peak hold function off, PH-120, PH90, PH-60, PH-55, PH-50, PH-45, PH-35, PH-30, PH-25, PH-20, PH-15, PH-10 and PH-5 (seconds)



3. Press key **MODE** to save and enter to peak hold & weighing mode.

Two functions

A: use this mode to compare weight of several items, “P-H” at Lower Left corner will flash to indicate a higher value.

B: Display and hold the maximum value of a weighing item.

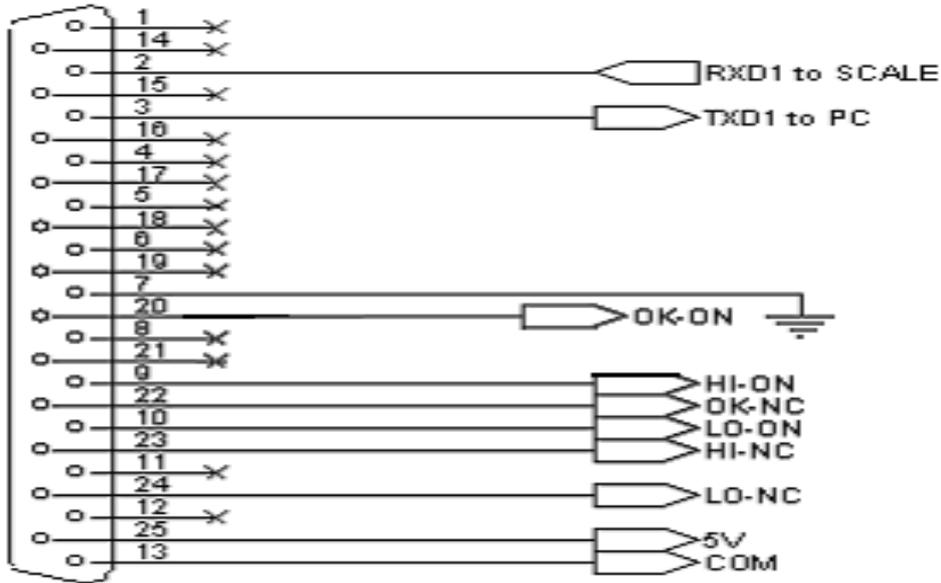
4. To clear previous record and process next comparison, press key **G/N**.

Note: In the peak hold, not available to check Gross/ Net or use the simple counting function.

8. Serial Interface

☆ If an external interface is needed, please select a three-in-one board, which combines RTC (time display) & RS-232 & Relay (weight check) on one circuit board.

8-1 RS-232 connector



RS232/RELAY

8-2 Accessories

Option		External device		Output format
RS232+RTC+Relay 	+	 PC	→	2008/06/16 10:25:54 N.W.: + 52 g T.W.: + 0 g G.W.: + 52 g
RS232+RTC+Relay 	+	 BP-545D	→	2008/06/26 14:58:48 N.W.: + 3.662 kg T.W.: + 0.000 kg G.W.: + 3.662 kg
RS232+RTC+Relay 	+			(Applicable to the quality control of the factory product quantity or weight and that of the total production line.)

<p>RS232+RTC+Relay</p> 	<p>+</p>	 <p>SH-24</p>	<p>→</p> <p>2008/06/16 10:25:54 N.W.: + 52 g T.W.: + 0 g G.W.: + 52 g</p>
<p>RS232+RTC+Relay</p> 	<p>+</p>	 <p>ZEBRA</p>	<p>→</p> <p>2000/00/00 00:00:00 N.W.: + 3.658 kg T.W.: + 0.000 kg G.W.: + 3.658 kg</p>
<p>RS232+RTC+Relay</p> 	<p>+</p>	 <p>GODEX(EZ)</p>	<p>→</p> <p>2008/06/26 17:27:45 N.W.: + 3.661 kg T.W.: + 0.000 kg G.W.: + 3.661 kg</p>
<p>RS232+RTC+Relay</p> 	<p>+</p>		<p>Displays value of Weighing only</p>

9. Error codes list

The following list describes the various error codes and that can appear on the display.

E02 no.samp Indicates not sampling yet.

E04 EE.ERR EEPROM data incorrect.

E05 out.ran Indicates an overload condition.

E07 E.Lo>Hi The upper limit set is small than the lower limit.

E.Unit The used weight unit is different during the process of accumulation.

- Over Sampling result is negative

Over Accumulated number of weighments or weight exceeds the display range.



Indicates when batteries are weak