Content

1. Introduction

This manual contains installation and operation instructions for the JWI-688 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 the scale for 15 minutes before using it for the first time.
- Keep the indicator away from EMI noise, strong wind and vibration, which might cause incorrect reading.
- Avoid sudden temperature changes (suitable operating temperature is between 0℃~ 40℃.)
- Disconnect the power supply when cleaning the indicator.
- Do not immerse the indicator in water or other liquids.
- Service should be performed by authorized personnel only.

3. Product Introduction

3-1 Specifications & Features

Specifications

Model	**JWI-688**
Input sensitivity	0.13uV/DIV
Input voltage range	-0.5mV to 16.5mV
Load cell excitation	Up to 4 ×350 ohm load cells
System linearity	0.003% of full capacity
Input impedance	10M ohm or more
A/D conversion mode	△-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±10%) or Rechargeable battery（6V/4A）

Features

◎ Backlit LCD display with prominent 29mm high digits

◎ Gross or net weight switchable

◎ Low battery /Charging indication

◎ Adjustable stand for bench scale

◎ Manual tare, pre-tare, simple counting, HOLD, Check weighing and accumulation

◎ Adjustable filtering level for weighing under various conditions

◎ Rechargeable battery or AC power

◎ Suitable for a wide range of bases and load cells

◎ Adjustable capacities, resolutions and parameters（division from 300 to 300000）

3-2 Front Panel

3-2-1 Display

Low battery indication

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.

Kg,t,lb,lb.oz,pcs 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

◄/G/N key

☆ Displays gross and net weight by turns

☆ Long press for the choice of sampling

☆ Shift key(shift leftwards)

+ /PRINT/HI key

☆ The number increases one when value setting

☆ Print out when setting manual print

☆ Long press higher limit initials higher limit setting

-/HOLD/LO key

☆ The number decreases one when value setting

☆ Remain the weighing display in the window (5 options)

☆Long press lower limit initials lower limit setting

TARE key

☆ Tare manually

☆ Long press to enter preset tare

☆ Shift key (shift rightwards).

ZERO/ESC key

☆Zeros the display

☆ Short press to save and exit from the setting mode

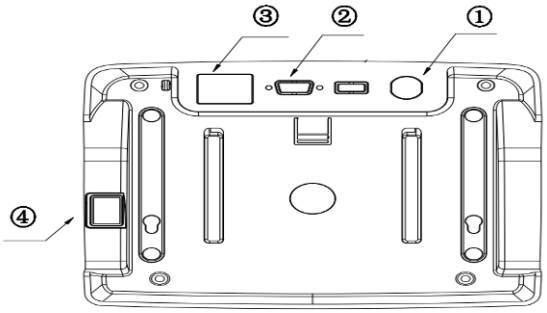
☆ Long press to exit from the setting mode without saving.

UNIT/SET key

☆ Exchange the weighing units

☆ Long press to enter the parameter setting

3-3 Rear Panel



1) Port for connecting load cell.
2) USB port
3) RS-232 port : Serial interface port
4) Power socket
5) Power ON/OFF switch

3-4 Power supply

Please verify the local power source before plugging into the power outlet, and use the individual power socket and original adaptor.

Alternative power supply

1) (100V~240V) Adaptor
2) (6V/4A) Internal Rechargeable Battery

Power Consumption

About 330 mW with backlight

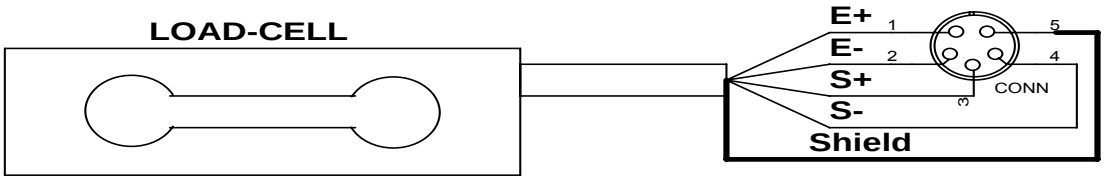
Low battery warning

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.

Note: Battery is to be 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 Load cell connection



	PIN	SIGNAL
LOAD CELL CONNECTION	1	E+
	2	E-
	3	S+
	4	S-
	5	SHIELD

4-2 Assembly Description of Upright Pole

(1）Rod seat

(2）Upright pole

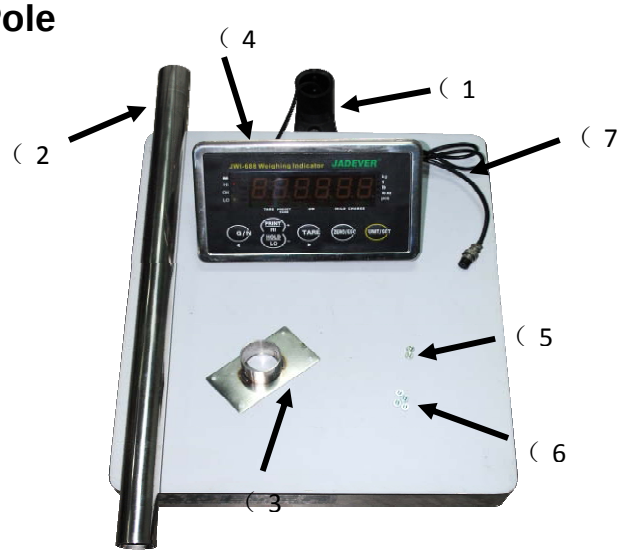
(3）Bracket

(4）Indicator

(5）Screw (for fixing the upright pole)

(6）Screw (for fixing bracket)

(7）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 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, lock the screw.

5. Setting Mode

5-1 Maximum Weighing Capacity & Division Setting

1. Press and hold key ***ZERO/ESC*** and ***TARE/►*** while powering on the scale. When the window displays "*300. 00 KG*", release the key and it enter the capacity setting
2. Press ***+/PRINT/HI*** or ***HOLD/LO/-*** to choose common used capacity. Press ***◄/G/N*** or ***TARE/►*** to shift the decimal point and press ***UNIT*** to choose kg, g, t, lb or 台斤.

   Note: if not the needed capacity, long press ***UNIT/SET*** until the number leftmost is blinking to set the capacity casually. Please do as follows.

   - Press ***◄/G/N*** or ***TARE/ ►*** to shift key leftward or rightward
   - Press ***+/PRINT/HI*** or ***-/ HOLD/LO*** to change the value.
   - Press ***◄/G/N*** or ***TARE/ ►*** until the decimal point is blinking.
   - Press ***+/PRINT/HI*** or ***-/ HOLD/LO*** to shift the decimal point
   - Press ***UNIT/SET*** to choose kg, g, t,lb or 台斤
   - Press ***ZERO/ESC*** to save and entet into division setting when the window dispays "*0. 02 KG*"

   Note: LONG press ***ZERO/ESC*** is to return to weighing mode without saving.
3. Press ***+/PRINT/HI*** or ***HOLD/LO/-*** to choose common used division. Press ***◄/G/N*** or ***TARE/►*** to shift the decimal point

   Note: if not the needed division, long press ***UNIT/SET*** until the number rightmost is blinking to set the division casually. Please do as follows.

- Press ***◄/G/N*** or ***TARE/ ►*** to shift key leftward or rightward
- Press ***+/PRINT/HI*** or ***-/ HOLD/LO*** to change the value.
- Press ***◄/G/N*** or ***TARE/ ►*** until the decimal point is blinking.
- Press ***+/PRINT/HI*** or ***-/ HOLD/LO*** to shift the decimal point
- Press ***ZERO/ESC*** to save and enter into calibration setting.

4. The window dispays CAL. Press ***TARE/ ►*** to enter calibration setting while LONG press ***ZERO/ESC*** to exit and return to weighing mode.

5-2 Function Setting

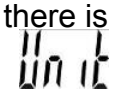
1. Press and hold ***UNIT/SET*** while powering on or long press ***UNIT/SET*** under normal weighing mode to enter function setting.
2. Press ***◄/G/N*** or ***TARE/►*** to shift between the functions
3. Press ***UNIT/SET*** to enter the parameter setting.
4. Press ***◄/G/N*** or ***TARE/►*** to shift between the function parameters
5. Press ***ZERO/ESC*** to save and return to the previous parameter or long press ***ZERO/ESC*** to exit without saving and return to the previous parameter.
6. Press ***ZERO/ESC*** and return to normal weighing mode.

5-3 Description of Parameter Values

1.  **Offset value**

   Displays the offset value and the keypad testing can be conducted
2.  **Brightness** selection:1,2,3. The higher level, the brighter screen.
3.  **Power saving grade** select: 5, 10, 30, 60, OFF. (enter the power saving mode after 5, 10, 30, 60s without any action, and the screen will show a decimal point)
4.  **Auto-off**

   Off: Non power off

   5, 10, 30, 60(minutes) : Auto power off after 5, 10, 30, 60 minutes under the condition that there is no action and the weight is equal or lower than 9d after shows - - - - - -
5.  **Unit setting**

   Init: Press key ***UNIT/SET*** to select the default unit when powering on the scale**:** kg,

lb…final .(final=keep the final being used unit when power off)

Use: Press key ***UNIT/SET*** to select the weighing unit. **On:** Enable the unit **off:** Disable the unit

Note: Press ***UNIT/SET*** to choose the weighing unit. Press ***◄/G/N*** or ***TARE/ ►*** to enable / disable the unit

6. **Zero range**

d0, **d1**, **d2**, **d3**, **d4** and **d5**. (d= scale division)

7. **Hold function**

HoLd – 0: no hold function

HoLd – 1: Peak hold. Press any key to release

HoLd – 2: Hold after stable. Press any key to release

HoLd – 3: Hold after stable. Release after moving away the article. The hold value is based on the current value and its range could be set in sub menu. Accumulation hold function is available, that is you could add article after hold the first value.

HoLd – 4**:** Press key ***HOLD/LO/-*** to hold. Press any key to release.

HoLd – 5**:** Hold automatically.(Optional dynamic animal weighing function).

Sub menu for Hold 3: INF (default: infinity) /10 /20 /50 /100 /200 /500 /1000 2000 /5000 /10000 /20000 /50000

H=current hold value, R=hold value range, d= division, W= actual weight

Keep to hold the value when |W-H|<=R*d, or the scale will exit the hold function. The scale will cancel the hold function when empty the weighing pan, if choose INF setting.

Sub menu for Hold 5: default hold value arrange (HD): 0100

Disable the hold function automatically: |CW-CH| > HD*d, CW=actual weight, CH=current hold value, HD=hold value arrange.

Disable the hold function manual: press HOLD button to cancel the current hold value.

NOTE: The function works only the weight is above 20d

8. **Check weighing memory**

On: Check weighing function is auto-on when restart the indicator

off: Check weighing function would not auto-on when restart the indicator

9. **Stable Check Weighing**

On: Check weighing after stable indicator appears and the weights is between the upper and lower limit

Off: Check weighing when the weights is between the upper and lower limit

10. bEEP **Check Weighing buzzer beep**

Hi: There will be a warning sound when the weight of articles exceeds the upper limit, and the weight is equal or more than 20d

LO: There will be a warning sound when the weight of articles exceeds the lower limit, and the weight is equal or more than 20d

OK: There will be a warning sound when the weight of articles is between the upper and lower limit (including the upper and lower limits), and the weight is equal or more than 20d

OUT: There will be a warning sound when the weight of articles is beyond the upper & lower limit, and the weight is equal or more than 20d

no.beep: no beep

11. bAUd **Baud setting**

Options: 2400, 4800, 9600.

12. F IL **Filtering setting**

Set the filtering level in which the stable indication turns on. The higher the setting, the slower stabilization time

Options: **1**, **2**, **3**, **4**

13. P-t **Tare/Zero condition**

Stable: Only after the stable indication appears, Tare/Zero function acts after pressing down key ***TARE*** or ***ZERO***

Always: Tare/Zero function acts by pressing down key ***TARE*** or ***ZERO*** even if it is not stable

auto: Press down key ***TARE*** or ***ZERO*** even if it is not stable, but Tare/Zero function acts after stable

14. 0-oFF weight memory parameter

OFF**:** not display the previous weight when powering on again

ON**:** display the previous weight when powering on again.

15. rESEt parameter initialization

Press ***UNIT/SET*** twice to begin initialization until the window displays **"*OK*"**

6. Calibration

Note: Before calibration, please set the capacity first. The unit used in calibration is the one that has been set before. During the calibration procedure, LONG press ***ZERO/ESC*** to return to normal weighing mode without saving.

Here we take 3kg/10g as an example

1. Press and hold ***TARE/►*** while powering on. Do not release it till the window displays "***CAL"***
2. With no load on the weighing pan, press ***TARE/►*** to start zero point calibration.
3. Wait till the window displays the first calibration value. (the window displays **1.000kg**)

   Note: The first calibration value is default. If the capacity has been changed, the default value is 1/3 of full load.

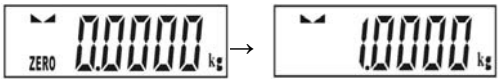
   If you need to change the value, do as the following: Press ***UNIT/SET*** to enter the value setting. Press ***◄/G/N*** or ***TARE/►*** to move leftwards or rightwards. Press***+/PRINT/HI*** or ***HOLD/LO/-*** to change the value. Press ***ZERO/ESC*** to save.
4. Put the corresponding weight on the weighing pan, and then press ***TARE/►*** to complete the first point calibration.

   Note: After the first point calibration, the window can display the weight value. If no need for the other point calibration, move to Step 6 to finish the calibration procedure.
5. Add another weight to the current weight. The window will show the total weights value. Press ***TARE/►*** to complete. Repeat this step to complete multi-point calibration.
6. Press ***ZERO/ESC*** to save. After the window displays "PASS", it will return to normal 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.）

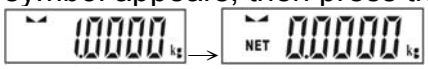


7-2 Manual Tare & Preset Tare

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 left-most digit blinking.
2) Press key ***◄/G/N*** or ***TARE/►*** to shift leftwards or rightwards. Press key ***+/PRINT/HI*** or ***HOLD/LO/-*** to increase or decrease setting values. E.g. here we set the Preset Tare value as 0.500kg.
3) Press key ***ZERO/ESC*** to save and return to weighing mode, 
4) Put the load on the container, the scale will automatically deduct the value of the container from the total value.
5) Press ***TARE/►*** or key ***ZERO/ESC*** with no load on the pan if the tare function is to be cancelled.

7-3 Check Weighing

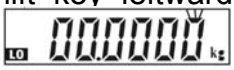
Use this mode to compare the weight of an item to Lower, and Upper limits. When the check weighing mode is enabled, the "▼" indicator will turn on.

Upper limit setting

1) Long press key ***+/PRINT/HI***. The scale is now in Digital inputting mode with the left-most digit blinking.
2) Press ***◄/G/N*** or ***TARE/►*** to shift key leftwards or rightwards. Press***+/PRINT/HI*** or ***HOLD/LO/-*** to change the value. 
3) Press ***UNIT/SET*** to turn on or off the weighing check

4) Press ***ZERO/ESC*** to confirm and save the upper limit value.

Lower limit setting

1) Long press key ***-/HOLD/LO***. The scale is now in Digital inputting mode with the left-most digit blinking.
2) Press ***◄/G/N*** or ***TARE/►*** to shift key leftwards or rightwards. Press***+/PRINT/HI*** or ***HOLD/LO/-*** to change the value. 
3) Press ***UNIT/SET*** to turn on or turn off the weighing check
4) Press ***ZERO/ESC*** to confirm and save the lower limit value.

Place the sample on the weighing pan.

HI indication appears, when the item on the weighing pan is greater than the upper limit

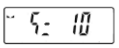
OK indication appears, when the item on the weighing pan is between upper and lower limits.

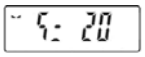
LO indication appears, when the item on the weighing pan is smaller than lower limit

Note: the item on the weighing pan should be more than or equal to 20e.
When changing the Hi-Lo value, the scale will activate the weighing checking function automatically. If the Lo value is higher than Hi value, then the Hi value will become the same value as Lo data
.

7-4 Simple Counting

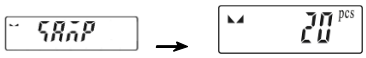
1) Press key ***UNIT/SET*** to select the unit “PCS” under the weighing mode. 

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

3) Use key ***+/PRINT/HI*** or ***HOLD/LO/-*** to choose the sampling amount. Available options are10、20、50、100、200、500、1000(pieces) . 

4) Put the corresponding samples on the weighing pan, and then press key ***TARE / ►***

“SAMP” 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/SET*** to select the proper weighing unit.

Note:

1. The larger of 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.

8. Error message

Error Message	Problem	shootings
ERR0	Exceed the zero range	The item should be within 2% of full load
ERR2	Exceed the initial zero point	1. Check whether there are other alien articles on the scale pan, remove those articles. 2. LOAD CELL failure, which requires to be changed or to contact our Service.
ERR3	Exceed the A/D resolution range	1. Check whether it is A/D failure, if yes, please replace AD. 2. LOAD CELL failure, replacement is required or contact our Service.
ERR4	EEPROM failure	Re-sold EEPROM or contact our Service.
ERR5	Overload condition	Remove weight that is greater than the scale capacity from the pan.
ERR6	Exceeds the display range	----------
ERR7	Accumulated number of weights exceeds the display range	Delete the exceeding weights
ERR8	Weight limit value is higher than the full load value	Reset the weight limit value.
ERR9	Exceed tare or pre-tare range	The tare value should be over zero and less than or equal to full load.
ERR10	Wrong calibration weights	Place the right weights(the calibration value ≤ full load)