Weighing Indicator

User Manual

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1. Introduction

This manual contains installation and operation instructions for the JWI-700W Series weighin 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.
- Over 2 years without using the scale for the first time, please charging fully before utility.
- Please cut off the charging power after the battery is fully charged.
- If the charge indicator indicates red light (24 hours or more) when the battery is charged please check the scale or replace a new battery.
- Warn up for 15 minutes before using it the first time.
- Keep the indicator away from EMI noise, strong wind and vibration, which might caus incorrect reading.
- Avoid sudden temperature changes (suitable operating temperature is between -5°C~ 40°C
- 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

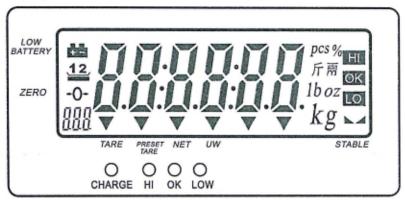
Model	JWI-700W
Input sensitivity	0.13uV/DIV
Input voltage range	-0.5mV to 16.5mV
Load cell excitation	DC 5V ,Up to 8 ×350 ohm load cells
System linearity	0.003% of full capacity
Input impedance	10M ohm or more
A/D conversion mode	Δ-Σ
A/D internal resolution	700,000 count
A/D conversion speed	8 times/second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

Features

- Backlit LCD display with prominent 29mm high digits
- Supports up to eight 350 ohm analog load cells
- O Gross or net weight switchable
- O Low battery /Charging indication
- Adjustable stand for bench scale
- Weight accumulation max 99 pieces
- Manual tare, pre-tare, simple counting, HOLD, Check weighing and accumulation
- Adjustable filtering level for weighing under various conditions
- Rechargeable battery or AC power, with power-saving and auto-shut off function
- Suitable for a wide range of bases and load cells
- Adjustable capacities, resolutions and parameters (division from 300 to 300000)
- © 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 ±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.

JWI-700W

2

Unit weight is too small for ensuring accurate quantity calculations.

PER 76 ID 02

kg Units of measure

The weight on the weighing pan is greater than the upper limit(with HI lamp on)

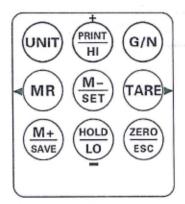
The weight on the weighing pan is between upper and lower limits.(with OK lamp on)

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	Short press steps through activated weighing units, release on desired one.		
G/N)	Displays gross and net weight by turns		
TARE	Tares the weight of the container or accepts the keypad tare entries Select the later parameter in the same level Select the later record when checking the accumulation record Shift keys rightwards		
ZERO	Zeros the display (within 2% of max.capacity) Exits from certain operation without save		
M- SET	Long press to enter function setting Deletes accumulation records Delete the present accumulation record for the sake of wrong accumulation operation under the accumulation mode.		

3



- Adds the indicated weight into accumulation memory
- 2. During editing, save and return to the higher option
- 3. Used in capacity and division settings



- Memory recall
- Select the former parameter in the same level
- 3. Select the former record when checking the accumulation record
- Shift keys leftwards

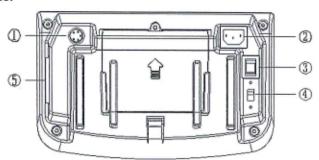


- During setting value, add 1 to the current value
- Set the upper limit of the check weighing
- 3. Print



- 1. During setting value, deduct 1 to the current value
- 2. Set the lower limit of the check weighing
- 3. Hold function

3-3Rear Panel



- 1) Port for connecting load cell.
- 2) Power socket
- 3) Power ON/OFF switch
- Two-stage switch (110V or 220V)
- 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%)
- (6V/4A) Internal Rechargeable Battery

Power Consumption

About 300 mW without backlight

About 380 mW with backlight

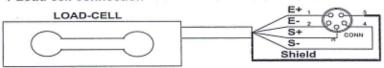
Low battery warning

When "pears 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

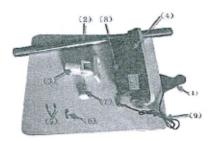


	PIN	SIGNAL
CARGELL	1	E+
LOAD CELL	2	E-
CONNECTION	3	S+
	4	S-
	5	SHIELD

4-2 Assembly Description of Upright Pole

- (1) Rod seat
- (2) Upright pole
- (3) Racket
- (4) Indicator
- (5) Screw(for fixing the upright pole)
- (6) Screw(for fixing 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

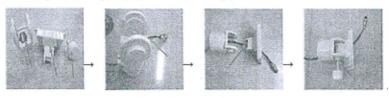




Lock it with two screws (5).

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, lock the screw.

5. Setting Mode

5-1 Maximum Weighing Capacity & Division Setting

- Press M+/SAVE while powering on the scale. When the window displays "CAP 300. 00 KG", release the key and it enter the capacity setting
- Press +/PRINT/HI or HOLD/LO/- to choose capacity. Press ◆/MR or TARE/▶ to shift key leftward or rightward and press UNIT to choose kg, g, lb or 台斤.
- If the capacity needed is not within the default common used value, press M-/SET to enter
 capacity free setting while the number leftest blinking. Press
 ✓MR or TARE/> to shift key
 leftward or rightward. Press +/PRINT/HI or HOLD/LO/- to change the value or shift the

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decimal point and press UNIT to choose kg, g, lb or 台斤.

Press M+/SAVE to save and enter to the division setting while press ZERO/ESC to return to capacity setting without saving.

- The window displays Div0.02kg when entering division setting after finishing capacity setting.
- Press +/PRINT/HI or HOLD/LO/- to choose division. Press +/PRINT/HI or HOLD/LO/- to shift the decimal point
- If the division needed is not within the default common used value, press M-/SET to enter division free setting based on the principle of 1/2/5 minmum division while the number rightest blinking.press
 If the division needed is not within the default common used value, press M-/SET to enter division free setting based on the principle of 1/2/5 minmum division while the number rightest blinking.press

+/PRINT/HI or HOLD/LO/- to change the value or shift the decimal point.

Press M+/SAVE to save and enter to the calibration setting while press ZERO/ESC to return to capacity setting without saving.

The window displays CAL when entering the calibration setting after finishing division setting.
 Press TARE/>
to enter calibration setting. Press ZERO/ESC to return without saving.

5-2 Function Setting

- Press and hold M-/SETwhile powering on or long press M-/SETunder normal weighing mode to enter function setting. The window displays "check". Setting item "P00" displays momentarily at the left bottom
- Press
 ✓MR or TARE/> to shift between the functions
- Press M-/SET to enter the parameter setting.
- Press +/PRINT/HI or HOLD/LO/- to shift between the function parameters
- Press M+/SAVE to save and return. Press ZERO/ESC to exit without saving.

5-3Description of Parameter Values

- P00: LILLI Offset value
 Displays the offset value and the keypad testing can be conducted
- 2. P01: LIVIL Backlight mode

Off: No backlight

Auto: when weight value is stable or any key is pressed. But auto off after N seconds (N=2s,

5s, 10s, 20s, ever) with no action

Ever= It is always on when the weights over 9e

On: Backlight on

3. P02: RUED Auto-off

Off: Non power off

5 · 10 · 30 · 60(minutes) : Auto power off after keeping the scale unused for 5 · 10 · 30 · 60(minutes) with "-----" appears

4. P03: Unit setting

Init: Press key *Unit* to select the default unit when powering on the scale: pcs, 斤, lboz, g, kg, final .(final=keep the final being used unit when power off)

Use: Press key Unit to select the weighing unit. on: Enable the unit off: Disable the unit

5. P04: ILI D Zero range

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

6. P05: Hat a Hold function

HoLd - 0: no hold function

HoLd – 1: Peak hold. Press M-/SET key to release, and press +/PRINT/HI key to print out the value.

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

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.

7. P06: Lhu Check weighing memory

on : Check weighing on off : Check weighing off

8. P07: Little Check weighing function

on: Check weighing under the condition that the weight is within the limits and the stable

indication appears

off: Check weighing under the condition that the weight is within the limits

9. P08: 000 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

10.P09: TET | External device

U If LI Birch printer (BP545,TDP643)

ບົດປີເຊິ່ງ= Godex printer

u P = Adhesive sticker label printer

Zebra printer

Off = Dot matrix printer (CK,SH-24)

E &=Large LED display

PE =Computer

[= CX large screen display(version 0.02)

Ch = Thermal printer(Chinese available)

Note: Special setting is needed by distributor if you want to print in Chinese.

the output format is compatible with Toledo Continuous Mode.

ESEEL=Work with the function of "Use Serial Keys" in Windows in outputting the data to Excel and other software. Reference user manual: http://www.jadever.com.cn/Download.aspx

 $"-\footnote{iff} = \footnote{iff} = \f$

WinXP/ Win7 system available.

LP-50=Self adhesive printer

11.P10: บกับนี้ RS-232 Serial Transmission Rate

9600 + 4800 + 2400

12.P11: TICH Print mode

contin: Continuous print

stable: Stable print (weight is equal or more than 20d)

key: Manual print by pressing key PRINT

ckok: Printing after weighing checking is OK.

13.P12: ITE Print format

See the appendix (more than 100 formats. The appendix just shows two formats.)

14.P13: 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

15. P14: 1- L 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

16.P15: 1 RTC set

on: Enable RTC function

off: Disable RTC function

RTC setting:

When the window shows "on", press M-/SET to enter RTC setting and the window shows the

year. Press **◄/MR** or **TARE/>** to choose date and time. Press **M-/SET**to enter setting.

Press
##/MR or TAREi> to shift key leftward or rightward; Press +/PRINT/HI or

HOLD/LO/- to change the value. Press M+/SAVE to return.

Note: The scale should have a RS232 board

17.P16: U-01 zero off-set function

OFF: not display the previous weight when powering on again

ON: display the previous weight when powering on again.

18.P16: ([[] Initialization

Press M-/SET to initialization and display RESET.

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6.Calibration

Note: Before calibration, please set the unit first. The unit used in calibration is the one that has been set before. During the calibration procedure, 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".
- With no load on the weighing pan, press TARE to start zero point calibration. "on 0"is blanking at the left bottom.
- 3. Wait till the window displays the first calibration value. "on "appears at the left bottom.

, IDD _{4...}

Note: The first calibration value is default. With the same capacity, the last first calibration point value can be recorded. 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 M-/SET to enter the value setting. Press ◀/MR or TARE/▶ to move leftwards or rightwards. Press+/PRINT/HI or HOLD/LO/- to change the value. Press M+/SAVE to save.

- 5. Add another mass to the current weight. The window will show the total weight. Press *TARE* to complete. "on 3"appears at the left bottom. 150"....
- Press M+/SAVE to save. After the window displays * PRESON, 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 the gross weight. (The desired weighing unit should be selected





before weighing.)

7-2 Tare

Manual Tare

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

 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.

- 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.

Preset Tare

- Long press key TARE/ for 3 seconds. The scale is now in digital inputting mode with the left-most digit blinking.
- Press key
 MR to shift leftwards, key TARE/> to shift rightwards, key +/PRINT/HI to increase setting values and key HOLD/LO/- to decrease setting value. E.g. here we set the Preset Tare value as 0.500kg
- 3. Press key **M+/SAVE** to save and return to weighing mode.
- Put the load on the container, the scale will automatically deduct the value of the container from the total value.
- To clear tare with an empty pan, press down key TARE/ or key ZERO/ESC

7-3 Check Weighing

Lower limit setting

 Begin by pressing down key HOLD/LO/-. The scale is now in digital inputting mode with the JWI-700W 12 right-most digit blinking.

To set the value of lower limit, press key
 In shift leftwards, key TARE/>
to shift rightwards, key +/PRINT/HI to increase setting values and key HOLD/LO/
to decrease setting value. Key M-/SET to enable or disable the weighing checking function.

005000_{**}e

3. To save the Lower limit and return to weighing mode, Press key M+/SAVE

Upper limit setting

- Begin by pressing down key +/PRINT/HI. The scale is now in digital inputting mode with the right-most digit blinking.
- To set the value of upper limit, press key
 ✓MR to shift leftwards, key TARE/>
 to shift rightwards, key +/PRINT/HI to increase setting values and key HOLD/LO/- to decrease setting value.
- 3. To save the upper limit and return to weighing mode, press key M+/SAVE Place the sample on the weighing pan, if the sample weight is under the lower weight range while over or equal 20d, the LOW lamp will light up. If the sample is within the lower and upper weight range while over or equal 20d, the OK lamp will light up. If the sample is over the upper weight range while over or equal 20d, the HI lamp will light up.

7-4 Simple Counting

1. Press key UNIT to select the unit "PCS".

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

S: 10 ..

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

585° J_ 20° J

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- 5. Remove the samples and put the load on, the scale calculates the amount of the load.
- To go back to the normal weighing mode, remove the load and press key UNIT to select the proper weighing unit.

Note:

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

7-5 Accumulation, Accumulation Display and Accumulation clear Accumulation

Under the weighing mode, put the item on the weighing pan. Press key *M+/SAVE* at the appearance of " is displayed momentarily before the display reverts to the weight of the item.

Remove the item and the display goes back to zero before the next accumulation can register.

(The maximum is 99 pieces, display the latest 10 accumulation events in details.)

Accumulation Display

Press key M-/SET to display the accumulation data

The number of weighments is indicated by Auxiliary display at the left bottom.

XX=Total accumulation : "XX=certain accumulation

Accumulation Clear

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

7-6 Printer initialization by the indicator operation

- Press M-/SETwhile powering on to enter parameter setting. Use key
 MR or TARE/> to shift to P09 PEr I
- Shift to certain printer model, Press M-/SET and the window will show "UNSUP" or "INIT?"

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"UNSUP" means the printer is no need for initialization. Press ZERO/ESC to return.

"init?" means the printer is should be initialized. Press **MR/SAVE** to initialize the printer. When the initialization is finished, the window will show "ok". And then displays the printer model.

Press ZERO/ESC to return

7-7 Input commands

Connect the indicator and computer. Run serial port debugging program on the computer. Input the capital number "Z", "T", "R", "C", "P" in the sending area, and the indicator can conduct the corresponding actions.

R/P=Reading Weighing

Z=zero

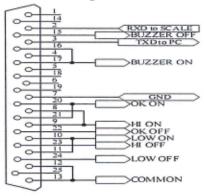
T=tare/cancel tare

C=Cancel Tare

8. Serial Interface

If external interface is needed, please select the proper three-in-one board first, which integrates RTC (time display), RS-232 and relay (weight checking) functional module onto one circuit board. Only after this board is adopted, the three functions can be realized.

8-1 RS-232 Diagram



9. 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	Check whether there are other alien articles on the scale pan, remove those articles, LOAD CELL failure, which requires to be changed or to contact our Service.
ERR3	Exceed the A/D resolution range	Check whether it is A/D failure, if yes, please replace AD. 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 weighments exceeds the display range	Delete the exceeding weighments
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)

Appendix 1: printing format (Optional)

Printing Device	Format	Sample
PC	prt-01	2004.11.25 12:28;26 1. 000 kg
	prt-02	G.W.: 1. 500 kg T.W.: 0. 500 kg N.W.: 1. 000 kg
	prt-03	1. 000 kg
	prt-04	ST GW + 100.00 UT GW + 100.00 UT NW - 200.00 ST NW - 200.00 ST: stable; UT: unstable; NW: net weight; GW: gross weight
	prt-05	ST, GS, + 100.00kg US, GS, + 100.00kg US, NT, - 200.00kg ST, NT, - 200.00kg ST; stable; UT; unstable; NT; net weight; GS; gross weight

	(11)	
	prt-06	ST, + 100.00kg ST, - 100.00kg "ST," is the prefix
	prt-07	+ 100.00kg - 100.00kg
	prt-08	02 + mark + data (6 digits without decimal point) + decimal place + XOR checksum high + XOR checksum low + 03
	Prt-09	N.W.: + 0.00 kg G.W.: + 0.00 kg T.W.: + 0.00 kg
BIRCH/GODEX/ZEBRA/CK	prt-01	2004.11.25 12:28:26 1. 000 kg
	prt-02	G.W.: 1. 500 kg T.W.: 0. 500 kg N.W.: 1. 000 kg
ск	prt-02	2910-11-12 13:14:15 G.W.: 1.48 kg T.W.: 0.00 kg N.W.: 1.48 kg
DMP	prt-01	2004.11.25 12:28:26 1. 000 kg