Weighing Indicator

User Manual

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1. Introduction

This manual contains installation and operation instructions for the JWI-3000W 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°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

JWI-3000W	
0.13uV/DIV	
-0.5mV to 16.5mV	
Up to 4 ×350 ohm load cells	
0.003% of full capacity	
10M ohm or more	
Δ-Σ	
700,000 count	
8 times/second	
15,000 count	
6 digits	
AC 110V/220V (AC±10%) or Rechargeable battery (6V/4A)	

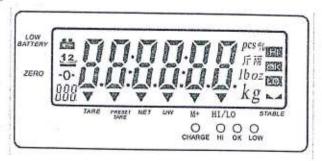
Features

- 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
- O 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 or Preset Tare Indication

-0- Center of Zero Indicat ion. 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.

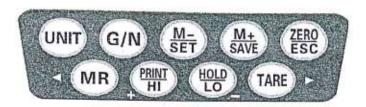
NET Net weight--Gross weight minus Tare. Symbol "▼" points at "NET" when Tare or Preset Tare action are done.

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

 $F^{es} = 0$ $F^{$

- 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)
- ▲ A Stable indication
- Charge Lamp

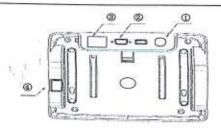
3-2-2 Keyboard



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.	
M+ SAVE	Adds the indicated weight into accumulation memory During editing, save and return to the higher option Used in capacity and division settings	
√MR	Memory recall Select the former parameter in the same level Select the former record when checking the accumulation record Shift keys leftwards	
PRINT	During setting value, add 1 to the current value Set the upper limit of the check weighing Print	
HOLD	During setting value, deduct 1 to the current value Set the lower limit of the check weighing Hold function	

3-3 Rear Panel

- 1) Port for connecting load cell.
- 2) RS-232 port : Serial interface port
- 3) Power socket
- 4) 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

- (9V/400mA) Adaptor
- (6V/4A) Internal Rechargeable Battery

Power Consumption

About 300 mW without backlight About 380 mW with backlight

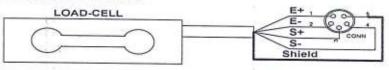
Low battery warning

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.

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

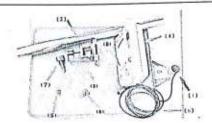
4-1 Load cell connection



	PIN	SIGNAL
LOAD CELL	1	E+
LOAD OLLL	2	E-
CONNECTION	3	S+
SOURCETION	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) Knob pole
- (8) Bracket slot
- (9) Load cell wire



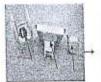
Step 1: Thread the wire of the Load Cell (9) on the rod seat (1) through the upright pole (2). Insert The upright pole into the rod seat and then lock it with two screws (5).

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 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 ◄/MR or TARE/▶ to shift key leftward or rightward. 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 TAREN to enter calibration setting. Press ZERO/ESC to return without saving.

5-2 Function Setting

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

5-3 Description of Parameter Values

1. P00: [HELF Offset value

Displays the offset value and the keypad testing can be conducted

2. P01: L IVIIL Backlight mode

Off : No backlight

Auto : Auto on once get a stable weigh data 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: Un it current using units 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

4. P03: 7 zero range setting: d0, d1, d2, d3, d4, d5.

d0 (one division), d1 (2 divisions), d2 (3 divisions), d3 (4 divisions), d4 (5 divisions) and d5 (6 divisions)

5. P04: Hold 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

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.

6. P05: L hai whether to save the upper & lower limit of quantity checking: on, off OFF = previously set quantity checking values are not retained when the unit is turned on. ON = previously set quantity checking values are retained when the unit is turned on.

7. P06: [hil 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

8. P07: Off 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

9. P08: PEr / External device

b if [H= Birch printer (BP545,TDP643)

GodE = Godex printer

TEO n= Zebra printer

GP = Adhesive sticker label printer (paper size 5cmx3cm)

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

E E=Large LED display

PE =Computer

= CX large screen display(version 0.02)

Ch = Thermal printer(Chinese available)

¿Lonc=the output format is compatible with Toledo Continuous Mode.

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

ENEEL: Work with the function of "Use Serial Keys" in Windows in outputting the data to Excel.

Reference user manual: http://www.jadever.com.cn/Download.aspx

U.KEY: U.KEY connector works with PC to send the weighing data to computer (WinXP/Win7) in form of Excel and so on.

10. P09: UNIV RS-232 Serial Transmission Rate

9600 + 4800 + 2400

11.P10: Print mode

contin: Continuous print

stable: Printing automatically when get a stable weight (more than 20d)

key: Manual print by pressing the key PRINT

12.P11: Ortic printing format setting: prt01~prt03

Use the numeric key to set the format directly.

13.P12: 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

14. P13: 1-1 Precondition for zeroing or taring setting: stable, auto, always

stable: Taring or zeroing can be not action without stable indication after pressing the key
TARE or ZERO

always: Taring or zeroing can be action without stable indication after pressing the key TARE or ZERO

auto: Press key TARE or ZERO, but it works only when get the stable indication.

15.P14: 0-off zero off-set function

OFF: not display the previous weight when powering on again

ON: display the previous weight when powering on again.

16.P15: CESE Initialization

Press M-/SET to start initialization and display RESET.

6.Calibration

Note: Before calibration, please set the unit first. The unit used in calibration must be the one that has been set before (P02: "If IL). 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 U"is blanking at the left bottom.
- 3. Wait till the window displays the first calibration value. "On fappears at the left bottom. 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 ◄

9

/MR or TARE/> to move leftwards or rightwards. Press+/PRINT/HI or HOLD/LO/- to change the value. Press M+/SAVE to save.

- - 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 mass to the current weight. The window will show the total weight. Press TARE to complete. *** 3***appears at the left bottom. 1500.....
- Press M+/SAVE to save. After the window displays "PRITY", it will return to normal weighing mode.

7.Operation

7-1 Weighing

7-2 Tare

Manual Tare

When weighing a sample that must be held in a container, tare and store 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.
- 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.
- To clear tare with an empty pan, press down key TARE/ or key ZERO/ESC

Preset Tare

 Long press key TARET for 3 seconds. The scale is now in digital inputting mode with the left-most digit blinking. DQDDDQ.

- 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 (0,0050).
- 3. Press key M+/SAVE to save and return to weighing mode. F., OSD,
- Put the load on the container, the scale will automatically deduct the value of the container from the total value.
- 5. To clear tare with an empty pan, press down key TARE/▶ or key ZERO/ESC

7-3 Check Weighing

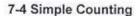
Lower limit setting

- Begin by pressing down key HOLD/LO/-. The scale is now in digital inputting mode with the right-most digit blinking.
- To set the value of lower 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. Key M-/SET to enable or disable the weighing checking function.
- 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.
- 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.

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.



- 2. Press key G/N, the ex-factory default sample quantity (10 pcs) is displayed 5: 10
- 4. Put the corresponding samples on the weighing pan, and then press key TARE/>. •\$8.59 is displayed momentarily before the display reverts to the sample quantity.

SAMP 20"

- 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:

- 1. 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 **A**. - **A**. - **A** 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 </MR to display the accumulation data.

Press key *MR* or *TARE*to check a total accumulation event and each accumulation event in detail.

The number of accumulated weight is indicated at the left bottom.

LXX= total accumulation event : iXX= the single accumulation

Accumulation Clear

To clear accumulation data (total accumulation data or one of the latest 10 accumulation events), press key <a>MR to display the accumulation data needed and press key <a>M-/SET to clear

data chosen. When clear total accumulation data, the accumulation signal " v " will disappear and back to normal weighing mode. If need to exit without clearing data 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.
- After choosing one printer model, press M-/SET and the window will show "UNSUP" or "INIT?"

"UNSUP" means the printer can't be initialized by scale. 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 to 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

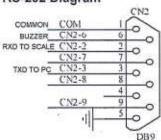
C=Cancel Tare

8. Serial Interface

If external interface is needed, please select the proper RS 232 board or Relay port firstly, and only when this board is adopted, the functions can be enabled.

Note: RTC & RELAY is unavailable.

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 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)

Appendix 1: printing format (Optional)

Printing Device	Format	Sample
PC	prt-01	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 CW + 100.00 kg UT CW + 100.00 kg UT NW - 200.00 kg ST NW - 200.00 kg 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; NV: net weight; GW: gross weight
prt-06	ST, + 100.00kg ST, - 100.00kg "ST," is the prefix	

BIRCH/GODEX/ZEBRA/GP /CK	prt-01	1. 000 kg
	prt-02	G.W.: 1. 500 kg T.W.: 0. 500 kg N.W.: 1. 000 kg
СК	prt-02	G.W.: 1.48 kg T.W.: 0.00 kg N.W.: 1.48 kg
DMP	prt-01	1. 000 kg
	prt-02	G.W.: 100.00 kg T.W.: 0.00 kg N.W.: 100.00 kg
	When null appear under display of accumulation, press key PRINT to the print out.	(01) 1.765 kg (02) 1.760 kg (03) 1.760 kg (03) 5.285 kg

NOTE:

The printing sample could be of different kinds of formats. When there is specific demand about the format, conduct as follows

- As for BRICH/GODEX/ZEBRA/GP printers, the factory designs the format as planned and email to the user. Add the format into the previous format file via computer. Then it is successful to add the new format and able to print the new format.
- 2) As for DMP/CK printer, it needs to change the scale design

Appendix 2: Exporting data to PC in the form of EXCEL

Introduction:

Connect the scale with PC and set the parameter of external device as "EXCEL" on the scale, then you could export the weighing data to PC in the form of EXCEL. With this function, you could record/accumulate/average/data statistical analysis the testing data, which we could call it as scale-computer data management function.

Note: pls enable "Use Serial Keys" function in the computer.

Hardware connection and settings

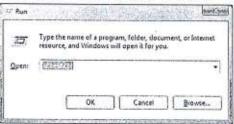
- Use transmitting serial wire or USB wire to connect scale and pc. Note: pls install usb driver first, if you use usb wire.
- Parameter settings in scale:

"PERI" = "EXCEL" (external device)
"BAUD" = "2400"/"4800"/"9600" (baud rate)
"PRT.M" = "KEY"/"STABLE" (printing model)
"PRT.F" = "PRT.F01" (printing format)

Enable the function of "Use Serial Keys" in the computer

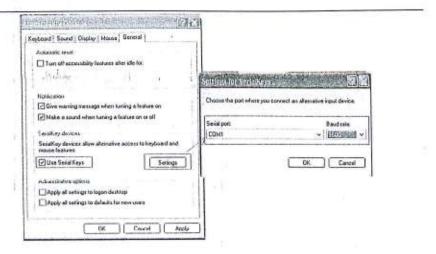
Set Windows XP as a example:

1. Press "Start" -> "Run", and enter "access.cpl" -> "OK".



In the dialog box "Accessibility Options", enter General option, choose "Use Serial Keys" and press "Settings".

In the dialog box "Settings for SerialKeys", set the corresponding Serial port and Baud rate, which should be same as Baud rate in scale.



Test if Serial Keys works well.Open a Text Document, and press the Print buotton on the scale. The Serial Keys works well, if pc exports the weighing data to Text.



Export weighing data to Excel

- Open Excel.
- 2. Press [Print], then Excel will show Weighing data.