JIK-4 series

User's Manual

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1. Introduction

Thank you for deciding to purchase a JIK-4CSB Weighing indicator. The model has the excellent performance and splendid properties under severe quality management. It is recommended to read this manual in full before using it for good function application.

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 power supply.
- Please ensure the rechargeable battery is fully charged if the indicator is not used over 2 months.
- Please cut off the charging power supply in time when 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.
- © 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.
- Please contact authorized dealer if you have any need.

3. Product Introduction

3-1 Specification and Feature

Specification

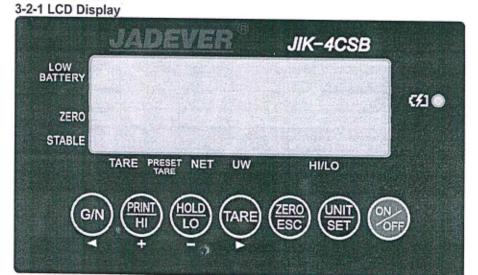
Model	JIK-4CSB 0.007% of full capacity(ensuring 15000 capacity)	
System linearity		
A/D conversion mode	Δ-Σ	
A/D internal resolution	700,000 count	
A/D conversion speed	10 times/second	
External display resolution	15,000	

Display	6 digits	\neg
Power supply	DC 9V/400mA or Rechargeable battery (6V/2.8A)	\neg
Certification	CE	\neg

Feature

- Up to 1/15000 resolution
- Waterproof indicator with stainless steel structure
- Easy to read large display with green LCD backlight
- Adjustable filtering level for weighing under various condition
- Zero / Tare / Weighing / Simple counting / Hold / Net & Gross Weight / Check weighing function
- Suitable for a wide size range of bases and load cells
- Adjustable standard for bench scale with different size

3-2 Front Panel





Low battery indication

ZERO Center of Zero Indication. The zeroing range is ±2% of scale capacity.



TARE Symbol "▼" points at "TARE" when the weight of the container is tared .

lb. lb. oz pos

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Units of measure

HI The item on the weighing pan is greater than the upper limit

OK The item on the weighing pan is between upper and lower limits.

LO The item on the weighing pan is smaller than lower limit.

OK Battery charging is finished

Battery is charging

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
- ជា Print out when setting manual print
- ☆ Long press higher limit initials higher limit setting

-/HOLD/LO key

- ☆ The number decreases one when value setting
- A 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

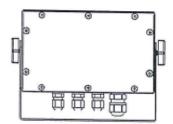
- ☆Zeros the display
- ☆ Short press to save and exit from the setting mode
- Long press to exit from the setting mode without saving.

UNIT/SET key

- ☆ Exchange the weighing units
- ☆ Long press to enter the parameter setting

3-3 Rear Panel

- 1. Power supply slot
- 2. RS-232 Port
- 3. Load cell slot
- 4. Relay



3-4Power supply

1. DC9V/400mA/Rechargeable Battery

Power Consumption

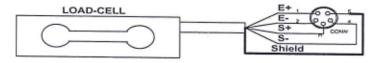
Turn on the backlight: It can be used for about 100 hours and consumes 150mW. Turn off the backlight: about 200 hours available, power consumption is 80mW

Low battery warming

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.

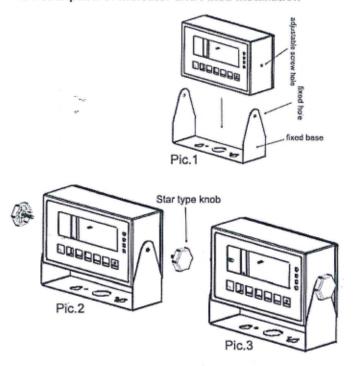
4. Installation Instructions

4-1 Load cell connection

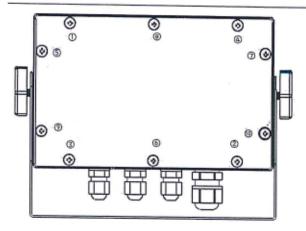


	PIN	SIGNAL
LOAD CELL	1	E+
LOAD CELL	2	E-
CONNECTION	3	S+
CONNECTION	4	S-
	5	SHIELD

4-2 Description of Indicator and Fixed installation

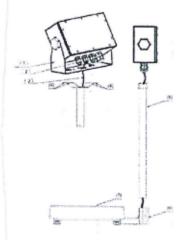


- Put the indicator on the fixed base, let the adjusting screw hole align at fixed hole, and turn
 the star type knob
- Adjusting the indicator into best operating angle, and tightening the star type knob. See Pic.3
- 4-3 Order description of locking waterproof screws in front cover and rear cover.



- 1. The order of locking screws is shown as above
- 2. The best torque of locking screws is 5 ~ 7 kg f. cm

4-4 Assembly diagram for bench scale



1	Load Cell male connector
2	Load Cell female connector
3	Fixed base of indicator
4	Upright pole and indicator stators
5	Upright pole
6	Upright pole base
7	Bench scale base

4-5 Description of bench scale assembly

- 1. Prepare all the parts of platform and JIK indicator.
- 2. Pull the load cell cable through pole holder (6) and upwards through pole (5), then come out from center of the pole holder (4), and fix the pole with cross-headed screws.
- 3. Insert pole (5) into pole holder (6) and then tighten the screw.
- Pull load cell cable through indicator supporter (4) to connect to the indicator. Install Indicator

supporter (4) and indicator stand (3) together.

Connect the load cell cable to female socket (2), and connect male socket (1), then finished assembling.

5. Setting Mode

5-1 Maximum Weighing Capacity & Accuracy Setting

- Press and hold key ZERO/ESC and TARE/ while powering on the scale. When the window displays "150, 00 KG", release the key and it enter the capacity setting
- 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, 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:

 Press:

 In TARE In the shift key leftward or rightward
 - Press +/PRINT/HI or -/ HOLD/LO to change the value.
 - Press
 If 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、斤
 - Press ZERO/ESC to save and entet into division setting when the window dispays "0. 01 KG"

Note: LONG press ZERO/ESC is to return to weighing mode without saving.

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
 If to shift key leftward or rightward in the shift key leftward in the shift key leftward or rightward in the shift key leftward in the shift
- Press +/PRINT/HI or -/ HOLD/LO to change the value.
- Press
 If 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.
- 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

 Press and hold UNIT/SET while powering on or long press UNIT/SET under normal weighing mode to enter function setting.

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- 2. Press **◄/G/N** or **TARE**/► to shift between the functions
- 3. Press UNIT/SET to enter the parameter setting.
- Press ◀/G/N or TARE/► to shift between the function parameters
- 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.

Description of Parameter Values

1. [H[[h Offset value

Displays the offset value and the keypad testing can be conducted

2. L UNC Backlight mode transformation

Off: Close the backlight (backlight is closed at any time)

Auto: Backlight is open when weight is stable or you're pressing keys, but it will close automatically after lasting several seconds (2s,4s,6s,...,20s,ever). "ever" means backlight will open automatically and continuously if the time is longer than 9d.

On: Open the backlight (backlight is opened at any time when starting up the indicator)

3. PULD 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

4. Unit setting

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

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

5. PEro Zero range

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

6. คือได้ Hold function

HoLd - 0: no hold function

HoLd - 1: Hold peak value. Press unit/set key to release, press print/hi to print HOLD 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

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.

Add a sub menu for Hold 5 to set hold value arrange (HD) eg:0100(The default)

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

Cancel the hold function manually: press HOLD key to cancel the current hold value.

7. Lhur 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

8. Link 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

9. DEL 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. Let external device, such as, ET. CX. PC. JMS. Godex . BIRCH. ZEBRA. GP.

DMP、CK、T.CONT、EXCEL。

CX: MMS screen (V0.02 version)

CK: thermal printer (paper size 57.5mm)

JMS: connecting the weighing system software

T.CONT: the format of output is compatible with Toledo Continuous Mode

EXCEL: Work with the function of "Use Serial Keys" in Windows in outputting the data to

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

U.KEY: U.KEY connector to work with PC directly.

b if [H= Birch printer (paper size 5cm*3cm)

น็นอี่ใ = Godex printer (paper size 5cm*3cm)

PEbrR= Zebra printer (paper size 5cm*3cm)

GP: Adhesive sticker label printer (5cm*3cm)

มีแก้ = Dot matrix printer

EE=Large LED display

PE=Computer

11.0000 RS-232 Serial Transmission Rate

9600 + 4800 + 2400

12.77 CH Print mode

contin: Continuous print

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

key: Manual print by pressing key PRINT

13. Prif Print format

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

14.F L 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. 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

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after stable

16. RTC: print date-time

OFF: do not print date-time when printing

ON: print date-time when printing

17. " of weight memory parameters.

ON display the previous weight when powering on again

OFF not display the previous weight when powering on again

18. (C 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** for 5 seconds to return to normal weighing mode without saving.

Here we take 3kg/10g as an example:

- 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 calibration.
- Wait till the window displays the first calibration value. (the window displays 1.000kg)

Note: The first calibration value is default. (For example: if the capacity is 3kg, then the first calibration value is 1kg.) 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.

 Put the corresponding weight (default: 1/3 of full load) 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.

- 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.
- Press ZERO/ESC to save. After the window displays "J" 1, it will return to normal weighing mode.

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.



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

- 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.
- 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.
- Press UNIT/SET to turn on or off the weighing check. (Note: the light of HI/LO will be on after activating this function.)
- 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.
- Press ◄/G/N or TARE/► to shift key leftwards or rightwards. Press+/PRINT/HI or HOLD/LO/- to change the value.
- Press UNIT/SET to turn on or turn off the weighing check
- 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.

Please reset the HI/LO value after changing the unit.

7-4 Simple Counting

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



- 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 are
- 0、20、50、100、200、500、1000(pieces). 5: 27
- 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.



- 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:

- The larger of 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 Printer Initialization (Optional)

Press UNIT/SET while turning on the scale to enter setting mode.

- Step 1. Press G/N or TARE Choose parameter PERI
- Step 2. Press UNIT/SET to enter external devise setting, press G/N or TARE to choose the printer needed, such as Godex.
- Step 3. Connect the printer to scale, and press UNIT/ SET, screen will show UNSUP or INIT. If screen shows UNSUP, it means the printer doesn't need to be initialized, and then press ZERO to return. If screen shows INIT, it means the printer needs to be initialized.
- Step 4. When screen shows init. Press UNIT/SET to initialize the printer, screen shows init...ok, then the model name of the printer.
- Step 5. Press ZERO Twice to save setting, and back to normal weighing mode.

8. Input commands (Optional)

Connect the indicator and computer. Set Parameter P09 to "PC" and P11 to "Key". Run serial port debugging program on the computer. Input the capital number "Z", "T", "R" in the sending area, and the indicator can conduct the corresponding actions and have key sound at the same time.

Z=zero T=tare R=print

8. Error message and trouble shootings

Error Message	Problem	Solution	
ERR0	Exceed the zero range	The item on the pan should be within 2% of full load.	
ERR1	Model setting error. Resolution should be within 300-300000	Adjust or reset the capacity first then adjust resolution	
ERR2	Initial zero point exceeds 30% of full load	Remove the obstacle article under the pan Need calibration Replace the load cell or contact the maintenance department.	
ERR3	Exceed the A/D resolution range	Replace A/D Replace the load cell or contact the maintenance department.	
ERR4	EEPROM failure	Re-weld EEPROM or contact the maintenance department.	
ERR5	Overload condition	Remove the overload item	
ERR6	Exceeds the display range		
ERR8	Weight checking value is higher than full load value	Reset the weight limit value.	
ERR9	Exceed tare or pre-tare range	0 <tare full="" load<="" td="" value≤=""></tare>	
ERR10	Wrong calibration weights	Place the right test weights and the calibration value should be below full load.	

Appendix 1

Printing Device	Printing Type	Printing Format
PC	prt-01	1. 000 kg·
	prt-02	0.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 kg UT GW + 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; NW= net weight, GW= gross weight
	prt-06	ST, + 100.00kg ST, - 100.00kg "ST," is the prefix.
	prt-07	+ 100,00kg
	prt-08	02+symbol+data (no decimal point , 6 digits)+decimals + xor check high + xor check low+03;
BIRCH/GODEX/ZEBRA/CK/GP	prt-01	1. 000 kg ¹
	prt-02	G.W.: 1.500 kg· T.W.: 0.500 kg· N.W.: 1.000 kg·
CK Printing Format	prt-02	2010-11-12 13:14:15 GW: 1.48 kg TW: 0.00 kg NW:

DMP	prt-01	2004.11.25 12:28:26 1.000 kg
	prt-02	2012.04.26 13:05:33 G.W.: 100.00 kg T.W.: 0.00 kg N.W.:
, ET	prt-01	EtOut: 1.00 kg
U-key	prt-01	0.985
	prt-02	0.985 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 printer, it needs to change the scale design