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1. Introduction

This manual contains installation and operation instructions for the JLI Series animal 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 3-3.

◎ Warm up for 15 minutes before using it 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 -5℃~ 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	**JLI**
External display resolution	1/300—1/15000
Weighing units	kg / g / lb
Display	Dot-matrix LCD display with green LED backlight. Display area 108X57.5mm
Dimension(mm)	250X150X90
Power supply	9V/1A adapter，or 6V/3.2AH rechargeable battery
Non-Linearity	0.0015%FS
A/D Conversion rate	Approx. 120 Times/Sec.
A/D Internal Resolution	520,000
Input sensitivity	0.29uV/DIV
Load cell excitation	5V
Input voltage range	-2mV ~ 20mV
Load cell excitation	5V

Feature

◎Easy to use with literal display instruction

◎Stainless steel cover for durable use with IP66 rating certified

◎Dual channel as a standard feature

◎Dynamic weighing function. Fast and accurate

◎Zero / Zero tracking / Manual tare / Pre-tare / Auto-tare / Hold / Net & Gross Weight / Check weighing / Record functions

◎Parameters can be set according to different kinds of animal

◎Data can be recorded up to 100 pieces

◎ Together with JLI Weighing System Software, the animal health condition can be watched over anytime

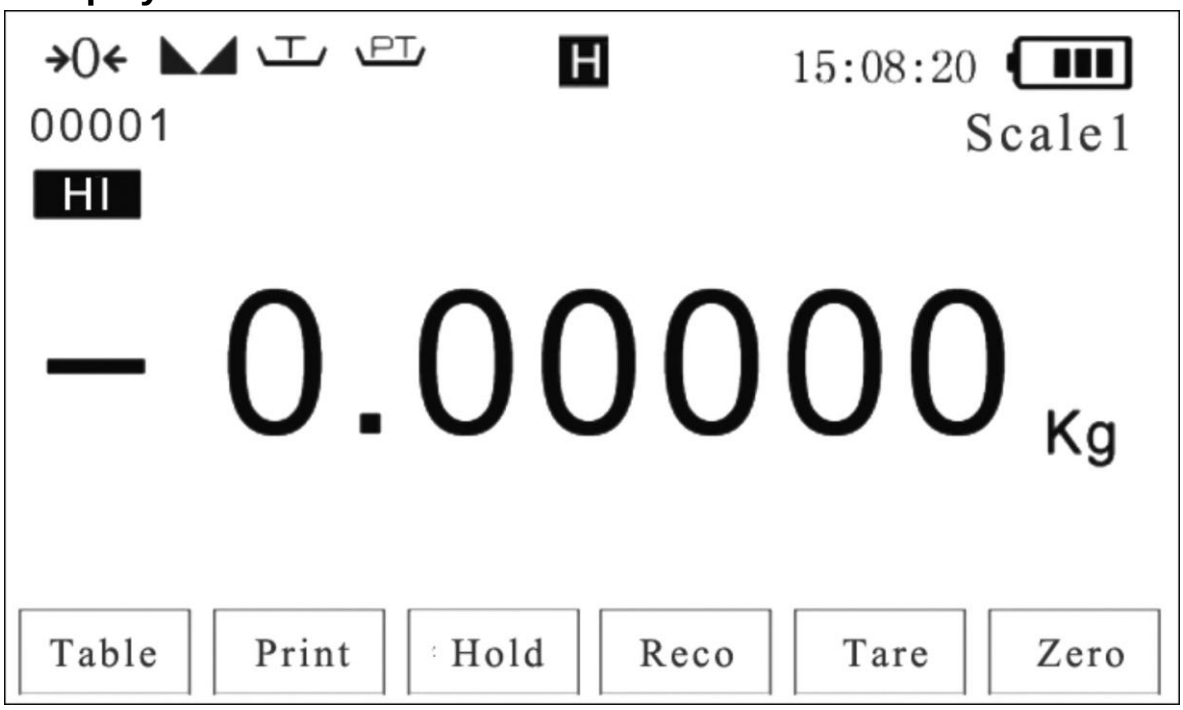
◎Embedded Real Time Operating System

◎Data output format is settable, can be connected to computer, thermal printer, dot matrix printer, light tower and large LED display

◎RS232 interface (Standard). Relay interface (Optional)

3-2 Front panel

3-2-1Display



→0← ： Center of Zero Indication

： Stable indication

T ： Tare Indication

PT ：Preset Tare Indication

00001：Animal number（Set in the JLI weighing system software）

HI ：Check weighing indication.

15:08:20：Time

：Battery indicator

H Hold indication

Scale1：Channel indication

Table：View the record, including animal number, weight, date and time

Print：Print out the current weighing value

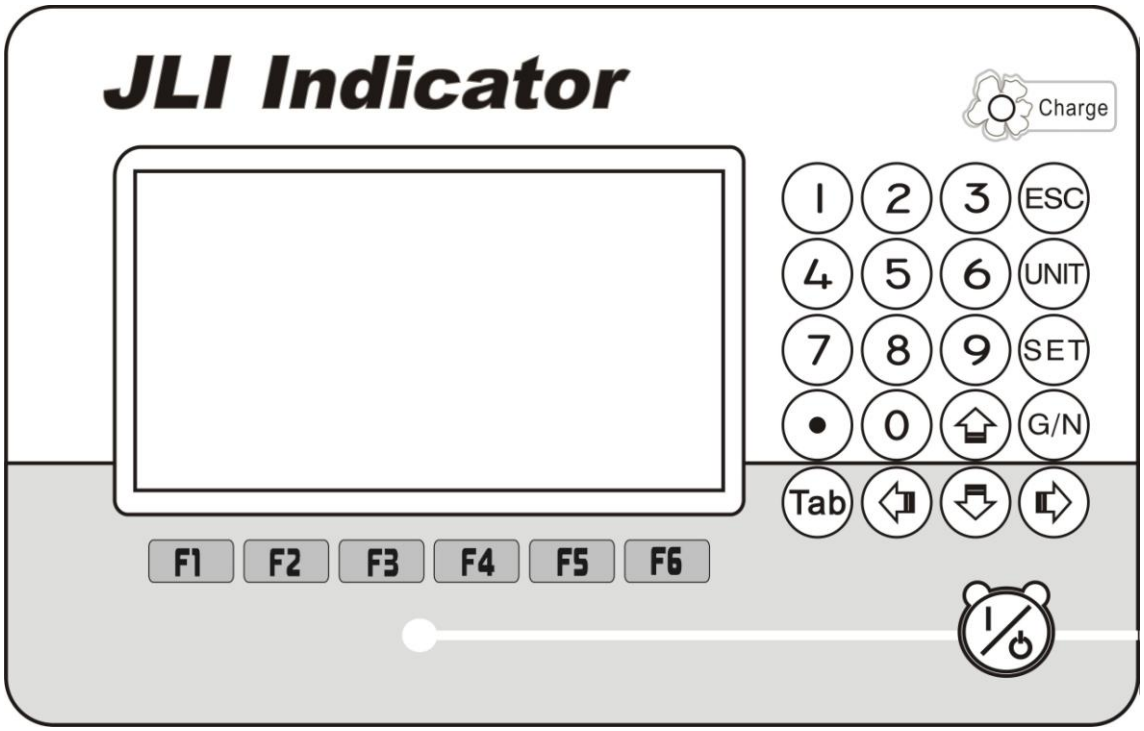
Hold：Hold the current weighing value

Reco: Record the weighing data

Tare：Tare the weight of the container

Zero：Zero the display (within 2% of max. capacity)

3-2-2 Keyboard



0 ~ 9	Input the number
•	Decimal point
Tab	● Under normal weighing mode, shift between scale 1 and scale 2 ● Under setting mode, shift among each parameter setting items
ESC	Exit and return to normal weighing mode
UNIT	Weighing unit
SET	Parameter setting
G/N	Display gross and net weight by turns
	Under setting mode, shift among the options of the same grade
	Under setting mode, shift among the options of the same grade
	When inputting the value, press to move the cursor leftwards
	When inputting the value, press to move the cursor rightwards
F1 ~ F6	Press and conduct the corresponding action according to the LCD displays

3-3 Power supply

Alternative power supply

- 9V/1A adapter
- 6V/3.2A rechargeable battery

Power Consumption

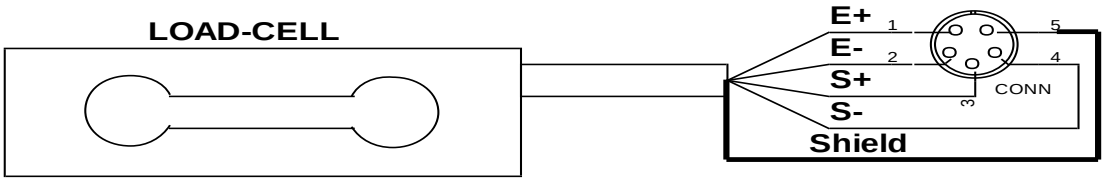
With backlight the battery can last for 10 hours

Without backlight the battery can last for 30 hours

It costs 8 hours for one full charge

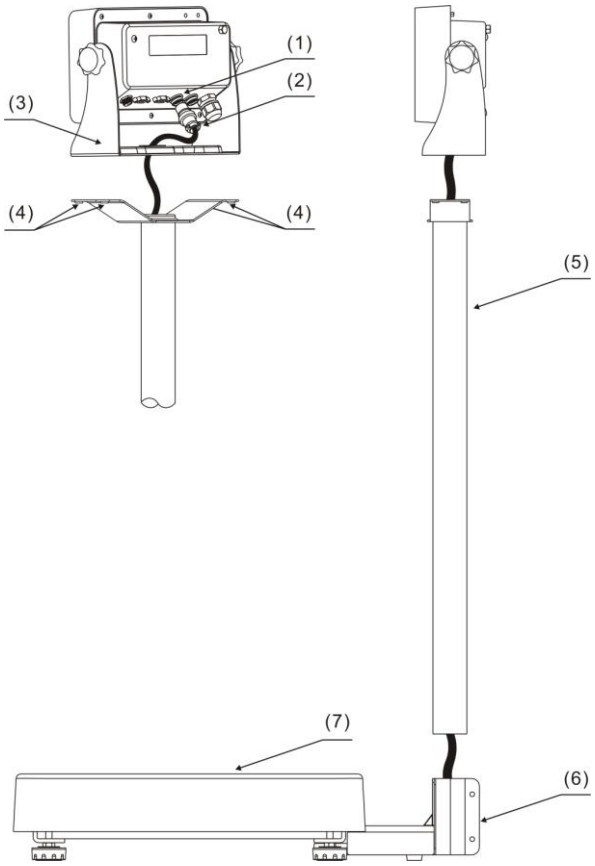
4. Installation

4-1 Load Cell connection



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

4-2 Assembly Description



1	Load Cell (male) connector
2	Load Cell (female) connector
3	Indicator Stand
4	Supporter between frame and indicator
5	Pole
6	Pole holder
7	Platform

1. Pull the load cell cable through pole holder (6) and upwards. Install pole (6) into the pole holder (5), and fix the pole with cross-headed screws.
2. Pull load cell cable through indicator supporter (4) to connect to the indicator.
3. Install Indicator supporter (4) and indicator stand (3) together.
4. Adjust the indicator to adequate viewing angle and tighten the screws located on each side of the Indicator.

5. Setting mode

1. Press key ***SET*** to enter setting mode
2. Press corresponding numeric keys to enter certain parameter setting
3. Press key  or  to move the cursor rightwards or leftwards. Press key ***Tab*** to shift among the parameter items

1-0 Language setting
English=English interface
Chinese=Chinese interface

1-1 Range setting
Press key ***UNIT*** to select the unit for capacity setting
Resolution is from 1/300 to 1/15000
Note:
If only one channel has been set the capacity and resolution, another channel keeps the previous setting. After setting, the window will display division according to the parameter being set.

1-2 Calibration
Conduct the single point calibration

1-3 Factory initialization
Initialize the settings

1-4 Channel setting
Chan_1=Only one channel can be used
Chan_both=Both channels can be used

1-5 Show inner count
Check the inner count and conduct the keypad testing. Pressing down each key, there will be corresponding display in the window

1-6 Animal number
The number is set in the JLI animal software

1-7 Zero/Tare
Stable: able to conduct when stable
Unstable: able to conduct when unstable
Auto: able to operate when unstable but conduct when stable.

1-8 Filter parameter
Set the filtering level in which the stable indication turns on. The higher the setting, the slower stabilization time
Options: **1**，**2**，**3**，**4**

1-9 Weight locking
Auto=Hold the weight value automatically
Manual=Press key Hold to hold the weight value manually
Note: when Auto is set, it only works on the condition that the weighing value is equal or more than 20d

2-0 Zero display
Set the range in which the Zero indication turns on.
Options: d0, **d1**, **d2**, **d3**, **d4** and **d5**. (d= scale division)

2-1Tare setting
Select the tare condition: **Stable**, **Unstable**, **Auto**(Press under the key**[Tare]**, but the tare action will be conducted after the stable indication appears)
Set the upper and lower limit of Auto Tare

Note:
- The range of manual tare and pre-tare is greater than 0 but no more than the full capacity
- If the gross weight is within the zero range, zero action can be conducted and at the same time clear the tare no matter whether it is under the tare mode or not.
- The range of clear tare is between -0.5d and 0.5d
- If the weight of item exceeds the full capacity, the window will display the error message “ERR5”. Tare and other operations cannot be conducted

2-2 Hi/Lo setting
Hi： There will be a warning sound when the weight of item(s) exceeds the upper limit, and the weight is equal or more than 20d. The window displays 
Low: There will be a warning sound when the weight of item(s) exceeds the lower limit, and the weight is equal or more than 20d. The window displays 

In: There will be a warning sound when the weight of item(s) is between the upper and lower limit (including the upper and lower limits), and the weight is equal or more than 20d. The window displays [redacted]

Out：There will be a warning sound when the weight of item(s) is beyond the upper & lower limit, and the weight is equal or more than 20d. The window displays [redacted]or [redacted]

None：There will no warning sound the weight is equal or more than 20d. The window displays [redacted], [redacted] **or** [redacted]**.**

Check weighing

On：Enable the check weighing function

Off：Disable the check weighing function

Check weighing mode

Unstable: start check weighing setting without the appearance of stable symbol.

Stable: start check weighing setting with the appearance of stable symbol

Buzzer

In：Inner buzzer

Out：Outer buzzer

Note：

- The unit when setting Hi/Lo function is corresponding with the weighing unit being used
- If change to another weighing unit, the Hi/Lo function should be set again.
- The weight should be more than 20d
- 0≦Lower limit≦Upper limit≦Max. Capacity
- Check weighing function can also be done after tare

2-3 Beep setting

Beep_on=Turn on the buzzer

Beep_off=Turn off the buzzer

2-4 Auto power-off setting

Off：Non power off

5，10，30，60(minutes)

2-5 Port

COM 1=Only one port can be used

COM 1&COM 2=Both COM 1 and COM 2 can be used

Note: COM 2 is only used for wireless communication.

2-6 External device

JLI software=JLI Animal software

ET=Large LED display

PC=Computer

JOW=Wireless module

2-7 Baud rate setting

Set RS-232 Serial Transmission Rate.

Options:**19200**，**9600**，**4800**，**2400**

2-8 Print mode

Manual=Manual print

Stable=Stable print

Continue=Continuous print

2-9 Print format

Format 1=Print format 1

Format 2=Print format 2

3-0 Product information

Check the product information including Hardware version, Program size, Program version, Update time, Area number and GUID

3-1 Date and Time setting

Set the system date and time

3-2 Backlight

Off=Backlight is always off

Auto= Auto on for ten seconds with items placed on the weighing pan or any key is pressed.

On=Backlight is always on

3-3 Record setting

Set the max. record number(upper limit is 100pieces)

Record mode：**Stable**（Record after the stable indication appears）；**Weight ok**（Record after the weight check is OK）；**Manual**（Record manually）

3-4Inner setting (ex-factory setting)

Input the password to enter inner setting including initial zero point, zero range, minimum capacity, and gravity acceleration

6. Single Point Calibration

Note:

- If the parameter *1-4 Channel setting* is set to be **Chan_1**, the channel cannot be changed during the calibration procedure.

- Before calibration, please set the capacity and resolution. The unit used in calibration is the one used when setting capacity.

1. Press key ***SET*** to enter parameter setting
2. Select parameter *1-2 Calibration*
3. Press **[NEXT]** to start zero point calibration. The window shows “Calibrating zero, please wait”
4. After the zero point calibration is done, press numeric key to input the calibration value.
5. Press **[NEXT]** to enter single point calibration.
6. Place the corresponding weight on the weighing pan, press **[NEXT]** to start single point calibration
7. After the calibration is finished, press **[SAVE]** to save and return.

7. Operation

7-1 Weighing

Begin with no load on the weighing pan, the display reading zero. Place item(s) to be weighed on the weighing pan. The display shown is the gross weight.（The desired weighing unit should be selected before weighing.）

7-2 Tare

Note:

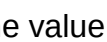
- If tare action takes effect, there would be a beep sound. If not, there would be two beep sound
- After tare, pick up some items. And then press **[Tare]** again, the deducted value is the latest tare value
- Conduct pre-tare first, and then manual tare, the deducted value is the manual tare value. The window displays 

- Conduct manual first, and then pre-tare, the deducted value is the pre-tare value. The window displays 

- Under the gross weight display mode, tare cannot be conducted or cleared.

Manual Tare

When weighing an item 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 **[Tare]**. The weight of container is tared. The window displays  and the value is 0.
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. Press key ***G/N*** to check the gross weight and net weight
5. To clear tare with an empty pan, press down **[Tare]**

Pre-tare

1. Press key ***SET*** to enter parameter setting
2. Enter parameter *2-1 Tare setting*
3. Press key ***Tab*** to shift to "*Pretare value"*
4. Press numeric keys to input the pretare value
5. Press **[Save]** to save the value
6. Press **[PreT]** to enable the preset tare function
7. Press **[Esc]** to return to normal weighing mode. The window displays the indication  and the value is equal to pretare value
8. Place the item(s) on the weighing pan. The scale will automatically deduct the preset tare value
9. Press key ***G/N*** to check the gross weight and net weight
10. To clear tare, with an empty pan, press down **[Tare]**

Auto-tare

1. Press key ***SET*** to enter parameter setting
2. Enter parameter *2-1 Tare setting*
3. Press key ***Tab*** to shift to "**Auto-tare** "
4. Press key  or  to select "**ON**"
5. Press key ***Tab*** to shift to "**Auto Tare Hi Weight**" / "**Auto Tare Low Weight**"
6. Press numeric keys to input the upper and lower limits
7. Press **[Save]** to save the value
8. Press **[Esc]** to return to normal weighing mode

9. Place the item(s) on the weighing pan. The scale will automatically deduct the value when the weight is between the upper and lower limits. The window displays the indication T

10. To clear tare, with an empty pan, press down **[Tare]**

7-3 Hold

Manual hold

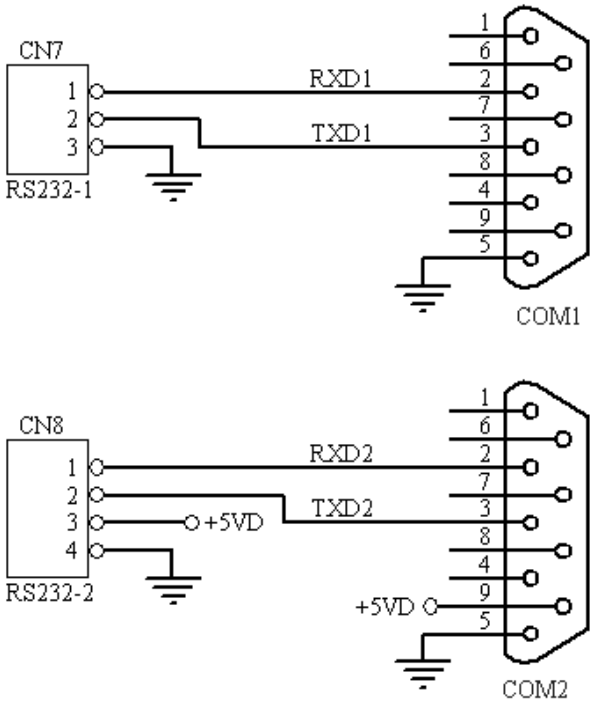
1. Place the item(s) on the weighing pan. Press **[Hold]** to hold the weighing value
2. To clear hold, press **[Hold]** again

Auto hold

1. Press key ***SET*** to enter parameter setting
2. Enter parameter *1-9 Hold* and select "**Auto**."
3. Press **[Save]** to save the setting and press **[Esc]** to return to normal weighing mode
4. Place the item(s) on the weighing pan. The scale will automatically hold the weighing value and the window displays H simultaneously.
5. Press **[Hold]** to exit and re-hold the new weighing value.

6. Auto hold starts only if the weight is equal or more than 20d.

8. RS232 Connector



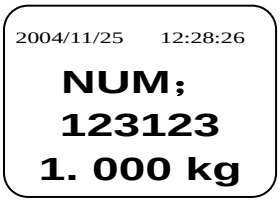
9. Error message and trouble shootings

Error Message	Problem	Trouble shootings
ERR0	Exceed the zero range	Ensure the weight on the pan is within 2 percent of full load.
ERR1	Model setting error.	
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	Check whether it is EEPROM failure, if yes, please replace EEPROM or contact our Service.
ERR5	Overload condition	Do not load the item exceeds the maximum tolerance.
ERR6	Exceeds the display range	
ERR7	Accumulated number of weighments exceeds the display range	Do not accumulate the weighing.
ERR8	Lower limit is higher than upper limit	Reset the higher and lower weighing value
ERR9	Exceed tare or pre-tare range	Reset the tare value which should not be zero and not exceed full load.
ERR10	Wrong calibration weights	Place the right weights and calibrate again.

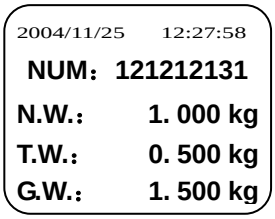
10. Output format

BP-443D / EZ-2P print format

prt-01



prt-02



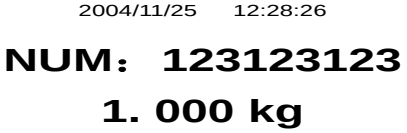
(1) Please contact your supplier/-dealer for additional EZ-2P & BP-443D print formats.

(2) A memory card has to be installed in EZ-2P. (BP-443D memory card is standard)

(3) The print formats are installed into the printers through PC. Please email your specific requirement to us and we will make the requested print format for you.

SH-24 print format

prt-01



prt-02