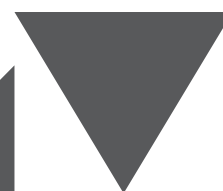


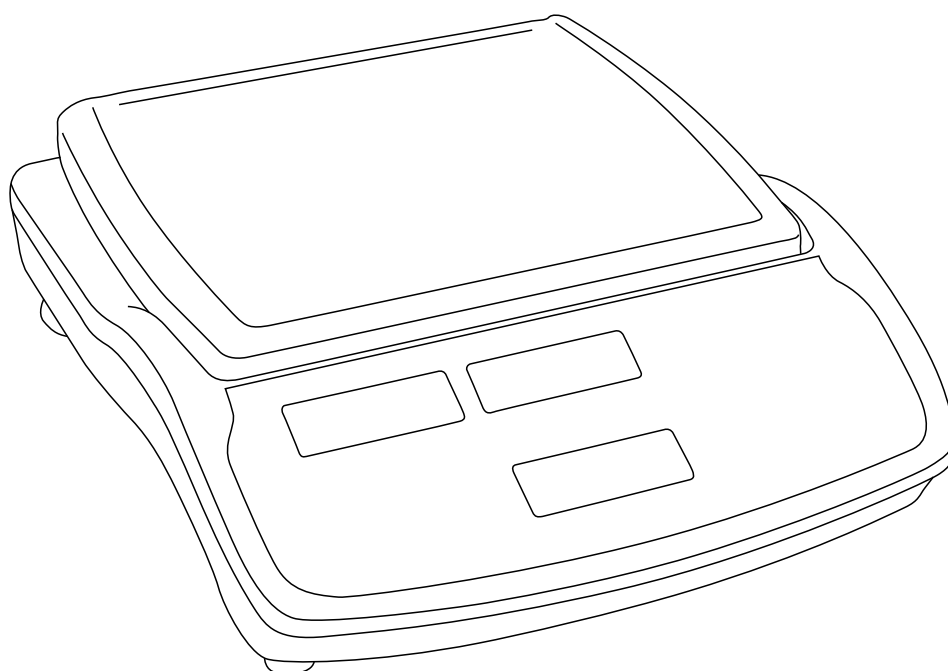


GRAM



SERIE

VK



USER'S MANUAL



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1. Introduction

Thank you for deciding to purchase a JCAII counting scale. This goods 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 scale on a flat and stable surface. See 3-3 Leveling the Scale for details.
- ◎ Verify that the input voltage and the plug type matches the local AC power supply.
- ◎ Warm up the scale for 15 minutes before using it the first time.
- ◎ Keep the scale 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 scale.
- ◎ Do not immerse the scale in water or other liquids.
- ◎ Service should be performed by authorized personnel only.

3. Before Using the Product

3-1 Unpacking and Checking

Open the package and check the instrument for transport damage. Immediately inform your dealer if you have complaints or if parts are missing. The package should contain:

- Scale body
- User manual
- Stainless steel pan
- Wire (power cord)

3-2 Installing Components

Cover the stainless steel pan on the top housing properly before using the scale.

Important:

Please find the delivery protection screw in the bottom of the scale. Loose it according to the instruction sticker next to it

Before use the scale **Loose the screw counter-clockwise to the end**

Before move the scale **Tighten the screw clockwise to the end**

3-3 Leveling the Scale

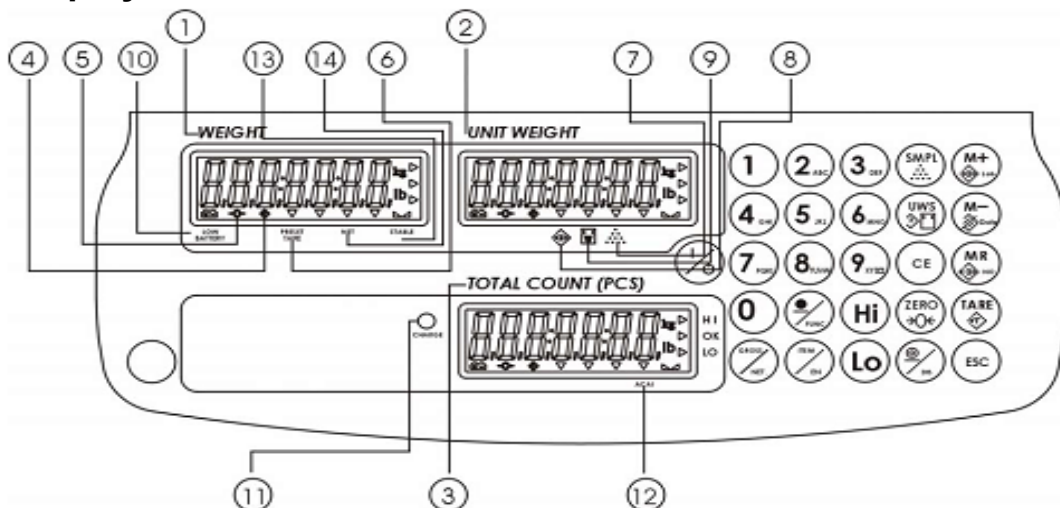
To compensate for small irregularities or inclinations at the location, the scale can be leveled. The scale is equipped with a level indicator at the front panel .Adjust the adjusting feet until the air bubble in the indicator is centered as shown.









Note: The scale should be leveled each time its location is changed.

4. Product Introduction

4-1 Display



- 1) **Weight Window:** displays weight of object on weighing pan, or accumulated weight value.
- 2) **Unit Weight Window:** displays the average piece weight value, or number of weighments .
- 3) **Total Count Window:** displays the calculated number of pieces on the weighing pan, or accumulated piece count value.
- 4)  Tare or Preset Tare indication.
- 5)  Center of Zero Indication, The zeroing range is $\pm 2\%$ of weighing capacity.
- 6) **PRESET TARE** Symbol “▼” points at “**PRESET TARE**” when Tare value entered via numeric keys.
- 7)  Under the sample counting mode, Symbol “▼” points at “**SMPL**” when calculated unit weight is lower than 4/5 of scale division or the quantity of sample is less than 10 pieces.
- 8)  “Accumulation” function is enabled under weighing mode.
- 9)  Under entering a known unit weight mode, Symbol “▼” points at “**UW**” when entered unit weight is lower than 4/5 of scale division. Unit weight is too small for ensuring accurate quantity calculations.
- 10) **Low Battery Indicator:** When “  ” appears, the battery power requires recharging.
- 11) **CHANGE** Charge Lamp

Red--- battery is charging

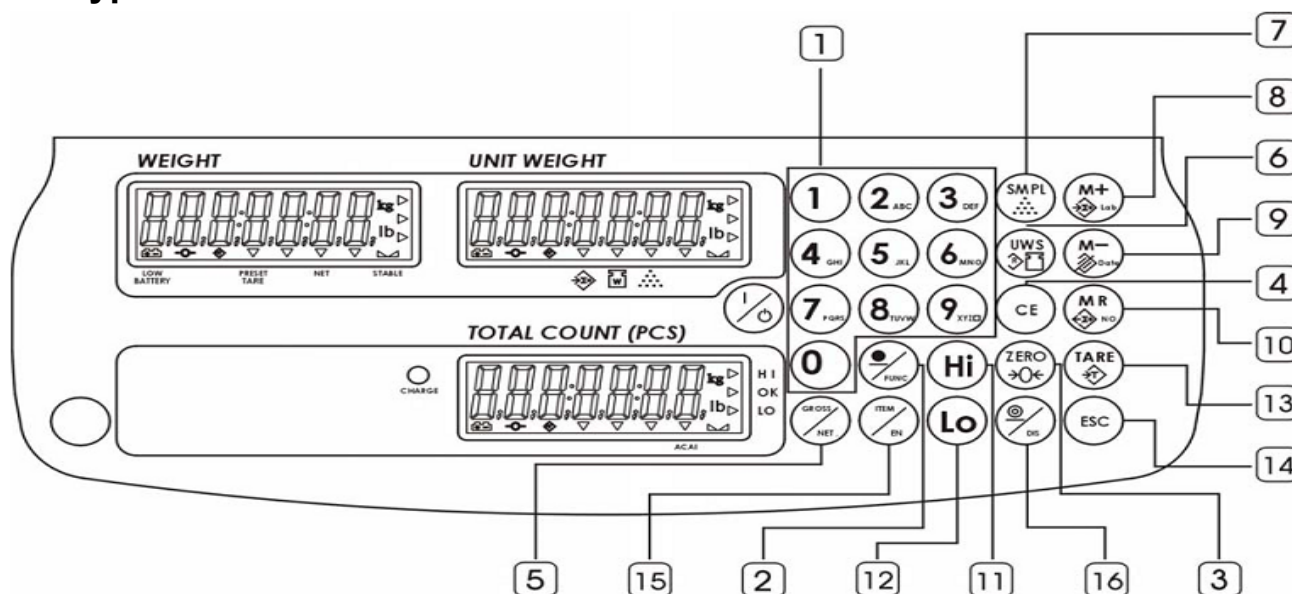
Green---battery is fully charged

ACAI Symbol “▼” points at “**ACAI**” when Automatic counting accuracy improvement is functioning.

STABLE Stable indication, Symbol “▲▲” appears at the top of “**STABLE**” when scale is in stable condition.


NET Gross weight minus Tare. Symbol “▼” points at “**NET**” when manual Tare or preset are actions are done.

4-2 Keypad



- Enters specific values for tare, unit weight and other data entries.



- Key  can be also as a space key when edit label.



- Decimal point
- Initiates function setting



- Sets the weight to zero.



- Clears the indicated input values.



- Displays gross and net weight by turns



- Inputs unit weight and run its counting function



- Enters the sampling mode and change its scale choice(scale 1 or 2)
- Switches between main scale and remote platform



- Adds the indicated weight or piece count value into Accumulation memory.
- Enters label editing mode



- Steps to next parameter
- Deletes accumulation records
- Display year, date, time
- Go back to previous parameter



- Recalls and displays the accumulated data



- Selects/ sets the Hi Value of weight or piece
- change the next content of parameter
- units switch for the pre-tare function



- Selects the Lo value of weight or piece
- Changes to previous content of parameter



- Tare



- Give up any setting and return to normal weighing



- Call up unit weight ID
- Enable / switch on relay output function under HI/LO setting.




- Print
- Disable/ switch off relay output function under HI/LO setting.



5. Analog Section



Input sensitivity	1~4mV/V
Zero adj. Range	20% FS
A/D conversion rate	10 times per second.
Load cell excitation	5V DC
Number of load cells.	up to 4x350 ohm loadcells
Resolution.	1/30,000

6. Setting mode

1. Under the weighing mode, long press key  for 3 seconds to enter basic parameter setting mode.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
P-00	PoWer	off

2. Press  or  to switch between parameters from P-00 to P-07

3. Press key  or  to step through all the available setting options.

4. Press key  to save the setting and return to weighing mode.

Parameter description

1. P-00 Power (default: off) Set the period of inactivity before the scale automatically turns off. Options are Off =non power-off, 10, 20,30,40,50, 60, 70, 80 and 90 (minutes).

2. P-01 Backlight (default: auto)

~~off~~=always off ~~on~~=always on ~~auto~~=turn on when the weight is over 20e

3. P-02 Serial number display (default: off)

~~off~~=never display ~~on~~=will display when price is zero

4. P-03 Beep sound (default: in)

~~in~~=when check is OK ~~out~~=when check is Hi/Lo (~~in~~, ~~out~~=using scale's buzzer)
~~E-in~~=when check is OK ~~E-out~~=when check is Hi/Lo (~~E-in~~, ~~E-out~~=using light tower's buzzer)

5. P-04 ACAI (default: off)

Options: off/5/10/15/20/25/30/35/40/45

6. P-05 Printer model (default: normal)

Options: normal / EZ/ BP/SH/ZEBRA (normal as compatible printer)

7. P-06 Rs-232 Baud Rate (default: 9600)

Options: 19200 / 9600 / 4800 / 2400

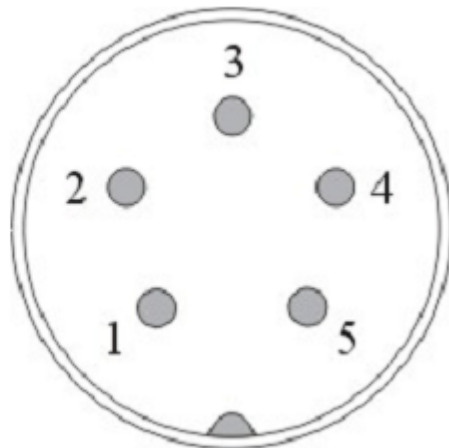
8. P-07 Data (default: n81)

Options: n81 / o81 / e81 / n71 / o71 / e71

7. Dual Channel

7-1 Diagram of sub channel connector

- 1 E+
- 2 E-
- 3 S+
- 4 S-
- 5 GND




7-2 Installation Process

1. Turn on the main scale
2. Connect the remote platform to JCAII main scale

7-3 Setup

- 1) Under the weighing mode, long press key  for 3 seconds to enter basic parameter setting mode.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
P-00	PoWer	off

- 2) Long press key  to enter advance parameter setting mode.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
A-00	PERO	d2

- 3) Press key  or  to select parameter A-08.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
A-08	dUAL	both


- 4) Press key  or  to step through all the available setting items.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
A-08	dUAL	SUB



both = Using main scale together with the remote platform

Sub = Use the remote platform only



main = Use the main scale only

5) Press key  to save the setting and return to weighing mode.


7-4 Maximum Capacity & Division Setting & Unit

1) Press and hold  while turning on the scale. Do not release  till *r - main* is displayed in the Total Count window.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.0000	2	<i>r - main</i>

2) Use numeric keys together with  to input the new capacity, press key  to clear the indicated input values.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
3.0000	2	<i>r - main</i>


3) Press key  advance to division setting. Use numeric keys to input the new division.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
3.0000	1	<i>r - main</i>

4) Press key  to advance to Maximum Capacity & Division Setting of the remote platform.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
1500	1	<i>r - Sub</i>

5) Repeat step 2-3 to complete the settings.

6) Press key  to save the settings and return to weighing mode.


7) Press key  to change its unit: kg, lb, g.

7-5 Calibration



 = remote platform

 = main scale


Note:

- Please calibrate the main scale first.
- The calibration steps of main scale and remote platform are the same. Press key  to switch the calibration for the main scale or remote platform before the zero point calibration.
- You can only do the calibration for the remote platform after you have set the max. capacity and division of the remote platform.


Here take JCAII-6K as an example.

1. Press key  and hold while turning on the scale. Do not release  till **CAL-0** is displayed in the Unit Weight window.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
00000	CAL-0	0000

3. With no load on the weighing pan, press key  to start the zero point calibration and wait till **CAL-1** is displayed in the Unit Weight window. Input the first calibration weight value by the numeric key (6K model, 1/3 of full load is 2kg). And then put the corresponding weights on.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
2000	CAL-1	0000

- 3... Press key  and wait till **CAL-2** is displayed in the Unit Weight window. And then put the corresponding weights on.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
4000	CAL-2	0000

4. Press key  and wait till **CAL-3** is displayed in the Unit Weight window. And then put the corresponding weights on.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
6000	CAL-3	0000


5. Press key  and wait till **PR55** is displayed in the Total Count window.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
6.000	CAL-3	PR55

6. Press key  to save the settings and return to weighing mode



7-6 Set AD gain of remote platform


1. Under normal weighing mode, press  for 3 seconds to enter the basic parameter setting.

2. Press  for 3 seconds to enter the advanced parameter setting.



3. Press key  or  to select parameter A-07

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
A-07	Ad	32

4. Press  or  to select the AD gain. (Options: 1/2/4/8/16/32/64)

5. Press  to save and return to normal weighing mode.




7-7 Switch between Main scale and Remote platform

1. Press  to switch between main scale mode and sub channel mode (remote platform)
2. The **55555** flashed in the Weight Window.
3. When **55555** flashing disappear, means that you are in the sub channel mode (remote platform). Now the remote platform could be used
4. To change back to the main scale mode just press , and **|||||||** will flash in the Weight Window.
5. When **|||||||** flashing disappear, means that the scale have returned back to main scale

mode.

8. Operation

8-1 Zero-point




Press  if you do not see “” but symbol “” appears

8-2 Tare & Preset Tare

8-2-1 Tare


1. Under the weighing mode, place a container weighing (eg. 0.100kg) on the pan.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
		

2. Press key  to complete tare action. The  symbol appears with symbol 



pointing at “**NET**”.





WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
		


3. Put the load on the container. The display shown is the Net weight. Press key  to see the gross weight.

4. To clear tare, with an empty pan, press key 

8-2-2Preset Tare

1. Input the tare value using the numeric key together with key , and press  to switch units(g / kg). (scale will beep if the tare value is larger than full capacity.)

2. Press key . The  symbol appears with a symbol  pointing at “**NET**” and another  pointing at “**PRESET TARE**”


3. Put the load on the container. The display shown is the Net weight. Press key  to see the gross weight.

4. To clear tare, with an empty pan, press key



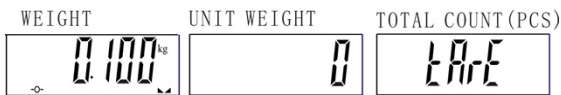
8-2-3 Auto-tare

Set the high limit of the tare value

1. Press  under normal weighing mode. **LArE** appears in the Total Count window.




2. Use numeric key to input the high limit value. Eg. 0.1kg.



3. Press  to save and return.

Set the low limit of the tare value

1. Press  under normal weighing mode. **LArE** appears in the Total Count window.





2. Use numeric key to input the low limit value. Eg. 0.1kg.



3. Press  to save and return.

Enable/disable the Auto-tare function

1. Under normal weighing mode, press  or . **LArE** appears in the Total Count

window. (If not press



).

2. If you want to enable auto-tare function, press



If you want to disable auto-tare function, press



Note: the unit of normal weighing and tare setting are same.

8-3 Counting method

8-3-1 Key in a known unit value

1. Use numeric key to input the unit weight value(eg.1.2g), then press key



WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.000 ^g	1.2000 ^g	0

2. Put the article on the pan, and the scale starts counting

Note: Symbol “▼” points at “UW” when entered unit weight is lower than 4/5 of scale division. Unit weight is too small for ensuring accurate quantity calculations.


8-3-2 Sample counting

Note: Do tare or zero-point before doing the following steps

1. Put samples onto the weighing pan and input the quantity with the numeric key.


(eg. 0.300kg, 20pcs)

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.300 ^{kg}	20 ^g	0

2. Press key . The unit weight is calculated

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.300 ^{kg}	15098 ^g	20

3. Remove the samples and put on the articles, the scale begins to count

Note: Symbol ▼ appears pointing at “” in the Unit Weight window when sample quantity is less than 10 pieces.

8-3-3 ACAI









Automatic Counting Accuracy Improvement (ACAI) results in a more accurate count by increasing the reference weight without the need to count additional parts. A higher reference weight is important when there is a risk of inconsistent piece weights or if the reference weight is close to the minimum. ACAI uses an initial averaging unit weight to count additional weight that is placed on the scale. After a few seconds, the scale gives a beep as a new higher reference weight is used to recalculate the averaging unit weight. The process can be repeated as long as the additional weight is less than the less than previous reference

weight. Once the limit is exceeded ACAI is turned off.

Note:




- If you set the average parameter (P4) to OFF, it means that the scale will do the ACAI in all situations.
- If you set the average parameter to 15, the scale will not work if there is an object shortage or more than $\pm 15\%$ of the unit weight.
- Whether it works or not, depends on the object's tolerant of weight.


8-3-4 Simple Recipe Function

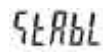

1. Hold the  for 3 seconds under the normal weighing mode, then press  to set the advance parameter. Press key  or  to select parameter A-10, and press  or  to activate or disable this function.
2. Press  to save the setting and return to normal weighing mode.
3. Activate the simple recipe function, and press  after put the item on the weighing pan, then the scale will tare automatically when keeping the item. Repeat the same operation until get all material needed for a recipe.
4. Press MR to check all accumulation items.
5. Clear the weighing pan and press TARE to continue a second recipe weighing.

8-4 Accumulation

8-4-1 Choose Accumulation Mode

1. Press  with no load on the pan.
2. Press  or  to choose the accumulation mode

 = Manual

 = Auto-accumulate when  symbol appears


P.ECE = Auto-accumulate when quantity is between HI – LO limits


WEIGH = Auto-accumulate when weight is between HI – LO limits

3. Press  to save and return.

8-4-2 Set the Max Account of accumulation

The max accumulation number is 99. You can change the max accumulation number as following:
For example, if you want to change the accumulation number to 9

1. Press  and the Unit Weight display is blinking.
- | WEIGHT | UNIT WEIGHT | TOTAL COUNT (PCS) |
|---------|-------------|-------------------|
| 0.0000g | 9 | 0 |

2. Press  to save and return. And now you can accumulate up to 9 times only.




Note: You can change the max accumulation back to 99 times by repeating the above steps.

It will beep for 3 seconds when accumulate to the max account (eg. Max accumulation=9) and the


ACC-09 is blinking

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
2.0000g	ACC 09	0

Under this condition, you have the following options:

- Press , it will print every set and total, **ACC-09** is still blinking. (It is only for normal printer SH-24. Label printer could not do it.)
- Press  to return to normal weighing mode, and still keep accumulation. (But if you try to accumulate another set, it will appear **ACC-09** to warn)
- Press  twice to delete all accumulation,

8-4-3 Manual Accumulation


1. Put the article on the pan. Press key . The symbol "**ACC 1**" is blinking in the Unit Weighting window. This is the first accumulation.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.3000g	ACC 1	300







2. The symbol  will appear pointing at the “” after the blinking.



3. Repeat step 1.

4. Press  to return to normal weighing mode.


8-4-4 Accumulation display

- Press  to see the last accumulation value.
- Press  once more to see the total accumulations value.
- After the above two steps, press  again, it will display every accumulation value one by one.
- Skip 2-3 steps and press any numeric key to see a certain accumulation. For example, if you want to see the 12th accumulation, press key  .
- Press  to return to normal weighing mode.


8-4-5 Print while display of accumulation

Note: Only for SH-24

Print a certain accumulation


Enter a certain accumulation display, press 


Print total accumulation

Enter total accumulation display, press 
 Weight on the scale will print out every set and total
 No weight on the scale will just print out the total




8-4-6 Delete accumulation

Delete a certain accumulation


- Enter a certain accumulation display, press  to delete.

- Press  to return to normal weighing mode.

Delete total accumulation


- Enter the total accumulation display, press  to delete.
- Press  again to delete and return to normal weighing mode. If you don't want to delete, press  to return to normal weighing mode.

8-5 Print

Put the load on the pan and press key  to print. (Note: the weight should be more than 20e)

8-5-1 Set a Print form

EZ/BP/GP set 0~99 forms (The printer should be initialized first); **SH-24** set 0~15 forms

- Press key  with no load on the pan.
- Key in the Form Number with numeric key. For example, if you want to choose the 9th form, press

 .

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.0000 _g	0 _g	Prt-00

- Press key  to complete and return to weighing mode.

Samples of BP/ EZ /GP Print Forms (Preset 10 forms, at most 100 forms)

Prt-00 2002/07/11 10:10:20 N.W.: 0.379 kg U.W.: 3.7930 g Total: 100 PCS	Prt-05 NW: 0.379 kg U.W:3.7930 g 100 PCS 2002/07/11 12:07:41 rate <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3
Prt-01 2002/07/11 10:10:20 1.000 kg ABC COMPANY 0981-123456	Prt-06 NW: 0.379 kg U.W:3.7930 g 100 PCS 2002/07/11 12:07:41
Prt-02 2002/07/11 10:10:20 1.000 kg 1 C - 0 0 1 2	Prt-07 NW: 0.379 kg U.W:3.7930 g 100 PCS 2002/07/11 12:07:41
Prt-03 2002/07/11 10:10:20 N.W: 1.000 kg T.W.: 0.095 kg # 2	Prt-08 2002/07/11 10:10:20 #1 0.379 kg 100 PCS U.W:3.7930 g
Prt-04 2002/07/11 10:10:20 1.000 kg	Prt-09 2002/07/11 10:10:20 N.W.: 0.379 kg T.W.: 0.095 kg U.W.: 0.095 kg Total: 100PCS

Note :

- (1) Please contact your supplier/-dealer for additional EZ /BP/GP print forms.
- (2) The print forms are installed into the printers through PC. Please email us and we will make the requested print form for you. (Note: for Prt-02, we suggest to use large label with the width of 100mm as the bar code is longer.)

Samples of SH-24 Print Forms


**Prt08-15 print forms
with unit weight**

**Prt08-15 print forms
with tare weight**

Prt-00	0.379kg 3.7930g 100PCS
Prt-01	2002/01/01 00:09:23 0.379kg 3.7930g 100PCS
Prt-02	ABC COMPANY 0918-123456 0.379kg 3.7930g 100PCS
Prt-03	2002/01/01 00:09:23 ABC COMPANY 0918-123456 0.379kg 3.7930g 100PCS
Prt-04	#1 0.379kg 3.7930g 100PCS
Prt-05	2002/01/01 00:09:23 #1 0.379kg 3.7930g 100PCS
Prt-06	ABC COMPANY 0918-123456 #1 0.379kg 3.7930g 100PCS
Prt-07	2002/01/01 00:09:23 ABC COMPANY 0918-123456 #1 0.379kg 3.7930g 100PCS

Prt-08	N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-09	2002/01/01 00:09:23 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-10	ABC COMPANY 0918-123456 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-11	2002/01/01 00:09:23 ABC COMPANY 0918-123456 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-12	#1 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-13	2002/01/01 00:09:23 #1 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-14	ABC COMPANY 0918-123456 #1 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS
Prt-15	2002/01/01 00:09:23 ABC COMPANY 0918-123456 #1 N.W: 0.379 kg U.W: 3.7930 g TOTAL: 100 PCS

Prt-08	N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-09	2002/01/01 00:09:23 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-10	ABC COMPANY 0918-123456 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-11	2002/01/01 00:09:23 ABC COMPANY 0918-123456 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-12	#1 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-13	2002/01/01 00:09:23 #1 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-14	ABC COMPANY 0918-123456 #1 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg
Prt-15	2002/01/01 00:09:23 ABC COMPANY 0918-123456 #1 N.W: 0.379 kg T.W: 0.100 kg G.W: 0.479 kg

When **ALL03** appear under display of accumulation, press .the printout will be as following.

```


2002/01/01
00:09:23
ABC COMPANY
0918-123456
1) 0.100 kg   10 PCS
2) 0.100 kg   10 PCS
3) 0.100 kg   10 PCS
-----
0.300 kg   30 PCS
U.W.=10.000 g
  
```

Note: (1)If you wish the SH-24 should be able to print date & time, the scale needs an optional module RS-232+RTC.

(2)If you have a printer that you think is compatible with the SH-24, then just connects the scale and the printer and remember to choose print model **normal** (even it is not the SH-24). Please choose own of the print formats from Prt-00 to Prt-15 and if the print appears correct, means that the printer is compatible with the SH-24.


8-5-2 Set Print mode



1. Press key  with no load on the pan.


2. Press key . The display shown is


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0.000g	Manual	Prt---


3. Press key  or  to choose the print mode

 = Manual

 = Print after  appears

 = Print when quantity is ok (with check function)


 = Print when weight is ok (with check function)

 = Print continuously

 = No action

4. Press key  to complete and return to weighing mode.

8-5-3 Select the Printer Model


1. Under normal weighing mode keep pressing  for about three seconds to enter parameter setting.

2. Press  or  to switch between the parameters and select P-05

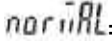
3. Press  or  to choose printer model

 = BP printer output (Automatic-sticking), paper size: 5cm*3cm

 = ZEBRA printer output (Automatic-sticking), paper size: 5cm*3cm

 = SH-24 printer output (dot-matrix)

 = EZ printer output (Automatic-sticking), paper size: 5cm*3cm

 = Normal compatible printer


 = LED display

 = Adhesive sticker label


8-6 Serial number

8-6-1 Set Serial Number Mode



Note: The weight should be less than 20e and there is no accumulation data.


1. Under normal weighing mode, press . It will show as


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0000g	500.1	51861

(If not, press ). Scale would appear the

accumulation data, if there is acc record. Delete the acc data firstly, then set the serial number function.

3. Press  or  to choose the serial number mode

=No action

= The serial no. plus 1 when  symbol appear.

=The serial no. plus 1 when quantity is between HI-LO limits


=The serial no. plus 1 when weight is between HI-LO limits.

4. Press  to save and return.

8-6-2 Set Max Serial Number


The max serial number is 9999, but you can change the max serial number as shown below.

For example: if you want to change the max serial number to 9, do as the following.

1. Press  and the Unit Weight display is blinking.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0000g	9	0


2. Press  to save and return.

Note: When the serial number reaches the max, the Unit Weight display will flash  and beep for 3 seconds and then return to normal weighing mode.

And because it has reached the max serial number, it will reset to 1 when the serial number do increase 1.

8-6-3 Change the Current Serial Number

For example: if you want to change the serial number to 9, do as the following.

1. Press  and the Unit Weight display is blinking.



WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0000g	9	0

2. Press  to save and return.

Note: the serial number is starting from 9.

8-7 Quantity check

8-7-1 Set the high limit of quantity

1. Press  under normal weighing mode. The last high limit value of quantity is blinking in the Total Count window while the arrow is pointing at **HI**. (If the value in Total Count window is not blinking, press )



Eg. 111pieces.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0000g	0	111

2. Use numeric key to input the high limit of quantity you want.

3. Press  to save and return.

8-7-2 Set the low limit of quantity

1. Press  under normal weighing mode. The last low limit value of quantity is blinking in the Total Count window while the arrow is pointing at **LO**. (If the value in Total Count window is not blinking, press )




Eg. 111pieces.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0000g	0	111


2. Use numeric key to input the low limit of quantity you want.

3. Press  to save and return.

8-7-3 Enable / Disable the quantity check function



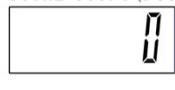
1. Under normal weighing mode, press  or . The display in the Total Count window is blinking. (If the value in Total Count window is not blinking press )

2. If you want to enable the function, press 

If you want to disable the function, press 


Note: When the **HI & LO** checking function is enabled, there will be an arrow pointing between

PERSET TARE and **NET**.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
		

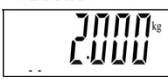
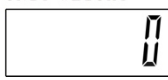
8-8 Weight check

8-8-1 Set the high limit of weight

1. Press  under normal weighing mode. The display of the weight is blinking in the Weight window while the arrow is pointing at **HI** in the Total Count window. (If the value in Weight

window is not blinking, press )


Eg. 2kg.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
		

2. Use numeric key to input the high limit of weight you want.

3. Press  to save and return.

8-8-2Set the low limit of weight

1. Press  under normal weighing mode. The display of the weight is blinking in the Weight window while the arrow is pointing at **LO** in the Total Count window. (If the value in Weight

window is not blinking, press )




E.g. 2kg.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
2000 kg	0	0  HI OK LO


2. Use numeric key to input the low limit of weight you want.

3. Press  to save and return.

8-8-3Enable / Disable the weight check function

1. Under normal weighing mode, press  or . The display in the Weight window is blinking. (If the value in Weight window is not blinking, press )

2. If you want to enable the function, press 

If you want to disable the function, press 

Note: When the **HI & LO** checking function is enabled, there will be an arrow pointing between

PERSET TARE and **NET**.








WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
0000 kg	0	0

8-9 Unit weight ID

Note: possible save up to 50 ID

8-9-1Saving ID method 1

For example, save 1.23g to ID 12

1. Press     under normal weighing mode and the Unit Weight is blinking.
2. Press  and key in the accumulation number  . The Total Count window will

blinking.




WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
00000 kg	123 g	5-1812

3. Press  to save

8-9-2 Saving ID method 2

.For example, there is a unit weight 1.23g already existing and save it to ID 12

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
00000 kg	123 g	0

1. Press  and key in the accumulation number   and the Total Count window will

blinking.


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
00000 kg	123 g	5-1812



3. Press  to save.

8-9-3 Call up ID


Note: If the Unit Weight display is not showing 0, please press first



1. under normal weighing mode, press 

2. Use numeric key to input a certain ID. (e.g.   to call up ID 13)


WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
00000 kg	12300 g	00-13

3. Press  to confirm and the scale is ready for counting.

8-10 Label

Set your own label


Note: The label can save up to 32 characters





1. Keep pressing  until you see the display as shown.

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
-		


HI
OK
LO

Arrow “▶” pointing at **HI** means that the first 16 characters can be edited.

2. Keep pressing and releasing . The display will show 2, A, b, C in order. Choose *A* for example.

3. Press  or do nothing for a while to edit the next character. Press  to move leftwards and  to move rightwards. Press  to clear.

4. Repeat 2-3 steps to complete the first 16 characters.


5. Press  to complete the next 16 characters. The shown is

WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
-		

HI
OK
LO

Arrow “▶” pointing at **LO** means that the last 16 characters can be edited.


6. Do as steps 2-4

7. Press  to save and return to normal weighing mode.

8-11Time Setting

1. Press and hold  under normal weighing mode.






WEIGHT	UNIT WEIGHT	TOTAL COUNT (PCS)
2001	10-23	10:13:16

2. Press  to enter adjusting mode.

3. Press  to move leftwards and  to move rightwards. Use numeric key to input the adjustment.

4. Press  to save and return.

8-12 Error message

Error Message	Reasons	Solutions
<i>E noEE</i>	The CPU unable to read the EEPROM	Return to the Manufacturer
<i>E CALF</i>	Unable to read the 3 points calibration range	Do the 3 points calibration
<i>PH</i>	Zero Point is too high	Make sure the pan is empty when turn on the scale or perform the 3 points calibration.
<i>PLo</i>	Zero Points is too low	Make sure the pan is on the scale or perform the 3 points calibration.
<i>E UnSt</i>	Unstable Zero Point	(1)Make sure there is no winds or vibration. (2)Change the stability /vibration parameter accordingly.
<i>CLF-b</i>	Battery for RTC is too weak	Replace a new battery or press  to abort.
<i>-----</i>	Overload (The weights on the pan is more than +9e of the max. capacity)	Take away the overloaded objects.
<i>ouEr</i>	The value in the Total Weight window or Total Count Window exceeds the display range	(1)Press  key twice to clear the all the accumulation or press  key to return to normal weighing mode . (2)Change another bigger unit weight
<i>ou-15</i>	The last accumulation is more than the preset accumulation allowed .	Press  key twice to clear the all the accumulation or press  key to return to normal weighing mode .

8-13 Problem & Solution

Printer cannot print out

- Make sure the parameter P-05 is set correctly.
- Make sure the parameter P-06 and P-07 match the printer.
- If EZ or BP is being used, they should have download the printer format before.

HI & LO checking do not work

- Make sure the function is enabled.
- The value of LO is greater than HI.


No sound in HI & LO checking function

Make sure the parameter P-03 is set correctly.

Reset the time every time when the scale is turned on

Connect an optional RTC

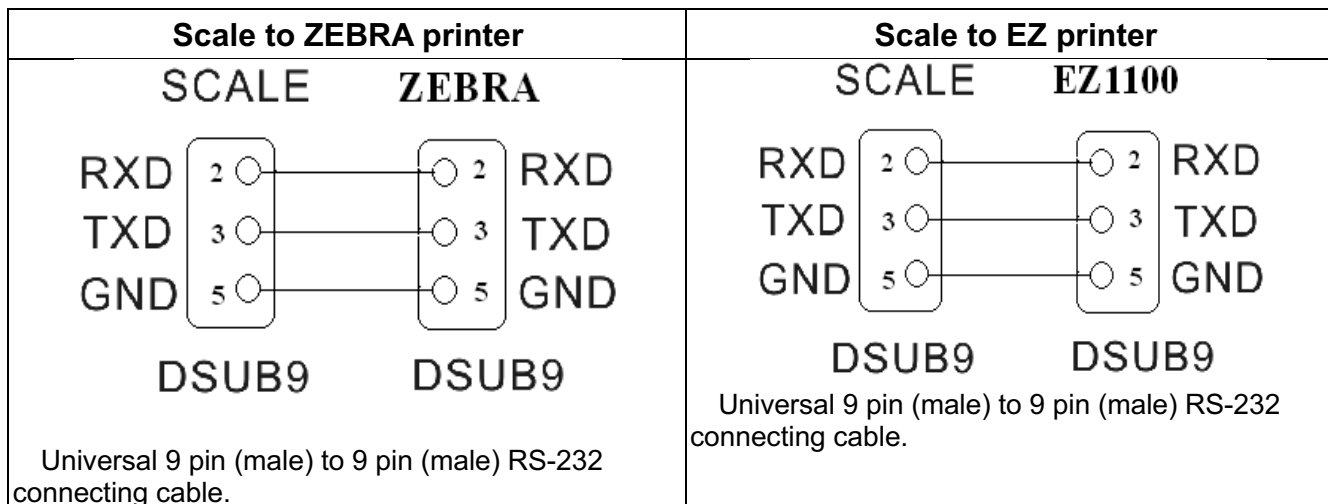
How to check whether the printer is compatible to the scale

- Under the parameter P-05, select “normal” printer.
- Check the baud rate (P-06) and the data (P-07) is compatible to printer. If not, please change the setting accordingly.
- Under the normal weighing mode, press  to print. If the printer is able to print, it means that this printer can replace the SH-24 printer.

9. Option

Scale to Printer

Scale to BP545D(TDP) printer		Scale to SH-24 (TP) printer	
SCALE	BP545D	SCALE	SH-24
RXD 2	○	RXD 2	○
TXD 3	○	TXD 3	○
GND 5	○	GND 7	○
DSUB9	DSUB9	DSUB9	DSUB25
Universal 9 pin (male) to 9 pin (male) RS-232 connecting cable.		Universal 9 pin (male) to 25 pin (male) RS-232 connecting cable.	



Scale to PC

1. Connect the scale and computer by using the RS232 cable as the following picture.
2. Please set the print mode

Manual

Print after ▲▲ appears

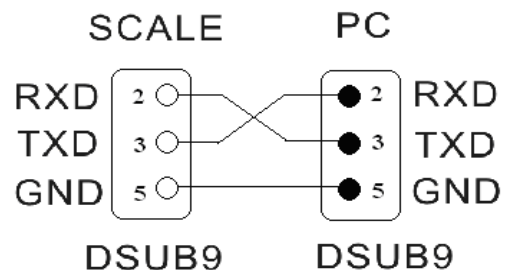
Print when quantity is ok(with check function)

Print when weight is ok(with check function)

Print continuously

No action

3. Get receiving program ready on your computer.



Commonly used 9 female ~9male RS232 connecting cable. The pin2 and pin3 should be exchanged.

Note: The hollow dots represent male connectors and the black dots represent female connector.

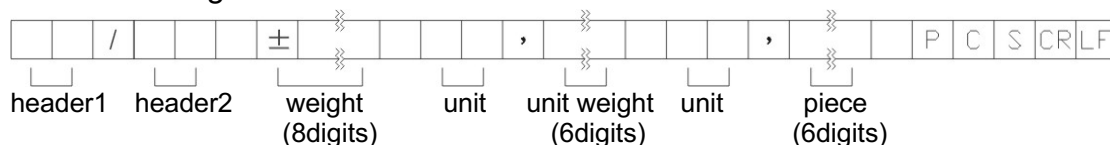
Data Protocol

● Output Data When Print Mode Set As Continue

Case1: No unit weight on Scale



Case2: with unit weight on Scale



(header1: ST=STABLE US=UNSTABLE) (header2: NT=NET GS=GROSS)








examples for Case1:

ST /NT+ 12.350 kg
US/GS+ 30.000 lb

examples for Case2:

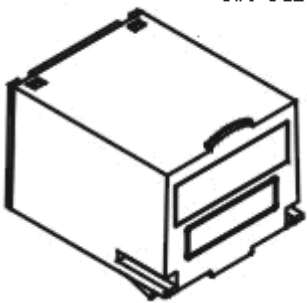





ST /NT+ 10.000 kg, 1.0000 g, 10000 PCS
US/GS+ 30.000 lb, 0.0010 lb, 30000 PCS

Only one optional device being used

	Option	application	Remark
AP1	Two rs232 port+Relay	 BP	Can print out bar code 
AP2	Two rs232 port+Relay	 Zebra	2009-05-27 14 : 46 : 38 G.W.: 1.000kg U.W.: 0.5g Total : 400PCS
AP3	Two rs232 port+Relay	 EZ (godex)	
AP4	Two rs232 port+Relay	 SH-24	Can print out accumulation data 2002/01/01 00:09:23 ABC COMPANY 0918-123456 1) 0.100 kg 10 PCS 2) 0.100 kg 10 PCS 3) 0.100 kg 10 PCS ----- 0.300 kg 30 PCS U.W.=10.000 g
AP5	Two rs232 port+Relay	 LED Display	→ Only the weighing data can be shown on the LED display

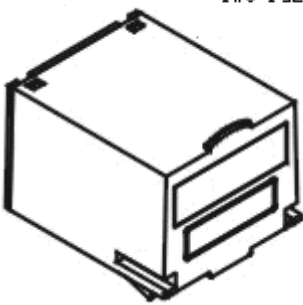






AP6	<div>  <div>Two rs232 port+Relay</div> <div>+</div>  <div>LED Light Tower</div> </div> <div>Light tower can indicate three → different situation</div>
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Two optional devices being used

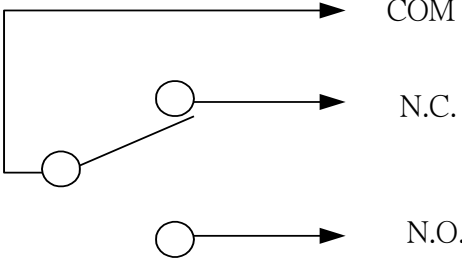
	Option	Application
AP1	<div>  <div>Two rs232 port+Relay</div> </div>	<div>  <div>BP/ Or</div>  <div>ZEBRA/ Or</div>  <div>GODEX/ Or</div>  <div>LED Light Tower/ Or</div> </div> <div>  <div>LED Display</div> </div>

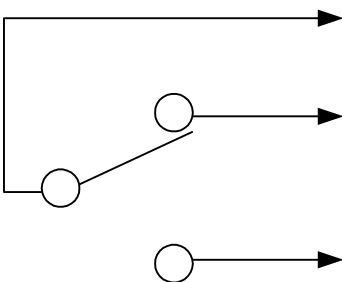
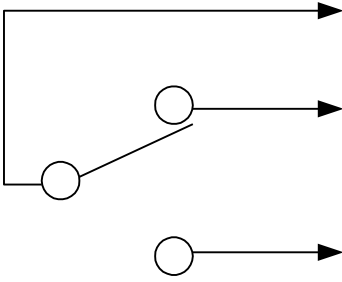
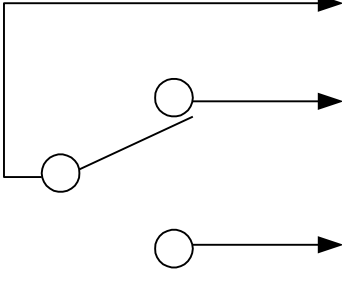
	<div data-bbox="1018 145 1120 286" data-label="Image"> <p>PC</p> </div>
AP2	<div data-bbox="311 963 774 1288" data-label="Image"> <p>Two rs232 port+Relay</p> </div> <div data-bbox="949 638 1193 846" data-label="Image"> </div> <div data-bbox="1037 855 1102 927" data-label="Caption"> <p>BP/ Or</p> </div> <div data-bbox="954 938 1185 1149" data-label="Image"> </div> <div data-bbox="1002 1158 1137 1229" data-label="Caption"> <p>ZEBRA/ Or</p> </div> <div data-bbox="1013 1247 1120 1391" data-label="Image"> </div> <div data-bbox="1000 1411 1141 1482" data-label="Caption"> <p>GODEX/ Or</p> </div> <div data-bbox="1018 1482 1120 1624" data-label="Image"> <p>PC</p> </div> <div data-bbox="1323 943 1369 1294" data-label="Image"> </div>

Three optional devices being used

	Option	Application
AP1	 <p>Two rs232 port+Relay</p>	<div>  <p>BP/ Or</p> </div> <div>  <p>ZEBRA/ Or</p> </div> <div>  <p>GODEX/ Or</p> </div> <div>  <p>PC</p> </div> <div>  <p>LED Display And</p>  <p>LED Light Tower</p> </div>

10. Relay Module Diagram
RELAY OUTPUT :

Alarm	
-------	---

HI	
OK	
LO	

RELAY CONTACT SPEC
1A/24VDC , 0.5A/125VAC , 0.25A/250VDC



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