

# PS-series Bench Scale

## **OPERATING MANUAL**



SCALE COMPANY, INC.

You have purchased a quality precision weighing instrument that requires handling with care.

Read entire contents of this **Operation Manual** prior to operating your new instrument.

## **Disclaimer Notice**

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Calibrate your instrument using reference weights of the appropriate tolerance (class). An instrument can be no more accurate than the standard to which it has been compared. For assistance in the selection of reference weights, please contact the factory.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

## **Introduction**

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Thank you for choosing one of our instruments. Your instrument is designed and manufactured to the most rigorous standards in order to give you years of service. First, check the contents of the shipping carton. You should find the following :

**\* Manual      \* Instrument      \* AC Adapter**

Next, follow the instructions for installing your instrument.

Now you are ready to begin using your instrument. To take advantage of its many features, carefully read your operating manual.

It contains step-by-step procedures, examples, and other vital information.

Warning: Use of this product in a manner not specified by the manufacturer may impair any safety protection provided by the equipment!



## Specifications

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|                           |                                                                                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Model</b>              | <b>PS 20</b>                                                                                                                                                                                                                                  |
| <b>Readability</b>        | 6000d                                                                                                                                                                                                                                         |
| <b>Range</b>              | 30kg/60kg/120kg/300kg/600kg/1200kg/3000kg<br>60lb/120lb/240lb/600lb/1200lb/2400lb/6000lb                                                                                                                                                      |
| <b>Display</b>            | LCD, height 25mm                                                                                                                                                                                                                              |
| <b>Ambien Temperature</b> | 0~40 °C    85 RH                                                                                                                                                                                                                              |
| <b>Power Supply</b>       | 9V/500mA, AC adapter<br>Built in 6V Rechargeable-battery.<br>Battery operating limited at 5.5V and display will show <span style="border: 1px solid black; padding: 2px;">L a b R E E</span> . In this time the instrument should be charged. |

## Preparation

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This product is intended for indoor use.

- \* Select a suitable work area.
- \* Work area should be relatively free from drafts and vibrations.
- \* Work surface should be level and rigid.
- \* Do not locate near magnetic material or equipment/instruments which use magnets in their design.
- \* Avoid area which have variations in room temperatures or have excessive room temperatures. Room temperatures above 40 °C or below 0 °C could affect instrument operation and accuracy.

## Installation

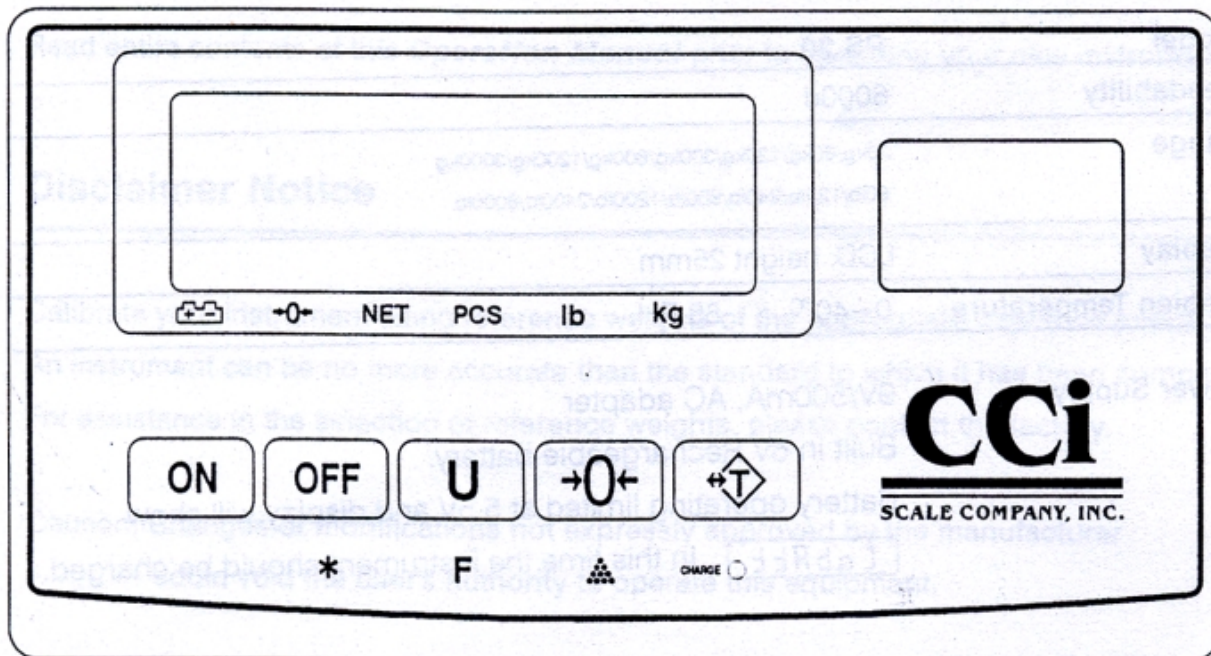
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Remove instrument and accessories from the carton.

Save packing material for transportation purposes.

- \* If using the AC adapter, insert power cord into the receptacle located on the side Panel of the unit (behind On/Off switch). Firmly push in the plug.
- \* Allow the instrument to warm up for 30 minutes prior to use.  
Your instrument features a numeric display that continuously shows your weighing results.





## Function keys



Turns instrument **On**.  
Can be used for print out. ( option )



Turns instrument **Off**.



Used for parts counting.



Captures a new center of zero.



Reduce gross weight on pan as tare weight.



This key used for piece count sampling.



Function key



Optional key




# Operation


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## 1. Taring ( Zeroing )

All models have taring ( zeroing ) capabilities up to their total weight capacity.  
To weigh a sample in it's container with the display showing the weight of the sample use the following Zero ( tare ) procedure:


- a. Place sample container on pan and then press  key.
- b. Now place sample in it's container.
- c. When the balance is stable, the display shows the weight of the sample.

## 2. Counting Function

- a. Count the desired amount sample pieces (10, 20, 50 or 100 total pieces )
- b. Pres  key to display total count numbers of 10, 20, 50 or 100.

This number will cycle, press  key gain to select sample size once it is displayed. The arrow at the bottom of the display will point to " PCS ".

- c. You are now ready to perform parts counting of those specific pieces.

Press  key for he total weight.

Repeat step a through c for each type of piece to be counted.




# Calibration

Shown on the display:


1. Please have the jumper Jp3 switch OFF before you start to calibrate weight.

2. Press and hold any key while powering ON. The system goes to Calibration mode.


CAL

3. Press  key goes to UNITS mode.


Uni. t.Lb

Press  key to select Calibrating units in lb or kg.


Uni. t.Kg

4. Press  key goes to CAPACITY mode.

r 200


Press  key to select Maximum Capacity.

C.200000

5. Press  key goes to SPAN mode.

( Offset value to be displayed around 5000 ~ 50000 )

12222


6. Press  key to make display to zero.


0

7. Put on the calibrating weight in lb.

( Span value to be 50000 ~ 150000 at full capacity )

122222

8. Press  key to cycle through a list of permissible weights.

When the weight on the scale is displayed, press  key the weight calibrating to be done.

200000

9. After finish the weight calibration, make the Jp3 switch ON.

Now you are ready to weigh.



# Programme

Shown on the display:

CAL

Press and hold any key while powering **ON**. The display will show

Press  key goes to **programme sequence**.

Press  key for **parameter selecting** and

Press  key for **setting and goes to next step**. The programme sequence as follows:

## A. Auto zero

AO 0

None

AO 1

ATZ 1d

AO 2

ATZ 2d

## B. Auto power off

AOFF 0

None

AOFF 1

5 minutes after

AOFF 2

10 minutes after

AOFF 3

20 minutes after

AOFF 4

30 minutes after

## C. Backlit

bL 0

None

bL 1

Active

bL 2

Auto lighting while loading

## D. Print output

Pr 0

None

Pr 1

Manual

## E. Baud rate

br 9600

Baud rate 9600

br 2400

Baud rate 2400

## F. Units

Unit 0

kg only

Unit 1

kg/lb



# RS232C Specifications & connections

## A. Specification :

Baud rate : 2400 /9600  
 Parity : none  
 Data bit : 8  
 Stop bit : 1

## B. Data format :

| NO | 1 | 2  | 3  | 4 | 5 | 6 | 7  | 8  | 9 | 10 | 11  | 12  | 13 | 14 | 15  | 16  | 17 | 18 | 19 | 20 |
|----|---|----|----|---|---|---|----|----|---|----|-----|-----|----|----|-----|-----|----|----|----|----|
| G  | R | SP | X  | X | X | X | X  | X  | X | SP | k/l | g/b | CR | LF |     |     |    |    |    |    |
| N  | T | SP | X  | X | X | X | X  | X  | X | SP | k/l | g/b | CR | LF |     |     |    |    |    |    |
| T  | A | SP | X  | X | X | X | X  | X  | X | SP | k/l | g/b | CR | LF |     |     |    |    |    |    |
| O  | T | Y  | SP | X | X | X | X  | X  | X | SP | P   | C   | S  | CR | LF  |     |    |    |    |    |
| A  | P | W  | 1  | 0 | 0 | 0 | SP | X  | X | X  | X   | X   | X  | SP | k/l | g/b | CR | LF |    |    |
|    |   |    |    |   |   |   | CR | LF |   |    |     |     |    |    |     |     |    |    |    |    |
|    |   |    |    |   |   |   | CR | LF |   |    |     |     |    |    |     |     |    |    |    |    |
|    |   |    |    |   |   |   | CR | LF |   |    |     |     |    |    |     |     |    |    |    |    |
|    |   |    |    |   |   |   | CR | LF |   |    |     |     |    |    |     |     |    |    |    |    |
|    |   |    |    |   |   |   | CR | LF |   |    |     |     |    |    |     |     |    |    |    |    |

## C. Connections : DB-09 Male

pin no.    2        5        others  


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                  TXD   GND    NC

Characters denoted by "X" are characters 0 ~ 9.  
 Leading zeros are replaced with spaces "SP".

## Error message

### Symptom

### Cause

### Solution

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#### Over load :

\* Weighing range exceed      > Unload scale or reduce preload

**└-----┘**

#### Under load :

\* Weighing pan not in place      > Ensure the weighing pan is correctly installed and surrounding parts are not touching

\* Weighing range zero below      > Set scale to zero

\* Contact between weighing      > Apply pre-load

**- O L -**

#### Zeroing not possible :

\* Zeroing outside the zero setting range      > Ensure that zeroing is performed in the admissible range ( 20% of Cap.)