

PSC SERIES

DIGITAL COUNTING & CHECKING SCALE

OPERATION MANUAL

PLEASE READ THIS MANUAL VERY CAREFULLY BEFORE
ATTEMPT TO OPERATE THE SCALE

SEPTEMBER 1999

Specifications subject to change without prior notice

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1. INSTALLATION

1.1 Check and make sure that the following accessories are included:

- a. This operation manual
- b. Indicator x 1
- c. Platform x 1
- d. Power adaptor x 1
- e. Tools set x 1 (PSC-2 and PSC-3 only)

Contact your dealer if any items are missed.

1.2 Attach the indicator to the platform. Refer to **APPENDIX INSTALLATION DIAGRAM** for assembling method.

1.3 POWER THE SCALE

- a. Before plugging the power adaptor into an electricity outlet, check and make sure that the input voltage of power adaptor matches with the output voltage of the outlet. If not, do not plug in the adaptor, contact your dealer immediately.
- b. Before first time use, plug the main adaptor into the wall outlet and charge the scale for at least 8 hours.

1.4 Retain the packing materials for future transportation purposes.

CAUTION:

In some countries, this unit is required by law to be sealed (or stamped) and bearing a serial number. Do not break or remove the seal (or stamp) or serial affixed to this scale. Such actions may be an offence in law and void warranty. Contact your dealer for more information or after sales service.

For most accurate result, do not use this scale when environment condition fall beyond those as listed on **SPECIFICATIONS**.

Do not attempt to open this unit or conduct any trouble shooting other than those listed on **TROUBLE SHOOTING**.

2. SPECIFICATIONS

2.1 GENERAL SPECIFICATIONS

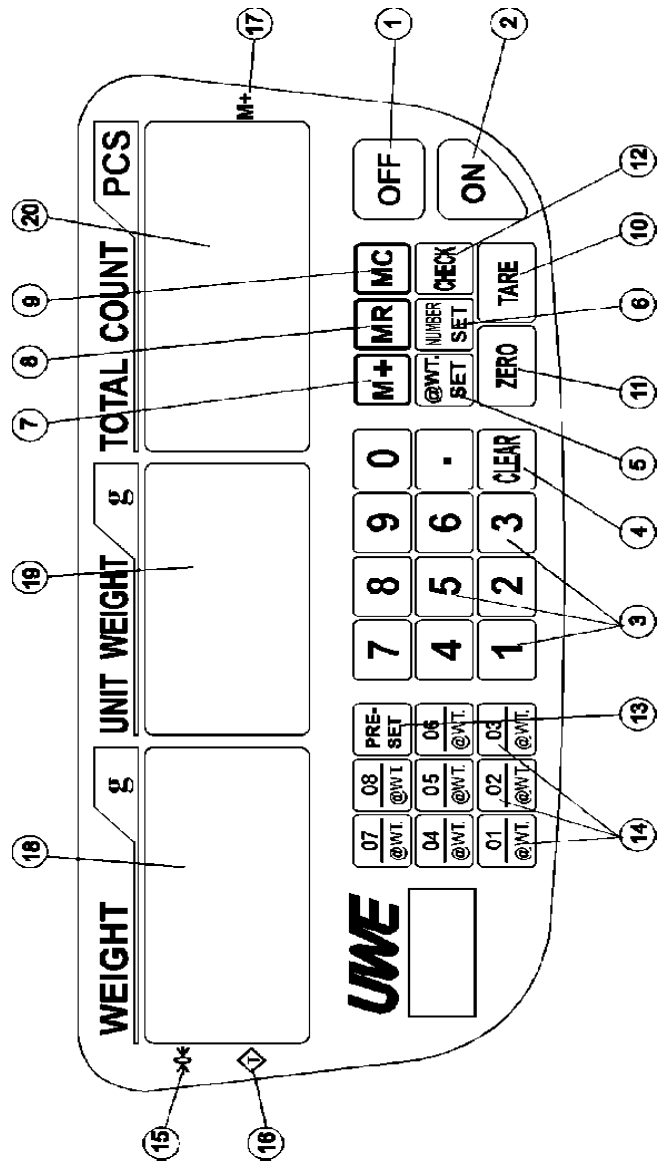
Model No.	Capacity	Division	Platform size
PSC-1-2.4	2400g	0.2g	280x330mm
PSC-1-6	6000g	0.5g	280x330mm
PSC-1-12	12000g	1g	280x330mm
PSC-1-24	24000g	2g	280x330mm
PSC-1-60	60kg	0.005kg	280x330mm
PSC-2-24	24kg	2g	330x450mm
PSC-2-60	60kg	0.005kg	330x450mm
PSC-2-120	120kg	0.01kg	330x450mm
PSC-3-60	60kg	0.005kg	420x520mm
PSC-3-120	120kg	0.01kg	420x520mm
PSC-3-240	240kg	0.02kg	420x520mm
Tare Range	FULL RANGE (SUBTRACTIVE)		
Zero Range	Maximum = 2% of Rated Capacity		
Auto Pieces Weight Enhancement Range: Min. = 4 pieces Max. = Max. count previously achieved			
Operation Environment	0°~40°C (32°~104°F), Non-condensed. R.H. 		
Power source	By Built-in Rechargeable Battery or Power Adaptor.		

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2.2 MINIMUM PIECES, WEIGHT APPLIED & SAMPLE SIZE SPECIFICATIONS

Model No.	Recommended Minimum		
	Piece Weight	Weight Applied	Sample Size
PSC-1-2.4	0.2g	4g	800g
PSC-1-6	0.5g	10g	2kg
PSC-1-12	1g	20g	4kg
PSC-1-24	2g	40g	8kg
PSC-1-60	5g	100g	20kg
PSC-2-24	2g	40g	8kg
PSC-2-60	5g	100g	20kg
PSC-2-120	10g	200g	40kg
PSC-3-60	5g	100g	20kg
PSC-3-120	10g	200g	40kg
PSC-3-240	20g	400g	80kg

3. KEYBOARD & PANEL LAYOUT AND DESCRIPTION



KEYS DESCRIPTION

1. OFF KEY

Press this key to turn scale off.

2. ON KEY

Press this key to turn scale on.

3. NUMERIC AND DECIMAL KEYS

Press these keys to attain the desired numeric value.

4. CLEAR KEY

Press this key to clear the numeric figure entered.

5. UNIT PIECE WEIGHT SET KEY

Press this key to enter a unit piece weight.

6. NUMBER SET KEY

Press this key to enter the number of pieces on platform.

7. M+ KEY

Press this key to add current total count to memory.

8. MR KEY

Press this key to recall individual counting result and accumulated total counts.

9. MC KEY

Press this key to clear all data kept in memory.

10. TARE KEY

Press this key to tare off the weight of a container. Refer to **SPECIFICATIONS** for maximum tare range.

11. ZERO KEY

Press this key to set weight to zero. Refer to **SPECIFICATIONS** for maximum zero range.

12. CHECK KEY

Press this key to set upper weight and count check limit.

13. PLU PRESET SET KEY

Press this key to set a unit piece weight to PLU.

14. PLU RECALL KEYS

Press these keys to recall the unit piece weight stored in the corresponding PLU location.

INDICATORS DESCRIPTION

15. ZERO INDICATOR

When a zero weight is detected, an arrow will appear and point at this indicator.

16. TARE INDICATOR

When the tare function is in operation, an arrow will appear and point at this indicator. The weight being displayed on the **WEIGHT PANEL** is the net weight.

17. M+ INDICATOR

This indicator will appear when memory is containing accumulated transaction data.

PANELS DESCRIPTION

18. WEIGHT PANEL

The current weight detected is shown here.

19. UNIT PIECE WEIGHT PANEL

The current unit piece weight entered is shown here.

20. TOTAL COUNT PANEL

Total count of the current or accumulated transactions is shown here.

4. INTERNAL SETTINGS

4.1 PLACE THE SCALE

Place this unit on a hard and strong surface, where is free from RF interference, vibration, fire, direct sunlight and excessive moisture.

For most accurate weighing result, always place this unit on a level surface. If necessary, adjust the adjustable feet underneath the scale to obtain a level condition.

4.2 POWER ON/OFF THE SCALE

Press **ON** or **OFF** to turn scale on or off.

4.3 INTERNAL SETTINGS

4.3.1 Set Backlight (Option) Status

4.3.1.1 Turn backlight on: - Power Saving Mode

- a. Turn scale on.
- b. Press **1** then **ZERO**.
- c. Backlight is turned on.

NOTE: Under the Power Saving Mode, backlight will be automatically turned off after weight displayed is unchanged for about 20 seconds.

Backlight will be turned on again by pressing any key or when a new weight is detected.

4.3.1.2 Turn backlight on: - Normal Mode

- a. Turn scale on.
- b. Press **2** then press **ZERO**
- c. Backlight is tuned on.

NOTE: Backlight under this mode will remain lit on until manually turned off.

4.3.1.3 Turn backlight off

- a. Turn scale on.
- b. Press **0** then press **ZERO**
- c. Backlight is turned off.

4.3.2 Set AUTO POWER OFF Status

This unit is equipped with **AUTO POWER OFF** function. Default setting = auto off after 4 minutes unused. Follow the below steps to disable/employ the **AUTO POWER OFF** function.

- a. Turn scale off
- b. Press and hold **NUMBER SET**, then turn scale on. Scale displays "**F.1**"
- c. Press **NUMBER SET** for three times. Scale displays "**F.4**"
- d. Press **@WT/SET** to select:

- * To disable the **AUTO POWER OFF** function select "**0-OFF**"
 - * To employ the **AUTO POWER OFF** function select "**4-OFF**"
- e. Press **ZERO** to confirm and return to normal operation status.

5. INSTRUCTIONS FOR USE

5.1 ZERO THE WEIGHT DISPLAYED WHEN UNLOADED

If **ZERO INDICATOR** does not appear when unloaded, press **ZERO** to set weight displayed to zero. Refer to **SPECIFICATIONS** for maximum zero range.

5.2 ENTER/CLEAR THE WEIGHT OF A CONTAINER

5.2.1 When the Weight of the Container is unknown

Place a container onto the platform, and then press **TARE** to tare off the weight of this container. After **TARE** is pressed, zero weight will be displayed and the **TARE INDICATOR** appears.

5.2.2 When the Weight of the Container is known

Enter the actual weight of the container through the numeric keys and press **TARE**.

Once **TARE** is pressed, the **WEIGHT PANEL** will display tare weight entered in negative value.

5.2.3 Clear Weight of a Container from Memory

To clear the weight of the container, remove all loads from platform and press **TARE**, then **TARE INDICATOR** would disappear.

5.3 PLACE A LOAD

Always place a load onto the platform gently. Sudden shock/excessive force may cause irrecoverable damages to the weight sensor inside. It is a good practice to remove all loads from platform immediately after weighed. This would prolong the lifetime of the weight sensor.

5.4 WEIGHING APPLICATIONS

Before weighing, make sure that the **ZERO INDICATOR** is on. Should a container have to be used, refer 5.2.1 and 5.2.2 to tare off the weight of the container.

Place subject matter on platform and the weight of it is displayed on **WEIGHT PANEL**.

For best weighing result, refer to **SPECIFICATIONS** for recommended minimum weight to be applied.

5.5 COUNTING APPLICATIONS: -

UNIT PIECE WEIGHT IS KNOWN AND FIXED

- a. Refer to 5.1 and 5.2 for zero and tare
- b. Enter the unit piece weight and confirm by pressing **@WT/SET**. The unit piece weight is now displayed on the **UNIT WEIGHT PANEL**.
- c. Place load on the platform. The weight of the load is displayed on the **WEIGHT PANEL** and the quantity is displayed on the **TOTAL COUNT PANEL**.

NOTE 1: For best counting result, refer to **MINIMUM PIECES, WEIGHT APPLIED & SAMPLE SIZE SPECIFICATIONS** for recommended minimum piece weight and weight applied.

NOTE 2: When the individual unit piece weight is not standardized, it is strongly recommended that counting procedures as described in 5.6 should be employed.

NOTE 3: Under this method, the **AUTO PIECE WEIGHT ENHANCEMENT** function will be disabled for same subsequent counting.

5.6 COUNTING APPLICATIONS: - UNIT PIECE WEIGHT IS NOT KNOWN

- a. Refer to 5.1 and 5.2 for zero and tare
- b. Go through sampling procedures. (Refer to **5.7 SAMPLING** for more details).
- c. Step by step add more loads onto the platform (or remove part of the load from the platform). The latest Weight, unit piece weight and total quantity would be displayed on the corresponding panels.

NOTE 1: In case of adding, do not empty load from platform until the transaction is completed.

NOTE 2: Also refer to **5.8.1 HOW AUTO UNIT PIECE WEIGHT ENHANCEMENT FUNCTION WORKS** for more details

5.7 SAMPLING

Should the unit piece weight is unknown, follow the below procedures to get the unit piece weight.

- a. Place a sample with known quantity on platform.

- b. Enter the quantity of the sample through the numeric keypad and confirm by pressing **NUMBER SET**.
- c. The scale will automatically determine the unit piece weight. The unit piece weight will then be displayed on the **UNIT WEIGHT PANEL**.
- d. Sampling process is now completed.

NOTE: For best counting result, refer to **MINIMUM PIECES, WEIGHT APPLIED & SAMPLE SIZE SPECIFICATIONS** for recommended minimum piece weight and sample size

5.8 AUTO PIECE WEIGHT ENHANCEMENT FUNCTION

In order to obtain the best counting result and to avoid and minimize sampling error, this scale is equipped with the **AUTO UNIT PIECE WEIGHT ENHANCEMENT** function.

This function will automatically be employed when the unit piece weight is obtained through the sampling method as described in **5.7**.

5.8.1 How AUTO UNIT PIECE WEIGHT ENHANCEMENT FUNCTION Works

After a unit piece weight is obtained by methods as described in **5.7**, then place more loads onto the platform. The new quantity will be shown on the **TOTAL COUNT PANEL**.

The **AUTO UNIT PIECE WEIGHT ENHANCEMENT** function will update the unit piece weight if both requirements of below are met:

- a. The quantity added to platform is more than 4 pieces of previous maximum counts previously attained from the same transaction.
- b. The quantity added to platform is less than 100% of previous maximum counts previously attained from the same transaction.

If the above requirements are met, a new unit piece weight will be displayed on the **UNIT WEIGHT PANEL** and confirmed by an audio "beep".

AUTO UNIT PIECE WEIGHT ENHANCEMENT function will be terminated when a zero weight is detected during the transaction process.

It is strongly recommended that this function should be employed when the unit piece weight is unknown or when the individual unit piece weight is not standardized.

5.9 ACCUMULATED COUNTING TRANSACTION

- a. Obtain a transaction result 5.5 and 5.6
- b. Press **M+** to save weight and total count to memory.
- c. Scale displays "TOT 1" on the **WEIGHT PANEL**, 1 donates this is the first memory entered. The weight and total count of current transaction are saved to memory.
- d. The **M+ INDICATOR** appears to indicate that memory is now containing data.
- e. Repeat above steps for subsequent counting transactions.

NOTE 1: If no unit piece weight is applied, only weight data will be saved to memory.

NOTE 2: A quantity value could be manually added to memory by entering the quantity and then press **M+**.

5.10 RECALL ACCUMULATED DATA FROM MEMORY

- a. Press **MR**
- b. Scale displays "TOT #" on the **WEIGHT PANEL**. # donates the total number of entries saved to memory. Then, the total accumulated weight and total count are displayed on the **WEIGHT** and **TOTAL COUNT PANEL** respectively.
- c. The scale will return to normal operating status 2 seconds after the accumulated data is displayed.

NOTE: Data stored will be erased when the scale is turned off.

5.11 TO CLEAR ACCUMULATED DATA FROM MEMORY

- a. Press **MC**
- b. Scale displays "TOT 0" on the **WEIGHT PANEL**. 0 donates no entry is saved to memory. Then, zero weight and zero count are displayed on the **WEIGHT** and **TOTAL COUNT PANEL** respectively. The arrow pointing at the **M+ INDICATOR** will disappear.
- c. All data is cleared now.
- d. The scale will return to normal operating status 2 seconds after the accumulated data is erased.

5.12 CHECK FUNCTIONS

This scale is equipped with Check Function to monitor upper weight limit or upper count limit.

5.12.1 Monitoring the Upper Weight Limit

Follow the below steps to monitor the upper weight limit.

- a. Press **CHECK**, scale displays **CH._C** on the **UNIT WEIGHT PANEL**.
- b. Key in the upper weight limit through the numeric keypad and confirm by **@WT/SET**, or press **CLEAR** to quit.
- c. When **@WT/SET** is pressed, scale displays **CH._A** and upper weight limit entered on the **UNIT WEIGHT** and **WEIGHT PANEL** respectively.
- d. Wait until the scale return to normal operating status.
- e. The upper weight limit is now stored in memory.

NOTE: The upper weight limit stored in memory will be erased when scale is powered off.

- f. Start counting transaction. When the upper weight limit is reached or exceeded, a continuous audio beep alarm will be generated.

5.12.2 Monitoring the Upper Count Limit

Follow the below steps to monitor the upper count limit.

- a. Press **CHECK**, scale displays **CH._C** on the **UNIT WEIGHT PANEL**.
- b. Key in the upper count limit through the numeric keypad and confirm by **NUMBER SET**, or press **CLEAR** to quit.
- c. When **NUMBER SET** is pressed, scale displays **CH._C** and upper count limit entered on **UNIT WEIGHT** and **TOTAL COUNT PANEL** respectively.
- d. Wait until the scale return to normal operating status.
- e. The upper weight limit is now stored in memory.

NOTE: The upper count limit stored in memory will be erased when scale is powered off.

- f. Start counting transaction. When the upper count limit is reached or exceeded, continuous audio beep alarm will be generated and the count value shown on **TOTAL COUNT PANEL** will start flashing.

5.12.3 Clear Upper Weight Limit

- a. Press **CHECK**

- b. Press **0**
- c. Press **@WT/SET**
- d. Wait until the scale return to normal operating status.
- e. The upper weight limit is now erased from memory.

5.12.4 Clear Upper Count Limit

- a. Press **CHECK**
- b. Press **0**
- c. Press **NUMBER SET**
- d. Wait until the scale return to normal operating status.
- e. The upper count limit is now erased from memory.

5.13 UNIT PIECE WEIGHT PLU MEMORY

5.13.1 Saving a Unit Piece Weight to PLU Memory

This scale is equipped with 8 unit piece weight PLU memories. Save a unit piece weight to memory by one of the following methods.

5.13.1.1 Direct entry method

- a. Key in the unit piece weight through keypad.
Make sure the unit piece weight does not

exceed 5 figures disregarding decimal location.

- b. Press **PRESET**.
- c. Press the preferred PLU location to store, or press **PRESET** again to quit.

5.13.1.2 Current unit piece weight method

- a. When a unit piece weight is displayed on the **UNIT WEIGHT PANEL**, press **PRESET**.
Press the preferred PLU location to store, or press **PRESET** again to quit.

NOTE: Data stored in Unit Piece Weight PLU will not be erased when scale is powered off.

5.13.2 Recall Unit Piece Weight from Memory

To recall unit piece weight stored in memory, simply press the corresponding Unit Piece Weight PLU.

After the PLU is pressed, the unit piece weight will be displayed on the **UNIT WEIGHT PANEL**.

NOTE: The **AUTO PIECE WEIGHT ENHANCEMENT** function will be disabled for some subsequent counting if the unit piece weight is recalled from memory.

5.13.3 Clear Unit Piece Weight PLU

- a. Press 0
- b. Press **PRESET**
- c. Press preferred PLU location to clear, or press **PRESET** again to quit.

5.14 COMPUTER DATA RS232C OUTPUT (Option)

5.14.1 Create a Program File

- a. Create BASIC computer program file as below to enable the computer to receive data sent by scale.

```
10 OPEN "COM*:2400, N,8,2,CS,DS,CD" AS#1
   *: Input 1 if the input port of computer
   is COM 1, or input 2 for COM 2 ...etc.
20 LINE INPUT #1, A$
30 PRINT A$
40 GOTO 20
50 END
```

- b. Save the above program file.

5.14.2 Connect the Scale with a Computer

Follow the below steps to connect the scale with a computer.

- a. Turn scale off
- b. Turn computer off
- c. Connect the RS232C output of scale to computer by a appropriate data cable
- d. Turn scale on
- e. Turn computer on
- f. 000000Load and run the BASCIA program file

5.15 PRINTER OUT (OPTION)

By pressing the **M+** and **MC**, the follow data will be transmitted to computer.

<u>S/N</u>	<u>WT</u>	<u>UW</u>	<u>CT/N</u>	<u>(NOTE 1)</u>
01.	78	1.0000	78	
02.	580	2.0000	290	(NOTE 2)
0.3	+++		100	(NOTE 3)
<hr/>				
03/	658		468	(NOTE 4)

NOTE 1:

S/N = Serial Number, WT = Weight, UW= Unit Piece Weight, CT/N = Count Number. An underlined heading will be transmitted if **M+** is pressed for the first time.

NOTE 2:

By pressing **M+** again, the data of 2nd transaction is transmitted.

NOTE 3:

+++ donates that the count number is added to memory by manual entry.

NOTE 4:

By pressing **MC**, the total number of transaction, total accumulated weight and count number are transmitted.

A consecutive dot line sent before the accumulated result donates the total accumulated value.

5.16 RECHARGE THE SCALE

When the **LO-BAT INDICATOR** appears, recharge the scale immediately. **Failure to do so may cause irrecoverable damages to the rechargeable battery inside.** Recharging is possible during operation.

6. TROUBLE SHOOTING

Syndrome Scale cannot be turned on

Check: Is the scale charged?

Action: Recharge the scale for at least 8 hours before first time use or plug in the power adaptor before power on the scale.

Check Is the power adaptor inserted properly into both the electricity outlet and the DC inlet of scale?

Action: Secure both ends of the power adaptor and try again.

Syndrome Scale turned off automatically

Check Is the **AUTO POWER OFF** function employed?

Action Refer to 4.3.2 to disable the **AUTO POWER OFF** function.

Check Is the **LO-BAT INDICATOR** on?

Action Apply the power adaptor.

Syndrome Rated capacity cannot be reached

Check Is the **TARE INDICATOR** on?

Action: Turn the scale off. Remove all loads from platform and turn on again.

Check Is there anything obstructing the platform?

Action Remove all obstacles.

Syndrome **When turning on scale, all display PANELS blank out but only the Zero and TARE INDICATOR appear**

Check Is any load applied to platform when turning scale on?

Action: Turn scale off. Remove all loads from platform and turn scale on again.

Syndrome **Weight and TOTAL COUNT PANEL blank out during operation**

Check Does the load applied to platform exceed the rated capacity of scale?

Action Remove all loads from platform and try again.

Syndrome **Weighing result is not accurate**

Check Is the scale placed in a level condition?

Action Adjust the adjustable feet to a level condition.

Check Is the scale affected by airflow, vibration or RFI?

Action: Place the scale away from all disturbances.

Check Is the scale calibrated correctly?

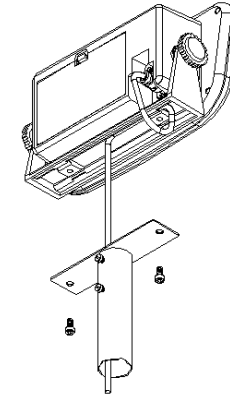
Action Contact your dealer.

7. DAILY CARE AND MAINTENANCE

- a. Clean the scale with a soft and damp cloth.
If necessary, apply a mild detergent.
- b. Do not use any harsh, abrasive material, acetone, volatile solvent, thinner or alcohol for cleaning.
- c. Verify the accuracy of scale periodically.
NOTE: In some countries, calibration is restricted to be done by an authorized/qualified agent only. Contact your dealer for more information.
- d. The scale must be placed horizontally during transportation or long time storage.
- e. Store scale in a dry and clean place.

8. APPENDIX INSTALLATION DIAGRAM

PSC-2 indicator installation



PSC-3 indicator installation

