

Yamato



Digital Counting Scale

AW-CS series

SERVICE MANUAL

PLEASE TAKE THE TIME TO READ THESE INSTRUCTIONS BEFORE
STARTING TO USE THE SCALES

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SPECIFICATIONS

MODEL#	AW-CS3	AW-CS6	AW-CS15	AW-CS30
Capacity	3kg x 0.2g	6kg x 0.5g	15kg x 1g	30kg x 2g
Division	6lb x 0.0005lb	12lb x 0.001lb	30lb x 0.002lb	65lb x 0.005lb
Units of Measure	Kg, Lb			
Function keys	P1~P9, P#, PGM, M+, MC, SAMPLE SIZE, SAMPLE WEIGHT, COUNT PRESET, 0~9, “ ”, ENTER, • ZERO,TARE,UNITS, C/BLACKLIGHT,			
Stabilisation Time	1-2 seconds			
Temperature	0°C - 40°C			
Humidity	25% ~ 95% RH			
Power supply	Built-in rechargeable 6v/4Ah battery or 12VDC /110~240 VAC 50/60Hz AC adapter			
Indicator display	WEIGHT = 6 Digits Avg Piece Weight = 6 Digits PIECES = 6 Digits			
Dimensions	Scale Size: (340 mm x 340 mm x 127 mm) Platform Size: (320 mm x 230 mm)			

OVERLAY



LCD DISPLAY FUNCTION



1. lb

The lb annunciator is illuminated to show that the weight displayed is in pounds. The **UNITS** key may be used to select pounds as the weighing units.

2. kg

The kg annunciator is illuminated to show that the weight displayed is in kilograms. The **UNITS** key may be used to select kilogram as the weighing units.

3. NET

The NET annunciator is illuminated to show that the weight displayed is the net weight. Net weight is determined by subtracting the stored tare weight from the gross or scale weight. The tare weight, usually the weight of the container, is entered using the tare key. Note that the NET annunciator is only active when a zero tare weight or tare weight value is stored and the display is in the weight mode as shown by the illumination of the lb or kg annunciator.

4. ZERO (Center-of-Zero)

The Center-of-Zero annunciator is located on the left of the display and is illuminated to indicate that the weight is within +/- 1/4 division of the center of zero.

5. Insuf Sample

The Insuf Sample annunciator is located on the lower left of the display and is illuminated to show that the sample is too small to calculate an accurate piece weight. If the counting function is continued without increasing the sample size, the scale will still operate even though accuracy will be affected.

6. (Low Battery)

The Low Battery annunciator will illuminate to indicate that the internal battery requires charging. No change in operation will occur until just before the battery voltage drops to a level where operation is affected. At this level, the scale will automatically turn itself off.

7. M+

The M+ annunciator is located on the lower right of the display and is

illuminated to show that the display is in the Accumulator mode and that the value displayed is the current contents of the accumulator. Individual counts are adjusted via the (M+) and (MC) keys or optionally, any count may be entered using the numeric keypad. Note that when both the M+ and ADD annunciators are illuminated, the current count has been added to the accumulator.

8.  (Stable)

The (Stable) annunciator is located at the bottom left of the display and is illuminated when the WEIGHT display is stable.

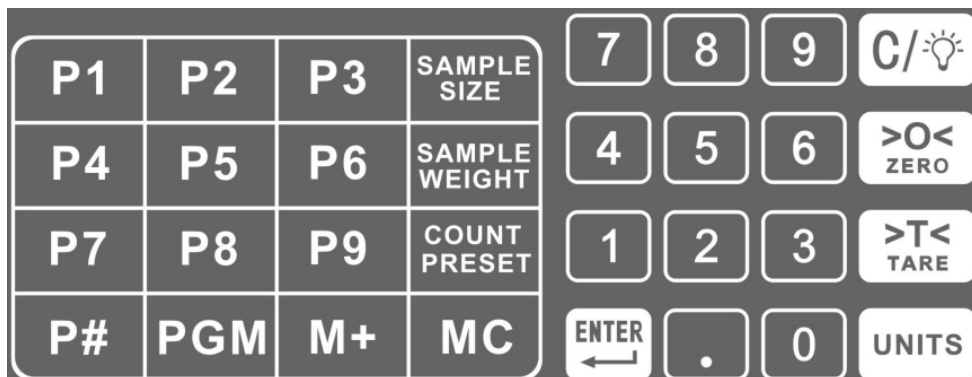
9. **ADD**




The ADD annunciator is located at the bottom right of the display and is illuminated when the scale is in the accumulator mode (M+).





NOTE!

When the battery needs to be recharged, the CHARGING LED will turn Red. After the battery has been recharged, the CHARGING LED will turn Green.

KEY FUNCTION DESCRIPTION



Key	Description
	<p>This key is used to weigh a known number of pieces in preparation for a new counting operation. Sample quantities are entered using the numeric keypad in any quantity desired.</p>
	<p>Pressing this key will display the calculated average piece weight from the current sampling and counting operation. It will also allow the manual entry of a known average piece weight (using the numeric keys) to be used in the next counting operation.</p>
	<p>This key is used when setting the Quantity and Weight Preset limits. During a counting operation (with the limits set) if the quantity or weight exceeds the limits, the error beeper will sound and an error message will flash on the display.</p>


	<p>The MC key is used to clear the accumulator. The M+ and ADD annunciators will turn off to indicate the clearing has taken place.</p>									
	<p>Pressing the M+ key will cause the scale to display the contents of the accumulator (the number of pieces accumulated since the last time the accumulator was cleared).</p> <p>The M+ key is also used to add the current piece count value to the accumulator. The M+ annunciator will be selected to indicate the accumulation has taken place.</p>									
	<p>The PGM key is used to add or edit product look up (PLU) numbers. Up to 99 PLU numbers can be programmed. Note that the first 9 PLU's are assigned to the P1-9 keys and that all PLU's can be selected using the numeric keys.</p>									
	<p>Pressing the P# key will cause the scale to recall the average piece weight along with the saved tare weight (if a tare weight was programmed) associated with the product look up (PLU) number.</p>									
<table border="1" data-bbox="84 1109 308 1268"> <tr> <td>P1</td> <td>P2</td> <td>P3</td> </tr> <tr> <td>P4</td> <td>P5</td> <td>P6</td> </tr> <tr> <td>P7</td> <td>P8</td> <td>P9</td> </tr> </table> <p>P1 ~ P9</p>	P1	P2	P3	P4	P5	P6	P7	P8	P9	<p>Pressing these keys will cause the scale to recall the average piece weight along with the saved tare weight (if a tare weight was programmed) associated with the product look up (PLU) number assigned to the key.</p>
P1	P2	P3								
P4	P5	P6								
P7	P8	P9								






0 ~ 9

These keys are used to enter numeric data during normal operations as well as during calibration and operational setup.



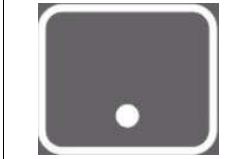
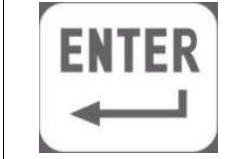


The  key is used to perform different functions depending on the current mode of operation:

- Data Entry: The  key is used to clear an incorrect entry from the display without processing the data. If an incorrect entry is made, press the  key and re-enter the correct data.
- Pressing and holding the  key for 3 seconds will toggle the display backlight on and off.



The **ZERO** key is used to perform a variety of functions depending on the current mode of operation: Weight Display Mode (lb or kg annunciator on): Pressing the ZERO key will set the weight display to zero and turn on the ZERO annunciator if the displayed weight is within $\pm 4\%$ of scale capacity.

	<p>The TARE key is used to display the current tare weight (or zero if no tare has been entered) and/or using the numeric keypad, to enter a new tare weight. It is also used when entering a tare under a Preset number.</p>
	<p>Pressing this key will toggle the weighing units between pounds (lb) and kilograms (kg). The currently selected weighing unit is indicated by illuminating either the lb or kg annunciator.</p> <p>Metric Conversion</p> <p>To change weighing units, press the UNITS key to toggle between pounds and kilograms. Note that either the LB or KG annunciator will illuminate to indicate which weighing unit is active.</p>
	<p>This is the decimal point key. It is used to enter a decimal point where required when entering numeric data.</p>
	<p>The Enter key is used to signal completion of the entry of data and causes the scale to process the data entered.</p>

DISPLAYING WEIGHT

1. With the scale in the Weight mode (0000 will be displayed for WEIGHT and 0 will be displayed for the Avg Piece Weight and PIECES displays), place the item to be weighed on the scale platform.
2. The display will show the weight on the scale platform. The lb or kg annunciators will illuminate to indicate which unit of weight has been selected and that the scale is in the Weight mode. Note that the Avg Piece Weight and PIECES display will remain at 0 (zero).

ZERO THE WEIGHT DISPLAY

1. With the scale in the Weight mode (0 will be displayed for the Avg Piece Weight and PIECES displays), press the **ZERO** key.
2. The WEIGHT display will show) 0000 and the ZERO and Stable annunciators will illuminate, indicating a center-of-zero, stable gross weight condition.

TARE WEIGHT ENTRY

1. Push Button Tare

- 1.1 With the scale in the Weight mode, place the empty container on the scale platform.
- 1.2 Press the **TARE** key. The WEIGHT display will change to zero and the NET annunciator illuminates, indicating net weight is being displayed. The empty container's weight has been entered as "tare weight".

2. Pre-set Tare with Known Weight of Container

With the scale in the Weight mode, press the TARE key. The display will change to show PrEtA and the PIECES display will show ----- (six dashes).

Using the numeric keypad, enter the desired tare (container) weight. After the desired tare value has been entered, press the **TARE** key.

The display will show the Net weight (Gross minus tare) and the NET annunciator will illuminate.

Proceed with the counting or weighing operation.

3. Pre-set Tare with Container on Scale

3.1 With the scale in the Weight mode, place the container on the scale.

Read the weight of the container.

3.2 Using the numeric keypad, enter the container weight and press the **TARE** key.

3.3 The display will show the Net weight (Gross minus tare) and the NET annunciator will illuminate.

3.4 Proceed with the counting or weighing operation.

4. To Clear the Tare

To return to a zero tare, simply remove all material from the scale platform and press the **TARE** key. This will reset the tare weight to zero.

QUANTITY PRESET HI LIMIT

The scale can store a Quantity Preset Hi Limit value. The scale will beep and the Avg Piece Weight will display a blinking **-0t4-** if the quantity is over the Hi limit value set.

1. Press the **COUNT PRESET** key (items can be on scale or platform can be empty).
2. The WEIGHT display will change to show **PrESEt**.
3. Using the numeric keypad, enter the Quantity Preset Hi Limit.
4. Press the **SAMPLE SIZE** key, followed by the **COUNT PRESET** key.
5. The scale will return to the Weight mode.

WEIGHT PRESET HI LIMIT

The scale can store a Weight Preset Hi Limit value. The scale will beep and the Avg Piece

Weight will display a blinking **WUPSt** if the weight is over the Hi limit value set.

1. Press the **COUNT PRESET** key (items can be on scale or platform can be empty).
2. The WEIGHT display will change to show **PrESEt**.
3. Using the numeric keypad, enter the Weight Preset Hi Limit.
4. Press the **SAMPLE WEIGHT** key, followed by the **COUNT PRESET** key.
5. The scale will return to the Weight mode.

Clear the Quantity and Weight Preset Hi Limits

To clear the Quantity and/or Weight Preset Hi Limit, simply enter a “0” for the limit value.

COUNTING

1. Weight of Sample Is Unknown

- 1.1 With the scale in the Weight mode, place the sample on the scale platform.
- 1.2 On the numeric keypad, enter the number of pieces in the sample.
- 1.3 While the display is blinking, press the **SAMPLE SIZE** key.
- 1.4 The display will change to show **SAnnP** and then show the average piece weight and number of pieces.
- 1.5 Add the pieces to be counted and read the total count on the **PIECES** display.
- 1.6 Remove the pieces from the scale.
- 1.7 Press the **C/** key to complete the counting operation and return to the Weight mode.


2. Sample Weight is known

2.1 With the scale in the Weight mode, using the numeric keypad, enter the piece weight of the sample.

2.2 Press the **SAMPLE WEIGHT** key.

2.3 Add the pieces to be counted and read the total count on the PIECES display.

2.4 Remove the pieces from the scale.


Press the  key to complete the counting operation and return to the Weight mode.

Insufficient Sample



IMPORTANT! If the sample weight is too small the PIECES display will show

“-----“ (six dashes) for a few seconds and then the Insuf

Sample annunciator will illuminate. Continued use of the scale with the Insuf Sample annunciator illuminated, will result in an “inaccurate” count. Press the  key to cancel the counting operation and return to the Weight mode. Increase the number of pieces for the sample and repeat the counting operation to achieve an “accurate” count.

ACCUMULATOR

1. ADDING TO THE WEIGHT ACCUMULATOR

1.1 With the scale in the Weight mode and displaying zero weight, place the item on the scale platform.

1.2 Press the **M+** key to add to the value of the Weight Accumulator.

1.3 The Avg Piece Weight display will change to show the accumulator values and the ADD annunciator will be illuminated (to indicate the addition to the accumulator has taken place). After 3 seconds, the scale will return to the weight mode.

1.4 Remove the item from the scale.

1.5 The scale is ready for the next counting or weight operation.

NOTE:

Additional Weight Accumulator additions can not take place until the current weighing operation (scale weight returns to zero) has been completed.

2. DISPLAYING THE ACCUMULATOR

With the scale in the Weight mode and displaying zero weight, press the **M+** key to display the content of the accumulators. The values of the accumulator will be displayed for 3 seconds, then return to the Weight mode display.

3. CLEARING THE ACCUMULATOR

With the scale in the Weight mode and displaying zero weight, press the **MC** key. The accumulator will be reset to zero.

OPERATION USING PLU(S)

1. ADD OR EDIT PLU

- 1.1 With the scale in the Weight mode, press the **PGM** key. The Weight display will change to show **PLU**.
- 1.2 Touch the P1 through 9 key or using the numeric keys, enter the desired number of PLU 10 through 99 to change and press the **ENTER** key. The PLU number will be shown on the Weight display.
- 1.3 Using the numeric keypad to enter the average piece weight and then press the **ENTER** key to accept it. Note that if the PLU currently has an average piece weight, you can press the **ENTER** key to accept it or change it at this time.
- 1.4 The PIECES display will change to show **PLU**.
- 1.5 Press the **ENTER** key to accept it.
- 1.6 The next sequential PLU number will be displayed. Repeat steps 2 through 5 to program the remaining PLU's.

1.7 To exit PLU programming, simply press the PGM key and the scale will return to the normal weight mode.

2. PLU Operation Using Numeric Keypad


With the scale in the Weight mode, press the **P#** key. The Weight display will change to show **PLU**.

Enter the desired PLU number (1 through 99) and press the **ENTER** key.

The recalled PLU and average piece weight will display along with the associated tare weight (if a tare weight was programmed).

Add the pieces to be counted and read the total weight on the **WEIGHT** and the total count on the **PIECES** display.

Remove the pieces from the scale.

Press the  key to complete the counting operation and return to the Weight mode.


2. PLU Operation using Preset P1 through P9

3.1 With the scale in the Weight mode, press the desired **PLU** key P1 through P9.

3.2 The recalled PLU and average piece weight will display along with the associated tare weight (if a tare weight was programmed).

3.3 Add the pieces to be counted and read the total weight on the **WEIGHT** and the total count on the **PIECES** display.

3.4 Remove the pieces from the scale.

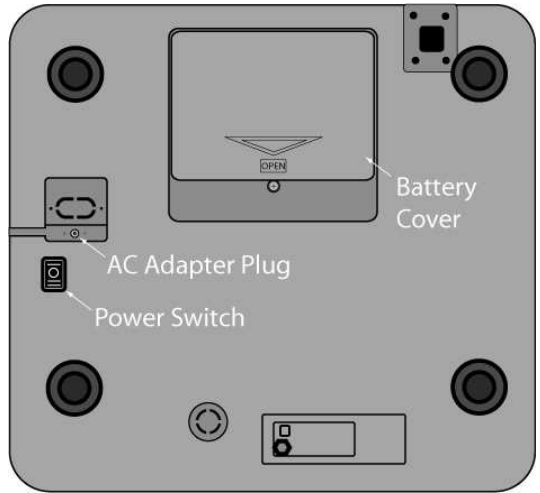
3.5 Press the  key to complete the counting operation and return to the Weight mode.

POWER SWITCH

The Power Switch is located on the bottom left side panel towards the front of the scale.

Place the power switch in the on position. The scale will perform a brief lamp test. This test consists of illuminating all display segments and annunciator LED's to allow the operator to make a visual verification that the display is

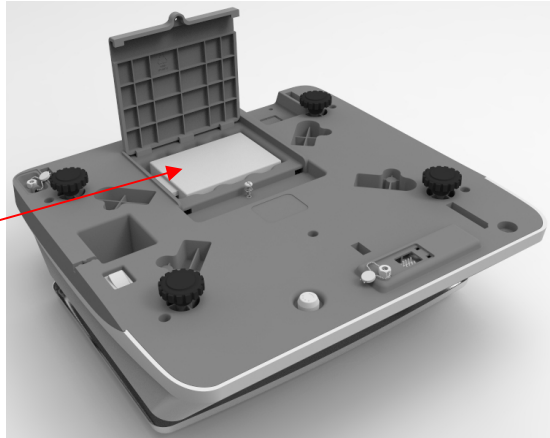
operational. After completion of the lamp test, the scale will display the model number and software revision level and then the WEIGHT display will change to show zero weight, indicating the scale is ready for use.



Before using the scale, it should be “warmed up” (turned on and unloaded for approximately 15 to 20 minutes).

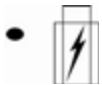
RECHARGEABLE LEAD-ACID BATTERY

Built-in rechargeable
6v/4Ah battery



3. Battery Charging


The scale can charge the battery (lead-acid rechargeable battery, 6v/4Ah). Just connect the scale to the external power supply to charge it. The battery will be charged regardless if the scale is on or off. It takes approximately 12 hours to charge the battery to full capacity depending on the voltage of the battery. If the battery has been-discharged, a prolonged charging time is required to bring the battery back to full capacity.



Red light: The battery is charging.

Green light: The battery is fully charged.

4. Low Battery

When the battery voltage falls below 5.7v, the low battery annunciator  will be turned on.

The battery must be recharged. Continued use (approximately 15 minutes later), the display will show **Lo bAt** in the weight field. If the battery voltage drops too low for accurate weighing, the scale will automatically shut off and you will be unable to turn it back on. When the low battery indicator is displayed, the operator should plug the power supply into the scale and then into the proper electrical wall outlet. The scale will begin charging the battery.

Notice

The battery should be recharged at least every 5 months regardless if it is used or not.

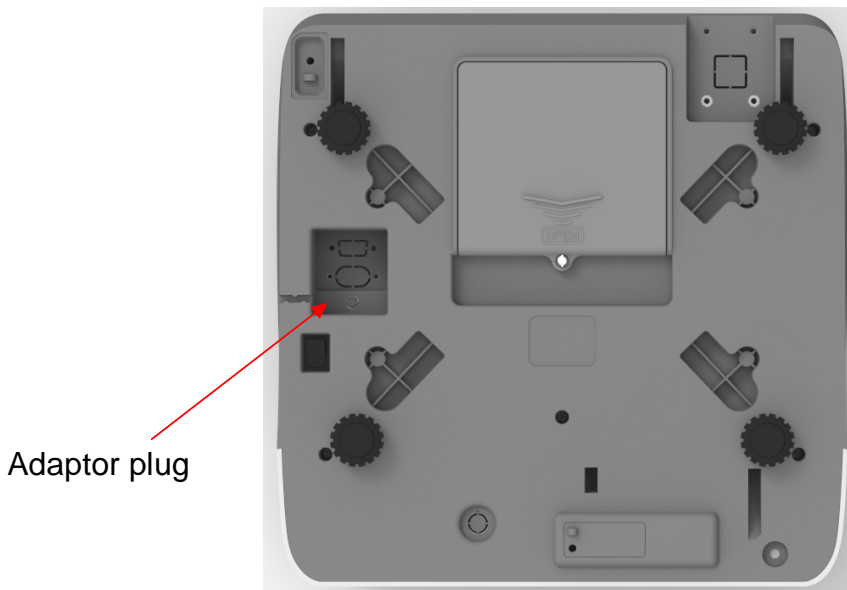
After a long time storage, e.g. over 3 months, it is desired to cycle (charge/discharge) the battery 3 times to let it restore to full capacity. When replacing the battery, pay much attention to the poles. The positive (+) terminal must be connected to the red connector and the negative (-) terminal must be connected to the black connector. If connected wrongly, the battery will be damaged.

NOTE: The battery cover can be removed by loosening a single captive screw. This screw remains attached to the cover which prevents it from falling out of the cover or being dropped and lost.

The capacity of the batteries will reduce over the years and therefore also the total operation time of the scale. This is not an error of the scale, but it is normal behavior or rechargeable batteries.

POWER SUPPLY

Make sure the battery pack is installed in the battery box of indicator, or, plug the connector of 12VDC /110~240 VAC 50/60Hz AC adapter in the scale.



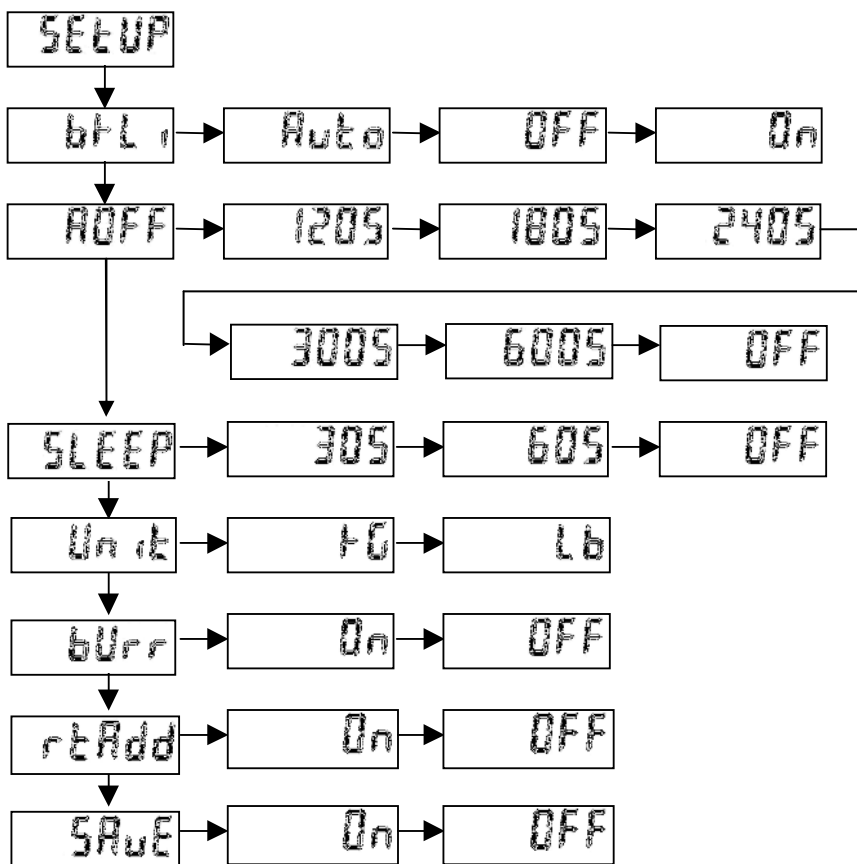
SCALE SETTINGS

1. Accessing the User Setup Mode

To access the User Setup Mode, with the scale off press and hold the **UNITS** key while switching the scale on. The Scale will display **SETUP**.

2. To Navigate in the User Setup Mode

Use the following keys to navigate the User Setup settings.



3. **btl** – Backlight Mode

With **SETUP**, **btl** displayed the current setting for the Backlight Mode parameter will be shown. If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter.

Otherwise, use the **TARE** key to toggle between the selections and then press the **UNITS** key to save it and proceed to the next parameter. The available settings are:

Auto = **Auto Backlight** – While weighing, the backlight will be turned ON automatically when the weight is over 10 divisions or any key is pressed. The backlight will turn OFF automatically when the scale has not been used for 10 minutes.

OFF = The will be no backlight (always OFF).

On = The backlight will always be ON.

4. **ROFF** – Automatic Power-Off

With **SETUP**, **ROFF** displayed the current setting for the Automatic Shut-Off function parameter will be shown. If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter.

Otherwise, use the **TARE** key to toggle between the selections and then press the **UNITS** key to save it and proceed to the next parameter. The available settings are:

120s = After 120 seconds (2 minutes) of no activity the scale will shut off and must be turned on using the ON/OFF switch.

180s = After 180 seconds (3 minutes) of no activity the scale will shut off and must be turned on using the ON/OFF switch.

240s = After 240 seconds (4 minutes) of no activity the scale will shut off and must be turned on using the ON/OFF switch.

300s = After 300 seconds (5 minutes) of no activity the scale will shut off and must be turned on using the ON/OFF switch.

600s = After 600 seconds (10 minutes) of no activity the scale will shut off and must be turned on using the ON/OFF switch.

OFF = The Auto Shut-Off function is disabled.

5. SLEEP – Sleep Mode

With **SETUP**, **SLEEP** displayed the current setting for the Sleep Mode function parameter will be shown. If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter. Otherwise, use the **TARE** key to toggle between the selections and then press the **UNITS** key to save it and proceed to the next parameter. The available settings are:

30s = If no activity occurs on scale for **30** seconds, the scale will enter Sleep Mode. The display will be blank except for a flashing cursor. To activate the scale, press any key or add/remove weight from scale.

60s = If no activity occurs on scale for **60** seconds, the scale will enter Sleep Mode. The display will be blank except for a flashing cursor. To activate the scale, press any key or add/remove weight from scale.

OFF = The Sleep Mode function is disabled.

6. Unit - Weighing Units

With **SETUP**, **Unit** displayed the current setting for the Weighing Units parameter will be shown. If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter.

Otherwise, use the **TARE** key to toggle between the selections and

then press the **UNITS** key to save it and proceed to the next parameter.
The available settings are:

Kg = kg (Kilograms)

Lb = Lb (Pounds)

7. **bUrr** – **Beeper**

With **SETUP**, **bUrr** displayed the current setting for the Beeper parameter will be shown.

If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter.

Otherwise, use the **TARE** key to toggle between the selections and then press the **UNITS** key to save it and proceed to the next parameter.

The available settings are:

On = Enable Beeper

OFF = Disable Beeper

8. **rtAdd** – **Return Add**

With **SETUP**, **rtAdd** displayed the current setting for the Return Add parameter will be shown. If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter.

Otherwise, use the **TARE** key to toggle between the selections and then press the **UNITS** key to save it and proceed to the next parameter.

The available settings are:

On = The weight have to return to 0.0 then you can execute the M+

OFF = You can execute the M+ even the weight did not return to 0.0

9. **SAVE** – Save User Setup

With **SETUP**, **SAVE** displayed the current setting for the Save Setting parameter will be shown. If the setting displayed is acceptable, press the **UNITS** key to proceed to the next parameter.


Otherwise, use the **TARE** key to toggle between the selections and then press the **UNITS** key to save it and proceed to the next parameter. The available settings are:

On = The changes are saved and the scale is ready for use with the new settings.

OFF = The changes are NOT saved and the scale will continue to operate with the *previous* settings.

The scale will reset and perform a lamp test. Next, the display will show the model number; the software revision level and then the **WEIGHT** display will show zero weight.

HOW TO ENTER INTO THE SETTING MODE

1. Power on the scale use switch key. The Power Switch  is located on the bottom right side panel towards the front of the scale.
2. Using screw driver to open the test pin cover on the bottom side of the scale. (Refer fig.1. Bottom Side)
3. Touch the two right hand side pins once using metal screw driver at the same time to enter setting mode.

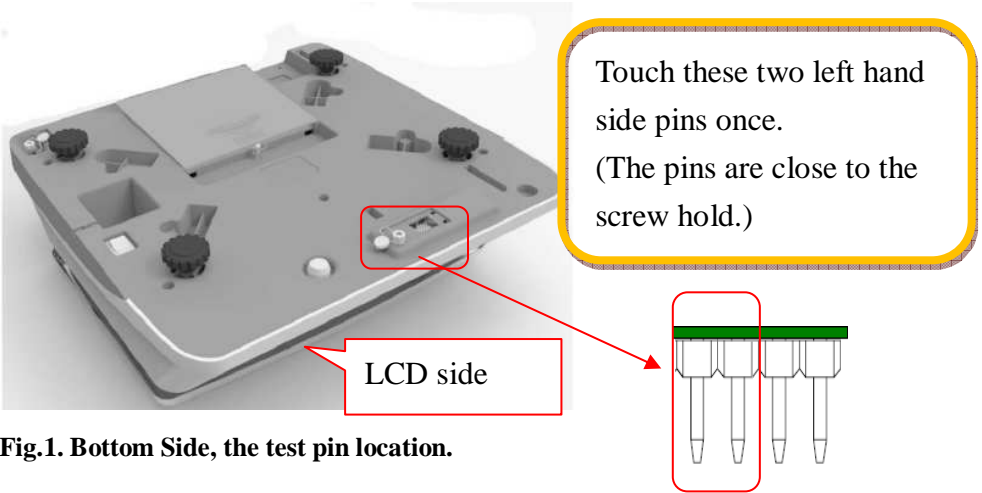


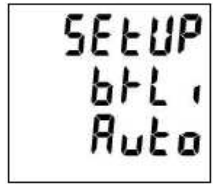
Fig.1. Bottom Side, the test pin location.

CALIBRATION PROCEDURE

To navigate in the setting Mode:

- Press UNIT to accept the displayed setting and proceed to the next step.
- Press TARE to toggle through available settings
- Press ZERO to return to the previous steps
- Press C to end setup and proceed to “SAVE”

In setting mode, when the “**bkLi**” is displayed. Press **UNIT** key until “**CAL YES**” appears on the LCD.



Note: if the display shows “**CAL no**”, press **TARE** key to change to “**CAL yes**”.



Press **UNIT** key to enter into calibration mode.

Press **UNIT** key, the display shows “CAL”, and then the last calibration value will be display.



To enter the calibration weight value using **0-9** numerical keys. After entering the calibration weight press **UNIT** to confirm.



Place the calibration weight carefully in the centre of the scale plate, and the display shows span count value. Press **UNIT** key after the span count stabilizes. The adjustment process will start.



After the adjustment is finished successfully, the scale will automatically change to the setting mode.



The “**SAvE YES**” appears on the LCD, press **UNIT** to return to the normal mode.



GRAVITY SETTING

In setting mode (please refer page.25)

In setting mode, when the “bkLi” is displayed. Press **UNIT** key until “GrAu on” appears on the LCD.

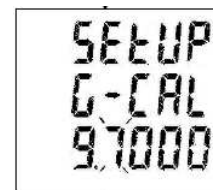


Note: if the display shows “GrAu off”, press **TARE** key to change to “GrAu yes”.

Press **UNIT** key to start setting the original gravity.



Setting the origin gravity value using 0-9 key. Press **UNIT** key to the next step to setting the gravity of place of use.



Using 0-9 key to set the gravity of place of use. Press **UNIT** key to finish the gravity setting.

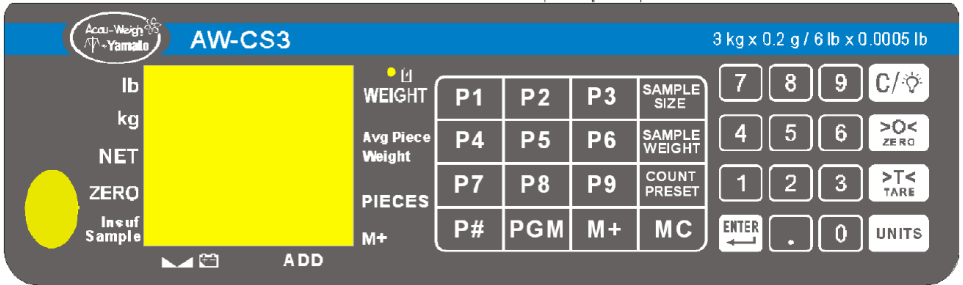
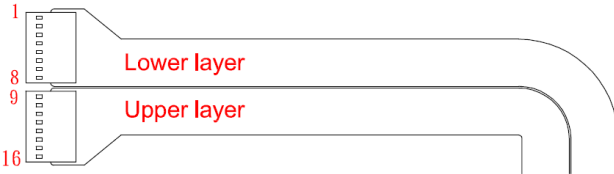


CONTROL PANEL

When control panel switch damaged. Using multi-meter to measure voltage of control panel. Reconnect control panel. Make sure that control panel is connected to the correct housing.

If problem persists, replace a new control panel.

Upper layer is PIN 9 to PIN 16
 lower layer is PIN 1 to PIN 8



Upper Layer

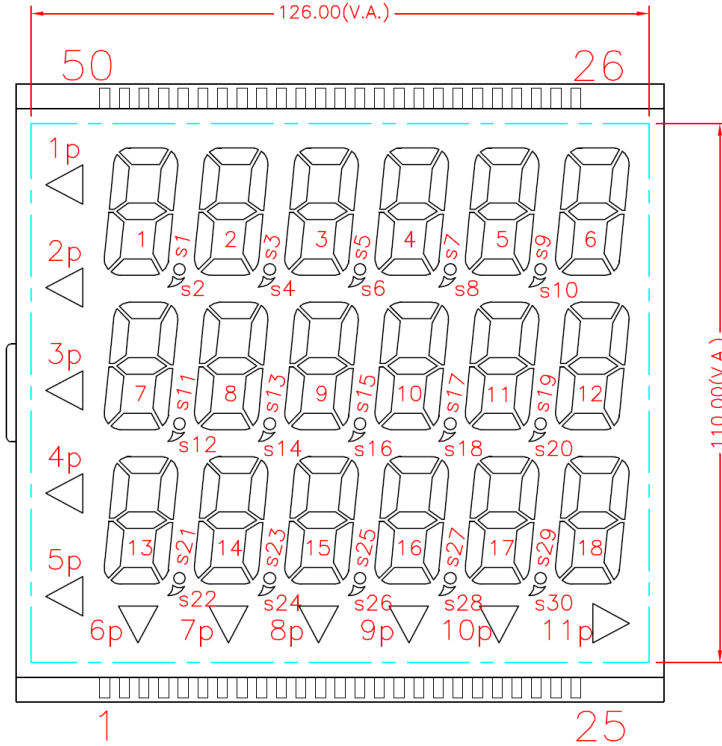
PIN Assigmen	pin 13	pin 14	pin 15	pin 16
pin 12	P1	P2	P3	SAMPLE SIZE
pin 11	P4	P5	P6	SAMPLE WEIGHT
pin 10	P7	P8	P9	COUNT PRESET
pin 9	P#	PGM	M+	MC

Lower layer

PIN Assigmen	pin 5	pin 6	pin 7	pin 8
pin 4	7	8	9	c/backlight
pin 3	4	5	6	ZERO
pin 2	1	2	3	TARE
pin 1	ENTER	.	0	UNITS

LCD FORMAT

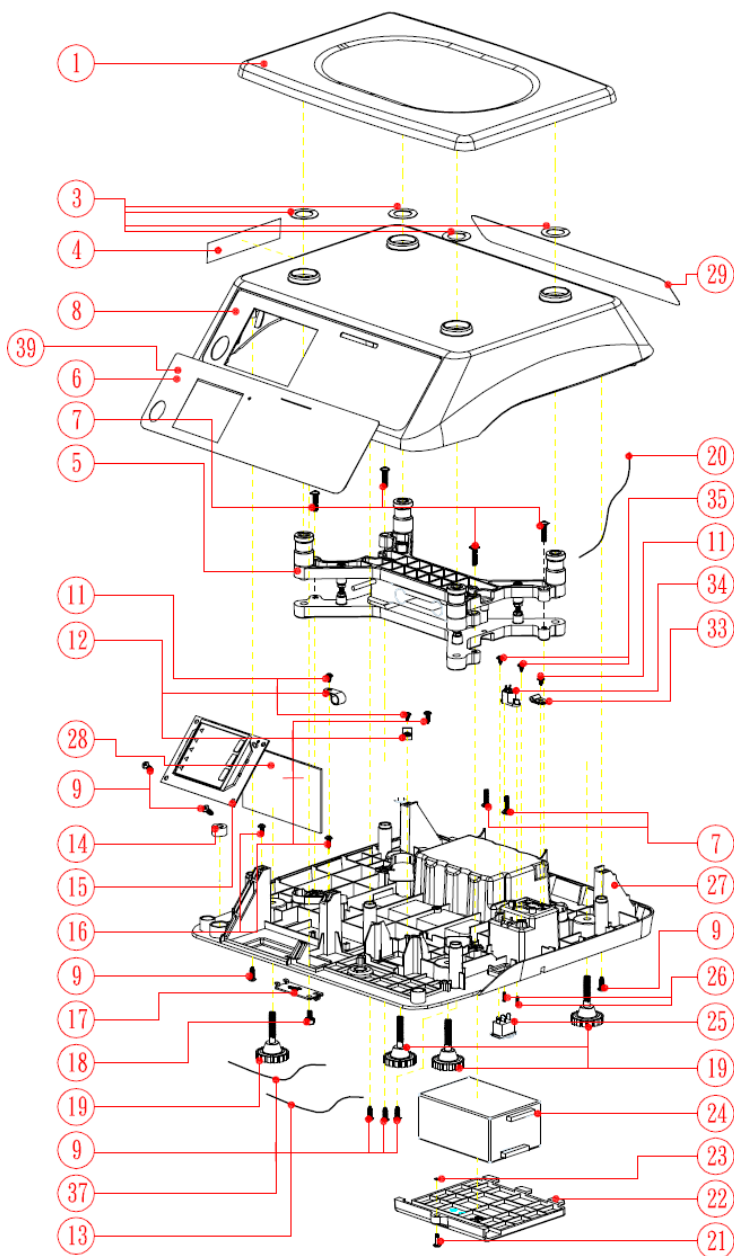
When power on, the scale shows non-complete segments. Please check the LCD pin (please refer to above LCD format). Check whether LCD pins are soldered properly or not.

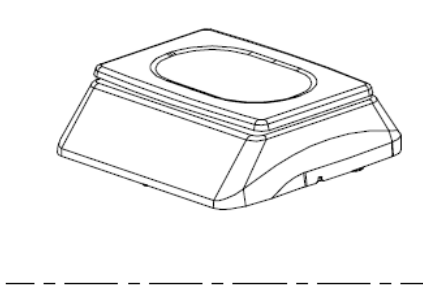


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
COM0	C0	/	/	/	s22	6p	11p	s30	18d	s29	17d	s27	16d	s25	15d	s23	14d	s21	13d	s20	12d	s19	11d	s17	10d
COM1	/	C1	/	/	s24	s28	10p	18c	18e	17c	17e	16c	16e	15c	15e	14c	14e	13c	13e	12c	12e	11c	11e	10c	10e
COM2	/	/	C2	/	5p	s26	9p	18g	18f	17g	17f	16g	16f	15g	15f	14g	14f	13g	13f	12g	12f	11g	11f	10g	10f
COM3	/	/	/	C3	/	7p	8p	18b	18a	17b	17a	16b	16a	15b	15a	14b	14a	13b	13a	12b	12a	11b	11a	10b	10a

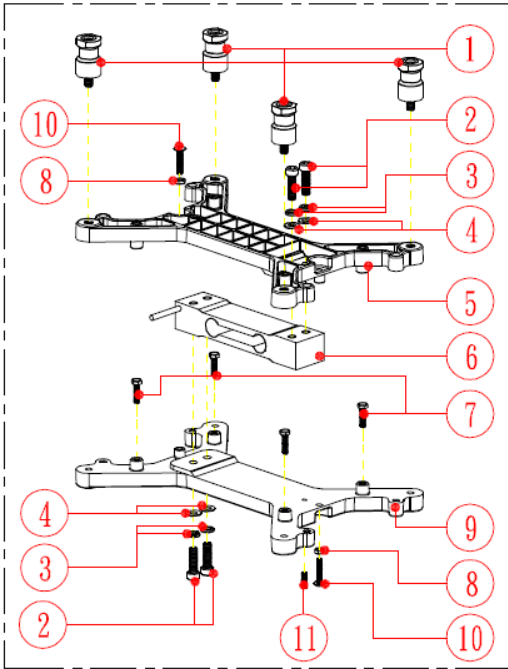
	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
COM0	s15	9d	s13	8d	s11	7d	s10	6d	s9	5d	s7	4d	s5	3d	s3	2d	s1	1d	s2	s8	s18	/	/	/	C0
COM1	9c	9e	8c	8e	7c	7e	6c	6e	5c	5e	4c	4e	3c	3e	2c	2e	1c	1e	s4	s6	s16	/	/	/	C1
COM2	9g	9f	8g	8f	7g	7f	6g	6f	5g	5f	4g	4f	3g	3f	2g	2f	1g	1f	2p	3p	4p	/	/	/	C2
COM3	9b	9a	8b	8a	7b	7a	6b	6a	5b	5a	4b	4a	3b	3a	2b	2a	1b	1a	1p	s12	s14	C3	/	/	/

PART LIST & ASSEMBLY DRAWING




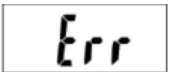







No.	Item	Spec.	Q' TY
1	Platform	TO-1241 (TO-8071)	1
3	Plastic washer	ST-8254	4
4	Label	GM-2348	1
6	Control Panel	NP-6871	1
7	Washer Head Screw	M4*16	6
8	Plastic cover	CR-8164	1
9	Screw	4*12	7
11	Washer Head Screw	3*6	3
12	Cable Clips	*CC-4	2
13	Wire with switch	WR-1040	1
14	Bubble Level	15*8mm(300R)	1
15	Display Board	ZLC140010KB	1
16	Screw	3*10	3
17	Seal	ST-8267	1
18	Seal screw	SS-2320/P10	2
19	Adjust Feet	SW-8091	4
20	Wire	WR-8191	1
21	Screw	M3*0.5*9	1
22	Battery Cover	BT-8072	1
23	Retaining Rings E-type	ø2*ø5	1
24	Lead-Acid Battery	DJWG-L0_BATTERY	1
25	Power Switch	SC768-3	1
26	Screw	3*5	2
27	Plastic Base	BW-8098	1
28	Main Board	ZLC140009KB	1
29	Rear Panel	NP-8632	1
33	Wire Clips	UC-0	1
34	AC Jack	LD-0201 2.5φ	1
35	Washer Head Screw	M3*5	2
37	Cable	WR-8223	1
39	Overlay	NP-7421	1



LBS TIEO QV01	1	Rubber Strut	SW-8085	4
	2	Hexagon Screw	M6*1.0*20	4
	3	Washer	M6	4
	4	Washer	M6*11.5	4
	5	ALI. Bearing plate(Top)	TP-0811 (TP-8024)	1
	6	load cell	PA08B-0005K-DGS1	1
	7	Hexagon Screw	M4*0.7*15	4
	8	Nut	M4*0.7	2
	9	Bearing plate(base)	TP-0621 (TP-8025)	1
	10	Washer Head screw	M4*0.7*33	2
	11	Screw	M4*0.7*16	1

ERROR MESSAGE

ERROR MESSAGE	REASON	ACTION
	<p>Low battery: This warning shows that the voltage of batteries is too low to use.</p>	<p>Please replace with new batteries or plug the AC adaptor for operation.</p>
	<p>Overload: The total load exceeds the maximum capacity of the scale.</p>	<p>Please reduce the loading and try again.</p>

	<p>Zero count over calibration: Zero range +10% while powered on.</p>	<p>Please re-calibrate the instrument. *1</p>
	<p>Zero count under calibration: Zero range -10% while powered on.</p>	<p>Please re-calibrate the instrument. *1</p>
	<p>Counting error (too high): Indicates that the signal from the load cells is too high.</p>	<p>This error is normally caused by a serious fault on the scales i.e. a faulty load cell or wiring. Please contact the local Service Representative.</p>
	<p>Counting error (too low): Indicates that the signal from the load cells is too low.</p>	<p>This error is normally caused by a serious fault on the scales such as a faulty load cell or wiring. Please contact the local Service Representative.</p>
	<p>EEPROM error: Indicates that there is a fault with the scales software.</p>	<p>This error is normally caused by a serious fault on the scales such as a faulty load cell or wiring. Please contact the local Service Representative.</p>