BA114
Electronic Balance 30kg x 1g

Impact Test Equipment Ltd
www.impact-test.co.uk & www.impact-test.com

User Guide
User Guide
User Guide

Impact Test Equipment Ltd.
Building 21 Stevenston Ind. Est.
Stevenston
Ayrshire
KA20 3LR

T: 01294 602626
F: 01294 461168

E: sales@impact-test.co.uk

Test Equipment Web Site
www.impact-test.co.uk

Test Sieves & Accessories Web Site
www.impact-test.com

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1.0 INTRODUCTION

- The **CBW** series of scales provide an accurate, fast and versatile series of general purpose weighing scales with counting, % weighing and check-weighing functions.

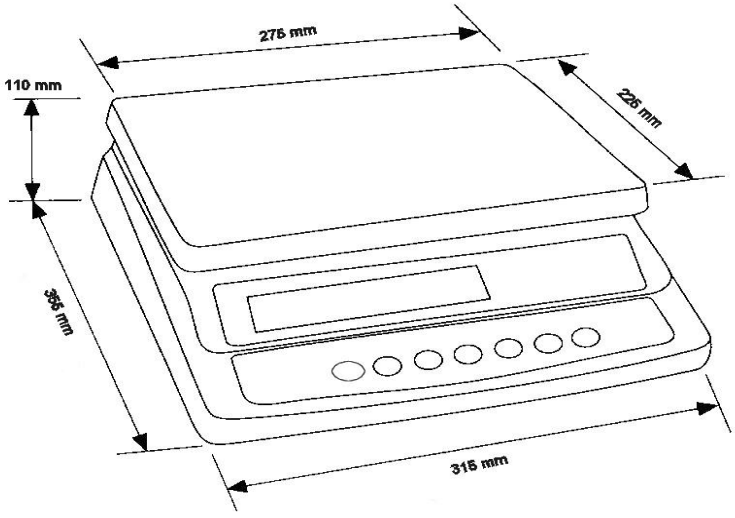
- There are 2 series of scales - **CBW** scales which use kilograms as the default unit and the **CBWa** range of scales have changeable units from pounds to kilograms. The scales in these series share the same functions except the **CBWa** series have the ability to change the weighing units.

- There are 5 models in each series with capacities up to 45 kg / 100 lb.

- These all have stainless steel weighing platforms on an ABS base assembly.

- All scales have sealed keypads with colour coded membrane switches and the displays are large easy to read liquid crystal type displays (LCD). The LCD's are supplied with a backlight.

- The scales include automatic zero tracking, audible alarm for pre-set weights, automatic tare, pre-set tare, an accumulation facility that allows the count to be stored and recalled as an accumulated total and bi-directional RS-232 interface for communicating with a PC or printer.



2.0 SPECIFICATIONS

CBW SERIES					
Model #	**CBW 3**	**CBW 6**	**CBW 15**	**CBW 30**	**CBW 45**
Maximum Capacity	3 kg	6 kg	15 kg	30 kg	45 kg
Readability	0.1 g	0.2 g	0.5 g	1 g	2 g
Tare Range	-3 kg	-6 kg	-10 kg	-30 kg	-45 kg
Repeatability (Std. Dev.)	0.1 g	0.2 g	0.5 g	1 g	2 g
Linearity ±	0.2 g	0.4 g	1 g	2 g	4 g
Units of Measure	kg, g				

CBWa SERIES

Model: CBW-6a

UNITS OF MEASURE	MAXIMUM CAPACITY	TARE RANGE	READABILITY	REPEATABILITY	LINEARITY
Grams	3000.0 g	-3000.0 g	0.1 g	0.1 g	0.2 g
Kilograms	3.0000 kg	-3 kg	0.0001 kg	0.0001 kg	0.0002 kg
Pounds	6.0000 lb	-6 lb	0.0002 lb	0.0002 lb	0.0004 lb
Pounds/Ounces	6 lb 0.0 oz	-6 lb 0.0 oz	0.1 oz	0.1 oz	0.1 oz

Model: CBW-12a

UNITS OF MEASURE	MAXIMUM CAPACITY	TARE RANGE	READABILITY	REPEATABILITY	LINEARITY
Grams	6000.0 g	-6000.0 g	0.2 g	0.2 g	0.4 g
Kilograms	6.0000 kg	-6 kg	0.0002 kg	0.0002 kg	0.0004 kg
Pounds	11.9935 lb	-11.99 lb	0.0005 lb	0.0005 lb	0.001 lb
Pounds/Ounces	11 lb 15.0 oz	-11 lb 15 oz	0.1 oz	0.1 oz	0.1 oz

Model: CBW-35a

UNITS OF MEASURE	MAXIMUM CAPACITY	TARE RANGE	READABILITY	REPEATABILITY	LINEARITY
Grams	15000.0 g	-10000.0 g	0.5 g	0.5 g	1 g
Kilograms	15.0000 kg	-10 kg	0.0005 kg	0.0005 kg	0.001 kg
Pounds	35.000 lb	-35 lb	0.001 lb	0.001 lb	0.002 lb
Pounds/Ounces	35 lb 0.0 oz	-35 lb 0.0 oz	0.1 oz	0.1 oz	0.1 oz

Model: CBW-65a

UNITS OF MEASURE	MAXIMUM CAPACITY	TARE RANGE	READABILITY	REPEATABILITY	LINEARITY
Grams	30000 g	-30000 g	1 g	1 g	2 g
Kilograms	30.000 kg	-30 kg	0.001 kg	0.001 kg	0.002 kg
Pounds	65.000 lb	-65 lb	0.002 lb	0.002 lb	0.004 lb
Pounds/Ounces	65 lb 0.0oz	-65 lb 0.0 oz	0.1 oz	0.1 oz	0.1 oz

Model: CBW-100a

UNITS OF MEASURE	MAXIMUM CAPACITY	TARE RANGE	READABILITY	REPEATABILITY	LINEARITY
Grams	45000 g	-45000 g	2 g	2 g	4 g
Kilograms	45.000 kg	-45 kg	0.002 kg	0.002 kg	0.004 kg
Pounds	100 lb	-99 lb	0.005 lb	0.005 lb	0.01 lb
Pounds/Ounces	99lb15.0 oz	-99 lb 15.0 oz	0.1 oz	0.1 oz	0.2 oz

Common Specifications for CBW and CBWa	
Interface	RS-232, Optional
Stabilisation Time	2 Seconds typical
Operating Temperature	0℃ - 40℃ 32℉ - 104℉
Power supply	9V DC, 800 mA Through an external adapter
Battery	Internal rechargeable battery (~70 hours operation)
Calibration	Automatic External
Display	6 digits LCD digital display
Scale Housing	ABS Plastic, Stainless Steel platform
Pan Size	225 x 275 mm 8.9” x 10.8”
Overall Dimensions (wxdxh)	315 x 355 x 110 mm 12.4” x 14” x 4.3”
Net Weight	4.1 kg / 9 lb
Applications	General Purpose Scale
Functions	Weighing, parts counting, % weight, Checkweighing

3.0 INSTALLATION

3.1 GENERAL INSTALLATION

- Avoid extreme temperatures. Do not place in direct sunlight or near air conditioning vents. Avoid air movement such as from fans or opening of doors and windows.
- Avoid unsuitable tables. Do not place near vibrating machinery.
- Avoid unstable power sources while charging the battery. Do not use the scale near any large user of electricity such as welding equipment or large motors.
- Avoid high humidity that might cause condensation. Avoid direct contact with water. Do not spray or immerse the scales in water.
- Keep the weighing area clean.
- Do not stack material on the scale when not in use.
- Protect the scale from extreme temperatures, vibration and dust.

3.2 INSTALLATION OF CBW SERIES

- The CBW Series comes with a stainless steel platform packed separately.
- Place the platform in the locating holes on the top cover.
- Do not press with excessive force as this could damage the load cell inside.
- Level the scale by adjusting the four feet. The scale should be adjusted such that the bubble in the spirit level is in the centre of the level and the scale is supported by all four feet.
- Attach the power supply cable to the connector on the bottom of the scale. Plug in the power supply module. The power switch is located on the base on the right side of the scale.
- The scale will first display the model number (CBW 30- where 30 denotes the capacity of the scale in kg), followed by the revision numbers (1.2-2.03 where 1.2 is the current hardware revision number of the main circuit board and 2.03 is the current software revision number). A self-test is followed next. At the end of the self-test it will display "**ZERO**", if the zero condition has been achieved. A stable symbol and "**GROSS**" indicators are also displayed.

4.0 KEY DESCRIPTIONS

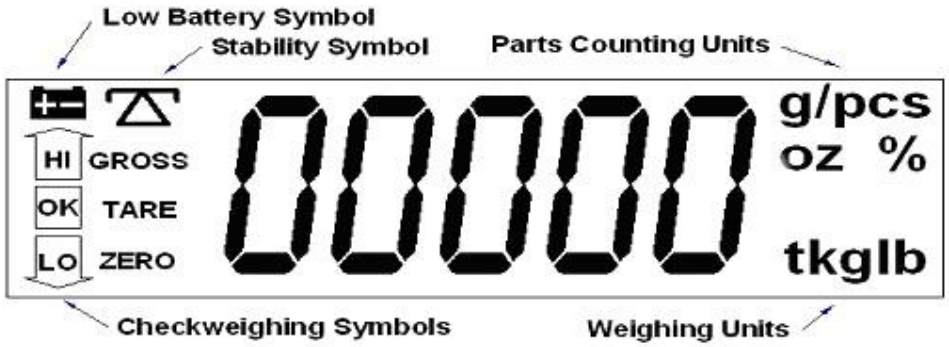
KEYS	PRIMARY FUNCTION	SECONDARY FUNCTION
[Zero]	Sets the zero point for all subsequent weighing. The display shows zero.	↵ or **[Enter]** key when setting parameters or other functions.
[Tare]	It tares the scale and stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the results. This is the net weight. Entering a value using the keypad will store that value as the tare value.	A secondary function ▲ is available to increment the active digit when setting a value for parameters or other functions.

[Limit]	It sets the limits for check weighing and allows setting of either the low limit or the high limit or both.	A secondary function ▶ is available to move the active digit to the right when setting values for parameters or other functions.
[%]	It enters the percent weighing function. Allows the weight, unit weight, and count to be seen when parts counting.	A secondary function ◀ is available to move the active digit to the left when setting values for parameters or other functions.
[Func]	This is used to select the function of the scale. When the scale is weighing, it will select parts counting. When it is not in the weighing mode it will return the user to weighing.	A secondary function **[C]** is available to act as a clear key when setting values for parameters or other functions.
[Print]	It is used to print the results to a PC or printer using the optional RS-232 interface. It also adds the value to the accumulation memory if the accumulation function is not automatic.	A secondary function **[ESC]** is used to return to normal operation when the scale is in a parameter setting mode.
[Units]	It is used to change the weighing units of the display from kilograms to grams and back to kilograms for **CBW** series. For **CBWa** scales this key will select kilograms, grams, Pounds and Pounds/ounces for the weighing unit, if enabled. This should only be done in gross weighing or at zero.	None.

5.0 DISPLAYS

The LCD display will show a value and a unit to the right of the digits.

Other labels are TARE, GROSS, ZERO, **(Stable) and** **(Low battery).**



6.0 OPERATION

6.1 ZEROING THE DISPLAY

- You can press the **[Zero/Enter]** key at any time to set the zero point from which all other weighing and counting is measured. This will usually be necessary when the platform is empty. When the zero point is obtained the display will show the indicator for "**ZERO**".

- The scale has an automatic re-zeroing function to account for minor drifting or accumulation of material on the platform. However you may need to press the **[Zero/Enter]** key to re-zero the scale if small amounts of weight are still shown when the platform is empty.

6.2 TARING

- Zero the scale by pressing the **[Zero/Enter]** key, if necessary. The zero indicator will be on. Place a container on the platform, a value for its weight will be displayed.
- Press the **[Tare]** key to tare the scale. The weight that was displayed is stored as the tare value and it is subtracted from the display, leaving zero on the display. The "**TARE**" indicator will be on and the "**GROSS**" indicator will be off. As product is added only the weight of the product will be shown. The scale could be tared a second time if another type of product was to be added to the first one. Again only the weight that is added after taring will be displayed.
- When the container is removed a negative value will be shown. If the scale was tared just before removing the container, this value is the gross weight of the container plus all products those were removed. The "**ZERO**"- indicator will also be on because the platform is back to the same condition it was when the **[Zero/Enter]** key was last pressed.

6.3 WEIGHING A SAMPLE

- To determine the weight of a sample, first tare an empty container if used, then place the sample in the container. The display will show the weight and the units of weight currently in use.

6.4 PERCENT WEIGHING

- The scale will allow a sample weight to be shown as 100%. Then any other weight placed on the scale will be displayed as a percentage of the original sample. For example is 350g is placed on the scale and the **[%]** key is pressed the display will show 100.00%. Remove the 350g weight and place a 300g weight on the scale. The display will show 85.71% as 300g is 85.71% of 350g.
- **NOTE:** The scale may jump by large numbers unexpectedly if small weights are used to set the 100% level. For example, if only 23.5g is placed on a scale with 0.5g increments and the scale is set to 100%, the display will show 100.00%, however a small change of weight will cause the display to jump to 102.13% as one scale division (0.5g) increase to 24.0g will be equivalent to an increase of 2.13%.
- Pressing **[Func]** will return the scale to weighing.

6.5 PARTS COUNTING

- Before beginning, tare the weight of any container that will be used, leaving the empty container on the scale.
- Press the **[Func]** key to begin. The scale will show "**P 10**" asking for a sample size of 10 parts. Change the sample size by pressing the **[Tare/↑]** key. The display will cycle through the options: 10, 20, 50, 100, 200 and back to 10.
- Place the number of samples on the scale. The number should match the options for parts counting, i.e., 10, 20, 50, 100 or 200 pieces.
- Press the **[Zero/Enter]** key when the number matches the number of parts used for the sample. As more weight is added, the display will show the number of parts (pcs).
- Press the **[%]** key to display unit weight (g/pcs or lb/pcs), Total weight (kg or lb) or the count (pcs).
- Press **[Func]** to return to normal weighing.
- '**lb**' will be shown on the **CBWa** scales when weighing unit is set to pounds.

6.6 CHECK-WEIGHING

Check-weighing is a procedure to cause an alarm to sound when the weight on the scale meets or exceeds the values stored in memory. The memory holds values for a high limit and a low limit. Either or both the limits can be used.

6.6.1 Setting up Check-weighing while weighing

- Press the **[Limit]** key. The display will show the current High Limit with the left most digit flashing and the HI symbol on the left of the display.

- To change the value shown press **[%/←]** and to select the digit to change press **[Limit/→]**. Use **[Tare/↑]** to increment the flashing digit. When the desired value is shown press **[Zero/Enter]** to accept the value. If you want to reset the value to zero, press the **[Func/C]** key to clear the value.

- After pressing the **[Zero/Enter]** key the display will then show the Low Limit, the "**LO**" symbol will be on to the left side of the display. Enter the low limit in the same way the high limit was entered.

- The limits are displayed in **Kg**.

- Pressing the **[Zero/Enter]** key will return the scale to weighing, with the Check-weighing function enabled.

- When a weight is placed on the scale the arrows will show whether the weight is above or below the limits and the beeper will sound as described below.

BOTH LIMITS SET	The display will show **OK** and the beeper will sound when the weight is between the limits.
LOW LIMIT SET	HIGH LIMIT is set to zero. The display will show **OK** and the beeper will sound when the weight is less than the Low Limit. Above the Low Limit the display will show **HI** and the beeper will be off.
HIGH LIMIT SET	LOW LIMIT is set to zero. The display will show **LO** and the beeper will be off when the weight is less than the High Limit. Above the High Limit the display will show **OK** and the beeper will be on.
BOTH LIMITS SET. LOW IS SET GREATER THAN HIGH	The beeper will never sound and the display will show **LO** if the weight is less that the Low Limit and **HI** if the weight is greater than the Low Limit.

6.6.2 Setting up Checkweighing while Parts Counting

- Checkweighing facility can be set up for Parts Counting by entering values as Low and High Limits to be keyed in by the user. The limits are displayed in **PCS**.

- Press **[Func]** to enter the Parts Counting mode. Press **[Zero/Enter]** to fix a sample size. Press **[Limit]** and enter the numeric values for high and low limits following the same procedure as stated in the earlier section.

NOTE:

- The weight must be greater than 20 scale divisions for the check-weighing to operate.

- To disable the Checkweighing function, enter zero into both limits by pressing **[Limit/➔]** to recall the current settings.

- When the current limits are shown, press **[Func/C]** to clear the settings and then press the **[Zero/Enter]** key to store the zero values.

6.7 ACCUMULATED TOTAL

- The scale can be set to accumulate when a weight is added to the scale automatically or manually by pressing **[Print]**.
- See Section 7 on PARAMETERS for details. The accumulation function is only available when weighing. It is disabled during percent weighing or parts counting.
- The accumulated weights will be stored in the master unit of the scale, i.e. kg or lbs.
- If at any time the weighing units are changed, the accumulated data will be lost.

6.8 MANUAL ACCUMULATION

- When the scale is set to manual accumulation the weight displayed will be stored in memory when the **[Print]** key is pressed and the weight is stable.
- The display will show "**ACC 1**" and then the total in memory for 2 seconds before returning to normal. If the optional RS-232 interface is installed the weight will be output to a printer or PC.
- Remove the weight, allowing the scale to return to zero and put a second weight on. Press **[Print]**, the display will show "**ACC 2**" and then show the new total.
- Continue until all weights have been added.
- To view the total in memory press the **[Print]** key when the scale is at zero. The display will show the total number of items "**ACC XX**" and the total weight before returning to zero. The total will also be printed via the RS-232 interface.
- To erase the memory, press **[Print]** to view the totals and then press the **[Func/C]** key to clear the memory.

6.9 AUTOMATIC ACCUMULATION

- When the scale has been set to Automatic Accumulation the value is stored in memory automatically.
- Add a weight to the scale. The beeper will sound when the scale is stable indicating the value is accepted. Remove the weight.
- The display will show "**ACC 1**" and then the total in the memory before it returns to zero. Adding a second weight will repeat the process.
- While the weight is on the scale, press the **[Print]** key to store the value immediately. In this case the scale will not store the value when the weight is removed. The total can be viewed as above.
- In all cases the scale must return to zero or a negative number before another sample can be added to the memory.
- More products can be added and **[Print]** be pressed again. This can continue for up to 99 entries, or until the capacity of the display is exceeded.

7.0 PARAMETERS

The parameters can be chosen by the user to set the scale to:

- Display the weight in other increments of weight to minimise the affects of vibration, wind or other environmental conditions.
- Control the back light on the display. It may be necessary to turn the backlight off to maximise battery life.
- Set the Accumulation to Automatic, manual or set the RS-232 interface to continuously print the weight.
- Set the accumulation to be active when the **[Print]** key is pressed or to be inactive.
- Set a range for auto zero.
- Select another weighing unit than the standard.
- Set the check weighing alarm.

7.1 PROCEDURE

To set parameters, press the **[Func]** and **[Print]** keys at the same time.

- The display will show "**Inc xx**" where **xx** can be 1, 2, 5,10 or 20. The first value shown is the default scale increment value.
- To change to a different increment value press **[Tare/↑]**.
- Press the **[Zero/Enter]** key to store the changed value.

  For example, on a 15kg scale the standard increment is 0.5g, the value can be changed to 1.0g or 2.0g.

7.1.1 Control the backlight

- The standard is to have the backlight operate automatically, turning it off when the scale is not being used.
- The backlight can be set to be "**EL On**", "**EL Au**" (Automatic) or "**EL OFF**". The maximum battery life is achieved with the backlight turned off.
- Press the **[Tare/↑]** key to change the setting.
- Press the **[Zero/Enter]** to store the changed setting.

7.1.2 Automatic accumulation

- With "**Au on**" the memory will accumulate the weight automatically.
- "**Au oFF**" will enable the manual accumulation.
- "**P Cont**" will set the RS-232 interface to send the weight continuously and the accumulation function is disabled.
- Press the **[Tare/↑]** key to change the setting.
- Press the **[Zero/Enter]** key to store the changed setting.

7.1.3 Accumulation of data in memory when [Print] is pressed

- To accumulate weight in the memory when **[Print]** is pressed, set "**ACC on**". To use the **[Print]** key to only print the weight without adding it to memory, set "**ACC oFF**".
- Press **[Tare/↑]** to change the setting between **on** and **oFF**.
- Press the **[Zero/Enter]** key to store the changed setting.

7.1.4 Auto zero range

- The auto-zero will automatically set the scale to zero when the displayed weight is almost near zero. This helps to make sure that the scale is measuring weight from an accurate zero starting point.
- The Auto zero value can be set to 0.5, 1, 2 or 4 scale divisions. The normal setting is 1 scale division. The display will show "**A2 1d**".
- Press the **[Tare/↑]** key to change the value.
- Press the **[Zero/Enter]** key to store the changed setting.

7.1.5 Selectable unit of weight displayed

- The scales are normally set to display in kilograms, however they will show the weight in grams, if enabled.
- The display will show "**Ut on**" or "**Ut oFF**".
- Press **[Tare/↑]** to change the setting between **on** or **oFF.**
- Press the **[Zero/Enter]** key to store the changed setting.

CBWa Scales only:

The **CBWa** scales can change units from kilograms to grams, pounds or pounds/ounces immediately if they are enabled as in the step above. This also allows the scales to be calibrated in either kilograms or pounds and all memory accumulations are in either kilograms or pounds as last selected.

When the scales are set to display in other units of weight the accumulation function is still keeping the weight in kilograms (or pounds for the **CBWa** series) in memory and will use the base weighing unit when printing over the RS-232 interface.

7.1.6 Setting of the check weighing alarm

- The display will show "**bEEP x**" where "**x**" is a digit from **0** to **2**.

0	will set the buzzer to off when check weighing
1	will set the buzzer to on when the **OK** symbol is on
2	will set the buzzer to on when the weight is outside the **OK** symbol limit

- To change this digit press the **[Tare/↑]** key.

- Press the **[Zero/Enter]** key to store the changed value and continue to the next parameter.

7.1.7 Speed at which the machine will run the ADC

- The slowest setting is **7.5** and the fastest is **60**. The default setting is usually **15**. The display will show "**SPd 15**".
- To change this setting press the **[Tare/↑]** key.
- Press the **[Zero/Enter]** key to store the changed value and return to the normal weighing.

8.0 BATTERY OPERATION

- The scales can be operated from the battery, if desired. The battery life is approximately 70 hours.
- When the battery needs charging a symbol on the display will turn on. The battery should be charged when the symbol is on. The scale will still operate for about 10 hours after which it will automatically switch off to protect the battery.
- To charge the battery, simply attach the power supply module to the scale and plug in. The scale does not need to be turned on.
- The battery should be charged for 12 hours for full capacity.
- Just above and to the left of the display is a LED to indicate the status of battery charging. When the scale is plugged into the mains power the internal battery will be charged. If the LED is green the battery is being charged. If it is red it is nearly discharged and yellow indicates the battery is increasing the charge level. Continue to charge overnight for a complete re-charge.
- As the battery is used over the years it may fail to hold a full charge. If the battery life becomes unacceptable then contact your distributor or Adam Equipment.

9.0 RS-232 INTERFACE

The CBW scales can be ordered with an optional RS-232 output.

Specifications:

RS-232 output of weighing data ASCII code 4800 Baud 8 data bits No Parity

Connector:

9 pin d-subminiature socket Pin 3 Output Pin 2 Input Pin 5 Signal Ground

Data Format for normal weighing operations, parts counting or recalling of totals from memory will all be different. Examples follow:

A. Normal Output

GS 1.234 kg	GS for Gross weight, NT for net weight and a unit of weight
No. 1	This number increments every time a new value is stored in memory
Total 1.234 kg	The total value stored in memory
<lf> <lf>	Includes 2 line feeds

B. When in percent weighing mode, the output is shown in percent weight only

GS 100.00%	GS for Gross weight, NT for net weight and a unit of weight
<lf> <lf>	Includes 2 line feeds

C. When in parts counting mode, the weight, unit weight and count will be printed-

GS 1.234 kg	GS for Gross weight, NT for net weight and a unit of weight
U.W. 12.34 g/pcs	The average piece weight computed by the scale
PCS 100 pcs	The number of parts counted
<lf> <lf>	Includes 2 line feeds

D. When recalling the Total weight stored in the accumulation memory the output format is-

**********	A line of stars is shown
<lf>	Includes 1 line feed
TOTAL No. 5	
Wt 21.456kg	The total value stored in memory
**********	

9.1 INPUT COMMANDS FORMAT

The scale can be controlled with the following commands. The commands must be sent in upper case letters, i.e. "**T**" not "**t**".

T<cr><lf>
Tares the scale to display the net weight. This is the same as pressing **[Tare]**.

Z<cr><lf>
Sets the zero point for all subsequent weighing. The display shows zero.

T12.345<cr><if>
Would be same as entering a preset tare value of 12.345 from the keypad.

P<cr><lf>
Prints the results to a PC or printer using the optional RS-232 interface. It also adds the value to the accumulation memory if the accumulation function is not set to automatic.

10.0 CALIBRATION

- The **CBW** scales are calibrated using metric weights and the **CBWa** scales can be calibrated using either metric or pound weights, depending on the weighing unit in use before calibration.
- To start calibration turn the scale off and then turn it on again. Press the **[Tare]** and **[%]** keys together once, during the initial counting from 9 to 0 on the display.
- The display will show "**UnLoAd**". Remove all weight from the pan and then press the **[Zero/Enter]** key to set the initial zero point when the scale is stable.
- The display will then show "**AdLoAd**" at which point the calibration mass should be placed on the pan. It is best to use a weight close to the full capacity of the scale.
- Press the **[Zero/Enter]** key. The display will then show the last mass used. If this is the same as the mass on the pan then this can be used or a different value can be entered.
- To use this value, press the **[Zero/Enter]** key when the stable indicator is on.
- Or if a different value is desired, enter the value using the **[►]** arrow key to select the flashing digit and the **[▲]** to increment the flashing digit. If value is correct, press the **[Zero/Enter]** key to accept when the stable indicator is on.
- Remove the calibration weight as the scale counts back from 9 to 0.
- If an error message "**FAIL H**" or "**FAIL L**" is shown during calibration, re-check the calibration and repeat, if necessary. If the error cannot be corrected contact your dealer or Adam Equipment for advice.

CBCa Scales only:
CBWa scales will also have the Lb or Kg (or g) indicator on to show the unit of the weight requested. If the scale was in pounds before starting the calibration, the weights requested will be in pound values. If the scale was weighing in kilograms then metric weights will be requested.

11.0 ERROR CODES

During the initial power-on testing or during operation, the scale may show an error message. The meaning of the error messages is described below.

If an error message is shown, repeat the step that caused the message. If the error message is still shown then contact your dealer for support.

ERROR CODE	DESCRIPTION	POSSIBLE CAUSES
Err 4	Initial Zero is greater than allowed (4% of maximum capacity) when power is turned on or when the **[Zero**/**Enter]** key is pressed.	Weight on the pan when turning the scale on. Excessive weight on the pan when zeroing the scale. Improper calibration of the scale. Damaged load cell. Damaged Electronics.
Err 5	Keyboard error.	Improper operation of the scale.
Err 6	A/D count is not correct when turning the scale on.	Platform is not installed. Load cell is damaged. Electronics is damaged.
Err 7	Scale is not stable when setting the percentage weighing.	The scale is not stable. Improper operation of the scale.
FAIL H or **FAIL L**	Calibration error.	Improper calibration (should be within ± 10% of the factory calibration). The old calibration data will be retained until the calibration process is complete.
Err 9	Scale is unstable.	There is vibration or draft making the scale unstable. Electronics may be damaged.

To view the A/D count, press **[Zero**/**Enter]** and **[%]** at the same time while the scale is performing the initial check at power-on. Press **[Zero**/**Enter]** to return to normal weighing.

CE

Manufacturer's Declaration of Conformity

This product has been manufactured in accordance with the harmonised European standards, following the provisions of the below stated directives:

Electro Magnetic Compatibility Directive 89/336/EEC

Low Voltage Directive 73/23/EEC

Adam Equipment Co. Ltd.
Bond Avenue
Denbigh East Estate
Milton Keynes, MK1 1SW
United Kingdom

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Shielded interconnect cables must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device.

Changes or modifications not expressly approved by Adam Equipment could void the user's authority to operate the equipment.

ADAM EQUIPMENT is an ISO 9001:2000 certified global organisation with more than 30 years experience in the production and sale of electronic weighing equipments. Products are sold through a world wide distributor network -supported from our company locations in the UK, USA and SOUTH AFRICA. The company and their distributors offer a full range of Technical Services such as on site and workshop repair, preventative maintenance and calibration facilities.

ADAM's products are predominantly designed for the Laboratory, Educational, Medical and Industrial Segments. The product range can be classified as follows:

- Analytical and Precision Laboratory Balances
- Top Loading Balances for Educational establishments
- Counting Scales for Industrial and Warehouse applications
- Digital Weighing/Check-weighing Scales
- High performance Platform Scales with extensive software features including parts counting, percent weighing etc.
- Digital Electronic Scales for Medical use
- Retail Scales for price computing

Adam Equipment Co. Ltd.	**Adam Equipment Inc.**	**Adam Equipment S.A. (Pty) Ltd.**
Bond Avenue Milton Keynes MK1 1SW UK	26, Commerce Drive Danbury, CT 06810 USA	P.O. Box 1422 Kempton Park 1620 Johannesburg Republic of South Africa
Phone:+44 (0)1908 274545 Fax: +44 (0)1908 641339	Phone: +1 203 790 4774 Fax: +1 203 792 3406	Phone +27 (0)11 974 9745 Fax: +27 (0)11 392 2587
e-mail: sales@adamequipment.co.uk	e-mail: sales@adamequipment.com	e-mail: sales@adamequipment.co.za

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