

BA110
Electronic Balance 5000g x 1g

Impact Test Equipment Ltd
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User Guide
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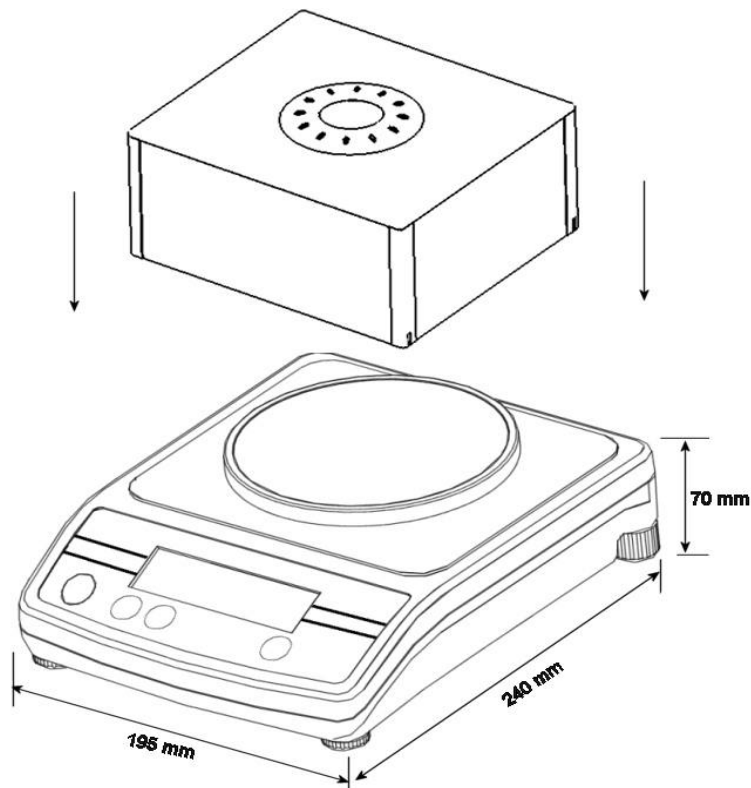
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1.0 INTRODUCTION

The AQT series includes an economical range of balances tailored for varied weighing applications. The main features are as follows.

- Runs using battery or AC Adapter supplied as standard
- Auto power off to save the battery
- Low battery indicator
- Net weight/stability indication
- Auto zero tracking
- Various weighing units available
- Integral security bracket
- Spirit level for balancing
- Large LCD (6 digits 15 mm high)
- Auto backlight
- Draft shield as standard on all models
- Large stainless steel weighing pan
- Auto calibration using the keypad



2.0 SPECIFICATIONS

Model #	AQT-200	AQT- 250	AQT-600	AQT-1500	AQT-2000	AQT-5000
Maximum Capacity	200g	250g	600g	1500g	2000g	5000g
Readability	0.01g	0.1g	0.1g	0.1g	1g	1g
Resolution	1:20,000	1:2500	1:6000	1:15,000	1:2000	1:5000
Repeatability (Std Dev)	0.02g	0.1g	0.1g	0.2g	1g	1g
Linearity ±	0.02g	0.1g	0.1g	0.2g	1g	1g
Units of Measure	g / ct. / oz. /dwt/tLT/ tLS/tLH	g / ct. / oz. / dwt		kg / g / lb /oz		
Stabilisation Time	3 seconds	2 seconds		3 seconds	2 seconds	
Operating Temperature	0°C to 40°C 32°F to 104°F					
Power Supply	12VAC @ 150mA adapter or 6x AA batteries					
Calibration	Push button calibration using external mass					
Calibration Mass	200g	250g	600g	1500g	2000g	5000g
Display	6 digit LCD, 15mm digits, with backlight					
Draught shield (w x d x h)	180 x 158 x 82mm (7.1" x 6.2" x 3.2")					
Balance Housing	ABS Plastic					
Pan Size	130mm diameter (5.1" diameter)					
Overall Dimensions (w x d x h)	195 x 240 x 70mm (7.7" x 9.4" x 2.8") without breeze shield					
Net Weight	1.2 kg. (2.6 lb)					
Features	Low battery, Stable and Zero indications					

3.0 SAFETY PRECAUTIONS

All safety messages are identified by the following words "**WARNING**" and "**CAUTION**". These words mean the following:

WARNING	Important information to alert you to a situation that might cause serious injury and damage to your property if instructions are not followed.
CAUTION	Important information that tells how to prevent damage to equipment.

When using the balance, following safety precautions should always be followed

WARNING

Use the AC adapter designed by the manufacturer for the balance. Other adapters may cause damage to the balance.

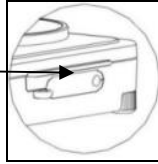
CAUTION

- Avoid installing the balance in direct sunlight- this may cause poor performance or malfunctions.
- Do not mix different type of batteries. Replace all the batteries at the same time.
- If the balance is not to be used for a long period of time, remove all batteries from the battery compartment to avoid leakage which may cause damage to the instrument.
- Avoid overloading or dropping material onto the platform as that could damage the balance.
- Do not spill liquids on the balance as it is not water-resistant. Liquids may damage the case and if it gets inside the balance it may cause damage to the electronics.
- Material that has a static electric charge could influence the weighing. Discharge the static electricity of the samples, if possible. Another solution to the problem is to wipe both sides of the pan and the top of the case with an anti-static agent.

4.0 PARTS DESCRIPTION

BEHIND

AC adapter socket



TOP

Stainless Steel pan

Shipping protection screw

Weighing platform

LCD display

[On/Off] key

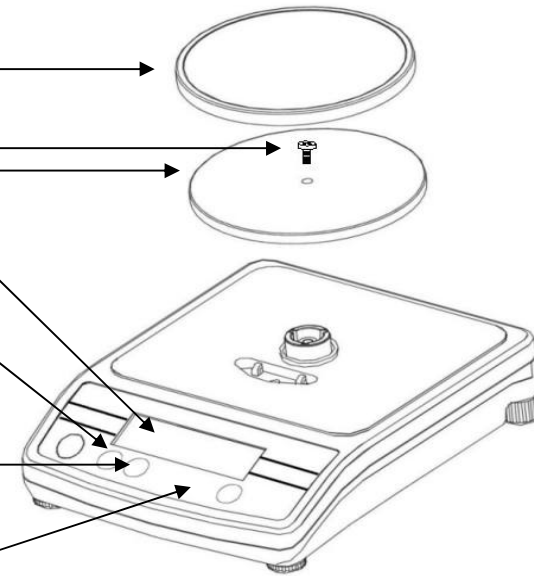
Turns the balance power on/off

[Units] key

Changes weighing units. Also used when calibrating

[Tare] key

Sets display to zero or tares the container

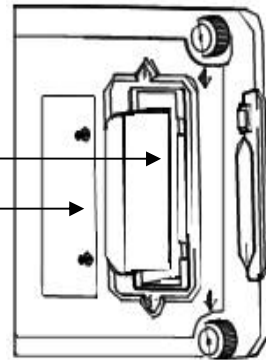


BOTTOM

Battery compartment

Battery compartment cover

Batteries are not included



DISPLAY

ZERO indicator

Indicates when the balance zero is correct.

STABLE indicator

Indicates when the reading is stable.



Low battery indicator

Weighing units

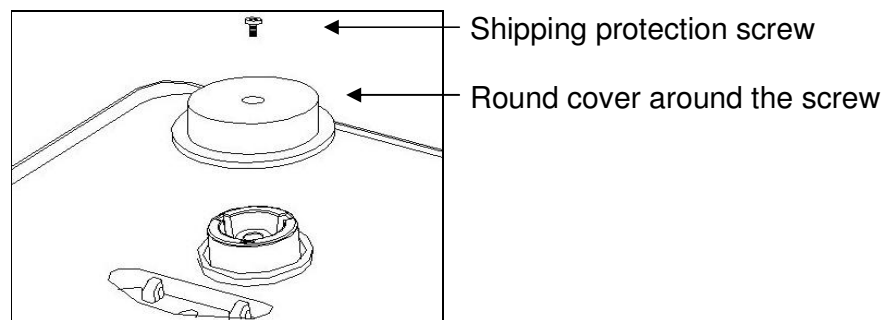


5.0 PREPARATION

5.1 SETTING UP THE BALANCE

CAUTION

- Avoid installing the balance in direct sunlight that may cause poor performance or malfunctions.
- Place your balance on a firm weighing table so that the balance is levelled (The balance will not perform accurately when it is not levelled).
- Level the balance by adjusting the feet to centre the bubble in the spirit level.
- Remove the shipping protection screw along with the round cover as shown below.



- Place the platform (comes separately packed) in the receptacles on the top cover. Secure the platform using the shipping protection screw after taking it out from the round cover. Place the stainless steel pan. (See the diagram on page 6).
- Do not press with excessive force as it could damage the load cell inside.
- Place the balance on a firm and flat surface for accurate weighing.

5.2 INSTALLING BATTERIES AND POWER

Remove the battery compartment cover and insert six batteries (R6P/LR6 /AA size) into the battery compartment. Take extreme care in placing the positive and negative polarities correctly. Plug in the AC adapter into the socket at the rear of the balance. The AC input requirement could be 100, 120, 220, 230 or 240 Volts (50/60Hz) depending on the location where it is used. Verify the adapter is correct.

6.0 WEIGHING

6.1 BEFORE WEIGHING

Be aware of the Automatic power-off function. If the Automatic power-off function is active it will turn the balance off after 2 minutes of inactivity.

6.2 WEIGHING PROCEDURES

- **Press [On/Off] to turn on the balance.**

When power is turned on, all display segments appear on LCD for a few seconds and finally on the display "0.00" will appear along with the last selected units.

- **Select the weighing unit with [Unit].**

Press [Unit] to select a weighing unit, eg. "g" / "ct" / "oz" or "dwt" . Once the unit has been selected, the weight will be displayed in the selected unit and a symbol for the weight will be shown.

- **Start weighing**
- **If you do not use a container for weighing**

Verify the reading is "0.00". If not, press [Tare] to display "0.00". Place the objects on the weighing pan to weigh.

When the reading becomes stable, the stable indicator is displayed.

- **If you use a container for weighing**

Place an empty container on the pan.
Wait for the stability indicator to be displayed and press [Tare].
Place the objects to be weighed in the container.
When the reading becomes stable, the stable indicator is displayed.
Only the net weight is displayed.

7.0 SETTING OF FUNCTIONS

7.1 ENTER FUNCTION SETTING MODE

- Press [**On/Off**] to turn the power off.
- Press [**Tare**] first, then press [**On/Off**], while keeping [**Tare**] pressed. The display will show "**A-On**" or "**A-OFF**".

7.2 SELECTION OF AUTO SHUT OFF MODE

- When the display shows "**A-On**" or "**A-OFF**" press [**Unit**] to select auto shut off setting mode.
- Press [**Tare**] to choose "**On**" or "**OFF**" mode,

"**A-On**" means auto shut off function is active.
"**A-OFF**" means this function is inactive.
- Turn off the power and then turn it on again to enter the normal weighing mode. The delay time will be about 2 minutes.

7.2 SELECTION OF AUTO BACKLIGHT MODE

- Next press [**Unit**] to enter the backlight setting mode. The display will show "**L-On**" or "**L-OFF**".
- Press [**Tare**] to choose "**On**" or "**OFF**" mode,

"**L-On**" means auto backlight function is active.
"**L-OFF**" means this function is inactive, i.e. backlight is shut off.
- Turn off the power and then turn it on again to enter the normal weighing mode.

7.3 UNITS SELECTION (FOR AQT 200 ONLY)

- Next press [**Unit**] to enter the units selection mode, the display will show "**On ct**".
- Press [**Tare**] to select **On** or **OFF**.

On means this weighing unit is enabled,
OFF means this unit is disabled.

- Press [**Unit**] to go to the next weighing unit. The following weighing units can be selected in sequence.

ct – oz – dwt – tL.H – tL.S – tL.T (**Note:** g is always activated)

- Turn the balance off and back to on again to return to normal operation.

NOTE: It is recommended that the balance is used in a location with sufficient light so that the backlight function can be turned off to maximise the battery life.

8.0 CALIBRATION

- Calibration may be required when the balance is initially installed or if the balance is moved from a location.
- With time and use, mechanical deviations may occur. Therefore calibrate the balance whenever the best accuracy is required or when any deviation is observed during weighing a test weight.
- Before calibrating it is necessary to have the proper calibration weights. The weights should be OIML Class M1 type or better. If you do not have proper weights do not attempt calibration.

Model #	AQT-200	AQT- 250	AQT-600	AQT-1500	AQT-2000	AQT-5000
Calibration Weight	200g	250g	600g	1500g	2000g	5000g

8.1 AUTO CALIBRATION (FOR AQT 200 ONLY)

- Before entering calibration mode, press **[On/Off]** to turn the power on for 1 minute.

Enter calibration mode

- Press **[On/Off]** to turn the power off.
- Press **[Unit]** first and then press **[On/Off]**, while keeping the **[Unit]** key pressed. The display will show the A/D value.

Calibration

- Wait for the stable indicator to be displayed,
- Press **[Unit]** - the display will show "**L 200**", with the "**L**" flashing. Place the 200g weight on the platform. A beep will be heard after a few seconds and the display will show "**200.00**".
- Press **[On/Off]**, to turn off the power. Press **[On/Off]** to turn on the power again.
- Place maximum weight (200g) on the platform to verify weighing is correct. If not, repeat the calibration.

8.2 AUTO CALIBRATION FOR ALL OTHER MODELS

- Before entering calibration mode, press **[On/Off]** to turn the power on for 1 minute.


Enter calibration mode

- Press **[On/Off]** to turn the power off.
- Press **[Unit]** first and then press **[On/Off]**, while keeping the **[Unit]** key pressed. The display will show the A/D value.

Calibration

- Wait for the stable indicator to be displayed,
- Press **[Unit]** -the display will show **"OOSAVE"**. After 2 seconds, the display will return to A/D value.
- Place the maximum weight (eg.2000g for AQT2000) on the platform.
- After the stable indicator is displayed press **[Unit]**
- The display will show **"OOSAVE"**. The calibration is complete now.
- Press **[On/Off]** to turn the power off. Press **[On/Off]** to turn on the power again,
- Place full weight (eg.2000g for AQT2000) on the platform to verify weighing is correct. If not, repeat the calibration procedure.

9.0 ERROR MESSAGES

EEEEHI	Overload
EEEELO	A/D value too low
	Low battery

Note: Calibration may be required before weighing. Read section 8.0 on "CALIBRATION" first and if necessary calibrate your balance for accurate weighing.



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

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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 Scales 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

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