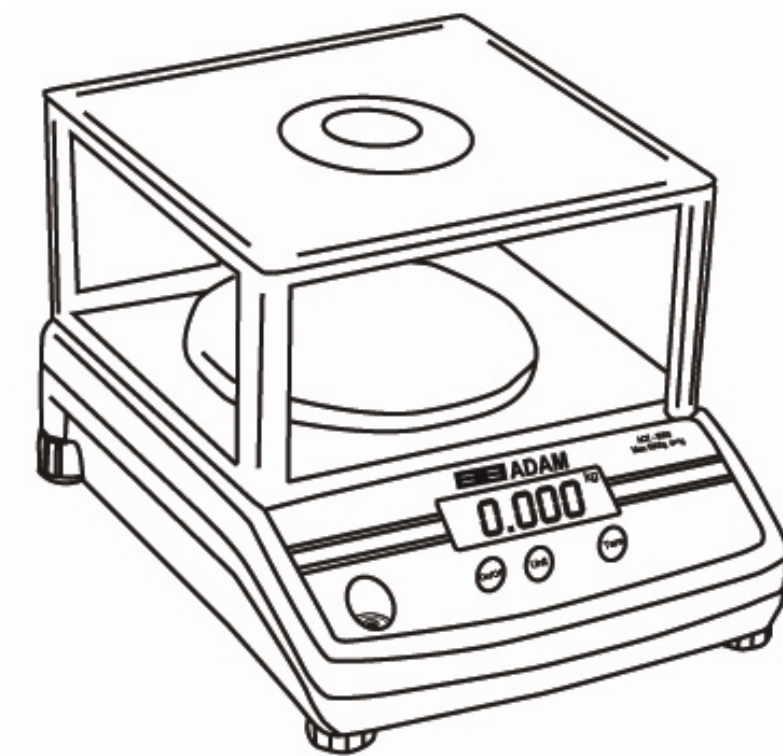




*Adam Equipment*

## **AQT SERIES**

(P.N. 4328, Rev. B2, December 2005)



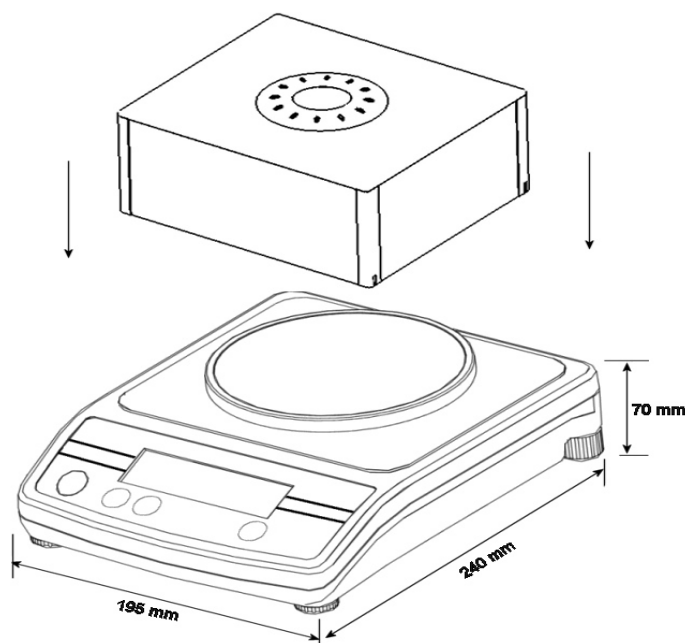
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## 1.0 INTRODUCTION

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-2600	AQT-2000	AQT-5000
Maximum Capacity	200g	250g	600g	1500g	2600g	2000g	5000g
Readability	0.01g	0.1g	0.1g	0.1g	0.1g	1g	1g
Resolution	1:20,000	1:2500	1:6000	1:15,000	1:26000	1:2000	1:5000
Repeatability (Std Dev)	0.02g	0.1g	0.1g	0.2g	0.2g	1g	1g
Linearity ±	0.02g	0.1g	0.1g	0.2g	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	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:

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

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

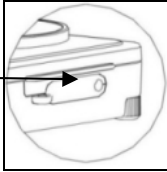
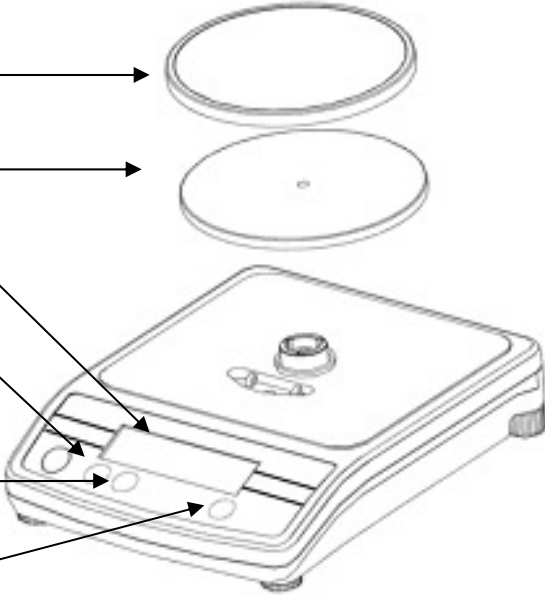
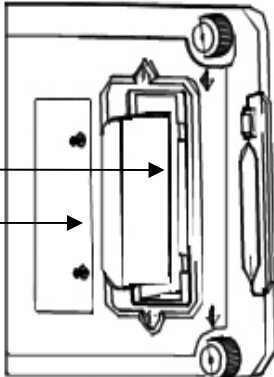

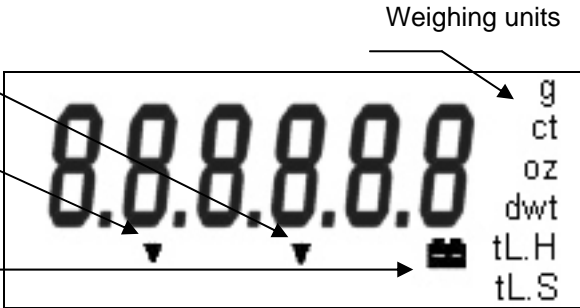
#### **WARNING**

**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

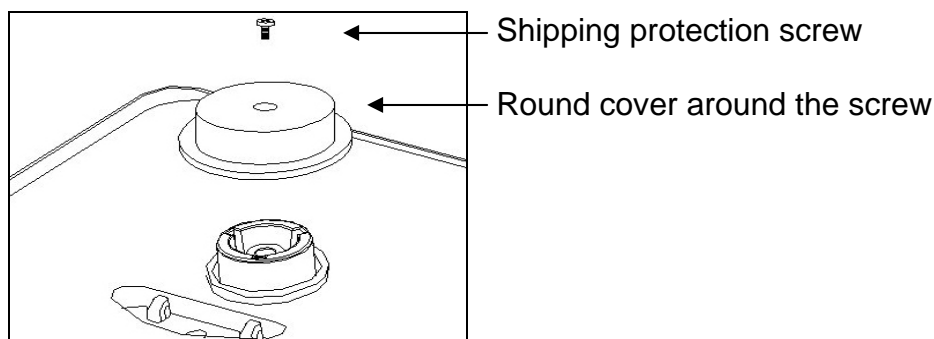
<p><b><u>BEHIND</u></b></p> <p>AC adapter socket</p>	
<p><b><u>TOP</u></b></p> <p>Stainless Steel pan</p> <p>Platform</p> <p>LCD display</p> <p><b>[On/Off]</b> key Turns the balance power on/off</p> <p><b>[Unit]</b> key Changes weighing units. Also used when calibrating</p> <p><b>[Tare]</b> key Sets display to zero or tares the balance</p>	
<p><b><u>BOTTOM</u></b></p> <p>Battery compartment</p> <p>Battery compartment cover</p> <p>Batteries are not included</p>	
<p><b><u>DISPLAY</u></b></p> <p><b>ZERO</b> indicator Indicates when the balance zero is correct.</p> <p><b>STABLE</b> indicator Indicates when the reading is stable.</p> <p> Low battery indicator</p>	 <p>Weighing units</p> <p>g ct oz dwt tL.H tL.S</p>

## 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 the balance on a firm weighing table so that the balance is levelled. The balance will not perform accurately when it is not levelled.
- Level by adjusting the feet to centre the bubble in the spirit level.
- Remove the shipping protection screw and round cover as shown below using the Allen key supplied in the box. (It is advisable to keep the shipping protection screw and the round cover along with the packing box for using during shipping to another location in future).



- Place the platform (comes separately packed) in the receptacles on the top cover. Place the stainless steel pan. (See the diagram on page 5).
- 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.

Alternately, 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 known to an accuracy that is appropriate for the balance being calibrated, for example, OIML Class M1 type or ASTM E617 Class 4. If you do not have proper weights do not attempt calibration.

Model	AQT-200	AQT- 250	AQT-600	AQT-1500	AQT-2600	AQT-2000	AQT-5000
Calibration Weight	100g Or 200g	200g Or 250g	500g Or 600g	1000g Or 1500g	1000g Or 2000g	1000g Or 2000g	2000g Or 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 last calibration value used, press **[Tare]** to choose either 100g or 200g then press **[Unit]** and the display will show the A/D value.

#### Calibration

- Wait for the stable indicator to be displayed,
- Press **[Unit]** - the display will show "L 100" or "L 200", with the "L" flashing.  
Place the appropriate weight on the platform. A beep will be heard after a few seconds and the display will show the weights value.
- 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 last calibration value used (For example, " L – 1000"), press **[Tare]** to choose between the two calibration weight values. When you have made your selection press **[Unit]** and the display will show the A/D value.

### Calibration

- Wait for the stable indicator to be displayed,
- Press **[Unit]** -the display will show "00SAVE". After 2 seconds, the display will return to A/D value.
- Place the required weight on the platform. This is the weight that you selected as your calibration weight value earlier.
- After the stable indicator is displayed press **[Unit]**
- The display will show "00SAVE". 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.

## 10.0 REPLACEMENT PARTS AND ACCESSORIES

If you need to order any spare parts and accessories, contact your supplier or Adam Equipment. A partial list of such items is as follows-

- Power Supply Adapter
- In use cover
- Stainless Steel Pan

## 11.0 SERVICE INFORMATION

This manual covers the details of operation. If you have a problem with the scale that is not directly addressed by this manual then contact your supplier for assistance. In order to provide further assistance, the supplier will need the following information which should be kept ready:

### A. Details of your company

- Name of your company:
- Contact person's name:
- Contact telephone, e-mail, fax or any other methods:

### B. Details of the unit purchased

(This part of information should always be available for any future correspondence. We suggest you to fill in this form as soon as the unit is received and keep a print-out in your record for ready reference.)

<b>Model name of the scale:</b>	
<b>Serial number of the unit:</b>	
<b>Software revision number (Displayed when power is first turned on):</b>	
<b>Date of Purchase:</b>	
<b>Name of the supplier and place:</b>	

### C. Brief description of the problem

Include any recent history of the unit. For example:

- Has it been working since it's delivered
- Has it been in contact with water
- Damaged from a fire
- Electrical Storms in the area
- Dropped on the floor, etc.

## **WARRANTY INFORMATION**

**Adam Equipment offers Limited Warranty (Parts and Labour) for the components failed due to defects in materials or workmanship. Warranty starts from the date of delivery.**

**During the warranty period, should any repairs be necessary, the purchaser must inform its supplier or Adam Equipment Company. The company or its authorised Technician reserves the right to repair or replace the components at the purchaser's site or any of its workshops depending on the severity of the problems at no additional cost. However, any freight involved in sending the faulty units or parts to the service centre should be borne by the purchaser.**

**The warranty will cease to operate if the equipment is not returned in the original packaging and with correct documentation for a claim to be processed. All claims are at the sole discretion of Adam Equipment.**

**This warranty does not cover equipment where defects or poor performance is due to misuse, accidental damage, exposure to radioactive or corrosive materials, negligence, faulty installation, unauthorised modifications or attempted repair or failure to observe the requirements and recommendations as given in this User Manual.**

**Repairs carried out under the warranty does not extend the warranty period. Components removed during the warranty repairs become the company property.**

**The statutory right of the purchaser is not affected by this warranty. The terms of this warranty is governed by UK law. For complete details on Warranty Information, see the terms and conditions of sale available on our web-site.**



### **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 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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The latest version of this publication can be found on our Website.

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