Adam Equipment

WBW & WBW-M SERIES

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Adam Equipment strives to be more environmentally focused and uses recycled materials and environmentally friendly packaging where possible. As part of this initiative we have developed a short manual that uses less paper and ink to describe the main functions of your new Adam indicator/scale. A complete version is available at www.adamequipment.com. Thank you for your support of Adam Equipment and we hope that you enjoy your new scale.

CONTENT

1.0 SETTING UP AND TURNING ON THE SCALES

There are three series within the range- WBW-M, WBW and WBWa. The WBW-M scales are configured at the factory for compliance with EN 45501, OIML R-76. They have different capacities and readabilities from the standard WBW series. The WBW series are similar to the WBWa series except the WBW scales are usually set for metric units, whereas for the WBWa series are usually set for imperial units.

SETTING UP

The WBW Series comes with a stainless steel pan. Place it on the top if already not installed. 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 module to the bottom of the scale and plug into the mains. Press the **[O/I]** key to start. The software revision number will be displayed followed by a self-test showing all digits before the zero is displayed along with the unit of weight that was selected last.

NOTE: the scale can be operated from the battery. If desired, the battery life is approximately 50 hours. When the battery needs charging a symbol on the display will turn on. The battery should be charged for 12 hours for full capacity.

2.0 OPERATION

2.1 NUMERIC ENTRY METHOD

To set a value when required, use the keys as given below-

- **[Limit]** key to increase the flashing digit
- **[Unit]** key to move to the next digit and
- **[Tare]** key to accept the value

2.2 ZEROING

You can press the **[Zero]** key at any time to set the zero point from which all other weighing and counting is measured. The scales have an automatic re-zeroing function to account for minor drifting or accumulation of material on a connected platform. However you may need to press **[Zero]** to re-zero the scale if small amount of weight is still shown when the platform is empty.

2.3 TARING

Zero the scale by pressing **[Zero]**. The zero indicator will be on. Place a container on the pan.

Press **[Tare]** when the reading is stable. The weight that was displayed is stored as the tare value, leaving zero on the display. The stable and **Net** indicator will be on.

As a sample 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 added to the first one.

Press **[Tare]** or **[Zero]** to remove the tare value and display zero. The **Net** indicator will disappear.

2.4 WEIGHING

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 unit of weight currently in use. To change the weighing unit press the **[Unit]** key.

2.5 CHECK-WEIGHING

Check-weighing is a procedure to show a display or sound an alarm when the weight on the platform meets or exceeds the values stored in the memory. The memory holds values for a high limit and a low limit. Either or both the limits can be set by the user.

The LCD display will indicate whenever the weight is within or exceeds the limits by showing **"OK"** (mass is between the limits), **"HI"**(mass is above the high limit) or **"LO"**(mass is below the low limit).

The limits can be locked by the manager (see the menu structure section) .A Limit Password must be used to change the limits or recall other limits from memory.

Setting up the limits

In normal weighing, Press the **[Limit]** key. It will show the current high limit.The user will be asked for the password if the current check-weighing password is anything other than **"0000"**. See the parameter **"F4 PS"** in menu structure. Enter the correct password using the numeric entry method as mentioned in section 2.1. If the password is **"0000"** it will display the last used high limit. The **"HI"** symbol will appear on the display.

Press **[Tare]** to accept the displayed high limit or enter the new high limit using the numeric entry method (see section 2.1). When the desired value is entered press **[Tare]** to accept the value. The **"LO"** symbol will be on. Display will show the last used low limit. Set the low limit in the same way the high limit was set.

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

NOTE: The limits are displayed in the weighing unit in use. The decimal point is fixed at the position that is used for the current weighing unit. If the weighing unit is pounds:ounces, the limits are entered in pounds and decimal parts of pounds. i.e. 6,0125 lb.

Limits stored in memory

If the scale is turned off it stores the last high and low limits in the memory along with information about the weighing unit in use when the limits were stored. If the scale is turned on again, the limits and the weighing unit will be active.

3.0 RS-232 SPECIFICATION

The RS-232 is not available in WBW scales.

4.0 CALIBRATION

The WBW-M scales should not be calibrated by the user. Calibration of the scales may make it illegal to use the scales. Contact your local metrology standards office for further assistance.

The WBW non-approved scales are calibrated using metric weights when the weighing unit selected is either kilograms or grams and using pound masses when the weighing unit selected is either pounds, ounces or pounds:ounces.

To start the calibration turn the scale off and then turn it on again. Press **[Tare]** during the self-test. Scale will show **"P- - - - "**. Enter code number **"0000"** using the numeric entry method (see section2.1) and press **[Tare]**. This will take you directly to the calibration section.Display will show **"UnLoAd"**.

Remove all weight from the pan and then press the **[Tare]** key when the scale is stable. After the Zero point is set, the display will show **"Ld xx"**. Place the suggested calibration mass on the pan. It is best to use a weight close to the full capacity of the scale. If the mass is different from the displayed value, enter the value of the mass in whole numbers using the numeric entry method (see section 2.1). The kg or the lb symbol will be on to show the active unit.

Press the **[Tare]** key when the stable indicator is on. The scale will calibrate to the mass and then return to weighing. Remove the calibration weight as soon as calibration is complete.

5.0 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 **[Zero]** is pressed.	Weight on the pan when turning the scale on. Excessive weight on the pan when zeroing the scale. Platform is not installed. Improper calibration of the scale. Damaged load cell. Damaged Electronics.
Err 6	A/D count is not correct when turning the scale on.	Load cell is damaged. Electronics is damaged.
Err 8	High limit input error	Low limit is set first, then the high limit is set lower than the low limit and high limit not equal to zero.
Err 9	Low limit input error	High limit is set first, then the low limit is set higher than the high limit and low limit not equal to zero.
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.

6.0 SPECIFICATIONS

EC Type Approved Models

	WBW 3M	**WBW 6M**	**WBW 15M**
Kilograms			
Max	3 kg	6 kg	15 kg
e =	0.001 kg	0.002 kg	0.005 kg
Grams			
Max	3000 g	6000 g	15000 g
e =	1 g	2 g	5 g

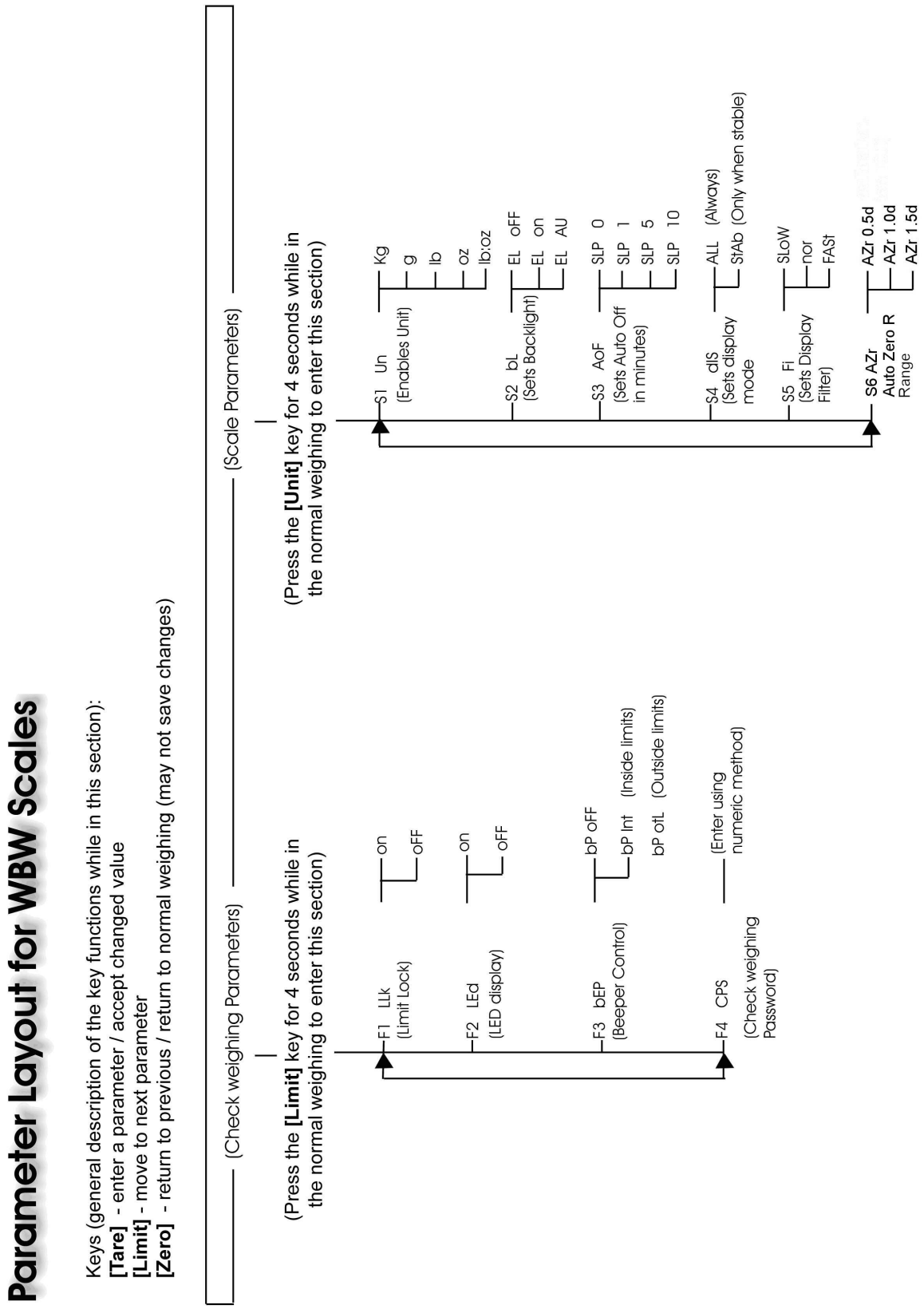
	WBW 2 / 5a	WBW 4 / 9a	WBW 8 / 18a	WBW 16 / 35a
Kilograms				
Maximum Capacity	2.000 kg	4.000 kg	8.000 kg	16.000 kg
Tare Range	-2.000 kg	-4.000 kg	-8.000 kg	-16.000 kg
Readability	0.0002 kg	0.0005 kg	0.001 kg	0.002 kg
Repeatability (S.D.)	0.0002 kg	0.0005 kg	0.001 kg	0.002 kg
Linearity (±)	0.0004 kg	0.001 kg	0.002 kg	0.004 kg
Grams				
Maximum Capacity	2000 g	4000 g	8000 g	16000 g
Tare Range	-2000 g	-4000 g	-8000 g	-16000 g
Readability	0.2 g	0.5 g	1 g	2 g
Repeatability (S.D.)	0.2 g	0.5 g	1 g	2 g
Linearity (±)	0.4 g	1 g	2 g	4 g

Pounds				
Maximum Capacity	5 lb	9 lb	18 lb	35 lb
Tare Range	-5 lb	-9 lb	-18 lb	-35 lb
Readability	0.0005 lb	0.001 lb	0.002 lb	0.005 lb
Repeatability (S.D.)	0.0005 lb	0.001 lb	0.002 lb	0.005 lb
Linearity (±)	0.001 lb	0.002 lb	0.004 lb	0.01 lb
Ounces				
Maximum Capacity	80 oz	144 oz	288 oz	560 oz
Readability	0.01 oz	0.02 oz	0.05 oz	0.1 oz
Repeatability (S.D.)	0.01 oz	0.02 oz	0.05 oz	0.1 oz
Linearity (±)	0.02 oz	0.04 oz	0.1 oz	0.2 oz
Pounds:Ounces				
Maximum Capacity	5 lb: 0.00 oz	9 lb:0.00 oz	18 lb:0.0 oz	35 lb: 0.0 oz
Readability	0.01 oz	0.02 oz	0.1 oz	0.1 oz
Repeatability (S.D.)	0.01 oz	0.02 oz	0.1 oz	0.1 oz
Linearity (±)	0.02 oz	0.04 oz	0.2 oz	0.2 oz

OTHER SPECIFICATIONS

Units of measure	WBW-M : kg, g WBW/WBW.a: kg, g, lb, oz, lb:oz
Tare	Full range
Stabilisation Time	2 seconds typical
Operating Temperature	-10℃ to 40℃
Power supply	12 VDC, 800 Ma through an external Power Supply Module
Battery	Internal rechargeable battery (~50 hours operation)
Calibration	Automatic External
Display	6 digits LCD digital display with capacity tracker and symbols for units
Scale Housing	IP 65 Sealed ABS Plastic housing with Stainless Steel pan
Pan Size	210 x 173 mm
Overall Dimensions (wxdxh)	231 x 265 x 153 mm
Net Weight	3.3 kg / 7.26 lb
Applications	Weighing Scales
Functions	Weighing, Check weighing

7.0 MENU STRUCTURE



8.0 WARRANTY INFORMATION

Adam Equipment offers Limited Warranty (Parts and Labour) for components that fail 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 any of its workshops depending on the severity of the problem. However, any freight involved in sending the faulty units or parts to the service centre will 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 the UK law. For complete details on Warranty Information, see the terms and conditions of sale available on our web-site.

9.0 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.)

Model name of the scale:	**WBW**_____
Serial number of the unit:	
Software revision number (Displayed when power is first turned on):	
Date of Purchase:	
Name of the supplier and place:	

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.

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 2004/108/EC

Low Voltage Directive 2006/95/EC

Adam Equipment Co. Ltd.
Maidstone Road, Kingston,
Milton Keynes, MK10 0BD
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 their 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.

WEEE COMPLIANCE

Sealed Lead Acid Battery Must be recycled Properly

Any Electrical or Electronic Equipment (EEE) component or assembly of parts intended to be incorporated into EEE devices as defined by European Directive 2002/95/EEC must be recycled or disposed using techniques that do not introduce hazardous substances harmful to our health or the environment as listed in Directive 2002/95/EC or amending legislation. Battery disposal in Landfill Sites is more regulated since July 2002 by regulation 9 of the Landfill (England and Wales) Regulations 2002 and Hazardous Waste Regulations 2005. Battery recycling has become topical and the Waste Electrical and Electronic Equipment (WEEE) Regulations are set to impose targets for recycling.

ADAM EQUIPMENT is an ISO 9001:2000 certified global company with more than 35 years experience in the production and sale of electronic weighing equipment.

Adam products are predominantly designed for the Laboratory, Educational, Medical, retail and Industrial Segments. The product range can be described as follows:

-Analytical and Precision Balances
-Compact and Portable Balances
-High Capacity Balances
-Moisture analysers / balances
-Mechanical Scales
-Counting Scales
-Digital Weighing/Check-weighing Scales
-High performance Platform Scales
-Crane scales
-Medical Scales
-Retail Scales for Price computing

For a complete listing of all Adam products visit our website at
www.adamequipment.com

Adam Equipment reserves the right to make changes to the technology, features, specifications and design of the equipment without notice.

All information contained within this publication is to the best of our knowledge timely, complete and accurate when issued. However, we are not responsible for misinterpretations which may result from the reading of this material.

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

www.adamequipment.com