



**KILOTECH**

**KWD 500 Water tight  
Portion/Weighing Scale**

**Operation Manual**

**Version 1.0**

**Last Modified: Jan 2006**

## KWD 500 portion control/ weighing scale

**Thank you for purchasing a KWD 500 scale. Please read all operating instructions carefully before using and note the following points:**

- Avoid lengthy exposure to extreme heat or cold as your scale works best when operated at normal room temperature. Always allow the scale to acclimate to a normal room temperature before use.
- Allow sufficient warm up time. Turn the scale on and wait a few minutes to allow the internal components to stabilize before calibrating or weighing.
- The cleaner the environment the better. Dust, dirt, moisture, vibration, air currents and proximity to other electronic equipment can all cause an adverse effect on the reliability and accuracy of your scale. Only use on a stable, vibration free surface.
- Handle with care. Gently apply all items to be weighed onto the tray top. Although this scale is designed to be quite durable, try to avoid rough treatment as this may permanently damage the internal sensor.
- Place the item to be weighed on the platform and after the stable weight is displayed, remove the item immediately. This will aid in the longevity and accuracy of this weighing instrument.
- Do not operate near an in-use cell phone, radio, computer or other electronic device as these devices emit RF and maybe cause unstable scale readings.
- Adjust the feet on the bottom of the scale to level it.
- The scale may be powered by 120VAC or a 6-volt rechargeable battery. When “Lo.bAt” is displayed alternatively, this indicates that the battery is low. Please recharge battery immediately.

- **Specification**

- 1. **Capacity and division:**

- KWD 500

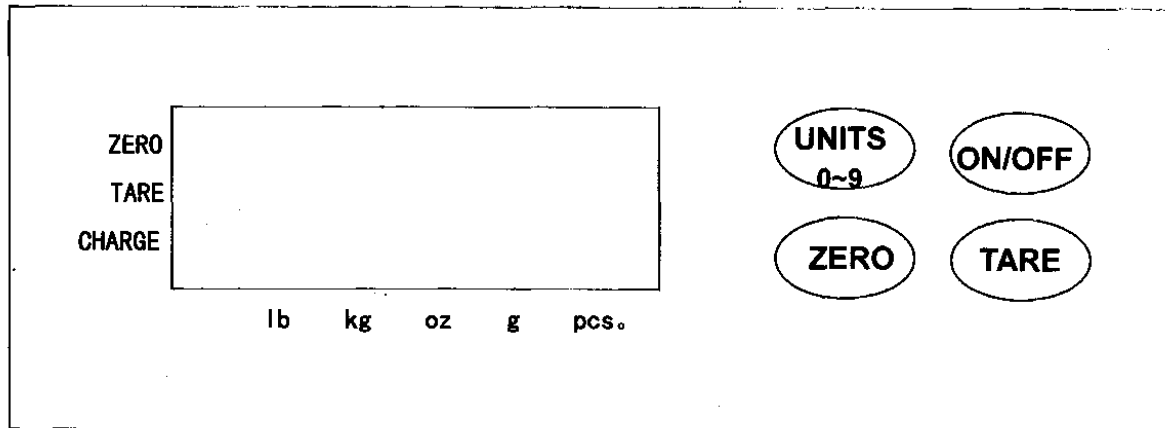
- 05 = 2.5kg x 1 g / 5 lb. x 0.002 lb. Minimum capacity 20g / 0.04 lb.

- 10= 5kg X 2g / 10 lb. x 0.005 lb Minimum capacity 40g / 0.1 lb.

- 20= 10kg x 5g / 20 lb. x 0.01lb Minimum capacity 100g / 0.2 lb.

- 50= 20kg x 10g / 50 lb. x 0.02 lb Minimum capacity 200g / 0.4 lb.

## 1. Overlay drawing



## 2. Features and Functions:

- Uses high performance chips made in U.S. which surpass international standard EN61326.
- Excellent performance against water, moisture and dust, suitable in food processing industries for aquatic products, meats and vegetables.
- Simultaneously pressing on Zero and Tare keys will access the different display modes and display speeds.
- Weighing units: kg, g, lb, oz and counting function, to meet demands from different users. Please note that the “counting” feature is Not Legal for Trade in the U.S.A. and Canada. Please verify with legal metrology officials in other countries.
- Anti-vibration mechanism makes this scale suitable for use on production lines.
- ABS housing with high strength and anticorrosion metallic parts, which are anti-rust for safety and sanitation.
- Water-proof loadcell.
- Built-in charger is sealed with epoxy resin, to resist water and moisture, and greatly reducing fault rate.
- 6V 4AH sealed maintenance-free rechargeable battery.
- Double sided red LED display.

## 3. Functions of operation keys and indicating signs.

### 3.1 Operation keys

ON/OFF: Power key, to turn the scale ON or OFF.

TARE: Tare key, used for taring; used to check battery voltage by pressing it on for 3 seconds

**ZERO:** Zero setting key, to reset the weight display to zero

**UNITS 0-9:** Unit switch, and as the numerical keys of 0 ~ 9

### 3.2 Indicating signs

**dc x.xx:** Battery voltage indicator. During the self-examination when the machine is turned on and when the UNITS key is pressed on, the display screen will show this sign, showing the current battery voltage is x.xx.

**-----:** Overload indicator. When the weight exceeds  $100\%FS + 9e$ , the display screen will show this sign, and the buzzer will send out a continuous “beeping” sound. At this time, the weight on the platform should be reduced.

**-Adc-:** A/D conversion overflows sign. In case of A/D conversion overflow, the display screen will show this sign, and the buzzer will send out a continuous “beeping” sound. At this time the object to be weighed should be removed from the platter. It may also be caused by low battery voltage.

**-Lo-:** Battery voltage low prompt. If the built-in battery voltage is low, this sign will be displayed on the screen when the scale is turned on. If loading a weight, the display will become normal, and at this time the scale can be used for a short period of time. However, it should be turned off as soon as possible in order to charge the battery using the built-in charger.

**C end:** Battery recharge complete. When the battery has been fully charged, this sign will flash on the display screen.

**Err-1:** Error indicator. When the battery voltage is low or there is a problem in the scale, this sign will be displayed, then it will turn off automatically. When this sign is displayed, the battery voltage should be checked first. If the battery voltage is too low, the battery should first be charged. If this sign is still shown after fully charging of the battery, it shows that the scale may have problem, and your distributor or the factory should be contacted for service.

**Err-0:** Zero error indication. If the inner code at zero position exceeds 20% when the scale is on, this sign will be shown.

## 4. Basic operations

### 4.1 Turn the scale on

Press the ON/OFF key, the power supply is turned on and the buzzer will send out a “beep” sound, the display screen will show SU1.0E (the software version), dc-x.xx (the battery voltage), and the system starts self-examination. All numbers are displayed in the order of 9, 8, 7, ... 1, 0. The maximum capacity of the scale is displayed. The display screen returns to zero . The scale enters the weighing mode.

### 4.2 Turn the scale off

**Manual:** Press and hold the ON/OFF key for 2 seconds. It shows “OFF”, and the scale will be turned off by releasing the key.

**Automatic:** The scale will turn off automatically when it is at the zero point for more than 10 minutes.

### 4.3 Zero setting

When the screen displays a weight (before operating tare function) not more than 4% of the maximum capacity, press ZERO key to set the display to zero, and then “ZERO” sign will lit.

#### **4.4 Tare and tare clearing**

To tare is to remove the weight of something (usually the container) in order to obtain only the net weight of the product.

- ❑ Place the item to be tared on the scale.
- ❑ Press TARE key. The weight will be displayed as zero and the TARE light will be lit.
- ❑ Place product in the container and the net weight will be displayed.
- ❑ When the platter is empty, the ZERO and the TARE lights will be lit and a negative of the original tare value will be displayed.
- ❑ Press TARE and the TARE light will go out and the display will show zero.
- ❑ The maximum TARE value is equal to 100% of the total capacity.

#### **4.5 Conversion of units**

- ❑ Different weighing units can be selected by pressing UNITS key.
- ❑ The corresponding unit indicator lights will be on.

### **5. Counting function**

#### **5.1 Entering and exiting counting mode**

Hold the UNITS key for 3 seconds to enter and exit counting mode.

#### **5.2 Sampling setting**

- a. In the counting mode (“pcs.”), press and simultaneously hold UNITS and ZERO keys for 3 seconds. The scale will enter the sampling setup mode, and “count” will be displayed. Then it returns to zero. If it does not display “0”, press ZERO.
- b. Load known number of sample objects on the platter. (the sampling should be as large as possible to get a highest precision, but not exceed the maximum capacity of the scale.).
- c. Press TARE to confirm and enter the quantity setup mode.
- d. One digit will flash “0”. Press UNITS once to change the lit digit, and add 1. Do this until it reaches the expected value.
- e. Press TARE to confirm.
- f. Press UNITS to go to the next number.
- g. Continue the same method as “e” & “f” until all numbers have been completed
- h. Press ON/OFF to exit the setting in the midway.

#### **5.3 Platform.**

- a. Load objects to be counted onto the platter.
- b. The quantity of pieces on the platter will be displayed.

NOTE: When counting objects with different unit weights, sampling setup should be re-done.

NOTE: The KWD 500 is a weighing scale with a counting feature. If you need a scale that is easier to use or for day to day business, call Kilotech at 1-877-328-5988 or 1-800-694-4445 and

inquire about a counting scale with counting as its primary function.

## **6. Power supply, charging and battery**

6.1 This scale operates on an AC supply 120V/ 60Hz. Which charges a 6V 4AH sealed maintenance-free rechargeable battery. Do not tamper in any way with this battery as this could cause serious damage.

6.2 To charge, if the 120 VAC wire is not visible, open the battery compartment at the bottom of the scale; pull out the AC wire and plug it into the 120 VAC outlet. The charging indicator will flash. The charging time depends on the conditions of battery, and usually is 10 hours.

6.3 The battery voltage is usually above 6.4V after full charging. And during discharge, it will stop discharging when the voltage is below 6V, the scale will display Lo, then Err – 1 and automatically turn off.

6.4 When the battery voltage is too low (below 4V), the scale will be in an abnormal working status, and the sign AdC will appear. In this case, the battery should be charged or battery be replaced.

6.5 When the scale is not used for long periods of time, it should be charged once every 1 ½ to 2 months,.

## **7. Inner code limit at zero position**

The inner code at zero position for this scale when turning on is set to be 20% F.S (1b). If the inner code at zero position exceeds 20%, it will display Err-0, then the scale will be shut off automatically. At this time, press ZERO without release and ON/OFF to turn on the scale, the scale will enter weighing mode. Please recalibrate the scale or check the load cell.

## **8. Calibration**

**Calibration requires technical knowledge and standard test weights. Calibration should only be performed by a scale technician. Check your local phone book for your nearest scale repair center. If the she scale technician does not have the Kilotech calibration procedure and access codes, this can be obtained by calling the Kilotech Service Center at 877-328-5988 (USA) or 800-694-4445 (Canada).**

**When the two position switch under the scale is in CALIBRATION position, the scale will display CAL. The weighing and counting functions will not work and only the calibration operation will work. To do weighing and counting, put the switch in the other position.**