ScaleMate User Manual

SM-200 (200 x 0.01g)
SM-500 (500 x 0.1g)
SM-501 (500 x 0.01g)
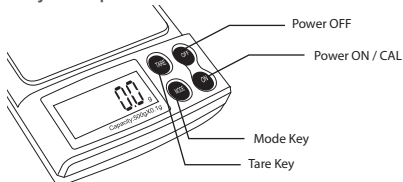**SM-DR (100x0.01g/500x0.1g)**

SCALEMATE

Thank you for purchasing the American Weigh ScaleMate digital pocket scale. Please read all operating instructions carefully before use. Scales are precision measuring devices and should always be handled with proper care. To ensure years of reliable service, keep these simple tips in mind:

- Do not exceed the scale's maximum capacity. Overloading your scale can permanently damage it!
- Avoid exposure to extreme heat or cold. Scales perform best at normal room temperature. If temperatures have changed dramatically, calibration and adjustment may be necessary.
- Allow your scale to warm up for 30-60 seconds before performing calibration and adjustment(if available).
- Store your scale in a clean, dry location. Dust, dirt, and moisture can accumulate on the weighing sensors and electronics causing inaccuracy or malfunction.
- Avoid using your scale in close proximity to strong radio wave emitting devices such as computers, cash registers, and cordless phones.
- Always weigh on a flat and level surface, free from vibrations and drafts. The corner of a room is usually the most stable.
- Gently apply all items to be weighed. Do not drop items onto the weighing platform.
- Avoid dropping your scale. The warranty does not cover damage due to rough treatment or overload.
- Check the batteries first if you are having any trouble with your scale. This simple step can remedy most scale issues.
- Do not disassemble your scale. This product contains no user serviceable parts.
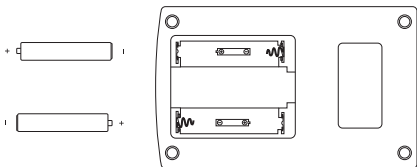
I. Part List

1. Scale
2. Removable Cover / Tray
3. AAA Batteries (x2)

II. Key Description

Power OFF

Power ON / CAL

Mode Key

Tare Key

III. Battery Installation

1. Before using the scale for the first time, check the battery compartment and remove any plastic insulation strips or packaging that may be in place to prevent battery drainage during shipping/storage.

2. If you are replacing the batteries, make sure the positive and negative contacts are properly aligned.

SCALEMATE

IV. Operation

1. Place the scale on a flat, level surface and press the **ON** key to turn the scale on.
2. Once the start-up process completes and the scale goes to zero you are ready to weigh.
3. Place the quantity to be weighed onto the weighing platform.
4. Wait a couple seconds for the display to stabilize before taking a weight reading.

V. Changing the Unit of Measure

1. Press the **MODE** key to change the scale's displayed unit of measure.
2. If the scale is turned off then back on, it will default to the last unit used.
- **SCALEMATE Units (All Models):** g (gram), oz (ounce), dwt (pennyweight), ozt (troy ounce), ct (carat), gn (grain)

VI. Using the Tare Feature

You can use this scale's tare feature to subtract the weight of an empty container or vessel for net weight determination. NOTE: The weight of the container will subtract from the available capacity.

1. Place the empty container or vessel on the weighing platform.
2. Press the **TARE** key once. The display will then reset to zero. If the container is removed, it's weight will be displayed as a negative number.
3. You may now fill the container with the quantity to be weighed. The display will show the net weight of the contents.

4. To return to normal weight display (gross weight), remove any items from the weighing platform and press the **TARE** key again to re-zero the scale.

VII. Calibration

Calibration and adjustment are performed at the factory. However, the weighing range can shift slightly during shipping. Also, due to changes in local acceleration of gravity around the world, adjustment is recommended when moving the scale from one location to another. To check calibration:

1. Place the required calibration weight on the scale and note the displayed value.
2. If the displayed value is not within acceptable tolerance (see chart below), adjustment is required.

Model	Acceptable Tolerance (±)	Calibration Weight	Recommended Accuracy Class
SM-200	0.02g	200g*	OIML M2
SM-500	0.2g	500g*	OIML M2
SM-501	0.02g	500g*	OIML M2
SM-DR	0.2g	500g*	OIML M2

*Can be changed to 100g during calibration by pressing TARE. See Section VIII.

VIII. Adjustment

1. Turn the scale on by pressing the ON key.
2. Wait for the display to show "0.0g" or "0.00g" then press and hold the ON key for a few seconds until the display shows "0", then release.
3. The display will flash "g" along with the default calibration weight value (see chart above). Place the

required weight on the center of the platform. If you wish to change the weight to 100g, press the TARE key before placing the weight on the scale.

4. Once the weight is confirmed, the "g" will stop flashing on the display and calibration is complete.

IX. Troubleshooting

- **Problem:** Scale will not turn on
- **Solution:** Check the batteries

- **Problem:** Displayed weight fluctuates randomly
- **Solution:** Make sure your workspace is stable and free of any air currents or vibration

- **Problem:** Displayed weight is inaccurate
- **Solution:** Perform a calibration adjustment

X. Error Codes

1. **OUTZ** - Zero range has shifted. Perform calibration adjustment. If the problem persists, the load cell may be permanently damaged due to overloading.
2. **88888** - Maximum capacity exceeded. Remove the extra weight to avoid damaging the load cell.
3. **L** - Batteries are low. Replace the batteries.

	SM-200	SM-500
Max. Capacity	200g	500g
Readability	0.01g	0.1g
Power	2 x AAA Batteries	
Platform Dimensions	2.5 x 2.8"	
Scale Dimensions	0.8 x 2.9 x 4.4"	
Warranty	10 Year Limited Warranty	

	SM-501	SM-DR	
Max. Capacity	500g	100g	500g
Readability	0.01g	0.01g	0.1g
Power	2 x AAA Batteries		
Platform Dimensions	2.5 x 2.8"		
Scale Dimensions	0.8 x 2.9 x 4.4"		
Warranty	10 Year Limited Warranty		

XI. Capacity/Readability Charts

SM-200	SM-500
200x0.01g	500x0.1g
7.05x0.001oz	17.64x0.01oz
128.6x0.01dwt	321.5x0.1dwt
6.43x0.001ozt	16.08x0.01ozt
1000x0.05ct	2500x0.5ct
3089x0.1gn	7716x1gn

SM-501	SM-DR	
500x0.01g	100x0.01g	500x0.1g
17.64x0.001oz	3.528x0.001oz	17.64x0.01oz
321.5x0.01dwt	64.30x0.01dwt	321.5x0.1dwt
16.08x0.001ozt	3.215x0.001ozt	16.08x0.01ozt
2500x0.05ct	500x0.05ct	2500x0.5ct
7716x0.1gn	1543x0.1gn	7716x1gn