

A&D

A&D WEIGHING
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ELECTRONIC PRECISION BALANCE

USER MANUAL

For Models SV-120. SV-200. SV-250, SV-610

PLEASE READ BEFORE USING BALANCE

1. General Description

This is a portable top-loading digital electronic balance. The sensing mechanism is a load cell. The balance may be powered by battery or optional AC adapter. Part #TB:10.

2. Installation

- A. Fill out the enclosed registration card & mail to A&D.
- B. Set the balance on a flat, rigid surface, located away from dust, vibration, extreme heat sources, wind, strong electromagnetic sources such as a electric motors or generators, and fluorescent lamp starters (within 3 feet typically).

Any slope may lead to inaccurate reading. Be sure the balance is placed on a level surface. For greater accuracy, recalibrate the balance (see below) whenever the balance is relocated.

In the event of temperature change, allow 2-3 minutes for the balance to stabilize.

- C. To install a 9V battery, open the battery compartment by pushing the battery compartment cover in the direction of the arrow on the bottom of the scale. After inserting and connecting the battery, close the battery compartment.
- D. An optional 9Vdc 200 mA AC adapter (Part #TB:10) may be used by plugging into the balance, and then into the main supply. The use of an adapter automatically disconnects the battery.

3. Panel Layout and Display Format.

A. Panel Layout

- a. "ON" key - used to turn on the balance
- b. "ZERO" key - used to zero the balance, or for taring a container to eliminate its weight.
- c. "MODE" key - a short press selects grams, oz, ozt or dwt.
- d. "OFF" key - used to turn off the balance
- e. "CAL" key - a prolonged press is used to calibrate the balance, a procedure discussed later in the instruction.
- f. "CNT" key - used for counting

B. Display Format

- a. This is a 5 digit liquid crystal display. Weighing units are shown on the right hand side of the display. When the balance has been zeroed, a zero "o" indicator appears on the upper left hand side of the display, just above the negative sign.
- b. When first turned on, the display shows all possible display segments, confirming that power is "on", and then the balance begins its search for zero.
- c. "EEEE" or "-EEEE" indicates overload or underload respectively. When the EEEEE signal blinks, it indicates that the tare process is prohibited due to the overload or underload conditions.
- d. "c b" (change battery) indicates the power from the battery or adapter is too low for normal operation.
- e. "CAb" indicates the balance is performing the calibration process.

4. Calibration Procedure

- 1. Make sure balance is in the gram mode.
- 2. Press ZERO key - balance will read zero.
- 3. Place correct calibration weight on weighing pan.

| | A&D Part # |
|-----------------------------------|-----------------------|
| SV-120 = 100 g calibration weight | AD-1600- 100g |
| SV-200 = 200 g calibration weight | AD-1600- 200g |
| SV-250 = 200 g calibration weight | AD-1600 - 200g |
| SV-610 = 500 g calibration weight | AD-1600 - 500g |

These weights are available through A&D. Any electronic balance should be calibrated periodically to assure its accuracy.

4. Press CAL key until display shows "CAb" (approximately 6 seconds). Then release. The balance is now calibrated. The display should read the same as the calibration weight being used.
5. Counting Operations
 1. Place the sample container on the pan and press zero to tare the container.
 2. Put the sample lot on pan or in the container. The quantity can be 10, 20, 50 or 100 pieces. After display stabilized, press count (cnt.) key. Press "cnt" key repeated until the sample quantity you placed on the pan appears. After the selection is chosen, the balance will compute the unit weight and will store this information in its memory. If the unit sample is inadequate the display will show "Add". If this occurs add more pieces to the quantity (quantity can be 10, 20, 50 or 100 pieces) until weight being counted is heavy enough to be counted. Weight has to be at least or more than the minimum sample weight. Which is indicated on the key pad.

NOTES: Minimum unit weight is half of the display increments. In the counting mode, pes. is shown as the unit.

6. Cautions
 - A. Never leave a load on the balance for a prolonged time as this may damage the loadcell.
 - B. Always place a load gently onto the pan. Dropping the weight on may cause PERMANENT DAMAGE of the loadcell.
 - C. Never try to disassemble the balance, which may PERMANENTLY DAMAGE the mechanism and electronic components. There are no user-serviceable parts inside the balance. Maintenance should be done by properly trained technicians.
 - D. For maximum accuracy, place loads as near to the center of weighing pan as possible.

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