

Balance Functions and Features:

Autocalibration – To Calibrate the balance to an External Weight:

This procedure calibrates your balance to an external calibration weight. If your balance has a motorized internal calibration weight it will have a suffix of IW after the model number. Please use the procedure for Autocalibration to calibrate the balance to a Motorized Internal Calibration Weight.

- Note:** Dual range models must be placed in HI range before starting the calibration procedure.
- Note:** For correct calibration weight refer to specification charts in the back of the manual.
- Note:** The balance should be warmed up for at least one (1) hour prior to calibration and leveled according to the Unpacking and Setup section.
- Note:** Perform autocalibration every time you move your balance.

Calibrate the balance using a recently certified external calibration weight. Metrology handbooks state that the calibration weight utilized to calibrate a balance should have a tolerance no larger than the readability of the balance divided by 3. Therefore, SA/ZSA models need a $\pm 0.033\text{mg}$ tolerance weight or better, SP/ZSP models need a $\pm 0.33\text{mg}$ tolerance weight or better, SL/ZSL models need a $\pm 3.3\text{mg}$ tolerance weight or better, and SG models need a $\pm 33\text{mg}$ tolerance weight or better. In addition, these same handbooks recommend that all balances be calibrated using an external certified calibration weight even if the balance has an internal calibration weight.

	User Action	Balance Response
1	Remove any containers or weighing samples so that nothing is on the weighing pan, then press the ZERO button	Zeros are displayed
2	Press the RANGE/FUNCTION button (or MODE and RANGE buttons simultaneously for dual range balance models)	Balance display cycles repeatedly through PCS, HI OK LO, CAL 1, CAL 2, \overline{T} and %.
3	Press the MODE button when CAL 1 appears	CAL 1 and a flashing 0 are displayed.
4	Wait 10 seconds for the balance to stabilize, then press the ZERO button.	The display stops flashing, CAL 1 and a solid 0 are displayed. In approximately 15 seconds, when this step is complete, a single weight or two alternating weights will begin flashing on the display.
5	Place one of the flashing weights on the balance's weighing pan.	The display stops flashing, CAL 1 and the selected weight are displayed.
6	Do not remove the weight from the pan.	The display will momentarily blink, then the selected weight will continue to be displayed. In approximately 15 seconds, when this step is complete, the display will blank, flash "OK", then display the calibration weight including decimal places. The balance is now calibrated and in the normal weighing mode. For balances with an internal weight press MODE to complete this step. This will not change the internal weight calibration factor.
7	Remove the calibration weight.	The display returns to zeros.