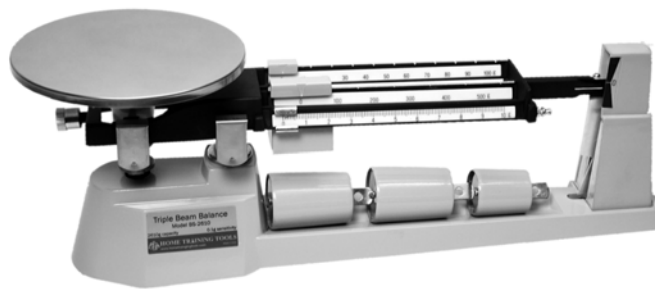


BS-2610
Triple Beam Balance
Operating Instructions



HOME SCIENCE TOOLS

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Construction and Application

This triple-beam balance is constructed to provide years of reliable, trouble-free operation. The beam is made of high-quality aluminum alloy for precise, consistent results. It has a tiered design for better visibility and faster operation. The agate beam bearings and steel knife-edges provide high accuracy, repeatability, and durability. The stainless steel pan provides long life in varied service conditions. The magnetic dampening system makes the balance faster and easier to use.

This balance is suitable for all junior high and high school level science courses, including physical science, earth science, biology, chemistry, and physics.

Specifications

Capacity:	610g without attachment weights
	2610g with attachment weights
Sensitivity:	0.1g
Readability:	0.1g
Beam Calibrations:	Front Beam 10g x 0.1g
	Rear Beam 100g x 10g
	Center Beam 500g x 100g

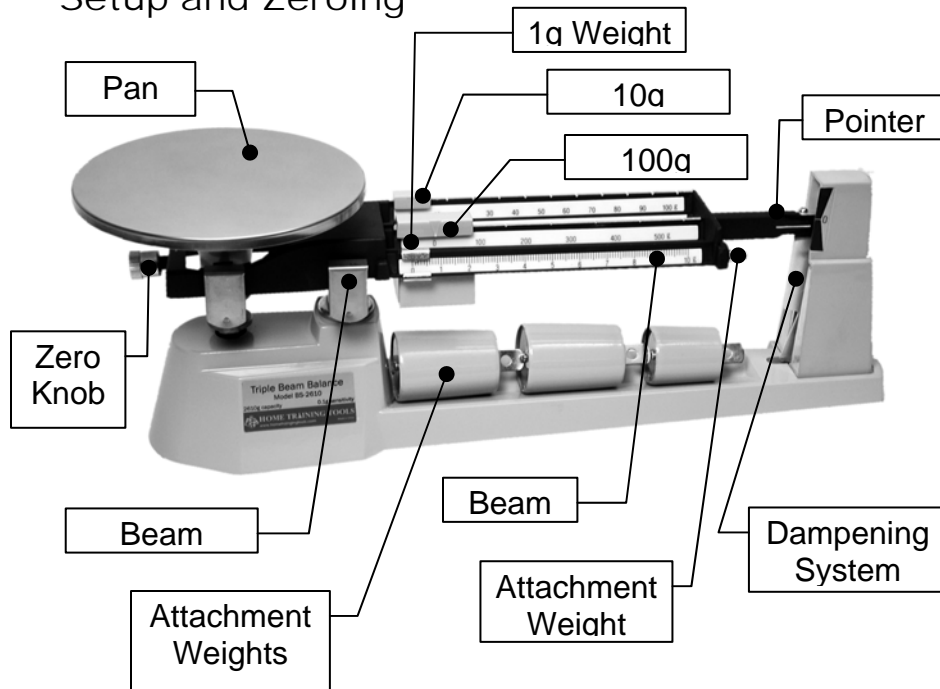
Unpacking

1. Carefully lift the balance from the foam packing carton and set it on its base on a smooth, flat surface.
2. Remove the three attachment weights from the carton.
3. Remove the split rubber washer wedged under the pan assembly.
4. Remove the rubber washer located above the pointer on the end of the beam (If one is present.) Make sure no bits of styrofoam packing are wedged around the pointer or in the dampening system.
5. Remove the rubber bands holding the sliding weights in place on the beam.
6. Slide the weights to the left, to the "0" position on the beam.

Care and Maintenance

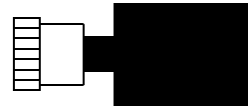
Keep your balance clean by wiping it down after each use. Use a soft cloth lightly moistened with water or a general-purpose household cleaner. Be sure your balance is clean and dry before storing it. An optional dust cover will keep your balance free of dust when not in use.

Setup and Zeroing



After placing your balance on a smooth, flat surface, move each of the three sliding weights to the zero position on the left side of the beams. Be sure the 10g and 100g sliding weights are fully seated in the notches cut into the beams near the "0" mark. Be sure the indicator point on the 1g sliding weight is centered above the "0" on the front beam. The pointer should now be near zero. (Zero is the "balanced" point at which the white line on the pointer matches the zero mark on the end of the balance.)

Now you can precisely zero your balance. Adjust the knurled zero knob, located on the left end of the beam, under the pan, until the white line on the pointer exactly matches the zero mark on the end of the balance. This may take several attempts, as wait for the pointer to stop moving after each adjustment. Turning the zero knob clockwise brings the pointer down, while turning the zero knob counter-clockwise brings the pointer up. If you run out of adjustment on the knob, check that the beam weights are fully seated in the notch closest to the "0" mark.



Once you have zeroed your balance, it is ready for use. You will need to check the zero adjustment periodically, especially after moving or transporting your balance.

Weighing Operation

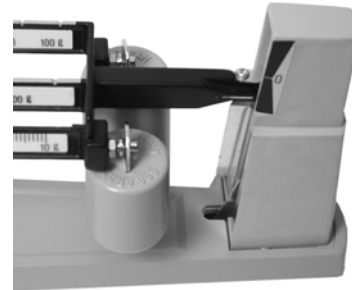
Place the object to be weighed on the center of the pan and proceed as follows:

1. Starting with the center beam, move the 100g weight to the right one notch at a time until the pointer drops. Then move the 100g weight back to the left one notch.
2. Now with the rear beam, move the 10g weight to the right one notch at a time until the pointer drops. Then move the 10g weight back to the left one notch.
3. Finally with the front beam, nudge the 1g weight to the right until the pointer reaches the zero position.
4. Add up the weight positions on each of the three beams to get the weight of the object. Read the 1g weight on the front beam to the nearest 0.1g.

Your balance has a total capacity of 610g using the sliding weights on the three beams.

Attachment Weights

The attachment weights extend the capacity of your balance up to 2610g. These weights hang on the attachment weight pivots located on the pointer end of the beam. Only two attachment weights can be used at a time. The attachment weights increase the capacity of your balance as follows:



The 500g attachment weight used alone increases the capacity to 1110g

A 1kg attachment weight used alone increases the capacity to 1610g
500g and 1kg attachment weights used together increase the capacity to 2110g (one on each pivot point)

Both 1kg attachment weights used together increase the capacity to 2610g (one on each pivot point)

Note that the attachment weights actually weigh much less than 500g and 1kg. This is because of the moment arm distance between the attachment weight pivot points and the beam bearings.

Limited Warranty

Home Training Tools warrants this product against defects in materials and workmanship for one year from the date of purchase. During the warranty period we will repair or replace, at our option, any defective component(s) at no charge. You will need to return your balance, freight prepaid, to Home Training Tools for warranty service. Please call 1-800-860-6272 for details.