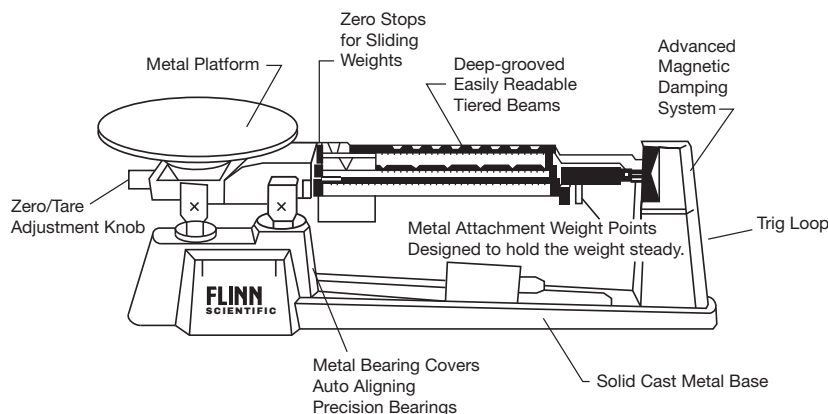


Flinn Triple Beam Balance Operating Instructions



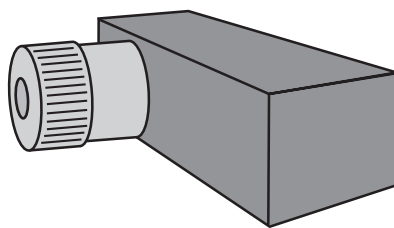
Unpacking and Setup

Carefully remove the balance and attachment weights from the box. Remove the polystyrene surroundings. One rubber washer underneath the platform is used to protect the balance during shipping. Rubber washer must be removed prior to the first use.

Place balance on a smooth, flat surface. Move all the sliding weights to the zero position. The pointer should be near zero.

Zeroing

The zero knob is located on the left side of the balance underneath the metal platform. Adjust the knob until the pointer is located at exactly zero. Do not force the knob beyond its stop position. Verify the pointer is at zero prior to each use.



Weighing

Place the object on the center of the pan and continue as follows:

1. Begin with the largest capacity beam (500 g), adjust the 500-g sliding weight to the right until it reaches the first notch, causing the pointer to drop. Next, move it back to the left one notch causing the pointer to rise.
2. Repeat step 1 with the 100-g sliding weight.
3. Repeat step 1 with the 10-g sliding weight until the pointer rests at zero.

The mass of the object is the sum of the values on each sliding weight. For example, for each beam the sliding weight rests on the following locations:

100-g beam: 70 g
500-g beam: 100 g
10-g beam: 2.7 g

The total mass of the object would be 172.7 grams.

Capacity

The capacity of the triple beam balance without the attachment weights is 610 g. When the two 1-kg attachment weights are used, the maximum capacity of the balance is 2610 g.

Care and Maintenance

Keep the triple beam balance clean at all times to maximize longevity. Most debris is easily moved using a can of compressed air. Never apply lubricants to the knives or bearings. Make sure that beams are also kept free of debris so that the unit can accurately mass objects. Store the balance with the sliding weights moved to the right, away from zero. A dust cover is available separately, Flinn Catalog No. OB1050.

To carry the balance, hold the pan end of the balance by placing the thumb and forefinger between the pan assembly and base. This action lifts the knife blades from their bearings and prevents damage from jarring or other strong bumps. Place the other hand **under** the zero end. Do not use the trig loop post assembly as a handle. If you grab the trig loop at the zero end as a handle (and it seems natural to do so), it could be pushed forward, and the damping vane inside may bend and become out of alignment.

Troubleshooting

General Issues

Before troubleshooting further, make sure the balance was unpacked completely. Remove the rubber washer and twist tie so the balance may mass accurately. Also, verify the sliding weights are all at the zero position.

Specific Issues

Q: The pointer is not at zero.

A: *Make sure the sliding weights are resting in the notch for each zero position. If the pointer is still not at zero, find the adjustment knob on the far left side of the main balancing arm under the platform. If the index pointer is below the zero mark, turn the knob counter-clockwise. If the index pointer is above the zero, turn the knob clockwise.*

Q: The balance arm does not float freely.

First make sure the rubber washer under the platform has been removed. If it has been removed, go on to the next step.

See if the back of the damping vane is touching the inside of the trig loop. If so, loosen the bolt under the trig loop post assembly and move the loop all the way back (away from the zero end). Tighten the bolt. If this is not the issue, go to the next step.

See if the damping vane is rubbing against the magnets within the trig loop. The magnets do not attract the vane, but they control the oscillation of the beam. If the damping vane is rubbing against one of the magnets, detach the trig loop by removing the bolt that holds the trig loop in place. Then check the damping vane retaining screws on top of the pointer end of the beam. If loose, tighten. If the damping vane retaining screws was not loose to begin with, then gently bend the damping vane enough to center it within the magnets by grasping the vane near the top with needle-nose pliers. If this does not correct the problem, go on to the last step.

See if the horizontal beam is centered within the trig loop (inside the housing at the pointer end). If the beam is not centered, the balance will need to be returned. The entire beam assembly needs adjustment.

Specifications

Beam Calibrations

Rear Beam:	100 g × 10 g
Center Beam:	500 g × 100 g
Front Beam:	10 g × 0.1 g

Readability: 0.1 g

Capacity

Without weight attachments:	610 g
With weight attachments:	2610 g

Additional Features

- Three beam direct reading
- Attachment weights
- Magnetic damping system