## **Cart Friction Pad**

## (Order Code PAD-VDS)

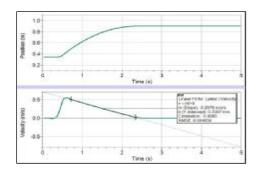
The Cart Friction Pad is a variable friction mechanism for use with the Vernier Standard Cart and Plunger Cart. It can be used on any flat surface or, for best results, with the Vernier Dynamics System track (order code VDS) to study the effects of friction.

## **Attach the Cart**

The Cart Friction Pad is held to either end of the Vernier Standard Cart and to the non-plunger end of the Plunger Cart by magnets installed in the cart. Magnets are supplied with the carts. Use the thumb screw on the Cart Friction Pad to adjust the friction.

## **Sample Experiments**

- Use a Motion Detector to study the accelerated motion of a Vernier Dynamics Cart rolling up and down an inclined plane. Set the Friction Pad so that a small friction is applied and repeat the experiment to observe the change in motion. Repeat the experiment with large frictional forces.
- Use a Motion Detector to study the motion of a Dynamics Cart as it is pushed across a horizontal surface. Attach the Friction Pad and repeat the experiment. How did friction change the motion?



Cart moving away from the Motion Detector and slowing down

• Use the Friction Pad in conjunction with Cart Fan (order code FAN-VDS) to study the interaction between the fan's force and the force due to friction.



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Vernier Software & Technology

13979 S.W. Millikan Way • Beaverton, OR 97005-2886
Toll Free (888) 837-6437 • (503) 277-2299 • FAX (503) 277-2440
info@vernier.com • www.vernier.com

