

SOLENOID BRAKE ACCESSORY FOR ACTIVITY WHEEL

ENV-042A-SBA

INSTALLATION MANUAL

DOC-290

Rev. 1.0

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INTRODUCTION

The Solenoid Brake Accessory for Activity Wheel directly replaces the manual brake that comes factory installed on the ENV-042, ENV-042A and ENV-046 Activity Wheels. The Solenoid Brake Accessory can be controlled programmatically by MED-PC IV®, or any other operating command signal, to prevent wheel turning at a specified time in an experiment. The brake uses a solenoid to depress a lever that places a rubber pad in contact with the rim of the wheel, thereby preventing the wheel from turning. The brake is designed to prevent movement where up to 400 grams of load is applied directly downward in the middle of the wheel. This document will guide you through the installation of the Solenoid Brake Accessory.

Specifications

Dimensions: 6" (152.4mm) length x 4" (101.6mm) width x 3" (76.2mm) height

Weight: 1.6lbs (0.72Kg)

Braking Force: 400 grams

Current Draw: 360mA @ 28VDC

INSTALLATION

Tools Needed

- #2 Phillips Screwdriver
- 3/32" Hex Key (included)

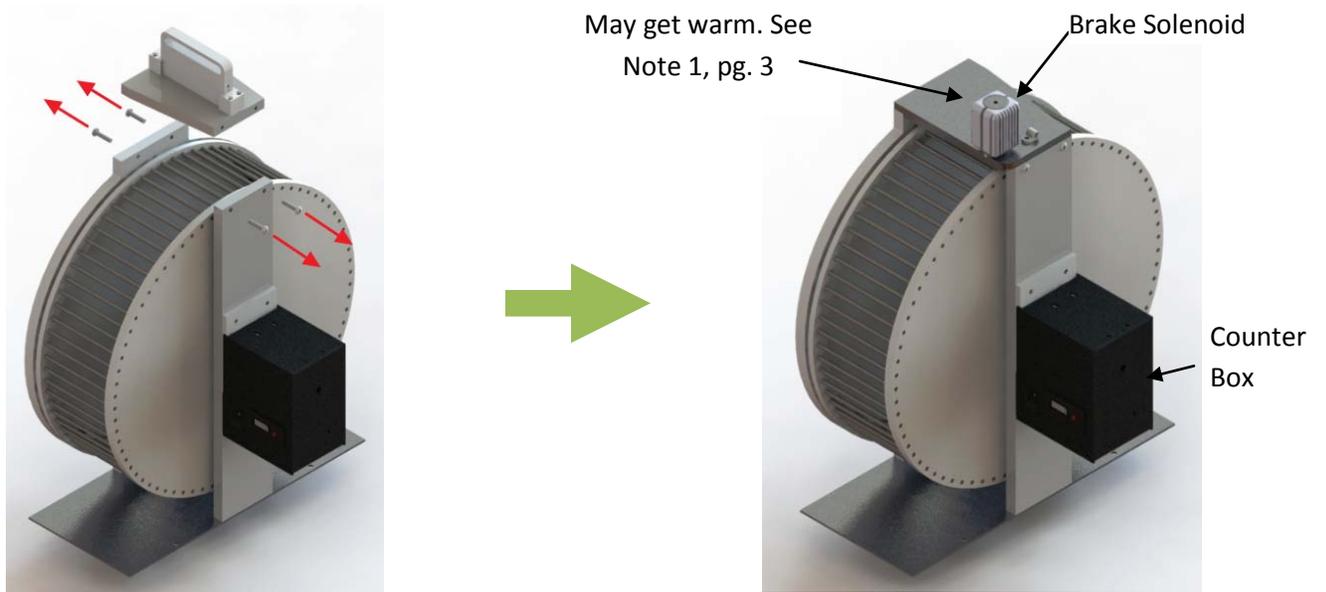
Removing the Manual Brake

Remove the 2 screws on each side (4 screws total) of the manual brake as seen in Figure 1. Save these 4 screws as they will be used to install the Solenoid Brake Accessory. Save the manual brake for future use if desired.

Installing the Solenoid Brake Accessory

Install the Solenoid Brake Accessory using the 4 screws previously removed. Be sure the brake solenoid is facing up and on the same side of the wheel assembly as the counter box as shown in Figure 1.

Figure 1 - Solenoid Brake Accessory Installation



Brake and Wheel Alignment

If the brake pad is centered on the rim of the Activity Wheel as seen in Figure 2, installation is complete.

If adjustment is needed, reach inside the wheel and use the included 3/32" hex key to loosen the 4 setscrews that hold the running wheel in place on the axle. See Figure 3. Loosen the setscrews about ¼ of a turn, just enough to move the wheel on the axle. Slide the wheel in the direction needed to center the brake pad over the wheel rim as seen in Figure 2 and tighten the setscrews. Installation is now complete.

Figure 2 – Brake and Wheel Alignment

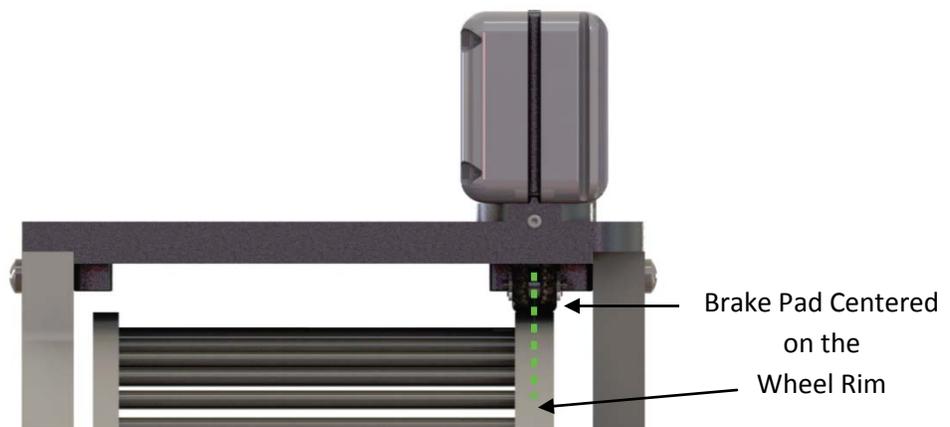
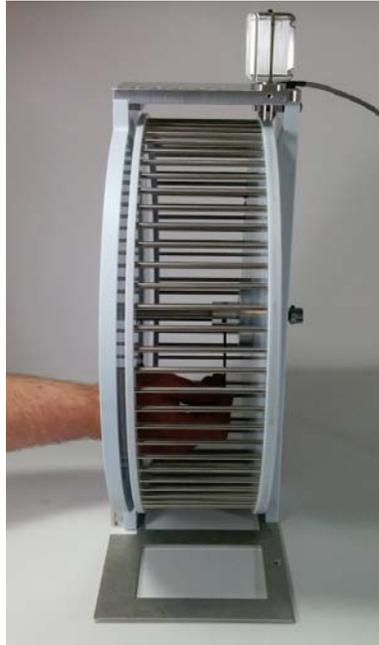
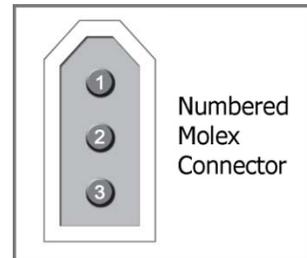


Figure 3 – Loosening/Tightening Setscrews



WIRING & OPERATION

Molex Pin #	Function	Wire Color
1	Not Used	N/A
2	Activate	White
3	+28 Volts	Red



Connect the ENV-042A-SBA cable to any available output on a standard 28V powered Med Associates connection panel such as the SG-716B.

Turning the Med Associates output on will engage the brake. If a Med Associates connection panel is not being used, connecting the white wire to ground will engage the brake.

NOTE 1: The brake solenoid, indicated in Figure 1, may become warm to the touch when engaged for an extended period of time.

CONTACT INFORMATION

Please contact Med Associates, Inc. for information regarding any of our products.

Visit our website at www.med-associates.com for contact information.

For technical questions, email support@med-associates.com.