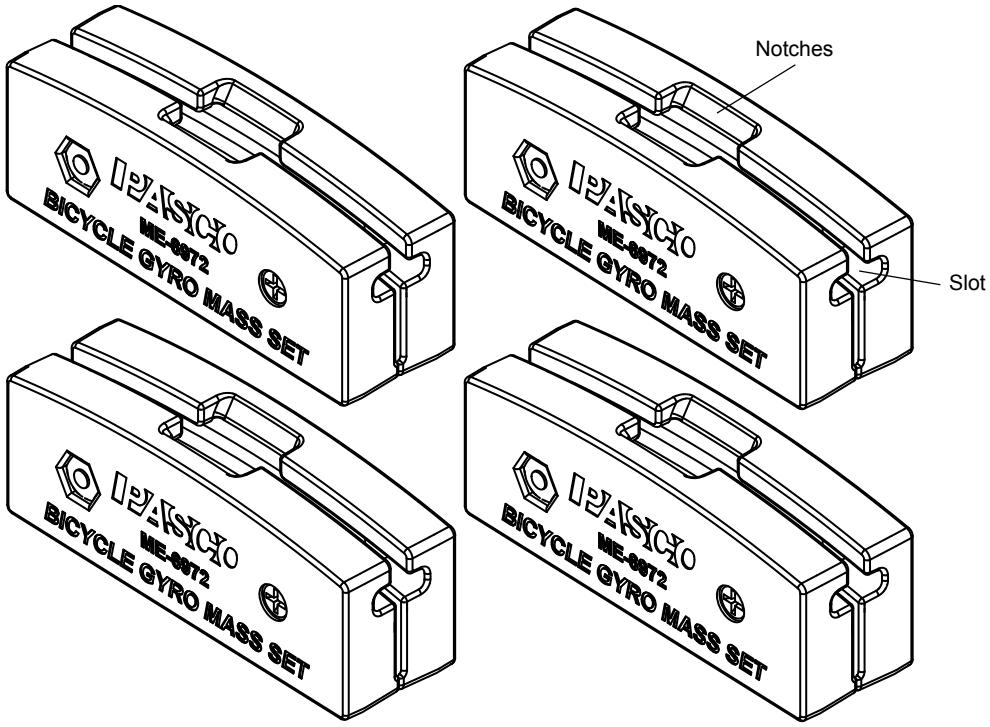
PASCO Mechanics

Bicycle Gyro Mass Set

ME-6972



Recommended Equipment*	Required Item
Bicycle Gyroscope (ME-6837)	#1 Phillips Head Screwdriver
Rotating Chair (ME-6856)	

*See the PASCO catalog or PASCO web site at www.pasco.com for more information.

Introduction

The Bicycle Gyro Mass Set consists of four masses that are designed to be used with the Bicycle Gyroscope (ME-6837). Each of the four masses has two halves that are held together by flathead screws and hex nuts.When the masses are clamped to the rim of the Bicycle Gyroscope, the rotational inertia of the gyroscope is increased. You can put either two or four Gyro Masses on the Bicycle Gyroscope at one time. You can use a Photogate Head and a PASCO data acquisition system to measure the angular motion of the Bicycle Gyroscope when a known torque is applied. Divide torque by angular acceleration to determine the rotational inertia of the gyroscope plus the masses.

Assembly

- To mount a Gyro Mass onto the Bicycle Gyroscope, start by using a #1 Phillips head screwdriver to remove the flathead screws from each side of the Gyro Mass. Be very careful to keep the small hex nuts.

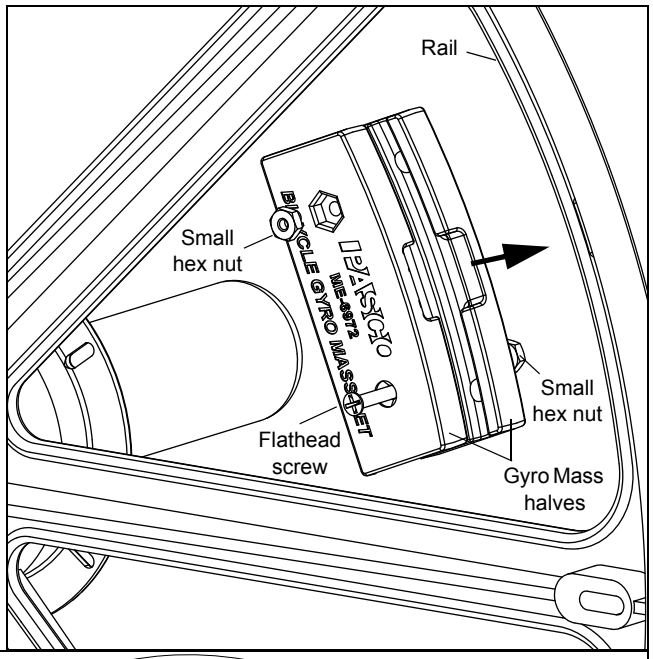
- NOTE: If a counterbalance is in the way of a Gyro Mass, use a small Torx-head driver to remove the counterbalance from the rim of the Bicycle Gyroscope.

- Position the two halves of the Gyro Mass on the inside edge of the rim of the Bicycle Gyroscope so that the notches on the top of the two halves fit over the raised tabs on the edge of the rim and the slots of the Gyro Mass fit on the rail on the gyroscope rim as shown.

- NOTE: Do not put a Gyro Mass on the section of the rim that has the valve stem.

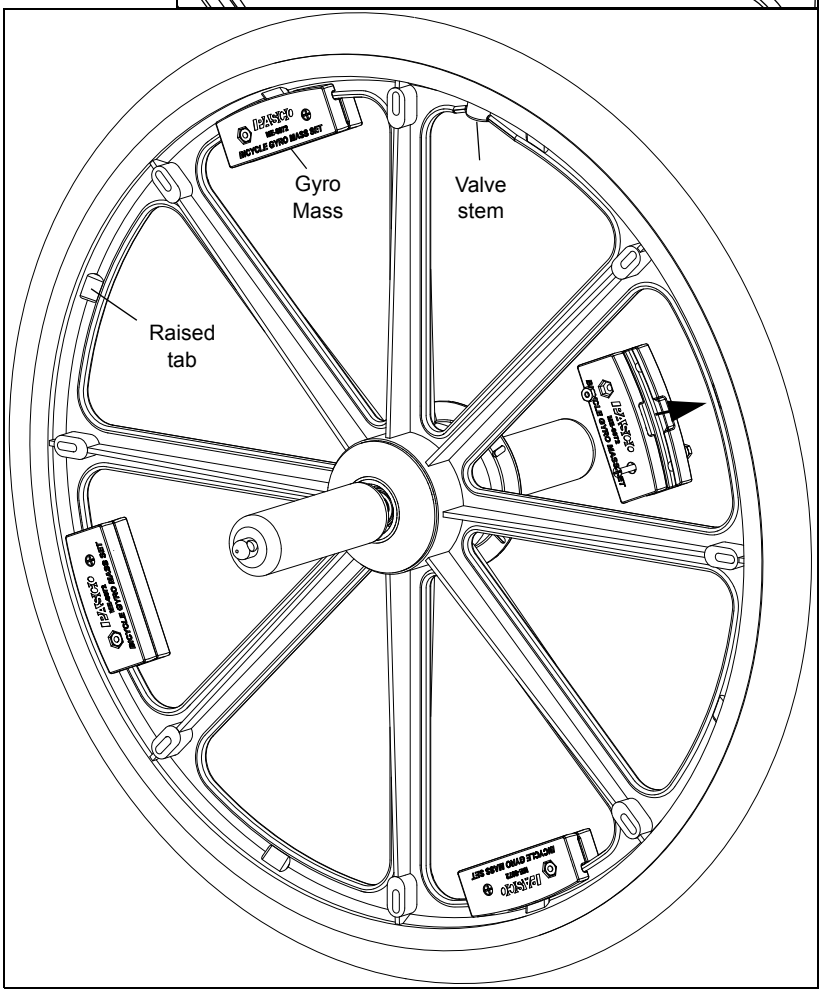
- Hold the halves of the Gyro Mass in place on the rim of the gyroscope, and use the screwdriver to fasten the flathead screws through the halves of the Gyro Mass and into the small hex nuts. Remember that there is one flathead screw and one small hex nut for each half of the Gyro Mass.

- Repeat the process with another Gyro Mass on the opposite side of the rim from the first Gyro Mass.



Balancing

To determine whether the Bicycle Gyroscope is in balance, hold the hand grips horizontally so that the wheel is vertical. If the wheel begins to rotate in one direction or the other, it is out of balance. If you removed one or both counterbalances when you assembled the Gyro Masses on the Gyroscope, replace the counterbalances on the rim. Use trial and error to find the position for the counterbalance that allows the wheel to remain in balance and not rotate.



Technical Support

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For the latest revision of this Instruction Sheet, visit:

www.pasco.com/go?ME-6972

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