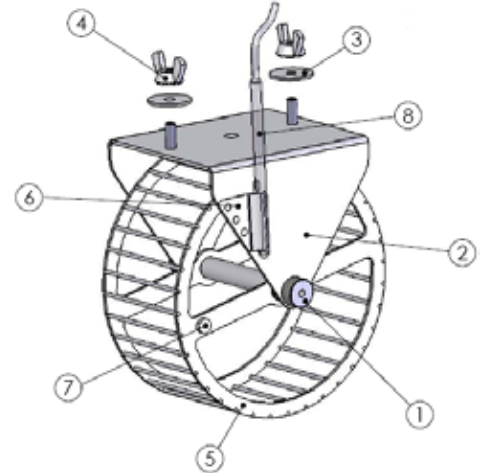


# User Instructions

## In-Cage Running Wheel (VV-ICRW-W/SNSR)

### Parts List:

1. Trunnion Axle
2. Bracket Assembly
3. Fender Washer (qty 2)
4. Wing Nut (qty 2) and Locking Nut (qty 2)
5. Wheel
6. Magnetic Switch Holder
7. Magnet
8. Magnetic Switch Assembly (packaged separately)



**This wheel is designed to work in a small animal cage with a wire-grid cage top. Minimum cage depth for the 4.5" wheel is 5 inches.**

1. To mount the wheel in a cage, place the wheel assembly up against the wire cage lid from below. Choose a slot in the wires for the two threaded studs to extend through.
2. Place a fender washer over each stud from the top side of the cage lid.
3. Affix using either the Wing Nuts or Locking Nuts.  
Note: The Magnetic Switch Assembly (8) is going to need to travel through the wire cage lid slots and insert into the magnetic switch holder on the side of the bracket assembly. Allow clearance for the switch glass tube and check it before tightening the hardware.
4. Tighten the nut until the wheel assembly is tight against the cage lid. Do not over tighten.
5. Place the cage lid over the cage and make sure the wheel is located in a position on the lid so that there is no interference with the cage walls, water bottles, feeders, cage bottom, or bedding. Adjust wheel assembly position on lid as necessary to allow sufficient clearances.

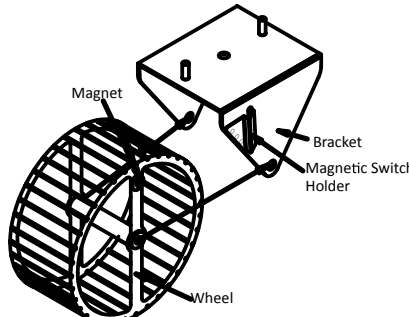
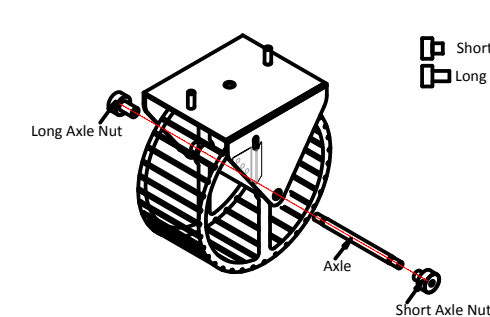
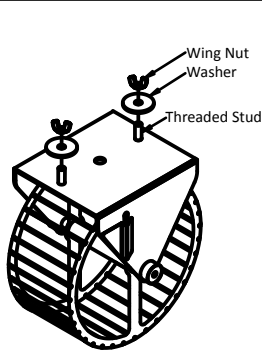
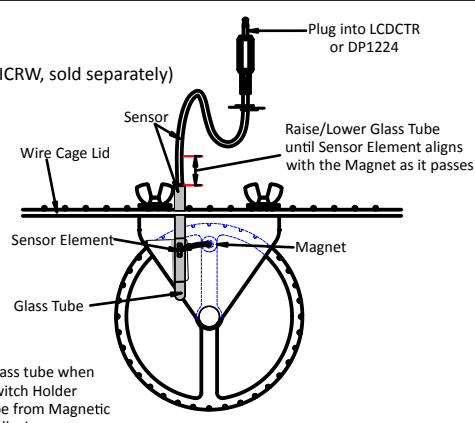
### Using the In-Cage Running Wheel:

1. Once the wheel assembly has been attached to the cage lid and placed in the cage, insert the glass tube end of the Magnetic Switch (8) through the wire lid and into the Switch Holder (6). The glass tube should extend down beyond the bottom of the Switch Holder and above the top of the wire cage lid.
2. The Magnetic Switch plugs into a stand-alone LCD Counter (sold separately) or a DP1224 attached via USB to a PC running VitalView® Data Acquisition Software.
3. Once the Running Wheel is assembled it is recommended that you raise/lower the Magnetic Switch to find the best position relative to the Magnet (7). When the Magnetic Switch is attached through a DP1224 to a computer running VitalView Software, the red LED on the side of the DP1224 will light when the Magnetic Switch is triggered. This function is disabled when the VitalView Software is monitoring/recording data.
  - The LCD Counter attached to the Magnetic Switch can also be used to observe when the Switch is triggered by the Magnet.
4. The In-Cage Running Wheel is constructed entirely of stainless steel except for the bronze bushings and is compatible with commercial cage washing systems. (Magnetic Switch Assembly not included).

### Notes:

- Make sure the Wheel is attached to the Bracket Assembly with the Magnet on the same side as the Magnetic Switch Holder
- Make sure Trunnion Axle is installed with SHORT Trunnion Axle Nut on same side as Magnet

# In-Cage Running Wheel (VV-ICRW) - Assembly Instructions

<p>①</p>  <p>Insert Wheel into Bracket with Magnet on same side as Magnetic Switch Holder</p>	<p>②</p>  <p>1. Insert Axle through holes in Bracket and Wheel 2. Thread Short Axle Nut onto Axle on side with Magnetic Switch Holder 3. Thread Long Axle Nut onto Axle on side away from Magnetic Switch Holder</p>
<p>③</p>  <p>1. Place Wheel Assy against underside of wire cage lid with threaded studs passing between wires 2. Place Washers over studs and thread Wing Nuts or Lock Nuts onto Studs</p>	<p>④</p> <p>Install Sensor (VV-SNSR-ICRW, sold separately)</p>  <p>1. Insert Glass Tube into Magnetic Switch Holder 2. Raise/Lower glass tube to align Sensor Element with Magnet 3. Plug Sensor into LCD Counter (LCDCTR) or DP1224</p> <p>Notes: -Be careful not to break glass tube when inserting into Magnetic Switch Holder -When removing glass tube from Magnetic Switch Holder DO NOT pull wire</p>