

Materials List for:

# A Simple Flight Mill for the Study of Tethered Flight in Insects

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## Materials

Name	Company	Catalog Number	Comments
Data Logger	DATAQ Instruments, Ohio, USA	DI-149	These particular data loggers were chosen because they can be easily connected via USB to a computer and come with free proprietary software (WinDaq/Lite, DATAQ Instruments, Ohio, USA) to visualize and record the sensor's output, increasing the affordability of the flight mill design.
Data Logger - potential alternative			A potential alternative to the DATAQ data loggers is an RS232 to USB adaptor, readily available through office or electronic supply stores. These should be able to read data directly from the serial port via the pyserial module.
Entomological pins	BioQuip		
Hypodermic steel tubing 19 guage	Small Parts	B000FN5Q3I	Available through Amazon.com; other suppliers are available but be sure to purchase austenitic steel tubing to ensure the arm in non-magnetic
IR Sensors	Optek Technology Inc., Texas USA	OPB800W	
N42 neodymium magnets			Readily available; can be purchased through specialized magnet suppliers, hobby stores or Amazon
Plexiglass/perspex			Readily available at any hardware store
Polystyrene columns for support			Any polystyrene or styrofoam packing materials that might otherwise be discarded or recycled can be used to fashion the support columns for the flight mill. Otherwise, styrofoam insulation sheets are available at any hardware store.
Solderless Breadboard Power Supply Module	Arrela	MB102	The 5V power unit, breadboard and solderless male-male jumper wires can be easily purchased as a kit.