Electric Whisk

- An electric hand-whisk is a handheld mechanism used for whisking, beating or stirring different liquids. It generates this whisking or mixing action by rotating the mixing device, also known as whisk, in a vertical manner. This is designed to be as small as it can be and hence is easily portable. A motor drives the whisk, which is immersed in liquids, and performs the whisking action.

This electric hand-whisk:

- is compact and easily portable
- can be used to whisk/mix eggs, whip cream, mix powders in liquid.

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**Materials Needed**

1. 3-d printer
2. 12V DC motor
3. ON/OFF Switch
4. Female pin with DC 12V adaptor
5. Adhesive
6. #2-56 screws

Items to 3D Print

All OpenSCAD and STL files are available here

The part list is:

1. Main Body
2. Whisk shaft
3. Whisk body
4. Upper Cap
5. Lower Cap

Tools needed for fabrication of the whisk

1. MOST Delta RepRap or similar RepRap 3-D printer

Skills and Knowledge Necessary to edit design

• 3D Modelling software - FreeCAD/OpenSCAD
• CURA for slicing and printing

Instructions

1. Print the mentioned in the Items to 3-d print
2. Connect wires to the two ends of the motor
3. Insert the electric motor from the lower part of the main body and place it on the base plate provided inside the body.
4. Draw out the wires from the holes provided on the base plate.
5. Attach the whisk shaft on to the shaft of the motor.
6. Put the lower cap on to the main body and fix it using #2-56 screws.
7. Attach the whisk body on to the whisk shaft.
8. Connect the wire from the negative end of the motor to the negative end of the DC female pin.
9. Connect the wire from the positive end of the motor to the switch and connect a wire from the switch to the positive end of the DC female pin.
10. Fit the ON/OFF switch on the slot provided for it on the main body.
11. Fix the upper cap on the main body using adhesives.
12. Switch ON and use the whisk for desired purpose.

**Cost**

1. Filament- approx $3
2. Motor - $12
3. Female Pin - $6
4. Screws - $1

Total cost- $22

**Working Prototype**

**Commercially equivalent**

The commercial equivalent can be found anywhere from $25 to $350

**Links**

1. DC Motor
2. Female Pin