



## Desktop vacuum cleaner robot

by [jake\\_lee\\_1105](#) on May 3, 2015

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I am an industrial designer from Taiwan, nice to find a place like this to share my stuff with you guys,

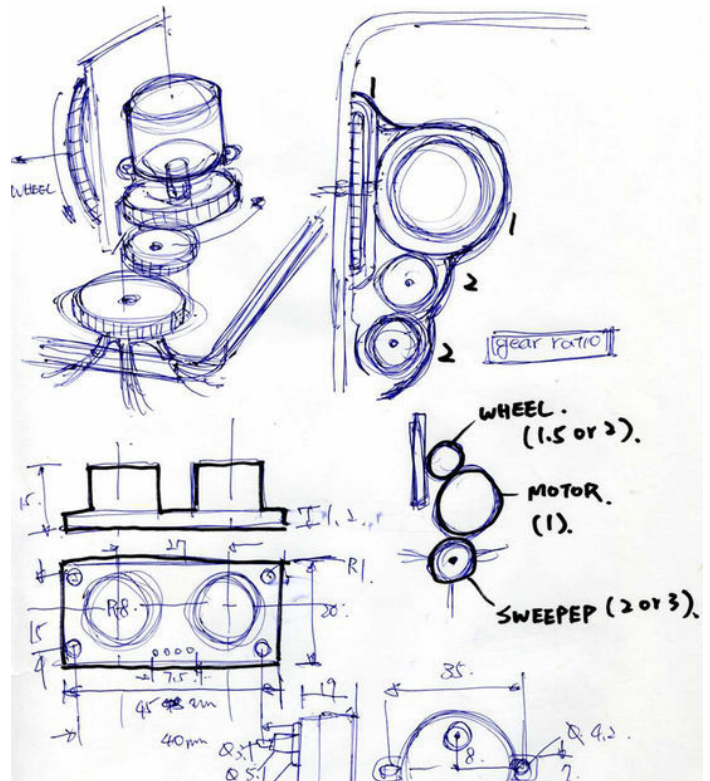
## Intro: Desktop vacuum cleaner robot

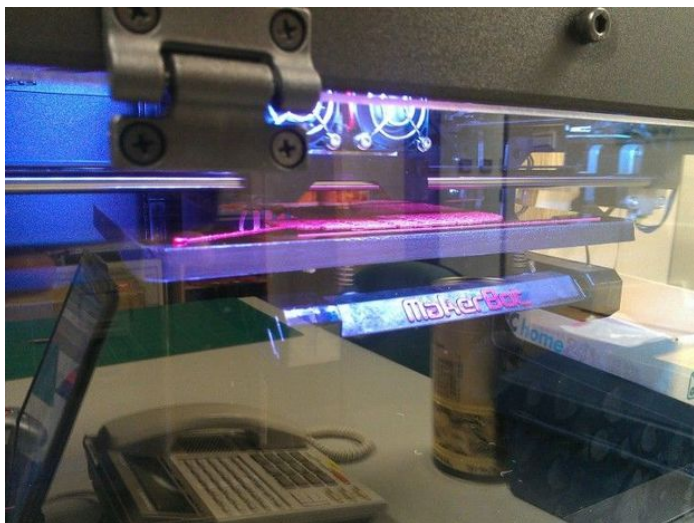
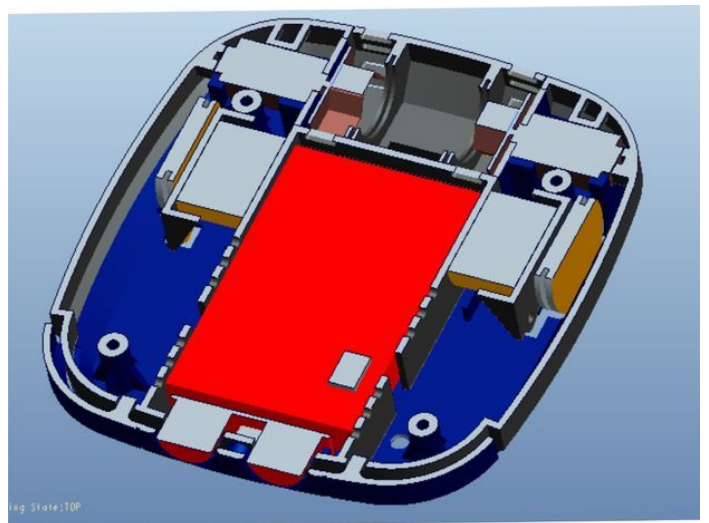
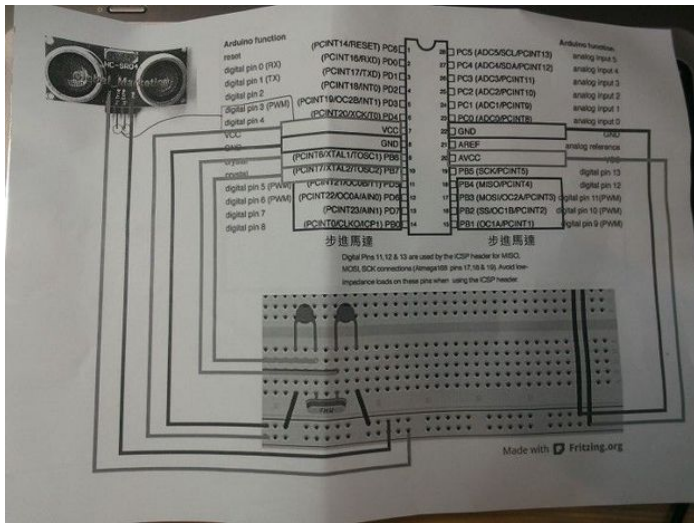
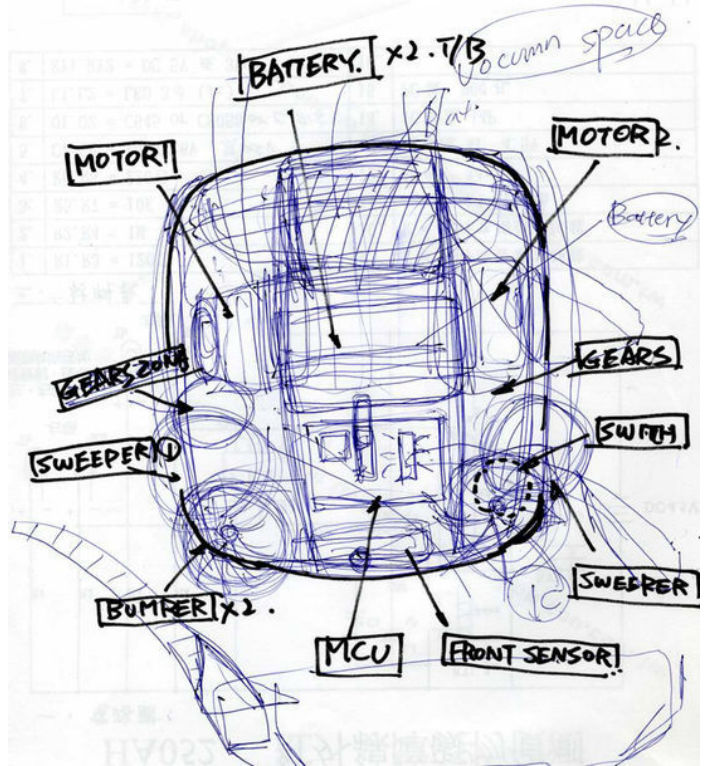
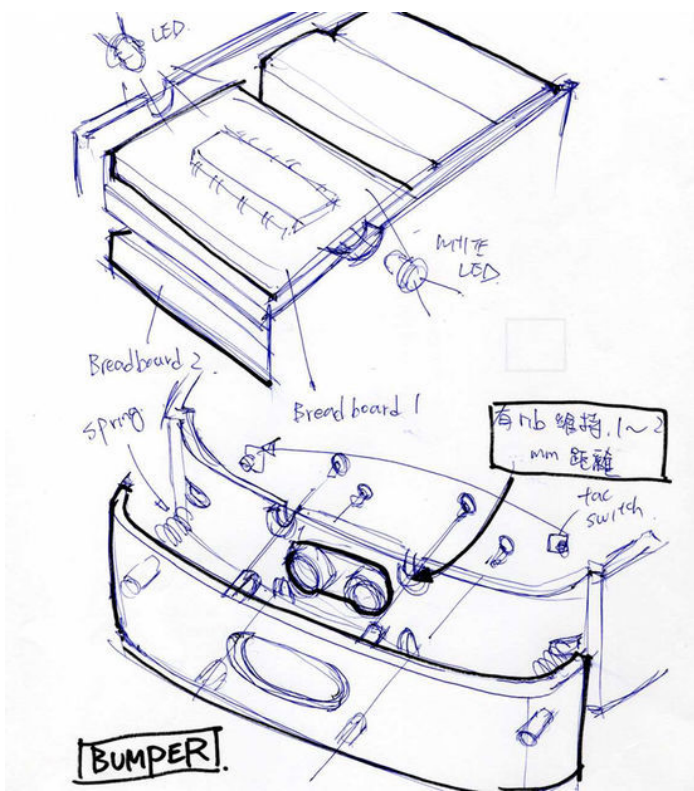
Not long ago, I started to search Instructables to find how to build an obstacle avoiding robot, then I had this idea to build a mini version Irobot vacuum cleaner. The development process takes about 3-4 months since I had to figure out how hardware/software and mechanical works, I built the model in pro-e and printed out with a 3D printer. The device is powered by 5v from any PC's USB port with a USB cable, I use Atmel328IC and coded it with Arduino development software.

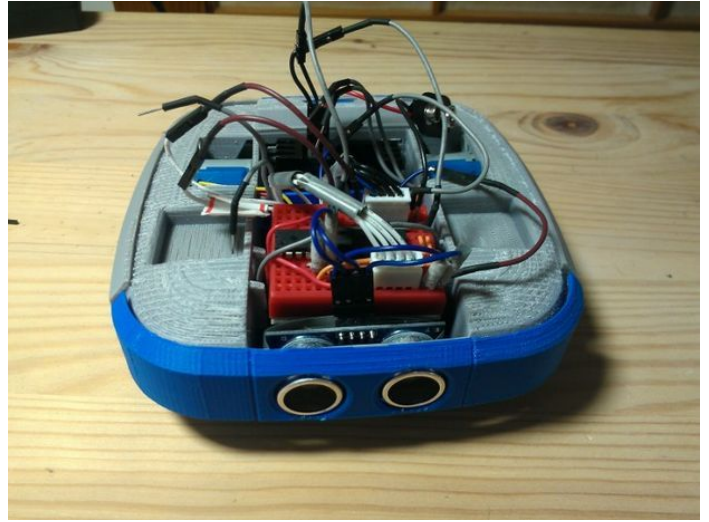
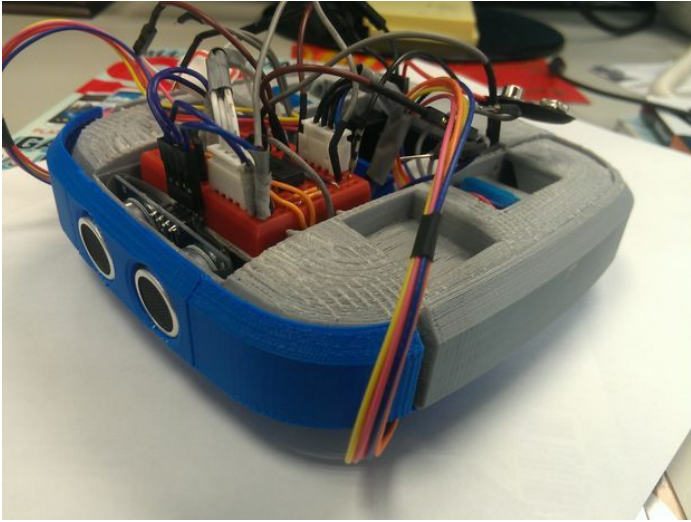
Follows the pics' order. 1) Design sketches. 2) Schematic (hardware) 3) Pro-E modelling 4) 3D printer printout 5) Prototype on hardware 6) Software coding and finished product.

Materials that you need:

- 1) 3D printer and a software that you can build 3D with
- 2) Atmega328P
- 3) 16 MHz crystal / 10K ohm resistor/ 18-22 pF capacitor.x2
- 4) Step motors x 2, and step motors controller x2 <==for travelling
- 5) 5v motor (normal) x2 <== for vacuuming
- 6) Ultrasonic Range Finder x1
- 7) 1 breadboard (or you may want to use Arduino UNO so you don't need to buy all individual components.)
- 8) 1 relay.









### Related Instructables



**How to make desktop vacuum cleaner robot (Photos)**  
by jake\_lee\_1105



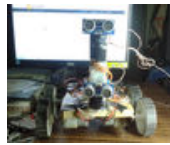
**Robot vacuum floor cleaner** by revrekad



**Obstacle Avoiding Robot with arduino** by kravi3



**Floor vacuum cleaner robot - controlled by Arduino with motor shield, with printed motor-wheels** by revrekad



**Self Obstacle Avoiding Robot** by Pathikrit



**3D Printed Humanoid Robot for under 1000.00 USD** by moverstreet007

### Comments