

# P A R T S

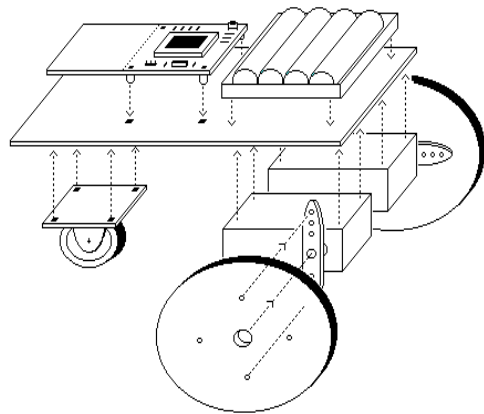
## BIG GROUP FUN:

Several PARTS members have been getting together and assembling a basic robot called B-BOT. When completed, each member will have a small robot, four by six inches, that uses the BOTBoard with a 68Hc11e0 and two R/C servos. The sensors are IR LEDs and a IR detector that helps navigate.

The first meeting was at my house in Troutdale, and we all assembled the BOTBoard. It was interesting seeing six guys, six soldering irons, and four work benches, all in my small work room. Kile Krockner was a soldering maniac, soldering up two boards for every one, the rest of us did. Finally the moment of truth came about when the boards were to be tested. No casualties! All boards worked perfectly.

The second meeting was at Doug Reeder's apartment. The six burning soldering irons kept the room nice and toasty. This part of the project was to be the most difficult, hand wiring the RS232 connectors, with MAX233 chips stuffed inside a DB25 housing. During this three hour session we learned the correct way to braid wire from Jim Peleggi, how to use a tiny wire wrap tool, and Glen Jensen demonstrated how to break a IC pin while soldering. Oops.

The B-BOT project is taking a little longer than I thought it would, but we are having a lot of fun getting together. The next step will involve modifying the servo's, and putting together the body. After that we will tackle software using assembler, PCBUG11, and the Tiny4th compiler.



## Sensor Update:

Hamamatsu has an interesting optical sensor that can detect an object even when flooded with 10000lux of light. The S4282 can be used as a photoreflector by connecting to a single IR LED. This tiny, 4 pin sensor takes care of the LED modulation, filtering, and signal processing, and outputs a logic level signal when detecting an object. Contact Hamamatsu at 408 261-2022 for technical information and pricing

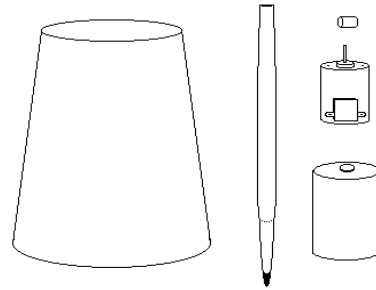
# Yes, but is it ART?

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For this newsletter I decided to do a project that would be fun for robot builders of all ages, even for the hard cord gear-heads. Its a 'robot' that can be built for only a few dollars, and it creates art.

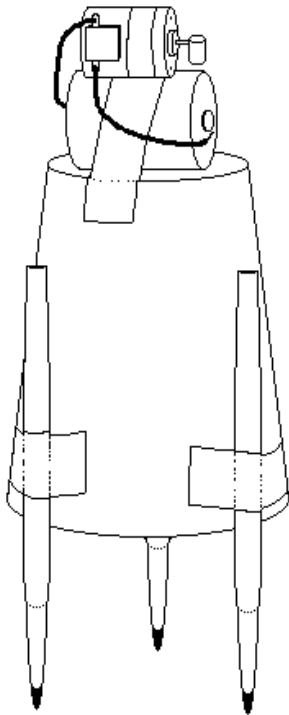
## The items that you need are:

- 3 felt tip pens that are different colors.
- 1 paper cup sturdy enough to be the body.
- 1 hobby motor 1.5v-3.0v.
- 1 battery C size should be ok.
- 1 pencil eraser for the motor weight.
- Misc. Good tape, wire, switch (optional) and drawing paper.



## Construction:

Invert the paper cup, and tape the feltpen legs pointed down like a tripod. If your motor doesn't have wires, solder the wires to the motor.



Next tape the motor to the battery, then tape one motor wire to the negative end of the battery. If you have a switch you can install it now, or else just tape the second wire to the positive side of the battery.

Cut a piece of the round eraser about 1/2 inch long and push it into the axil of the motor. It should be off center, so that the motor will viberate when running.

Now tape the battery motor combination to the top of the paper cup.

To run the robot, take the caps off the felt pens and place it on a large sheet of paper, then turn it on. As the robot dances around the paper you will see many interesting patterns develope. You can move the motor and battery around to get all kinds of designs.

If you experiment with this robot, I think you will find it a lot of fun.