"Making your own is a really easy and fun project. It can be made from almost anything, glued and screwed together with an end result which will keep kids (and adults!) amused for hours. With basic electronics of just a fan and a motor, a bubble machine is also a really easy first electronics project. This one I threw together with spare minutes here and there across the period of a week. The longest part was waiting for the centrifugal fan to arrive from Amazon, the best part was making a lot of mess in the Instructables office before realising that the shower would be a better place to blow bubbles while testing.

My bubble machine was made to keep my friends' toddler amused. She loves bubbles but is at an age where blowing them herself is rather hit or miss (not to mention messy). She spent a VERY happy 15 minutes running through and around them in the street outside, afterwhich the adults stepped in to play with heating the bubbles to see if they'd go higher, or experimenting with different bubble mixes to see if any where noticably better.

Earn 3 months pro membership: Anyone who makes their own bubble machine and posts a photo in the comments will get a code for 3 months of pro membership from me.

Step 1: Tools & Materials

These are the tools and materials that I used for my bubble machine. Yours will differ greatly depending on what you have available. This is a great project to do with scraps, and odds and

ends all hacked together. It doesn't have to look amazing to be a lot of fun, it just has to work. To make it easier for others to reproduce this, I've done away with my normal format of exactly what to use and instead broken it down into the five main components the machine's made from. The 5 steps after this talk about what alternatives you could use and what each has to do to make a great bubble machine. I then give details on how to assemble it if you did it exactly like mine.

Trough: To hold the bubble solution. It needs to be waterproof and not too shallow, that's it.

Bubble Ring: A ring of holes that will spin slowly through the trough picking up the bubble solution. As it lifts out of the trough the holes pass before a blower to form the bubbles.

Motion: A slowly moving motor to spin the bubble ring. A continuous servo is perfect for this.

Blower: Something with a bit of puff. Will force the bubble liquid out of the holes in the ring, forming BUBBLES! I used this 12V centrifugal server fan from Amazon.

Power: A power source or two for the blower and spinner.

You'll also need nuts, bolts, hot glue or superglue to hold everything together.

The files I used for laser cutting are included in this step.

Step 2: Trough

This component could be a cut down milk carton, a tupperware food storage box, some plastic food packaging or an over-engineered, laser cut, orange acrylic, finger jointed trough. I went this road as I enjoy using CAD and **https://www.fakereviews.com/amazon-product/my-bubble-machine-incredible-battery-operated-bubble-machine-with-more-than-500-bubbles-per-minute-output-convenient-with-ac-adaptor-removable-cover-and-smart-handle-blue-yellow** the laser cutter, tools a lot of people don't have.

All that matters is that it'll hold the liquid and you can mount your motor of choice onto it.

Mine was drawn in Alibre Design then the tabs were adding using a beta version of 123d plate which will hopefully soon be available as part of 123d I then laser cut it in 1/8"""" acrylic and used super glue to hold it together. To waterproof the joints I ran a line of clear packing tape down the outside. I also included in the design some slots raised above the trough on which to mount my servo. Hot glue would have worked equally well!

Step 3: Bubble Ring

Next you'll need something that will rotate through the trough to pick up the bubble liquid. Taking the wands out of a bumper pack of bubbles would be a great idea, then glueing them in a circle and mounting the motor at the middle. Of course.... I didn't do that, it had to be laser cut to make use of a tool I had but didn't need.

Mine's cut from 1\8"""" acrylic with 16 holes around a 6"""" perimeter. Each hole has slots cut into it so that it'll hold more liquid. There are holes cut in the middle to mount it to a standard servo arm with self tapping screws.

Step 4: Motion

Next, spinning your bubble ring in the trough. You'll need a motor that you can screw or glue your bubble ring to.

I went for a modified servo, it has a nice slow rotation and requires just two AA batteries. This tutorial by robomaniac shows you how to modify a servo to not require the control signal. You could also use any geared motor from an electronics store or even a standard K'nex or Lego one.

Step 5: Blower

I chose to use a $5 centrifugal fan from Amazon. It runs on 12V and has an air flow similar to a standard PC fan but over a much smaller area. Running at 9V it wasn't strong enough, but on 12V it was perfect.

You could also use a hair dryer, heat gun on its cold setting, a small desk fan with a cone on it. I don't recommend reversing a vacuum cleaner, it made a lot of mess in the Instructables office!

Step 6: Power

The power you'll need for your will depend on the motor and blower you choose. I used 2 AA batteries for the servo motor and a 12V drill battery for the blower.

What motors you choose to run will determine what battery or adaptor you need.

"

http://www.bbc.co.uk/search?q=bubbles machine