Instructables

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Special FX: Almost-free Squirting Blood Effect

Intro

This instructable will show you how to make a Swiffer WetJet mop into a sweet squirting blood effect. Also included is a cheap way to make fake blood. Add on the optional circuitry, and you can get a pretty decent heartbeat effect to boot.

I will update this with more pics, when I make my second unit. (I mistakenly didn't take any while I made the first one.)

Step 1 The Supplies

Ingredients:

- 1 Swiffer WetJet - these tend to break pretty easily, so mine was free
- 1/4" Clear vinyl tubing - length is up to you
- 1 Hose clamp - as small as you can get
- Something to put blood in
- Fittings (If you need them for the blood container)
- 1 SPST switch
- 4 AA Batteries
- Battery Holder (if you want to be fancy)

Optional:

- 555 Timer IC
- 5v regulator
- Potentiometers
- Capacitors
- power transistor
  (I'm not being specific on purpose. Read on for details.)

Tools:

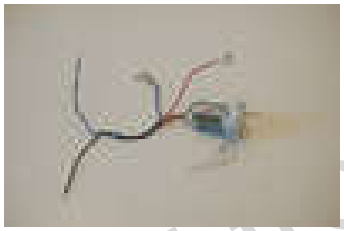
- Set of KEYED Torx wrenches - special tools that are great for lots of special jobs (See Picture)
- Scissors or other cutting implement
- Metal file - fine is better
- Flat head screwdriver, or nut driver
- Soldering Iron + Solder
- Wire strippers

Step 2 Disassembly

This step will remain pretty blank until I make the second one. Just go slowly, and remove parts until you get something that looks like the picture. You will need special tools for this step - KEYED Torx wrenches of a couple different sizes.

WARNING: THERE ARE SOME VERY SHARP PIECES ATTACHED TO THE PUMP

Be careful, and use gloves if you value your fingers.

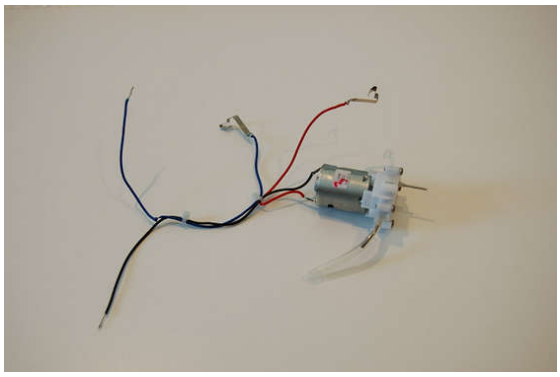


Step 3 Sharp Things

Once you get a motor/pump with some tubing and wires coming off, you are ready to begin assembly.

The intake is very sharp, and is essentially a really big hypodermic needle. Use the file to take off the point.

DON'T USE CUTTERS! - THEY WILL SMASH YOUR INTAKE CLOSED



Output tubing. Leave this as long as you can. I opted to remove the flow restrictors (not pictured)

Step 4 Intake Modification

Cut a piece of 1/4" tubing about a foot or so in length.

Cut a very small (approx. 1/4" length) piece of the tubing that came with the Swiffer WetJet.

Cram the small tubing into the 1/4" tubing - it should be a perfect fit

Modify the hose clamp - bend off the little tabs on the inside of the ring. This will make the hose clamp able to close even tighter, without chewing up your tubing.

Apply the hose clamp to the tubing, directly over the piece of small tubing. Tighten this until there is only the tiniest hole in the tubing.

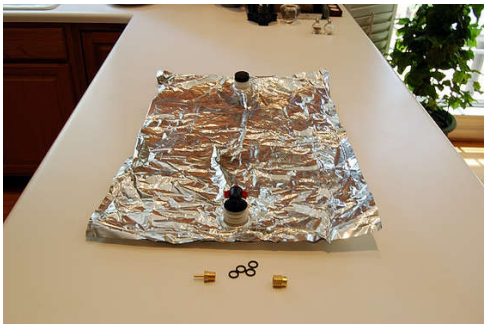
Push the assembly onto your pump's metal intake. It will stay on without any problems. If you are paranoid, you can add tape. I'm not.

Step 5 Bag - O - Blood

If you've ever ordered a Bucket - O - Coffee from a coffee shop or even Chik Fil-A, You've got an awesome refillable blood container.

Drain any leftover coffee from the container.

Tear open the cardboard part as you see fit. Recycle to make some hippies happy. Reserve the heavy

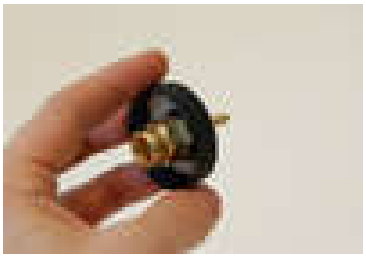


plastic (mylar if it's good quality) bag that once had coffee in it.

Rinse out the bag, and set it aside. Your focus is now on the cap.

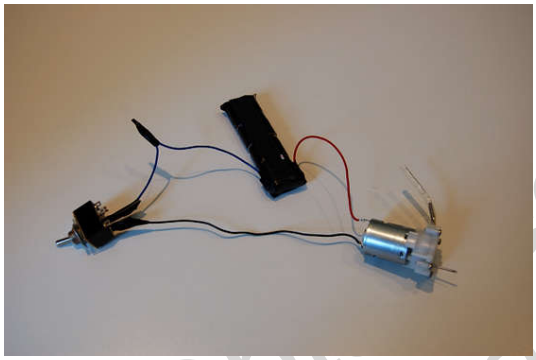
Use your desired fittings (I went with fancy brass, but you don't have to) to make a cap that now has a 1/4" tube attached to it. The other end of this tube should be the one attached to the intake of the pump. (See previous step)

If you can track down some IV gear (saline bags, etc), you may find them better suited for this task.



Step 6 Electrisical Stuff: Part 1 - The Bare Minimum

To drive the motor for the pump, you need 6v @ 50mA (approx. Just do what the manufacturer already has set up - 4 AA batteries).



Set up a simple circuit with your switch, but don't test your pump just yet. It isn't necessarily bad for the motor to run a dry pump, but it's not something you really need to risk.

Use electrical tape or some other method to keep all electronics dry. Do this before adding anything to your blood sac.

Now that everything is ready, it is time to test for leaks. Fill your bag with plain water, and screw the cap back on. Check it for leaks, around the whole thing. Then, turn the bag upside down and check the cap's seal.

If everything looks ok, test your pump out. I was rather impressed with how much liquid it actually could move.

Step 7 Electrisical Stuff: Part 2 - Getting Fancy

If you are like me, and want to have the blood pulse to simulate a heartbeat, read on. Otherwise, just skip this step. I will get some pics up later on, but for now I'm going to assume that anyone willing to go further will know a little something about IC timer circuits.

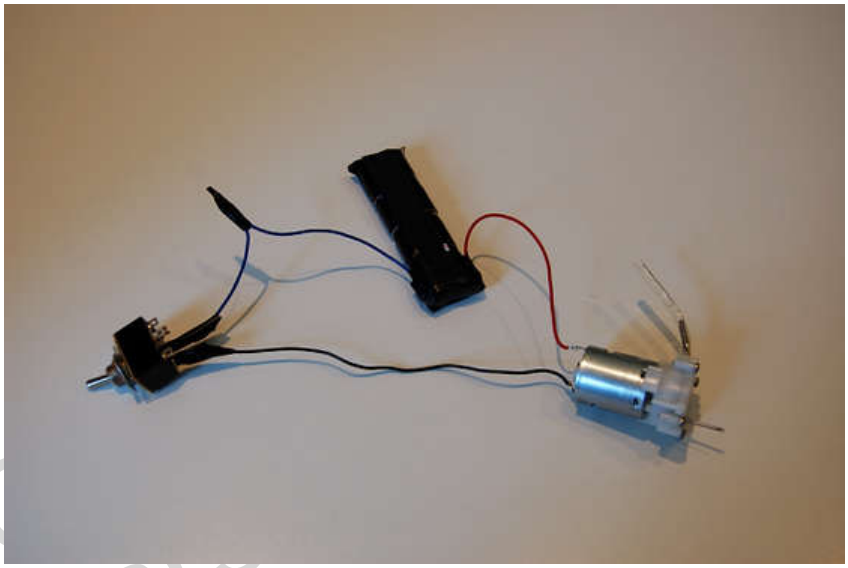
Using the schematic, and solder of course, set up the timing circuit. Before adding it to the pump, have the circuit drive an LED. No need to get your fancy $2-3 timer investment fried for no reason.

What we are looking for is a small pulse with space between pulses. Use the potentiometers to adjust your pulse so it seems close. Remember that blood only travels one direction in a given blood vessel, so don't try to get that second "thump."

Waterproof your circuit as best you can, but maintain the ability to adjust the pulses. Depending on how long your effect tubing is, you will need to adjust the pulse duration.

Extra-Super-Mega-Fancy:

Use a microcontroller circuit, and make the effect as realistic as you like. If your situation calls for an on screen death, you may want to have the pulse length get a little shorter over time. You may also want to add a digital potentiometer or a separate connection with a resistor to end the sequence with a only a fine trickle escaping the fake wound.



Step 8 Blood Recipe

This recipe for blood is so simple, anybody can do it. It is specially formulated to be extremely visible when sprayed or pumped. It is safe to drink, and washes out of most clothing (I won't make any guarantees, just use items you don't really care about when using this effect.)

Off-brand Cherry punch mix - About $.10 a pack, and cases from warehouse stores make it even cheaper.

Water - I used 1 qt per pack of punch mix

Mix, and put it into your blood container. If you are lazy like me, just mix it in the container.

Bonus Points:

If you are going to have blood pooling, or moving slowly along skin, start with half the water and add:
Light corn syrup (No measuring. Keep adding until it is thick enough.)
A dash of chocolate syrup (For a little cloudiness)

If you don't feel like throwing away sweet things, you can use cornstarch or powdered gelatin. You're just going to end up cooking the blood until it gets where you want it.

Step 9 The Fun Part: Applying the effect

Hide your blood container on the character's body somewhere. I chose to hang my bag off my back, underneath my shirt.

Run tubing discreetly, underneath clothing. Long sleeves are better for severed hands.

Use the sprayer for blade slashes - If the sprayer is in just the right spot, it will spray the attacker in the face.

Cover the end of the tubing with a makeup effect, or just hide it in your hand by palming.

NOTES:
This effect is a little harder to pull off as a stage/theatrical effect, since a gallon or so of fake blood will slosh around.

For cinema people, don't have dialogue in the scene unless it is absolutely necessary. The pump motor puts off a bit of noise. Wrap it in a washcloth to dampen sound, and put it in the character's pocket if you must have sound. If you want an even bigger slash-type of spray, check back in a couple months for my next blood instructable.

Disclaimer:
I am not responsible for any actions taken by anybody who uses this instructable to do something stupid. This is intended for cinema special FX.

I took these pictures on a timer, by myself. They are only to illustrate the effect.