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Air Cannon

DISCLAIMER

I DO NOT KNOW YOUR SKILLS AND ABILITIES IN CONSTRUCTING AND OPERATING ANY DECORATIVE PROPS. THEREFORE I CANNOT BE HELD LIABLE FOR ANY OF THE INFO PERSENT ON THIS SITE. IF YOU ARE NOT SURE WHAT YOU ARE DOING, ASK SOME ONE WITH EXPERENCE!

Here's a all new prop for 2003! I was bored one weekend trying to figure out a really simple pneumatic prop, so the idea came about why not build something to create a sudden burst of air, and make it cheap too! A few years ago I saw a friend use a modified propane tank as a air powered confetti shooter. The idea is simple the tank holds a large amount of compressed air at a moderate pressure (40-50PSI) and with the push of a button can release the air in a split second propelling the confetti into the air. Well if you leave the confetti out you get a simple, sudden burst of air. Perfect for a easy scare. Read on to find out how I built it.

Before I continue I would like to mention I do not know your experience level in the use of various tools and knowledge in pneumatics so I cannot take responsibility for your actions. If you are unsure about anything seek the advice/help of someone experienced. I will try to answer any questions you may have.

Here's a good pic of a nice new tank...not some old rusty piece of \$%#@ like the one I used! In case you couldn't tell this isn't the one I used...just to clear things up

First off you need a air storage tank, or something that will work as one. I had a few old propane tanks lying around so I decided that I would use on for this project. The normal valve on the propane tank has a 3/4" thread that mates to the tank, making it easy to adapt it to it's new use.

The only big problem with the tank is two things...first, the tank held propane a flammable gas, and second the chemical added to the propane that gives it its distinct nasty odor. Of course before I took the valve off I make sure no pressure was left, but even with the valve open there is still a small amount of gas that remains. So the first thing I did was fill the tank completely with water, this helps push out the leftover propane.

The tank can also absorb a slight amount of gas into the metal. So because of this it took quite a few times to get the odor/gases out. I used a simple-green/water mix that I filled the tank with to help eat away the odor. I let the tank sit with the water/simple green mix overnight.



Once I got the smell down to a minimum. I then proceeded to assemble the new valve/plumbing for the tank, keep in mind that even after numerous cleaning attempts the tank can still contain small amounts of propane, which can explode.

So use common sense, your going to fill the tank with air which can make a explosion in the tank possible. Chances are minimal as long as proper preparations are taken given the fact that the odor will remain in the tank far longer than the gas. I wanted the tank to be able to fill constantly while the cannon was in operation so I plumbed in a 1/4" quick connect air fitting & shutoff valve.

Since the tank has a 3/4" port I use a T-fitting that has two 3/4" threads and a 1/2" thread, the half inch thread has a reducer bushing that takes the 1/2" size down to a 1/4" size for the air fitting to connect to. To trigger the air I used a 3/4" sprinkler valve. Plumbed into the other end of the T-fitting.

I have a few pictures below to help show the various fittings used. Overall the total cost was about \$25-30 counting the flat black paint I used on the finished assembly.



This is the finished product



This is what the valve looked like

The valve is rated to pressures of up to manufacturer recommends 80PSI when it was new, which is more than enough pressure. The solenoid is designed to run on 24V AC but works on 12V DC fine.

It just takes a fraction of a second to open fully. You will also need to dream up some form of a barrel for the air cannon. I used a section of 1-1/4" PVC pipe. It took a few different fitting to adapt the 3/4" thread to the 1-1/4" PVC pipe. Just keep this in mind...when I first tested my model I filled up the tank to 125PSI, with no barrel.



The second the valve opened the tank spun around all over the place busting several of the fittings. It's less likely to go out of control with 40-50PSI of pressure. But always secure it to something because It does try to move! Once again, another prop/project brought to you by Brad Wulfsberg. Like I mentioned above, this is only a basic idea, feel free to adapt what you see here to anything you want. FREE!!! All I ask for is to give me credit for anything you use off

of this site. Have fun!!! And don't kill yourself !!! ---Brad

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