KidWash 2 : PVC Sprinkler Water Toy

by **m32825** on June 29, 2008

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intro: KidWash 2 : PVC Sprinkler Water Toy

Fun toy with mister jets helps kids beat the heat.

This project owes a big debt to the original KidWash instructable by discontinuity. When I saw it I knew right away it was going on the "must build" list for summer. A great combination: simple project, lots of fun for the kids!

I headed down to the PVC section of the local home improvement store to pick up supplies. While browsing the adjacent sections for interesting stuff I noticed the micro-irrigation section and inspiration struck: KidWash with mister jets!

The modification worked great. We turned it on and kids from up and down the block started showing up to help with the testing. It's a lot of fun on foot, but my kids also get a blast out of riding their bikes through it (just like dad at the carwash).

Pictures courtesy of J. Good Photography

step 1: Get your parts

Head to your local hardware store for the following 3/4" pipe and fittings:

2 ten foot lengths of PVC
3 end caps
1 threaded female hose connector (slip fit)
2 elbow joints (90 degree)
2 T connections
1 pack quarter circle mister jets (12 count)

If the option of chaining your KidWash with other water toys interests you, just pick two end caps and add:

1 threaded male hose connector (slip fit)
1 hose cap

Note: you want the PVC hose connectors, not the more expensive metal fittings. Don't give up if they're not with the other PVC fittings, I found them by the sprinkler parts.

The misters used here are from www.mrlandscaper.com, a brand carried by Lowes.

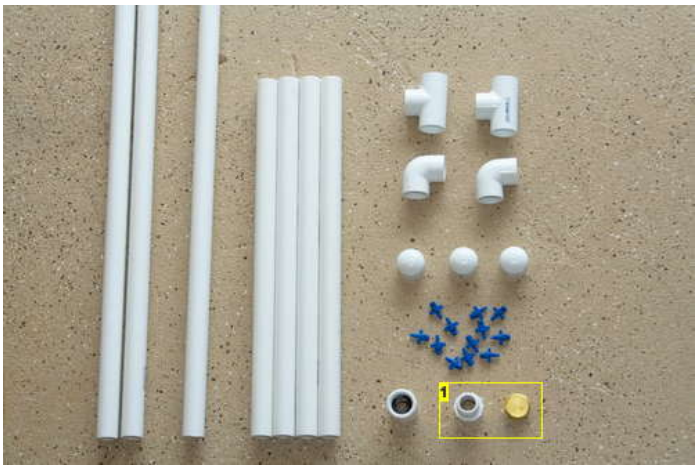


Image Notes

1. optional parts for chaining

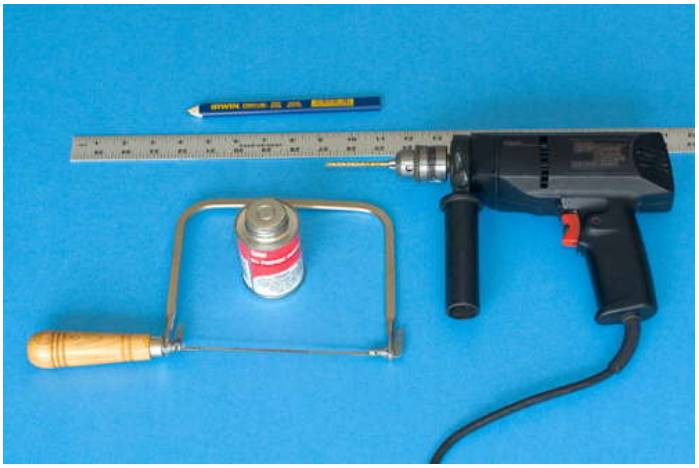
Image Notes
1. look for 90 degree (quarter-circle) misters
2. these were rated at 10 gallons per hour per mister

Image Notes
1. optional parts for chaining

step 2: Get your tools

You need:

measuring device
pen or pencil
saw
PVC cement
drill
5/32" drill bit



step 3: Cut pipes

Time to cut. You will need the following sections and sizes:

2 at 5 feet
1 at 4 feet
4 at 18 inches

Cut one of the 10' lengths in half so that you have two 5' sections.

Then, cut a 4' section from the second one. Cut the remaining 6' section in half and then each of the 3' sections in half.

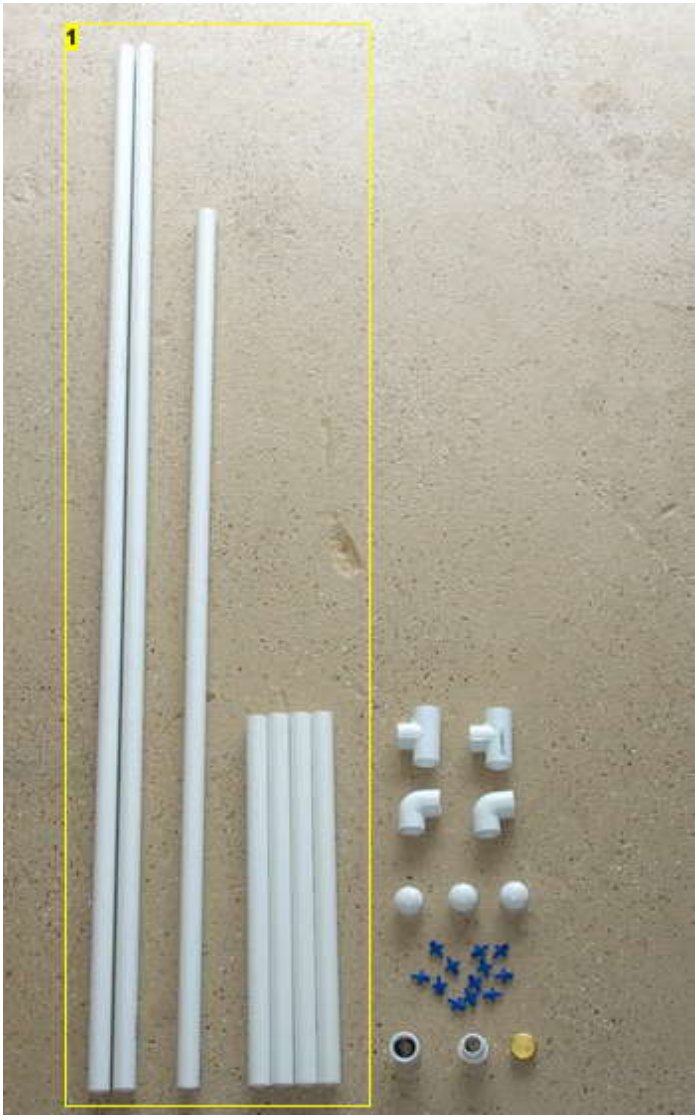


Image Notes
1. how pipes should look after this step

step 4: Make a center line

We want all the misters pointing more or less in the same direction, so start out by making a center line on the three longest pieces of pipe. Hold two pieces of pipe next to one another and use one as a guide to mark the other. The angle you hold your pen/pencil at isn't important, just keep it the same and you'll end up with a straight line.

step 5: Mark locations for misters

I had 12 misters, so I decided to put four on each side and four along the top. If you've got the same setup, measure 9" from the end of each pipe, mark it, and then mark three more locations at 10" intervals. This will center the four misters along the top, and provide nice coverage on the sides.

step 6: Drill holes

I found that a 5/32" hole was perfect for my mister jets, but check yours before drilling holes. The mister jets have threads and a taper that increases as they go in. The bit should leave a hole that allows the bottom to slide in easily, but engages the threads where they start. With the right combination you'll need to bear down to get the first threads to "bite", but after the first or second turn they'll cut their own threads into the pipe for a tight fit.

step 7: Assemble upright pipes

Make sure there are no PVC chips or other debris in the pipes before assembly. Fit the drilled pipes together to form a "U" shape with all the drilled holes facing up. The drilled holes on the side pieces should be closest to the end with elbow joint (near cross piece). Once you're satisfied glue up the "U", making sure the holes stay facing up.

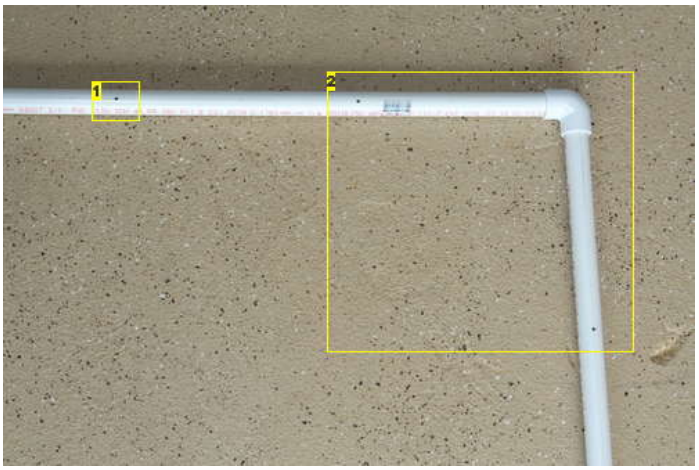


Image Notes

1. make sure all holes face up before gluing

2. distance from closest hole to elbow should be the same for top and side piece

step 8: Screw in mister jets

Screw the mister jets into the holes. You'll need to bear down at first to get the mister jet threads to bite, but after a turn or two they'll burrow into the pipe just fine. When you get down to the last turn or so, align the jet so it faces inwards. Angle the jets near the corners towards the center so that the water goes where the action is.

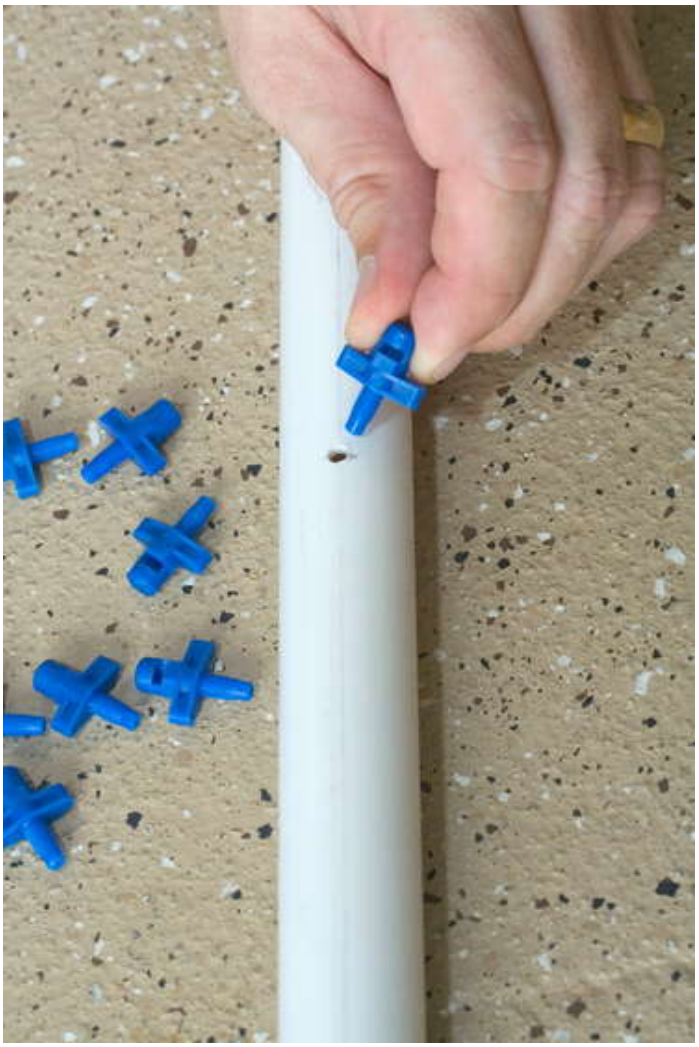


Image Notes
1. detail showing how mister cuts threads into pipe

step 9: Glue base

Now that the "U" is glued up and has the misters are installed, we need a base to stand it up on. Two options are pictured below. The left one is the default setup, the right one has the option to support chaining. Check the fit of all your parts and glue them up.

Image Notes
1. this is the default, capped

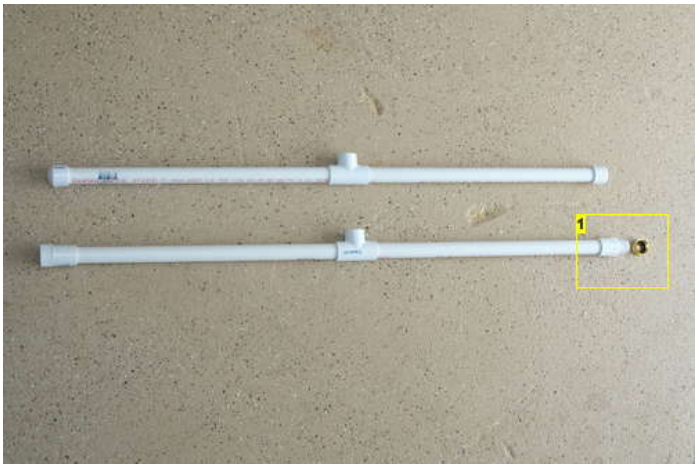


Image Notes
1. male hose connector with matching cap to support chaining option

step 10: Attach base

Assemble the "U" and the base without glue. Make sure the base pieces are parallel with each other, and perpendicular to the plane of the "U". You can place the base pieces on either edge of a sidewalk for a handy reference before gluing it up. Line the "T" pieces up with each side of a crack, then make the base pieces parallel to the edges of the sidewalk and you're ready for glue.

step 11: Try it out

Let the glue dry before testing. I know, it's hard. Clean up while you wait, it'll be dry in no time.

Turn the water on low enough that you get a little spray from all the misters. Check and adjust the direction of the misters to direct the water towards the center.

Turn it on full and look for leaks around the base of the misters. If you find one, you can use a wrap of teflon tape around the base of the mister to stop it.

This project uses 12 misters rated at 10 gallons per hour, for a total of 120 gallons per hour. I don't know how that compares with other water toys, but in an era of increasing water restrictions, getting the most out of the water you do use is a good thing.

step 12: KidWash times two -- optional chaining

If one kid wash is fun, then two must be more fun, right?

The pictures below show a hose connecting the two, but if you want them right next to one another you can connect them directly together. If you're going this route, make sure the connectors are going to match up before gluing the base to the second unit.

Image Notes
1. parked in the cool zone

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Water bottle sprinkler cap by frithiofandersson

Comments

50 comments Add Comment view all 95 comments

rsolimeno says: Jul 10, 2009. 5:41 AM REPLY

I made this project a couple of weekends ago with my 4-year old daughter and it was an immediate hit! Yesterday we took the Kid Wash 2 to her Day Care for "Water Day" and all of the children there had a terrific time!!

This project has really brought so much joy to so many children - I think the designer deserves an award!! THANK YOU SO VERY MUCH FOR SUCH A GREAT PROJECT!!!

28.martine says: Jul 5, 2009. 1:12 PM REPLY

It is very hot in Holland right now and I was thinking about a misting system on our terras. Glad I found this Instructable. I saw the terras misters in France and ever since I wanted to make one. I want a really fine mist with no water drops because of the pillows on the sofa. Can you adjust the spriklers? I have really no idea.

boblordofmonkeys says: Jul 2, 2009. 6:08 PM REPLY

thanks ill try it

smasumur says: Jul 2, 2009. 1:31 PM REPLY

Oooh, I have a project for the weekend now. I'm thinking of making a cube configuration with shutoffs to limit spray from various sides to a different spray effect (or water saving). I figured that with a cube, I can make a cover to put over it so it doubles as a fort when it's too cool for the sprinkler.

I'll have to think this one through before dashing off to the Home Despot. If I design it right, I may be able take it apart and store it flat for the winter.

wperry1 says: Jul 2, 2009. 8:39 AM REPLY

Great job! I have a new weekend project.

wadadli says: Jun 28, 2009. 9:01 PM REPLY

Great Idea.

I will be using this same concept for my 4th of July party. I have one of those pop up canopy tents. I constructed 2 mister bars to afix to the framework across two sides. This will become the cooling tent if when needed.

thinkdreams says: Jul 18, 2008. 7:15 AM REPLY

Here's mine, and it's very easy to do. I made some modifications that add easy storage and some height (for adults - hey, we need to have fun too!)

Post: http://www.bushwoodworking.com/
Pics: http://www.bushwoodworking.com/zenphoto/projects/kidwash2/

m32825 says: Jul 20, 2008. 9:20 PM REPLY

Well done, good mods, thanks for sharing!

bearcat73 says: Jun 25, 2009. 7:01 AM REPLY

I would like to make mine taller too, because my kids are tall. I'm thinking 6 foot. Would that be doable (stability wise)?

jyoung720 says: Jun 22, 2009. 8:07 AM REPLY

kidwash + pool

micah1_8 says: Jul 28, 2008. 6:53 AM **REPLY**

Are the jets really necessary? I would think that you could just drill tiny holes into the pipe and it would effectively do the same thing wouldn't it? Or are the jets needed to shape the spray?

jyoung720 says: Jun 15, 2009. 1:58 PM **REPLY**

Personally, i think the jets really make a huge improvement over drilled holes

m32825 says: Jul 28, 2008. 5:38 PM **REPLY**

The original KidWash used drilled holes. Check it out here, there are some pictures of it in action.

jyoung720 says: Jun 14, 2009. 7:03 PM **REPLY**

Just built this for my daughter (turning 3 in 2 weeks). What a fun build! Really quick, cheap materials, and a huge payoff. My daughter loved it! I found everything I needed at Lowe's. Total cost was about $20. Would have been a lot cheaper but I bought the 5 foot lengths of PVC instead of the 10 foot lengths. I made the top pipe 5 ft. long instead of four, so just in case you're wondering- 3/4" PVC will hold that span. Still used 12 misters, 6 across the top and 3 down each side. I had no idea the spray would be so fine. If there's a wind it caries the tiny droplets quite a distance. It was a big relief even for the adults this weekend in (always scorching) Houston! The mister jets really make a huge improvement over the original Kid Wash. Thanks for sharing!!

bscarano says: Jun 9, 2009. 5:14 AM **REPLY**

OK, So I set this up this past weekend. The kids loved it, although it was a little cold outside.

I was unable to find the MisterJets at Lowes, however, you can order them from their website or go directly to the manufacturers site and order (takes about a week).

All in all, turned out great, I didn't glue the feet, but they don't seem to move even at the highest pressure from the hose.

Great Instructable, it's now a fav.

kennedyl says: Aug 3, 2008. 5:13 PM **REPLY**

My son (14) and daughter (11) made this this weekend. They spent about 3-4 hours on it and had minimal help from dad. The instructions are very clear and it works great!!

m32825 says: Aug 4, 2008. 5:40 PM **REPLY**

Thanks for the feedback. Well done!

Lance Mt. says: May 17, 2009. 11:44 PM **REPLY**

Hey... I'm 14... This might just work!
-Yes!, Chris

Lance Mt. says: May 17, 2009. 11:42 PM **REPLY**

DUDE! I WANT IT!

Lance Mt. says: May 17, 2009. 11:43 PM **REPLY**

DUUUUUUUDE! This is sooo a 5/5
-Making one this weekend!, Chris

darrenfixler says: Apr 5, 2009. 11:22 AM **REPLY**

This was so easy to build and my kids love it. Thanks so much!!!

DIYoleSkool says: Sep 15, 2008. 10:42 AM **REPLY**

AWESOME Instructable!!!!! I built one as soon as I saw it!!

The mister part needs to be purchased at Lowes.. PART# MLM-03B

Runners who run outside in the heat, you NEED this!!!!

THANK YOU FOR POSTING THIS PROJECT, GREAT JOB!!

BobS says: Sep 5, 2008. 9:00 PM **REPLY**

When my kids were younger, I used to have a collection of pipes, knees and tees, but also valves and sprinklers. I let them build a contraption themselves, with the garden hose connected (first with some supervision). The pipe- tee connections sometimes had to be re enforced with a piece of teflon tape or aluminum foil. To add to the fun, I had a timer connected to the water supply.

midwife says: Aug 11, 2008. 2:11 PM **REPLY**

Thank you for posting this. We looked around and took it a step farther to make the deluxe kidwash that we found on another site. It has been a hit in the neighborhood.

clymusa says: Jul 26, 2008. 5:55 PM **REPLY**

This is an amazingly inexpensive project! I bought all the stuff I needed, plus made a few changes. all for $10.79.

Ours had:
- 12 misters (well 11 as I broke one off too trying to get it straight!)
- used 1/2 inch PVC pipes
- used a 1/2" to 3/4" threaded L connector
- then used one of those "quick connect" ends (about $1.20). I just drag my hose (with the main Quick Connect uhm...connector) and Click it on.
- Also, I glued all the parts except for the top bar for easy disassemble for storage.

Also once its full of water, it needs very little pressure to keep it going. BTW, the weight of the water in it keeps it pretty stable.

The kids had a blast! Thanks!

m32825 says: Jul 26, 2008. 7:59 PM **REPLY**

Thanks for the feedback, good job!

micah1_8 says: Jul 22, 2008. 7:33 AM **REPLY**

When I saw this, it inspired me. I'm thinking of making a wand like this. It'd be great for a spot-free rinse when washing the car. I'm also picturing a "V" shaped wand with a splitter valve. One leg with the mister jets, the other with plain holes to allow more water for heavier rinsing. Should work, shouldn't it?

A good name says: Jul 25, 2008. 9:57 PM **REPLY**

That's an awesome idea... making your own carwash kinda thing right?

Maybe just put it in the driveway and when you have to get your car clean in a hurry just flip it on and drive through it then have someone turn it off.

m32825 says: Jul 22, 2008. 3:35 PM **REPLY**

For a spot free rinse I think you need to use softened water, or else any drops that dry will leave little calcium deposits behind, at least that's what happens with groundwater here in Florida. Regardless, your idea might be a good way to reduce water usage when washing the car. You could do an instructable for the "Ride" category!

kraigmason says: Jul 21, 2008. 6:33 AM **REPLY**

Made this over the weekend.
http://www.flickr.com/photos/42635713@N00/sets/72157606278600768
That is a photo set plus final video.
Couple of points to consider...
Home Depot DOES NOT have the mister jets...had to get those at Lowes.
Also, be careful screwing in the mister jets.
They can crack if you screw them too tightly.

Great Fun!

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m32825 says: Jul 22, 2008. 3:31 PM **REPLY**

Well done, nice pics!

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nolefan says: Jul 13, 2008. 7:01 PM **REPLY**

I built one today for my kids. I made the legs 3 foot long instead of 1.5. I also found a brass hose connector that I attached to the PVC using 3/4 inch threaded PVC adapter. The kids love it. I have some extra 1 inch PVC around in the yard and plan to build a larger one next weekend. The mrlandscape misters worked great. One of my misters broke off on the top while screwing it in, so I have a long stream shooting out about 10 feet on the approach, but it adds a nice touch. I'm not sure I am going to fix it. I would advise using newer PVC. I used a used piece that was in the yard for the top and the misters did not grab very easily and one broke off. The new pvc took the misters without any problem. Great Instructable. Easy to follow.

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m32825 says: Jul 20, 2008. 9:40 PM **REPLY**

Thanks for the positive feedback. Good point about the relative "threadability" of new PVC compared to old PVC, and well done hooking the kids up with some cool summertime entertainment!

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kaline says: Jul 20, 2008. 9:24 AM **REPLY**

This is great. Built it yesterday, fired it up today, and the kids love it.

I'm with jer2665. I never did find the pvc hose adapter (I was at Lowes). I ended up using a threaded/slip-on connecter, screwed in a metal hose adapater, and then added a female adapter on top of that. Other than that, it was pretty easy to do. (With the exception of tearing up my finger trying to screw in the misters...use pliers!)

But, for somewhere between $15-$20, it was a great project for my son and I to build, and so far it's a big hit.

Thanks!

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m32825 says: Jul 20, 2008. 9:35 PM **REPLY**

Good job, thanks for sharing. That PVC hose adapter at Lowes is tricky to find, it was in the irrigation section at mine, across the aisle from all the other PVC fittings.

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fl_james says: Jul 18, 2008. 1:31 PM **REPLY**

There are two types of spray heads - fogging and misting. The fogging type will produce smaller water particles, which will result in lower condensation. Of course, here, getting wet is part of the fun, but the little foggers are great for other places, like the porch. They work well even in humid places like here on the West Coast of Florida.

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katalyss says: Jul 19, 2008. 7:15 PM **REPLY**

Any idea where I could find the fogging type?

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fl_james says: Jul 20, 2008. 6:24 AM **REPLY**

I got mine at Home Depot. They are in the sprinkler section.

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m32825 says: Jul 20, 2008. 9:33 PM **REPLY**

What pressure do you use with your fogging heads? Do they work well with regular water line pressure, or do you have to go a lot higher? Seems like I recall the pumps I looked at for fogging systems deliver water in the 1000 psi range, which requires a lot more strength than PVC can offer. Or maybe that's just for best performance?

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jer2665 says: Jul 19, 2008. 5:29 PM **REPLY**

I made this for my niece this afternoon, and what turned out to be an annoyance finding a certain piece turned out good.

Headed to Lowes and found everything but the pvc-host connector, tried Lowes and Home Depot, (those stories being as absolutely awful as they are, obviously I couldn't find anyone to help me) so I kept searching and found a pvc slip fit to threaded female for the hose but the female end that connected to the hose didn't spin. I grabbed a brass shut off valve that did spin to attach to the hose, so i screwed it into the fitting and now have an easy to turn off unit.

This actually turned out to be great since I now have a simple valve i can shut off at the unit so my niece is much more likely to flip that, than go to the spigot and keep turning that till it's off.

m32825 says: Jul 20, 2008. 9:30 PM **REPLY**

Cool, thanks for sharing. The first time I went the Lowes the person who helped me could only come up with a brass fitting, even though I described the PVC one I had seen previously: so even finding help is no guarantee!

Anyone who built the default model could upgrade it with an inline shutoff between the hose and the KidWash; I think that's a good suggestion.

optimized4perfection says: Jul 19, 2008. 9:00 AM **REPLY**

great for people who accidentally set themselves on fire!

m32825 says: Jul 20, 2008. 9:26 PM **REPLY**

Haha, I love that comment... way to think outside the box!

mdmaddox says: Jul 18, 2008. 8:52 AM **REPLY**

If you want to make a motion activated you might modify one of these. Scarecrow Motion Activated Sprinkler
http://www.backyardstyle.com/shop/index.php?page=shop-flypage-2573

m32825 says: Jul 20, 2008. 9:25 PM **REPLY**

Thanks for the link. We're working on something that I think will be really neat, stay tuned for future developments...

OrangeWhip says: Jul 7, 2008. 9:00 AM **REPLY**

My family and I built this over the long weekend. The kids love it! We broke a mister jet when putting it together so I need to pick up a new one. We're already thinking of enhancements that we can make.

And to you folks complaining about water usage... if you really want to conserve natural resources, turn off your computer. You're wasting power that could be used by Africa. Letting my kids run through a sprinkler for 15 minutes is no big deal.

A good name says: Jul 13, 2008. 8:14 AM **REPLY**

Yeah, as long as you don't do it on the pavement it should be okay, because it just goes into the grass.

A good name says: Jul 13, 2008. 8:15 AM **REPLY**

Also try to only have it on when the sun is setting.

cudubh says: Jul 12, 2008. 8:37 PM **REPLY**

Made one this weekend. The longest part was finding the female hose adapter. The kids love it. I have a feeling that we will have lots of kids in our yard before the summer is over.

dianep says: Jul 9, 2008. 2:27 PM **REPLY**

Great idea, I love it!

view all 95 comments