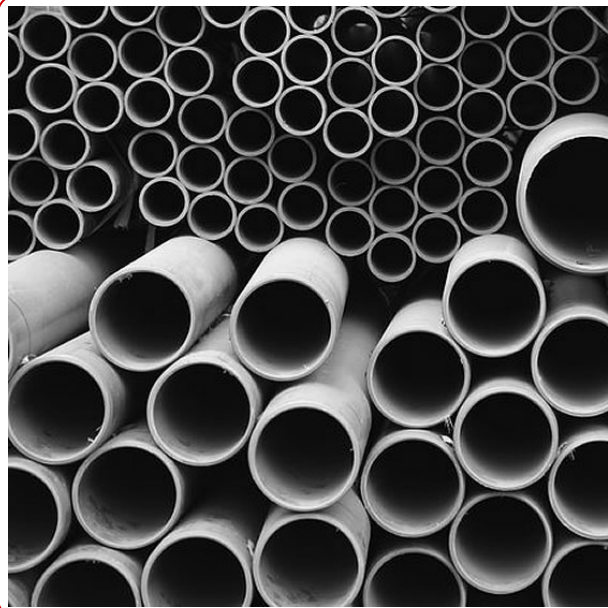


What Pipes to Use

Advice on choosing the right plastic pipes

Since taking up the didgeridoo I have tinkered and experimented with plastic pipes to see what makes the sound and to try and make it sound good.



I look at this in two different. Firstly what size pipe or tubing do I want in order to create the sound I want ie what length, diameter and thickness of walls, then secondly, where can I get it the easiest and cheapest. Whatever meets these criteria is the right one. Plumbing and guttering pipes are the obvious answer as they can bought in hardware and diy shops such as B&Q, Wickes.

Of my experiments, successes and failures I ended up preferring the 32mm (1 ¼") waste pipe from Wickes.

As it is plumbing pipe and used for waste it has good resistance to wear and tear. Part of its testing is for heat, both hot and cold, and as a result does not suffer from rapid change in moisture and environment. It does expand and contract, but does not fall apart. Cost wise it comes in at under a pound for 2m (6' 6") and if cut carefully can make two didgeridoos of different keys.

The wall thickness is relevant here because if to thick the instrument will lack resonance and therefore lose a lot of the quality of sound. If to thin the plastic can be awkward to use and manipulate. Waste pipe is normally 2mm thick which is enough material to allow for vibration when played, and is thick enough to work.

As this is what works best for me, the remainder of these pages on how to make a plastic didgeridoo use this size pipe unless otherwise stated (like when making a slide didge or large bells).

Regardless of where I have bought pipes from, they all seem to have printing down the length of them. I tried scraping and sanding this off and became quite frustrated before thinking practically. In most cases a soft cloth with a small amount of white spirit soaked into it, then rubbed along the print will remove it without any surface damage. Doing this also has the advantage of degreasing the pipe.

Let it dry thoroughly before heating the plastic to shape it in any way.

What length to cut them

A pipe of given dimension will sound different with each person that plays as each person plays with a slightly different amount of air pressure. A good way of getting out of answering. I decided to conduct an experiment so I at least would understand how the sound changes with different lengths, thicknesses and diameters of pipes.

The following results are based on 32mm diameter waste pipe. I started with a 2m (6' 6") pipe and cut lengths from it of 5cm (approx 2"), testing the pitch with the new length. When I played near a key I cut lengths of 1cm until I had the key spot on. I repeated this process until I could not produce a drone. The pipe was not fashioned in any way ie mouthpiece, bell or bore.



The experiment was repeated on a different day and, guess what? Yep, I got different results. I did a third test on another day, with a third set of slightly different readings. So I decided to use the mean average of the three figures as my lengths. Since then it has proved fairly reliable for me.

- A# = 74cm
- A = 77cm
- G# = 83cm
- G = 88cm
- F# = 94cm
- F = 100cm
- E = 106cm
- D# = 112cm
- D = 118cm
- C# = 124cm
- C = 130cm
- B = 136cm
- A# = 142cm
- A = 148cm

How to cut the pipes

Lots of tools can be used to cut plastic. If you use a saw of some description then try to use a blade with a high number of tpi (teeth per inch) as the more teeth the smoother the cut. Don't try to use a Stanley knife or similar as the plastic is far too abrasion resistant to cut easily. A hacksaw or junior hacksaw is fine.

If the blade is too coarse - too big for the job, or there are too few tpi, the plastic can fracture and chip causing you to start over. Plastic less than 2mm wall thickness is more susceptible to chipping than thicker material.

Once you have cut the pipe to the length you want, tidy up the edge that has been cut. If the cut is not straight then you can use a file or rough sandpaper (a solid block with sandpaper wrapped around is best), to even the edge. Work through finer grades of sandpaper to end up with a smooth even finish.

Alternatively, you can purchase a plastic pipe cutter.

The one I have cost less than £10. Make sure it will cut the diameter you want as the cutters come in different sizes. This makes cutting a simple and quick process and reasonably square as well. As the blade cuts rather than saws the plastic, the cut itself is clean meaning you do not have to clean up the cut edge as it will be smooth. Take care though as it can leave a sharp edge that you may want to run a fine piece of sandpaper over to smooth off.

Whatever you use and however you do it, it is easiest if you secure the pipe first, holding it square in something like a workmate. Most mouthpieces are square, or perpendicular to the pipe. It's amazingly easy to cut the pipe at an angle and even a small amount can make a big difference. If you have a straight cut it is simple to change it to suit the shape of your mouth. Cutting skew wiff makes it harder to get a good mouthpiece.

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