

A PERCUSSION INSTRUMENT -- using found objects

by **Thinkenstein** on June 5, 2009

Table of Contents

intro: A PERCUSSION INSTRUMENT -- using found objects	2
step 1: THE BASE	2
step 2: HEAT FORMING	3
step 3: MOUNTING THE FOUND OBJECTS	4
step 4: THIS IS HOW IT SOUNDS	5
File Downloads	5
Related Instructables	5
Advertisements	5
Comments	5

intro: A PERCUSSION INSTRUMENT -- using found objects

"The Phoenix" is percussion instrument that recycles found objects. The objects are organized in space on a frame made of PVC pipe and standard pipe fittings. They are mounted to the base using heat-formed PVC connecting units, pop rivets, nuts and bolts, hose clamps, or other means.

It is unlikely that any two collections of found objects will be the same, so the finished instruments will also be different and involve user creativity to solve unique mounting problems that may arise. Some collections may use legs and sit on the floor. Some may be mounted to a wall, or hang from a ceiling, or involve any combination of the above.

The objects are mounted in space so that they do not touch, and will vibrate independently of each other to avoid buzzing or rattling sounds. Only available materials limit size and the variety of sounds that can be produced. "The Phoenix" can be played with drumsticks of metal or wood.



step 1: THE BASE

The base for mounting the found objects is made of PVC pipe and standard pipe fittings. Once the objects are organized, I use PVC cement to join the connections in the base so that the base will not fall apart under heavy use. I do not cement the pipes of the found object connecting units into the base sockets. That way I can remove them later for tinkering or transportation purposes.

This particular base is half attached to a table edge and half suspended by wires from overhead in order to adapt to its unique location in my house. PVC pipe legs could be used instead to make it a free-standing instrument.



step 2: HEAT FORMING

PVC (polyvinyl chloride) is a thermoplastic. It softens with heat and holds its shape when it cools. It can be sawed, drilled, filed, and scraped with common workshop tools. It can be heated over a gas stove to soften large areas. A propane torch can be used for heating smaller areas.

Because it can be so flexibly formed, it is an ideal material for holding the found objects at any location in space. It can conform itself to irregular shapes, and can be attached to them with pop rivets, nuts and bolts, hose clamps or by other means.

Objects that are struck will sound differently if they are held in different locations. If a bell object is held at the base it will ring clearly. If it is held at the lip, the sound will be deadened. Each object has to be experimented with to find the best place to hold it.

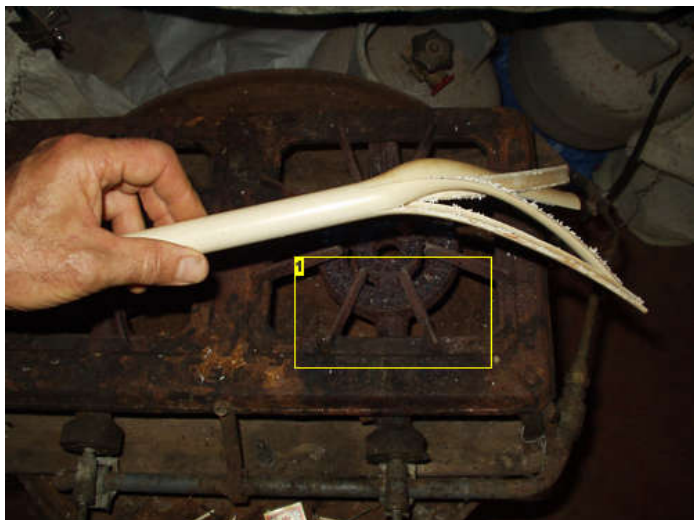


Image Notes

1. Due to the camera flash, the flame of the stove is not visible in this picture.

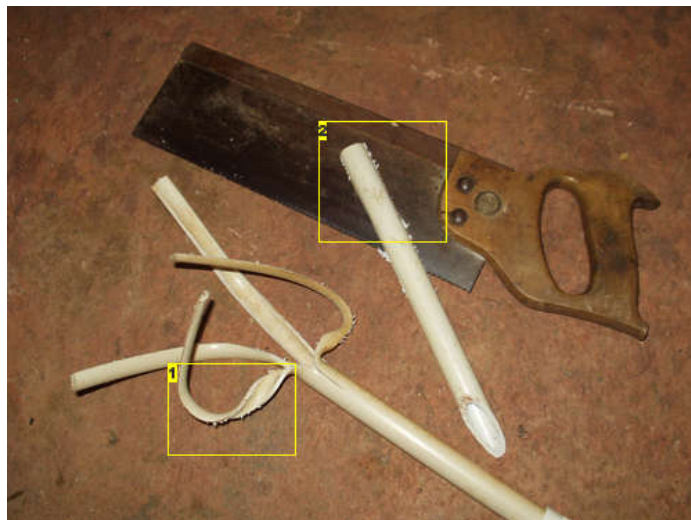


Image Notes

1. Rough edges can be smoothed using a scraping tool, or file.
2. Saw pipe length-wise to make an "octopus".



Image Notes

1. Objects can be easily attached with pop rivets.

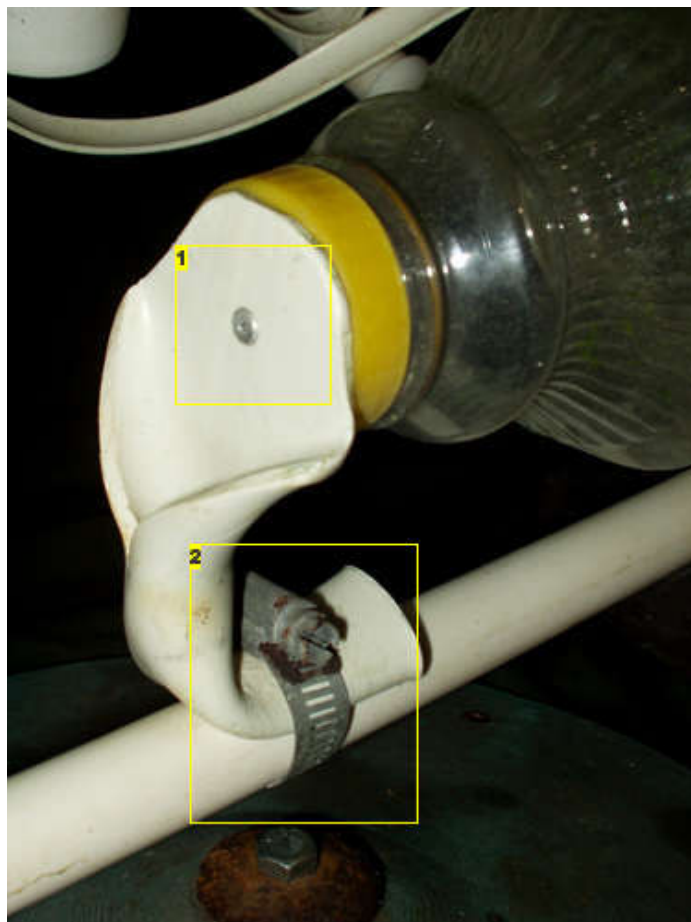



Image Notes

1. Because the plastic of the bottle cap is relatively soft, I reinforced it on the inside with a big washer made of PVC.



1. This is a heat-formed mounting bracket used to hold the leg to the front edge of the table.

step 3: MOUNTING THE FOUND OBJECTS

Most of the found objects are attached to one end of customized PVC connecting pieces, usually with pop rivets or bolts. The other end of the connecting pieces fits into sockets in the base fittings.

Unique problems are met with unique solutions and the result is a unique instrument.

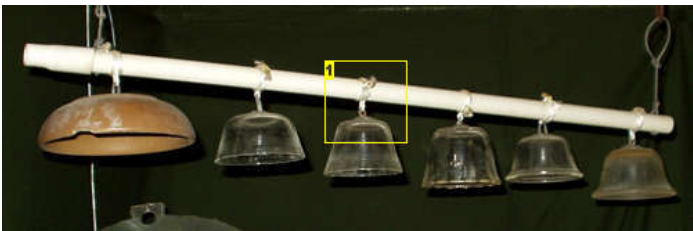


Image Notes

1. These glass bells are suspended using wire and string. The wires are shaped like the number 8, bent in the middle at 90 degrees. They are glued to the glass with silicone rubber.

step 4: THIS IS HOW IT SOUNDS

I hope this works for you. Try clicking on the MP3 file in the image window. With luck, you can download the audio file and hear how THE PHOENIX sounds.

As an added bonus you get to hear some of the local frogs in the background.

Enjoy!

File Downloads



09-6-6 THE PHOENIX.mp3 (2 MB)

[NOTE: When saving, if you see .tmp as the file ext, rename it to '09-6-6 THE PHOENIX.mp3']

Related Instructables



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Comments

14 comments

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korn581 says:

Did you use your hands free recorder for this recording?

Aug 29, 2009. 2:06 PM [REPLY](#)



Thinkenstein says:

Yes. A Radio Shack dictation recorder. About \$50 if I recall correctly.

Aug 29, 2009. 9:39 PM [REPLY](#)



cowscankill says:

I like the sound! Very original. And where do you live, might I ask? It seems all of your instructables have old, worn things in them.

Jul 18, 2009. 8:13 AM [REPLY](#)



Thinkenstein says:

Glad you like. I live in backwoods Puerto Rico. I do a lot of recycling. Check out my web site -- listed on profile page.

Jul 18, 2009. 9:38 AM [REPLY](#)



davebrown says:

the octopus parts look awesome
good job
do you stand up as you play this instrument or can you reach everything from a seat?

Jul 9, 2009. 5:27 PM [REPLY](#)



Thinkenstein says:

Thanks.

Jul 9, 2009. 6:52 PM [REPLY](#)

I play it standing up. The idea is to organize things compactly, so that you can move between them quickly. Since you can locate things anywhere in the space around you, you could organize it for playing sitting down.



thepelton says:

Reminds me of the group called "Stomp".

Jun 8, 2009. 1:43 PM [REPLY](#)



the_crikster says:

Neat! Reminds me of the percussion Skeleton Key uses along side a regular drum kit.

Jun 8, 2009. 8:42 AM [REPLY](#)



ChrysN says:

Cool, do you have any audio of how this would sound?

Jun 6, 2009. 10:06 AM [REPLY](#)



Thinkenstein says:

Not yet. Is there any way to tack an audio file onto the instructable?

Jun 6, 2009. 12:39 PM [REPLY](#)



ChrysN says:

I think you can upload it as you would an image file, and it will appear as a clickable object in your instructable.

Jun 6, 2009. 3:39 PM [REPLY](#)



Thinkenstein says:

Thanks for the idea, ChrysN. I just added on an MP3 audio file and it seems to work. It's a fun way to finish the instructable.

Jun 6, 2009. 9:54 PM [REPLY](#)



ChrysN says:

That sounds amazing!

Jun 7, 2009. 10:42 AM [REPLY](#)



Thinkenstein says:

Thanks.

Jun 8, 2009. 1:42 AM [REPLY](#)