

Simple Faraday Cage

<http://www.instructables.com/id/Simple-Faraday-Cage/>



What is a Faraday Cage?

A Faraday cage--also know as a Faraday shield--really isn't that complicated. Named after the English scientist Michael Faraday, who invented them in 1836, a simple Faraday cage is just an enclosure made of a non-conductive material, that is then enclosed in a structure that is made of a conductive material. A homemade Faraday cage that will protect life-saving and useful electronics from an EMP (Electromagnetic Pulse) event is something that every prepper should have. It doesn't need to be fancy or complicated just a simple design that can be put together in under 30 minutes.

This Instructable will be a conductive metal trash can with a non-conductive plastic trash can inside of it.

Step 1: Materials and Tools



Materials

- One 31 gallon (117.3 liters) metal trash can
- One 20 gallon (75.7 liters) plastic trash can
- Two 20" (50.8 cm) lengths of rope
- Roll of duct tape

Tools

- Utility knife with a new blade
- Drill with a bit just larger than the width of your rope

Step 2: Remove Trash Can Handles

In order for the plastic trash can to fit properly inside the metal trash can, we have to remove the exterior handles. The plastic is pretty thick here. So take your time and cut as close to the interior as you can.

Here is a before image:



Here is an after image:



Now the plastic trash can will easily slip into the metal one.



Step 3: Remove Trash Lid Handles

The plastic lid is not actually required for a functional Faraday Cage. As long as the electronic items that you store inside the plastic can are not touching the conductive metal trash can, they are protected. But I think that if you have the lid you might as well use it.

The lid handles need to be removed in order for it to fit properly inside the metal trash can. The lid is fairly thin so it is easy to cut.

Here is a before image:



Here is an after image:

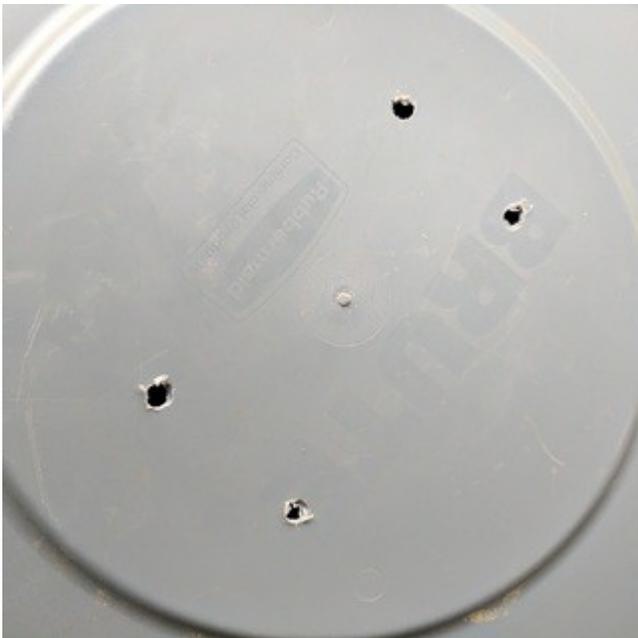


Now it perfectly fits inside of the metal can and seals the top of the plastic one.

Step 4: Add Trash Lid Handle

Unfortunately once the lid is on the plastic trash can, it is difficult to remove it. So we have to do a little prepper engineering to make it easier.

Drill four holes into the lid so they look like this:



Then insert your rope ends through the top of the lid and tie them off like this:



Now you have two rope handles on the top of your plastic lid.



I wrapped a little bit of duct tape around the ropes so they act as a single handle.



Step 5: Wrap Up

That's it!!

Now you have a really simple Faraday Cage that you can store anywhere. Because the plastic trash can inside is 20 gallons (75.7 liters), you can store a large number of electronic items inside.

Hank's Note:

I've read several articles that say you should also seal the metal lid in place with aluminum faced duct tape. Simply wrap the tape around the edge of the lid to close off the gap between the lid and can itself.