

## The Homemade Air Conditioner

### How to Survive a Hot Summer Day

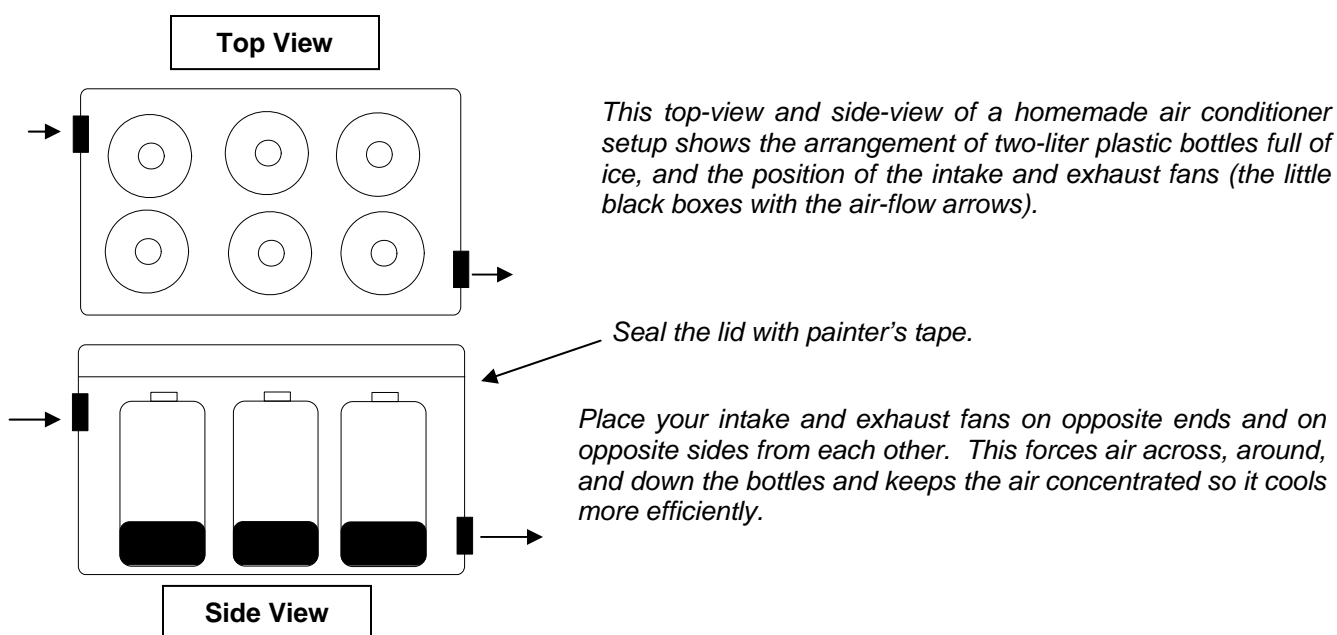
As cold as winters have been lately a lot of us say “Global warming? Yeah, right!” But then summer rolls around...

Only a couple of generations ago, our ancestors lived without creature comforts such as air conditioning. But now that we’ve had it in our lives for a while AC has become one of those things we just can’t do without. Literally! People die each year from heat-related illness.

This improvised air conditioner is one of the thousands upon thousands of little how-to tips you’ll find in our main text “Disaster Prep 101.” The reason you want to learn to make this now is because any number of things, like a disaster that knocks out the power or a copper thief that steals your air conditioner, could leave you suffering in the summer heat.

Though this tip is only useful for so long in a full power outage, this little improvised air conditioner can help take the edge off and make life a little more bearable. Not only that, but it’s very inexpensive, easy to make, rather effective, and you can use it over and over again.

Here’s the diagram for your own battery-powered air conditioner:



Here’s what you’ll need and how to put it all together:

- Set your household freezer to its lowest possible setting. Take six 2-liter plastic bottles, fill them with water to about two inches from the top and put them in the freezer. It’ll take a full day for them to freeze solid, and the empty two inches will allow for ice expansion. If a bottle cracks, don’t use it. A cracked bottle would only leak water as the ice thawed.
- Get a large and inexpensive styrofoam cooler with a lid. You’ll want it to be around three feet long, two feet wide and two feet deep; at least big enough to hold your six 2-liter bottles with some air-flow space in between them.
- Go to your favorite “dollar store” or “mega-mart” and get two battery-powered, hand held “personal fans.” You see them a lot at sporting events where people are fanning their face. They have a short stubby body and run on a single C-Cell or D-Cell battery, and they have an exposed fan blade on one end. (You can substitute

these fans with slightly more robust models that run off a spare vehicle battery such as a deep-cycle marine battery. With all these improvised gizmos, go with what you've got or what you can afford.)

Cut a three or four inch hole in each end. On one end, make the hole high near the top edge. On the other end, make the hole low, about three inches from the bottom (measuring on the inside of the cooler). Also make the holes on opposite sides of the box so when you're looking from one hole to the next, you're looking both down and diagonally across the cooler.

Take your frozen two-liter plastic bottles of water out of the freezer and set them inside the cooler spacing them so that air can flow between them.

Arrange one of your battery-operated personal fans near the upper hole on one end of the cooler. Mount it inside with the fan blowing into the cooler (you can hold it in place with duct tape). Mount the other fan on the outside of the cooler at the opposite hole. Have the fan pointing outward. This fan arrangement will draw air into the cooler, across the bottles and force the air out the bottom hole on the other side.

Having the exhaust hole near the bottom of the cooler and the first one near the top will force air across and down between the bottles and vent the colder air that settles. Also, having your exit hole three inches up from the bottom creates a lip inside the cooler to collect condensation so it won't dribble on your furniture.

● **Note 1:** This little unit won't cool your house down to "wear a parka" level, but in the average sized room it could really help. Having 2 or 3 of these units is even better.

● **Note 2:** Since heat rises and cold settles, set this unit as high as possible inside the room. This way it will draw in the warm air, and the cold air will settle on you.

● **Note 3:** Don't use bagged ice. Bagged ice does start off colder, but as it melts the bags collapse and air no longer circulates around them. Use the bottles since they keep their shape.

● **Note 4:** Don't just fill the cooler with ice and blow air across the top. There's not enough surface area for good cooling efficiency, and the melting exposed ice will actually *add* humidity, whereas the bottles will cause condensation *inside* the cooler and *remove* humidity making the heat more bearable.

● **Note 5:** Be sure to have extra batteries on hand for your fans.

As your bottles thaw out you can drink the cool water, or you can just leave them sealed and pop them in the freezer when you can.

Other tips to keep you cool on a hot summer day:

- ◆ If you live in a hot climate anyway, plant shade trees and shrubs on the sunny side of the house.
- ◆ Tint your windows if you can.
- ◆ Shade other windows as able.
- ◆ If you have plenty of running water consider putting a yard sprinkler on your roof to cool it down.
- ◆ If the power is completely out you can use a generator (or your car with a power inverter) to power your freezer.
- ◆ Drink cool beverages.
- ◆ Don't eat large meals. Eat smaller, lighter meals.
- ◆ Inside your house, go "as bare as you dare" since exposed skin keeps you cooler.
- ◆ Have an additional battery-powered fan pointed at you.
- ◆ Minimize the use of heat-producing electronics such as your laptop computer, and don't cook during the day.

For more heat management tips, see our article: ["Beat the Heat and Survive the Summer"](#)

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