



# How to Make a Candle Heater

by [Tactical Intelligence](#)

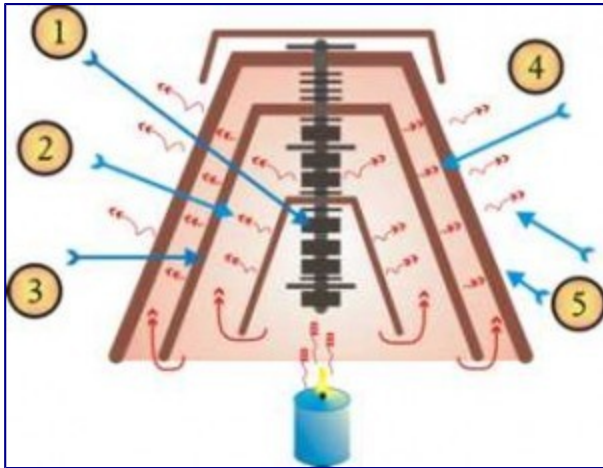


With the cold season coming to a close I wanted to share one more survival craft that you can do in order to provide some off-grid heat to a small insulated area with just a candle!

I got this idea straight from the [HeatStick.com](#) site, where instead of ordering one of their “Kandle Heeters” I decided to make my own and share with you guys how you can too (it cost me about 15 bucks to make compared to 30 dollars (plus shipping) if you were to buy one).

## How it Works

The basic purpose of this heater is to capture the heat given off of a candle flame and to concentrate it into a steel and ceramic radiator assembly. After some time, the ceramic surface will act as a thermal mass and begin to radiate the captured thermal energy into your room or office. Here’s how [heatstick.com](#) describes it (image and description c/o heatstick.com):



1. Heat rising from a burning candle (or electric lamp) is first trapped in the Steel Inner Core and surrounding Ceramic Inner Module.
2. The Inner Cores get very hot and radiate heat to the Ceramic Middle Core.
3. This Entire Inner Region gets VERY VERY HOT!! Heat synergistically builds up and “boils out” of the Ceramic Inner Core into the Ceramic Middle Core. The Middle Core heats up and begins to Radiate Heat. Heated air “boils out” into the Ceramic Outer Core.
4. The Large Surface Area of the Outer Core begins receiving Heat. The inner wall surfaces become very HOT! Heat travels through the wall to the Outer Surface.
5. The Outer Surface gets VERY WARM to HOT and gently begins to Radiate Heat into your home or office.

## Putting it all Together

The process for putting together the candle heater is very simple:

### What You Need



- one 4" ceramic (not glazed) pot
- one 2" ceramic (not glazed) pot
- one 1 1/2" ceramic (not glazed) pot
- two 1 1/2" x 1/4" washers
- three 1 1/4" x 1/4" washers
- three 1" x 1/4" washers
- eight 3/4" x 1/4" washers
- seven 1/4" nuts
- one 3" x 1/4" bolt

## Assembly Instructions

I think that the easiest way for you to learn how to put one of these heaters together is to follow the cutout image (to the left) I used from the heatstick.com site:



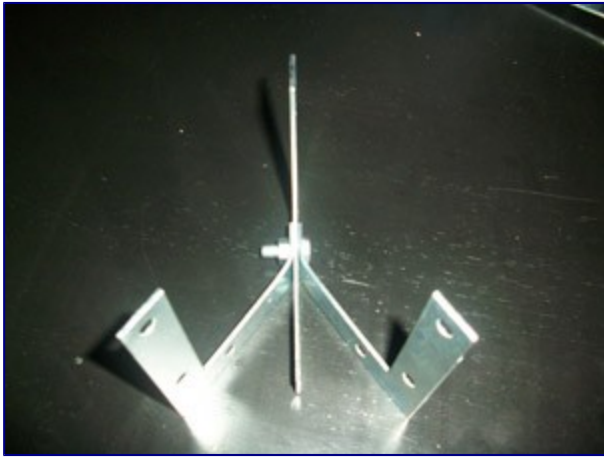
Just place the washers and nuts in the right combination as the image and you'll be good to go. Looking inside, it should look something like this:



## Making the Stand



I found the simplest stand to make is to purchase three 4" corner braces.



Then just put the three braces together with the middle brace facing the opposite direction and bend the outside two just enough to support the heater.

## Test Results



I decided to test out the heater with the bacon-grease candle I had made (check out [Homemade Lamps from Everyday Objects](#) to learn how to make your own). Since the homemade candle jar was a bit bigger than the 4.5" stand I made, I added 6" corner brace extensions to support the larger candle.

After burning the heater for around 6 hours it seemed to be putting out only a small amount of heat (a decent amount of heat was pouring out from underneath though). However, since the weather has been warmer around here I wasn't able to give this little heater a fair shake (and besides, how much heat output are you really expecting from a candle anyways?).

Despite the less-than-optimal testing conditions, still, in no way would it heat up your home (or even a normal size room for that matter), but in an enclosed area like your car I could see it having some benefit. Again I haven't been able to truly test it so this is only conjecture.

Even though the heater doesn't seem all that effective, making this contraption was far from a waste of time. I learned some important principles as well as came up with other ideas of how to convert a flame source to radiant heating (just think of a larger version of this heater combined with the [rocket stove I reviewed](#) and you'll get what I mean).