

# Solar Pool Heater



## DIY Pool Heater

Basically, it consists of about 200' of irrigation hose held to a 3/4" plywood 4x4 sheet with pipe brackets screwed down. The whole thing is propped up with legs at more-or-less the optimal angle for my location, and pointing more-or-less south. The inside of the frame was painted flat black, and the copper pipe brackets were painted flat black as well, after the thing was together.



Side View

Here is the 'T' off the pump. This is after the chlorinator, to hopefully keep the nastiness build-up in the hose away. I also added a ball valve in the line, which is super helpful in keeping the flow through the heater to a trickle. This allows the water to get hotter in the pipe, and maintain some thermal mass.



Mr. T

The back. Note the lovely collapsible legs for easy winter storage...



Backside

And always inelegant, the tie-wrapped outlet hose. I keep meaning to fabricate a nice contoured pipe that can come up the side, around the cap and point down inside at the wall so no water ever gets on the solar blanket, but just don't seem to get around to it.



The return.

Lastly, a couple of closeups of the coil itself. The first shows the final elbow that goes through the plywood and out. I couldn't get the irrigation hose coiled any smaller without it starting to kink, so this is where I stopped.



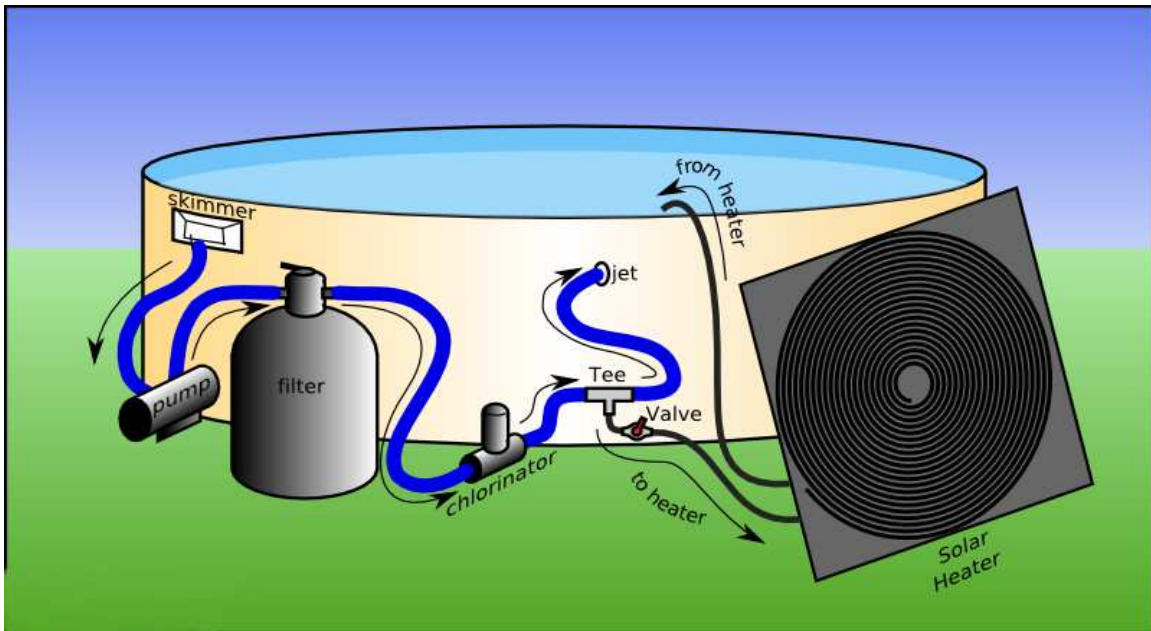
And out.

When I started I kept each pipe clamp with its own screws. By hand, and my cordless drill tended to over tighten the screw and I was afraid I would damage the pipe with the metal bracket. By the time I had gone around two or three times I realized I could share a screw between two pipe clamps. The other option would have been to use metal strapping.



Looks like art, eh?

Under noon sun, the water coming out is about 2C warmer than the inlet with the flow I valve down to. After one day of sun it pulled the pool up from 18C to 22C (it was 30C out that day), and in three days I had the pool at 28C. I am still looking for a 4x4 plexiglass to cover the coils, as I know alot of heat is lost if there is any wind blowing across them, at all.



Piping Diagram

The normal pump flow follows the blue line. Water is sucked from the skimmer by the pump, pushed through the filter, through the auto-chlorinator, then into the pool. The ball

valve T I added is after the chlorinator. When in bypass, all the water flows as if there were no heater. I turn the ball valve enough to allow **some** of the water to flow through the heater. I don't push it all through the heater, as it puts too much stress on the pump. I just keep adjusting it while watching the pressure gauge on the filter, and stop if it starts to move up. Hope the extra explanation was useful.