

# **The 12-Volt Solar Panel Powered Room Cooler (Home-Build)**

(2. Water Pump Installation)

A simple but effective way to cool a room using only sunshine.

This is a home build project that is fairly easy to build requiring minimal use of power tools and minimal wiring.



When you go to the hardware, just tell them you are trying to connect  $\frac{1}{2}$  inch PVC pipe to a  $\frac{3}{4}$  inch hose barb.

SEE THE PHOTO ABOVE AS AN EXAMPLE.

- Note some water pumps have  $\frac{1}{2}$  inch fittings IF you have a  $\frac{1}{2}$  inch fitting on your pump, then your plastic hose and hose barb will need to be  $\frac{1}{2}$  inch as well.

Also note the white fitting on the end of the 3" PVC Pipe off the T fitting. This is a common fitting you can get about anywhere and it will accept the threads on the end of the hose barb.



I use a little plumber's tape to tape & seal the connection. Do NOT overtighten as these are plastic and you are dealing with low pressure water. With your PVC fitting attached to your hose barb it should look like this.



After the glue dries attach your  $\frac{3}{4}$ " plastic line, tighten your hose clamps. You may need to shorten your plastic water line or adjust it (swivel it right or left) to make sure the water pick up on the pump (is not outside the frame). As per example below.

## WRONG



Note the water inlet is over the frame so the water it picks up is outside the frame. If you encounter this problem, you can try shortening the plastic hose or use ZIP ties to tie it in the proper spot (inside the frame). And make sure it stays inside the frame.

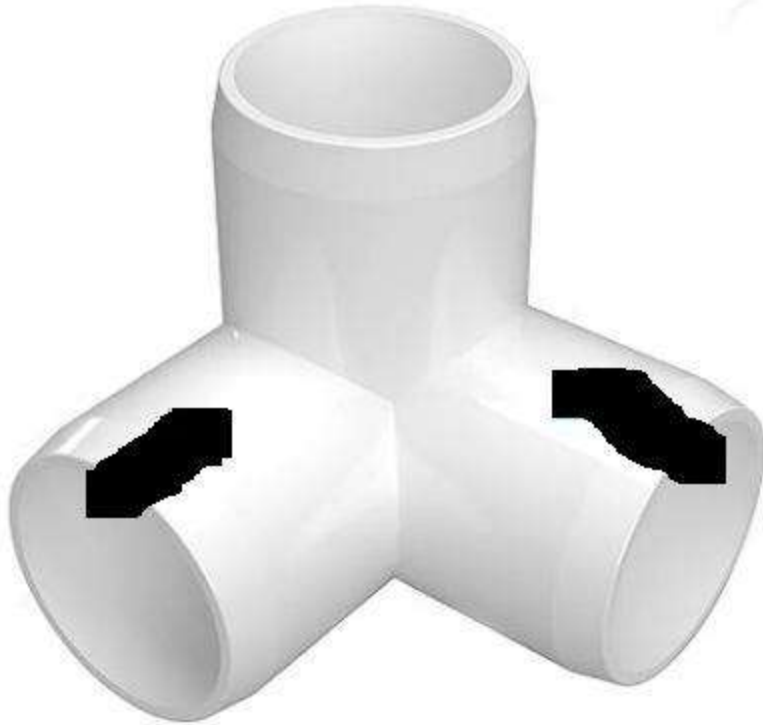
Note: In the video I was attempting to show the water flowing straight down into the tote. If you have NOT glued these water outlet pipes you can twist them to adjust the flow straight down and into the tote.

You can make these minor adjustments now, twisting the PVC pipe until your water is flowing straight down into the tote.

IF you have one or two holes that spray wildly check to see if there is any tailings left from the cutting of the pipe, if not, you may have to let it dry and silicone the hole closed (where the water is flowing in an odd direction) and after the glue dries you will need to re-drill a new hole as close as possible to the original hole.

When you are happy with the water flow, straight down into the tote, now you will need a magic black marker and mark each elbow right at the point the water pipe is inserted into the elbow. Also mark a corresponding mark on the PVC water pipe, so the two marks literally run together as one mark.

See example below:



This way when you glue these parts back together you can match up all the marks and everything will align perfectly.

Here is the link to the video: 2. Water Pump Installation:

<https://www.youtube.com/watch?v=hANKa36xb80>

or

<https://rumble.com/v55yq1p-2.-water-pump-test.html>

or

<https://www.brighteon.com/62810afc-9880-4475-b7fa-4a4b033c4ac9>

**Please note: that I am not responsible for any damages or injuries caused by your building this device. This information is only provided as reference and educational material ONLY.**

**Sorry but I must include a disclaimer (it is the times we live in).**

God Bless

Tony Lamb

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