

List of parts to build a Thomas Jacquin Allsky Camera

Version 1.1
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Also see these writeups:

1. Setup of the Raspberry Pi hardware and software
2. Installing the Thomas Jacquin software on the Raspberry Pi
3. Building a weatherproof case for the allsky camera
4. Displaying the allsky images to a website
5. Suggested allsky configuration and camera settings

List of Parts

1. [Complete Raspberry Pi 4 “starter kit” with 4GB of RAM](#). This kit includes a lot of detailed items that you would have to purchase separately, and the cost is quite reasonable
2. [ZWO Camera](#) which comes with an all-sky 170 degree fov lens.
3. [3” Acrylic dome](#) to fit over the camera
4. [Short right angle USB cable](#) to connect the cameras to the Raspberry Pi
5. [Right angle USB-C adapter](#) to connect the Raspberry Pi power supply to the RPI and have it all fit within the weatherproof case
6. Clear silicone caulking to seal the dome to the plastic endcap - see the writeup [“3_Build_weatherproof_case_for_allsky_camera”](#)

Continued on next page

For background, here are links to the Thomas Jacquin allsky camera:

Description of Allsky camera:

<https://www.instructables.com/id/Wireless-All-Sky-Camera/>

Github site with the software for the raspberry Pi which runs the all sky camera.

<https://github.com/thomasjacquin/allsky>

Here’s a link to an operating all-sky camera in Bend, Oregon

<http://www.cbstarrynights.com/allsky1/>

Materials needed to build a weatherproof enclosure, internal structure and electrical connection

7. Four-inch, inner diameter, black plastic drain pipe, 12 inches long. This is sold in home supply stores, typically in 2ft lengths or 20ft lengths.
8. Flat-topped plastic drain cap to fit over the outer diameter of the four inch pipe at the top of the enclosure. We will drill a 2" hole in the center of this cap. The inner central face of the cap should be flat out to the diameter of the camera body, to avoid complications of seating the camera up against that surface later.
9. Male fitting to slide over the bottom of the four inch pipe; this fitting is threaded on the bottom inside to take a threaded plug
10. Threaded plastic base plug to screw into the Male fitting #3. This threaded plug forms the bottom of the enclosure.
11. PVC Cement to attach the top cap and male base fitting to either end of the four inch length of pipe
12. Internal support to attach the camera and computer inside the weatherproof case – 3/16" plywood pieces, angle brackets, nuts and bolts - see the writeup "[3_Build_weatherproof_case_for_allsky_camera](#)" for details
13. Electrical extension cord, outdoor rated, for temporary setup; replaced later by electrician-installed power line
14. Electrical female plug to attach to cutoff extension cord inside the case to power the system
15. Ethernet cable, outdoor rated, to connect system to local network
16. Two large hose clamps to attach the weatherproof case to a vertical post; two rubber or foam spacers to separate the case from the post under the hose clamps

