

## How to make 3D Scans with the Scanse Sweep LIDAR system

For this workshop we are using this open source 3D scanning system based on the Scanse Sweep LIDAR system: <https://www.hackster.io/scanse/sweep-3d-scanner-035a5f> you can easily control the device with your cell phone, table or computer.

To get a great overview of the scanning process watch this video: <https://youtu.be/JK1Q7ec-8VA>

### A. Connecting to the 3D Scanner with your mobile Device

- 1) Plug in the two USB mini connectors and push the button in the bottom left corner to start up the built-in raspberry Pi.
- 2) Wait between 30 seconds to a minute to allow the raspberry Pi to start up, then find the wireless network PI3-AP with your mobile device and connect to it, so you can communicate with the scanner, use the password : raspberry.
- 3) At this point you can follow the excellent instructions here (Section: "Opening the Webapp in a Browser"): <https://github.com/scanse/sweep-3d-scanner/wiki/Using-the-Webapp>

### B. Performing a Scan

- 1) Plug in the USB cable on the side of the scanner, the Scanse Sweep Unit should start to spin.
- 2) Follow the documentation (Section: "Performing a Scan"): <https://github.com/scanse/sweep-3d-scanner/wiki/Using-the-Webapp>

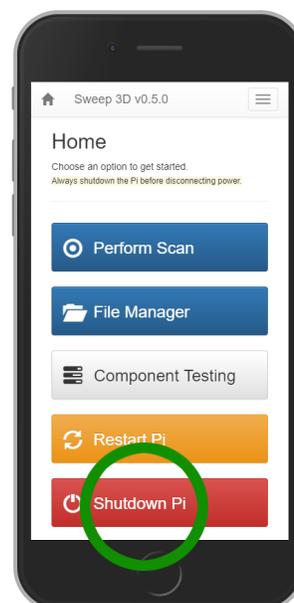
### C. Downloading Scan Data

- 1) Connect to the 3D scanner using your computer following the steps in section A.
- 2) Follow the documentation (Section: "Managing Scan Files"): <https://github.com/scanse/sweep-3d-scanner/wiki/Using-the-Webapp>

### E. Turning off the 3D Scanner

**This is important: Always turn off the 3D scanner using the Webapp interface. Wait until the lights on the side of the scanner stop blinking and one turns a solid red, then it is safe to unplug the 2 mini USB connectors.**

See also the section "Restarting/Shutting down the Raspberry Pi" in <https://github.com/scanse/sweep-3d-scanner/wiki/Using-the-Webapp>



## F. Viewing/Stitching Together Scan Data

- 1) Download the Sweep Visualizer Software: <http://scanse.io/downloads>
- 2) Get a quick overview of the software's functionality in the "Viewing Scan Files" section of the Webapp documentation: <https://github.com/scanse/sweep-3d-scanner/wiki/Using-the-Webapp>
- 3) There is a very detailed manual on the Sweep Visualizer software available here: <https://support.scanse.io/hc/en-us/sections/207173067-Sweep-Visualizer>
- 4) Stitching together multiple scans: <https://support.scanse.io/hc/en-us/articles/115005980407-Intro-to-the-Map-Tab>