RepVap Guide

by

Joshua Ward

This guide explains how to assemble a RepVap using a standard 5 gallon bucket from the given code and configuration files. Please visit my Github for the software and files:

<https://github.com/Corallus-Caninus/RepVap>

Upon completing this guide, or given a diligent reading through, the user should be able to build a RepVap from any container large or small with a little creativity and the included software.

Required Tools and Materials:

A **3D printer**, **filament** and the items in the **Bill of Materials** are required. You will also need a **hot glue gun** with **glue sticks**, these are used to form gaskets and not for mechanical connections as they don’t bond well to the HDPE bucket and lid. Flex Seal or spray sealants may be a good choice for polishing up 3D prints but I have not used it and recommend getting good at setting layer height and wall thickness parameters to make the parts as watertight as possible. You will require a **drill** and a **1” hole bit/saw** to cut the inlets in the bucket. If you choose to print refracting nozzles instead of nozzle arrays an **8mm or 5/16” drill bit** will be needed to tap the lid. **Zip ties** will be very helpful for cable and tubing management and are mandatory unless you have something better. A **soldering iron** is useful for wiring up the fan and to consolidate the wires into 1 plug if you are familiar with basic wire splicing, but **twist connector caps** will suffice. **Electrical tape** may also be useful for sealing the tubing to the junctions if you are printing refracting nozzles, it is also helpful in general and recommended but not necessary. **Masking tape** makes measuring the lid and bucket for cuts much easier and I would recommend having a roll. You will need a **box opener razor** for making precision cuts into the lid.

Configuring the Files:

Considerations on printing:

Preparing the materials:

Assembling the Bucket: