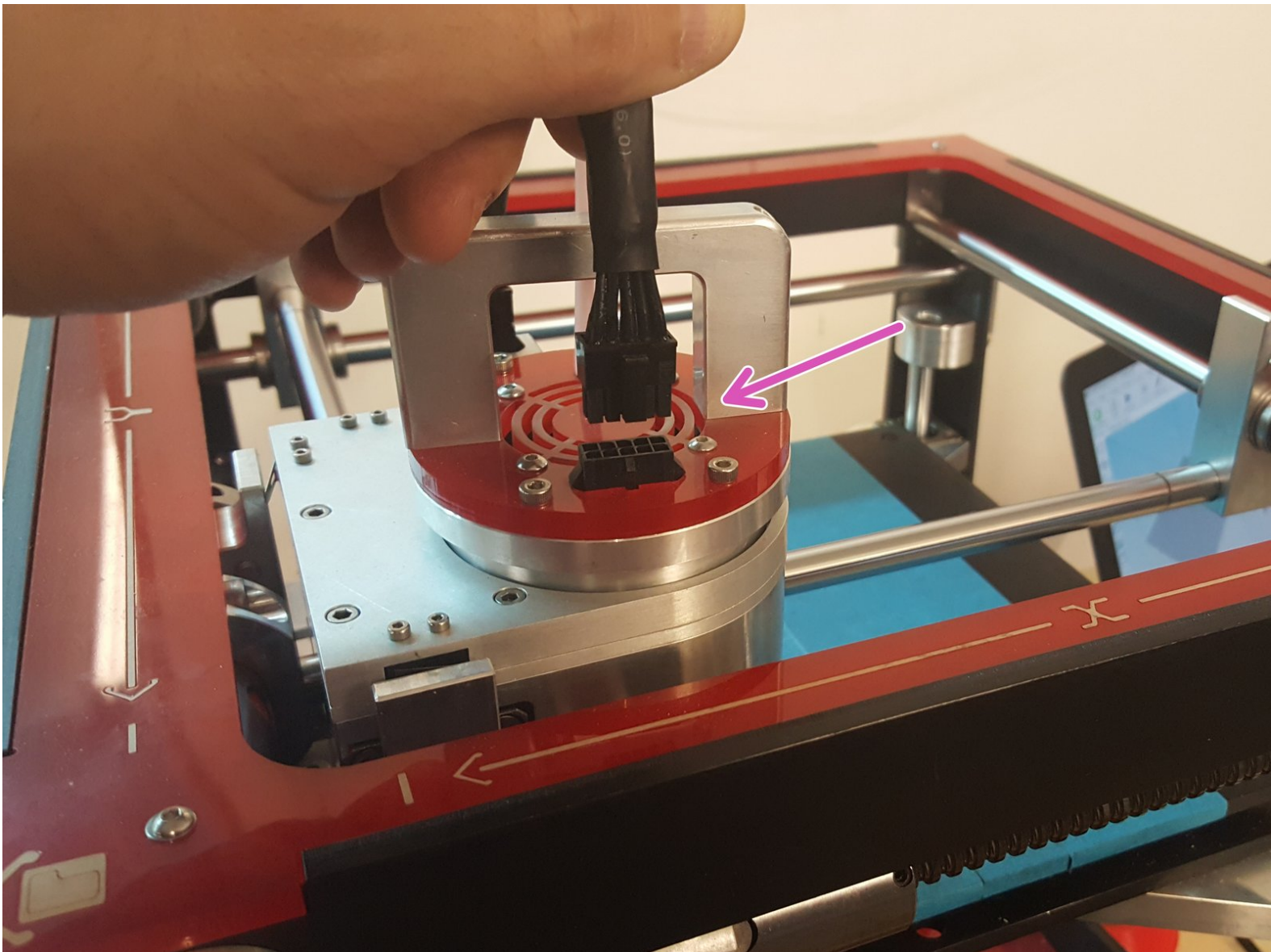




Extruder Guide

This guide will troubleshoot the 3D Printing Attachment

Written By: BoXZY

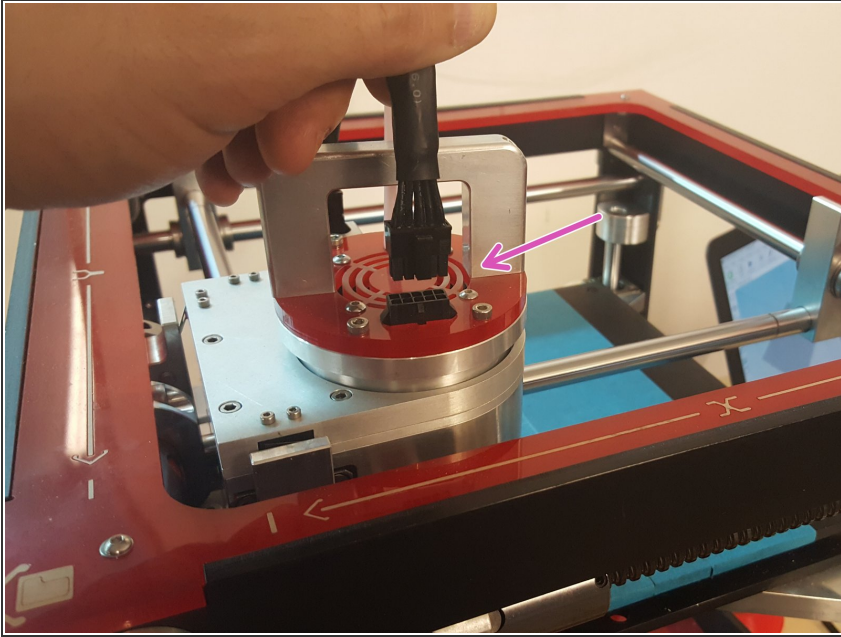


INTRODUCTION

If you are 3D Printing and BoXZY will not extrude plastic please follow this guide

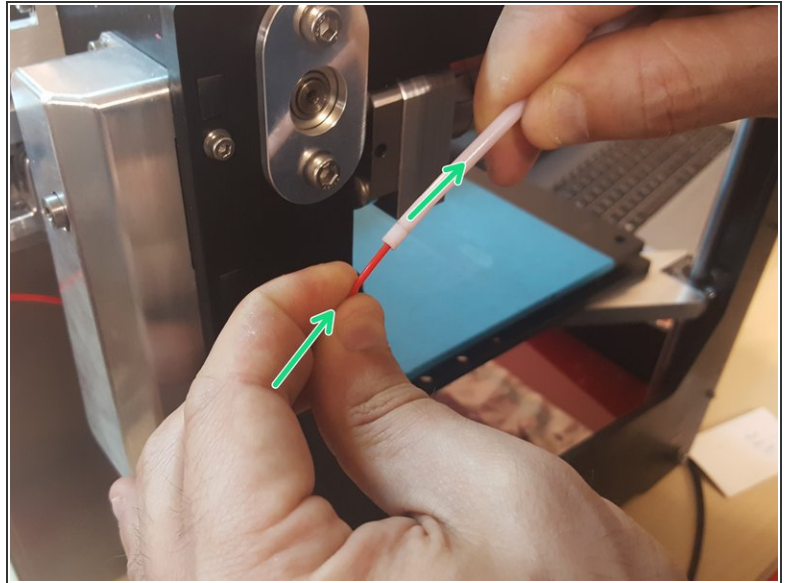
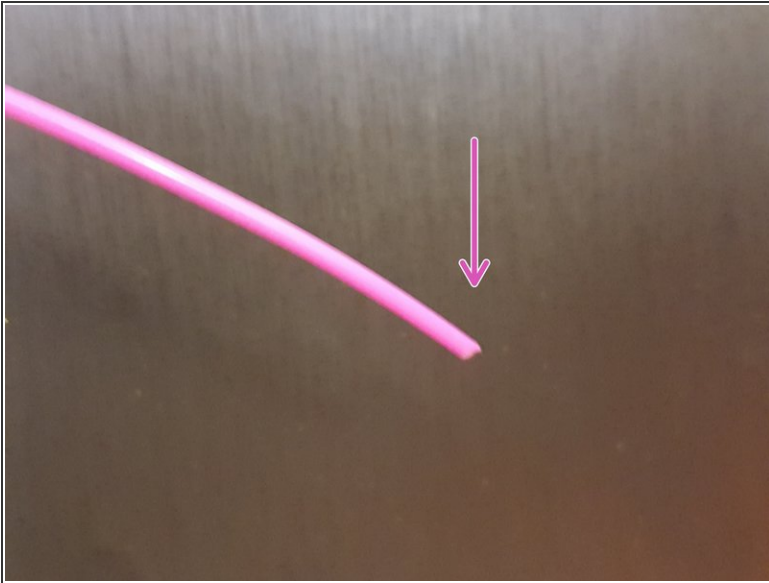
This guide will explore the issues with a non-extruding 3D Printing Attachment

Step 1 — Extruder: Connecting



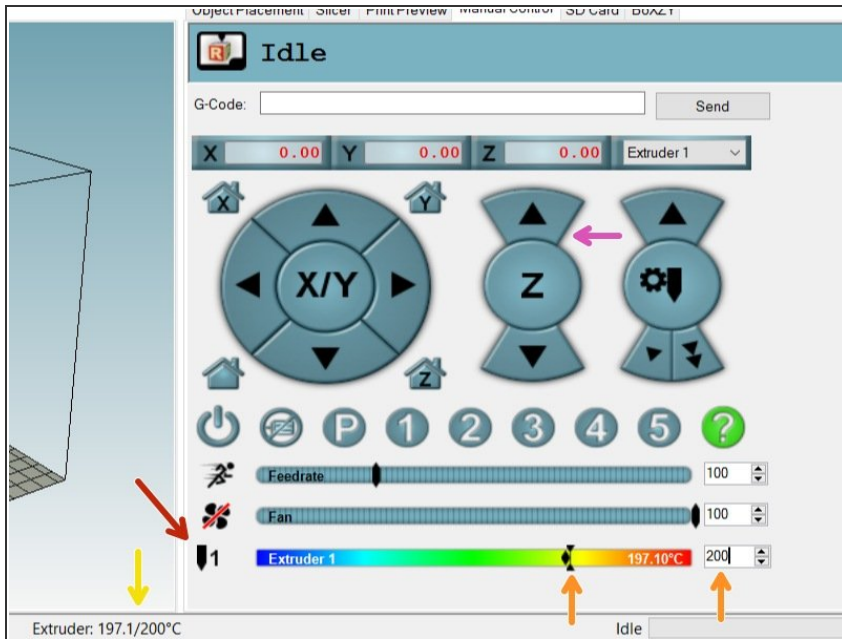
- ❗ Before you begin testing the extruder remove anything you have inside of BoXZY. Raw Material, Attachments or Clamps should be placed aside for this guide
- **Insert your 3D Printing Attachment** into your Attachment Mount
- **Connect the 3D Printing Wiring Harness** to the *3D Printing Attachment*
- **Connect BoXZY** to your *Computer* and the *Power Station*

Step 2 — Extruder: Clean Filament



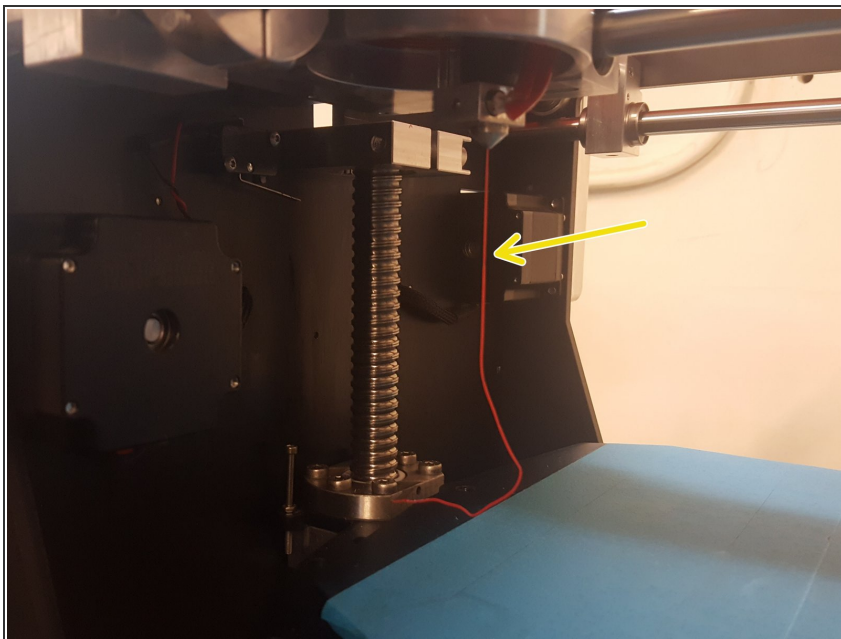
- **Cut** the end of your **Filament** so that it resembles the cut you see in the *first image*
 - ⓘ If you are removing Filament already loaded into BoXZY do so while the *Extruder* is **ON** and at 200 degrees. Once the *Extruder* is at 200 degrees turn the *Extruder Temperature* **OFF** and pull the Filament out
 - ★ Always cut the end of the Filament before inserting it into the Filament Tube
- **Insert** the **Filament** into the *3D Printing Attachment Filament Tube*, as shown in the *second image*
 - **Push** the **Filament**, by hand, all the way through the tube and into the 3D Printing Attachment until it cannot go any further

Step 3 — Extruder: Heating Up



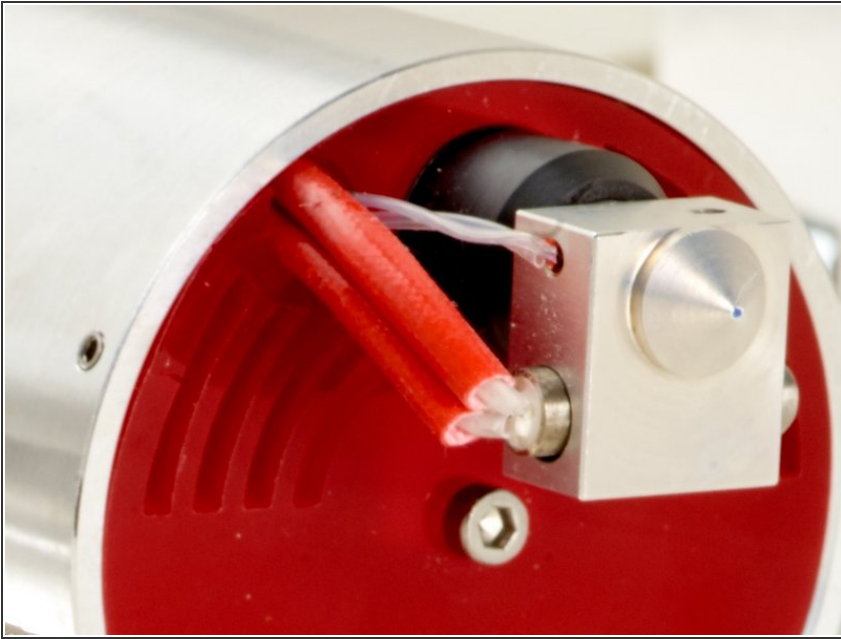
- Open the **Manual Control** tab in your *BoXZY Interface*
 - Lower the **Z axis** 100mm
- Turn your **Extruder ON**
 - Drag your Temperature bar or Enter the value of **200 degrees**
 - At the bottom of the interface there is an *Extruder Temperature* readout
- ⓘ Wait until the Extruder Temperature reaches 200 degrees before you proceed to the next step

Step 4 — Extruder: Manually Extruding



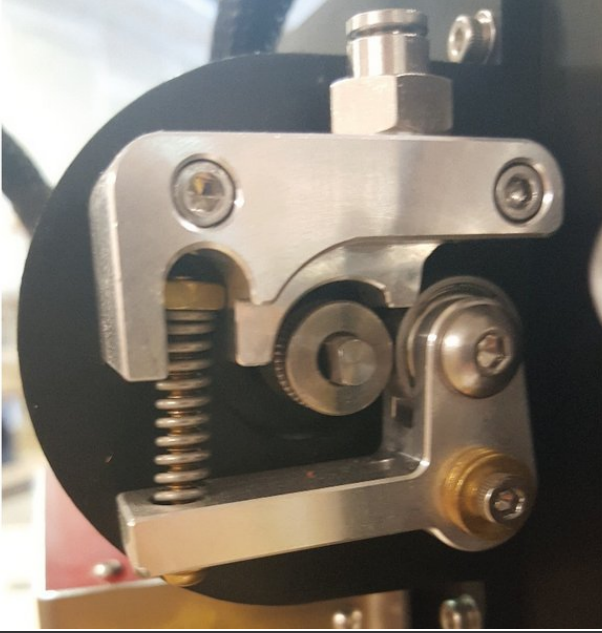
- Hold the **Filament Tube** in one hand
- Push the **Filament** into the **Filament Tube** with your other hand
 - You will have to apply a fair amount of force to push the filament through the extruder
- You should now see Filament Extruding from the 3D Printing Attachment Nozzle, as seen in the image
- If you do not see Filament Extruding you may have a clog in your Nozzle

Step 5 — Extruder: Clogged Nozzle



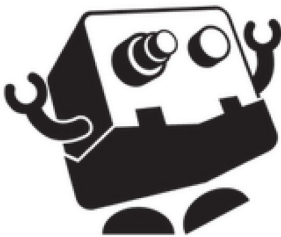
- If you have a clog change the Temperature setting to **280** degrees
- Wait for the Temperature to reach *280 degrees* and try to manually push Filament through the Extruder again
- Manually push Filament through the Extruder the same way as step 4 of this guide
- If the Extruder is still **not extruding** plastic find a **0.4mm** thick piece of *Guitar String* or other clean form of metal
- **Insert** the *Guitar String* into the *Nozzle* while the Nozzle is **Hot**. **BE CAREFUL when working with HOT 3D Printing Attachments**
 - Manually push the filament into the Extruder and repeat until unclogged
- ① If you are still *not able* to remove the clog follow [this 3D Printing Attachment Dissassembly Guide](#)

Step 6 — Extruder: Testing the Filament Drive



- If you are able to extrude plastic by manually pushing the Filament then let's test the *Filament Drive*
- **Remove** your Filament from the Filament Tube
- **Cut** the end of the Filament
- **Follow** [this guide to troubleshoot the Filament Drive](#)

Step 7 — Further Questions



- If you have any further questions please contact the BoXZY Team