How to post-process the printed parts

How to clean, trim or cut the parts after you print them on your printer.

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Step 1 — Why to post-process the printed parts?

- This guide will explain in detail, **how to post-process printed parts** used on Original Prusa i3 printers to ensure easy assembly afterwards.

- **Some printed parts** designed for Original Prusa printers **require post-processing**. Skipping this part might cause issues and damage to the parts during the assembly.

- 3D printing is a very accurate manufacturing process, but there are some factors, which can affect the final printed part:
  - **Temporary supports** - must be removed after the print
  - **Different material properties** - not all PETG or ABS are equal
  - **Defects in prints** - strings, imperfections due to the geometry
Step 2 — Tools used for the post-processing

⚠️ WARNING: following tools can easily harm you. Make sure you read the manual from the tool manufacturer!

⚠️ ALWAYS use protective equipment like safety glasses and gloves.

- **Recommended tools for this manual:**
  - **Sharp and thin cutting blade**, the best option is a scalpel, but utility knife is also possible to use.
  - **Twist drill bits, ideally with a flat head**, but those aren't easy to find. The lower the angle on the bit's head the better. For printed parts you need two sizes:
    - 8.1 mm / 0.3-inch drill bit (or slightly bigger, but not smaller)
    - 3 mm / 0.12-inch drill bit (or slightly bigger, but not smaller)
  - **Pliers with thin/slim jaw are the best**, you can also use the bundled ones, but you might not be able to reach certain places.
Step 3 — Optional tools for post-processing

- Following tools are not needed, though if you want to achieve the perfect shape and look we advise to use them:
  - **Curved/rounded scalpel** - some parts of the printed part are easier to clean with a curved blade.
  - **Heat gun** - certain materials tend to create strings during the print. Easiest way to remove them is by using a flow of hot air.

⚠️ Optimal temperature for the heat gun is 250 °C (482 °F) and blow on the parts from a distance of 10 - 15cm (4 - 6 inches).

⚠️ WARNING: Blowing hot air from a shorter distance can damage even melt the part!

⚠️ Do not touch the HOT PARTS of the heat gun!!!
Step 4 — Printed parts for post-processing

- After the print is finished, all parts should be checked for visible defects. Basic tips are given in:
  - General post processing (tips and tricks)

- Some printed parts require specific post-processing, use the steps listed below:
  - Y-axis parts post-processing
  - X-axis parts post-processing
  - E-axis parts post-processing
  - LCD parts post-processing

Step 5 — General post processing (tips and tricks)

- Use pliers to carefully remove the temporary supports.
- Clean the screw and rod holes using drill bits. Avoid increasing the diameter of the hole.
- Use a scalpel or utility knife and carefully remove the "elephant foot" (squished first layer) from the edges of the printed parts.
Step 6 — General post processing (tips and tricks)

- Use the heat gun to remove the strings on each printed parts.

- Set the heat gun temperature to 250 °C (482 °F)

- Blow the printed part from a distance of 10 - 15 cm (4 inch - 6 inch) until the strings melt.

- Some strings may be thicker and may not simply melt. Remove them with the scalpel.

**WARNING:** Blowing hot air from a shorter distance can damage the part.

Step 7 — Y-axis parts post-processing

- Use a scalpel to remove debris in the screw groove on the Y-belt tensioner.

- Use a 3 mm (0.12 inch) drill bit to clean all screw holes on the Y-axis plastic parts.

**NOTE:** This step is for the MK3S only
Step 8 — X-axis parts post-processing

- Clean the holes by drill bit 8.1 mm (0.3 inch) in the X-end-motor and the X-end-idler marked in the picture for easier insertion of the rods.

- The drill bit must be parallel to the hole axis.

- Check the drill tip position through the square hole. Do not drill the bottom of the hole!

- Insert the rod into each cleaned hole. Try to slightly pull in and pull out the rod. The rod must not move freely in the printed part.

- Use a 3 mm (0.12 inch) drill bit to clean all screw holes on the X-axis plastic parts.
**Step 9 — X-axis parts post-processing**

- Cut the groove on the top surface of the X-end-motor and the X-end-idler for easier insertion of bearings into the holes.

**Step 10 — E-axis parts post-processing**

- Use pliers to remove the print support on the fan-shroud.
Step 11 — E-axis parts post-processing

- Cut the groove on the P.I.N.D.A. sensor holder with a scalpel on the extruder-body.
- Use a 3 mm (0.12 inch) drill bit to clean all screw holes on the E-axis plastic parts.

Step 12 — E-axis parts post-processing

- Drill both holes on the extruder-idler with a 3 mm (0.12 inch) drill bit.
  
  **It is CRUCIAL to drill both holes at the same time!**

- In the most cases, the printed fs-lever part requires removal of the edge of the first layer. This edge may subsequently cause **malfunction of the filament sensor**.
- Carefully remove the edge with a scalpel, focus on the corner shown in the picture.
Step 13 — E-axis parts post-processing

**NOTE:** This step is for **MK3S/MK2.5S** and you will need the steel ball.

- Insert a piece of filament through the adapter-printer part to clean both filament guiding holes.
- Insert the steel ball and roll with the ball to all sides to ensure smooth movement.
- Push a piece of filament through the hole multiple times to clean it on the fs-cover part. **Do not use 3mm (0.12inch) drill bit for cleaning this hole!**
- Use the 3mm (0.12inch) drill bit for cleaning the screw hole.

**NOTE:** The filament guiding holes must be properly cleaned!

Step 14 — LCD parts post-processing

- Use pliers and carefully remove the temporary supports in the SD card slot on LCD-cover.
- Remove both temporary supports on the longer side, but keep the inclined part above, which will "lock" the PCB of the LCD in place (see the picture).