3D PRINT MANUAL

NOVI GrowAAL

PREPARING THE MODEL

1. Go to https://novi.createitreal.com

2. Accept or decline cookies.

3. Click on the plus-icon.

4. Locate the STL-file on your computer and click "Open".

5. Want to change the position?
   - Method 1: Click and drag the object.
   - Method 2: Change the values for the axes.

6. Want to change the size?
   - Click on "Scale".
   - Method 1: Scale by ratio. If you want to print at 150% of the original size, then enter 1.5.
   - Method 2: Scale by size. Enter wanted size in millimeters.

   Note: If you want to change the size of only one or two axes, uncheck "Uniform scaling"

7. Want to change the orientation? A correct orientation can improve print quality.
   - Click on "Rotate".
   - Enter the wanted number of degrees to rotate.
   - Rotate using the plus- or minus-icon for the wanted axis.

8. Does the model need support?
   - The 3D printer cannot print directly into the air. If you cannot rotate the object to make every part of the print supported, then you need to add support. Support material can be removed after print.
   The printer can print "bridges" without support. This means that it can bridge between two towers, and the build on top of it. If the bridge is too long, it will need support.
   - Method 1: Touching build plate. This will add support in places where the support is needed, and the support material can touch the build plate.
   - Method 2: Everywhere. This will add support everywhere it is needed.

   Note: If the "Transformation"-dropdown disappear and the model turns white, click on the model to make it reappear.

9. When the model is ready to print, click on the print-icon at the bottom of the screen.

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10. If you are not logged in, you will be asked to login. If you are logged in, skip the following 4 steps.

11. Click on "Login".

12. Login with your existing Createitreal-user or click on "Sign up now" to create a free user.

13. After login you will be asked if you want to continue where you left off. Click on "Yes".

14. Click the print-icon again.

15. When the NOVI-slicer is done slicing your file you will see the printing time, object weight and the amount of filament used. The object weight is equal to the weight of the filament used. The printing time is fairly accurate, typical within a few minutes. Make sure to write down this information, so you will know when your print is done and how much filament is needed. **This information is also required when you book time for the 3D printer at the NOVI Reception.**

16. Click on the save-button at the bottom of the screen to download the print-file.

17. Place the file on a USB flash drive. USB flash drives are available for purchase at the NOVI Reception.

STARTING THE PRINT

1. For timebooking, payment and access to the printing room go to the Reception at NOVI 1, Niels Jernes Vej 10. Remember to bring the information from NOVI Slicer (printing time and filament).

2. Go to GrowAAL EAST 3D Print Lab (Fredrik Bajers Vej 300) when you have been granted access and booked time for printing.

3. Start by locating the right printer. The printers are labeled with a number in the top left corner on the front of the printer.

4. Turn on the printer by flipping the black switch on the lower part of the backside. This process can take a few minutes. See picture:

5. Check to see if there is enough filament on the spool, and the color is right. If the spool needs to be changed, see "How to change spool" (page 5).

6. Remove the front cover and place on top of the printer. See picture:

7. Grab a spray bottle from the wall hanger. This is isopropanol used to clean the glass build plate.

8. Give the build plate a single light spray with the isopropanol, and gently wipe off with a paper towel from the dispenser on the wall. Wipe until the build plate is dry. Place the used paper towel in the bin.

9. Place the USB flash drive in the USB port on the front. Wait for the button on the screen to turn blue.

10. Click on "Select from USB" and click on the file you want to print.

11. Click on "Print". The print head and build plate will start heating up.

12. Place the front cover back on. Bottom in first, and the top will be held to place with magnets.
That was it.
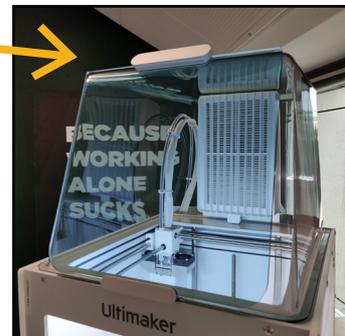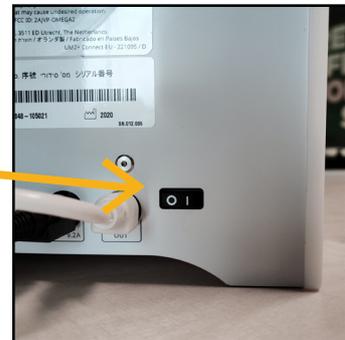
Note: To prevent a bad print, it is advisable to wait around and see if the first layer adhere properly to the build plate. If you experience problems with the print sticking to the plate, go to "The print doesn't stick to the build plate" (page 6). Depending on the print, the printer will sometimes print a single line around the object. The line does not have to be complete. The print time on the screen is not accurate.

REMOVING THE PRINT

1. Wait for the printer to cool down. The screen will say "Print finished" when it is cool.

2. Turn off the printer by flipping the black switch on the lower part of the backside.

3. Remove your USB flash drive.

4. Remove the front cover and place it on top of the printer.

5. Remove the print from the build plate, either by hand or using the spatula from the tool tray.

6. Remove the printed dot in the front left corner of the build plate. Place the printed dot in the bin.

7. Check to see if any filament is left in the print chamber.

8. Place the front cover back on. Bottom in first, and the top will be held to place with magnets.

9. Enjoy your print.

Note: If you have printed with glue on the build plate, you need to remove the build plate and clean it. See "The print doesn't stick to the build plate" (page 6).

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HOW TO CHANGE SPOOL

1. Make sure the printer is turned on. Remove the front cover and place it on top of the printer.

2. Click on the spool-icon on the screen. See picture:

3. Click on "Change material" and select "Start changing material".

4. Make sure the screen says, "Generic PLA" and click "Yes".

5. Open the feeder lever. The lever is placed on the back and must be flipped 180 degrees. See picture:

6. Start rewinding the mounted spool by hand. Make sure not to lose the end. Use the small holes on the side of the spool to fasten the end.

7. Lift the spool with spool holder off the printer and unscrew the nut on the spool holder. Remember which direction the spool was facing. The new spool must be placed facing the same direction.

8. Place the new spool on the spool holder. Tighten the nut, not too tight, and place the spool holder on the printer.

9. Use the flat cutter from the tool tray to cut the end of the filament in a 45-degree angle.

10. Insert the end in the feeder and gently push it until it reaches the nozzle.

11. Close the feeder. See picture:

12. Check if the feeder is closed properly and click "Material loaded".

13. Wait for the material to start extruding. When a few centimeters have extruded, click on "Material is extruding".

14. Wait for the printer to cool down.

15. Click on "Return to main menu".

16. See "Starting the print" (page 3) and skip to step 4.

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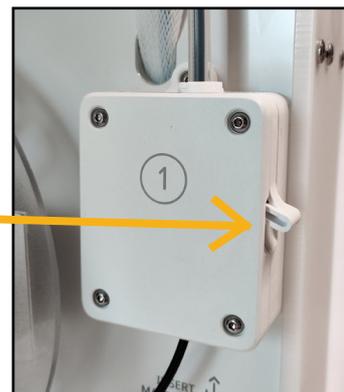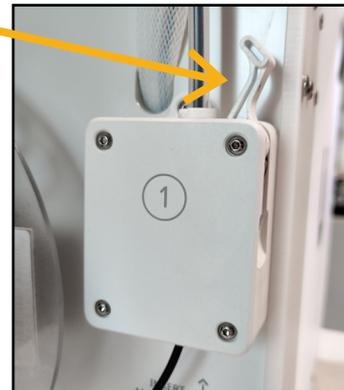
THE PRINT DOESN'T STICK TO THE BUILD PLATE

1. Click on the X-icon on the screen to stop the print, if the print doesn't stick to the plate. Confirm your decision.

2. Wait for the printer to cool down.

3. Remove the front cover and place it on top of the printer.

4. Remove the print and the printed dot in the corner of the build plate.

5. Wipe the build plate with isopropanol and a paper towel.

6. Apply a thin layer of glue with the glue stick found in the tool tray.

7. Start the print. See "Starting the print" (page 3) and skip to step 8.

8. When the print is done, and you have followed the steps in "Removing the print" (page 4) you need to clean the build plate.

9. Start by rotating the two clips in front of the build plate. Gently remove the build plate.

10. Clean the build plate with dish soap and hot water.

11. Dry the build plate with paper towels.

12. Place the build plate in the printer and lock the two clips.

13. See step 7 and 8 in "Removing the print" (page 4).