FABRICZOOM

Congratulations on receiving your new FabricZoom printer! Let's get things setup.

You can find all the instructions that come with the printer on our website www.fabriczoom.com. There you'll also find instructions with pictures demonstrating each step and videos. These instructions are provided as a checklist, but please consult the photos and videos first.

Important: When moving the printer, hold it by the outer aluminum beams. DO NOT lift the printer by the printhead or by the internal beam the printhead slides along. This beam is carefully calibrated, and lifting the printer by this beam may shift the printhead out of calibration. Have two people on hand for the unboxing.

1. Open the outer box and clear off the plastic wrap and foam.
2. You will find a hardcopy of these instructions along with Allen keys or hex screwdrivers for removing screws, and a wrench. The tools and accessories may be shipped in another box.
3. Move the inner box to a flat surface and open the box.
4. Carefully lift the printer from the box and set it on a flat, stable surface. Lift by the outer beams and avoid lifting by the printhead.
5. Remove the foam wrap.
6. Turn the printer over so that it is correct side up - the LCD screen and buttons will face forward.
7. Remove the aluminum supports and save the screws.
8. Cut the red ties holding cables in place. Do not cut the black ties.
9. Loosen the move the cable brackets from their shipping position under the top rear beam to their operating position behind the top rear beam.
10. Screw in the Cable Holder where marked on halfway along the rear upper bar of the printer. The rod can be slid down if desired. Use the Allen key or screwdriver to tighten the rod holder screw. Note the cable tower bracket must be behind the printer and the printhead will not have space if the bracket is installed on the interior of the printer.
11. Attach the cables to the ink lines on the back of the printhead. They are color coded and also have raised lettering in the 3D-printed plastic. You may need to rotate the line counter-clockwise first in order to rotate it clockwise fully.
12. Attach the four networking cables to the printhead, as show in the photo. Make sure you press down each until the socket clicks, and tug gently afterwards to ensure a good connection.
13. Use the Allen key to remove the two rubber holders on either side of the printhead wheels. Save these for later.
14. Use the wrench to gentry loosen the wheels on the front of the printhead.
15. Squeeze the wheels across the beam so they fairly tight. Now rotate the wheels with the wrench to tighten them further. The printhead should be able to glide smoothly - if overtightened the printhead will shudder when moving, but if under-tightened the printhead will wobble.
16. Slide the printhead slowly from one end of the printer to the other to ensure it can move unimpeded.
17. Remove the yellow plastic caps on the bottom of the printhead. Be careful not to scratch the face of the printhead.

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18. Remove the caps covering each valve next to the printheads.
19. Place a bowl or cup beneath the printhead to catch ink as you purge the link lines.
20. Open the accessories box and place the two pairs of black plastic trays one on top of the other next to the ink station. The height of these trays is important - do not use only one tray, or adjust the height of the ink bottles.
21. Connect the color coded ink lines on the printer to the output lines of the Ink Station. Consult the Ink Station instructions for a diagram of this and for general instructions of setting up the Ink Station.
22. (Optional) Use the two rubber holders removed earlier and the four additional holders in the kit. Attach these to the bottom rails of the printer to avoid slipping.
23. Locate the SD card (wrapped in anti-static cloth) and insert into the printer. The SD card should be inserted with the gold contacts facing up.
24. Place the tools and fabric wipes in the lower tray.
25. To turn the printer on, make sure Printhead Power button is set to "O" and then flip the Power Switch to "I". Press the Home button to reset.
26. Switch the Printhead Power Button to "I" for Fiber Reactive or Acid Ink, or "II" for Pigment Ink.
27. Switch the Printhead Power Button to "O" and then flip the Power Switch to "O" to turn off the printer.

You are now ready to load cleaning solution and ink! See the next steps.

If any of plastic parts are broken, consult the instruction page online for replacing broken plastic parts. Various spare parts are included with the printer in case any plastic parts are broken in shipping.

General Tips for Operation

The printhead face (the shiny metal part that faces the fabric) is very delicate and can get scratched or clogged easily. If you have to wipe the printhead face, use a clean slide cloth (provided). These are designed to be lintless and gentle on the surface. Never use a dirty cloth or a paper tissue, as these can clog the jets. Do not apply pressure to the printhead with your finger, even through a cloth. Instead, hold the cloth taut across the printhead and swipe it side by side (see instructional video).

If the motors are engaged, then the gantry and the roller will resist moving. Do not try to force them, as this can overload the motor electronics. If the motors are locked, simply press the Home button to reset the printer and the motors will release. Use printer's control panel to maneuver the printhead and roller. You can also turn off the printer and the motors will move freely. If the gantry strikes the frame and the motor does not stop by itself, immediately press Home or turn off the printer and consult the troubleshooting guide.

Always press the Home or Reset button after turning on the printer.

First Startup

When setting up the printer for the first time, pump cleaning solution through each printhead and leave it overnight. Repeat twice. This eliminates bubbles that have formed in the printhead as

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the printer was shaken during transport. If you skip this step, you can print with ink immediately but you may have stubborn air bubbles that create lines in your print.

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How to Change Ink to Cleaning Solution

1. Close the valve over the ink bottle.
2. Place the ink supply line into the Cleaning Solution and open the valve. Put away the bottle of ink.
3. Open the corresponding valves on the side of the printhead and on the bubble trap waste line. Make sure a cup or bowl is placed under each.
4. Press the corresponding button on the Ink Station. You should hear a pump turn on and Cleaning Solution should rise into the line. Press the button again to run the pump again.
5. Once the solution reaches the bubble-trap valve on the ink station, close the valve.
6. Continue pressing the pump button until cleaning solution exits the valve on the side of the printhead. Close the valve.
7. Press Forward again, and wait ten seconds until the solution finishes spraying from the printhead. Repeat twice.
8. Replace the bottle of cleaning solution with the new Ink bottle.
9. Repeat steps 1-7 with the new Ink.
10. When finished, press the White Quick Pump button. This briefly pumps all ink lines, which prevents one ink from backing up into another ink line.

When finished, use a printer cleaning cloth to gently wipe excess ink of the face of the printhead. Do not touch the printhead directly or through the fabric - hold the fabric taut, and sweep it over the face of the printhead. Do not use paper towels or other cloth as these may leave lint residue that can clog the jets.

Important: Do not pour purged ink back into the bottle, or otherwise try to reuse it in the printer. The ink will have picked up dust that will clog the printhead, and once mixed with the cleaning solution it will be the wrong viscosity to print properly. We recommend saving different waste inks separately, and using them for bulk dying, such as are tie-dye or other techniques.

When refilling an ink bottle with the same ink color and type, you do no need to replace the ink with cleaning solution, so under normal operation you will not need cleaning solution unless placing the printer into storage or changing ink types.

How to Run a Test Print

The test pattern included in the SD card is a good diagnostic if something is wrong with the printhead. The "staircase" is particularly good for identifying missing jets.

1. Place a sheet of A4 or letter size paper onto the media plate and secure it with the magnet.
2. Move the printhead over the paper using the Free Move menu, about an inch from the left side of the paper.
3. Go to Run Program > test.fz4 and press Forward.
4. Use the default settings - press Forward to accept each default.

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Maintenance

Your FabricZoom printer will very briefly fire the printhead every few minutes to keep the jets clean. When not in use, leave the printer turned on and in the Start screen. After three minutes, it will enter sleep mode and wake every few minutes automatically. You may hear a short, high-pitched chirp. Make sure you press the Home button to reset the printer when you are finished using it, and make sure you have a bowl or cup under the printhead to catch waste ink.

If you don't plan to print for several days or otherwise want to turn the machine off, then run cleaning solution through the printheads (from the Changing Ink instructions). Once cleaning solution is in each printhead, you may turn off the machine. If you leave the machine off with ink in the printhead, you may have missing jets when you next print - consult the troubleshooting guide. If ink if left to dry long enough, it may permanently clog the jet.

Troubleshooting: Missing Jets

If you are missing jets from the printhead, this may be because of air bubbles or dust clogging the jets. Go through the following troubleshooting steps, running a test print each time.

Level 1:
Testing the Printhead is a quick way to flush ink or bubbles out of the system. Position the printhead over the hole in the media plate, and go to Test Printhead on the start menu. Every time you press the Forward button, the jets will fire.

Level 2:
Pump the corresponding ink. Wait one minute. Wipe the printhead with a fabric wipe, being careful not to press into or scratch the printhead. You may need to press the Quick Pump button to pulse all inks so that backflow from one ink does not enter the other printheads.

Level 3:
Go through the "Changing Ink" protocol, but pause after the Cleaning solution has been run through the printhead. Leave the system overnight. Then continue replacing the ink.

Troubleshooting: Wobbly printhead

The printhead gantry may wobble if the screws holding the wheels taut have come loose, especially during shipping. Use the included wrench to rotate the screws on the wheels on the front of the printhead gantry. You may have to rotate left or right to tighten. The rear wheels do no tighten.

Troubleshooting: The gantry hits the end of the beam and tries to keep going

Press the Home button, or turn off the printer. The endstop switch may be damaged or bent out of alignment. Check to see if the endstop clicks properly and is angled in such a way that it can hit the endstop plate. If it is bent out of alignment, gently and slowly bend if back into alignment.

Troubleshooting: No ink comes out during printing

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If you just changed inks, you may still have cleaning solution in the printhead. Cleaning solution will not spray from the printhead itself and must be pushed out with the pumps. The cleaning solution will take on the color of the ink it replaces, so there may appear to be ink in the lines but it is still cleaning solution. Try pumping more ink through the printhead, and then running the "Test Printhead" command to see if any ink sprays. Also make sure the Printhead Power button is switched to "I" or "II."

Troubleshooting: There are gaps or overlaps between bands.

Make sure your fabric is stable - use paper-backed fabrics for best quality printing. Printing with bare fabric, or unevenly-backed fabric may result in "banding." When printing with a new fabric, experiment with different parameters for "Offset" - this shifts the distance moved per band up or down. The Offset can be negative. Write down what Offset you use for each fabric so you don't have to figure this out every time you print. Consider using "Accurate" mode instead of "Fast" mode to reduce banding - this is slower, but banding is reduced and more consistent.

Troubleshooting: Multiple printheads are printing in the same color.

Ink from one line has backed up into the other line. Press the Quick Pump button, leave the printhead for 1 minute and then wipe the printhead.

Troubleshooting: The colors are swapped.

One of the ink lines may have been switched during setup. Check that the color code of each ink connections. Watch the colors change during an ink change if necessary to determine if a line has been switch.

Troubleshooting: The print is going well, but then one or both colors become weak or vanish completely.

The printspeed is too high. Try the print again with a lower print speed than the software initially recommends.

Troubleshooting: There are offsets between bands where one band is shifted left or right from the next.

There may be several causes of this: 1.) is the fabric flat, well-backed with paper and loaded straight into the machine? 2.) the printspeed may be too high, try printing again with a lower speed.

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How to use the interface

There are four buttons:

Forward: Selects an option
Up: Increases a value or moves the selection up
Down: Decreases a value or moves the selection down
Home (Reset): Resets the printer and returns the user to the Start menu. If in doubt, press the Home button. Always press this button after starting up the machine.

There is also a Power Button on the back of the printer, which must be turned on. Always press the Home button after turning the Power on - the LCD screen may read gibberish before that and the motors may whine before being reset.

To print, Start > Run Program. Select the file you want from the list, scrolling down as necessary. Some operating systems leave "ghost" files on the SD card even after you delete them - if that happens, you can do a "quick format" of the SD card to fully wipe it and move only the desired files back on.

In Fast Mode, you will be prompted for an Offset - this is the distance between bands, and will differ from material to material. It can be negative. When printing on a new material, test different offsets, and be sure to record which offsets work. You can also use the Offset function to intentionally add gaps between bands or even to overlap bands. In Accurate Mode, the camera will determine the offset for you, so you are not prompted for this.

You will also be prompted for Ink Intensity and Print Speed. The printer will recommend a safe print speed based on the Ink Intensity. If your prints have issues, always try lowering the Print Speed.

When you are finished with the printer, press the Home button - the printer will enter sleep mode after three minutes, during which it periodically wakes to fire the jets to keep them clear. Leave the printer plugged in when loaded with ink but not in use. Change the printer to have cleaning solution in the printhead if you want to turn the printer off. If you do not press the Home button, the printer will not enter Sleep mode and will not keep its jets clear. This can result in jets clogging.

Navigate to the "Test Printhead" option to sequentially fire each of the printheads.

Navigate to the "Free Move" option to move the printhead and roller.

Set the Printhead Power setting to "I" for Fiber Reactive or Acid Ink and "II" for Pigment Ink. Turn it to "O" before turning the printer off or on. Always turn on the printer before setting the Printhead Power to "I" or "II."

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Printing

(Please see our website for detailed instructions, including pictures. This is only a quick overview and is not sufficient by itself to learn how to print.)

(See the software instruction guide on the SD card before printing.)

We're ready to print! Always start by loading a piece of paper - either a sheet or printer paper or blank newsprint. Secure the paper with the magnet strip and straighten it. Then tape the paper to the roller - one small piece of tape every foot is sufficient. Position the printhead so that it is over the paper, and near the left edge. Run a test print by going to >Run Program> test.fz4. Is the printer missing any jets? If so, consult the troubleshooting section to clear the jets.

Now load your fabric - this can be just fabric, fabric with paper backing or fabric with interface backing (see the Preparing Fabric section). Load it just like you would load paper, making sure it is loaded straight. For "Fast Mode" printing, the fabric can be positioned anywhere on the printer - just move the printhead until it is over the fabric and near the left edge. For "Accurate Mode," position the fabric as far to the left as possible, but leave at least half an inch of space, since if the fabric is loaded even a little crooked, it will drift in time.

Now print the file you want - go to >Run Program> yourfile.fz4. The printer knows whether the file is in Fast or Accurate Mode. In Fast Mode, it will ask you for an Offset value - this is the gap between bands. In Fast Mode, you should figure out what Offset value works best for each fabric and each situation - sometimes you may want intentionally large gaps, or even overlaps by setting a negative Gap value. In Accurate Mode, you will be prompted for a Scan Speed value that will affect the scan speed and quality. If you notice your printer consistently has overlaps or gaps in Accurate Mode, try changing the Scan Speed value.

The printer will now request an Ink Intensity and recommend a speed based on the intensity. This is only an estimate - if you have image quality issues, try lowering the speed. Slower speeds result in more uniform fields, and some high ink density settings may interfere with the printer's internal clock at high speed, which results in incorrect sized prints.

The printer will now proceed with printing your image. Don't try to move the printhead or the roller when the motors are engaged - they will resist, and if you overwhelm them with force it may damage the electronics. If the print needs to be stopped, press the Home button to reset the machine or press the power switch on the side. When you are finished, unroll the image from the roller. Different inks have different requirements for how to treat fabric after printing.