

Direct-to-Garment Printer Basics

Inspiration Station: Geauga County Public Library’s Maker Space Instructions

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Introduction

The **Roland BT-12 Direct-to-garment Printer** prints directly on to fabric.



Fabric Specifications

- Must be at least 50% cotton
- White or light color fabric works best; dark colors will darken the design and might not show

Washing Specifications

- Turn garments inside out before putting them in the washing machine.
- Hang dry.
- Lasts at least 50 washes before fading.
- Do not rub printed surfaces. May cause discoloration due to friction.

Example Materials:

- | | | |
|--------------|--------------|----------------|
| T-shirts | Tote bags | Kitchen towels |
| Sweatshirts | Baby bibs | Socks |
| Baby onesies | Loose Fabric | Masks |

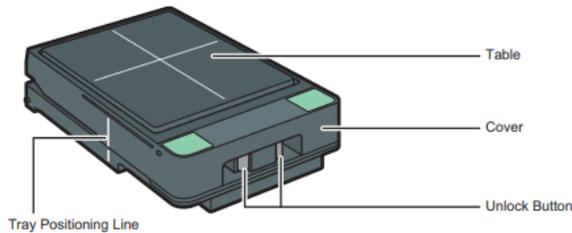
Preparing the Fabric

Different Trays There are two(2) trays available:

A4 Standard Tray

Tray (A4 Standard Tray)

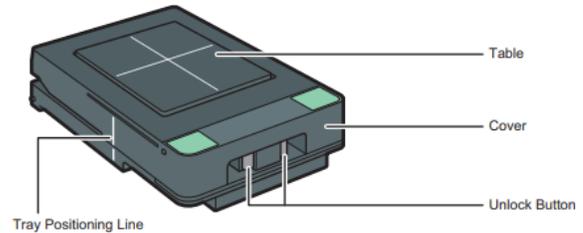
You can print within an A4 size (210 × 297 mm) (8.3 × 11.7 inches) area on a garment using this tray.



A5 Small Tray

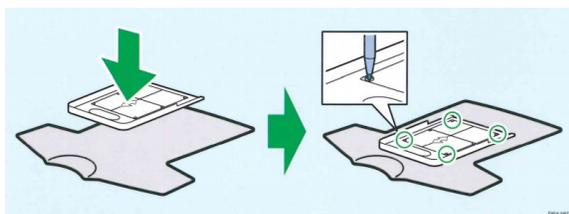
Tray (A5 Tray)

You can print within an A5 size (148 × 210 mm) (5.9 × 8.3 inches) area on a garment using this tray.

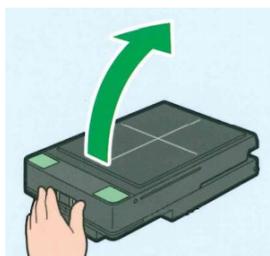


How to Prepare the Fabric

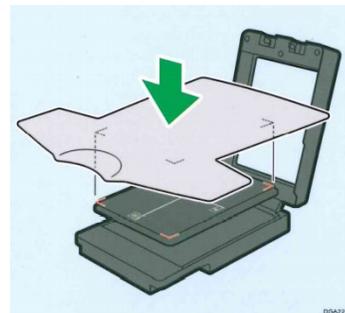
1. Take the cover off the tray you wish to use. **Leave the cover off for the rest of the process.** The cover is only for keeping dust off the tray and making the trays stackable for storage.
2. Optional: use the cover of the chosen tray to mark the corners of the tray on the fabric to line up later.



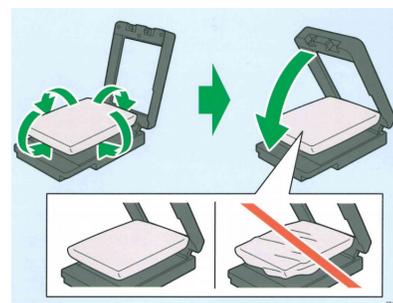
3. Open the tray by pinching the buttons on the front and let the tray fall all the way open.



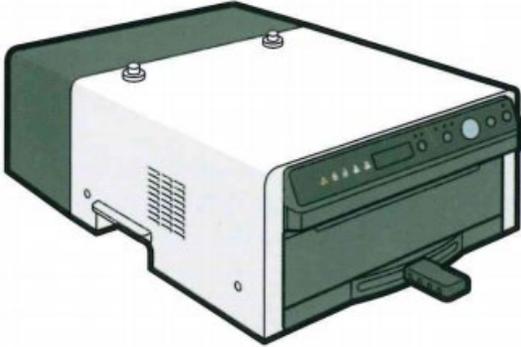
4. Place the fabric on top of the velvet tray, making sure to line up the marks.



5. Fold the fabric under the tray, making the fabric as smooth as possible on top.
6. Close the tray. All the fabric will fit under the velvet section.



Press the Fabric with the Finisher



DSA121

The finisher is essentially an oven that bakes and sets the ink. Use it *before* printing to press the fabric and remove wrinkles. Use it *after* printing to set the ink.

1. Make sure the finisher is plugged in.
2. Press the **power** button on the front of the machine.
3. Make sure the mode switching lever is set in the center (unlocked position).
4. Place the tray with the fabric inside in the finisher and close the door. **DO NOT PUT THE TRAY COVER IN THE FINISHER OR THE PRINTER.**

5. Press the **Preheat** button and wait for the finisher to heat up.

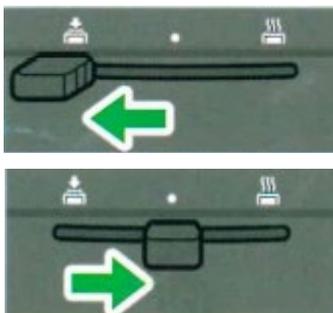
- a. As a safety precaution, the finisher locks once it exceeds 70°C (158°F). Therefore, it is best practice to put the tray in the finisher before preheating.



When the Preheat button is lit, press the **Preheat** button to start preheating.

When the **Preheat** button is unlit, no operation is necessary because preheating is completed.

6. When the finisher is at 170°C it will beep, and you can then slide the lever to the left, which is the pressing mode.



- a. The timer will start once a mode is chosen. For pressing, the finisher automatically sets for 30 seconds. An alarm sounds once it is finished.

- b. Move the lever back to center to finish pressing.

- c. Press the **Stop/Unlock** button until you hear a loud *click* and then open the door and remove the tray.

7. Close the door.

- a. When used for pressing, the finisher can stay on while you print. When printing is finished, move the tray back into the finisher to fix the ink.
- b. If the finisher starts to cool down again, press the **Preheat** button again to get it back up to 170°C.

Your fabric is now ready for printing.

Printing

The direct-to-garment printer prints directly on to fabric. It works best on pale and neutral colors, especially white. The fabric must be **at least 50% Cotton**.

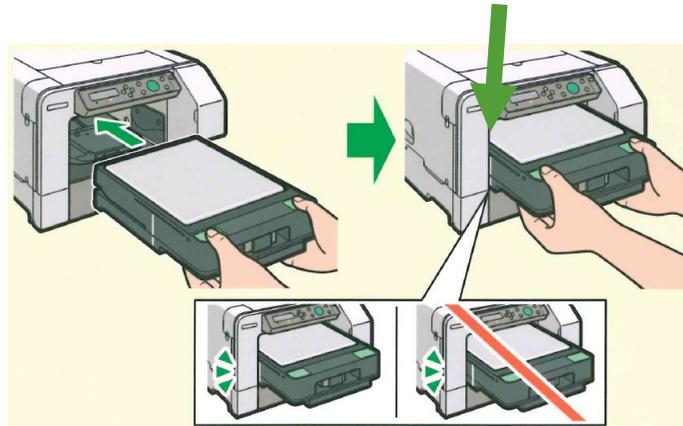


Before Printing: Prep the fabric in the finisher. Check the “Preparing the Fabric” directions.

To Begin

1. Make sure the printer is turned on.
2. Plug the USB cord into the laptop.
3. Move the tray from the Finisher to the Printer.

Make sure the tray is in properly. It clicks into place and the line on the left side should line up with the side of the printer.

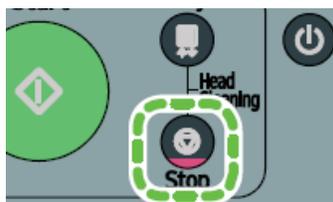


DO NOT FORCE THE TRAY FARTHER INTO THE MACHINE.

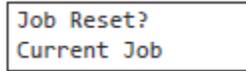
Check the Printer

The screen on the printer should read: READY. If it says PRESS START, that means an old job is saved in the printer and will print a previous design instead of yours. Follow these steps to remove it.

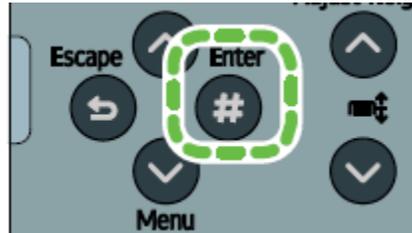
1. Press the STOP button.



- a. The screen will read: Job Reset? Current Job



2. Press the #Enter button.



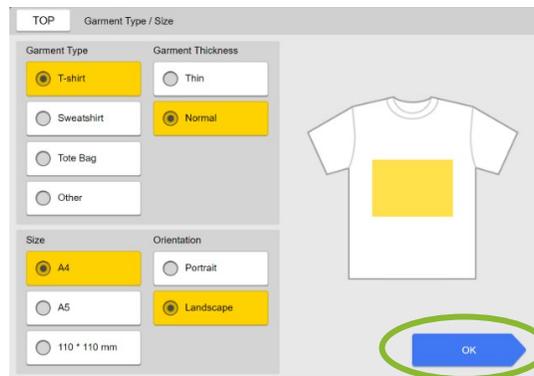
3. Repeat steps 1 and 2 until the screen reads READY.

Prepare the Print

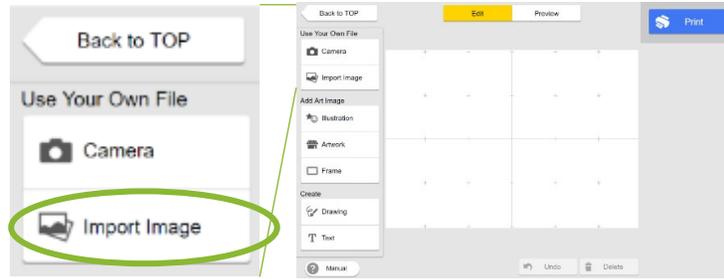
1. Open the Roland Design Software on the desktop
2. Click **Advanced Designer**
 - a. Easy Designer only asks a few questions but is not very helpful.



3. Choose the Garment Type, Tray, and Orientation. Then click **OK**.



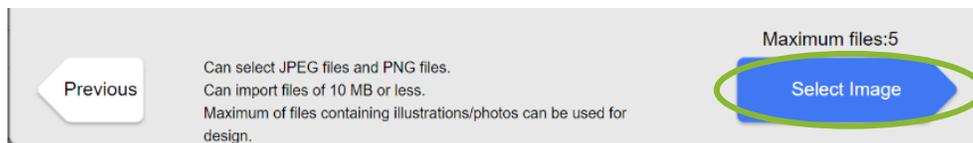
4. This opens the main design workspace. To add your image, click **Import Image**.



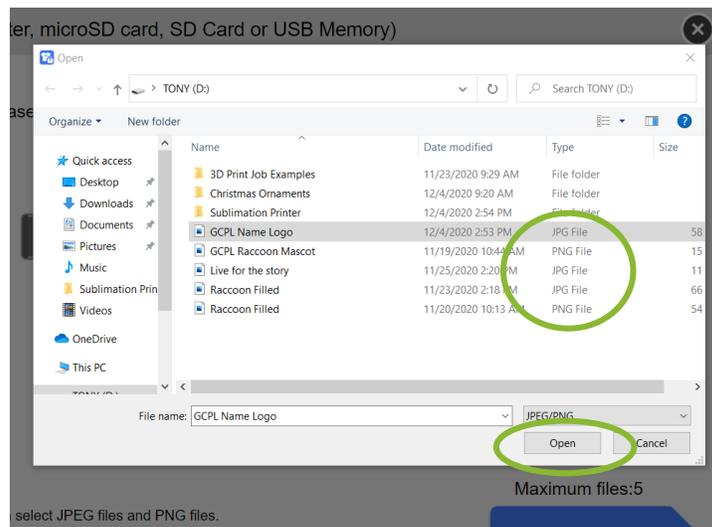
5. Click **Computer, SD/microSD Card USB Memory** to import your image from the computer.



6. Click **Select Image**.
 b. You can upload up to **5 files** for one design.



7. Find the image in the saved folder. Click on it and then click **Open**.
 c. The file must be a **JPG, JPEG, or PNG** image file.



8. The image will appear in the workspace. You can now move the image, change the size, etc.



Click **Preview** to see how the image will look on the item.



9. The placement of the image seemed low in the preview. Back in **Edit**, the image can be moved.



The preview now looks like this:



10. Add text by clicking **Text** on the left-hand side. The right-side changes to choose font or color.



11. Click in the workspace and type the word or phrase. One text box can only have 20 characters. Add another text box to create longer phrases.



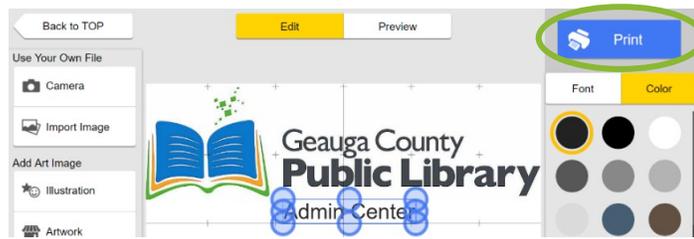
Click and drag on the text box to move it.



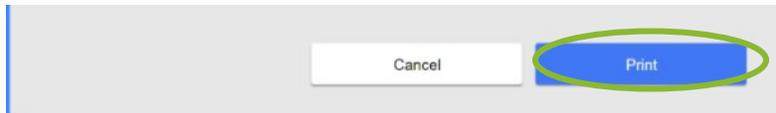
Preview with the new text:



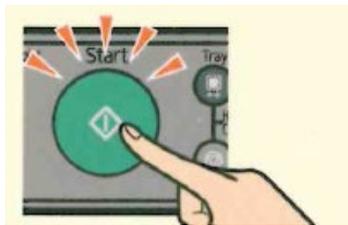
12. When ready to print, click **Print**.



A window will appear asking, "Are you sure you want to print this design?" Click **Print** again.



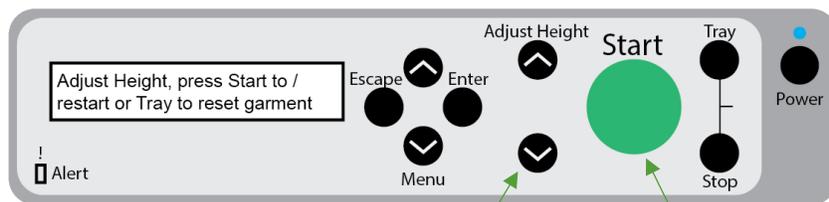
13. Press the blinking **Start** button on the printer. The printer will now print.



14. If this Error Message appears, do the following:

Adjust height, press Start to / restart or Tray to reset garment

- d. Wrinkles, slack, or a float remain on the fabric or the edges of the fabric are out of the tray. Detach the tray, then load the fabric again. If the message reappears, adjust the height of the tray manually: Press the Down Arrow ∇ for 30 seconds, then press Start. If message persists, press the ∇ arrow longer and press Start again. When finished, carefully remove the tray from the printer. Make sure to only hold the tray with your thumbs on the green squares. The rest of the tray may still be hot.
- e. Fabric that is 4mm (about 0.2 inches) or thicker is loaded on the A4 standard or A5 tray. Press the Down Arrow ∇ for 30 seconds, then press Start. If message persists, press the ∇ arrow longer and press Start again.



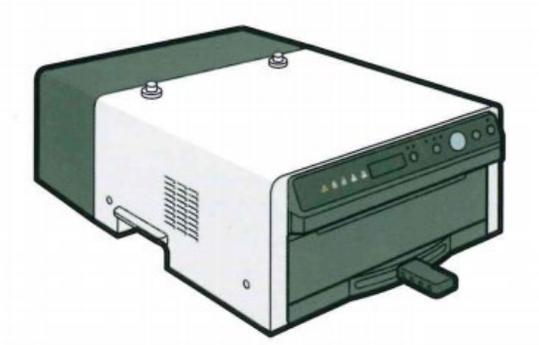
- 1. Down Arrow
(Hold for 30 seconds)
- 2. Press Start

15. After printing is finished, move the tray from the printer and back into the finisher.

THE PROJECT IS NOT FINISHED. DO NOT TOUCH THE INK.

Sealing the Ink

Fixing the Ink with the Finisher



The finisher is essentially an oven that bakes and sets the ink. Use it *before* printing to press the fabric and remove wrinkles. Use it *after* printing to set the ink.

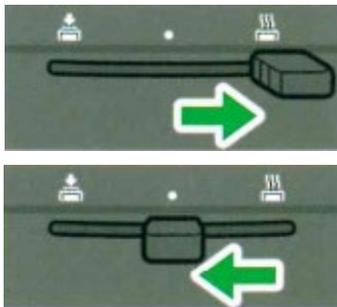
1. Place the tray in the finisher and close the door.
2. If the finisher reads a temperature lower than 170°C, press the **Preheat** button and wait for the finisher to heat up if it cooled down below 170°C.



When the Preheat button is lit, press the **Preheat** button to start preheating.

When the **Preheat** button is unlit, no operation is necessary because preheating is completed.

3. When the finisher is at the chosen temperature it will beep, and you can then slide the lever to the right, which is the fixing mode.



- a. The timer will start once a mode is chosen. An alarm sounds once it is finished. It should take **3 minutes**.
- b. Move the lever back to center to finish pressing.
- c. Press the **Stop/Unlock** button to open the door and remove the tray.
- d. Close the door.

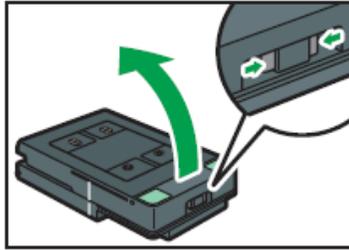
4. Remove the fabric from the tray.
 - a. Be careful: fabric and tray may still be hot.
 - b. Put the cover back on the tray when finished.

Printing Socks and Sleeves

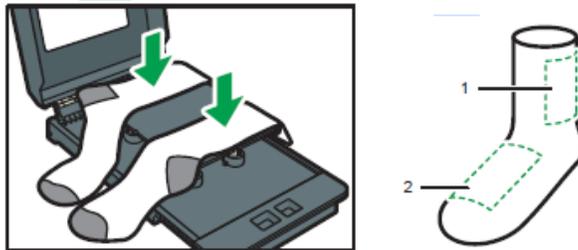
The direct-to-garment printer can be used to print on smaller items like socks or on the sleeves of t-shirts.

Socks or other small pieces of fabric:

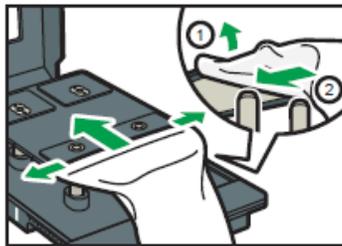
1. Choose the A5 tray which has the 5.9 x 8.3 in print area. Open the tray by pinching the latch on the front.



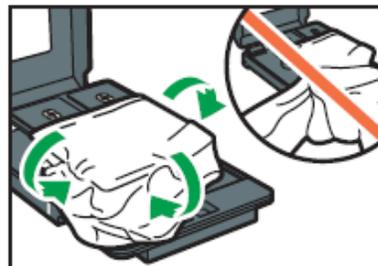
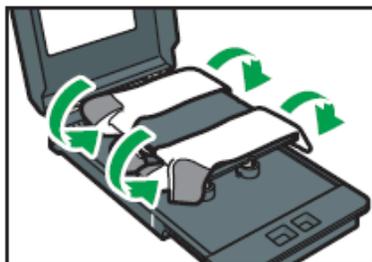
2. Place the socks on the tray as shown. You can print on the side, top, or bottom of the sock. Where you want the design should be in the print area.



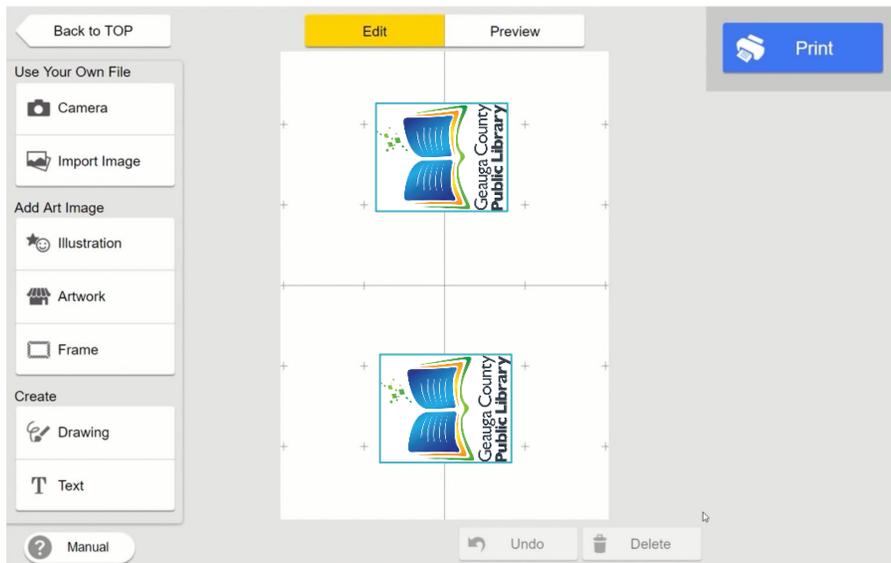
- a. For sleeves, open the sleeve and stretch it over the table in the tray.



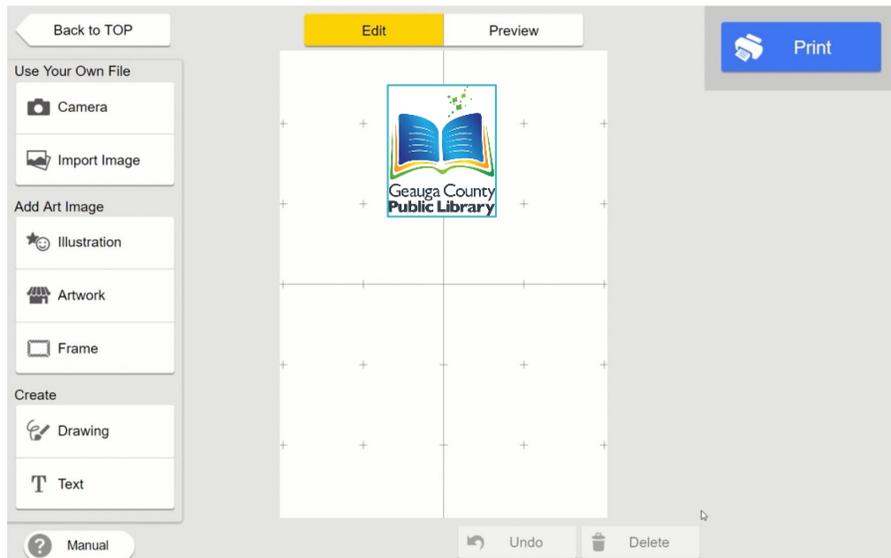
3. Tuck in the edges of the sock under the table. If a sleeve, make sure the rest of the shirt is inside the tray.



4. Make sure there are no wrinkles in the print area and close the tray lid.
5. Press the fabric in the finisher according to **Press the Fabric with the Finisher** (page 2)
6. Once pressed, move the tray to the printer.
7. When designing the print, make sure to note where the socks are according to the crosses on the table of the tray and the orientation of how the socks were placed. This is how you can line up the design on the fabric.
 - a. Place the designs where they will line up with the fabric.
 - i. Sock



ii. Sleeve



8. Press **Print**.
9. When done, move the tray back to the finisher and fix the fabric.
10. Remove the socks from the finisher.

BT-12 as Default Printer

If the Roland Design Software creates an error message asking for the direct-to-garment printer to be the default printer, follow these steps.

1. Click the Windows icon in the bottom left corner of the screen. 
2. Click on the gear for **Settings**. 
3. Click **Devices**.
4. Click **Printers & Scanners**.
5. Scroll down and **uncheck** the box next to “Let Windows manage my default printer.”

Let Windows manage my default printer

When this is on, Windows will set your default printer to be the one you used most recently at your current location.

- a. When this box is checked, the computer picks the default printer rather than leaving it as the direct-to-garment printer.
6. Click on the BT-12 printer in the list above.
 7. Click **Manage**.
 8. Click **Set as Default**.
 9. The software will now open normally.