

Phrozen Transform Mono LCD Upgrade Guide

V 2.0

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Part I: Installing the Bezel and MONO LCD Screen:

Materials:

[Mono LCD Screen & Driver Board](#)

I also recommend contacting [Grace](#) directly, and telling her to create an invoice for a Phrozen Transform Mono LCD Panel

[Plastic putty knife](#)

[Mandela Rose Phrozen Transform Mono Aluminum Bezel](#)

[2" Electrical Tape](#)

[Bookbinders Tape](#) (Optional)

[3M Double Sided tape for affixing the Display Driver to the Paraled](#) (Optional)

[Hot Glue Gun](#)

[Replacement Pyrex \(Borosilicate\) glass for Bezel](#)

[Thermal Paste for coolers](#) (Optional)

[40mm x 40mm Heatsinks](#) (Optional)

Paper Towels

Glass Cleaner (Recommended)

.125" (3mm) Thick Replacement Glass - 11.8125" x 6.8125" (300mm x 173mm) (Optional)

Disassembly of the original Phrozen Transform:

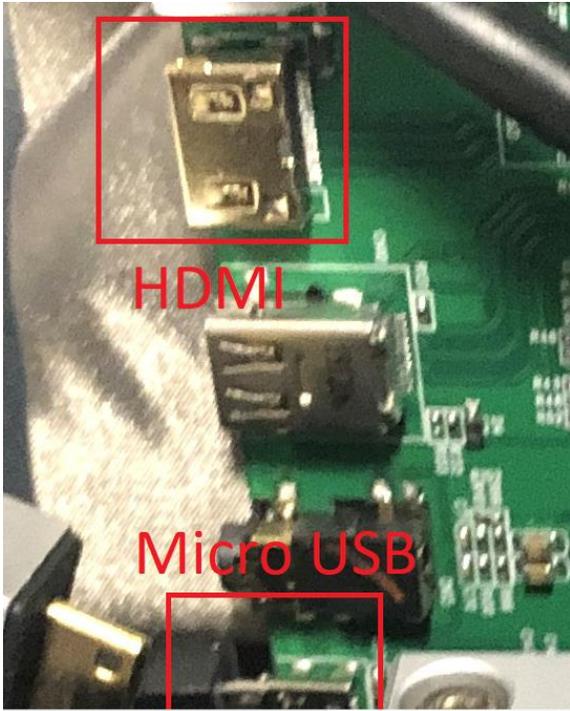
- 1) Remove the four screws from the corners of the Phrozen Transform. On the model Transform used while writing this, a 3mm Allen head worked to remove them.



(Note: There was some resin remnants around the original bezel, a plastic putty knife was used as leverage for lifting the bezel gently to remove it)

- 2) take note of where the original HDMI and interface connectors were located on the driver board





- 3) Using Isopropyl alcohol carefully clean around the edges of the recess that the bezel was seated in.

- 4) Remove the VAT mounting screws from the original bezel. This was sealed in place with hot glue. A bit of Isopropyl alcohol soaked on a paper towel and pressed into the glue helped it to



release easily in conjunction with using a slot headed screwdriver.

- 5) Using the screws from the original bezel, placed them in the new bezel, and hot glued them into place.



- 6) Remove the three screws at the bottom of the bezel and place the new LCD screen into place. Make sure to remove the clear plastic on the backside of the LCD Screen. It was also useful to make sure to make sure the circuit board cleared under the center mount point. This was done by sliding the LCD screen into place.



- 7) Insert your glass from the original LCD Bezel, or a replacement piece if you could not remove it. [Glass is 300mm x 173mm and 3mm thick] (Note – If your original glass is “stuck” to the bezel via glue or dried resin running it under very warm water, or putting it on your lowest oven temperature can help release the glass) I’ve also linked to replacement glass from the [“FEPSShop”](#) if you need to order a new piece
- 8) Screw the bottom bracket back into the mounting bezel. Make sure to remove the protective plastic sheet on the top of the LCD Screen at this point. As I ended up doing this incorrectly the “Up” side of the LCD is the one with the black covering over the Printed Circuit Board (PCB).



- 9) Using the 2” Tape, cut it to a length longer than the top/bottom of the bezel. Then cut the tape down the center, making two 1” pieces. Place these on the top and bottom of the bezel.

Covering the LCD connection points on the bottom, and just overlapping the edge of the glass on the top of the LCD



10) Repeat this process for the sides. Using the 2" Tape, cut it to a length longer than the top/bottom of the bezel. Then cut the tape down the center, making two 1" pieces. Be sure to also cut a notch that goes around the VAT mounting screws. Just overlapping the top and bottom glass, secure the tape into place. I have included links to both Bookbinding tape and Electrical Tape, both are good solutions, it is a matter of personal preference.

11) Cut the tape to length, making sure the 4 corner mounting points are exposed

12) Connect the Ribbon Cable to the connection point on the bottom of the LCD Screen.



13) Connect the Ribbon Cable to the Driver board. It is very important to note that the cable will fit both ways, but will only correctly display if the correct pins are lined up. Make sure the cable is connected as in the picture below. Black dot side of the cable to the driver board.



14) If you purchased them, place the 40mm x 40mm Heatsink to the IC Chip on the board, as well as to the exposed copper on the bottom of the board.

- 15) Secure the Driver board to the mounting bracket. NOTE: I opted not to do this, as I was worried about damaging the eDP cable when taking the LCD out of the machine. On the advice of Frank Collinwood, I affixed the display driver to the front right corner of the ParaLED with [3M double sided tape](#). This allowed me to easily stow the Micro USB & HDMI Cables, and easily attach/detach the eDP Cable.



- 16) Connect the HDMI Connector and Micro USB power connector to the Driver board.



- 17) Place the bezel, LCD Screen and Driver board back into the Transform and secure the corners with the screws from step 1 Note: Make sure to properly stow the HDMI Cable, so it is not between your screen and the LCD Array



Part II: Updating the Phrozen Transform Firmware to Transform (MONO) LCD Version

Materials:

[Scandisk MicroSD Memory Card](#) (Sandisk is only recommended as it seems to be the OEM brand)

- Note you can use whatever size you want here, my unit had a 16gb MicroSD Card

[MicroSD Card USB Adaptor](#)

File Archive software such as [7Zip](#) or [WinRAR](#)

[Win 32 Disk Imager](#) (PC Owners)

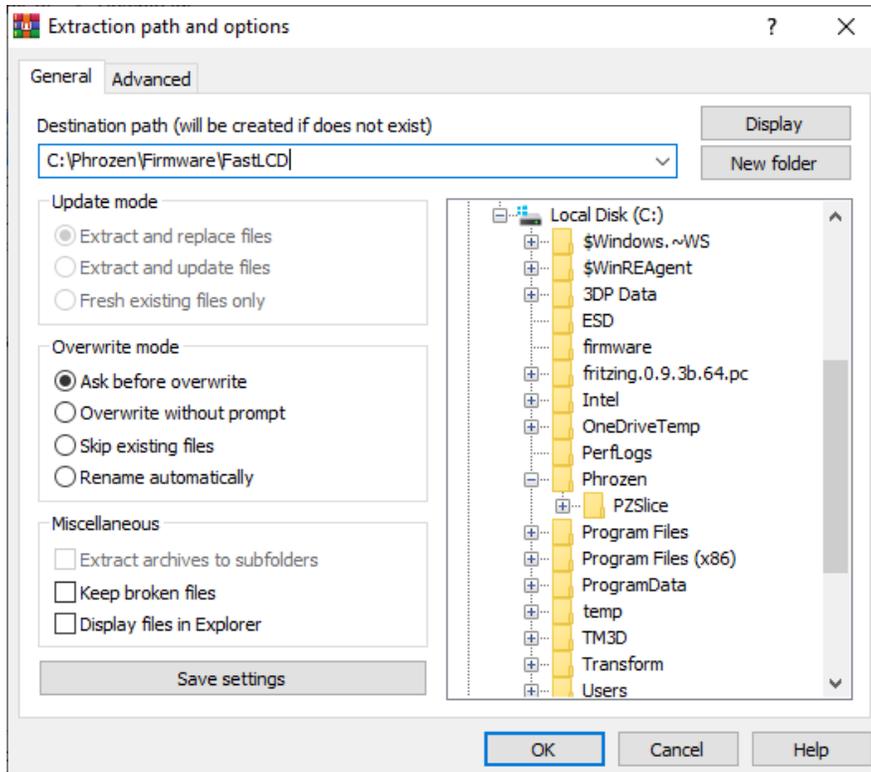
[BaleaEtcher](#) (Linux/Mac)

[Phrozen Transform \(MONO\) LCD Firmware](#)

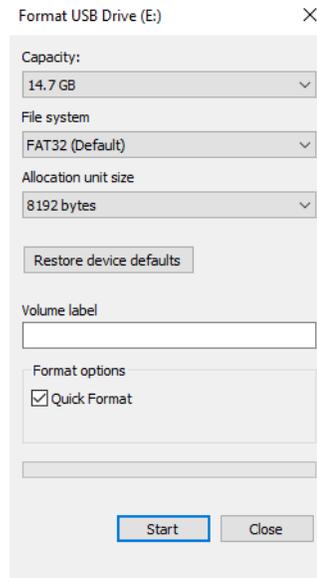
- Current version as of this document being written [Transform Fast 292](#)

Updating the Phrozen Transform firmware (PC Guide)

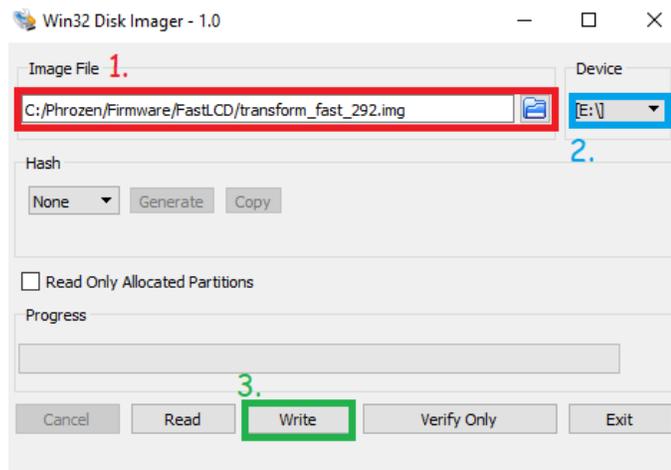
- 1) Download the latest Firmware for the Phrozen Transform (MONO) LCD Version. As of the publishing of this document that version is [Transform Fast 292](#)
- 2) Once you have downloaded the Zipped version of the firmware you will have to open the archive and copy it to your local hard drive. In this guide we are using “C:\Phrozen\Firmware\FastLCD” as the directory we want to send the image file too



- 3) You should now insert your USB Card reader into your USB Port, and make sure your SDCard is inserted as well. If you are prompted to format the Card, make sure you use a filesystem the Transform can read, such as Fat32. You will also want to make sure “Quick Format” is checked



- 4) You can then launch Win32DiskImager, you should select the extracted .IMG file in “C:\Phrozen\Firmware\FastLCD” (1) as your source file. Select your MicroSD Drive (2) as your Device and then select “Write” (3) from the menu. This will write the Firmware Image to the MicroSD Card.

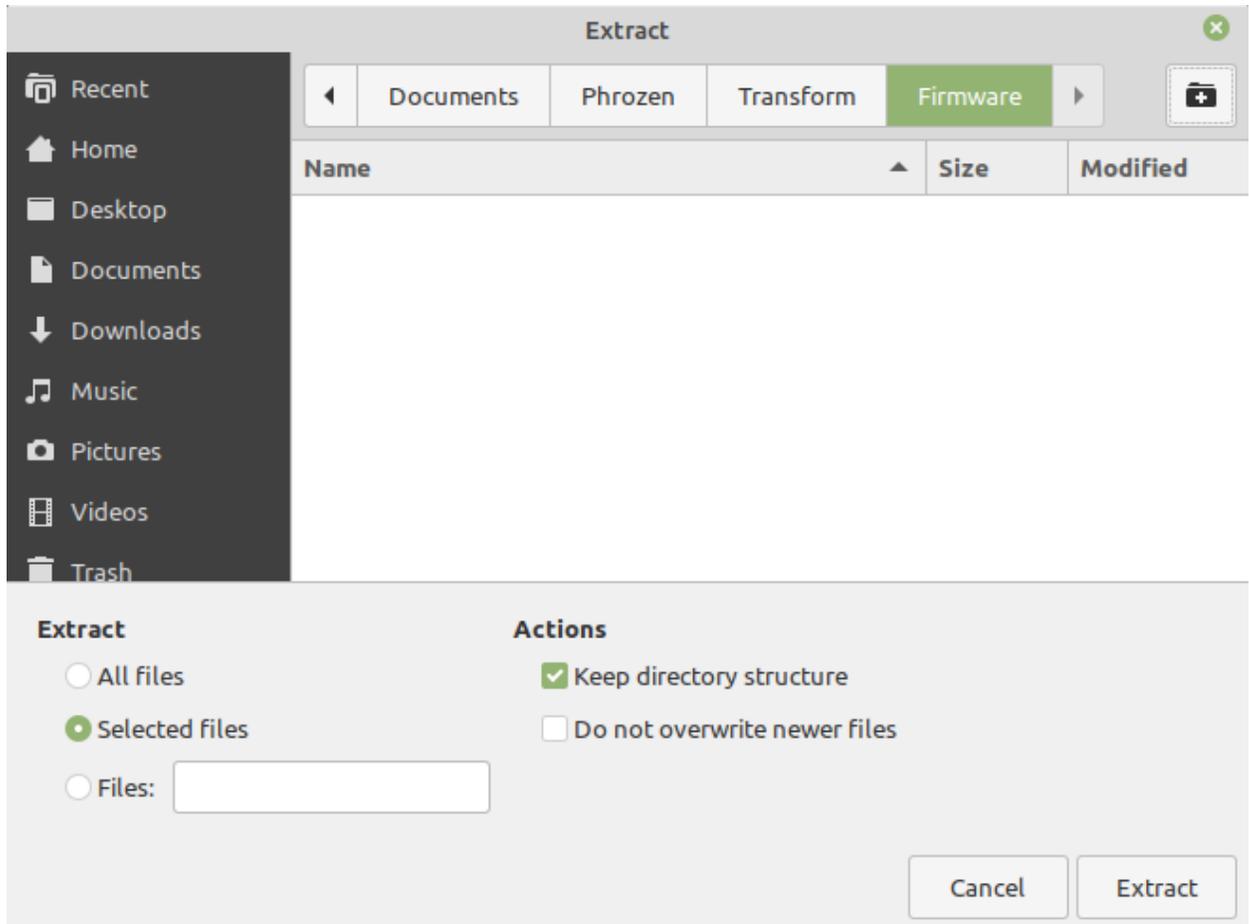


- 5) Once you have successfully written to your MicroSD Card, you can replace the one currently installed in the back of your Phrozen Transform with this new image.

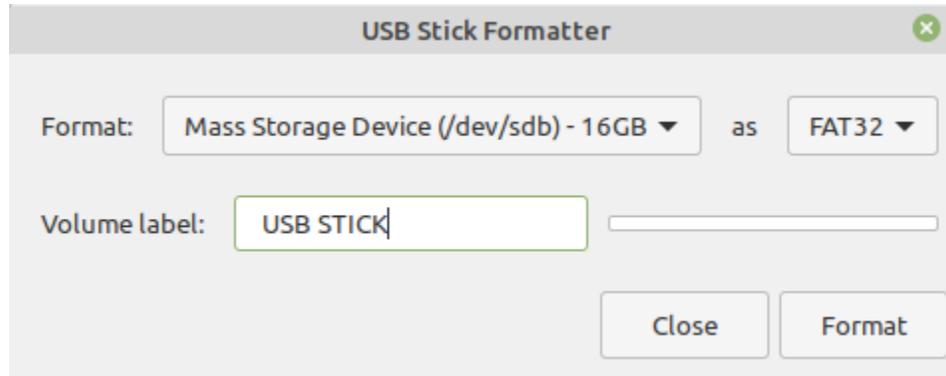
NOTE: You will have to setup your WIFI and other configurations once you boot the new Firmware.

Updating the Phrozen Transform firmware (Linux\Mac Guide)

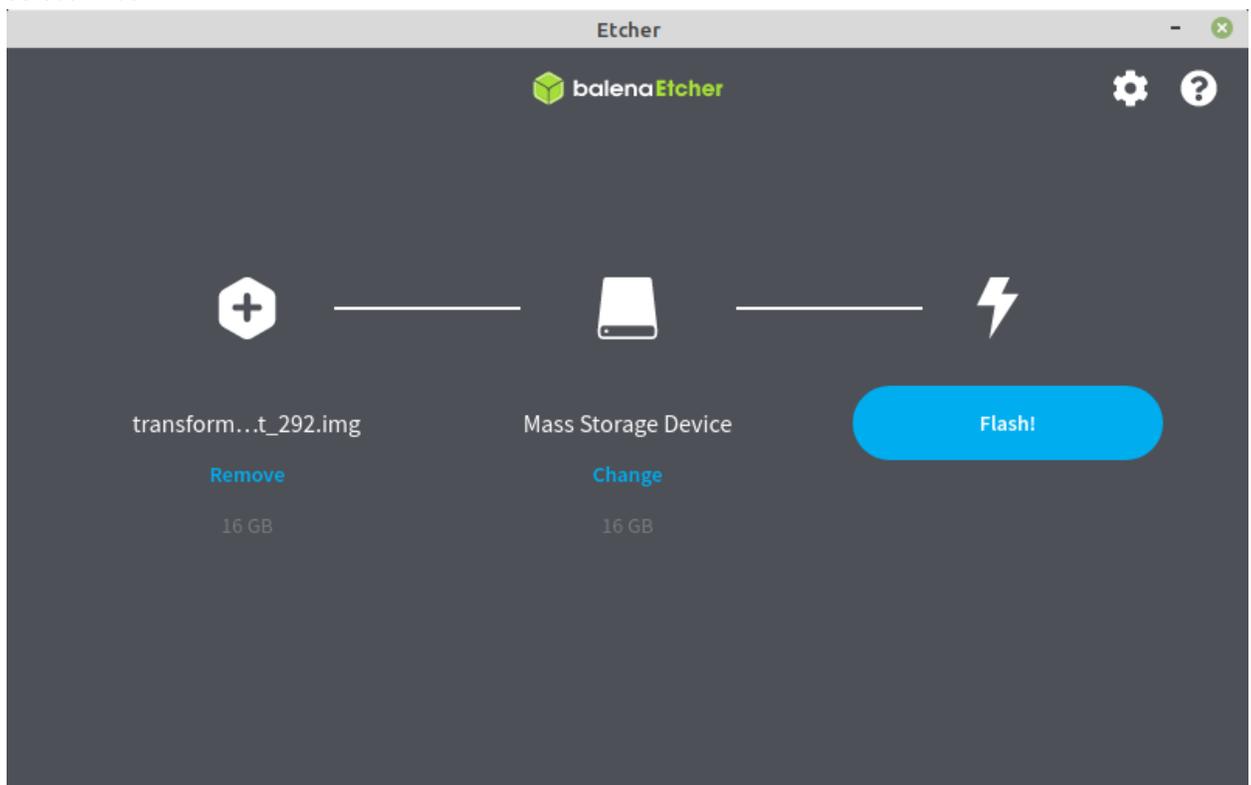
- 1) Download the latest Firmware for the Phrozen Transform (MONO) LCD Version. As of the publishing of this document that version is [Transform Fast 292](#)
- 2) Once you have downloaded the Zipped version of the firmware you will have to open the archive and copy it to your local hard drive. In this guide we are using “Documents\Phrozen\Transform\Firmware” as the directory we want to send the image file too



- 3) You should now insert your USB Card reader into your USB Port, and make sure your SDCard is inserted as well. If you are prompted to format the Card, make sure you use a filesystem the Transform can read, such as Fat32.



- 4) Launch Balena Etcher. Select the img file that we extracted, your target MicroSD Card, and then select "Flash"



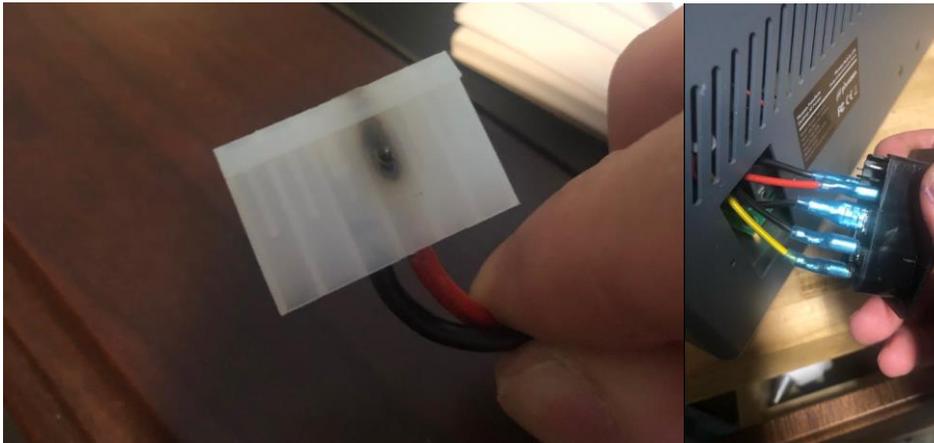
- 5) Once you have successfully written to your MicroSD Card, you can replace the one currently installed in the back of your Phrozen Transform with this new image.

NOTE: You will have to setup your WIFI and other configurations once you boot the new Firmware.

Part III: Additional Notes: Hardware replacement and Power Cord Issues

Updating the Power Connector/Plug

During the course of updating my printer, I found that I had a similar issue others had experienced with the power connector (going from the [Power supply board](#) to the Motherboard) that others had experienced. I believe this is caused by excess heat to the board. Phrozen will replace the connector if you contact them. You have to send photos of your plug and connector to their [support team](#).



Replacing the mother board / ETEPS Jumper.

During the update of my printer, I thought I had damaged my [motherboard](#). I ordered a spare one, and found that you need to configure it to work properly with the Transform, as the same board is used by multiple printers Phrozen produces.

One of the parts of the motherboard is this is the stepper driver. Note its orientation before you pull it off. There will most likely be a jumper under it changing your steps/mm. You will want to remove this Jumper. This jumper controls step resolution. - Full step, half step, sixteenth step and thirty seconds step.

