

## Morpheus – OLED Display PCBA Replacement

Rev 1.0 - 20231130

Symptoms: OLED display is “burned in”, the image of the burned in screen can be seen beneath the current screen, or the display may look “out of focus.” The OLED may also have become excessively dim, even on the brightest setting.

Remedy: Replace OLED Display PCBA

### Tools and Materials Required

- Control Forge/Morpheus OLED PCBA (See “Mounting OLED to PCBA”)
- Small Straight Slot Screwdriver
- 10mm nut driver
- 5/16” nut driver
- Small Phillips Head Screwdriver
- Container(s) to hold knobs, nuts, washers etc. during disassembly

### Note

- Do not remove the protective film from the OLED panel until instructed

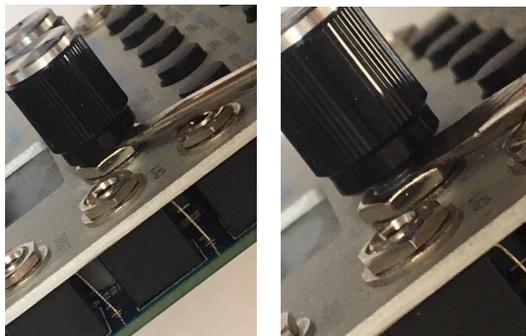
### Steps for Replacement

#### **Before Starting**

1. Verify the Morpheus is in working order, disconnect power and remove from the rack.

#### **Remove Old OLED Display PCBA**

2. Remove all 7 knobs from the module. Use the small straight slot screwdriver to pry gently in several places around the bottom of each knob while lifting straight up.

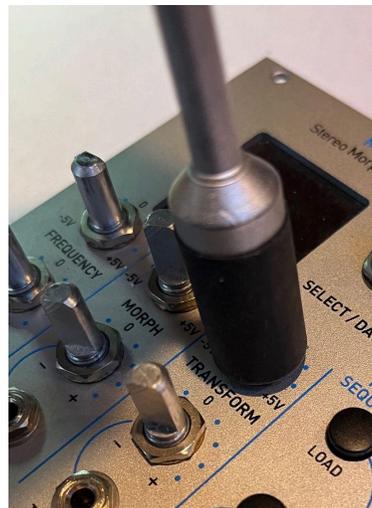


If the screwdriver will not press against the mounting nut, use a piece of cardboard or tough plastic under the screwdriver to prevent scratching the Front Panel. Work slowly and gently to avoid separation of the nylon inner sleeve from the knob. Very occasionally the metal knob may separate from the nylon inner sleeve when removed. Refer to the “Separated Knob Repair” document should this occur.

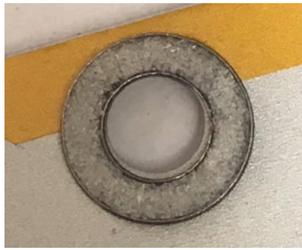
3. Remove the 11 jack nuts with a 5/16” nut driver; also remove the 11 washers.



4. Remove the nuts beneath all 7 knobs with a 10mm nut driver. Be very careful not to scratch the panel during this operation. Covering the nut driver with heat-shrink tubing can be helpful. The skirted knob will not have a washer under the nut, the non-skirted knobs may or may not have one. The washers under the non-skirted knob are not necessary.



5. Carefully remove the Front Panel.
6. Remove the thick washers from the pots and encoder. Tip: they sometimes stick to the back of the Front Panel. Note: Sometimes these washers can be greasy. If so, be careful not to touch the front panel with greasy fingers, as it will become stained. The washers can be cleaned with soap and water and dried before replacement.



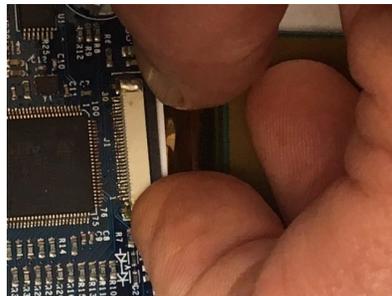
7. Unscrew the one mounting screw for the OLED display PCBA, set aside the screw, nut, lock washer and spacer.



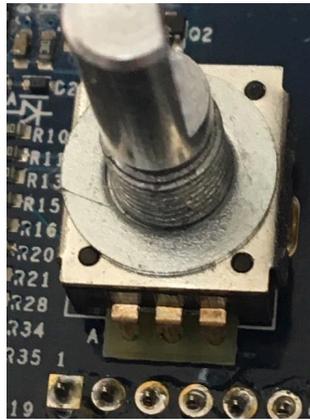
8. Fold OLED Display PCBA up from the encoder.



9. Pull on the sides of the flat cable connector lock to unlock the connector, and pull out the flat cable and remove the failed OLED Display PCBA. (The locking piece may be either white or black in color; black is shown here.)



10. Before proceeding, verify that there is a flat washer on the encoder as shown. If the washer is not present, install an M7x0.5mm washer. Contact Rossum Electro if you need an M7x0.5mm washer.

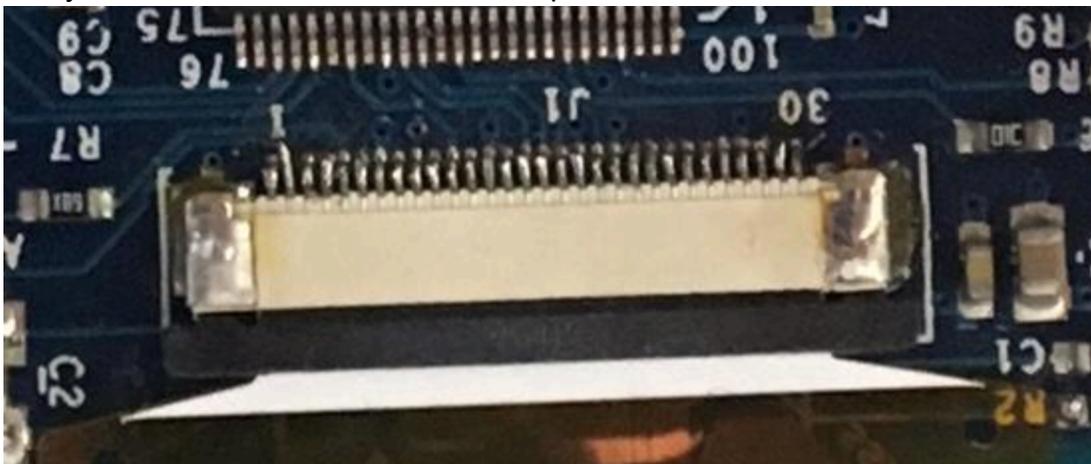


### Install Replacement OLED Display PCBA.

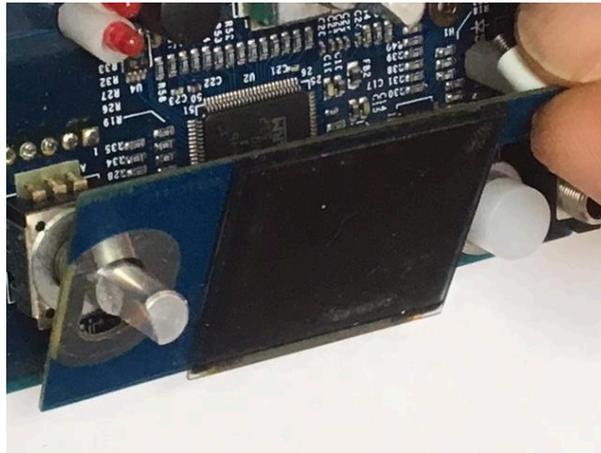
11. Push the flat cable into the connector, make certain that it is all the way in and completely seated. Note: lock plastic may be either black (as shown) or white.



12. Carefully push the connector lock into the locked position, leaving the flat cable completely seated and the white cable area parallel to the connector.



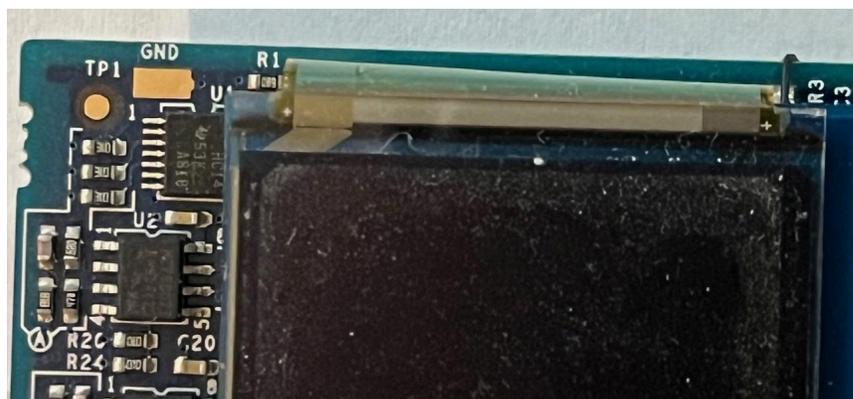
13. Fold the OLED Display PCBA back over the encoder with the mounting screw and spacer attached. Insert screw into hole in main PCB.



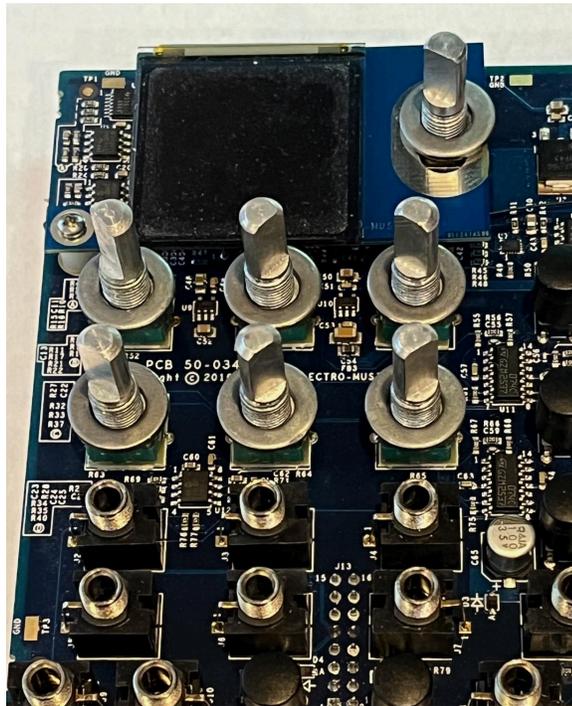
14. Apply lock washer and nut on rear of module and tighten. The screw goes through the OLED Display PCBA board, then through the spacer then the main PC board. The lock washer and nut go on the other side of the main PC board to secure the screw.



15. Make sure the OLED display is parallel to the main board and module edge. Remove the protective film from the OLED.



16. Replace all 7 thick washers on knob pots and encoder.



17. Reinstall front panel. Tip: If getting a button through a hole is difficult, use a pencil with an eraser to re-align the button slightly so it fits through the panel hole.

18. Install washers and nuts FINGER TIGHT on ONLY the bottom left jack, the bottom right jack and the top right (TRANSFORM) pot (washer optional).



19. Now power up the Morpheus and check the module to make sure there are no issues and that the new OLED Display works and is visually level.
  - a. If there is a problem, remove the nuts, washers and Front Panel.
  - b. If the display does not work, the connector was not fully seated. Reinsert the connector as shown in steps 11 and 12.
  - c. If the OLED display is not level, loosen the screw, and gently move the display into alignment by pressing in the appropriate direction.
20. When satisfactory, reinstall the Front Panel and 3 nuts and washers; check again.
21. Install all washers and nuts. DO NOT OVER TIGHTEN the encoder nut; it should only be slightly more than finger tight.
22. Press the knobs on fully.
23. Retest the Morpheus.
24. Note: To prevent screen burn-in, set the screen saver to 5 minutes or less.