XCS Dis-assembly Procedure

Introduction

The following procedure outlines the process for disassembling a XCS Xynergi-type console panel. This is a mechanically close-tolerance assembly. DO NOT attempt this procedure under time pressure. Ensure you have a Clean and Clear working area available.

It is expected that some technicians may wish to perform this procedure in order to diagnose and solve either button LED display issues, or encoder touch-sense issues. It is STRONGLY recommended that you contact either Joe (joe@fairlightau.com) or John D (johnd@fairlightau.com) for a copy of the “Xynergi Diagnostic Procedure” document,
And perform this diagnostic test FIRST.

This will help accurately diagnose exactly what the fault condition is with the Xynergi controller, and ascertain exactly where the fault condition lies, (hardware, software, control).

Armed with this information, you can avoid un-necessary dis-assembly of your Xynergi controller, and save significant time in solving the problem.

Parts required

- XCS panel Controller
- 2 X “Support-Arm” panel servicing arms
- 1.5mm Allen key
- 2.0mm Allen key
- #2 Phillips-head screwdriver
- #1 Pozi-drive screwdriver
- 5mm Socket Driver
- Clear static-free workspace

Procedure

This procedure should NOT be performed while the XCS panel is installed in a console. Disconnect ALL USB and power connections, remove the XCS panel from the console, and carefully transport it to your cleared workspace.

- **Mount the “I support” panel service arms**

- **Place the XCS panel face UP on the worksurface**

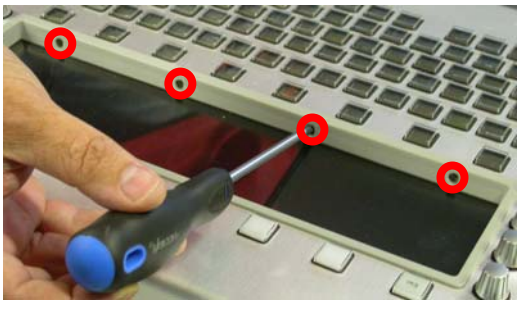
- **Remove the Jog Wheel**

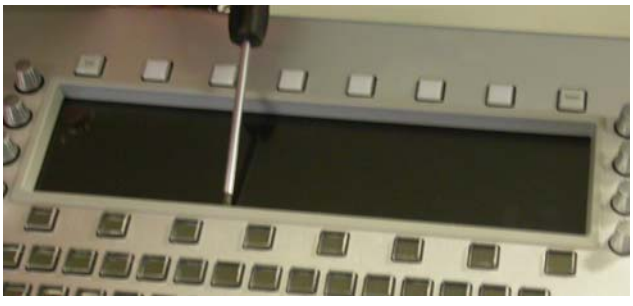
This is the same as with any other Fairlight console. Remove the rubber O-ring from the wheel. This will reveal an access hole for the locking grub-screw. Use a 1.5mm Allen key to loosen the locking grub-screw. DO NOT REMOVE the grub-screw from the wheel!

With the grub-screw now loose, the jog-wheel should be easily lifted straight up and away from the encoder shaft.

- **Remove the Display Bezel**

There are 4 screws on the lower edge of the display bezel. Using a #1 Pozi-drive screwdriver, remove each of these screws.



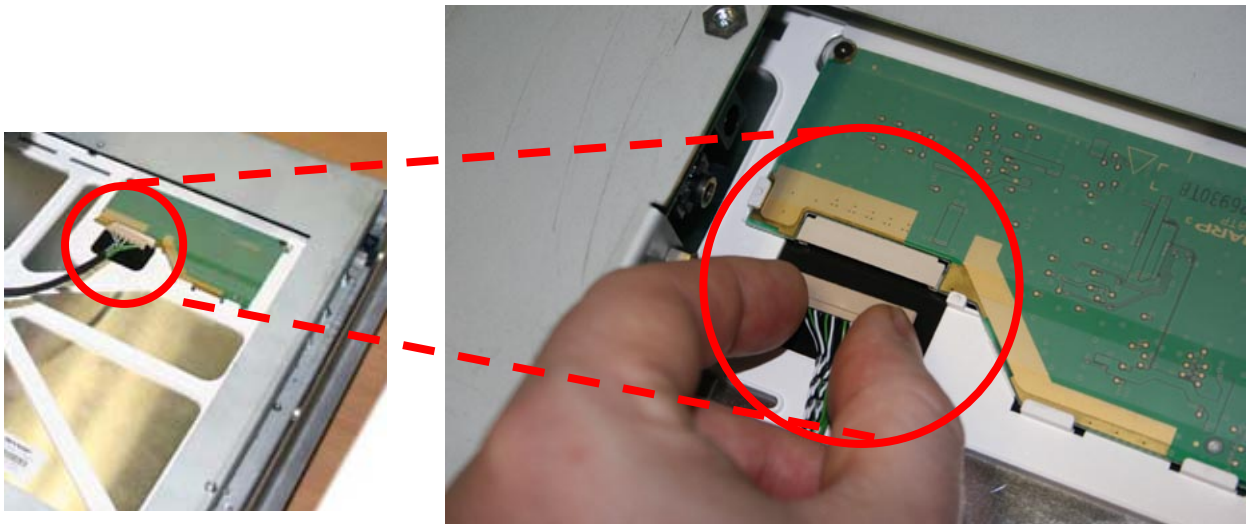


With the 4 screws removed, the bezel should hinge up along its top edge, and be easily removed.

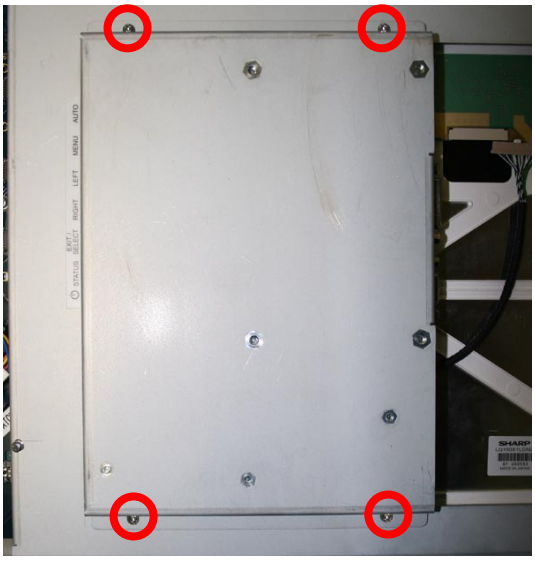
CAUTION! Make sure the bezel and see-through panel is protected from scratches while it is removed from the Xynergi chassis!

- **Flip the XCS panel over, so it is face DOWN on the work surface.**

- **CAREFULLY disconnect the TFT loom shown below**

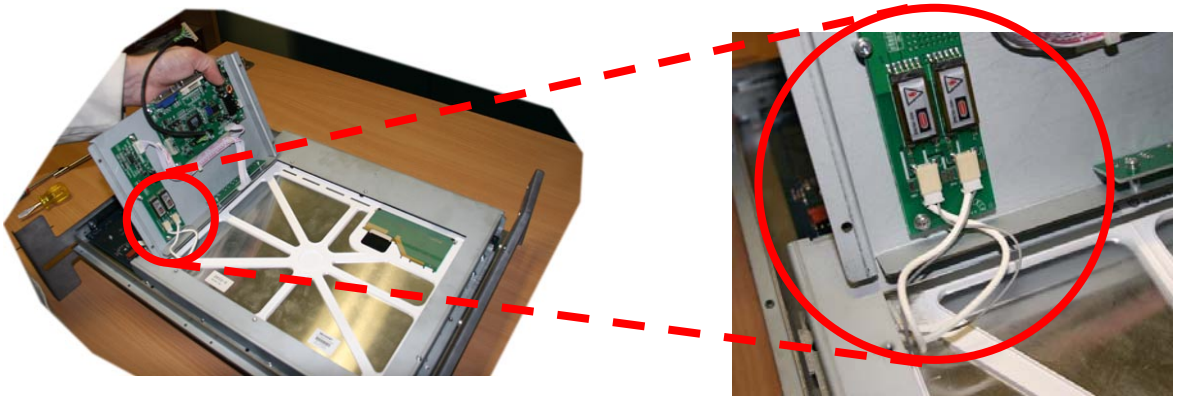


- **Using a #2 Phillips Head screwdriver, remove ONLY the screws shown below**



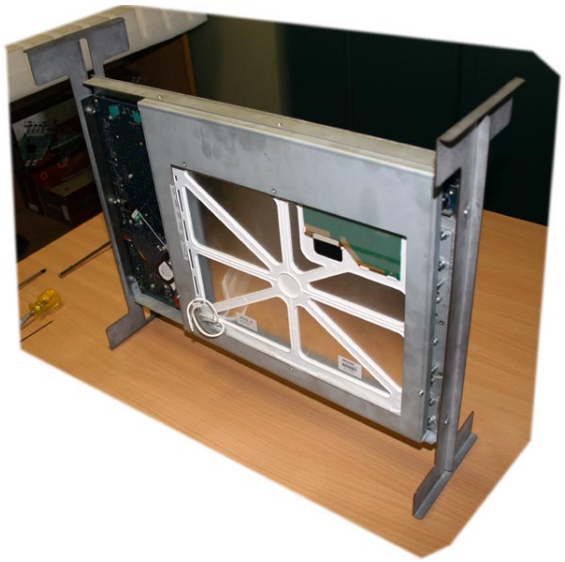
- **CAREFULLY hinge the PCB Enclosure up towards the LEFT.**
  DO NOT EXCEED 90 degrees!

- **With the PCB Enclosure supported, disconnect the 2 High Tension connections.**



- **Remove the PCB Enclosure and set aside**

- **Set the XCS panel upright on the workspace, such that the panel is facing AWAY from you**

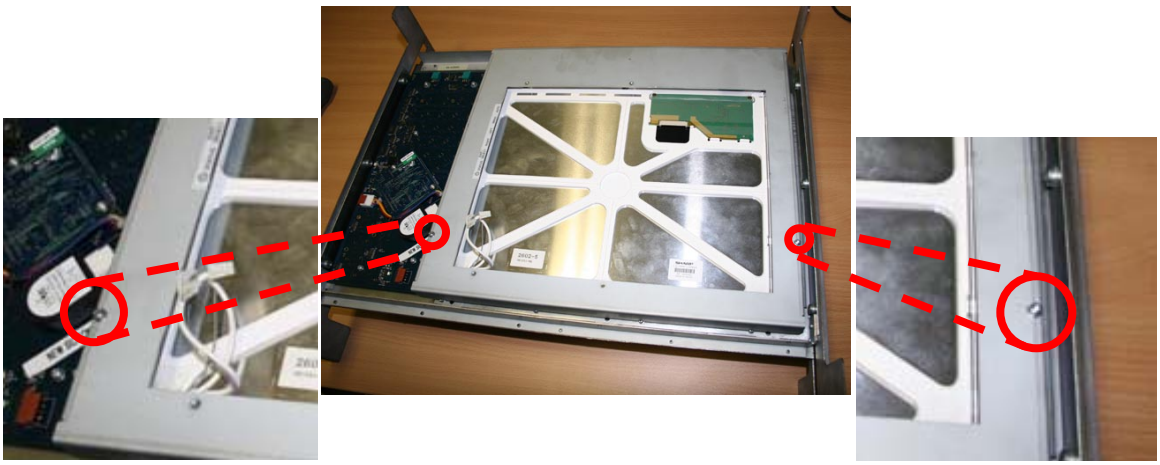


- **Remove Top Edge screws**

Using a 2.0mm Allen Key, remove the screws shown below.

- **Set the XCS panel back face DOWN on the workspace**

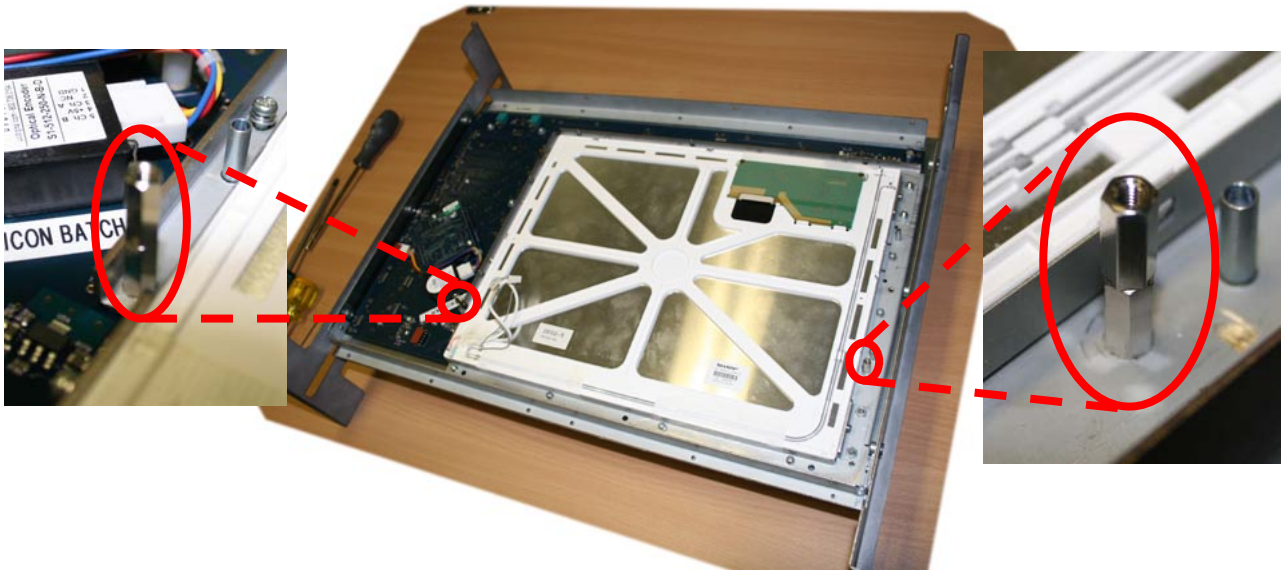
- **Remove the 2 screws shown below**



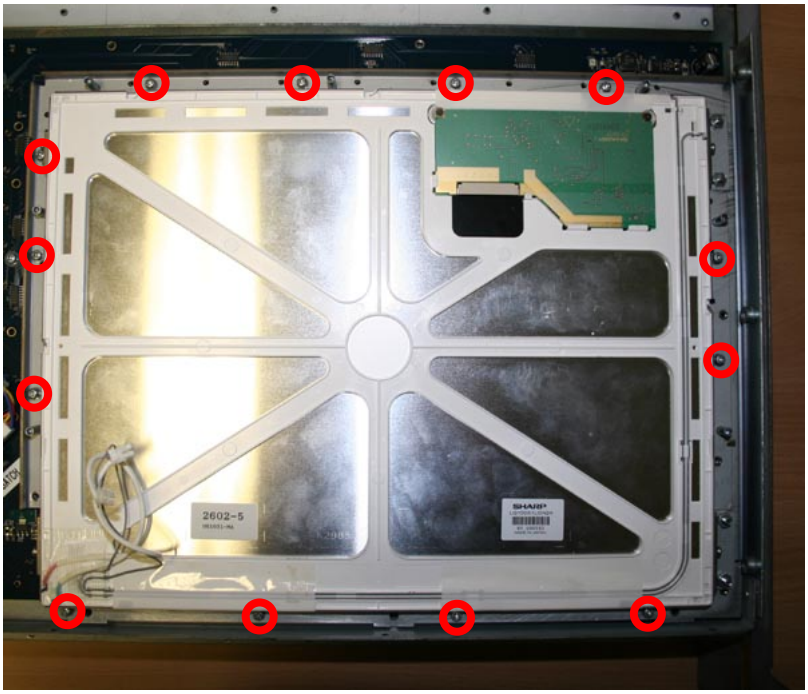
- **Remove the Base Support Panel and set aside**

- **Using a 5mm Socket driver, remove the 2 standoffs shown.**

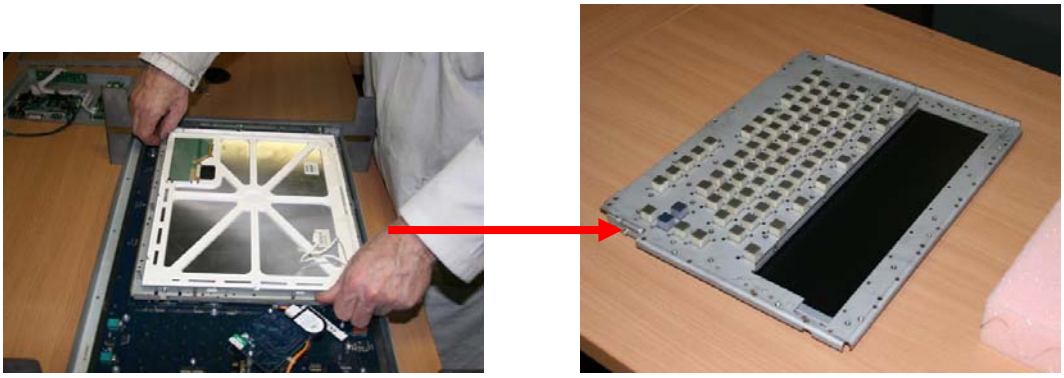
Each standoff is comprised of 2 pieces. Please remove both pieces.



- **Remove all screws shown below**

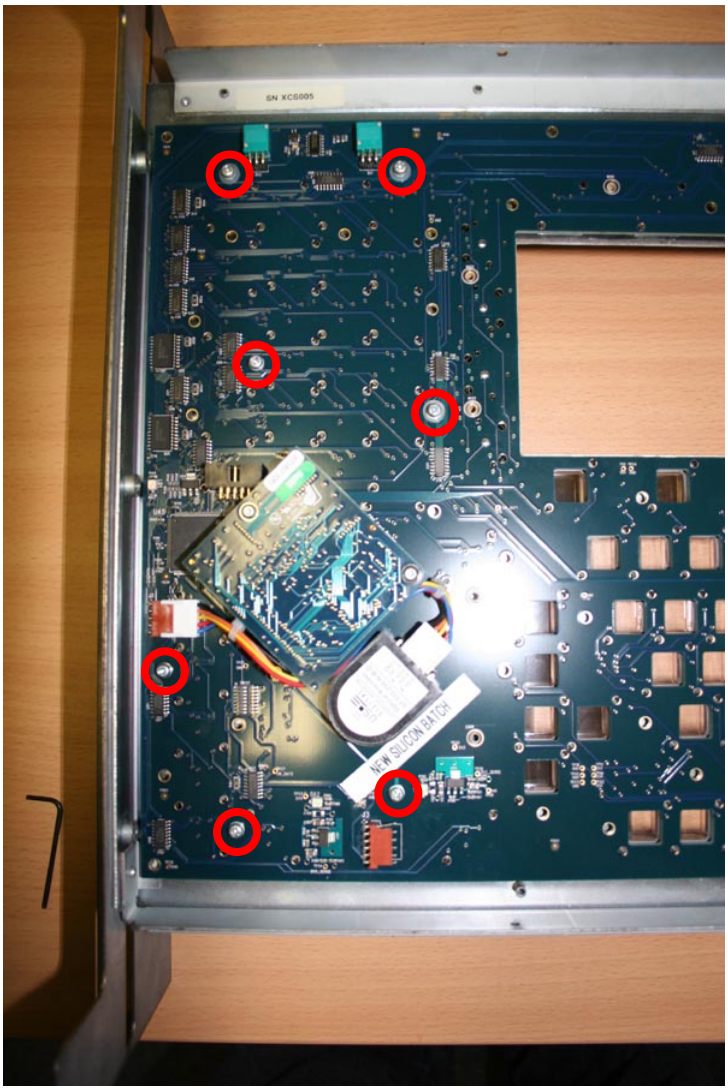


- **Carefully lift the LCD screen away from the panel, and set aside.**



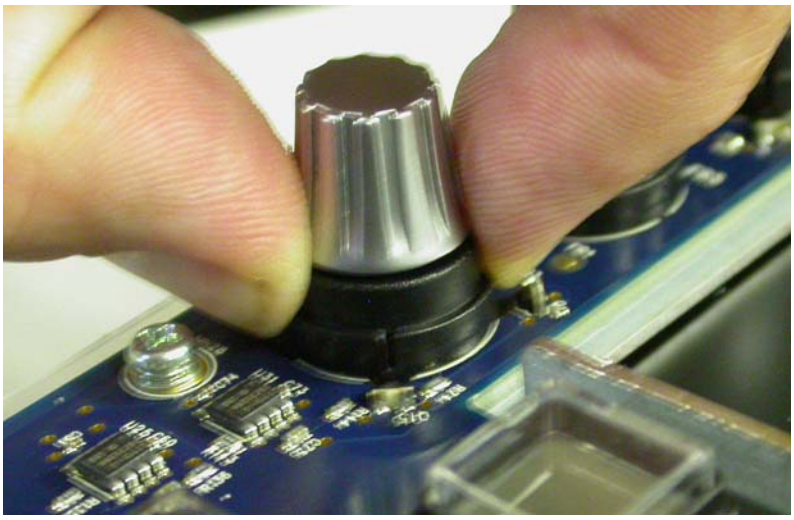
NOTE! There is a see-through insulating sheet between the LCD screen and the main PCB. CHECK for any deformations in this insulating sheet. If present, note their positions. CAREFULLY set the sheet aside for later re-installation.

- **Remove all screws shown below**



With the screws removed, the main PCB, encoders, and circuitry should now be free for removal from the panel metalwork.

Encoders can be removed from the PCB by simply “pinching” the black plastic base, and lifting the encoder assembly away from the circuit board.



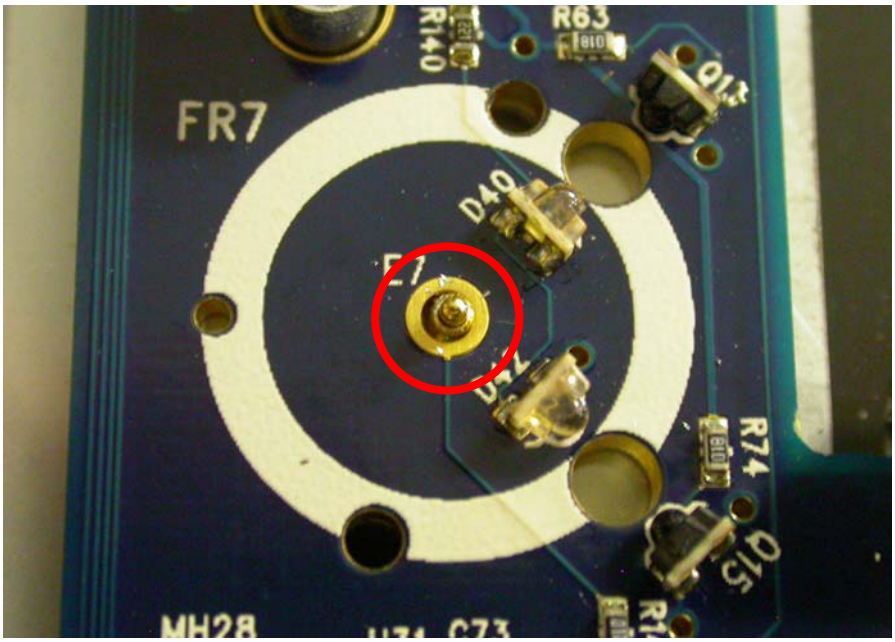
- **Inspect the Encoder contact points**

Below is a comparison of the old and new Xynergi encoders.

The encoder at left with the gold-coloured contact point is the original design. These encoders are prone to oxidisation, especially in high humidity environments. They may be cleaned with electronic CRC cleaning fluid and a suitable static-free lint-free cloth.

However, the preferred fix is to replace the encoders with the newer versions, as shown at right, with the “silver” contact point. These encoders use a totally different material for the contact point, and are far less prone to oxidisation.

The image below shows the spring-loaded contact on the Xynergi PCB, that makes electrical contact with the encoder.



The gold “tip” highlighted can in some circumstances become stuck in the down-position. This would cause it to NOT make contact with the encoder, and thus cause the touch sense for that encoder to fail.

- **Re-assembling the XCS Panel**

Re-assembling the XCS panel is essentially the reverse of the above procedure. Take care not to exert un-necessary pressure or force on any of the parts during re-assembly. If a component is not easily fitting into position, STOP! and confirm the cause of the issue.

If everything is performing as designed, you should be able to re-install your serviced XCS panel, and resume normal editing operations... ☺

Regards,
Fairlight TechSupport