

Aim: To discover hardware faults. Use the Fault Sheet at the end of this document to record findings.

Requirements:

- Line level audio source (CD player) with male XLR leads.
 - Multimeter for DC measurement.
 - 4 pin Littlelite or Ledlamp.
 - 2x RJ45 terminated CAT5 cables. Min length 2m.
 - Headphones.
 - Powered loudspeaker with female XLR lead.
 - USB key loaded with the relevant Allen & Heath iLive show **0807b bench test**. This is available on the Distributor website.
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PRELIMINARY CHECKS

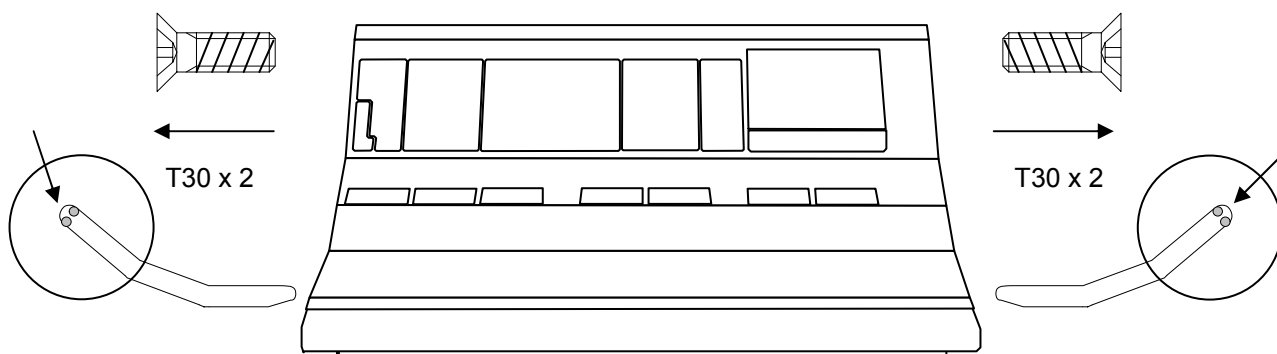
- **SURFACE INTERIOR INSPECTION**
 - SBC DC cable
 - Touch screen tilt adjustment

Remove top extrusion

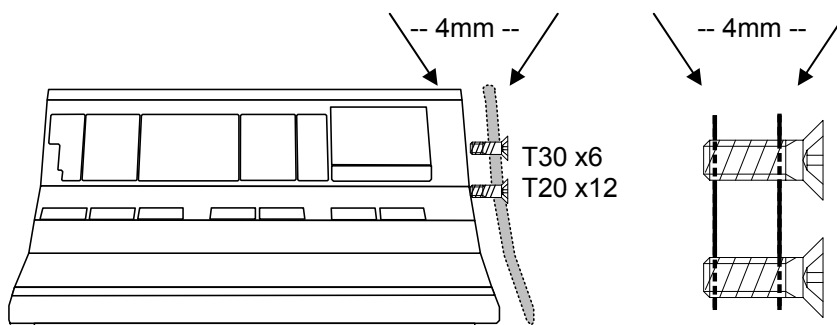
Aim: Remove the top extrusion to access the Processor, touch screen and rear connector circuits.

Tools:  T15, T20, T30.  PZ2 (demo units)

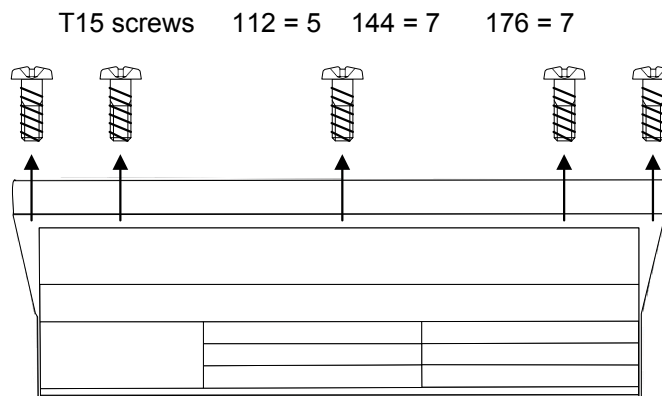
1. Remove T30 x 2 screws from each side trim.



2. Loosen T30 x 6 screws and T20 x 12 screws on right side trim. Do not remove.



3. Remove the T15 screws from the rear panel.

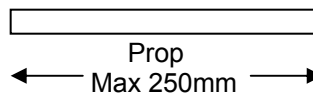


Open the upper processor panel

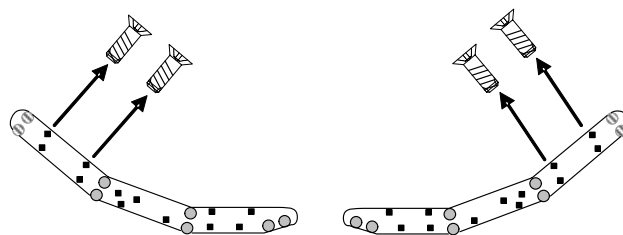
Aim: To open the upper processor panel to access processor, touch screen and rear connector circuits

Tools:  T20.  PZ2 (demo units).

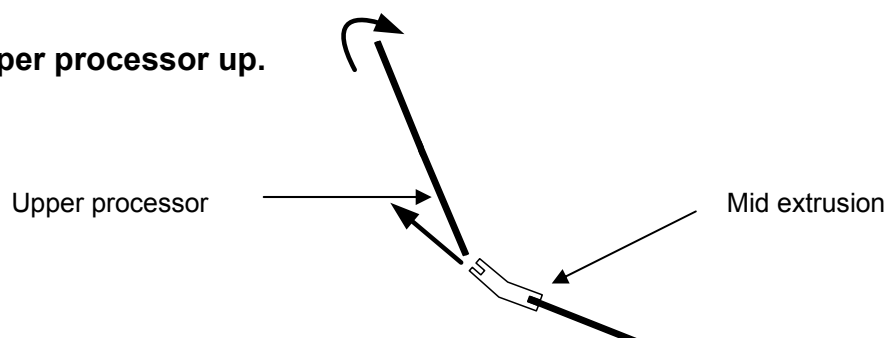
Materials: Prop, to hold upper processor panel in place. Non conductive. Rigid. Min length 230mm, max length 250mm, max depth 4mm.



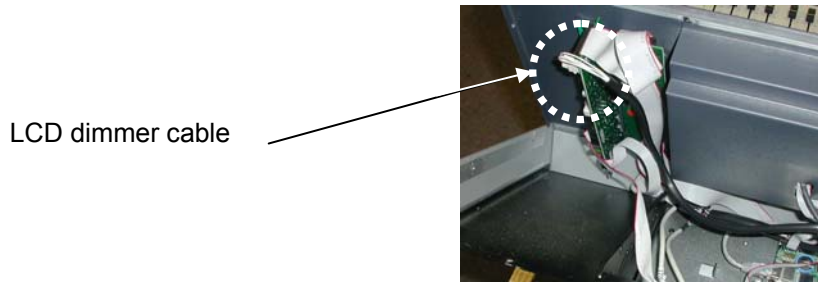
1. Remove T20 (PZ2) x 2 from left & right side trims.



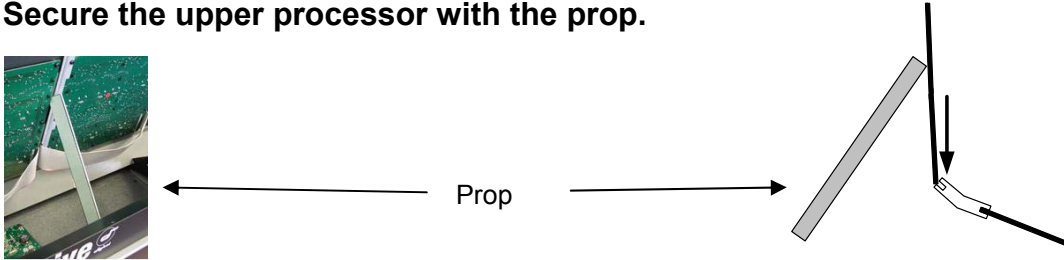
2. Pull the upper processor up.



Note: On some early units, the LCD dimmer cable is short and needs to be disconnected.



3. Secure the upper processor with the prop.



Check SBC (touch screen computer) DC cable

There are two types of SBC.

iLive surfaces produced from 2008 should have the SBC DC cable soldered to the rear connector PCB.

If the DC cable has a white plastic connector, it should be removed as shown in the following instructions.

1. Identify SBC

- There are two types of SBC:

003-591

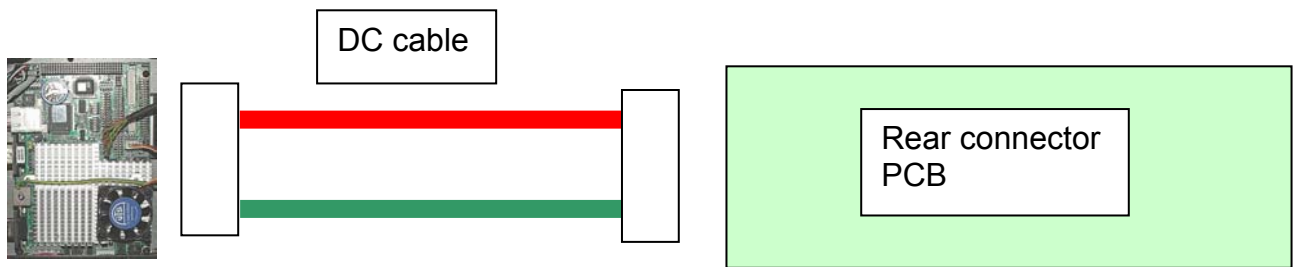


003-748

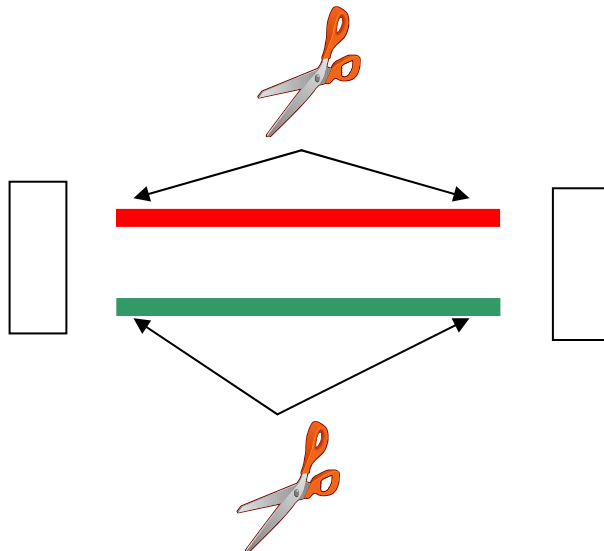


2. 003-591 (003-748 shown on page 6)

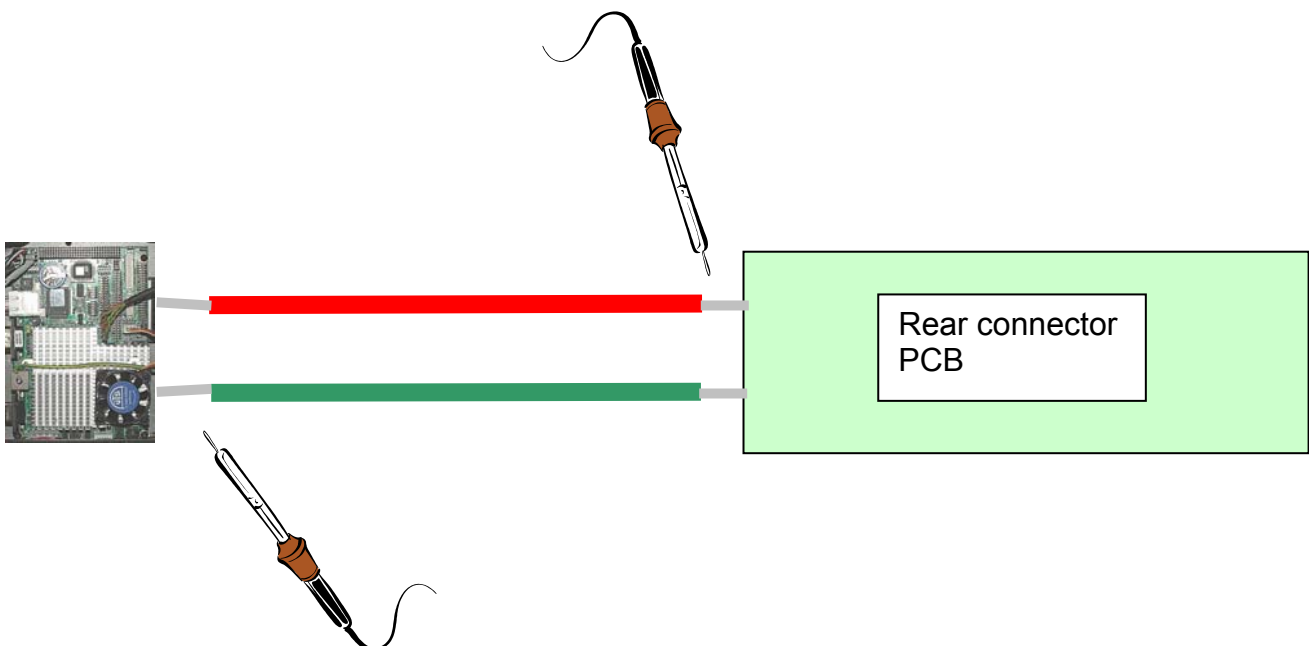
- a. Disconnect DC cable from SBC & rear connector PCB



- b. Cut the connectors from the cable.

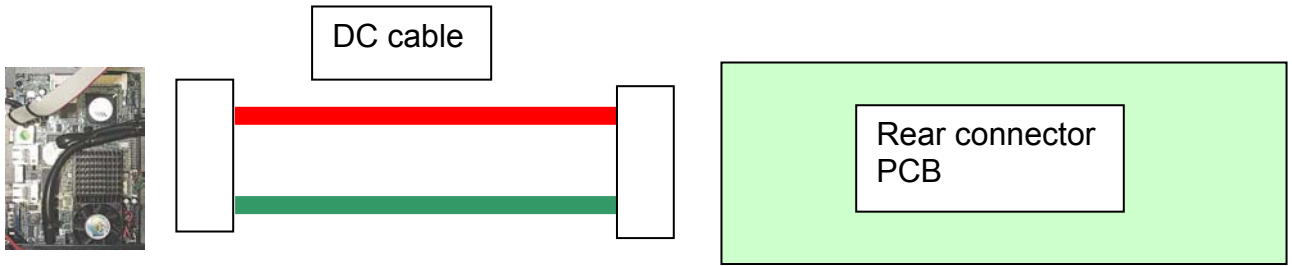


- c. Solder the DC cable direct to the SBC and rear connector PCB.

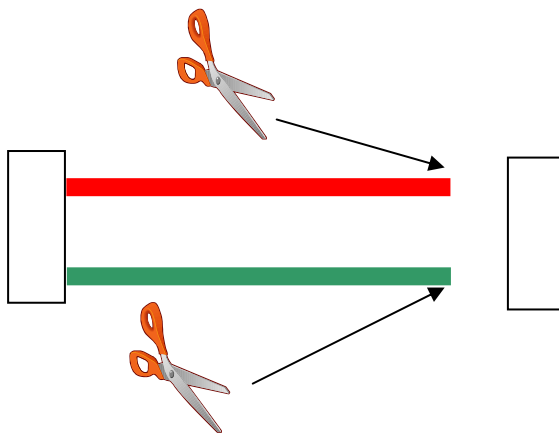


3. 003-748

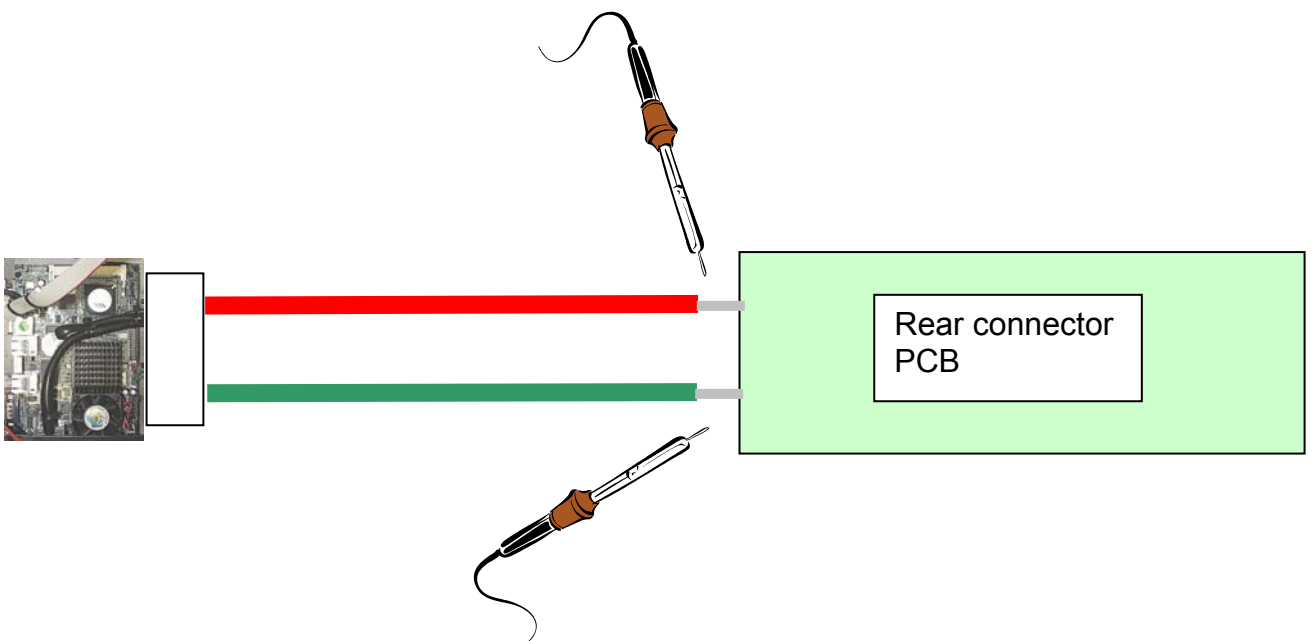
d. Disconnect DC cable from SBC & rear connector PCB



e. Cut connector from rear connector PCB end



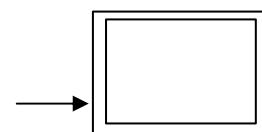
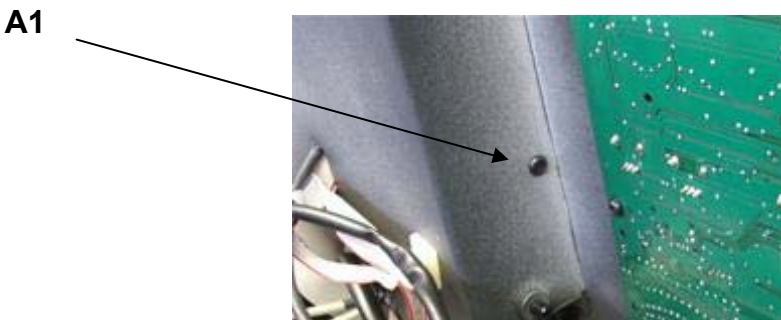
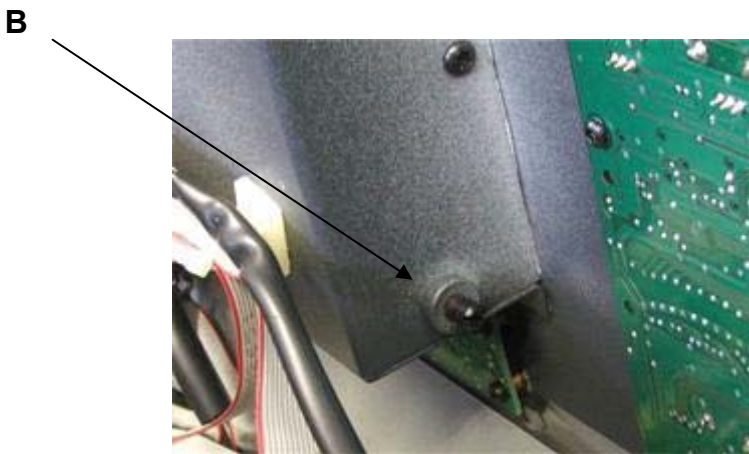
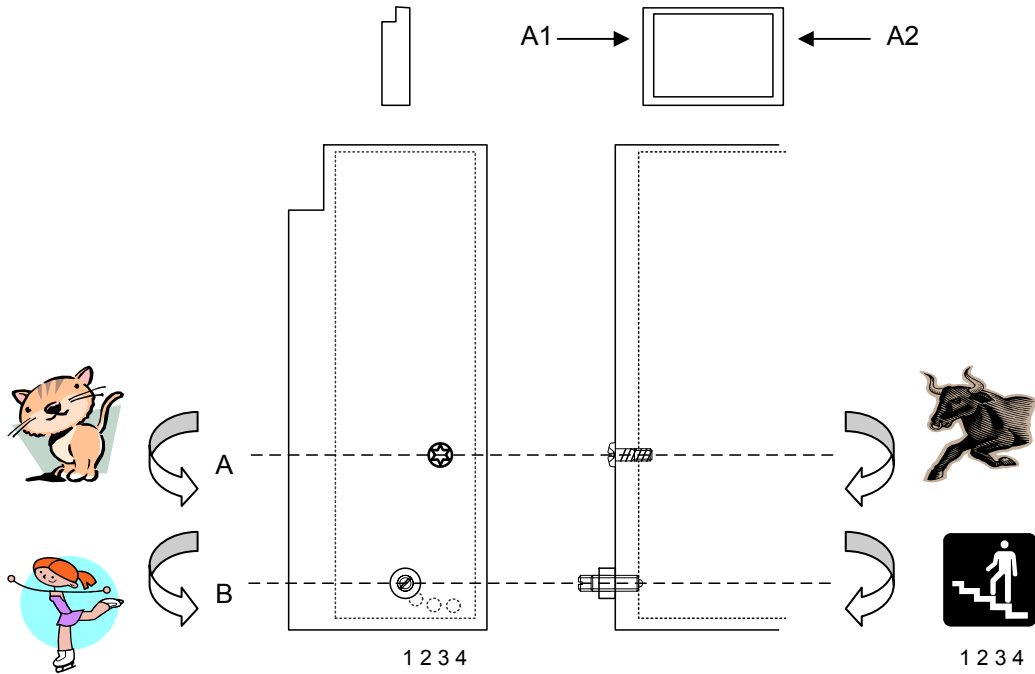
f. Solder the DC cable direct to the rear connector PCB.



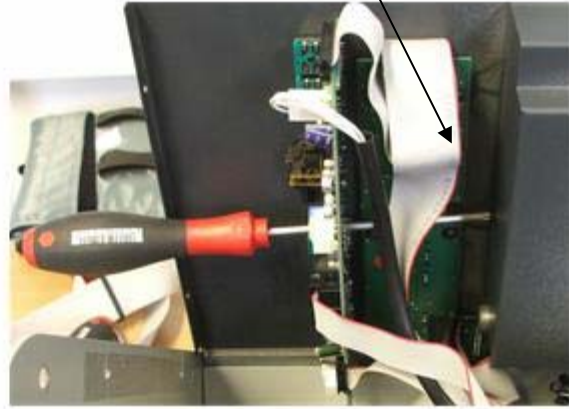
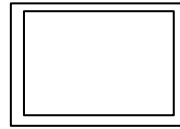
Check touch screen tilt

If the touch screen tilt is loose, it should be adjusted.

There are two adjustments for the touch screen tilt.
A1, A2. Adjust the 2x T20 for weak or strong action.
B. Adjust 1x grub screw for smooth or step action.



A2



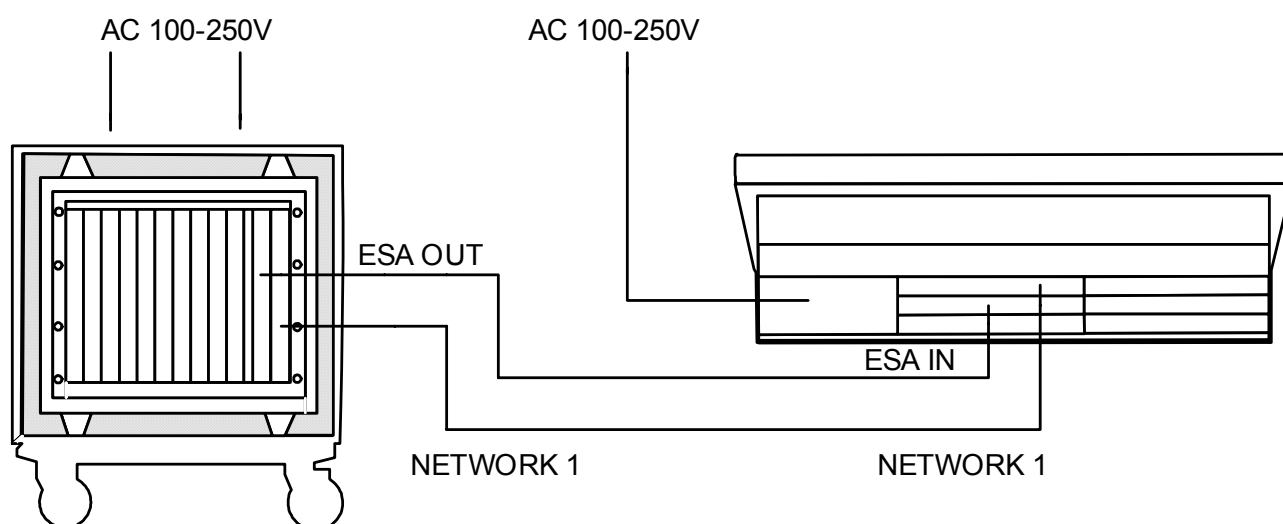
Apply thread lock to touch screen screws.

Bench Test

1. Connect AC power, EtherSound and network cables.

- AC power requirement 100VAC – 250VAC 50Hz – 60Hz

- 1.1. Connect AC supply for iLive surface x1. Switch OFF.
- 1.2. Connect AC supply for iDR10 MixRack x1 or x2 [The MixRack may have a single PSU or twin redundant PSUs]. Switch OFF.
- 1.3. Connect AC supply for iPS10 external PSU if required [The iPS10 external PSU may be used with the iLive surface]. Switch OFF.
- 1.4. Connect ethernet. CAT5 cable with RTJ45 connectors. Connect from MixRack Network 1 to iLive surface Network 1.
- 1.5. Connect EtherSound. CAT5 cable with RTJ45 connectors. Connect from MixRack ESA OUT to iLive surface ESA IN. [If the iLive surface does not have ESA fitted, there is no EtherSound connection to make]



2. Power ON and boot cycle

The iLive blue LED power indicators are designed so that if there is a problem with an individual power rail, the associated LED will light at partial brightness.

- 2.1. Power ON the MixRack. All output mute LEDs should light. After approx 10sec, they will revert to the last used setting. See section 4.3 below.
 - 2.2. Power ON the surface. Listen for the Touch Screen bleep after 3-4 sec
 - 2.3. Check MixRack and surface blue LED power indicators are on and at equal brightness. [Power LEDs will not light for iDR10 PSU #2 and iLive surface external PSU if these are not fitted]
 - 2.4. *If iDR10 has x2 PSU...* Switch each PSU off in turn and check all blue LEDs.
 - 2.5. *If iLive surface has iPS10 connected...* Switch each PSU off in turn and check all blue LEDs.
 - 2.6. The touch screen should read "No Channel Selected".
 - 2.7. Listen for excessive fan noise on surface and Mixrack.
-

3. Log in as Admin (user)

- 3.1. Press the Utility switch
 - 3.2. On-screen touch the Change User button
 - 3.3. Select Admin
 - 3.4. Log in
-

4. Back up the customer's shows to USB

- 4.1. On-screen press Show manager
 - 4.2. Insert the USB key
 - 4.3. On-screen touch User Shows so it is highlighted. The User Shows should be collapsed into one folder (use the – button if necessary).
 - 4.4. Touch the Copy to USB button to copy all User Shows to the USB key
-

5. Load the Allen & Heath Test Show

- 5.1. On-screen you should see the show 0807b bench test in the USB Shows pane
 - 5.2. Highlight the 0807b bench test show and copy to surface.
 - 5.3. When copy is complete, remove USB key
 - 5.4. Expand User Shows, select the 0807b bench test show and press Recall Show
-

6. Recall the 80, 112, 144 or 176 scene

- 6.1. Press the Scenes menu switch
 - 6.2. Highlight scene 80, 112, 144 or 176 and press Recall Scene
 - 6.3. In the Utility screen, touch Return then touch the Preferences button on screen. Set all buttons to OFF and LCD contrast to 10.
-

7. Lamps, 48V, LEDs

Note that not all surface i/o module LEDs are functional in early versions of firmware.

- 7.1. Check all i/p XLR phantom power LEDs are on MixRack and surface (see note)
 - 7.2. On any i/p XLR, measure +48VDC (+/- 2V) between pins 1-2 & 1-3
 - 7.3. Connect a 4 pin lamp to each of the lamp sockets on the rear of the surface and to the lamp socket on the iDR10 CPU module
-

8. Check LCDs faders and strip meter LEDs

- 8.1. Select layer C on all Banks. All LCDs are red. Check for equal brightness.
Faders should be at 0dB
 - 8.2. Select layer B on all Banks. All LCDs are blue. Check for equal brightness.
Faders should be at maximum.
 - 8.3. In the touch screen Utility page select Diagnostics / Signal generator.
 - 8.4. Assign the signal generator to groups 1 through 26.
 - 8.5. Increase level until all strip meter LEDs light.
 - 8.6. De-select all groups from signal generator.
 - 8.7. Select layer A on all Banks. All LCDs are green. Check for equal brightness.
Faders should be at minimum.
-

9. Check all processor switches and LEDs

- 9.1. Press strip 1 SEL switch bank 1 layer A
 - 9.2. Operate all rotaries and switches on the processor strip from Preamp through to Limiter. Check for sticking switches, bad rotaries and failed LEDs.
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10. Check menu switches/LEDs

- 10.1. Press each under screen menu switch on / off and check LEDs
- 10.2. Press strip 1 EQ SEL. Select Param View.
- 10.3. On screen touch one of the value panes
- 10.4. Check under screen rotary for function and illumination

11. Check SOFT switches/LEDs 1-8

12. Check LCD DIM rotary

13. Check LED DIM rotary

14. Check for sticking switches and failed LEDs

- 14.1. Select then de-select the SEL, PAFL, MUTE and MIX switches on each strip.
- 14.2. Check Rotary Shift, Pre-Post Fade, Assign, Solo In Place, Output AFL, Input AFL, Clear All, Sip Safes

15. Check all strip rotaries for illumination and feel. Check the pan indicator moves in the strip LCD.

16. Check all faders for smoothness and that aer knobs are secure.

17. Press the Scenes menu switch

- 17.1. Highlight Scene 6 Routing
 - 17.2. Press Recall Scene
 - 17.3. De-select the Scenes menu switch
-

18. Connect a line level audio source to MixRack i/p XLR 1

19. Audio should be present when you connect a powered loudspeaker to a MixRack o/p XLR

20. Connect the powered loudspeaker to each MixRack o/p XLR in turn

21. Connect the powered loudspeaker to each surface o/p XLR in turn

22. Connect the powered loudspeaker to a MixRack o/p XLR

23. Connect the audio source to each MixRack i/p XLR in turn

24. Talkback and Monitor

On the surface, press the PAFL switches on strips assigned as outputs. The PAFL (CHK) LEDs on the MixRack XLRs should light. Choose one of these output XLRs for the following test. It may be necessary to try different layers to get a CHK LED on.

- 24.1. Hold the TB Assign switch
 - 24.2. Press the MIX switch on the selected bus strip. Talkback is now routed to the MixRack XLR for that bus. XLR CHK should be on.
 - 24.3. Turn the Talkback level control to minimum.
 - 24.4. De-select the blue under panel TB48V switch
 - 24.5. Connect the audio source to the Talkback microphone input XLR.
 - 24.6. Press the TALK switch. Audio should be present at the chosen MixRack o/p XLR.
 - 24.7. Connect the loud speaker and audio source to Local Monitor L IN and L OUT XLRs on the rear of the surface
 - 24.8. Rais the Monitor Local level. Audio should be present at Local Monitor L OUT XLR. Also check Local Monitor R IN / OUT
 - 24.9. Raise the Phones level. Audio should be present at both headphone sockets.
 - 24.10. Disconnect the audio source from the Talkback XLR. Press the TB 48V underpanel switch and measure +48VDC across XLR pins 1-2 & 1-3. De-select the TB 48V
-

Final checks

25. Copy customer's shows from USB to Surface.

- 25.1. Check which Show & Scene the customer requires the system to power up in.
-

26. Check surface for loose and missing screws

- 26.1. Side trims
 - 26.2. Faders
 - 26.3. Rear panels
 - 26.4. Base
-

27. Check Mixrack for loose and missing screws

28. Check MixRack and surface flight cases

- 28.1. Wheel rubber
 - 28.2. Wheel brakes
 - 28.3. Handles
 - 28.4. Latches
-

29. Calibrate touch screen control

1. Press the **Utility** button below the screen
2. On screen, select **Diagnosis**
3. Select **Screen Calibration** Touch the CENTRE of red target. A new target will appear – touch the CENTRE of each of the four targets as they appear.

If it is not possible to operate the touch screen:

1. Connect USB keyboard to any front or rear panel USB socket
2. Connect USB mouse to any front or rear panel USB socket
3. Press the **UTILITY** button below the screen
4. Press F1 on the keyboard. This will activate the screen cursor
5. Use the mouse to click **Diagnostics**
6. Use the mouse to click **Screen Calibration**
7. Use your **finger** to touch the centre of each red target.
8. Press F2 on the keyboard. This will deactivate the screen cursor
9. Disconnect keyboard and mouse

30. Check units are clean



Test complete

FAULT REPORT

Serial number:	Date:
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<u>SURFACE</u>	<u>Strip</u>	<u>Fixed</u>
	<u>Slot</u>	<u>Fixed</u>

Serial number:	Date:
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<u>MIXRACK</u>	<u>Slot</u>	<u>Fixed</u>

NOTES