

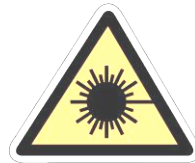
PSP™ Test DTP-H1500 / DTP-L1500 disassembly guide



Compiled by Parris, with thanks to Psycho & Unclejun
Version 2



WARNING



The Sony PSP™ Testing Tool & Development Tool units are subject to strict license agreements and as such are meant for restricted usage only. The writer and collaborating partners in no way condone the use of such units for illegal activity and do not condone copyright infringement or backward engineering.

If you legally own a faulty PSP™ Development Tool or Testing Tool, we strongly suggest that you return it to Sony for the best servicing & technical knowledge available. If you are determined to open your unit, then may we suggest that you take every precaution available to you as it is a delicate instrument and carries a deadly electrical charge if handled incorrectly!

Damage to the unit, injury or even death could occur if you are not familiar with said equipment or do not have sufficient electrical experience. We strongly recommend that you do **NOT** attempt repairs or open the unit. We cannot be held responsible for your actions!

The UMD and internal DVD (Panasonic SR-8589-C) both contain a Class A laser assembly and should be left well alone.

2 Class A lasers emit a beam of powerful light, which can cause permanent damage to the eyes & skin tissue*. These lasers are considered very dangerous and only a competent electrical engineer should attempt replacement or work on such devices. Never look directly into the beam whilst unit has any power going to it.

Voltage to the main unit is 19.5v via a very substantial PSU (DTP-H100), which is 100vac-240vac via a figure 8 cable. The PSU is non-serviceable and should never be opened or tampered with. We also advise that only a genuine & original Sony PSU intended for use with the said equipment be used.

**WHEN OPENING ANY ELECTRICAL DEVICE FIRST REMOVE
POWER SOURCE. UNPLUG FROM MAINS AND FOLLOW THE
INSTRUCTIONS CAREFULLY. FAILURE TO DO SO IS AT YOUR
OWN RISK!**

*Further information can be found here:
http://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_6.html#3

Introduction

The PSP™ Test unit is relatively easy to disassemble, but there is the odd quirk worthy of note, which I will point out as we proceed through the guide.

I was also asked whether there were any differences between specific PSP™ Test units, but whether software / firmware and/or hardware differences exist really can only be answered by other PSP™ Test owners with differing units. Please post me your findings for revision.

If you are not in the games development field of industry, I strongly recommend not attempting to find any of these units in favor of the newer PSP™ units, which actually out-perform the basic underlying functions of these units for a fraction of the cost.

If you are at all intrigued by what the PSP™ Testing Tool can do, then you may be surprised to learn that it functions very similarly to the retail PSP™. Its UMD drive is removed from the back of the handheld controller and is found on the main tower unit. It will happily play standard retail, debug & preview games titles, but of course not UMD films. There is also a built in DVD drive which can be used to run test code, preview & debug titles as well as updates. ***Retail updates available from retail UMD fail with a warning, causing no harm to the unit.***

Guide

1) Flip the unit upside down so that the two plastic feet are facing upwards. Remove the four silver screws and note their orientation. They have two plastic stubs, which ensure that they cannot be reassembled incorrectly.

<The vast majority of the screws used throughout the unit are precisely the same, so if I don't mention sizes then assume they are the standard size>

2) Now turn the unit upright with the rear of the unit facing you. One weak point of the unit is the external wireless antenna, which can & does tend to get in the way throughout the disassembly. At present you should tuck the antenna into its plastic holder. Remove the three screws holding the metal outer casing from the main frame. Once removed, pull the casing towards you and upwards.

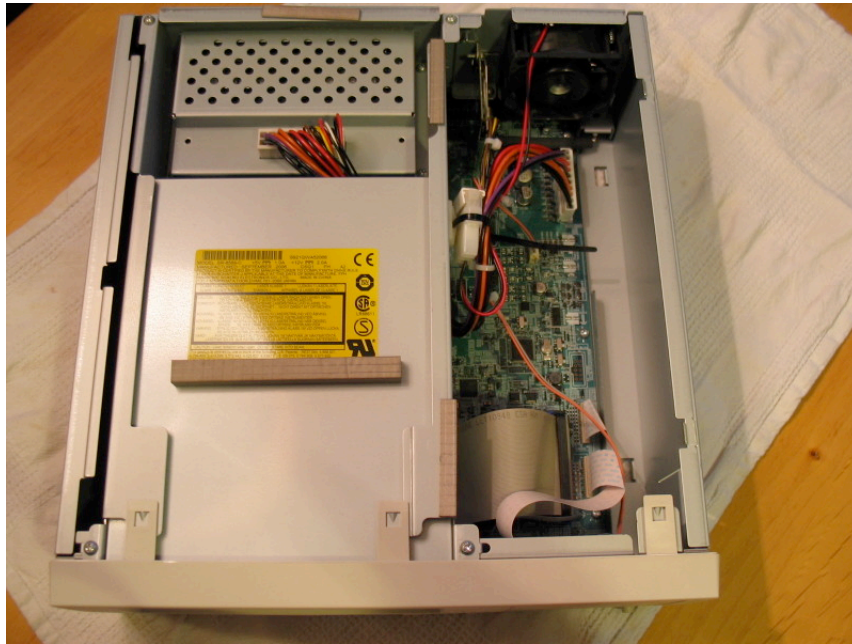


<Note in this image that the metal casing has a tongue that must be slotted properly on assembly. There are actually several more plus runners on both sides at the base. This can make reassembly rather awkward, so be careful. Also beware of any sharp metallic edges>

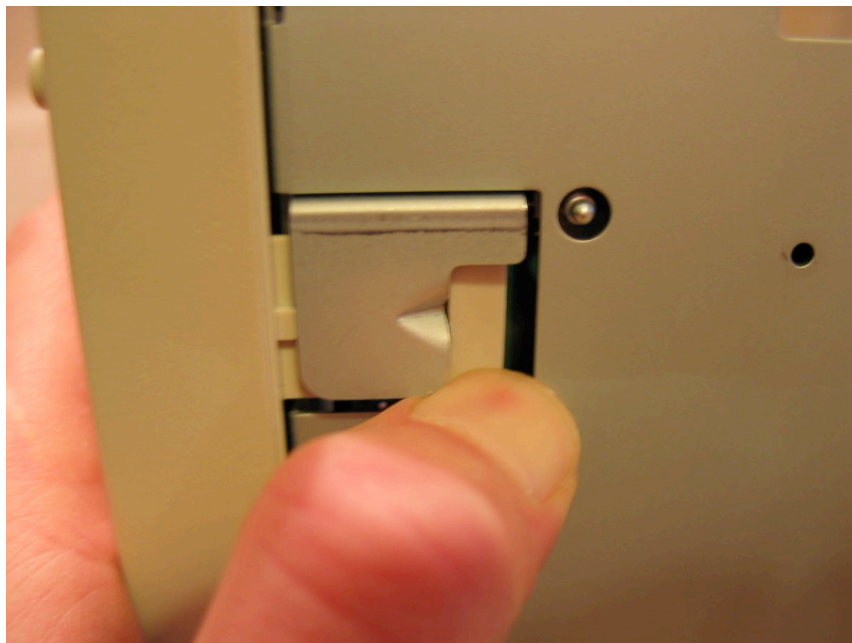
Before proceeding you should remove (if applicable) the two metal plates covering the I/O below the antenna. Also note the size of the four silver screws as they are smaller than standard.



You should now have a unit looking similar to this.



3) You now want to remove the plastic faceplate to expose the front PCB board, UMD and make the DVD removal possible. On either side of the faceplate are fragile plastic clips that are easily damaged so take great care! Start with the clips shown here:





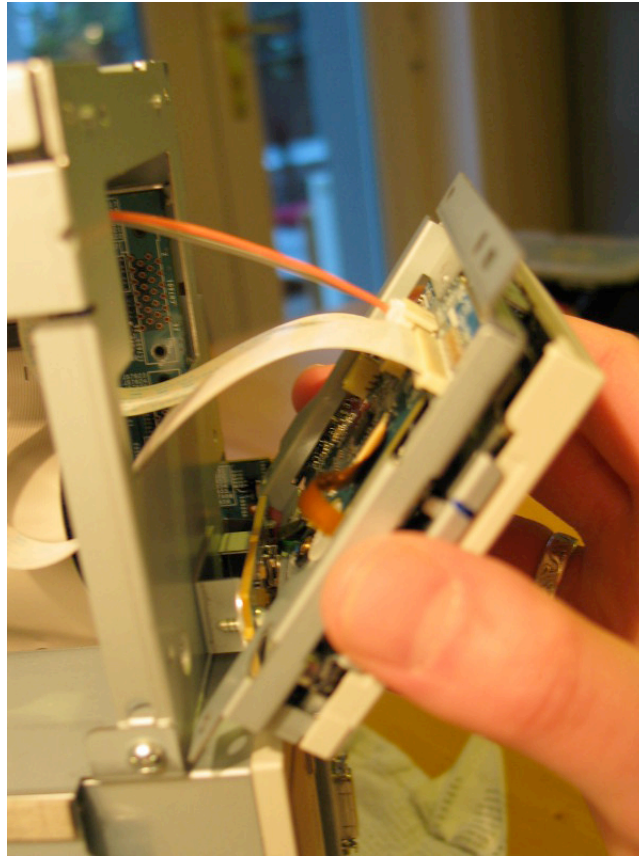
...push the two clips down, then turn the unit round so that you can lift the following three clips upwards:



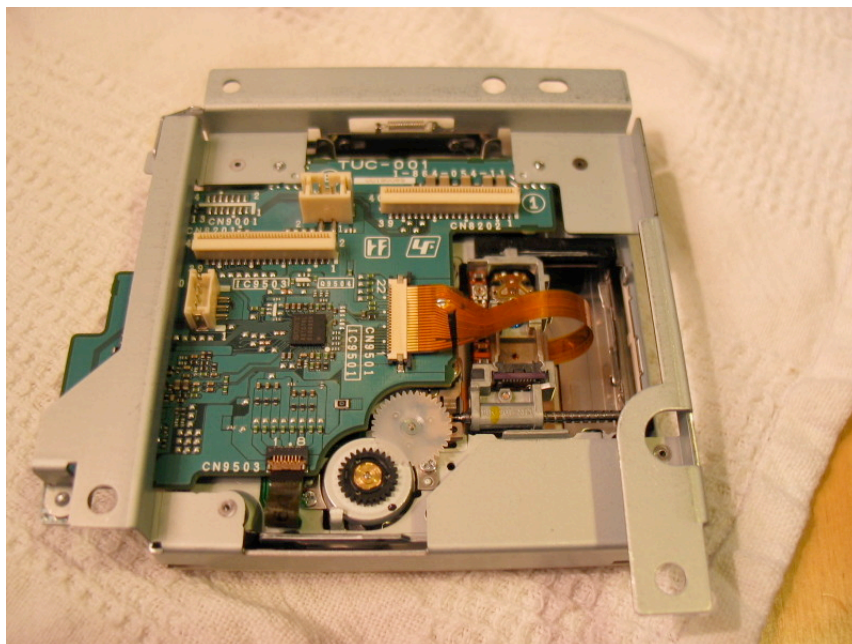
Which exposes

4) Keeping the unit upright you should now remove the second weak point of the unit, the UMD drive. It is removed by unscrewing the three silver screws clearly visible in the

image. Gently pull the UMD away from the unit as there are cables attached which you should not apply tension too.

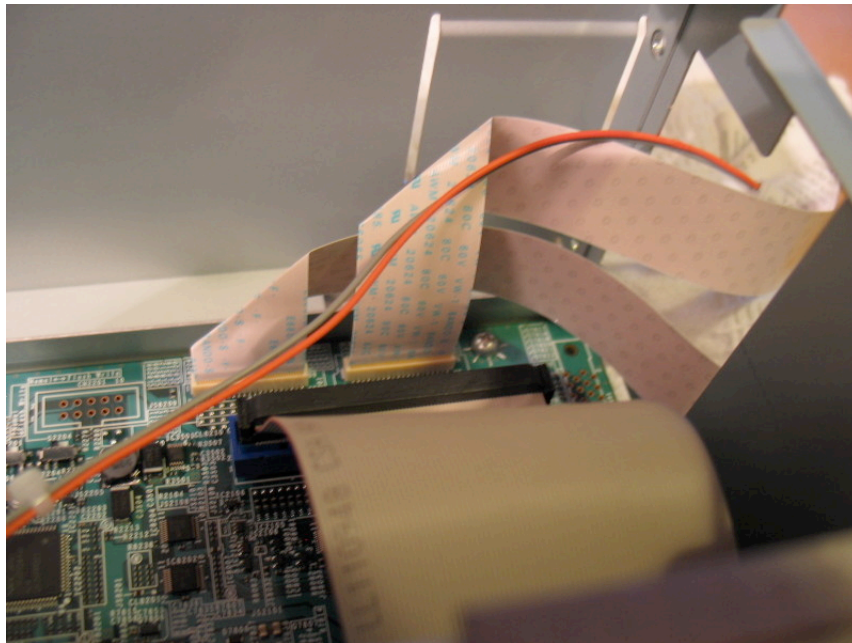


UMD underside:

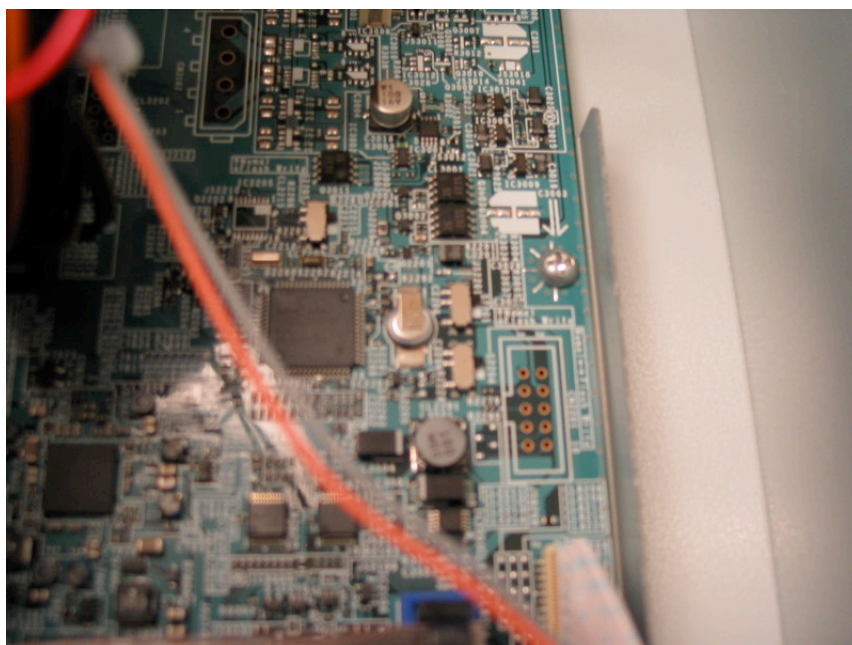


This is far as you'd need to proceed for lens / UMD mech issues. The two main IC

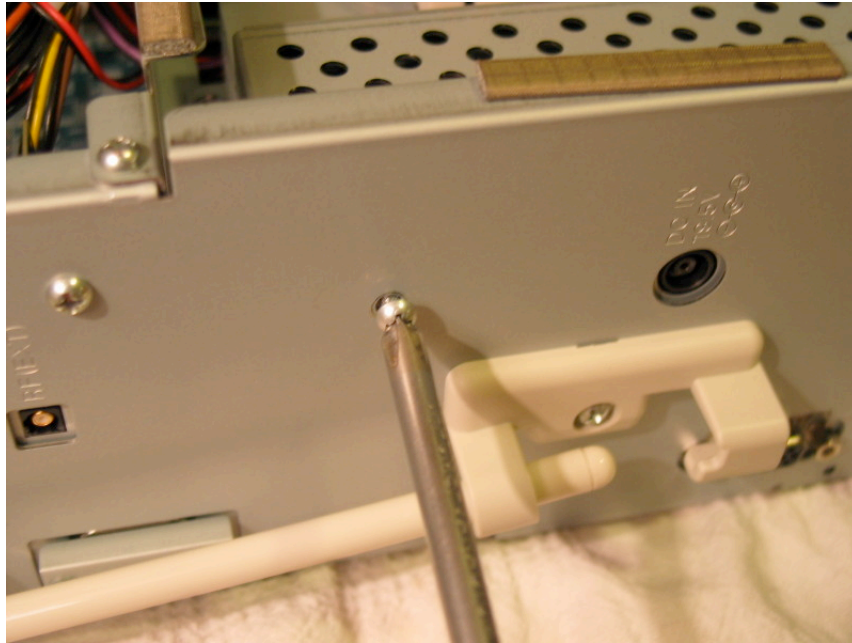
cables are clearly marked on the main PCB and the UMD PCB (CN8201 & CN8202). Mark them and note their orientation. The power cable (grey & orange) runs to the rear of the machine (see later images).



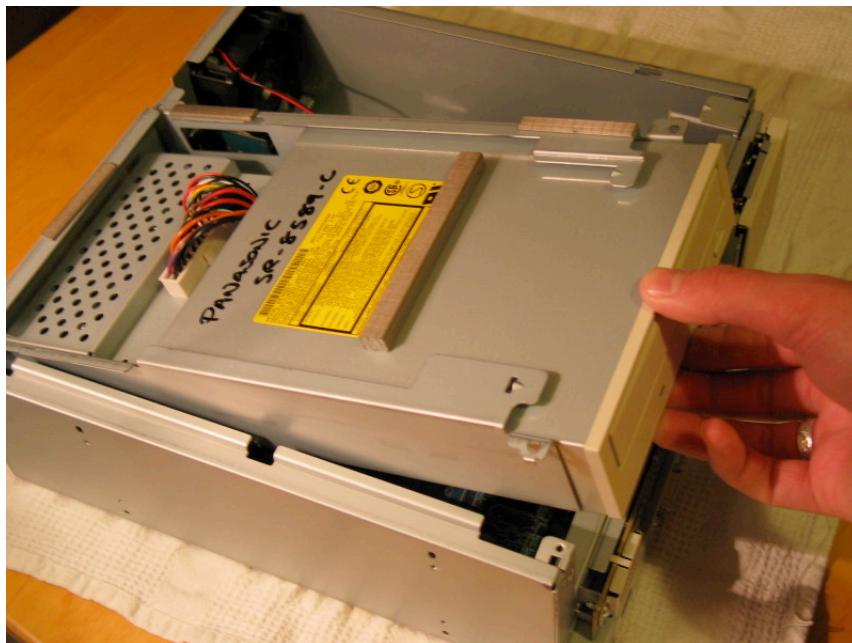
<Also note on this following image the small battery used on the PCB>



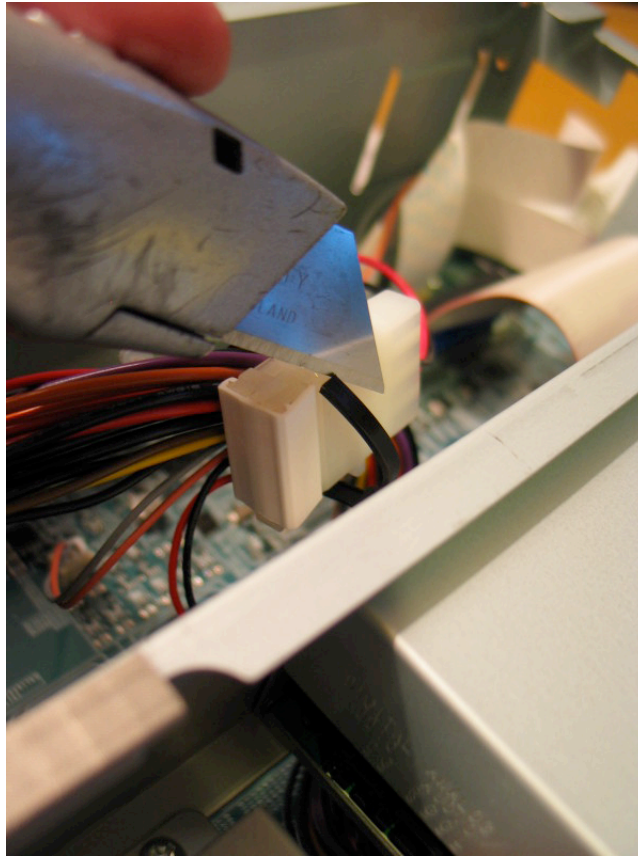
5) Turn the unit onto its side and so the rear is facing you and remove the single silver screw shown here:



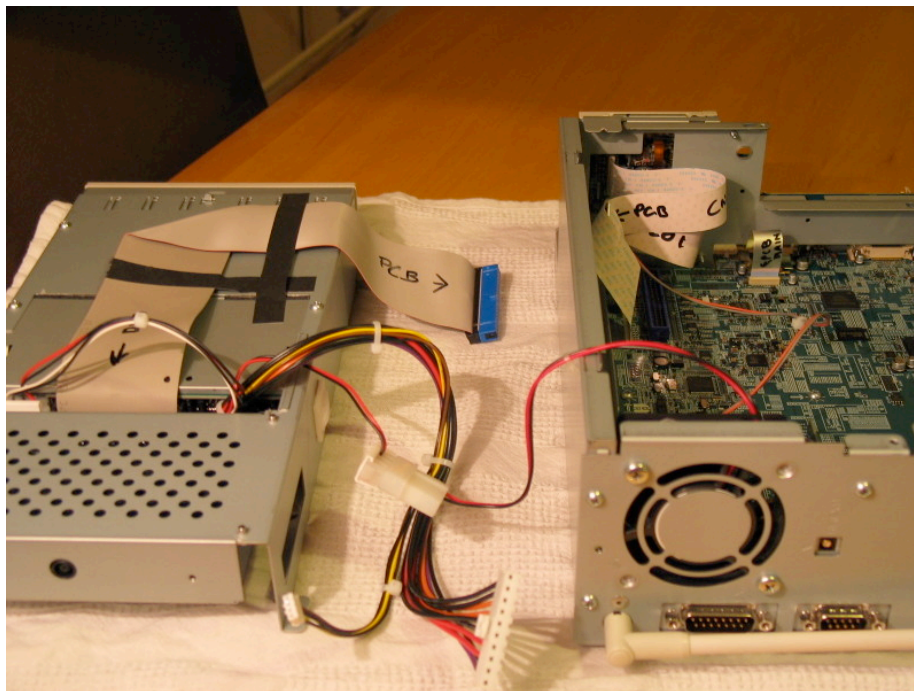
Now turn the unit so that you can remove the PSU and DVD unit. They are located in the 4 corners of the metal frame holding them to the main frame. Once removed, pull this small metal frame forwards and then gently upwards, but only as far as is shown!



6) Using a sharp knife, carefully cut the plastic cable tie holding all the cables to the side of the small metal frame. (It is important to replace any cable ties you have cut, they generally serve a purpose such as ensuring cables don't become damaged or interfere with fans).

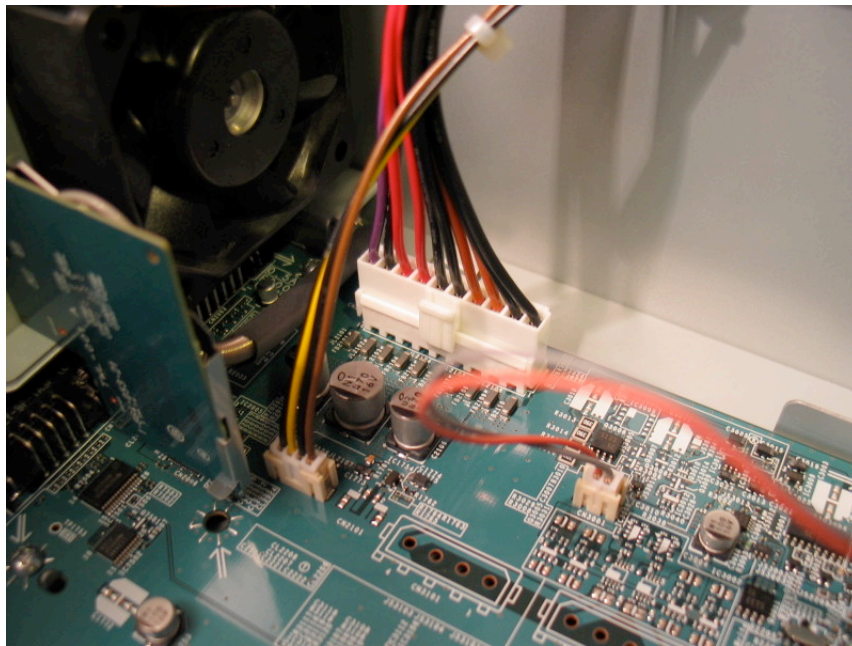


Now flip the whole of the smaller metal frame upside down and to one side. Note you will be required to remove three connections (see image) to ensure this is done without placing too much tension on cables.

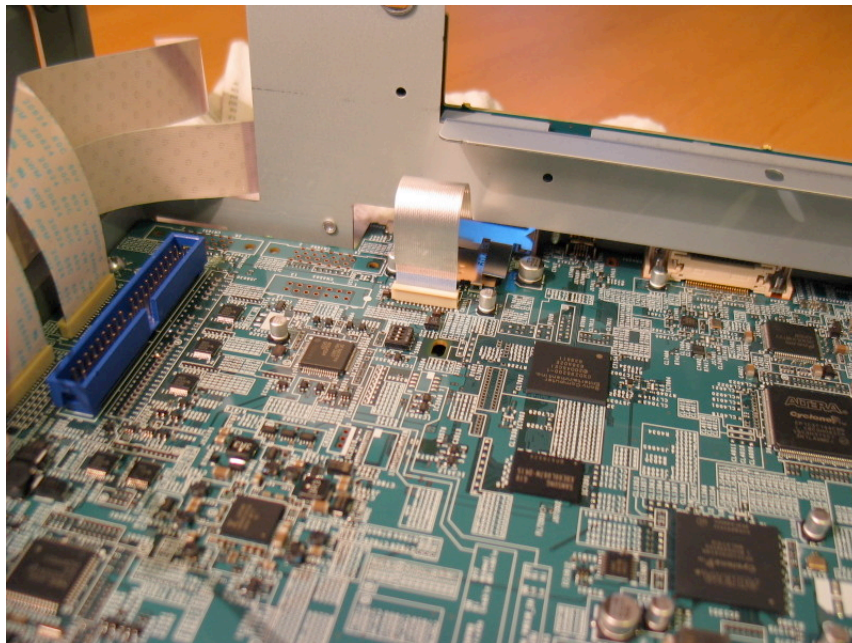


<The IDE cable is pretty obvious, but here is an image of the other two connections and their location on the main PCB for ease of reassembly. Also note the termination of the

UMD power cable at CN3001>

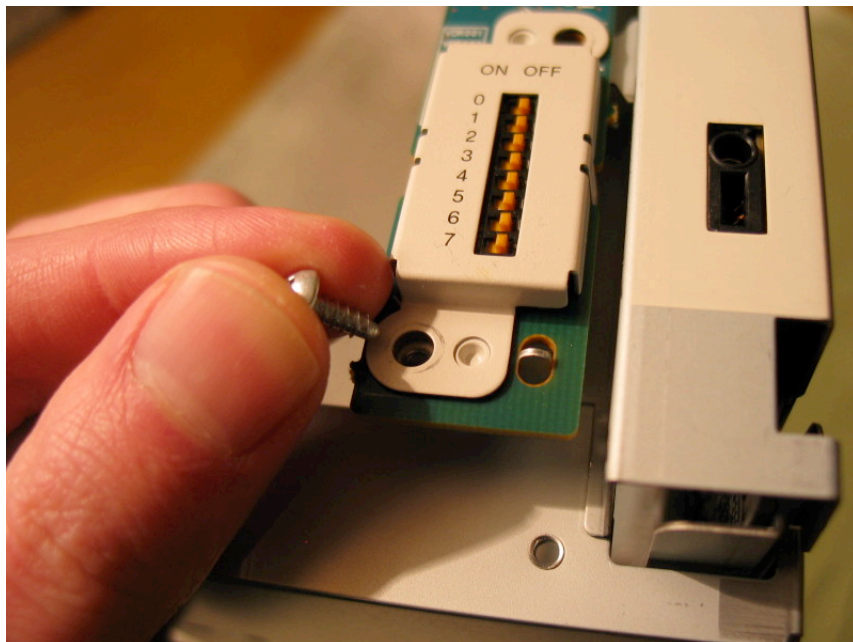
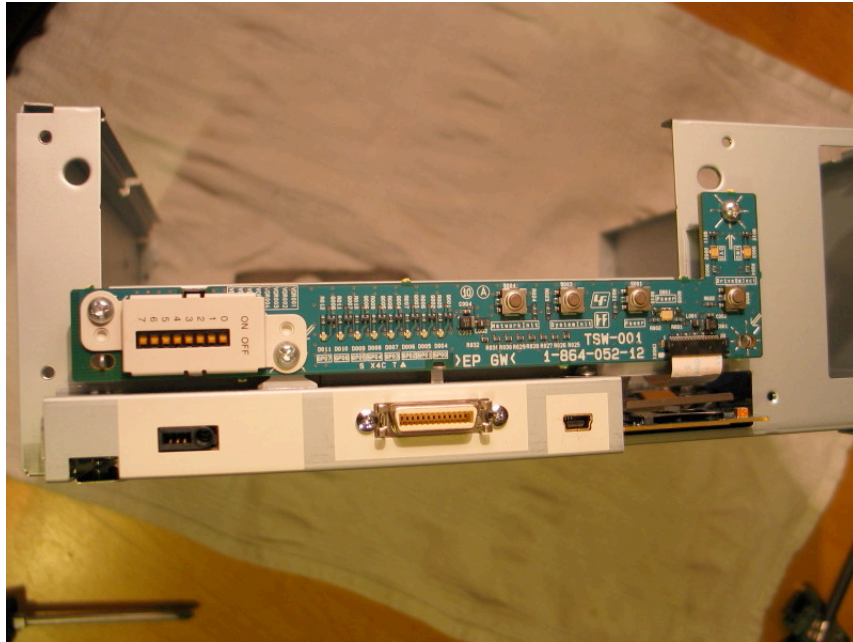


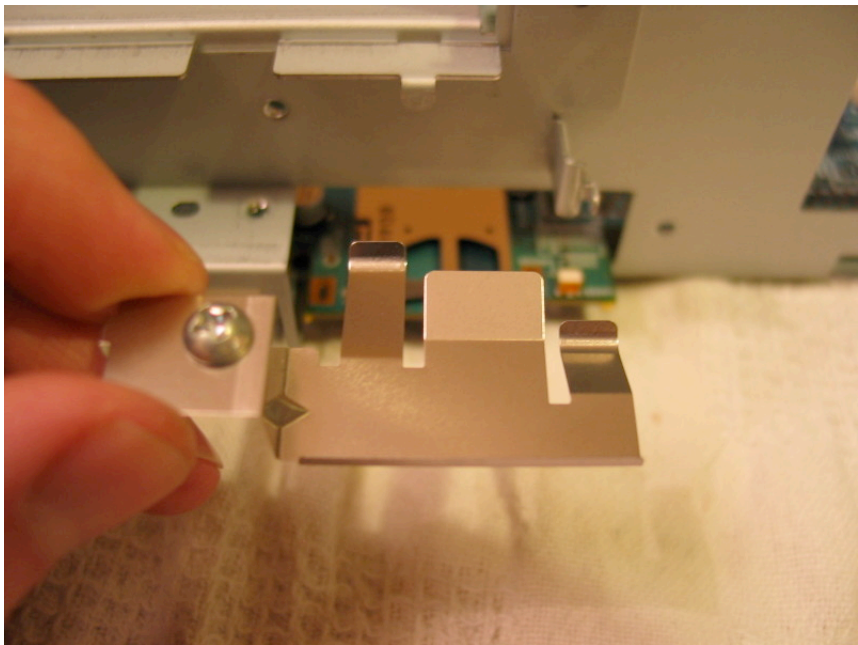
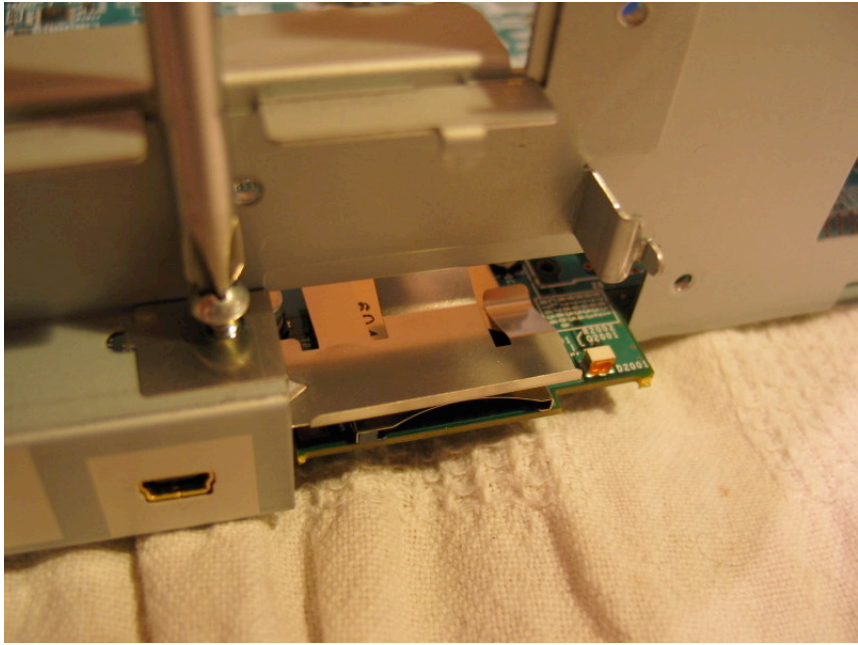
7) Remove the silver IC cable (once marked) from the connection located at the front of the main PCB, just below the UMD cables. Also remove (once marked) the UMD cables and turn the unit around so you are looking at the facade.

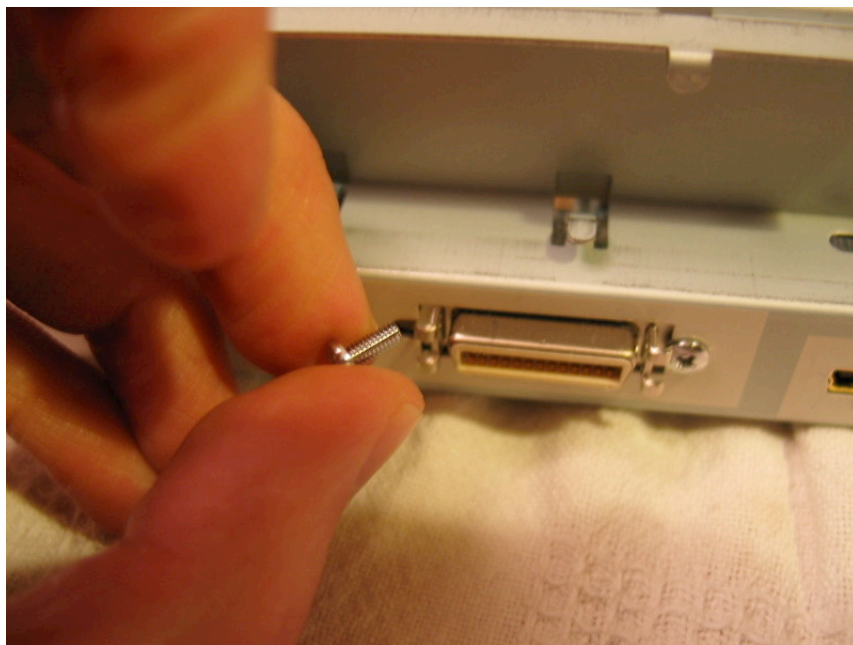
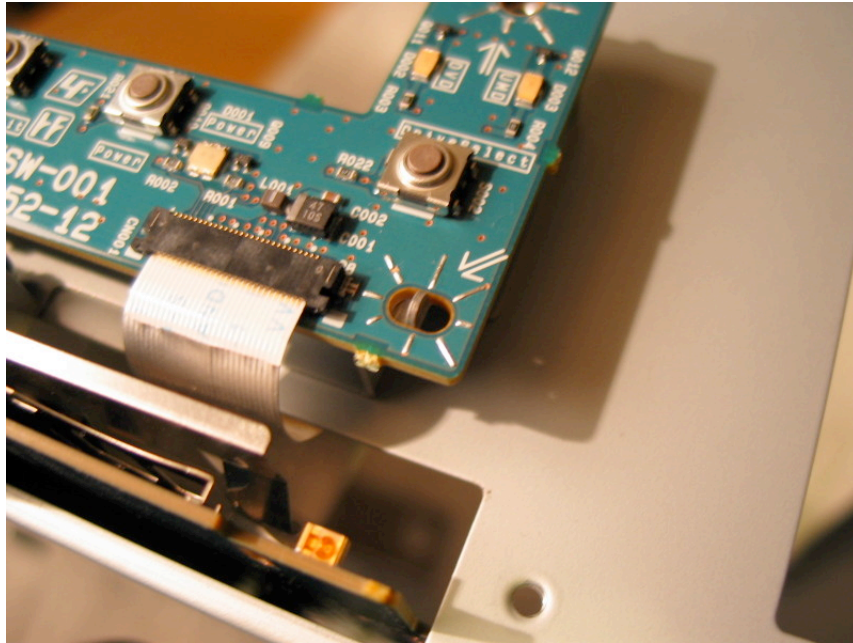


8) Remove the control PCB, shielding & fastening screws on either side of the controller connection. Note size of screws and orientation of the small metal shield plate above memory card insert.

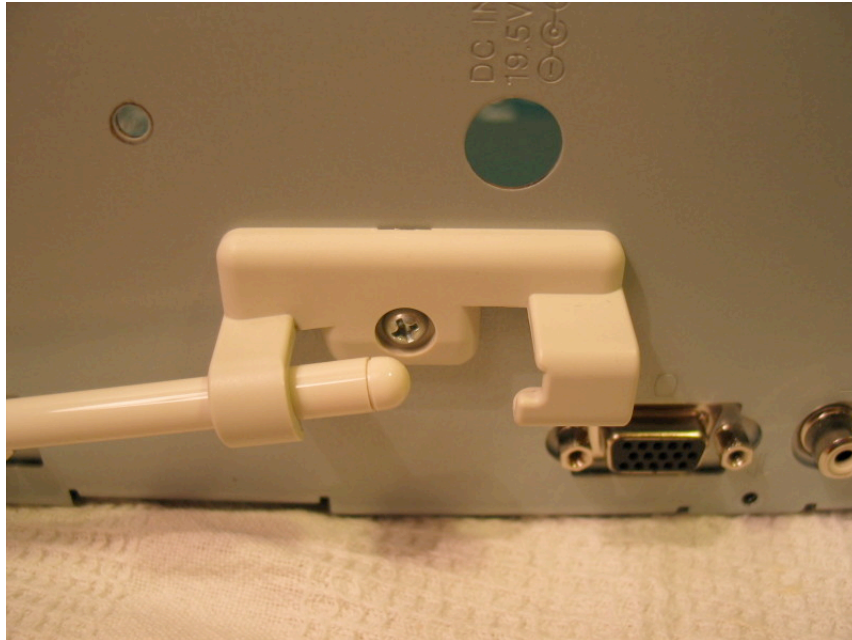
Lay the controller PCB safely to one side. Don't bother disconnecting the IC unless it is requiring replacement. If you have, then mark cable with orientation. Hopefully the images above shall assist with this if any mistakes creep in.



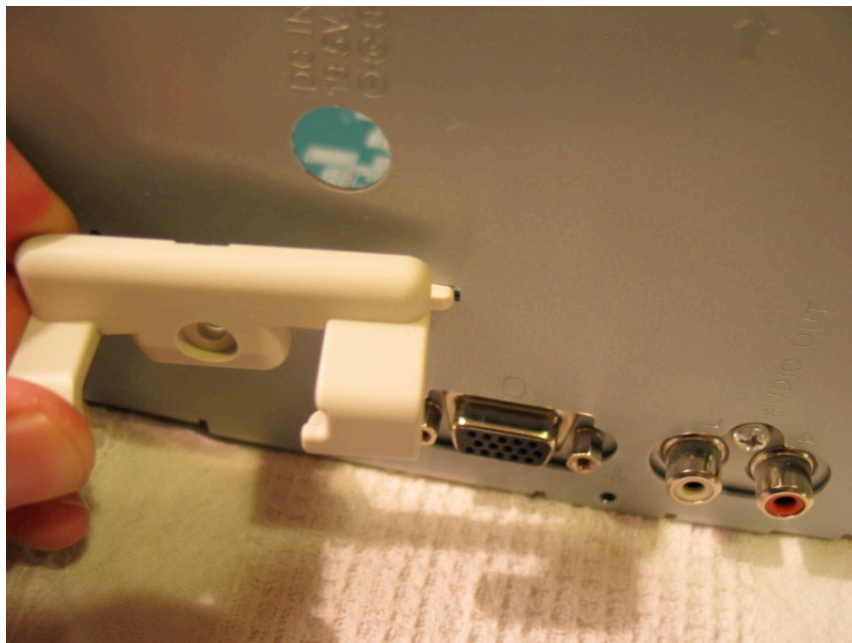




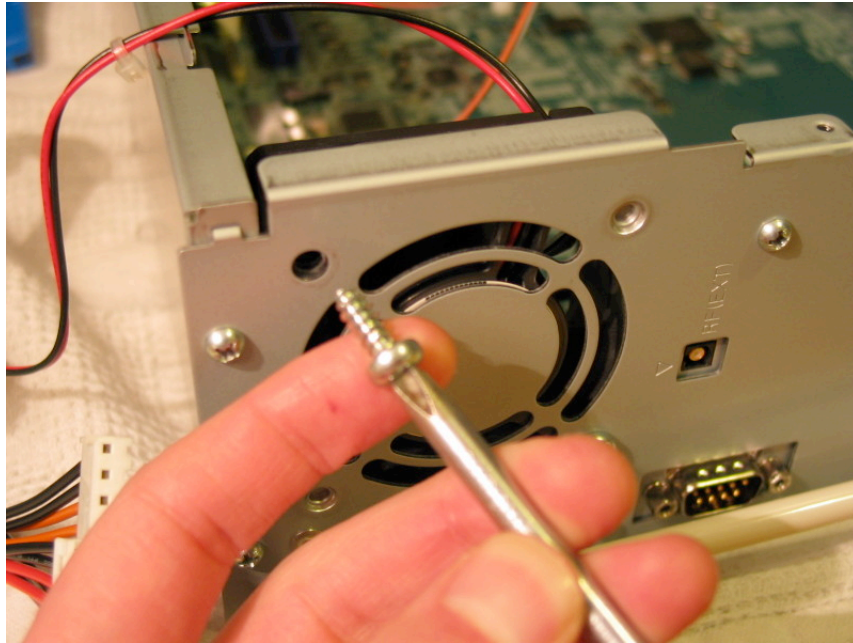
9) You now want to turn the unit around again so you are facing the rear of the unit. The next step is removing the back panel, fan & antenna. Please read this section carefully and do not be tempted to race ahead and start detaching cables etc. It's not necessary. You can simply lift the antenna section clean away rather than fiddle with connectors...



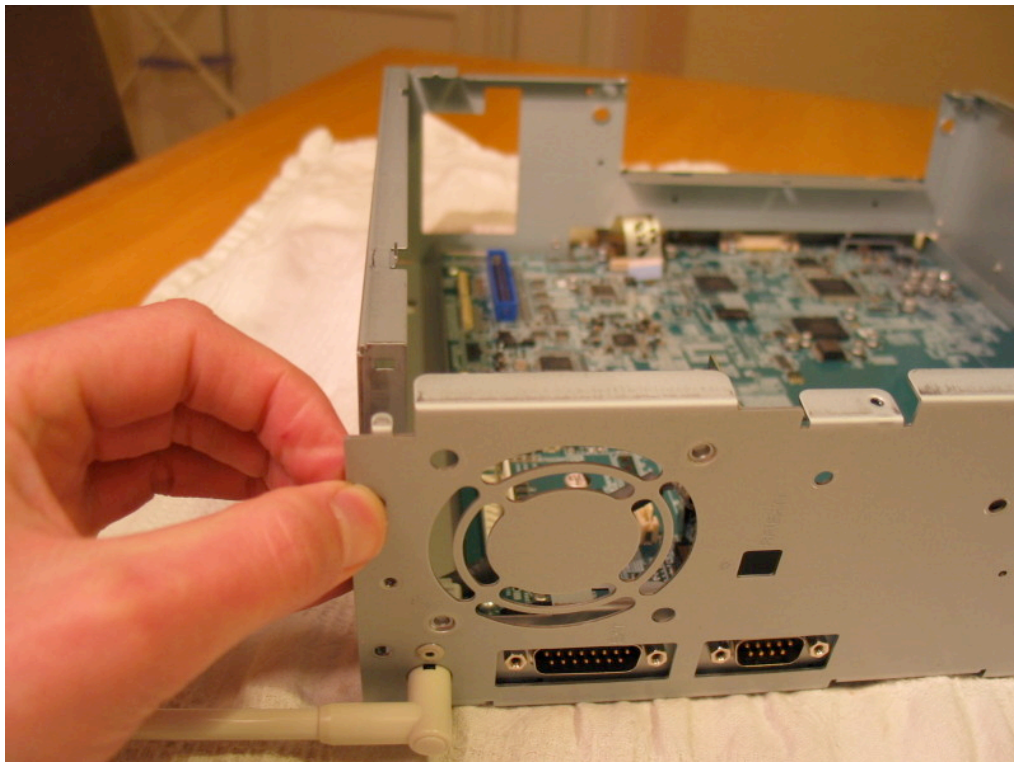
Firstly, remove the plastic antenna holder. There is a single silver screw. The only thing to note is the plastic piece that hooks into the slot...

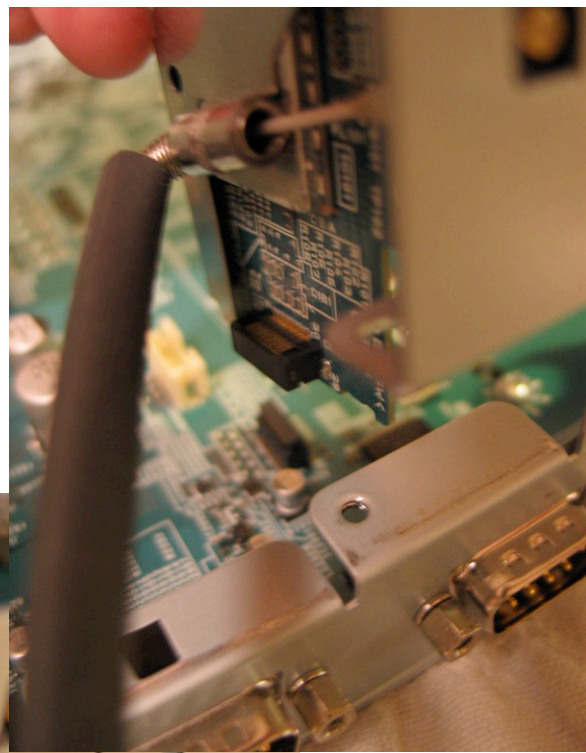
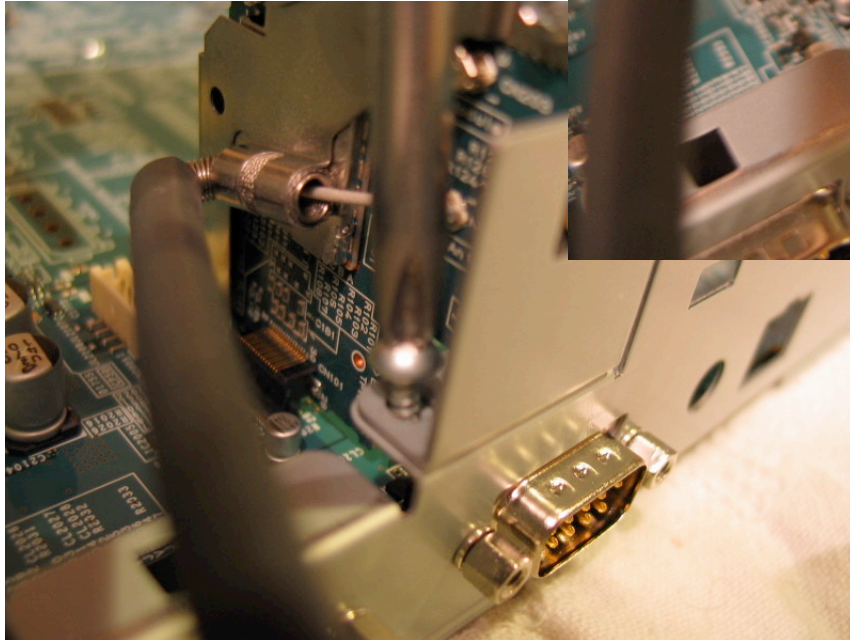


Secondly, remove the fan, which employs the largest pair of silver screws by far. Note the location of the two screws as opposed to the empty screw holes. The empty screw holes are actually indents inside the unit that help to keep the fan in place. Removal all further rear panel screws.



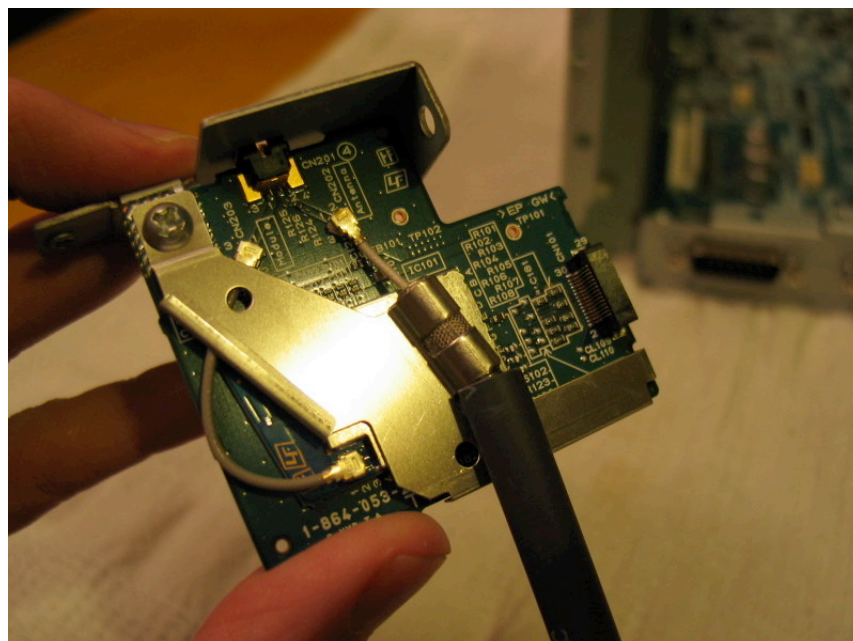
...and gently prise the back plate from the metal frame, but stop before you go very far!
Inside is one last screw and connection.

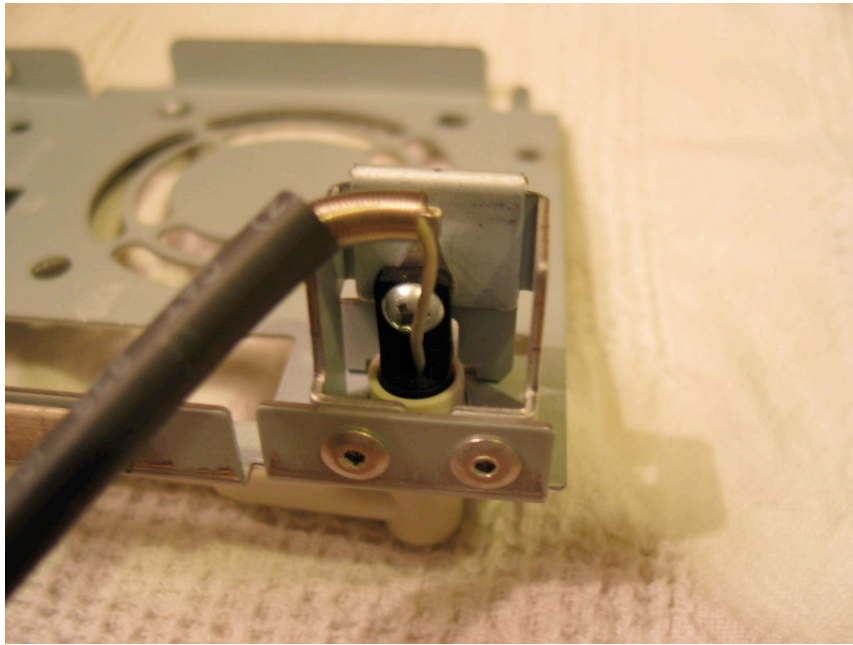




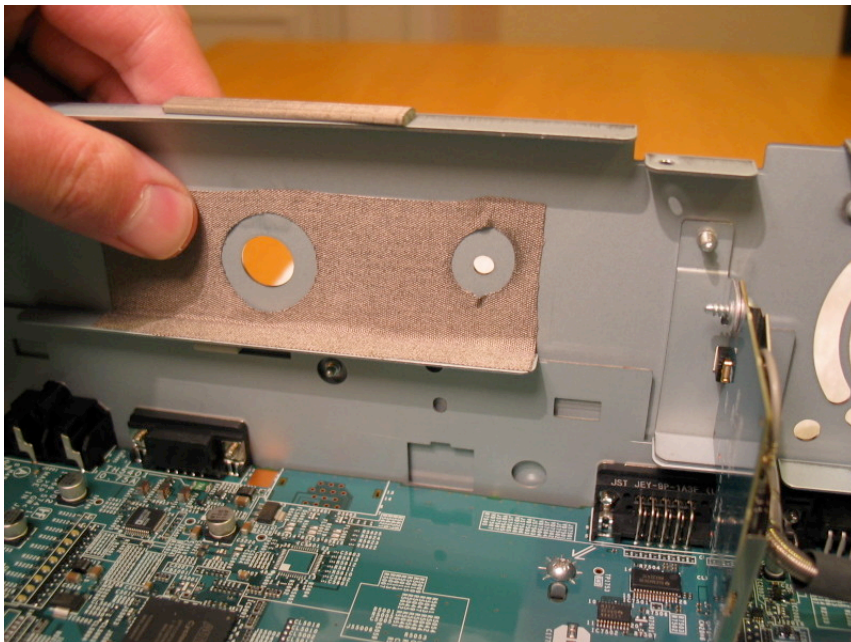
Remove the single screw and lift...

...so that the entire back plate, antenna & connection are kept complete. As you can see from the following two images, these PCB are fragile and not to be tampered with. Antenna connects to CN101.

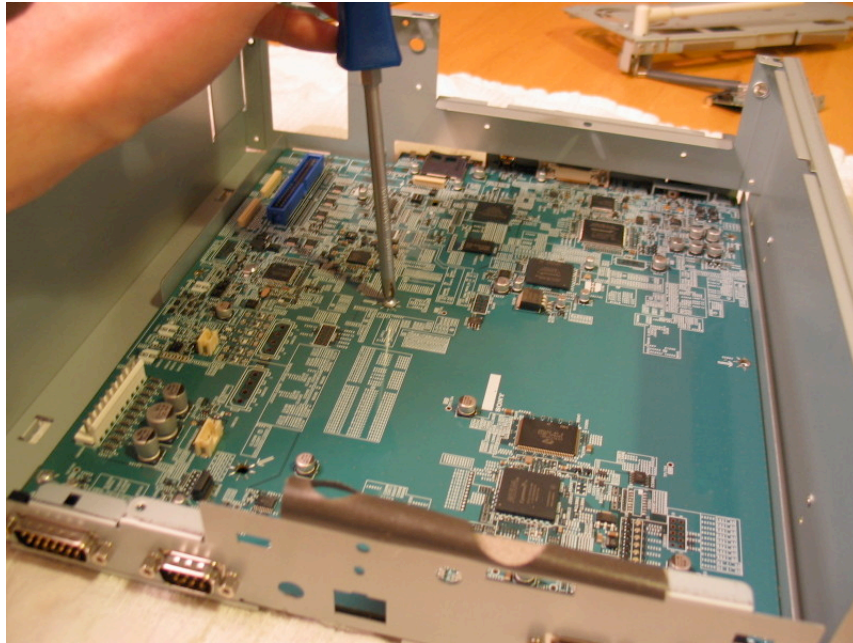




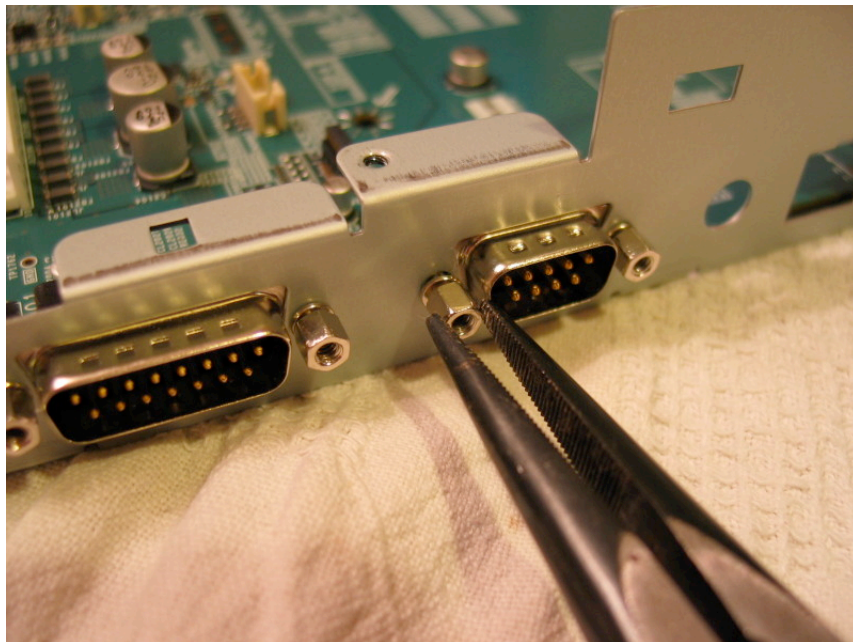
<The main metal frame and this smaller back plate have a connecting web stuck to the inside. Do not cut the matting; just pull the smaller metal back plate upwards gently to peel it away. Keep this section in good condition and on reassembly it should look like this:>



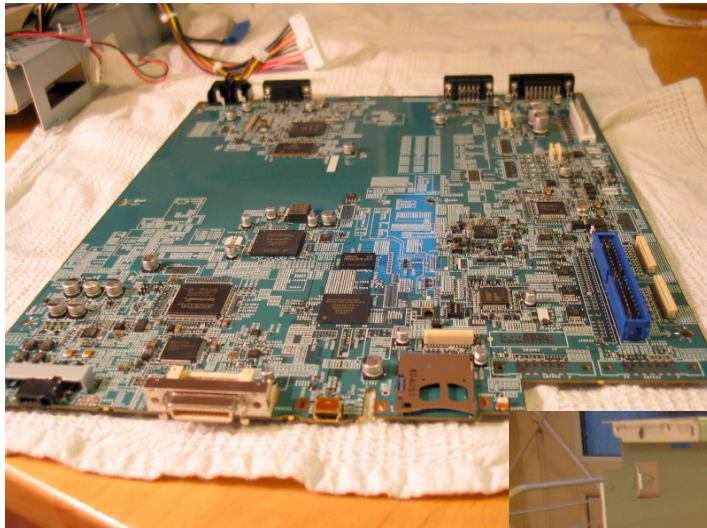
10) Your unit is now almost completely gutted except for the main PCB. Remove the internal screws (all standard):



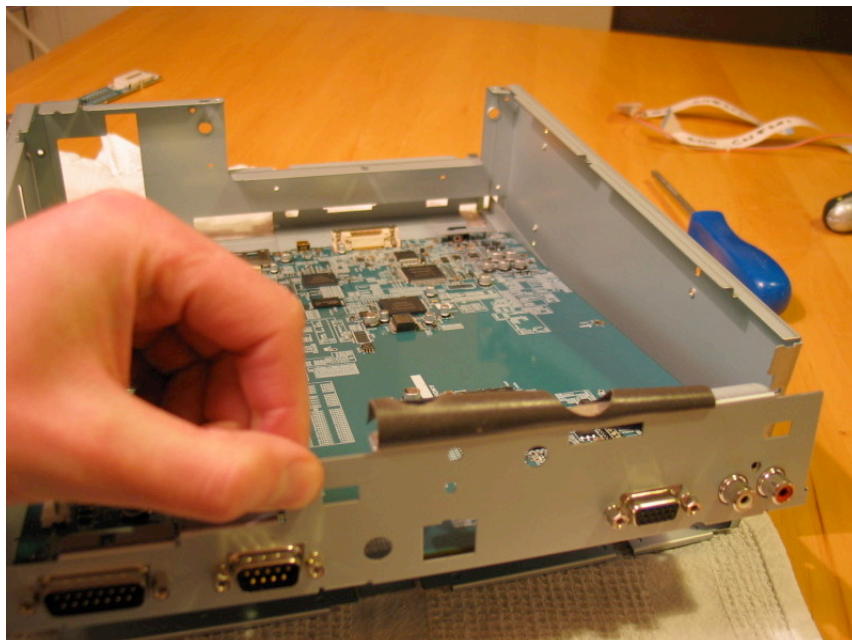
..and if necessary remove the 6 x I/O hexagonal screw points. The remaining small rear metal plate is actually attached to the PCB and not the metal frame, so it is not entirely necessary to remove these hex points if not required. As I am attempting to be thorough, I am showing a complete strip-down...



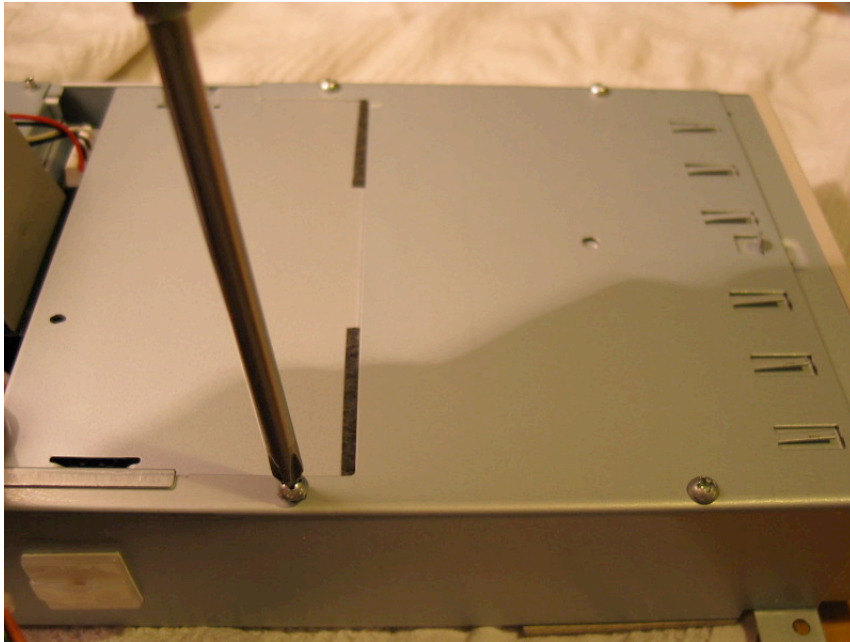
Which should result in this:



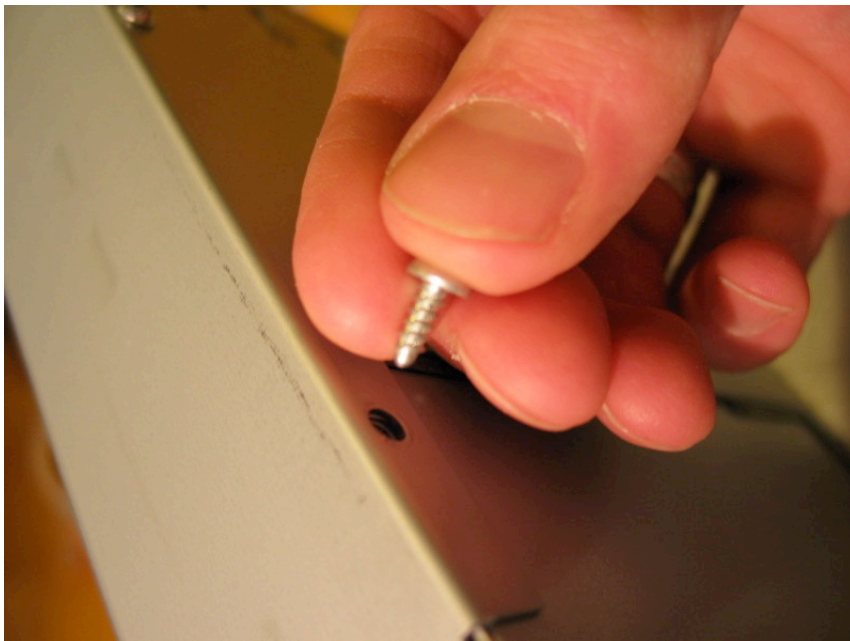
Note: On reassembly, you should attach the small metal plate & 6 x I/O hexagonal screw points prior to slotting them back into the metal frame for easier reassembly, like so:



11) We are not yet finished! Turning our attention to the DVD frame and PSU insert, turn it upside down to expose the 4 metal screws attaching the DVD unit to the frame. Pull the cabling out of the way in order to make the process easier:



Note: The four screws used to attach the DVD unit to the frame are standard! Also note, despite there being a cable sized hole cut into the frame, no cables actually pass through it. Doing so might actually damage the cables or place strain on connections.

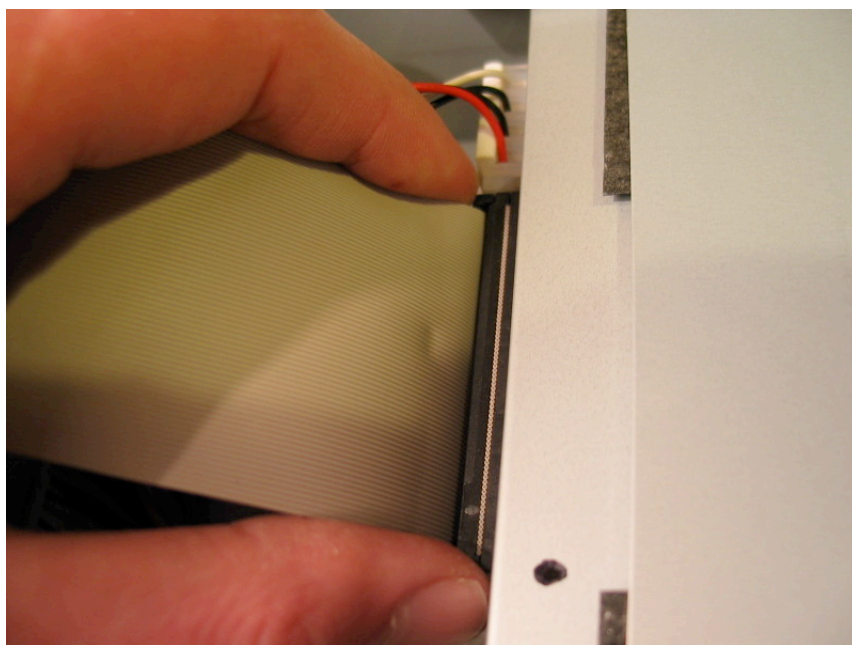


Pull the DVD forward and push the foam section under the metal arm that juts out from the frame:

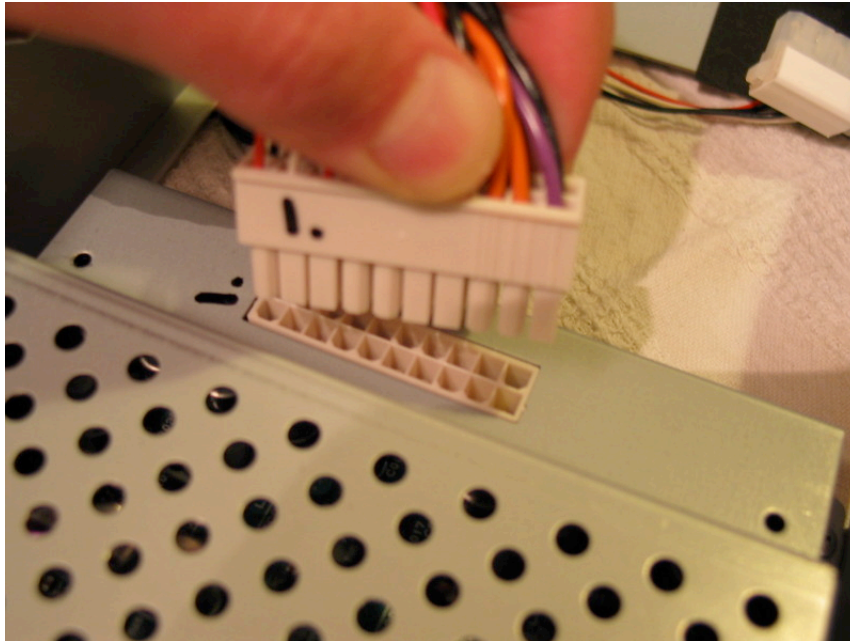


<Same in reverse when reassembling the unit (as is actually shown in this image for clarity)>

Do not remove the DVD entirely, but remove the IDE & power cable from the rear of the DVD.



Also remove the main PSU cable from the metal section behind the DVD (which you can now completely remove).

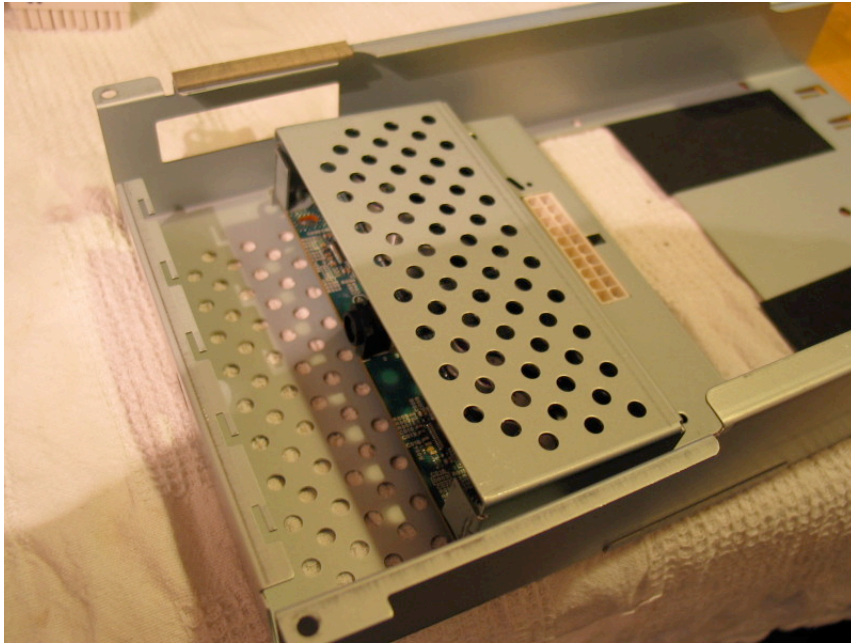


12) You are now left with the remaining section. The PSU PCB is housed inside the small metal box screwed to the frame.

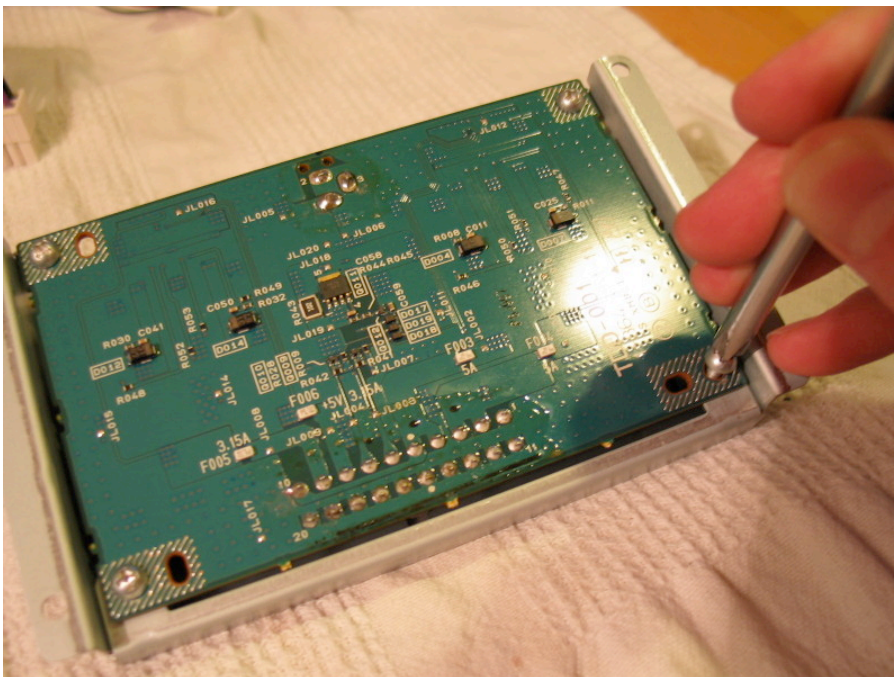
Remove the four remaining screws and note that these are the thinner, shorter screws (I initially thought they were for the DVD on reassembly - no need for you to make the same mistake):



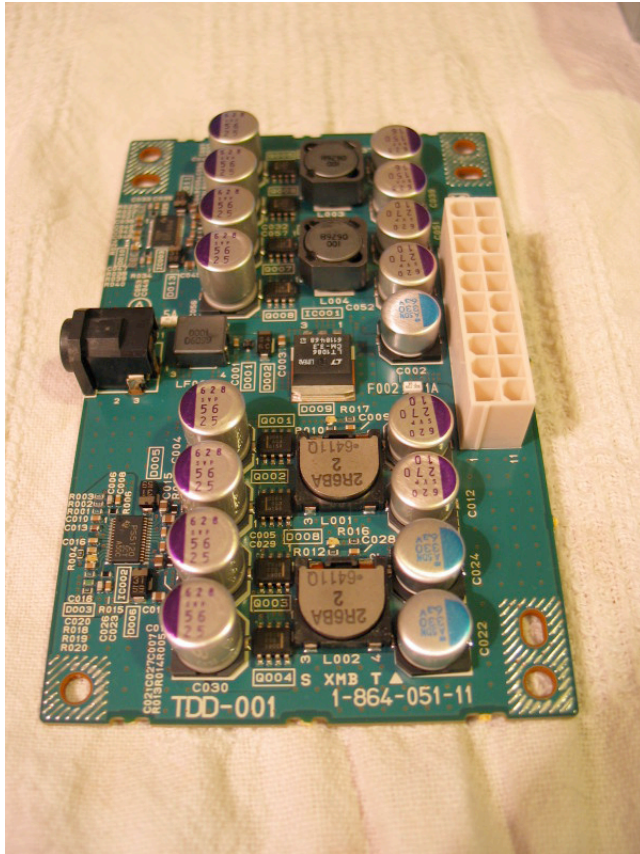
...and slide the metal box away from the frame...



...flip it over...



...remove the last four screws,



And finish off with the PCB on the left.

THE END!

I realise I have not included the PSP™ controller assembly (DTP-H110), but at present I am unwilling to do too much to that particular unit as it is incredibly fragile. I have previously mentioned the motherboard version for the unit and that a standard PSP™ screen will fit inside the unit as a replacement.

Lastly, the UMD appears to use a standard lens assembly, so if any read errors should begin to creep in, it is relatively straight

forward to correct this issue if you are familiar with lens replacement. If not, don't tackle it, as the UMD drive is incredibly fragile. Those cogs are wafer thin pieces of jelly like plastic. One kink and kiss goodbye to UMD reading!

Revisions:

I would like to thank Psycho & Unclejun for their assistance in producing this guide. At present there is very little technical information available to assist with repairing these units and confirmation & corrections were of great importance.

Internal dips at OFF position:

Psycho wrote to me with the following information,

“**Circles 1 & 2** are three switches mounted to the board. These three switches are labeled 'Normal <> Flash Write' and are all in the 'Normal' position on my board

Circle 3 is the set of 4 DIPS. These are labeled as follows:

- 1: SYSCONPWR On= HI, *Off= Normal
- 2: CP ForceOn On= Enable, *Off= Disable
- 3: P23
- 4: P24

(* = Default) Switches 3 and 4 don't sound like they do anything. Setting 1 and 2 ON seems to affect how the system shuts down. The fan stays on all the time, and you can't completely shut it off. Not sure what the purpose of that is...

Circle 4 on the image is part number for the main board detailed in image.
TMU-002
1-866-574-11

There's another bank of DIP switches just to the left of Circle 3 that isn't populated on our boards (maybe this is for the DevKit system). They are labeled:
1: /CP_COMM_PWRSW_EN On= Lo, Off= Hi
2: /PWRBUTEMU On= Lo, Off= Hi
(3 and 4 aren't indicated)"

