OpBox
Conversion Kit for Oppo203 Players

USER MANUAL

PLAYBACK
DESIGNS

IMPORTANT SAFETY INSTRUCTIONS

- Read and follow these instructions and keep this manual in a safe place.
- Do not use this apparatus near water.
- Do not block any ventilation openings.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing)instructions in the literature accompanying the appliance.

WARRANTY

Playback Designs warrants the OpBox product against defects in material and workmanship under normal use and service for a period of time specified by the product's serial number from the date of first delivery to the owner. The warranty time period is for 30 days. If within the first 30 days of ownership you register your Playback Designs product, by sending us a copy of your sales receipt, your name, address, city, state, zip code, phone number, email address and your dealer's store name, we will extend the warranty to 3 years. This warranty is limited to the original owner.

Playback Designs will pay for return shipping charges (domestically) back to the owner when the product is sent to Playback Designs within the first 30 days after purchase and the fault can be confirmed by Playback Designs. Otherwise, owner will be responsible for all shipping charges to and from Playback Designs. International customers must deal with their local dealer or distributor.

For all warranty claims, a copy of the original invoice must accompany the product.
Opening the product or modifying it in any way by the owner, including but not limited to cryogenic treatment, will void any warranty.

Please contact Playback Designs with a clear trouble report and for shipping instructions before shipping any product to Playback Designs.

Playback Designs products are sold worldwide through authorized dealers with restricted territories. If any Playback Designs product is purchased from non-authorized dealers or from a dealer selling outside his / her authorized territory all warranties will be void.

Alteration or modification carried out without appropriate approval may invalidate the user's right to operate the equipment.

BEFORE USING THE PRODUCT

- What is in the box:
  OpBox printed circuit board
  Mounting and backpanel plates
  Mounting hardware
  Optical ST-ST cable
  User manual

- Registration
  If you purchased this product from a dealer please take a moment and send us an email to info@playbackdesigns.com with serial number of the product and your address so we can register you for the warranty.
  If this product has been shipped to you directly from Playback Designs you are automatically registered.

DETAILS AND OPERATION OF OPBOX MODIFICATION KIT

- Description: This OpBox modification kit captures all the native audio data played on the Oppo203 player and sends it out via PLink optical data link to external Playback Designs converters. PLink is a proprietary format used to interconnect audio equipment from Playback Designs and uses standard ST-ST fiber optical cables.

  The OpBox board is mounted at the place of the original Oppo DAC board. For this the original DAC board has to be removed. This operation is designed to be reversible without damaging any part of the Oppo player or leaving any trace.

  The OpBox board with its optical cable is designed to optimize sonic performance of your audio equipment through galvanic separation of the player with all its video decoding circuitry inside from your sensitive audio system.

- What can be played: All digital audio data that is played on the Oppo203 player is captured and encoded to PLink format without any processing. This means native data from SACD, CD, DVD, Bluray or anything played digitally into the player via its LAN or digital inputs will be sent to the external Playback Designs converter for direct and unprocessed conversion to analog.
  The DSD data from SACD may only be accessible when the Oppo player is not connected to any HDMI receiver. Otherwise, all DSD data is converted to PCM.

- Recommended installation: The optical cable can be very long allowing to place the player far away from your sensitive audio equipment. For instance, if you are planning to use your Oppo player for video playback as well it is recommended to place it close to your video equipment and to run a longer optical cable to your audio equipment. This will ensure a clear separation between video and audio, which will improve the sonic performance of your audio system.

- Cable specification: Simplex or Duplex 62.5/125 multimode fiber optic. Any commercially available length is supported.

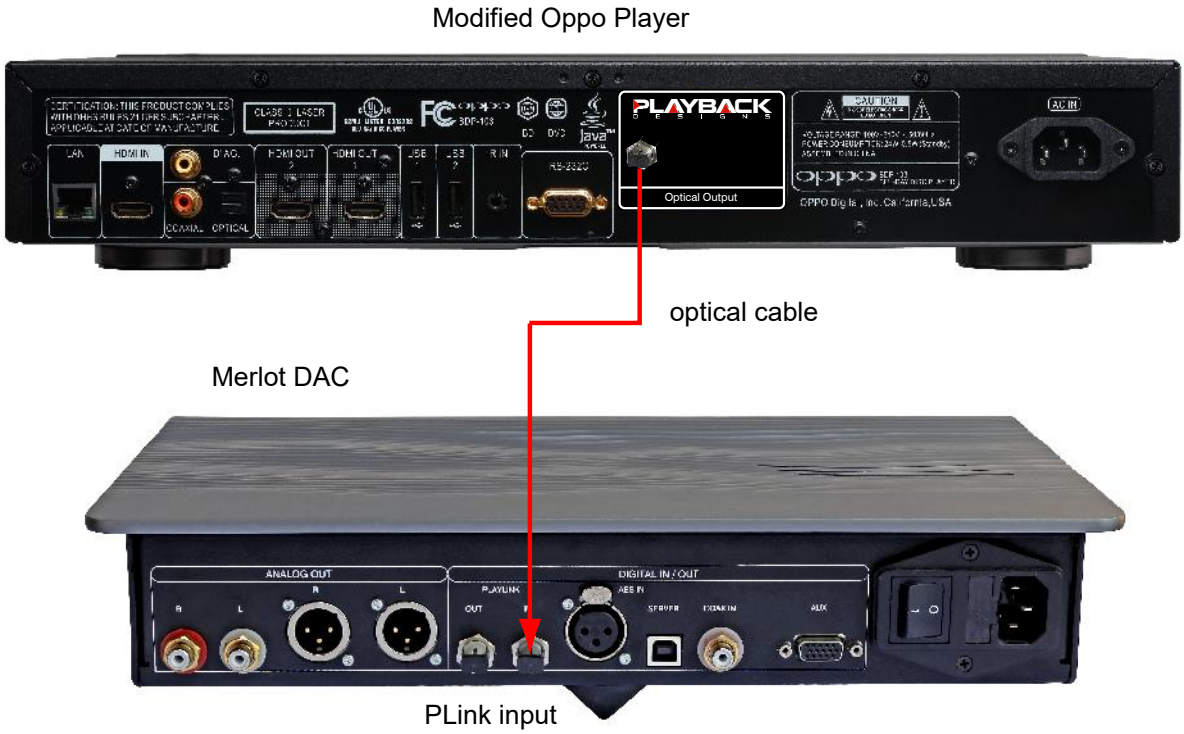
- Format specification and hardware setup: The encoding format on the optical cable is PlayLink or PLink. This format has 2 different modes: classic and Sonoma mode. The OpBox board supports both modes and can be configured accordingly (see section 14 under the installation instructions). In both modes PLink supports native PCM up to sample rates of 384kHz and in classic mode it supports DSD up to 5.6MHz, whereas in Sonoma mode it supports DSD up to 11.2MHz.
  You may have to configure your Oppo player to play native DSD (instead of PCM) and to select the stereo layer with SACD discs. For this connect the player to a TV and find the corresponding adjustment in the setup menu (Playback Setup and Audio Format Setup).

- Connection to Playback Designs audio equipment: the optical output can be connected to any Playback Designs equipment with a PLink input connector. In case you are using it with any classic product make sure to set the PLink In mode on the classic product to "PLink" (as opposed to "USB-X").

- Supported Oppo players: Any 203 version

CONNECTING TO MERLOT DAC

Set the internal switches to "Sonoma Fomat" (see section 14 under Installation) and then connect the optical cable to the PLink input of the Merlot DAC according to below picture:



You may have to configure your Oppo player to play native DSD (instead of PCM):

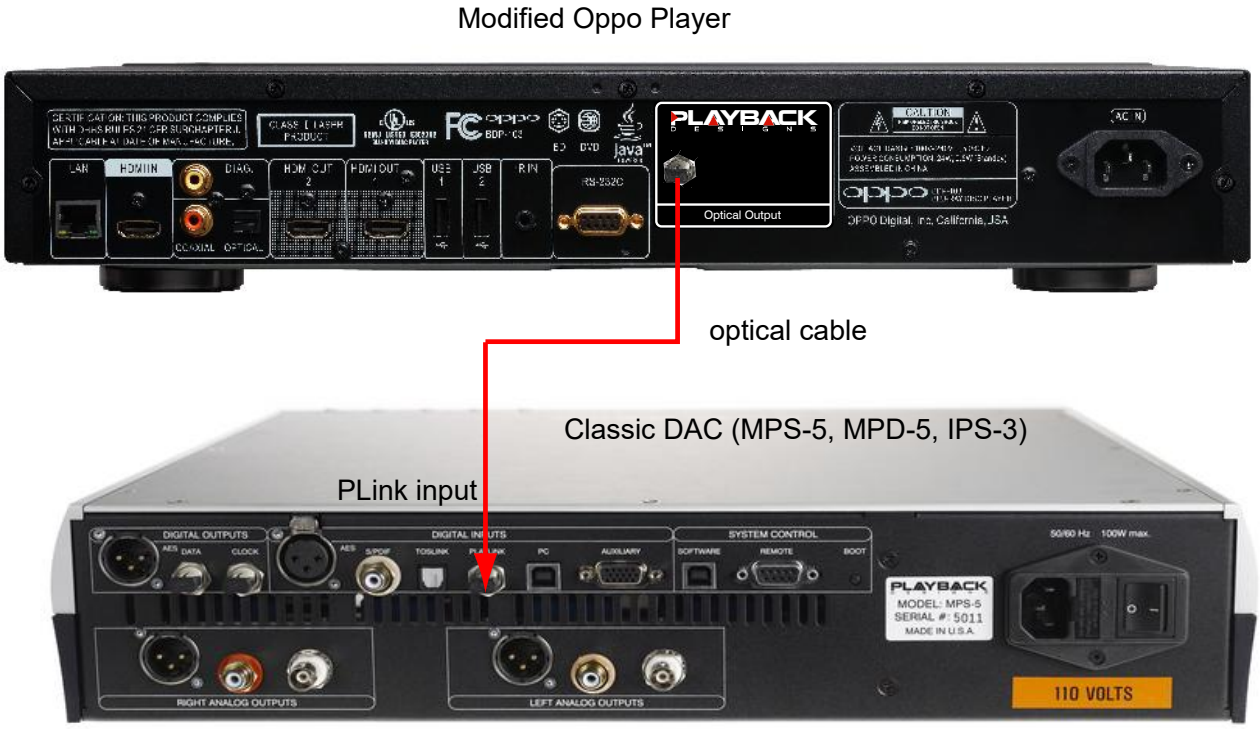
1. Connect player to TV
2. Enter Setup menu
3. Navigate to Audio Format Setup and select DSD under SACD.
4. Player with earlier software may not play DSD natively when a TV is connected via HDMI. In this case you will have to disconnect the TV in order to enjoy the full quality of DSD.

Also, you may want to program your player to select the stereo program by default when playing SACD's:

1. Connect player to TV
2. Enter Setup menu
3. Navigate to Playback Setup and select stereo under SACD priority.

CONNECTING TO CLASSIC PLAYBACK DESIGNS DAC

Set the internal switches to "Classic Fomat" (see section 14 under Installation) and then connect the optical cable to the PLink input of either MPS-5, MPD-5 or IPS-3 according to below picture:



You may have to configure your Oppo player to play native DSD (instead of PCM):

5. Connect player to TV
6. Enter Setup menu
7. Navigate to Audio Format Setup and select DSD under SACD.
8. Player with earlier software may not play DSD natively when a TV is connected via HDMI. In this case you will have to disconnect the TV in order to enjoy the full quality of DSD.

Also, you may want to program your player to select the stereo program by default when playing SACD's:

4. Connect player to TV
5. Enter Setup menu
6. Navigate to Playback Setup and select stereo under SACD priority.

INSTALLATION INSIDE OPPO 203 PLAYER

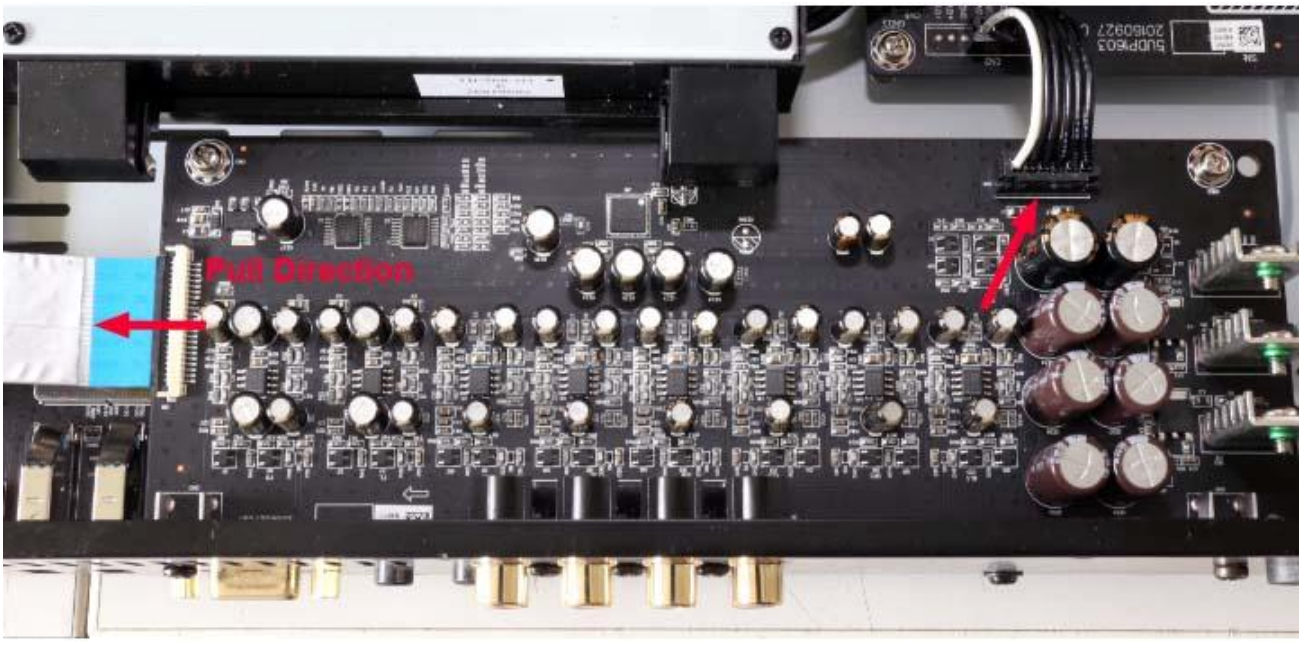
This procedure requires the operation of a screw driver, handling of sensitive electronic parts and connecting fine pitch cables in a somewhat delicate connector. If you are not comfortable with such operations then it is recommended to leave it to your dealer. They are equipped with the right tools and are quite familiar with such procedures.

CAUTION: Unplug AC cable from Oppo player. Playback Designs is not responsible for any harm due to electric shock. Static discharges can harm electronics - do not wear plastic shoes or stand on carpet during this operation.

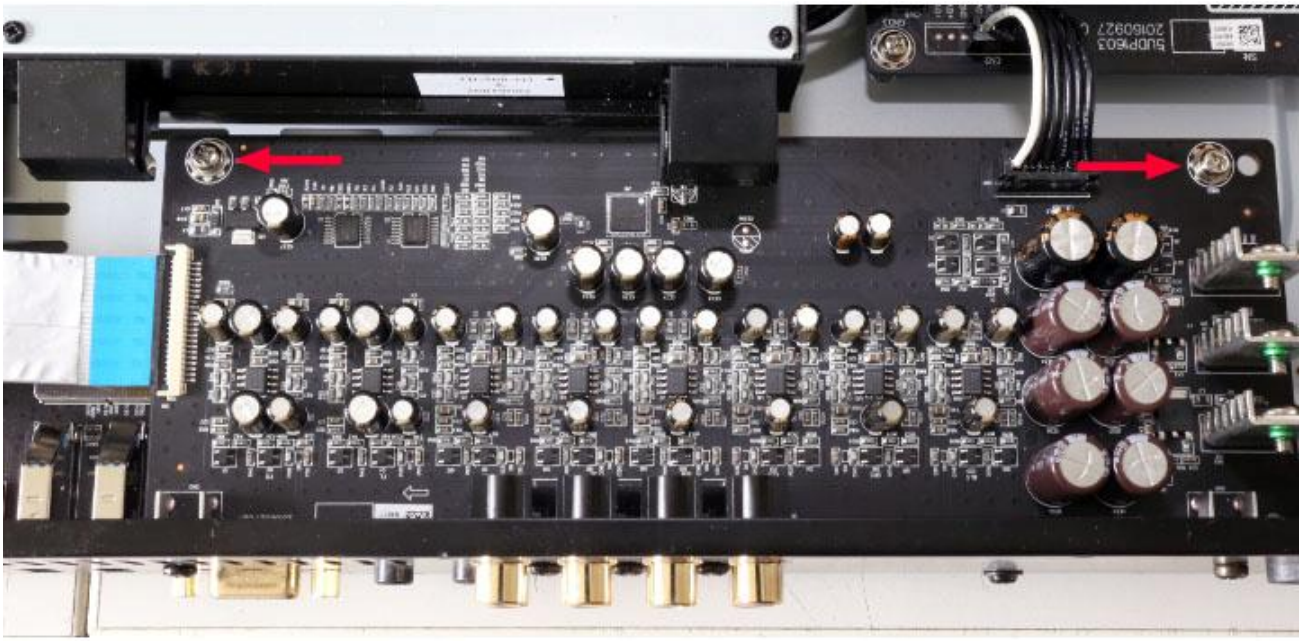
1. Remove top cover of Oppo player. If you cannot figure this out without a picture then you should definitely leave this operation to your dealer.

2. Remove the 5 screws on the back panel as indicated in picture below:

3. Pull the two cables pointed out in below picture out of their connectors on Oppo DAC board. The flat flex cable should be pulled out in direction indicated in below picture. This takes a moderate amount of force. Do not remove cables completely, remove them only on one side as indicated below.

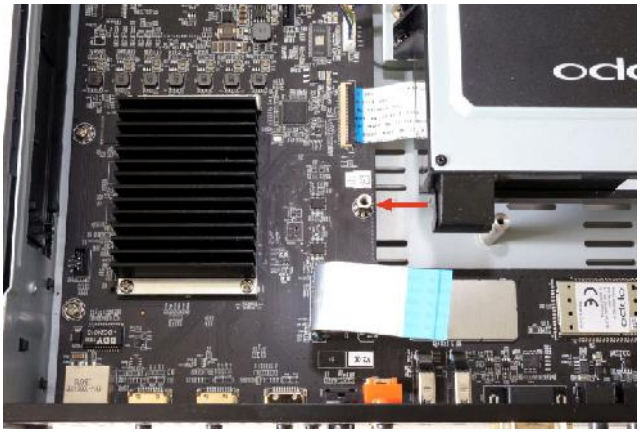


4. Remove 2 screws holding the Oppo DAC board:

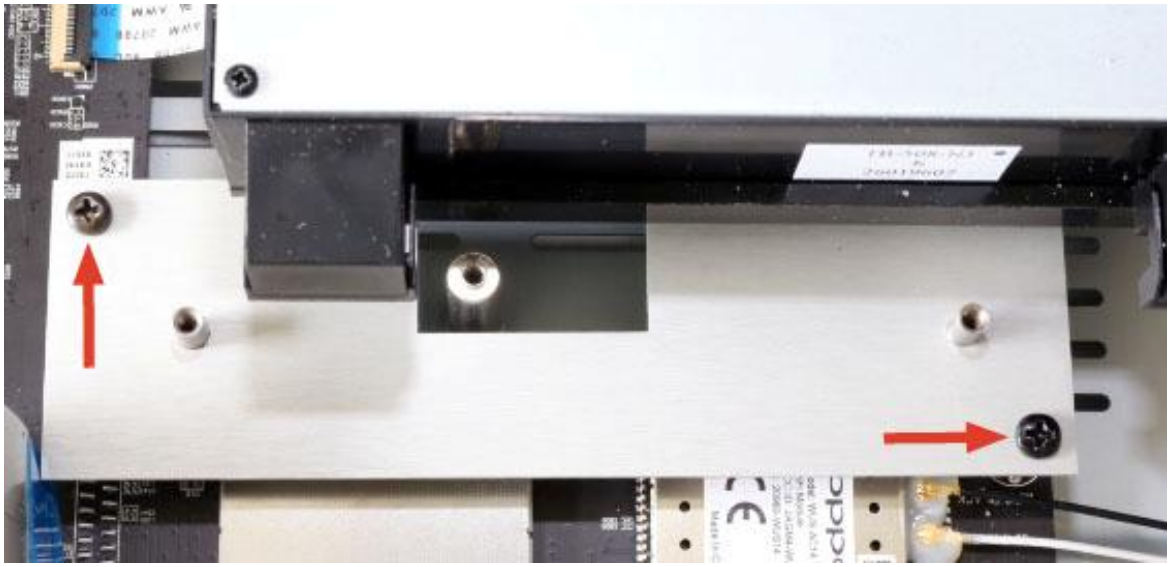


5. Slide DAC board out.

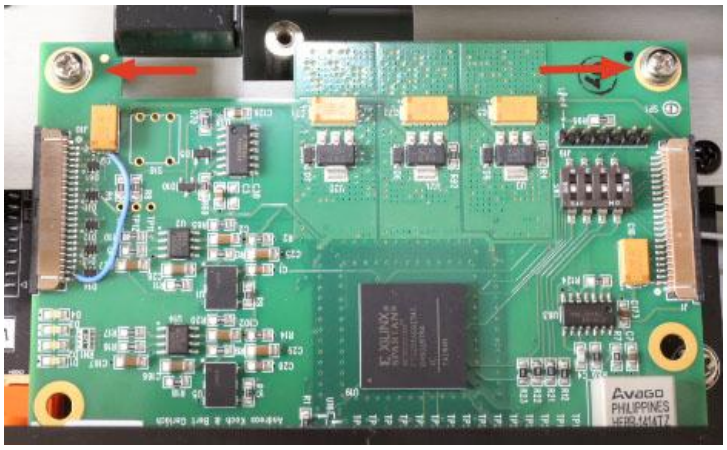
6. Remove screw as pointed out in below picture and mount provided hex standoff in place of removed screw:



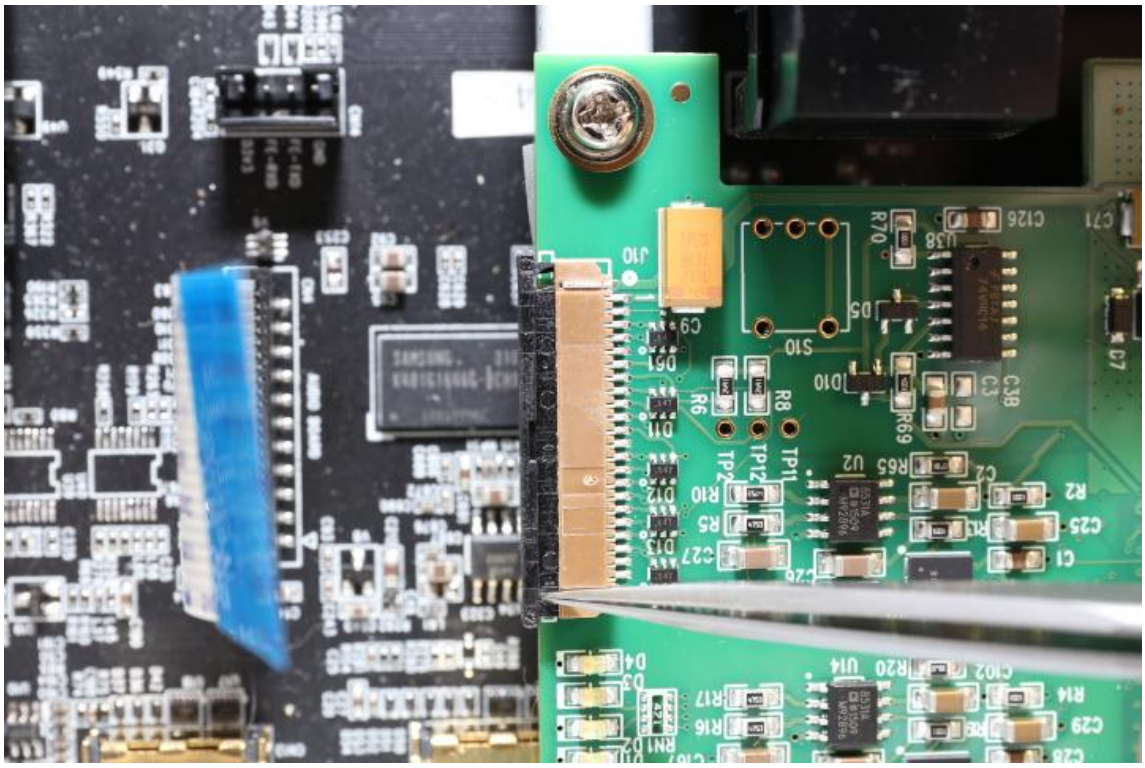
7. Mount support plate for OpBox printed circuit board as shown below. Use the two M3 Philips screws removed in step 2 above to secure the plate.



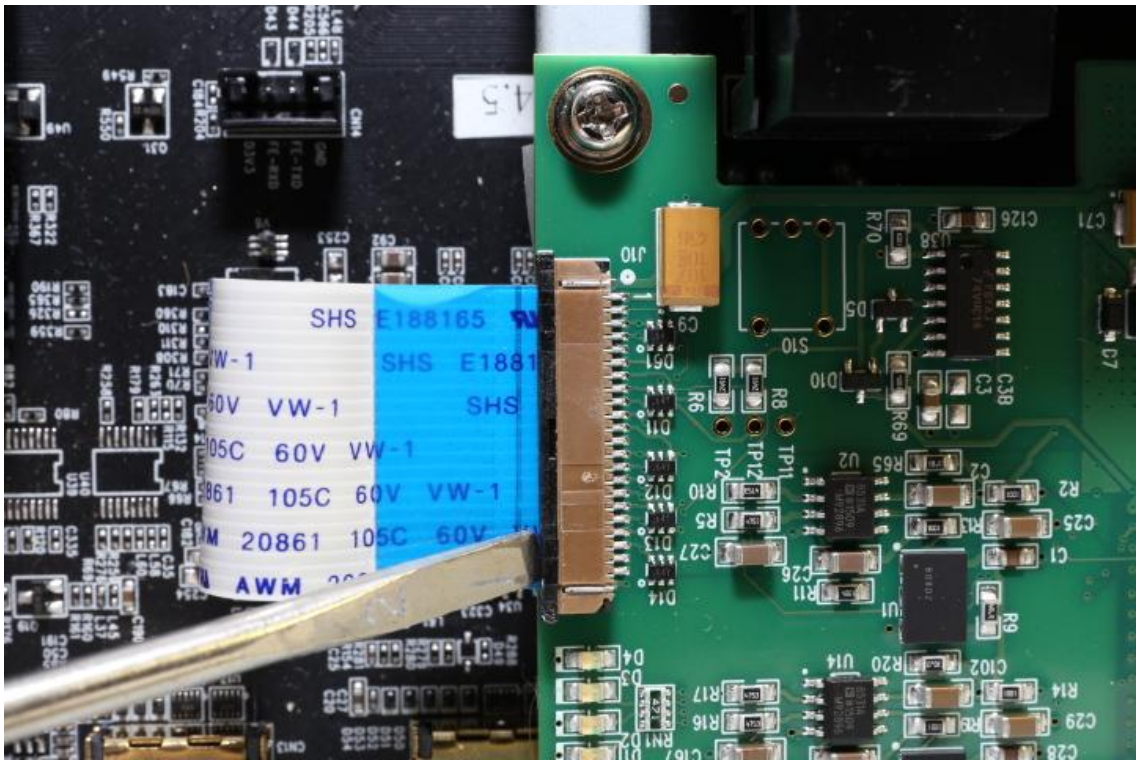
8. Mount Playback Designs OpBox board as shown in below picture and use 2 of the original mounting screws (removed in step 4 above) to fasten the board, as pointed out by red arrows. Make sure that optical connector goes through the appropriate hole in the back panel as shown below:



9. Use small screw driver or some other suitably pointed object to slide out small black wedge in flex connector as shown in below picture. Be careful to not use much force. The wedge is not supposed to move out of the connector completely, only by about 2 mm. Below picture shows the wedge fully moved out of the connector.



10. Insert flex cable into connector right below the black wedge. It does not take any force to insert cable! Once fully inserted, use a flat screw driver to move the black wedge back into the connector. This will secure the flex cable in the connector. Below picture shows the cable and wedge fully inserted. Double check the other end of the flex cable to make sure it did not get pulled out partially by mistake - you can gently push it down into its connector.

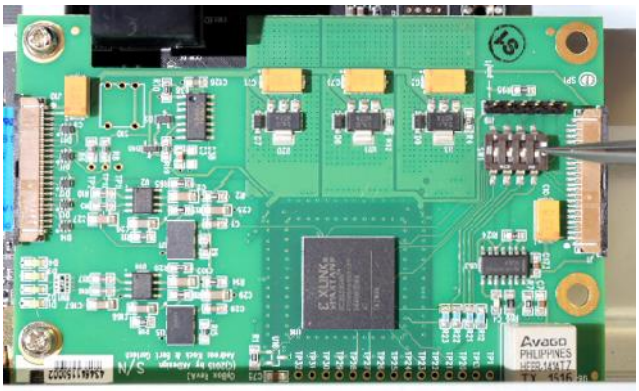


11. The Playback Designs cover plate for the back panel can be mounted in 2 ways:
    - permanent: remove protective paper on back of cover plate to expose the glue
    - removable: do not remove protective paper on back

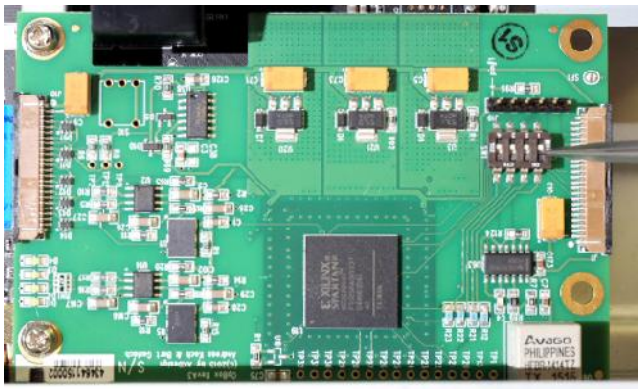
12. Mount the cover plate in the chosen method by sliding it over the optical connector and by making sure the small screw hole lines up with the corresponding hole in the back panel.

13. Mount the provided nut for optical connector. Use only moderate force to tighten it as connector is plastic and can easily be broken off. Use the provided small screw and nut to secure cover plate on rear panel as shown below:

14. The OpBox board can be connected to the classic line of Playback Designs products (MPS-5, MPD-5 and IPS-3) or the Sonoma line of products. Depending on which product you want to connect it to, you need to configure the PLink output mode of the OpBox board. It is shipped from the factory set to Sonoma mode. There are 4 switches on the board (see picture below) that can be set with a small screw driver.



all 4 switches down for Sonoma mode (default)



all 4 switches up for classic mode

15. Mount top cover again with original screws.