

# XENIUM

## RGB Installation Guide

Rev 1.1

NEMESIS



The installation of your Xenium will void your console's warranty and may cause damage to your console if not installed correctly. Please ensure that power is not applied to your XBox during this installation procedure.

XeniumMods@gmail.com

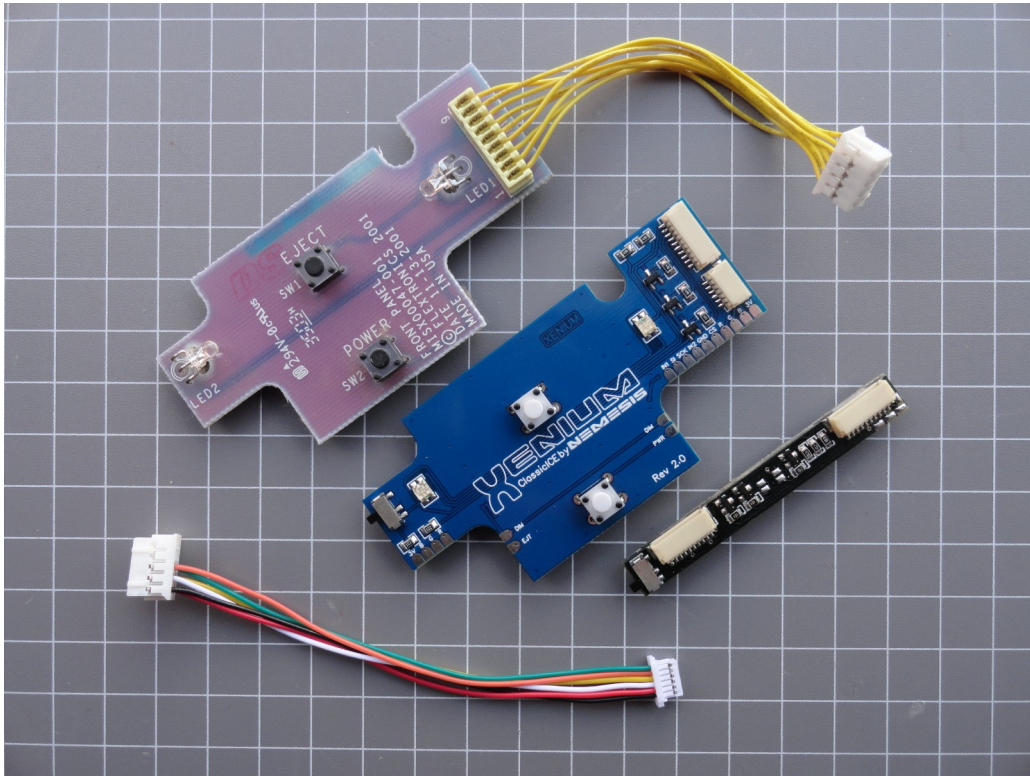
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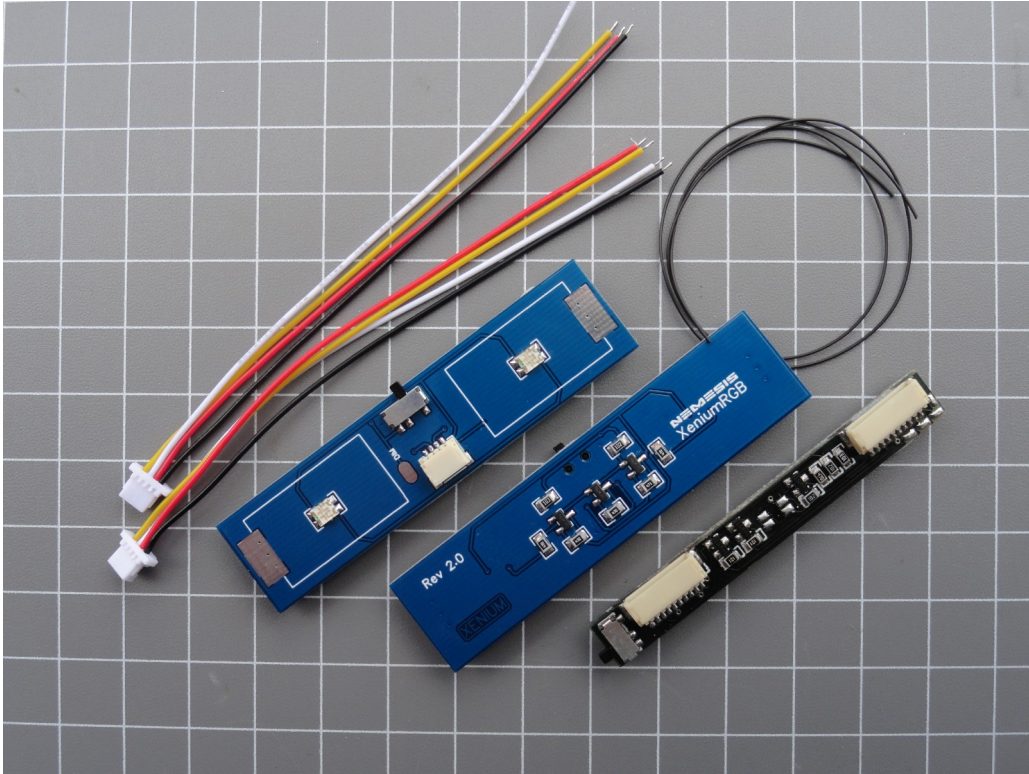
# Front Panel Introduction



The XeniumRGB front panel is essentially a hybrid of the Original Xbox front panel and the Original Xenium LED module, excuse the missing LED as I used it for my prototype Xenium mod-chip.

During prototyping of the front panel I didn't like the idea that the only way to change the LED between bright and dimmed was to manually flick the switch as this would require opening the console. Eventually it came to me to utilise the now unused original LED wiring to trigger the dimming feature, which in turn can be controlled XBMC or customised BIOS.

# Controller Ports Introduction



The Xenium RGB Controller Ports are a modified version of the Original Xenium LED module. Which now has dual RGB LED's with a new profile design that can be directly soldered to the back of the controller ports.

The dimming feature combined with RGB makes for an interesting boot up. Alternatively all the XeniumRGB modules can be set permanently to bright, by flicking the switch on the modules so that the white print is showing.



## Recommended Tools

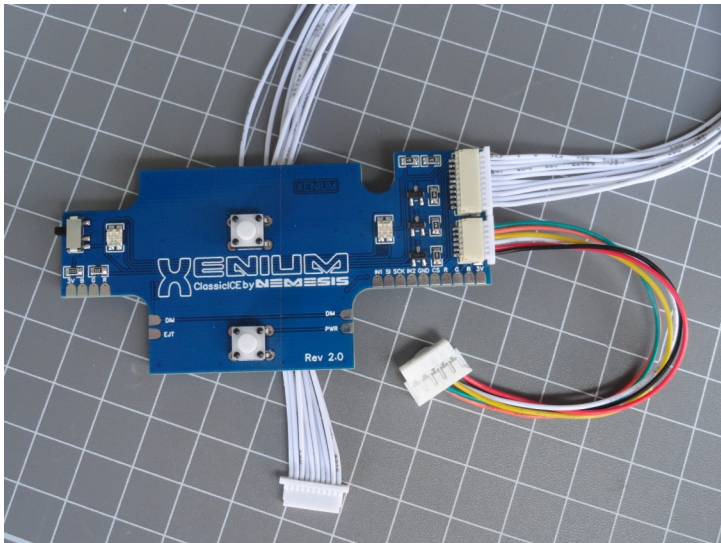


In addition to the usual recommended tools we will need a "Dremel" or similar device to cut the shielding on the back of the controller ports off.

A good soldering iron with temperature control will be a huge benefit. My general rule of thumb is to use 340°C for general soldering, 360°C for desoldering and 400°C for anything that's grounded. I like to use a 1.2mm tip on my iron with 0.8mm solder with 60% lead, be sure to use Flux as it will greatly improve the quality of your work. I recommend desoldering wick as a solder sucker is of no use at this scale. Some isopropyl alcohol, cotton tips and a toothbrush will assist with any cleaning. You may also need a hobby knife to remove the solder mask if you choose the "Quick Solder" method. I would also recommend the use of 30AWG Kynar Wire (aka Wire Wrap) as it is very fine and single core which will make soldering to small points much easier.

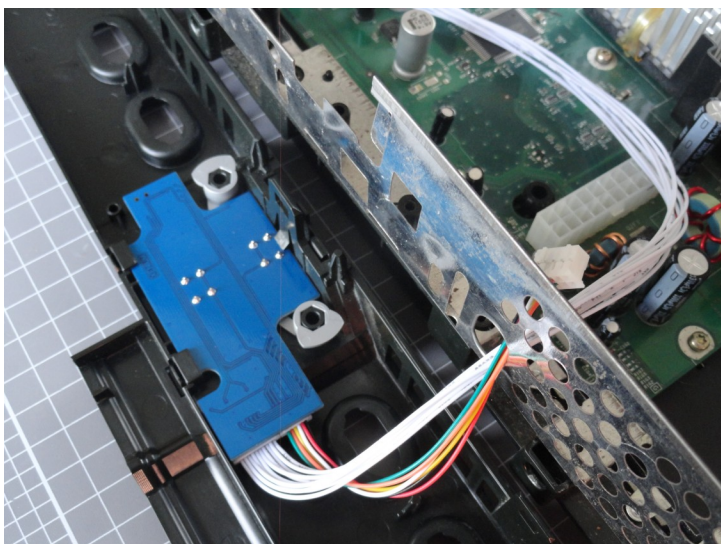


# Solderless Installation



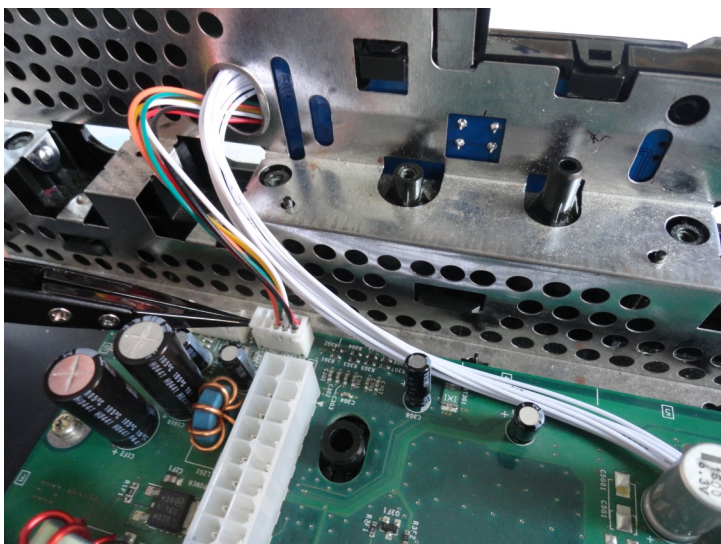
The process for "only" installing the XeniumRGB front panel is solderless.

After having taken off the front panel as shown in the "Disassembly Guide" and removing the Original Xbox front panel. Attach the 10pin and 6pin cables as shown in the image.



Next insert the XeniumRGB front panel into the faceplate and route the two cable through the hole as shown in the image.

Reattach the faceplate to the rest of the console, there's an example of this in the "Front Panel Install" section of this guide.

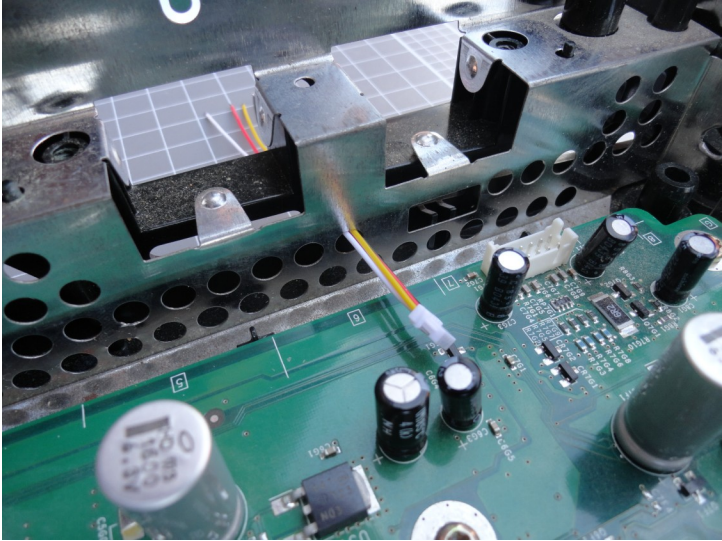


The white 10pin cable is to be connected with the Xenium and the other to the motherboard as shown in the image.

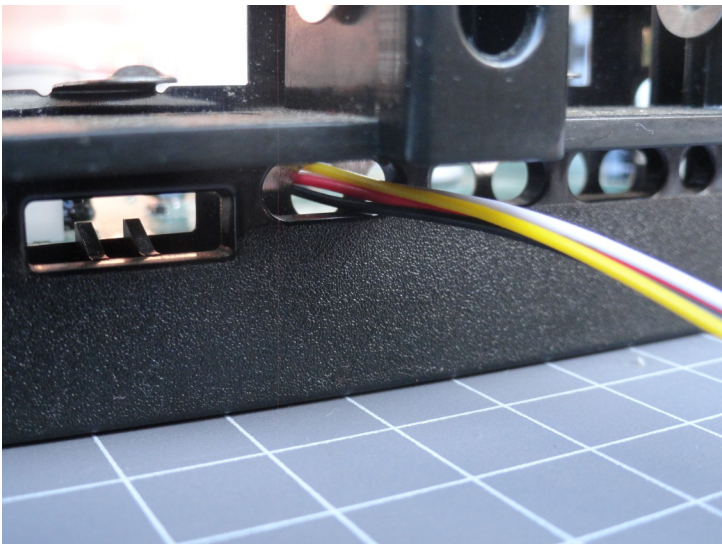
Be careful when disconnecting the plug on the motherboard as they have been hand crimped and the wire's may come out from the terminal pins. Try and use tweezers or a screwdriver to assist.



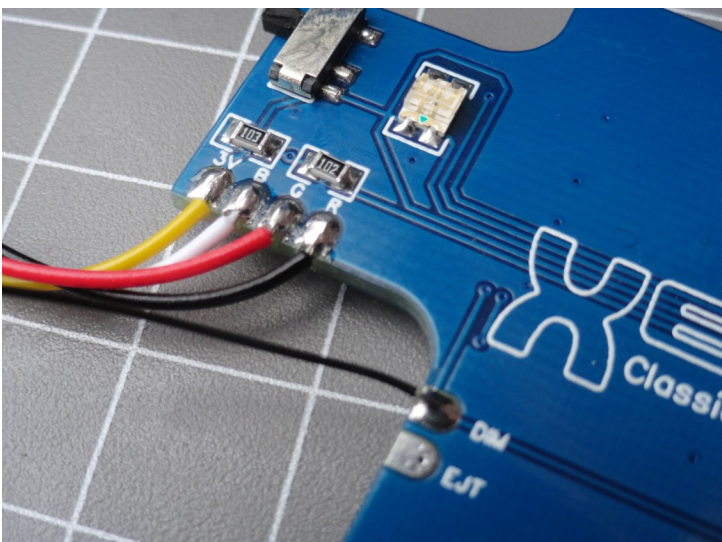
## Front Panel Wiring



For the full XeniumRGB front panel and controller port install, start by passing the 4pin "DIY" cables through the hole in the shielding as shown in the image.



Make sure it also passes through the hole on the front of the console. This could get a little tricky but just keep trying until you get it.

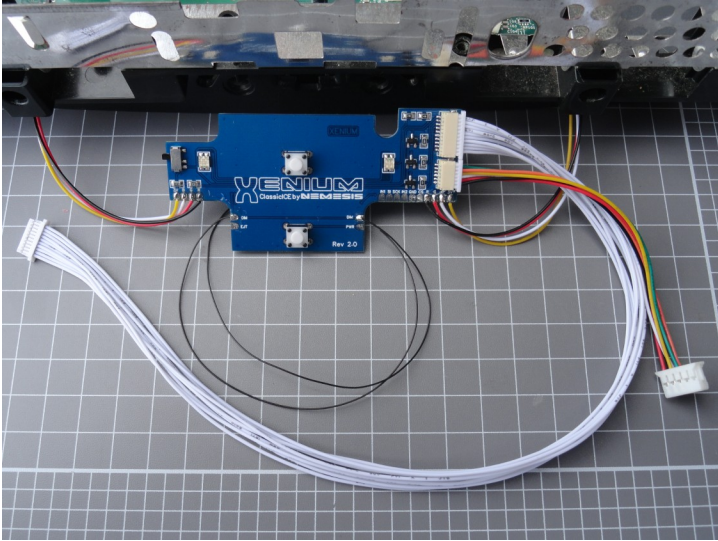


To solder on the wire's first add flux to all the relevant pads and create a nice bead on them. The wires are already tipped so just reheat the pads one at a time and insert the wire tip and remove the soldering iron.

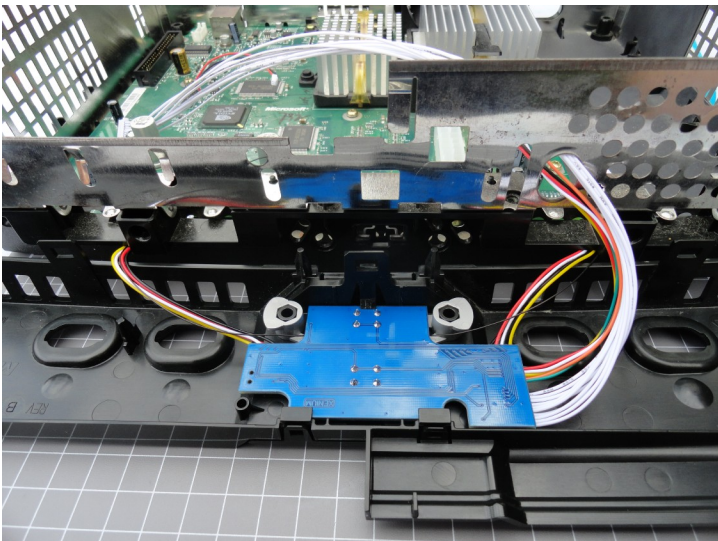
Do the same for the supplied Kynar wire if you want the dimming feature to work, follow the example shown in this image.



# Front Panel Installation



It might get a little tight to work on since the 4pin cables are rather short but after having soldered all the wire's and plugging in the 10pin and 6pin cables it should look something like this image.



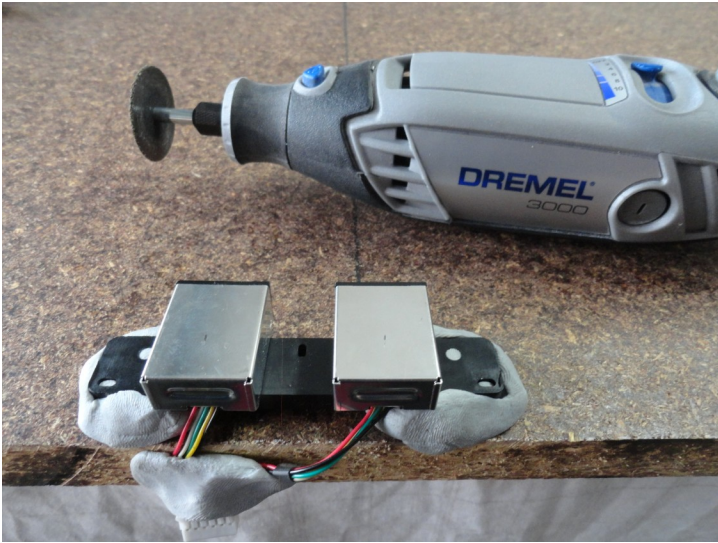
Next insert the XeniumRGB front panel into the faceplate and run the two main cables through the hole as shown in the image. And run the Kynar dimming wire's through the same path as the 4pin cables for each set of ports.



When lining up the faceplate with the console you may need to pull on the wires and cables making sure nothing gets caught.

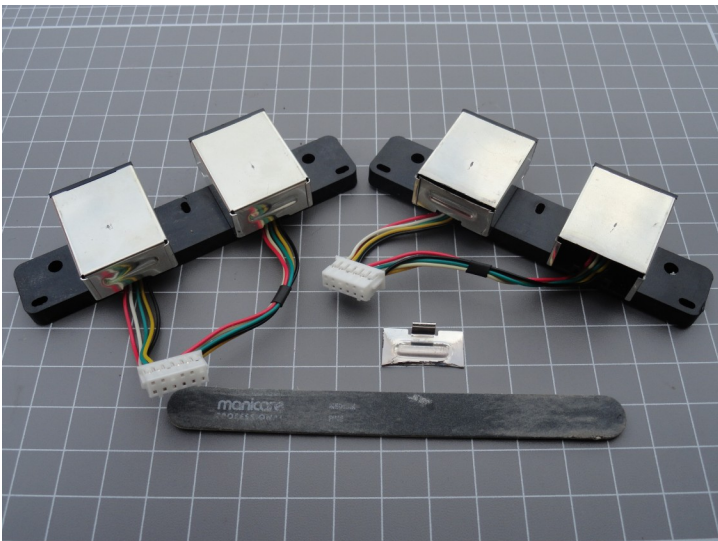
To reattach the faceplate start from one end as shown in the image and while pressing it back together, work along making your way to the opposite end. Pay much attention to the plastic tabs, that they don't break.

## Controller Port Preparation



Now we will prepare the controller ports for installation, I was able to mount the ports to my workbench using "Blu-Tack" which gives a good enough hold while you work on it.

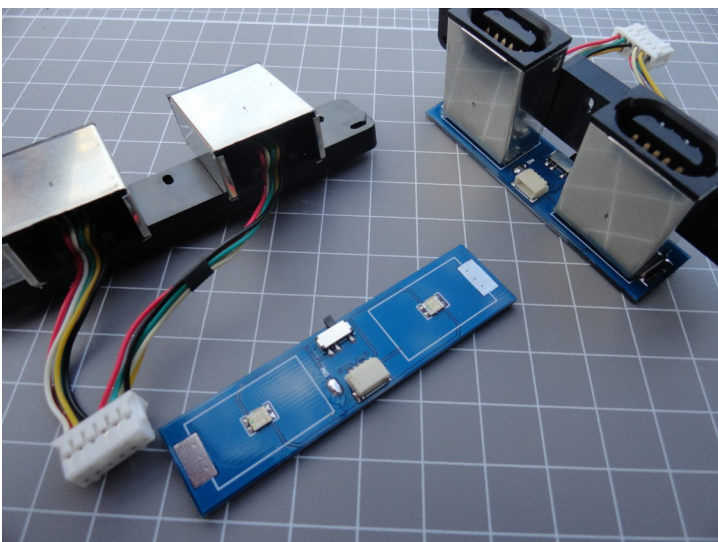
With either a "Dremel" or some other means cut the back of the shielding from the controller ports then use a screwdriver to pop them out.



Optionally you could use a nail file to clean the cut edge as shown in the image.

I would not recommend drilling as it is likely that the wires inside will be damaged, trust me I tried...

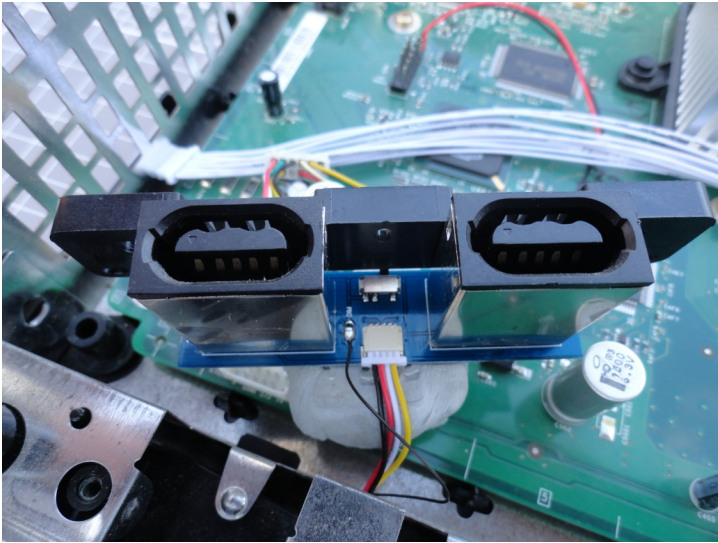
Next we will be mounting the XeniumRGB module directly to the controller ports.



Begin by adding flux to the "dim" pad and make a bead. Next mount the ports on top of the modules and temperately hold them in place with "Blu-Tack". With the soldering iron set to 420°C, add flux and a reasonable amount of solder to the large rectangular grounding pads. Apply some downward pressure while at the same time running the iron up and down the pad until there's a good join between the module and the controller port shielding.

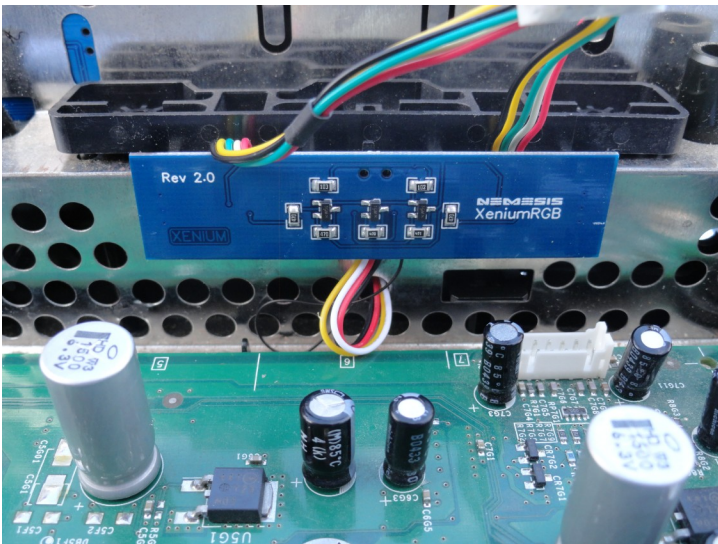


## Controller Port Installation



The 4pin cable's are kept short so that there's not too much excess wires for a cleaner install. Attaching the 4pin connector will be a bit tight to work on.

Again I used "Blu-Tack" to hold the controller ports in place while I solder the Kynar wire to the "dim" pad.



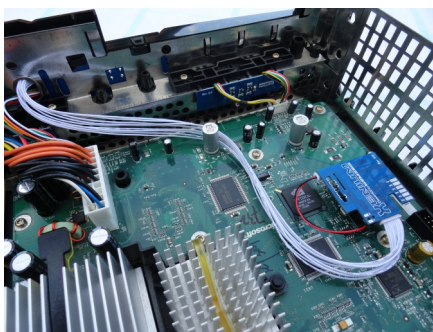
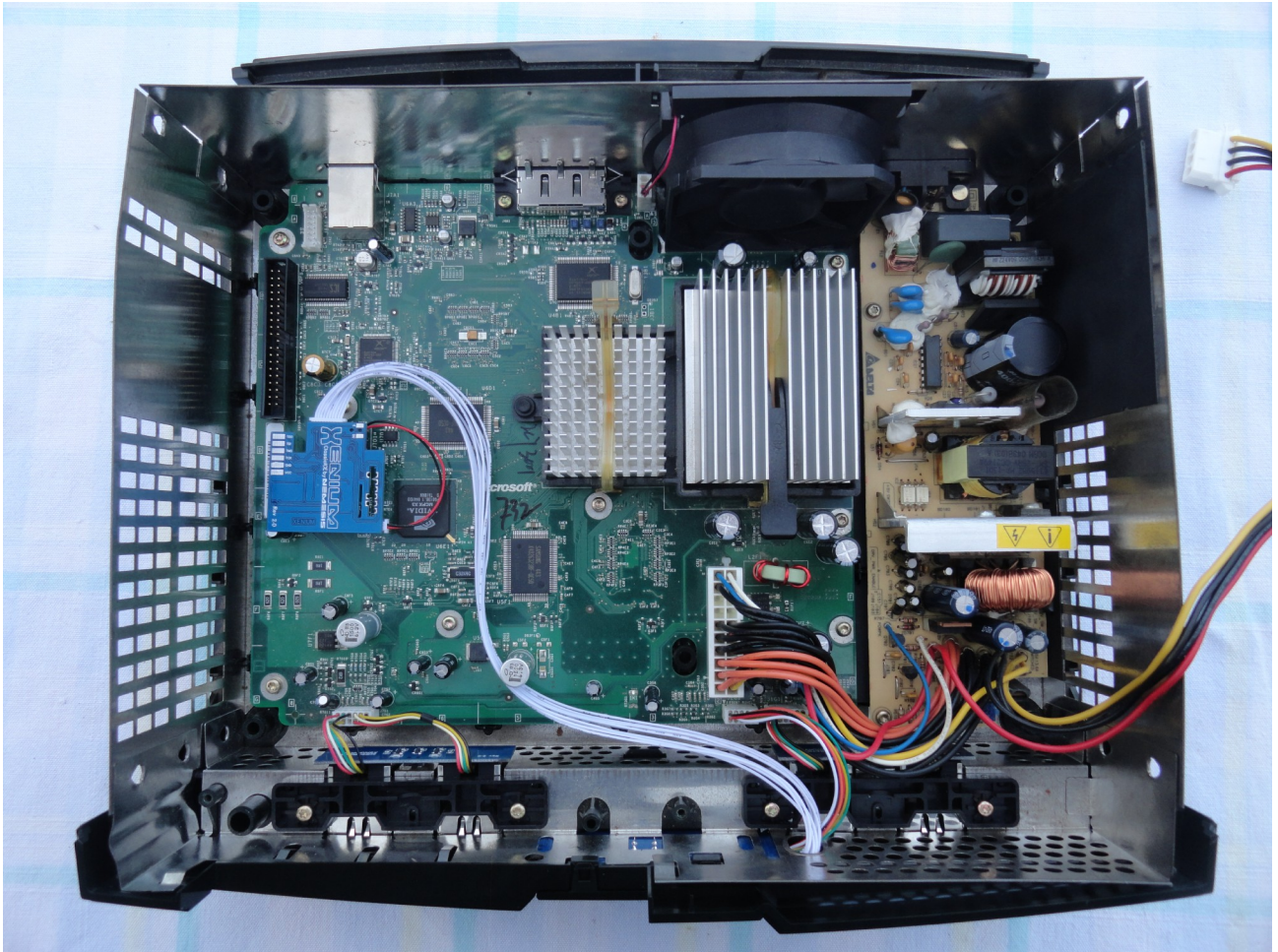
Be careful when inserting the controller ports back into there slots as the wires for the module might get in the way. Try and push them out of the way while the ports and being installed.



You can loose the remaining slack in the wires by pulling or moving them around from underneath of the faceplate as shown in the image to the left.



# Installation Overview



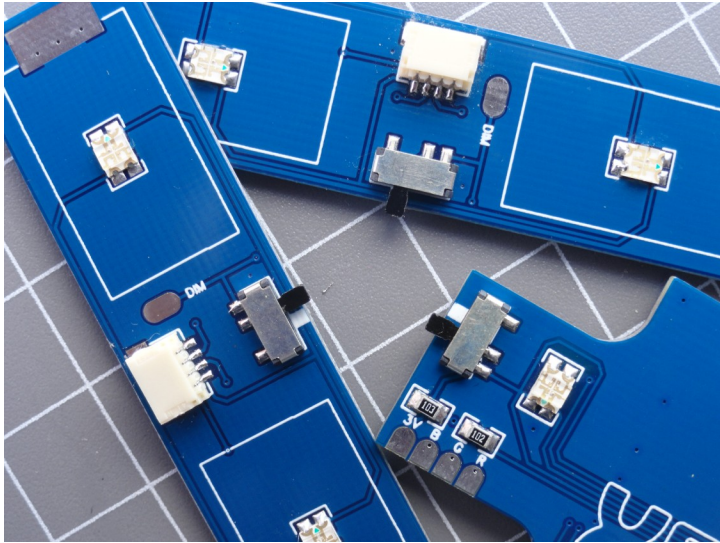
After connecting up the remaining cables to the Xenium mod-chip and motherboard the full installation should look something like this.

When reinstalling the DVD-rom "Disc Drive" be sure you don't crush the white 10pin cable. This will likely happen next to the PSU connector, alternatively you could route the cable around a capacitor or something as shown in these images.

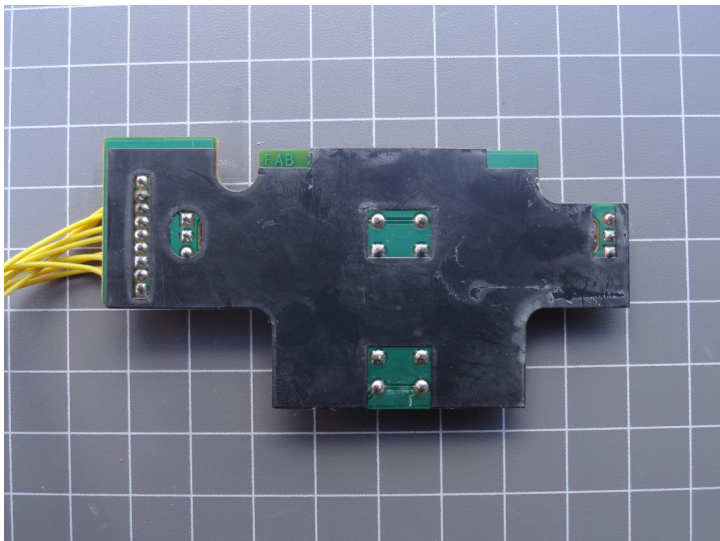




## Appendix

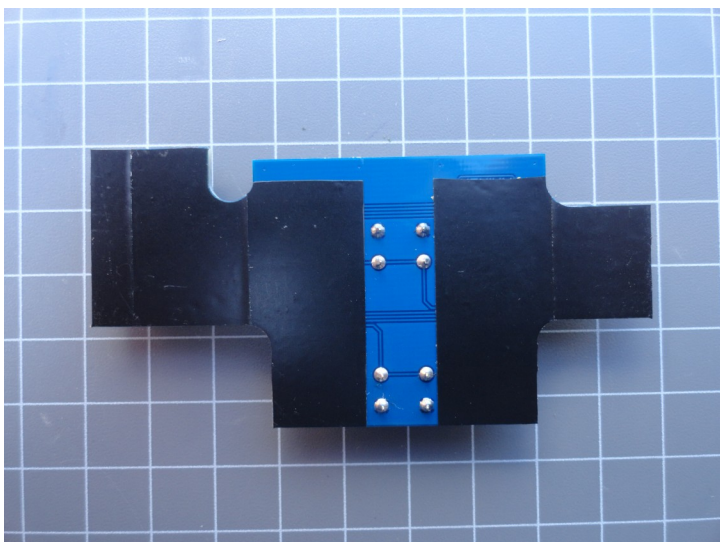


Here's just a quick example of a couple of switch's in the permanently bright position where the white print is viewable.



On the Original Xbox front panel there's a layer of insulation. I can see the reasoning behind this as the PCB is hard up against the shielding and overtime the vibrations could wear through the solder mask and a short may occur.

I haven't had any issues on my testing console but it would be a good idea to insulate the back of the XeniumRGB front panel module.



Here's a quick example using typical electrical tape, as you can see on the original there needs to be spaces in the corners for the tabs on the faceplate. Duct tape could over the PCB with a single piece then cut around it with a hobby knife.

Depending on the success of the Xenium I may get something made up for this...

# Disclaimer

By purchasing an Xenium you agree that the usage of this product is strictly your responsibility. XeniumMods is not responsible for any damage or loss of data caused during the installation or use of the Xenium.

The Xenium is designed for use as a development tool or as a device to perform certain repairs and is shipped with blank bios banks so that the end user is able to install their own bios. XeniumMods is aware that various hacked bios versions are available that may contain copyrighted code and can be used for piracy. The primary purpose of this device is to encourage users to exploit the full capabilities of their Original Xbox Console.

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