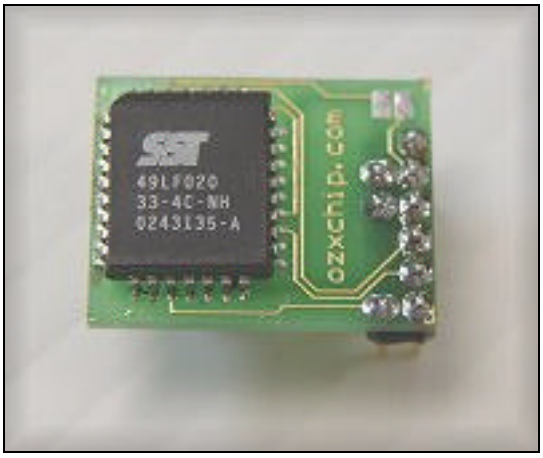
OZXCHIP

Installation Manual



Warning: The installation of your OzXChip 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.

If you have any concerns regarding the installation of the OzXChip please seek advise in our message forums (http://www.ozxchip.com/forum) or on the IRC at #ozxchip on EF Net.

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Part 1. Disassembling the XBox.

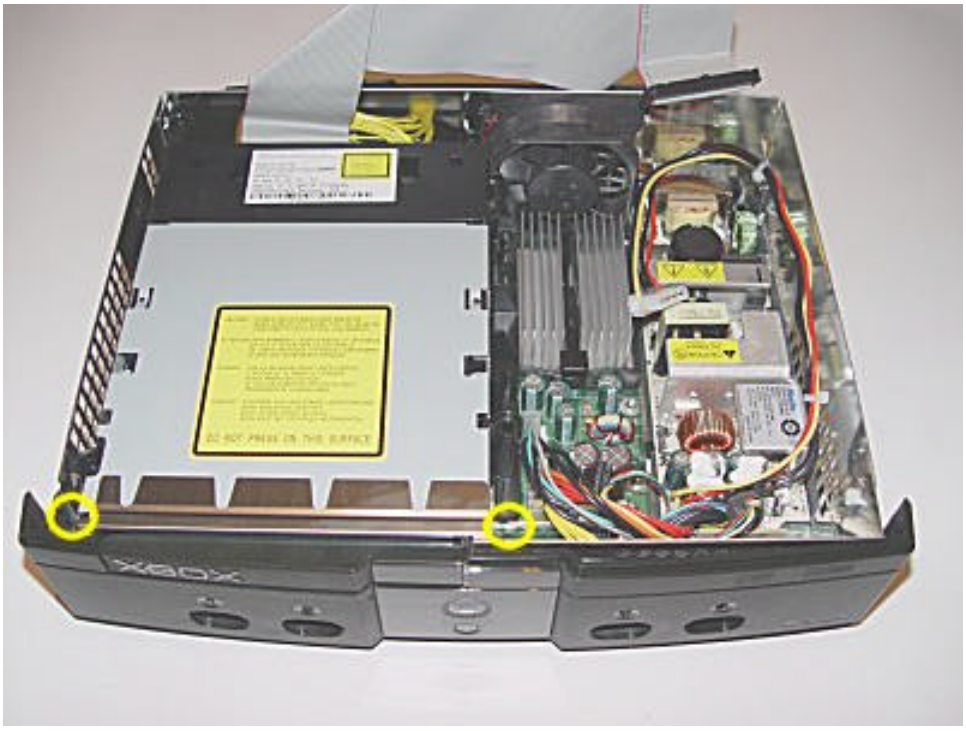
To disassemble your XBox console you must first remove the cover, you will need a Torx 20 screwdriver to do this and the image below indicates the location of six torx screws that must be removed.

You will need to lift the consoles feet up as displayed in the picture below to access four of the torx screws. The green circles above indicate the location of two torx screws that are hidden under stickers, remember that breaking these stickers will void your warranty but it is the only way that you can install the OzXChip.

Firmly remove the console's cover and you will reveal the contents of the Xbox!

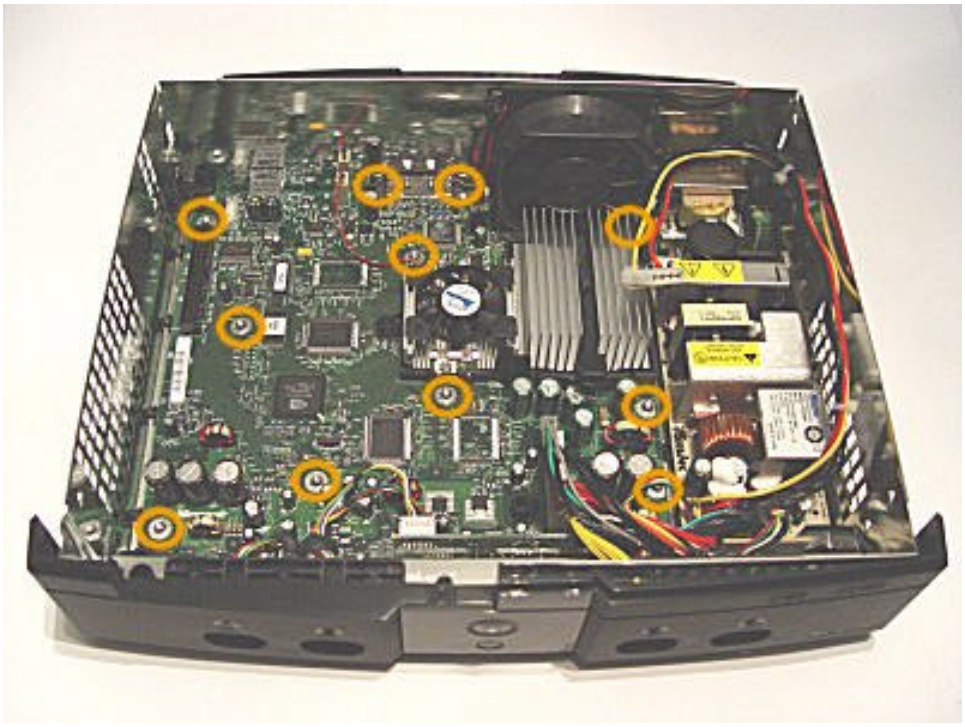
Now remove the IDE cable (marked in orange) and the power cable (blue) from the hard disk drive.
A torx 10 screw as indicated in green needs to be removed to allow the hard disk to be removed from the console.

With the hard disk removed you must now remove two torx 10 screws as indicated by the yellow circles.

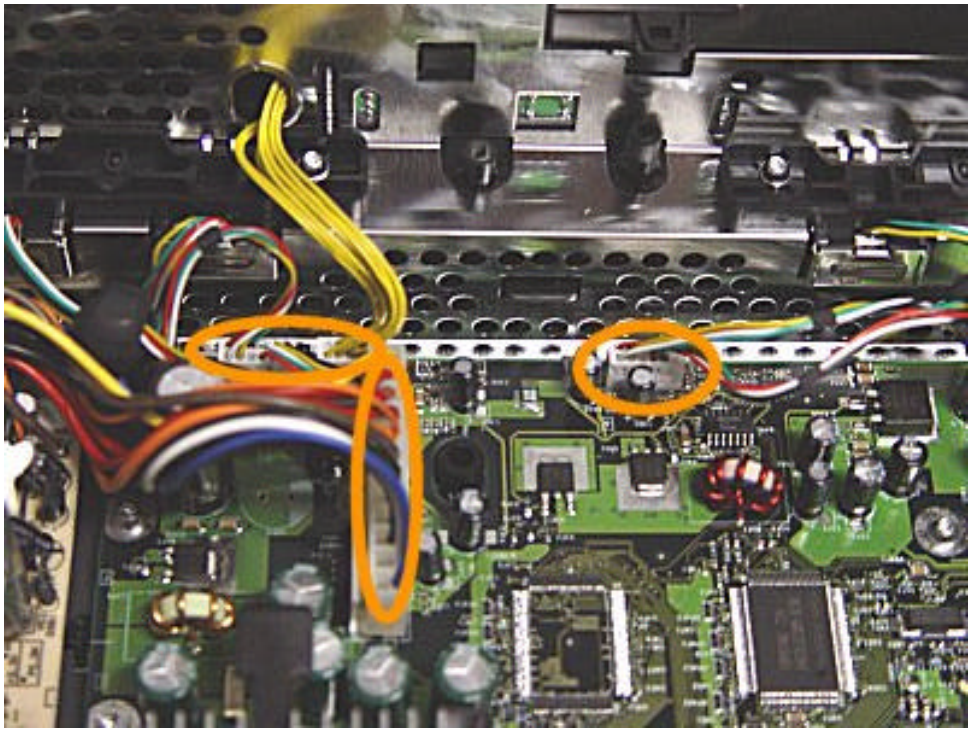


Remove the IDE and power cables from the DVD-Rom drive as indicated by the red and blue circles. You can then remove the DVD-Rom unit and the IDE & Power cables.

You can now clearly see the XBox's motherboard, to remove the motherboard you need to unscrew the eleven torx 10 screws as indicated by the orange circles. The fan on the GPU heatsink indicates a version 1.0 motherboard.

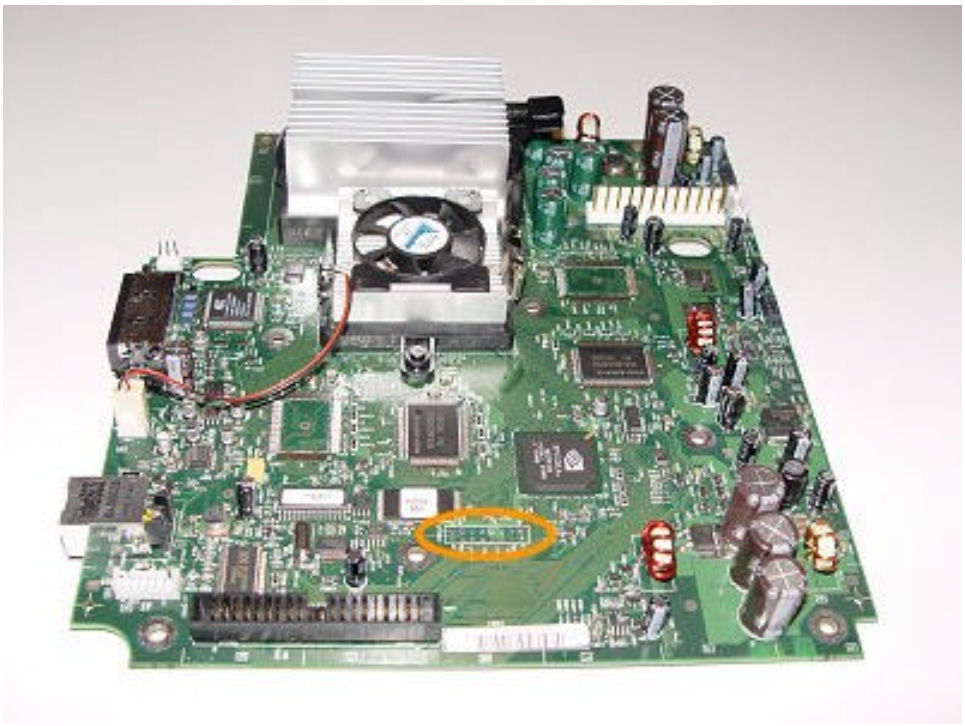


Once the screws have been removed you will need to remove the power supply connector and controller ports from the motherboard. In a version 1.0 motherboard the controller ports are connected to a daughter board that needs to be removed. The picture below shows a version 1.1 motherboard.

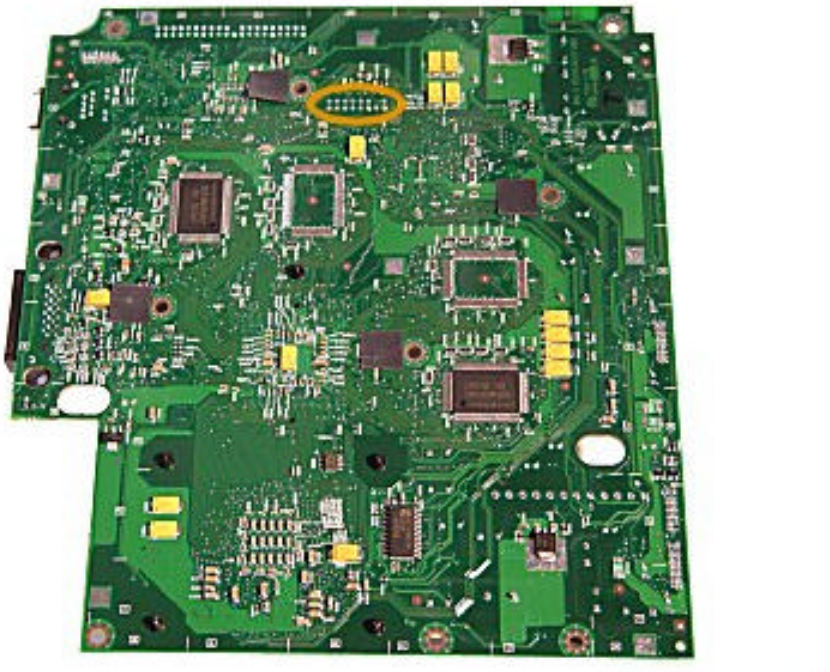


Part 2 – Identifying the LPC port and installing the Female Header.

The following picture shows the location of the LPC port on the top side of the motherboard.

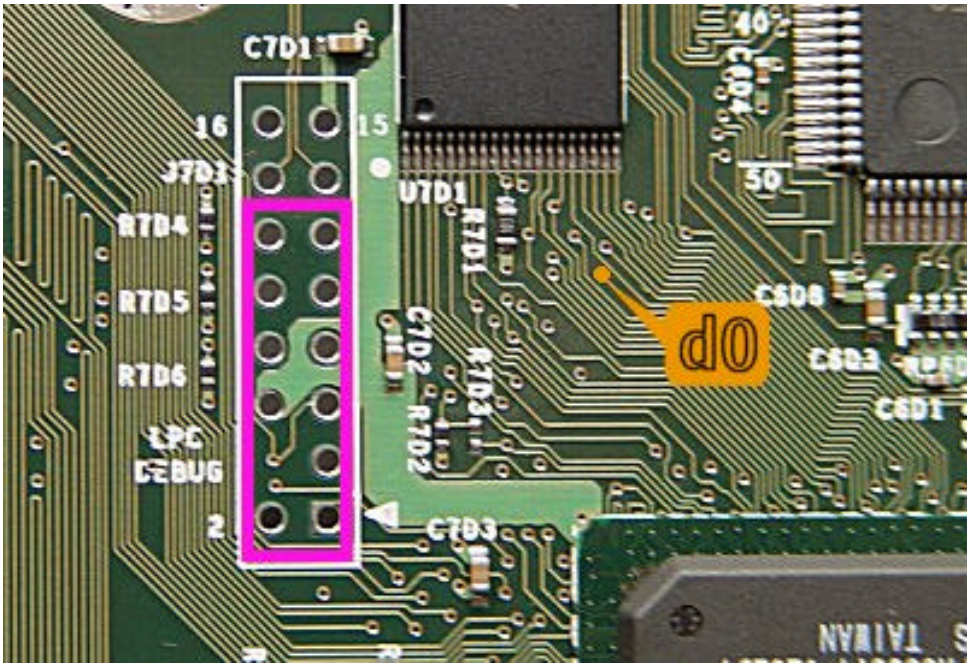


The picture below shows the location of the LPC port on the underside of the motherboard.

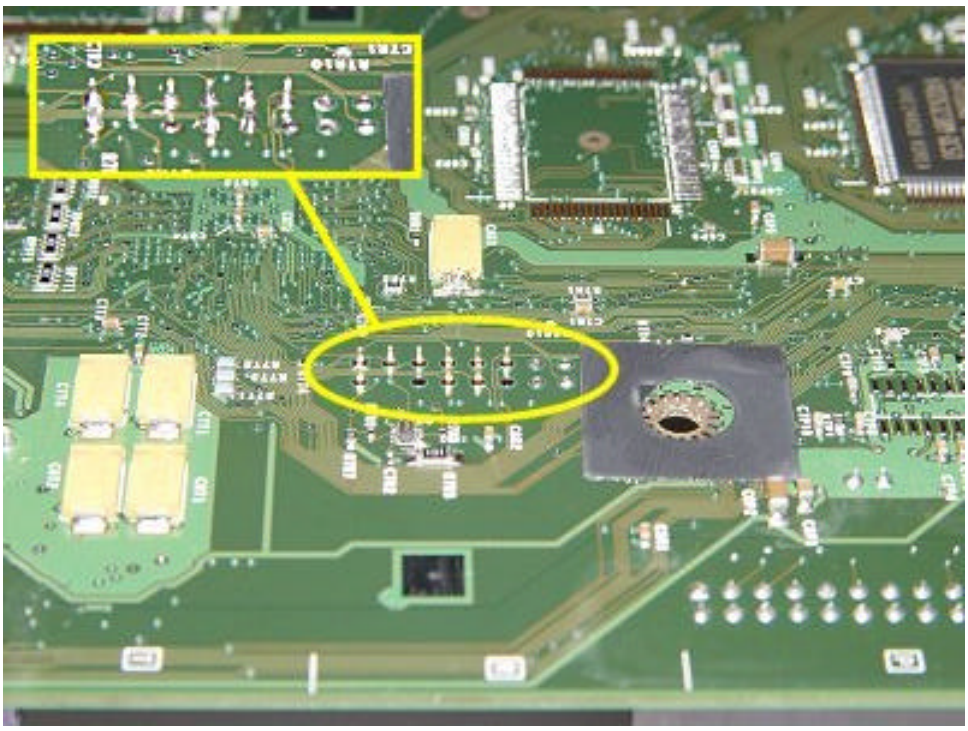


The installation of the OzXChip begins by mounting the female header into the LPC port.

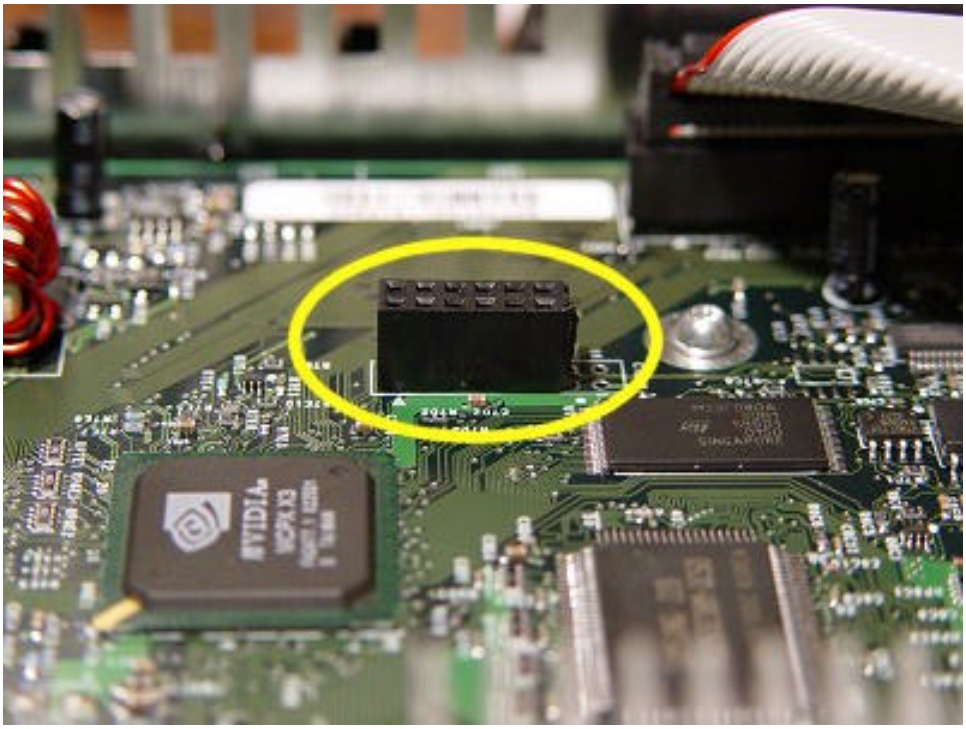
A version 1.0 motherboard will require the solder in the LPC port to be removed with de-solder braid or a solder sucker so that the header can be inserted. Most version 1.1 motherboards already have this LPC port free of solder as shown in the picture below. The pink rectangle in this picture indicates the placement of the female header, please note that the white arrow that is printed on the motherboard conveniently indicates the end at which the header should be mounted.



Once you have inserted the header into the points as indicated above you will need to it into position whilst you solder it in place from the underside of the motherboard as shown in the picture below.



When your header is soldered in place it should look like the picture shown below.



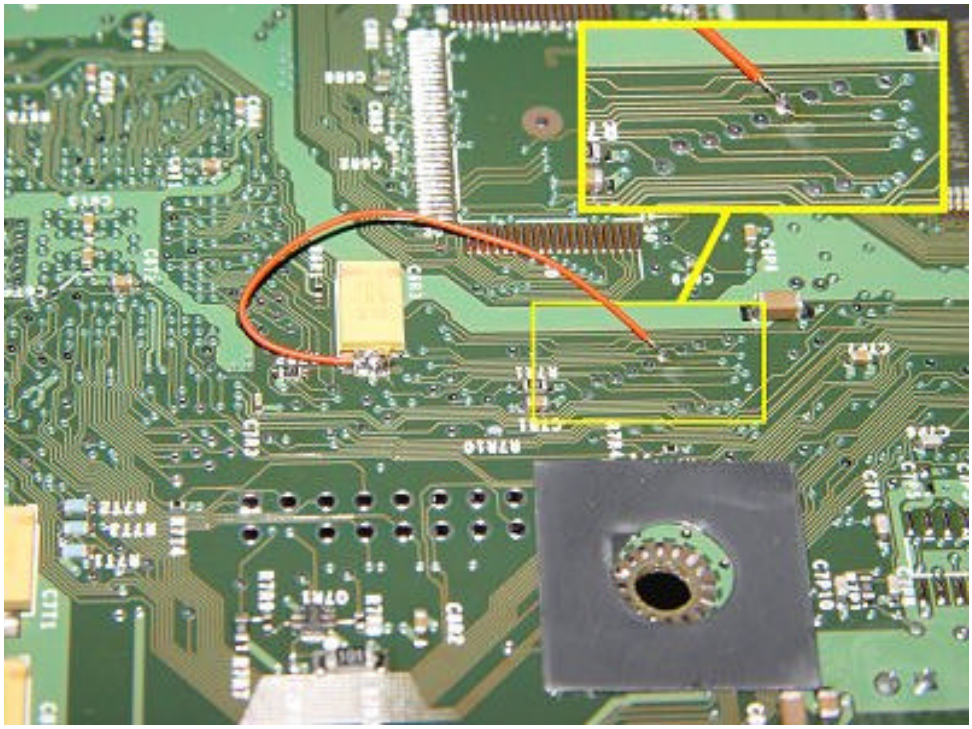
Part 3 – Installing the onboard bios disable wire or optional switch.

Having followed this manual you should be familiar with the location of the LPC port on both sides of the motherboard. Looking at the underside of the motherboard you will need to locate the area near the LPC port that is shown in the picture below.

If you do not wish to install a modchip disable switch then you can simply solder the two ends of the supplied wire between the points shown below otherwise please use the picture below as a guide only to identifying the solder points.

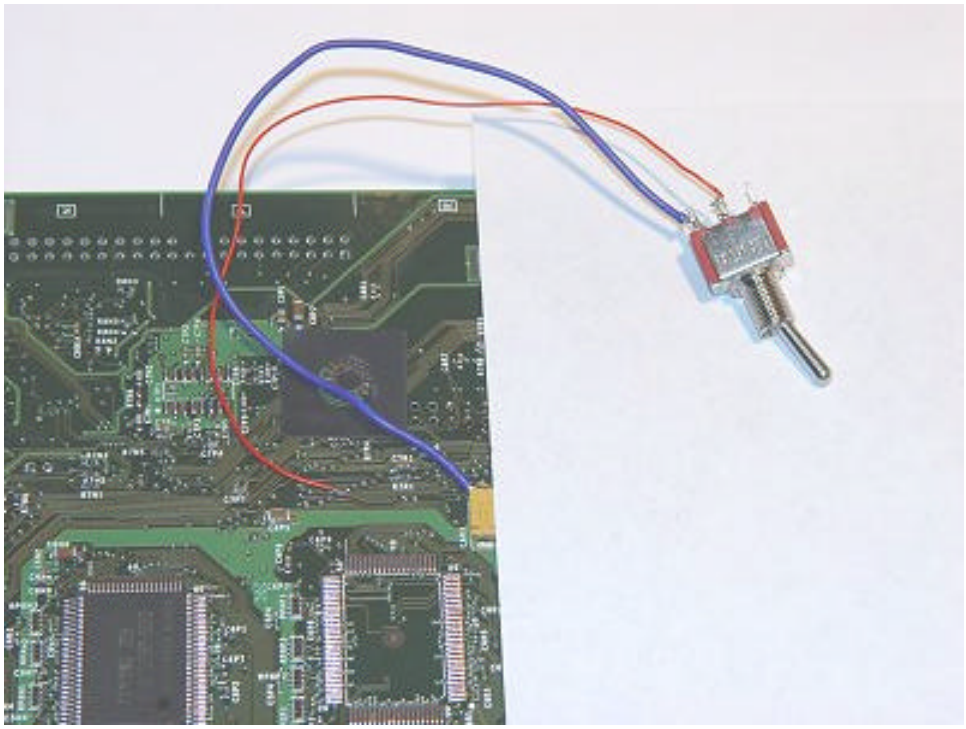
Onboard bios disable wire only.

The wire supplied in your OzXChip self-install kit needs to be soldered at both ends onto the points shown below.

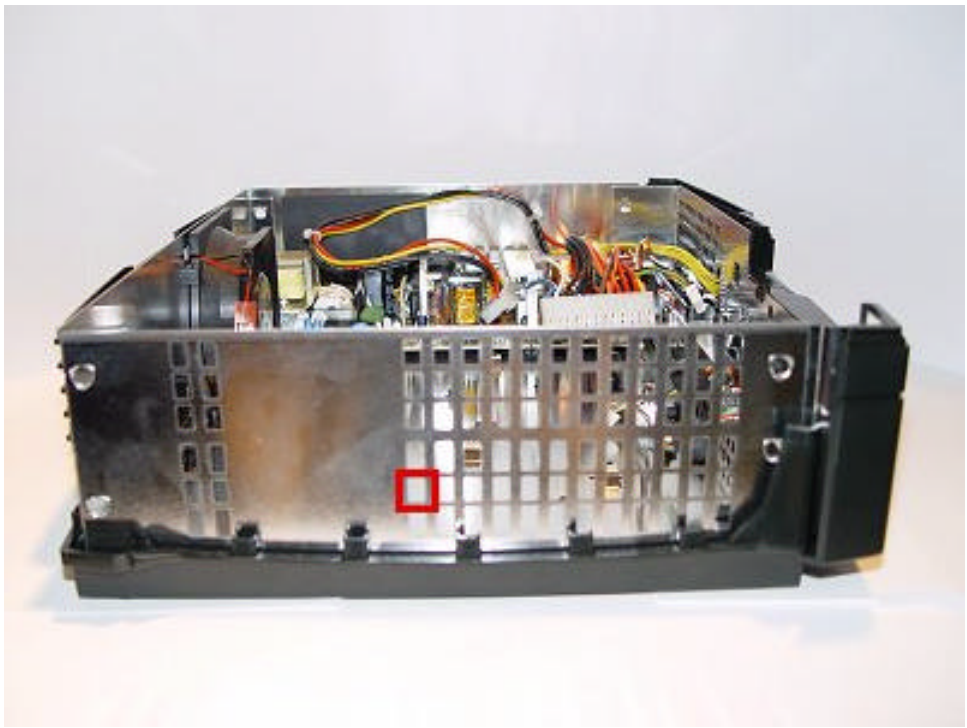


OzXChip disable switch.

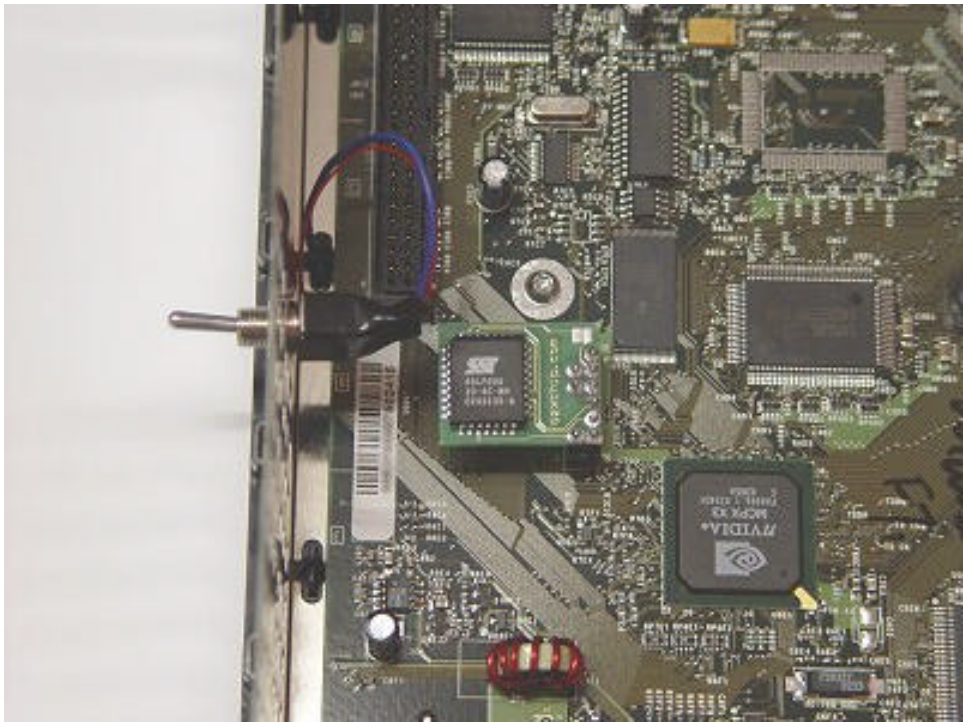
To install an optional toggle switch so that you can disable the OzXChip you will need to obtain a SPST switch and it can be soldered between the two solder points shown above. The picture below illustrates the points identified in the previous picture from a different angle.



The following picture shows the recommended mounting position for the disable switch, depending on the switch you are using you may need to open up this hole slightly to allow to switch to mount firmly.



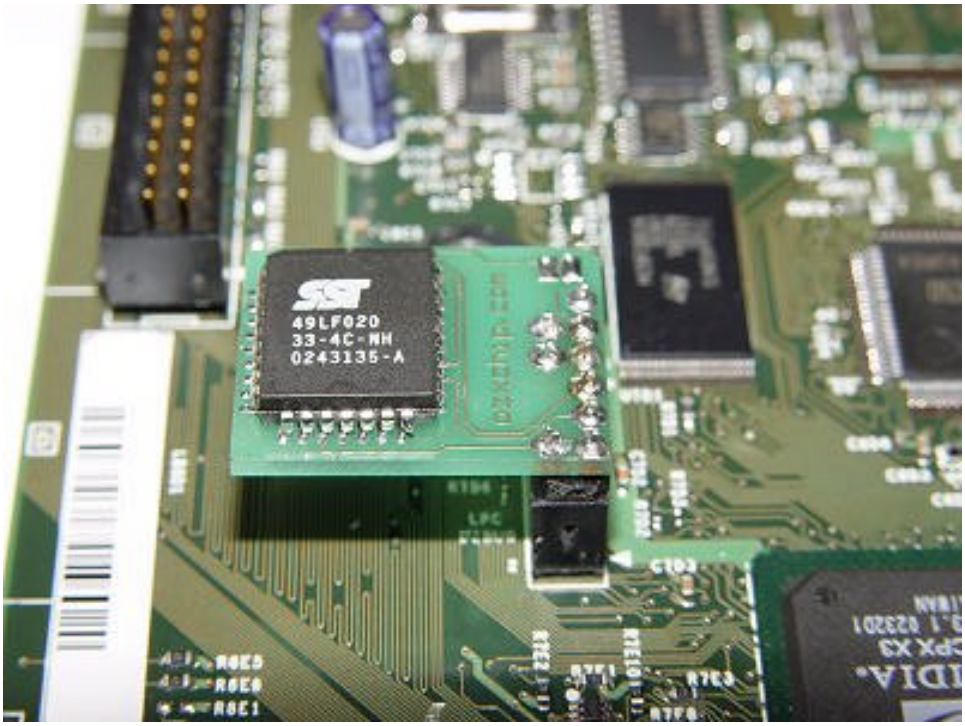
Wrap the end of the switch with electrical tape if possible and firmly mount the switch into position. Ensure that the switch does not touch the OzXChip.



The picture below shows what the switch should like from another angle.

To finish the installation of the disable switch you will need to cut a small section of the side grill out from the cover of your XBox as shown in the picture below.

Once you have installed the onboard bios disable wire or the OzXChip disable switch you can mount the OzXChip onto the header that you have installed. The OzXChip must be mounted in the direction shown in the picture below.



The installation of your OzXChip is now complete and you can start to reassemble your console.

Part 4 – Troubleshooting

After disassembling your XBox there are a number of things that can prevent your console from operating correctly. You may experience trouble when booting the console and you would be presented with either a flashing Eject LED or a Service Code on screen. The following are a description of these errors and some hints that may assist you rectify the problem.

Flashing LED Error Codes.

GREEN/RED Flashing: Probably a bad chip, bad installation or bad bios image. Check that the OzXChip is installed in the correct direction on the header and check your soldering of the header on the motherboard. To determine if this fault is related to the installation of the OzXChip and return to the onboard bios simply remove the wire or set your toggle switch to disable the OzXChip.

SOLID GREEN/No EJECT/No AUDIO/No VIDEO: Probably a bad solder point. Check all your points again. It could also be a heat problem, make sure your fan is connected and don't put your xbox near heat sources. You can also try to open the top of the xbox and check if it goes better.

SOLID GREEN/No AUDIO/No VIDEO: This is probably a problem with your audio settings. Try to boot your XBox with a standard A/V pack instead of a HD pack.

ORANGE/GREEN Flashing: No AUDIO/VIDEO (A/V) pack.
This may be caused by solder splash on the motherboard or a damaged track.

ORANGE Flashing: This may also be down to a solder splash on the board or a damaged track. May also be due overheating.

SOLID RED: System overheated, hardware failure!

Service Error Codes.

5 - kernel - HDD not locked (retail bioses require the HDD to be locked)

6 - kernel - Cannot unlock HDD

7 - kernel - HDD timeout

8 - kernel - No HDD found

9 - kernel - HDD parameters (PIO/DMA/or size {debug}, certain size minimum is required for debug)

10 - kernel - DVD timeout

11 - kernel - No DVD Found

12 - kernel - DVD parameters (PIO/DMA)

13 - kernel - Dashboard launch fail (due to missing/bad key, or anything else that would prevent it from running) and the dashboard didn't specify why it failed.

14 - dashboard - Error loading dashboard (dashboard generic error)

16 - dashboard - Other files to do with dashboard / dashboard settings (specific dashboard error)

20 - kernel - The dashboard was attempted to load and failed; It was a cold boot, and the dashboard didn't specify why it failed, but it (for some reason) needed to be noted that the DVD passed the challenge/response authentication

Credit goes to Superfr0 for his interpretation of these service codes and his awesome contribution to the XBox scene.

Part 5 – Disclaimer

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

The OzXChip is designed for use as a development tool and is shipped blank so that the end user is able to install their own bios. The developers of the OzXChip are aware that various hacked bios versions are available that contain copyrighted Microsoft code and can be used for piracy and in no way do we endorse or condone the use of such bioses. Our primary purpose for the development of this device is to encourage hobbiests to exploit the full capabilities of their console through the use of the legal Linux bios. For further information regarding Linux on the XBox we encourage you to visit http://xbox-linux.sourceforge.net/

For more information please check out our website at http://www.ozxchip.com