

THE SLIGHTLY MORE DETAILED GUIDE v1.01

This guide will cover the parts of this project that are specific to re-shelling the Xbox into a PC case. That means that I won't be covering things like TSOP flashing, softmodding, upgrading the HDD, recapping the motherboard, etc. I will provide links to help lead you in the right direction when I can, but a lot of this stuff will require prior PC building and Xbox modding knowledge. I can also guarantee you that there will be differences between the Alpha case vs any other random PC case. You'll have to get creative to figure out any issues that come up due to your specific PC case, but hopefully there won't be too many, the build should be fairly universal. My YouTube build video for the Xbox Alpha B is also required reading for this project.

The absolute minimum materials needed:

- A way to acquire the 3D printed parts (PCBWay offers printing services if you don't have a 3D printer)
- A PC case that supports ATX motherboards and has at least two free 5.25" bays in the front. MicroATX cases might also work, but I haven't tested any.
- A 1.2-1.5 revision original Xbox
- [Various Torx screwdrivers \(T20, T15, and T10 iirc\)](#)
- [Various M3 hex-cap screws and washers](#) (must include at least 4x M3x30mm screws)
- [M3 brass inserts](#)
- [>45mm long M3 \(2mm head\) allen wrench](#)
- [Various PC screws and standoffs](#)
- PSU capable of at least 10A on the +5v rail ([get a decent one](#), it can affect video quality)
- ATX to Xbox adapter ([make your own](#) or [order it built](#))
- [Sacrificial 40-pin IDE cable with around 1ft of continuous wire](#)
- [Tact switch/button](#)
- [ATX depinning tool](#)
- [Loose 20-pin ATX cable](#) (might need 2 of these in case you screw up and need more wire. You can also chop an old PSU's 20/24-pin cable off to get this too, we only need the male end)
- [3-pin fan Y splitter](#)
- [120mm PC fan](#)

The Xbox

Any working 1.2-1.5 revision xbox should work perfectly. A 1.0/1.1/1.6 *could* also work, but support for them is outside the scope of this guide. [This guide](#) can help you identify your revision.

[Disassemble the whole thing down to the bare components.](#) You want the motherboard, hard drive, DVD drive, controller ports, front button/LED board, IDE cable, and yellow DVD drive power cable. Everything else can be extra/spare parts for a future project.

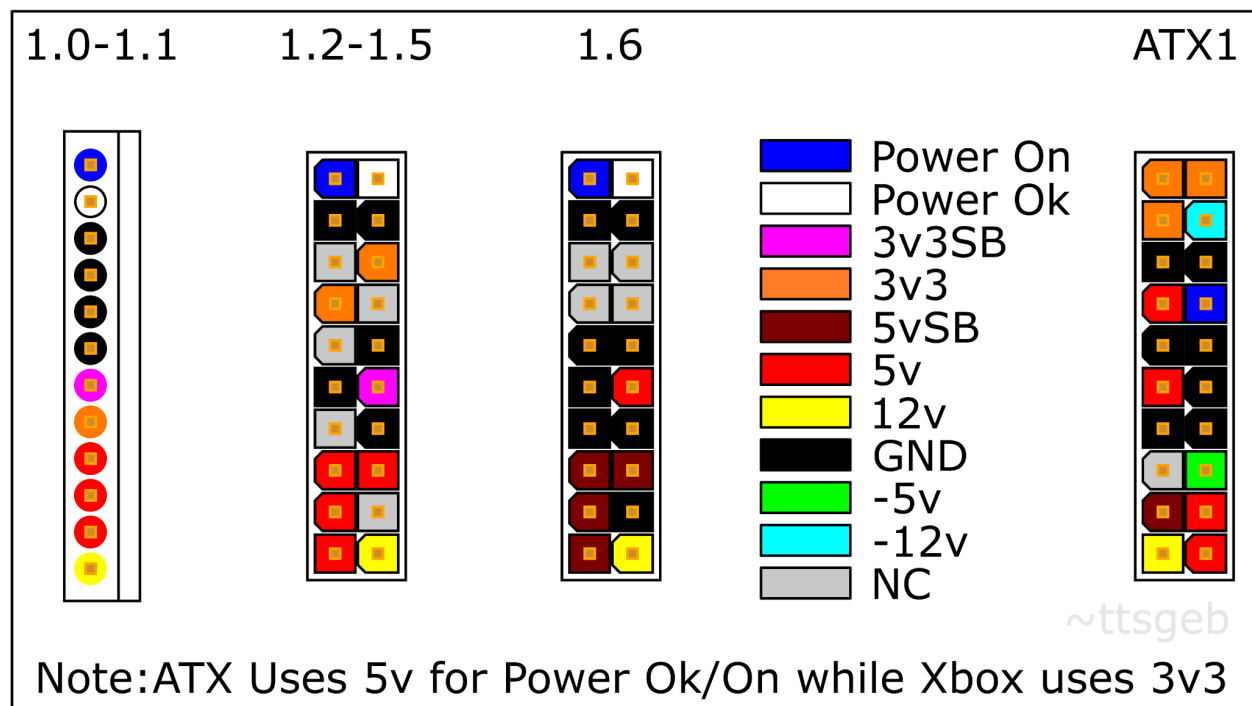
Take this opportunity to clean and fix anything that needs to be dealt with before continuing. [You probably need to remove your clock capacitor too.](#)

The Xbox to ATX Adapter

You can order it partially built, or you can order it *raw*. Whichever suits your tastes better. Links are at the top.

Once you have it / have it built to the point that you need to solder the Xbox power cable in place, take your loose ATX 20-pin cable and your ATX de-pinning tool and rearrange the cables in the 20 pin connector to match that of the Xbox's 20 pin cable. Use your Xbox's power supply 20-pin cable to match where the cables need to go. Then wire it up to the Xbox to ATX adapter. The wiring should be completely straightforward once you've rearranged the pins in the 20-pin connector.

Pinouts for Xbox PSUs for quick reference:



You should also have a cover for the Xbox to ATX adapter if you 3D printed all the parts on the Printables page. The thing is, this cover only works if you wire the adapter with the 20-pin cable

going upwards out of the PCB, not downwards like you're supposed to. So if you wired yours the right way... you can't use it lmao.

The Motherboard Adapter

The motherboard adapter plate uses 4 ATX mounting holes, and mounts on top of the case's standoffs. The Alpha 1 case has rubber motherboard supports between mounting holes which really helped with rigidity so it may be a bit floppy in other cases, but it'll work. You have to insert M3 brass inserts into the mounting holes for each of the Xbox motherboard mounts, and secure the board to the plate with M3 x 5mm screws.

The Cooler

Get pranked now you have to take 4 of those motherboard screws out to mount the cooling fan. Should have read ahead ya big dummy.

Take your 3D printed cooling fan bracket and put 4x brass inserts into each corner. Then mount it to the board by putting M3 x 10mm screws inside each of the 4 posts. This is where you'll need to use your >45mm allen wrench to screw the mounting screws through the motherboard holes and into the motherboard adapter plate. After that, attach your 120mm fan in a downward-blowing orientation (exposed blades side towards you) with a M3 x 30mm screw in each corner. You might need a washer on the screws to keep them from slipping through the holes in the fan. Then take your 3-pin Y splitter and install it into the motherboard's fan header. You can safely split off 2 fans from that header, but any more than that and you would probably want to run the other fans off of a [molex plug](#) or a [powered fan hub](#).

The DVD Drive

The DVD drive requires a decent bit of work to get set up. You'll need to [remove the front bezel from the drive tray](#) and hot glue in the 3D printed DVD drive tray bezel spacer. The flat side of the spacer with the groove running down the middle needs to get hot glued to the now bezel-less DVD drive tray. Just do your best to line it up... admittedly I kinda phoned it in when making the mounting solution for this one lmao.

To physically mount the DVD drive, you'll need to remove the large protruding plastic pieces from the sides of it with a dremel or belt sander until the sides are completely flush. Then you should be able to slide it right into your top 5.25" bay in your case. The Alpha 1 case has little holder tabs on the bottom of the drive bay for the DVD drive, but I think some cases don't. If you have a case that doesn't, gravity will want to claim your DVD drive. The fix for this would be to modify the 3D printed DVD drive braces to also take the role of holding the DVD drive from the bottom as well as the rear, but (surprisingly) I don't have a case that has this problem to test this

on right now. But either way, you'll want to screw the 3D printed DVD drive braces into the bay directly under the DVD drive using PC fan screws to brace it from the rear so that it doesn't fall backwards into the inside of the case. [Note to anyone using an Alpha case](#): only the left-side rail will fit because the top metal tray hits the right-side one. Mine is fine with just the left-side one, but there is also a circular brace included on the Printables page that bolts into the top tray in case you wanna use that instead.

The power cable for the DVD drive is going to need to be lengthened. I have been told that [this JST 2mm extension cable](#) can do the job, but I haven't personally tried it. For a normal ATX mid tower, you will probably be looking at adding about a foot of cable to it. The easy but monotonous way to do this is to just cut the cable in half, strip all the wires on both ends, and solder + heat shrink both ends onto some spare IDE cable or ribbon wire. You'll need a strand with 12 wires.

The Hard Drive

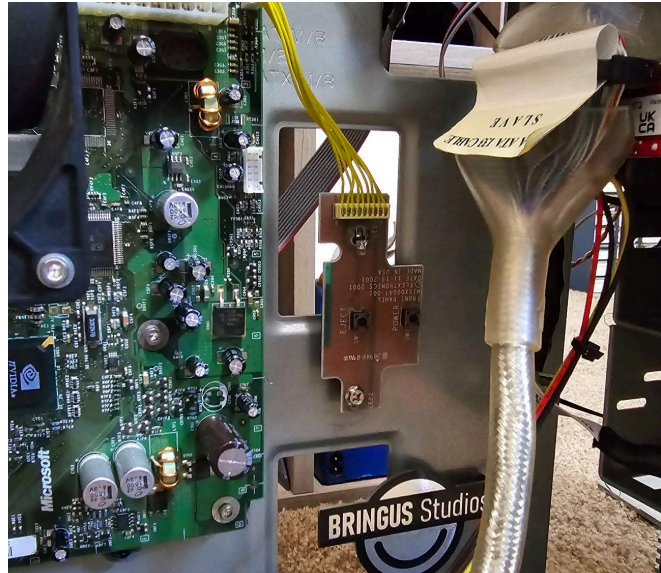
Just throw it into anywhere that can mount a 3.5" hard drive that will let your IDE cable reach both your HDD and your DVD drive. You'll likely have to [replace your IDE cable](#) in order to get it to reach. Get an 80-wire IDE cable, especially if you plan to upgrade your HDD. There is also an included 92mm fan bracket for mounting under the HDD. It's not required if your case has decent airflow. The bracket's screw holes might not line up with your case, but using just one screw seems to be enough to keep it in place.

The Front Panel & Controller Ports

The front panel requires a bit of assembly. You need to start by putting 2 brass inserts into each leg of the front panel. The legs are identical. Then you need to put one into the center mounting post of the front panel. It might be easier to put it in through the bottom if you need to.

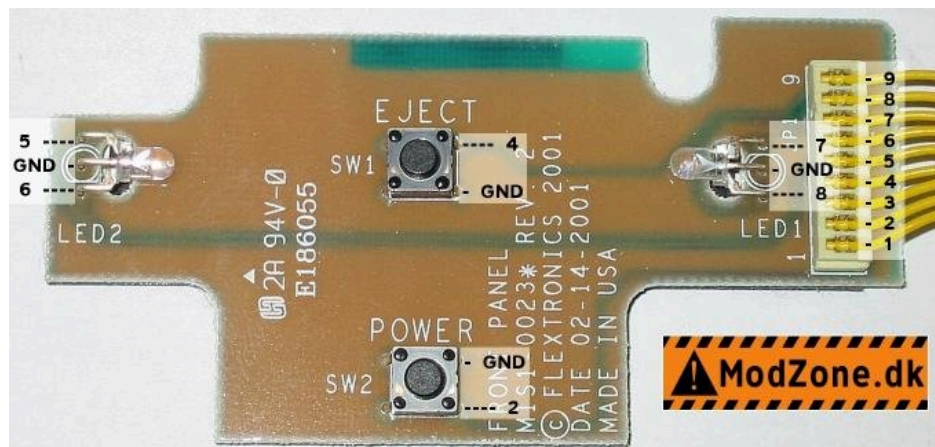
Here's where you need to decide if you want to use the buttons and LEDs that are built into your case, or if you want to integrate them into the front panel. You can use the reset button on your case for eject, the power LED for the green LED, and the HDD LED for the red LED. If you don't have these on your case or you don't want to use them, you'll have to do some work to the front panel:

Take your tact switch and solder 2 wires to the end of it that are long enough to reach wherever you are going to mount your button/LED board. I put mine on a motherboard standoff here:



Then hot glue it into the front panel. Desolder one of the red/green LEDs from the button/LED board and wire it up and hot glue it into the front panel as well. You can now [terminate your wires into dupont headers](#) if you want, or you can solder them directly to the button/LED board.

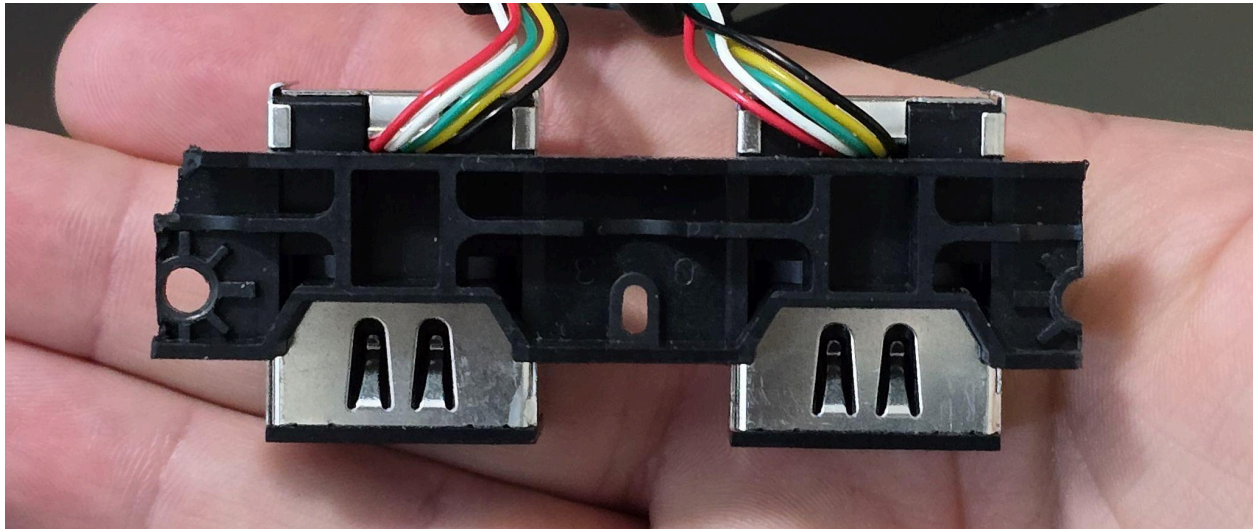
Here is the pinout for the button/LED board:



NC	9	10	Empty
LED1 Red (Right)	7	8	LED1 Green (Right)
LED2 Green (Left)	5	6	LED2 Red (Left)
GND	3	4	SW1 Eject
GND	1	2	SW2 Power

I would recommend soldering wires and terminating them in male dupont connectors for the IO here so that you can plug your case's IO directly into it instead of cutting and stripping your case's IO cables (but if you wanna do that then go for it).

Now take your controller port modules and shave them down so that the screw holes are barely still there. On **opposite sides** of each controller port module, shave one side of it down a bit further until the screw hole is an exact semicircle. Make each controller module look like mirror images of each other, don't shave down the same side on each. You have to do this because they will be sharing a middle mounting hole:



Mount the controller ports with a M3 x 8mm screw in the middle post, and 2x M3 x 12mm screws going through the outer holes and into the legs.

The legs are attached with only one screw because you may have to pivot the legs inwards in order to finagle them into the 5.25" bay. Once they're in place, make sure the front panel is flush with your case's front panel, and secure the legs with PC fan screws:



In my experience you can get away with 1 screw per leg, but you're welcome to add as many screws as will fit if it makes your day better.

I have been told that [this JST 2mm extension cable](#) can do the job, just like with the DVD drive power cable, but I haven't personally tried it. Otherwise, you'll need to get a rough idea of how long of a ribbon cable you will need to extend the controller wires. You are probably better off running 2x 10-wire strands for each module, but I got a bit stinky with it and ran a single 11-wire strand by combining each of the 5v (red), ground (black), and vsync (yellow) wires into just 3 wires instead of 12, and then 2 wires for each of the controllers' data pairs. Doing it this way made less wiring work for myself, but the end result is much more complicated, since my cable terminates in two ends, one for each of the controller plugs. Do whichever you wanna do.

And That's It, For The Most Part

The rest is on you to figure out for your particular case, and for any upgrades you wanna do to your Xbox. If you have any questions you want to ask me about any part of this build, feel free to join my [Discord server](#) and @ me in any of the channels with your questions/comments.