Replacing the Xbox DVD-ROM drive with a Sony DDU-1612

You will need :

A Sony DDU1612 DVD ROM drive, a 74LS00 chip, some 0.1" veroboard, six 20cm lengths of Kynar (or equivalent) wire, a soldering iron, some solder and a Dremel or equivalent.

When I needed to replace my Xbox DVD drive with a 3rd party one, I found that all the drives that had been used in the 3rd party mods (Samsung, Pioneer and Aopen) were extremely difficult (indeed seemingly impossible in the UK) to get hold of.

I opted for an easily available, good quality drive for my mod, the **Sony DDU1612**

After removing the bottom of the drive (easily released by undoing four screws) you will be presented with the circuit board in **[Fig.1]** All our connections go to this side of the board so no further disassembly is required.

The **X** [Green Wire] connection goes to the right hand side [as per diagram] of the Tray In/Out switch and the **Y** [Blue Wire] connection to the left hand side. The Eject connection [**W**] is soldered to the bottom-left of the eject switch. **[Fig.3]**

Finally the bit I was dreading – finding the notorious **Z** connection **[Fig. 2]**. I'm happy to say this took about 20 minutes and was exactly the signal I needed (no horrible inversion required here!)

Once all the points were found, I made up the PCB containing the small amount of circuitry that provides the signals that the Xbox yellow signal cable requires **[Fig.4]**, and connected it all up.

Since the Xbox DVD signal connectors are a bitch to get hold of, I butchered the existing signal cable from the old Xbox DVD drive. The power for the 74LS00 chip is taken directly from the 5.25" socket on the drive. The positive connection goes to the pin marked Vcc and the Ground goes to either of the middle pins marked GND. To keep everything neat I attached my PCB to the rear of the drive.**[Fig.5]**

I knew I was on a winner when I managed to boot successfully to Evox dashboard without any service errors from the Xbox. I then tried it with various discs, all of which worked flawlessly!

The only thing I could fault was the noise when reading CDR media – a small price to pay for being able to do so reliably in an Xbox!

Also, this drive didn't seem to require the front panel wire that went to the Xbox eject button that was used in the original "Pioneer" article, so I have omitted it from my diagram!

The Xbox will need a bit of cosmetic work with a Dremel or similar to get an exact fit, the left hand side pillar needs filing to accommodate the width of the new drive and two pillars at the front of the box that the drive rests on need shortening. This is detailed very well in the Pioneer article, so I won't repeat it here.

This mod is based upon the "Xbox DVD replacement with the Pioneer 500M guide" on the Evox website www.valholl.org and my thanks go out to the original author of that article.

Rob Scott 14/09/2003

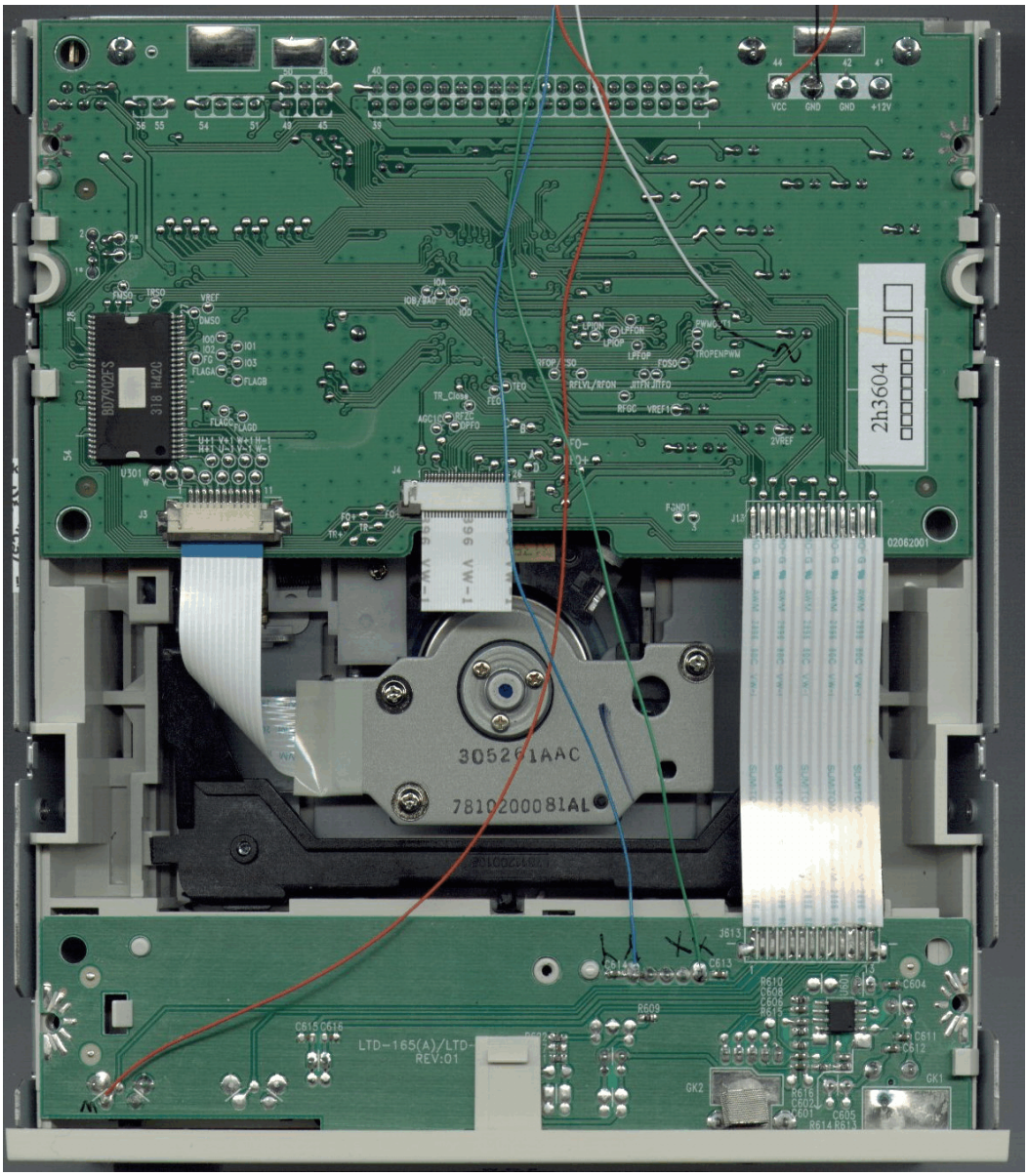

Fig.1 - The DDU1612 Internals

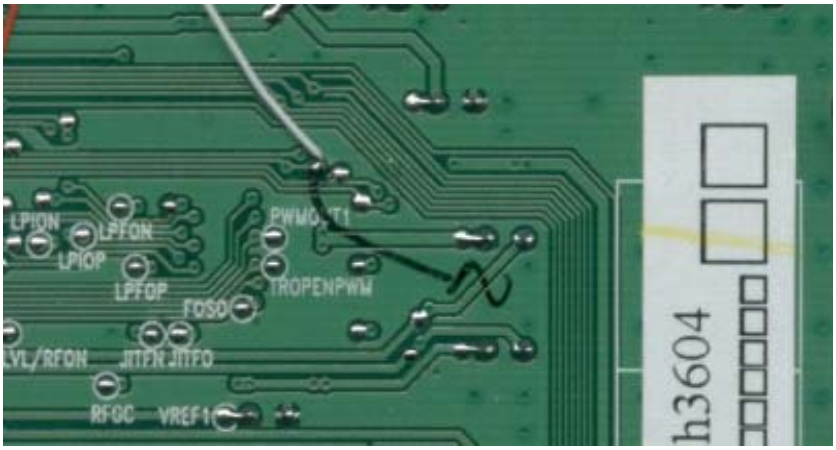

Fig.2 - The elusive “Z” connection!

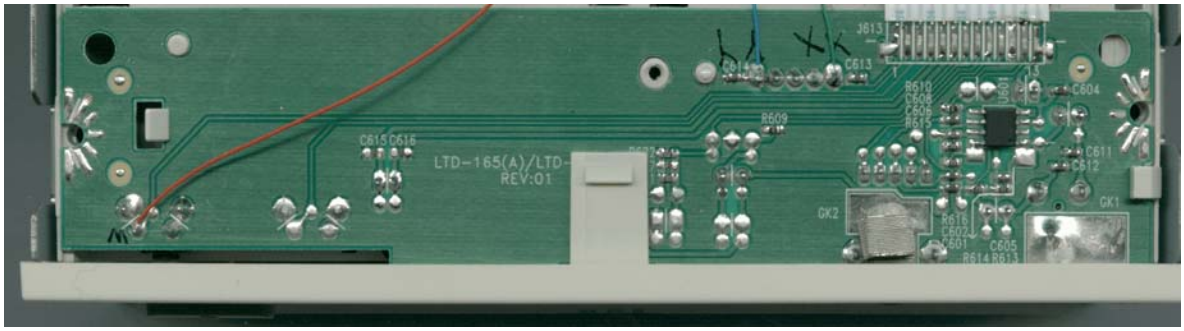

Fig. 3 - The W, X and Y connections

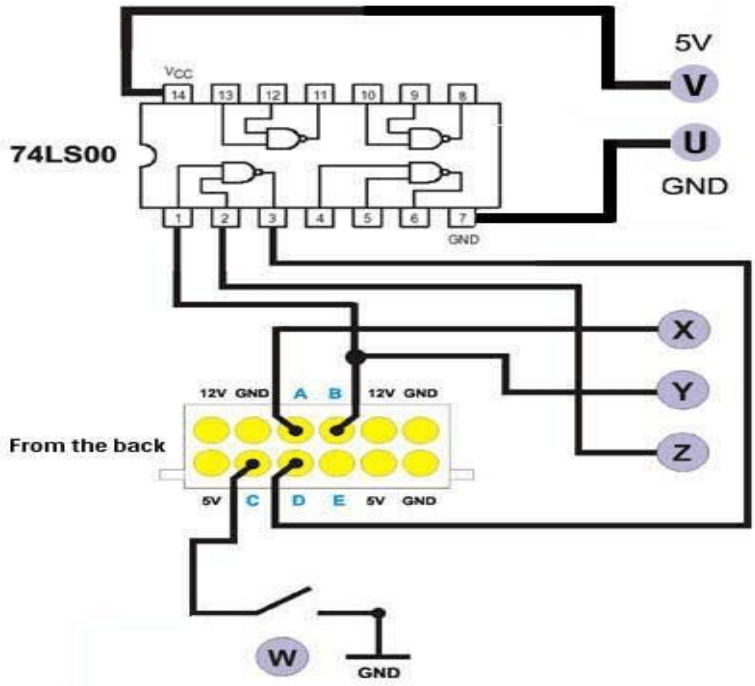

Fig. 4 - The modified circuit minus the Xbox front panel connection that's not required for this drive. [Unless I've missed something blindingly obvious somewhere!]

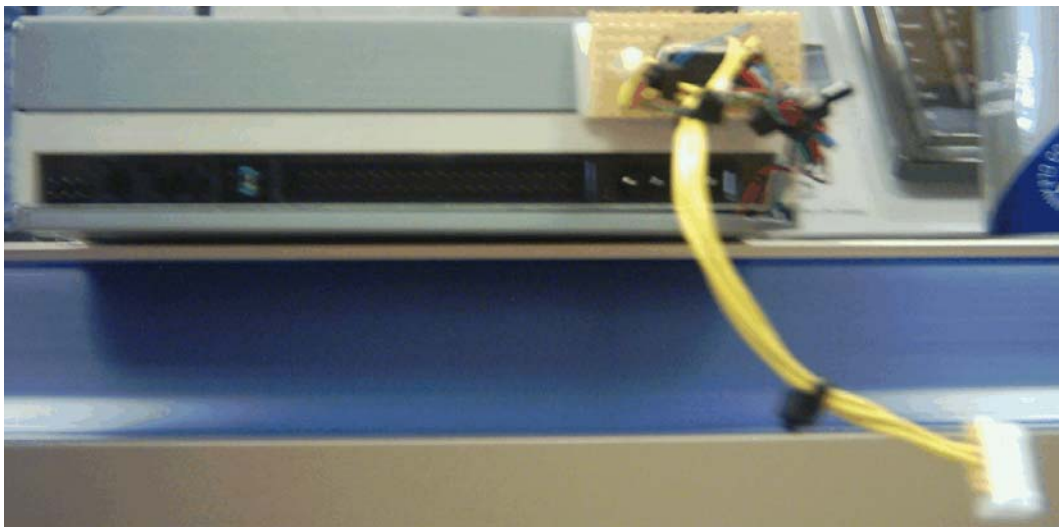

Fig. 5 - The Rear of the finished article (must get a new digital camera!)