

Atari 5200 4 port power mod conversion

Parts needed:

Power jack 2.5 I.D. 5.5 O.D. (I think)

47uf Electrolytic capacitor 35v

.1uf Ceramic capacitor 50v (usually marked 104)

1N5391G Diode (NTE 5800)

Four inches of medium gauge wire (probably around 18 gauge)

When I went to get the power jack, I took the 5200 power supply with me and tried the different size jacks until I found one that fit properly. Unfortunately, I forgot to note down what size it was. :- (I believe the above is correct, though.

The diode may be a little hard to track down so I have include the NTE equivalent. Which, incidentally, is what I ended up using.

First you're going to need to remove a couple of components from the board. They are: L8, a 2.7uH inductor located between the modulator and soldered in RF cable; and C45, a 4700uf electrolytic capacitor located just above the RF plug in socket.



Next, install the 47uf electrolytic capacitor in C45 where you removed the other capacitor. Make sure to note polarity.

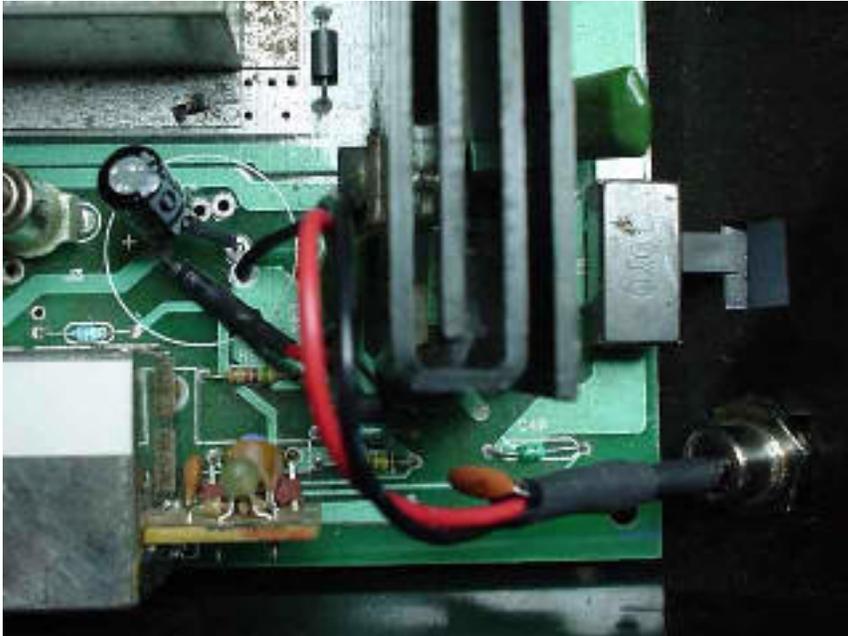
There should be two holes for positive at C45, install one end of the diode at the positive hole you didn't use for the capacitor. I would recommend installing the diode on the bottom of the board. Make sure that the end with the band

(cathode end) is soldered in at

C45. Attach the wire to the other end of the diode.

Now comes the tricky part, you need to install the power jack. I chose to install it

in the same spot as the power jack on the 2 port. So, that is what I'll describe here. You will notice that there is a capacitor (C40) that is slightly in the way. You need to install the jack so it is directly in front of the capacitor. Bend up the positive lead on the power jack. Now drill two holes for the negative leads. If you positioned it right, one of the holes should be going through the large ground trace on the top of the board. Solder the lead, going through the ground trace, to the trace. If you scrape a small portion of the green covering off of the trace, it will be easier to solder. Don't scrape away the trace, though.



On the bottom of the board jumper the two negative leads together. Solder one end of the ceramic capacitor to the two negative leads you just jumpered.

Notice that there is a handy hole in the corner of the board next to where you have installed the power jack. Feed the other end of the ceramic capacitor and the other end of the wire through the hole.

Bend the power jack's positive lead toward the hole. Solder the wire and ceramic capacitor's lead to the positive lead on the power jack.

You are now finished. Take a minute and examine your work to make sure nothing is touching that shouldn't be and that all the connections are solid. Remember this is the main power circuit and you don't want to fry your 5200!

Now for the standard disclaimer. You do this mod at your own risk. No warranties offered. It worked for me and if you do it correctly, it should work for you. But if you fry your 5200 don't blame me. If you have any questions, you can either post them or email me. I'll try to answer it if I can.

Mitchell Orman

<http://atari7800.atari.org>