

Consolizing an MVS 2 Slot

Parts Needed

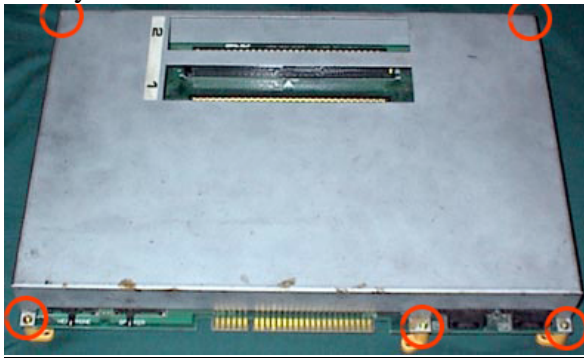
- 1 MVS 2 Slot Motherboard
- 1 RGB to NTSC Video Encoder
- 1 +5v@3A Power Supply
- 1 Matching Panel Mount Power Jack, if your PSU has a 2,1mm jack then get the same.
- 1 CR2430 3v Lithium Coin Cell Battery
- 1 24mm PCB Mount Coin Cell Battery Holder
- 2 Red Gold Plated Panel Mount Phono Jacks
- 1 Green Gold Plated Panel Mount Phono Jack
- 1 Blue Gold Plated Panel Mount Phono Jack
- 1 Yellow Gold Plated Panel Mount Phono Jack
- 1 White Gold Plated Panel Mount Phono Jack
- 1 Gold Plated S-video Panel Mount Jack
- 3 150ohm 1/4 watt resistors
- 1 Round Rocker Switch
- 1 LED – Your Color Choice
- Phillips Head Screw Driver
- Solder
- Wire Snips
- Good Soldering Iron

Getting Started

A 2 slot board generally uses both +5v and +12v when in a cabinet. When Consolizing a 2 slot board the +12v power supply is not needed since the onboard sound amp can accept +5v and still work.

Step One:

Remove metal cover. There are about 5 screws with feet on the board holding the cover on. Using a Philips head screwdriver, go ahead and remove all 5 or more/less depending what you have.

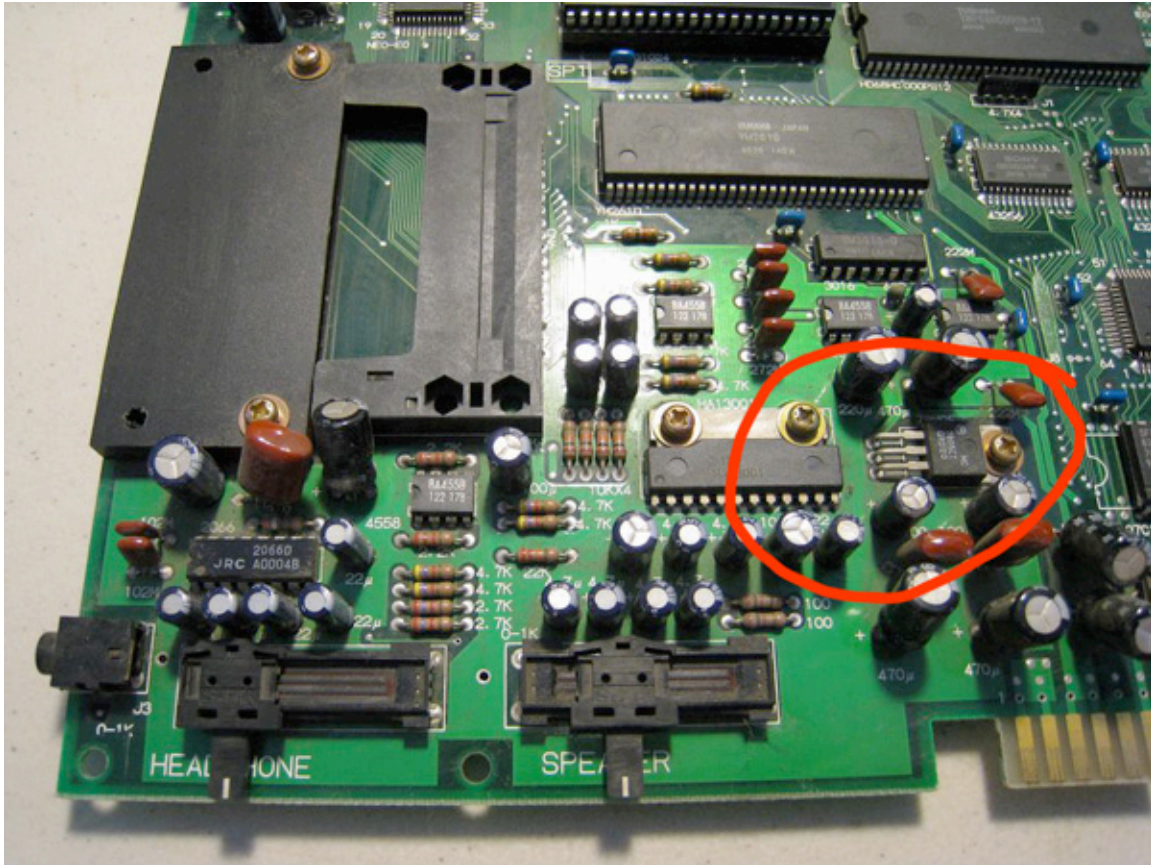


The +5v only Mod

With this mod your 2 slot is still playable in your cab.

Removing the Power Regulator:

In the bottom area of the board to the left you will see this:

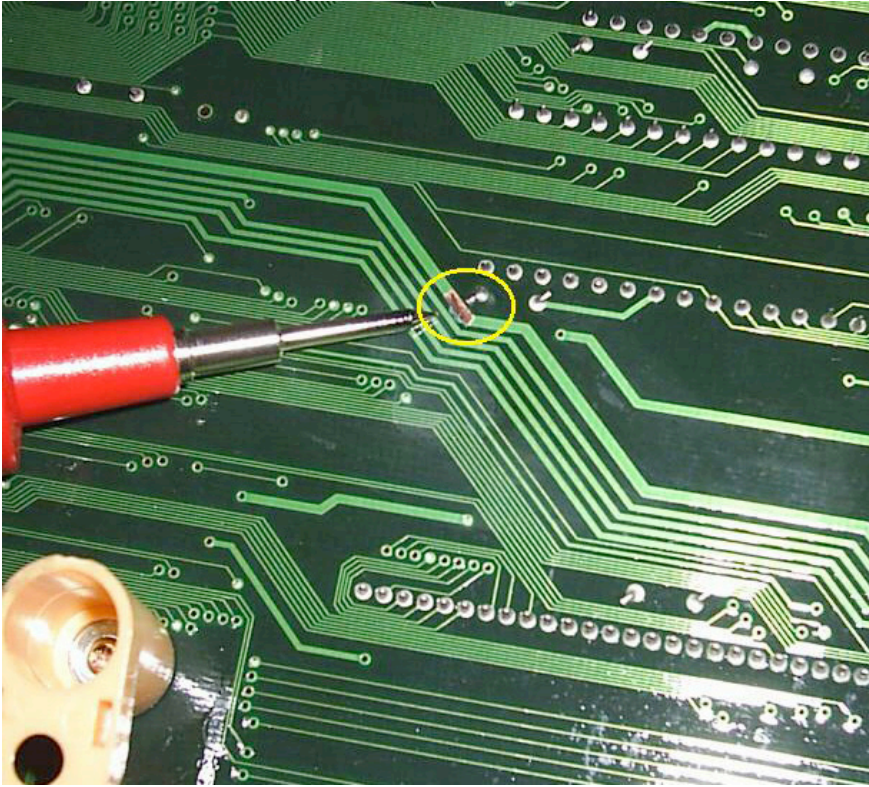


Go ahead and remove it from the board. I usually just unscrew it and cut the legs.

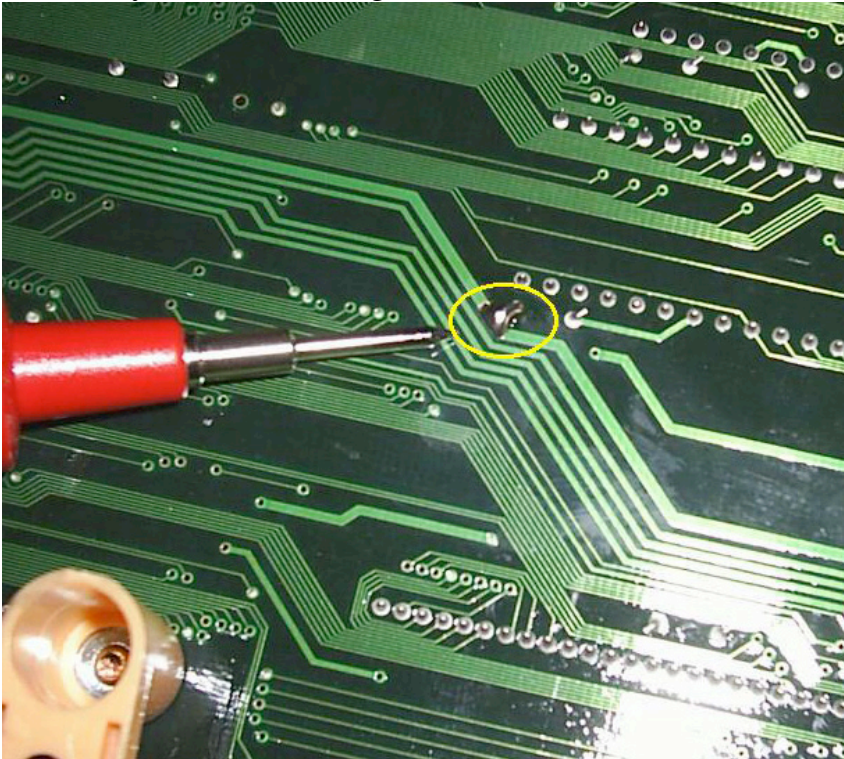
Making the bridge:

You will now need to create a +5v line bridge between the primary and secondary +5v rails. Flip your board over with the JAMMA edge away from you. In the middle section on the right you will see this area. Go ahead and scratch the trace until the trace is exposed. Once the trace is exposed go ahead and make a solder bridge between the leg and the trace.

This is the area before you solder:



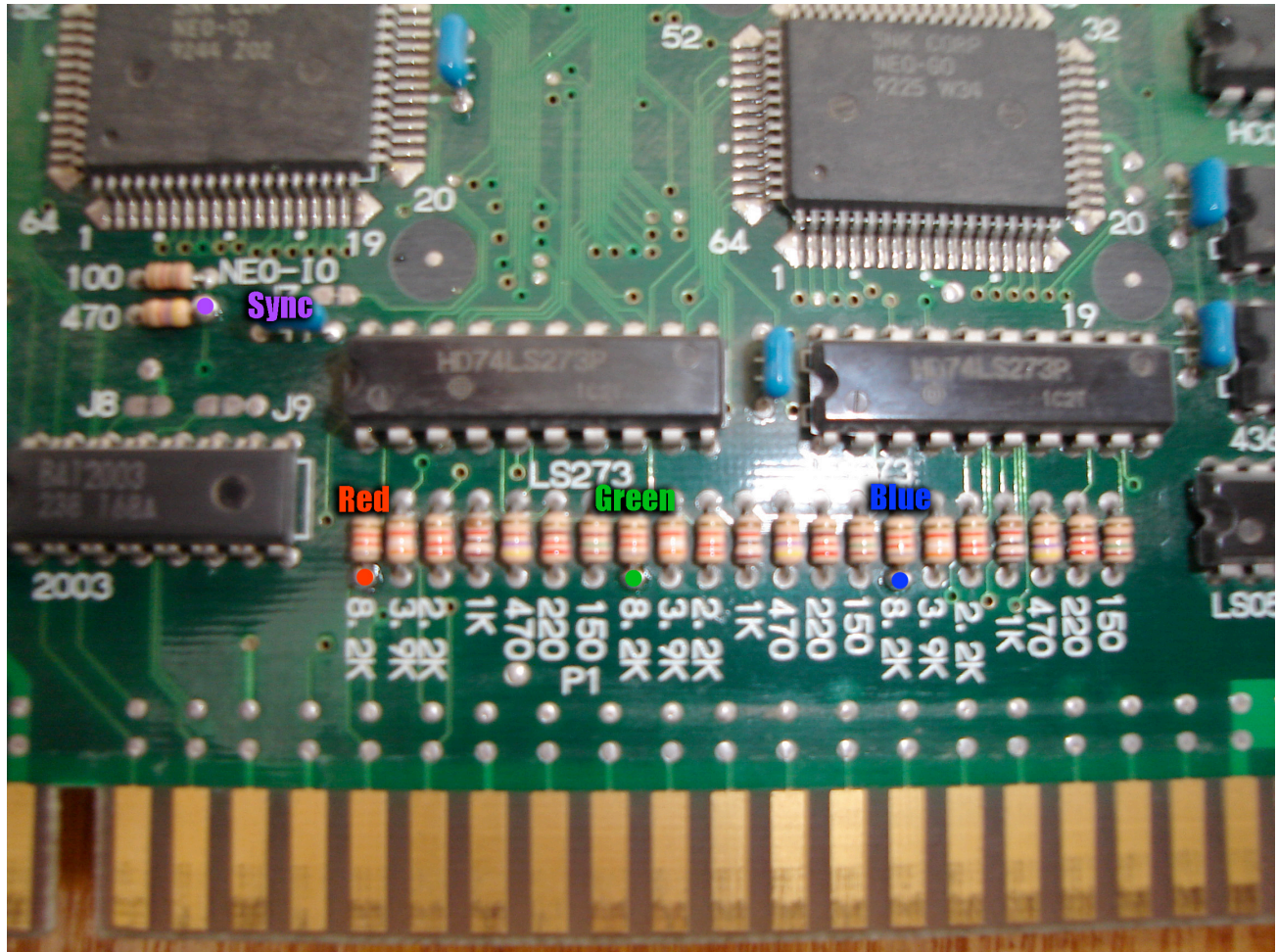
And after you create the bridge:



OK so that's the +5v mod.

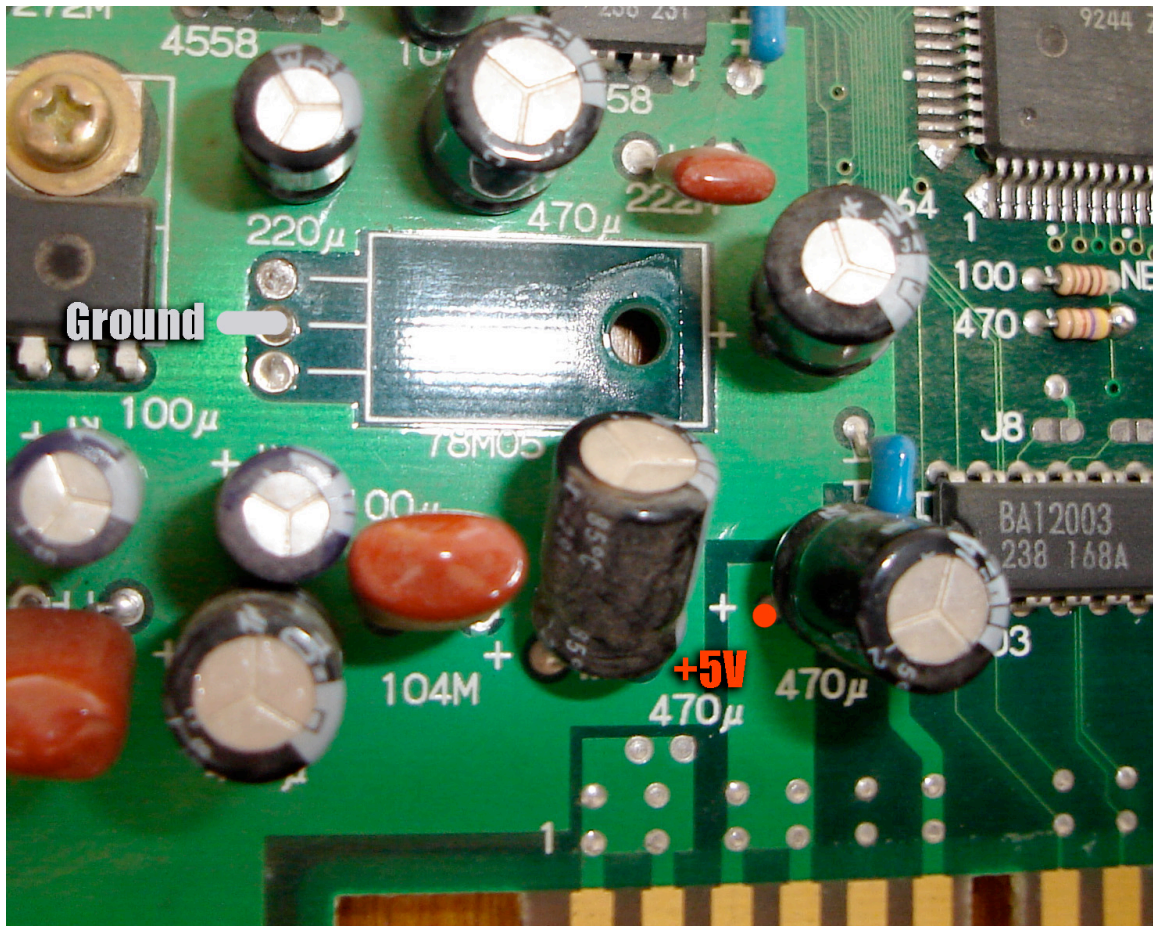
Tapping the RGBS Signals

To tap the RGB signals follow the picture below. For the RGB signals, they are taken from the 8.2k resistors on the right side of the resistor. I use a 150ohm resistor in line to bring down the brightness of the colors a tad so it doesn't look washed out on TV. If your encoder has onboard resistors or pots then you do not need to connect the 150ohm resistors. For the Sync signal it is located to the left from the resistor labeled 470 ohm.



Connecting the Power to the Board

To connect the power to the board, you will tap the +5v source to the left leg of the capacitor in the picture. For the ground, solder it to the middle pin of where the voltage regulator used to be like so:



On the other end of the wire you will connect to the power jack. Check your PSU for the polarity. If it says +---(o--- - then you connect the ground to the center pin of the power jack. If it says +---o)--- - then you do the opposite. Pick a spot on the back of the metal casing of the 2 slot to drill the hole for the power jack, power switch and audio and video jacks.

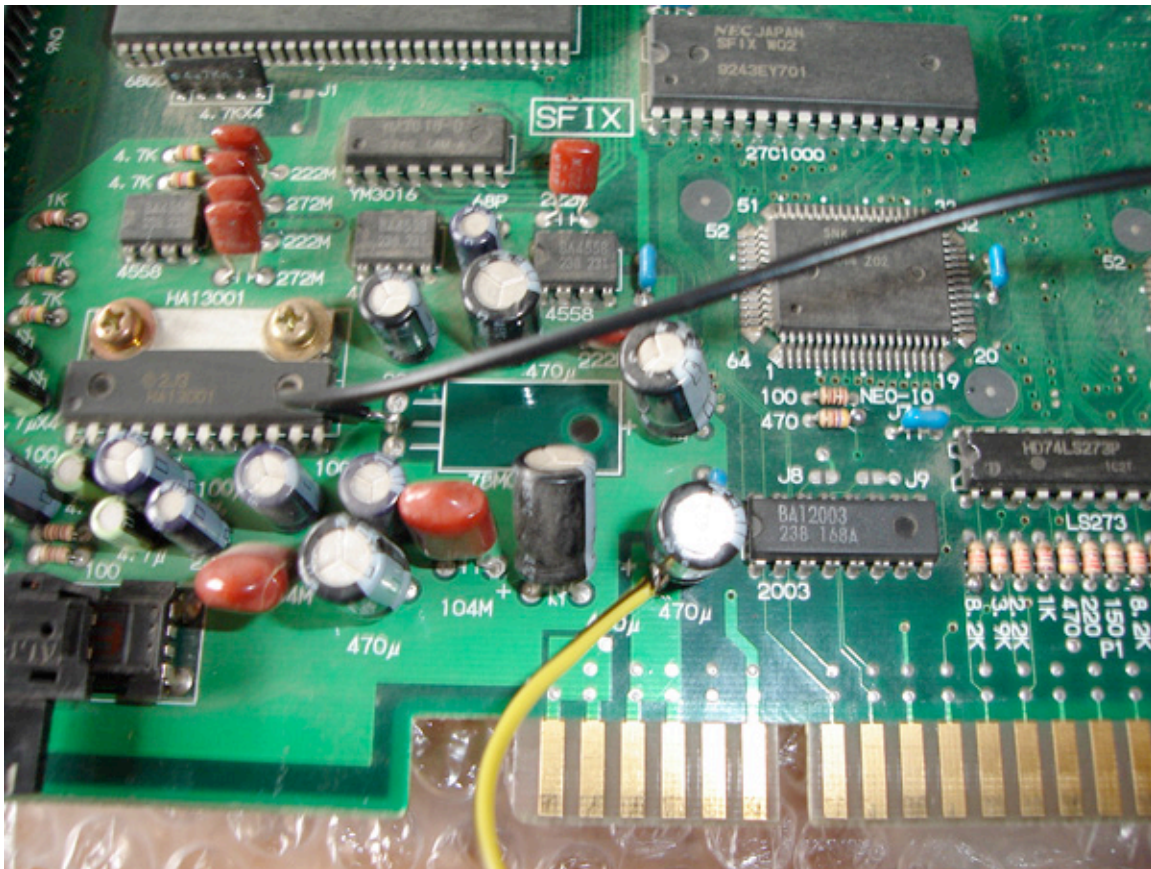


Above is the usual locations that I use for the power jack and the switch. I prefer my 2 slots to have the power switch on the back left side of the unit. To me it is cleaner this way. If you prefer to mount the switch somewhere else go ahead and do it. Just remember that you will need to run some longer wires when you do that.

For the power jack I use a panel (chassis) mount 2.1mm barrel jack. If you use a 2.1mm barrel jack, make sure your PSU tip is 2.1mm as well. You can also use a 2.5mm barrel jack and 2.5mm tip PSU, your choice. These are the ones I use personally/



This is what it should look like when you solder the wires to the board for the power jack:



Once you connect the above wires, run the black wire to the ground on the power jack and run the +5v line to the power switch. The power switch is a SPST switch meaning **S**ingle **P**ole **S**ingle **T**hrow which is a basic On-Off switch.

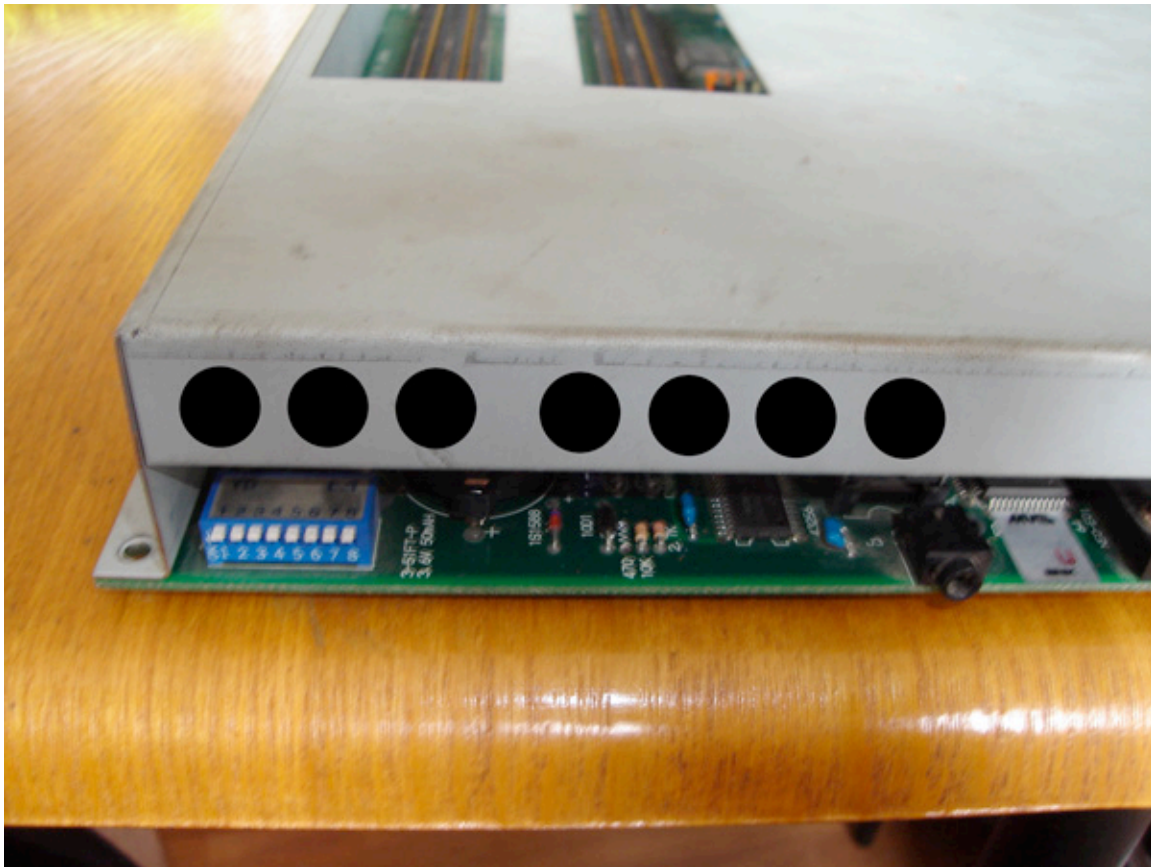
This is how it should be connected:



Adding the Video Encoder

Adding the encoder is simple. In the tapping RGBS section it tells you where to get the signals for the video encoder. Both a Neobitz and JROK have wiring headers, connect these headers to the locations in the pictures for RGBS. They will then plug right into the video encoder input. Once you have that connected you can connect the output of the video encoder.

Now you want to drill some holes for the video and audio jacks. Using a Unibit measure the size of the hole needed for each jack and space them apart by at least 3/4". I usually use a ruler with a strip of tape and mark where I want the holes and then place the tape on the metal casing where I want the jacks to be. I usually use this side:



This is just an example of what the holes should look like. These example holes are a little bit closer then I'd like them but you get the idea.

Once you drill the holes can then mount the video jacks onto the metal casing.

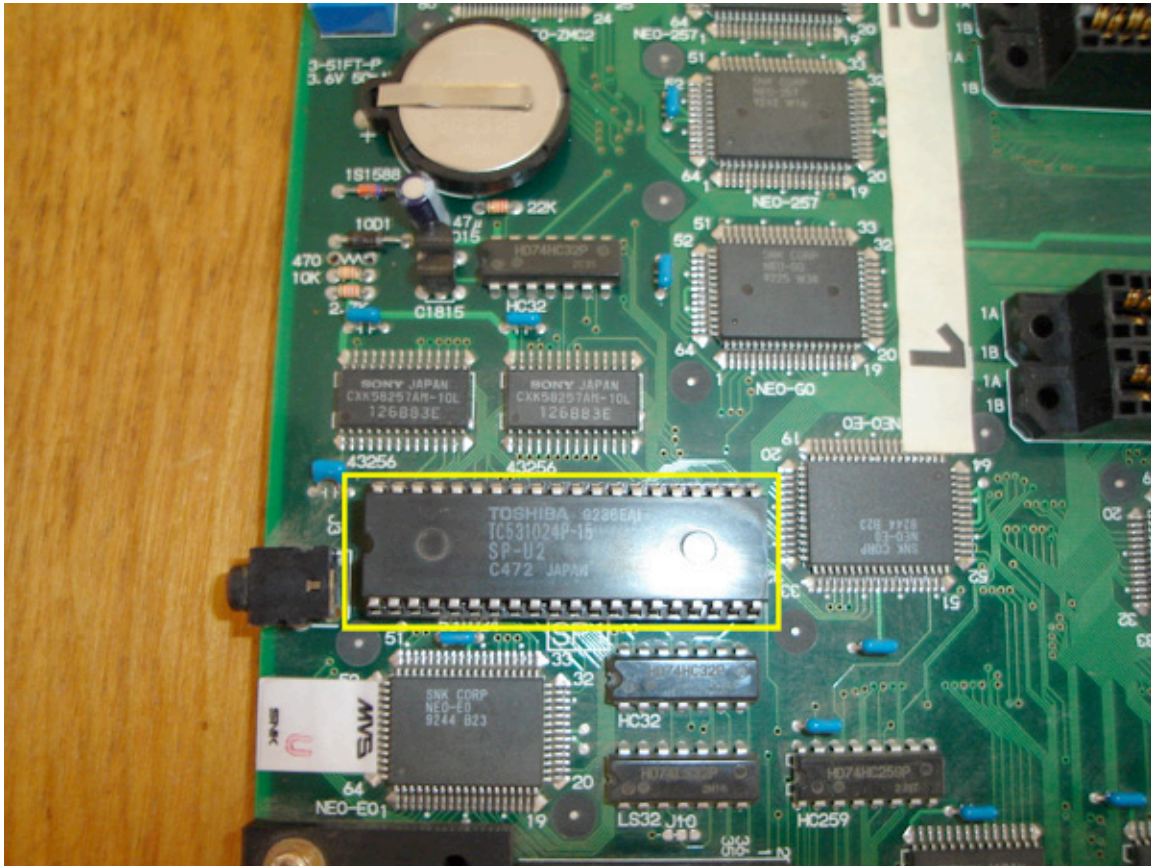
Please Note that if you plan on getting your casing painted or powder coated, now would be the time to have it done before you mount anything onto the casing.

A photograph of the rear panel of a vintage electronic device, likely a video cassette recorder, showing various input ports and internal components. The ports are labeled with colored circles: Yr (red), Y (green), Yb (blue), S-Vid (purple), Comp (yellow), Audio L (white), and Audio R (red). The device is resting on a wooden surface.

Component – Yr – Red
Component – Y – Green
Component – Yb – Blue
S-Video
Composite Video
Audio Left
Audio Right

Adding a Unibios

If you plan to put in a Unibios it is very simple. Just simply swap out your old bios with the new Unibios chip. The chip to swap out is:



Be very careful when removing the old chip, you can use either a chip puller or a flat head screw driver to remove it. Gently insert the flat head under either side of the chip and GENTLY pry the chip upward about 4mm then repeat on the opposite side. Keep repeating until the chip is out. Once you get the hang of it you will have your own method of removing the old chip.

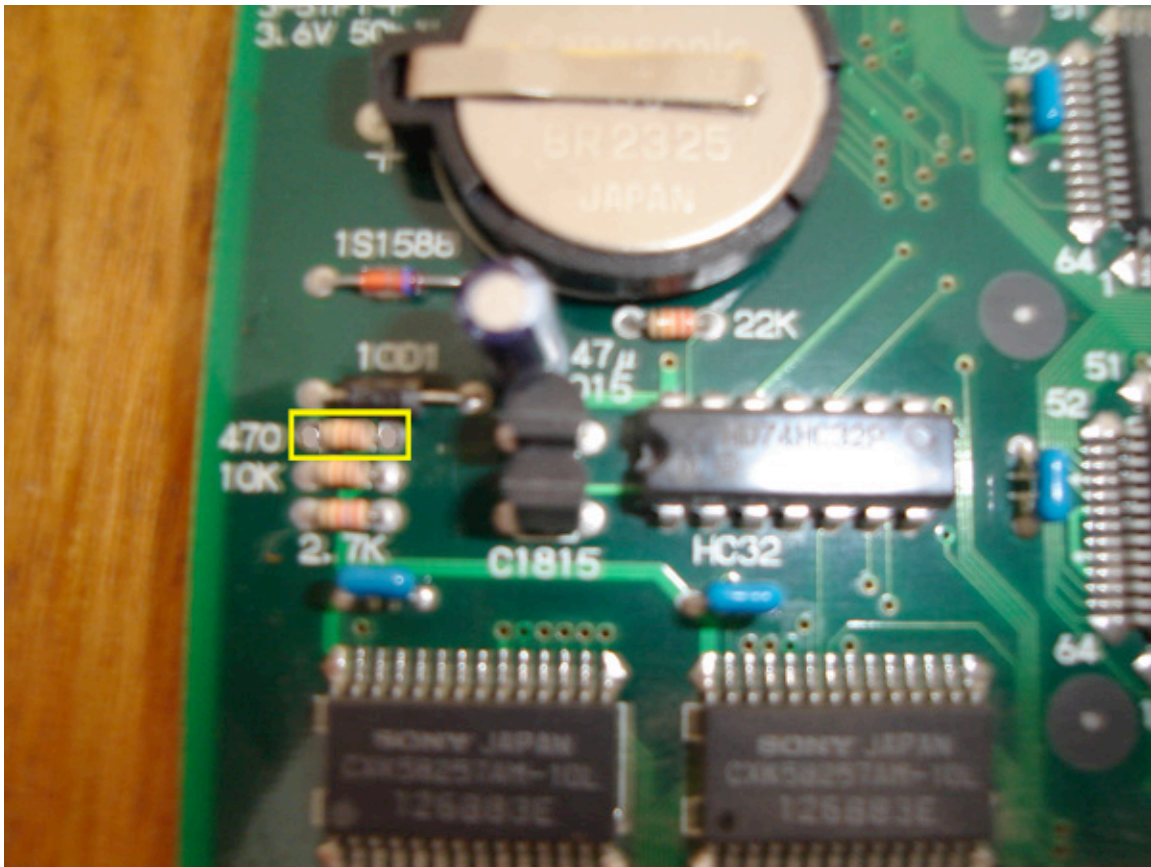
That's the basic how to for a consolized 2 slot.

Backup Battery Mod

This mod is basically for mostly consolized units. The stock backup battery keeps your saves in memory but need to be charged in order for the system to remember them. This is a problem for people that have a consolized unit as some people only play their units for 1 hour at a time. This amount of time is inadequate to charge the backup battery.

As you can see in the picture above, instead of the normal rechargeable battery there is a 3v lithium coin cell battery.

To do this mod all you need to do is remove the 470ohm resistor in this spot:

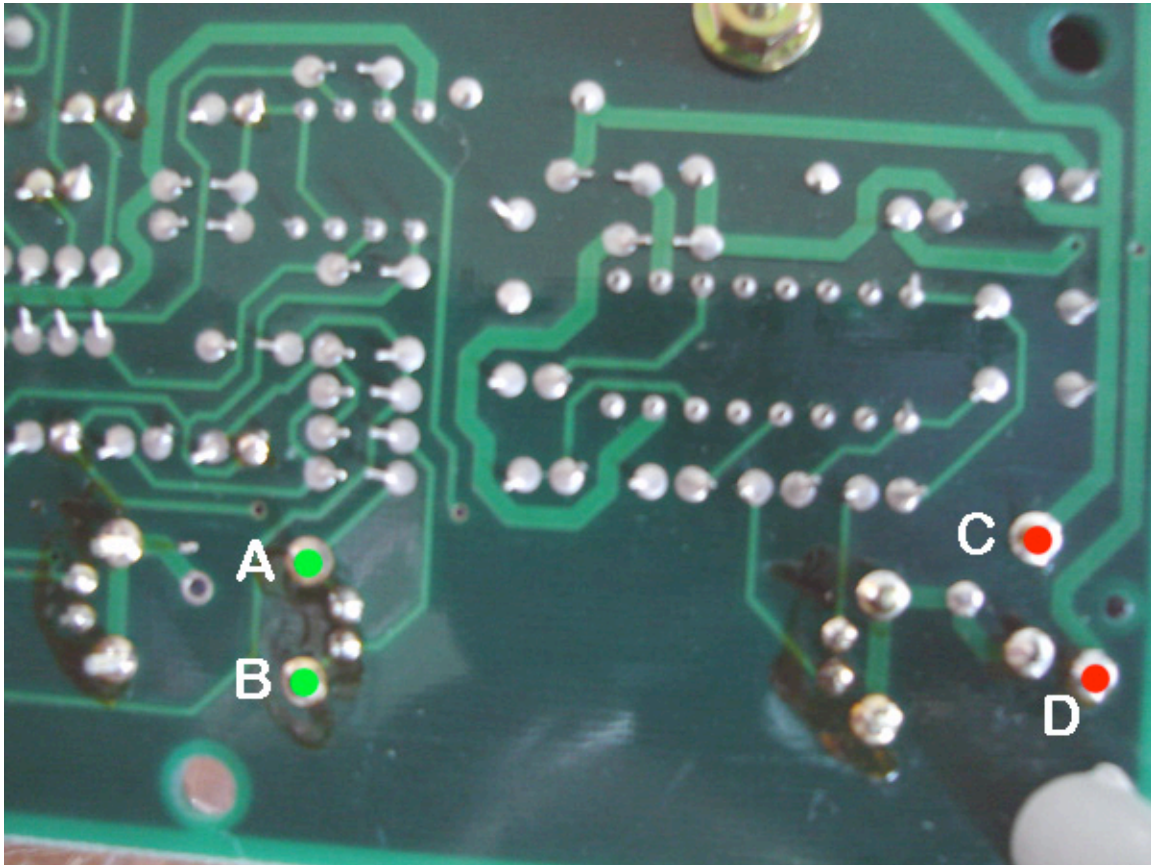


Then desolder the stock backup battery and replace it with a coin cell battery holder.

Tapping the Stereo Signals

There are many different methods to tap the audio from the board. The most widely used method is to tap it from the headphone jack.

If you flip the board over you will see this:



I usually use points A and B as they are better hidden and it is a constant line level output. Most people use C and D. Keep in mind that if you use A and B the audio level may be very low on some tvs and the headphone slider will not alter the audio level as it would if you used C and D.

A or C is left audio.

B or D is right audio.