

IntelliVision

MATTEL ELECTRONICS

**STEP-BY-STEP INSTALLATION GUIDE TO
COMPOSITE VIDEO OUT MODIFICATION**

INTELLIVISION I MODEL NO. 5370 PAL OR 2609 NTSC

Disclaimer:

This mod has been carefully designed and manufactured. It has proved to work. To my knowledge, it does not harm your system.

Nevertheless, I cannot be held responsible for any damage of your console (and yourself), when you install it. You open and modify your Intellivision at your own risk. Please make sure that your console is not connected to any power source whenever the cover is removed.

Study all information given in this installation guide about how to install the mod in the video game system carefully *before* you proceed. If there is anything not absolutely clear to you about this process, do not install the mod.

Many thanks to David Harley and Grant Ferey for the revision of the guides. The layout design was made by Franco Ricciardi. Thanks to Joe Zbiciak and Tim Lindner for creating the original design of this modification.

Feel free to use all pictures and information for any Intellivision related purpose, but please indicate its origin.

Send your questions, comments and suggestions to:
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-Oliver Puschatzki (october 2006)

Make sure that you have your Intv1 and modification board. Cable length fits either Intv 1 and Intv 2 consoles. If the cables seem to be too long for your console and prevent the mod from fitting easily into it, cut them down to the size you need.

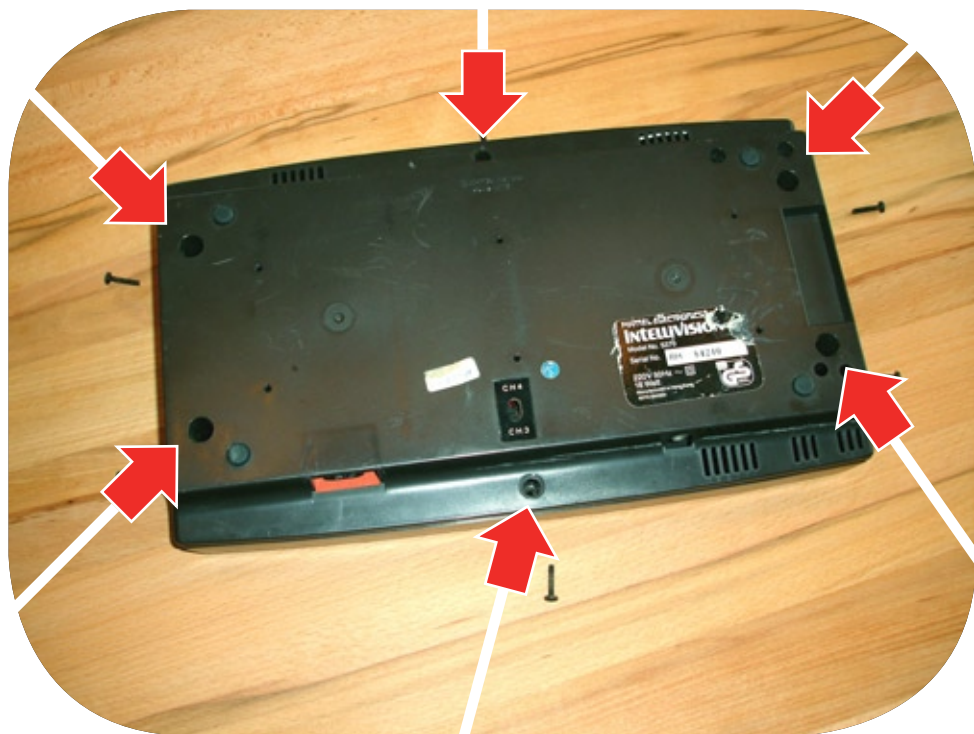


This is what you need:



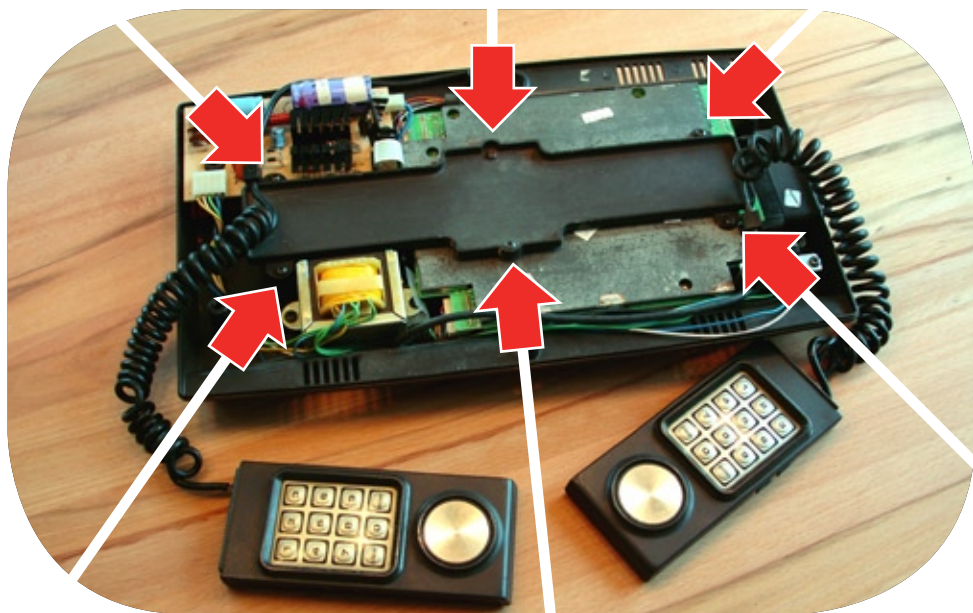
- a) A drill
- b) A drill bit
- c) A soldering iron
- d) Solder wire
- e) A Phillips screwdriver
- f) A knife (not shown in the picture)
- g) A small pair of pliers (not shown in the picture)

Turn the console upside down and unscrew all six screws that hold the cover. Turn the Intellivision again and remove the cover

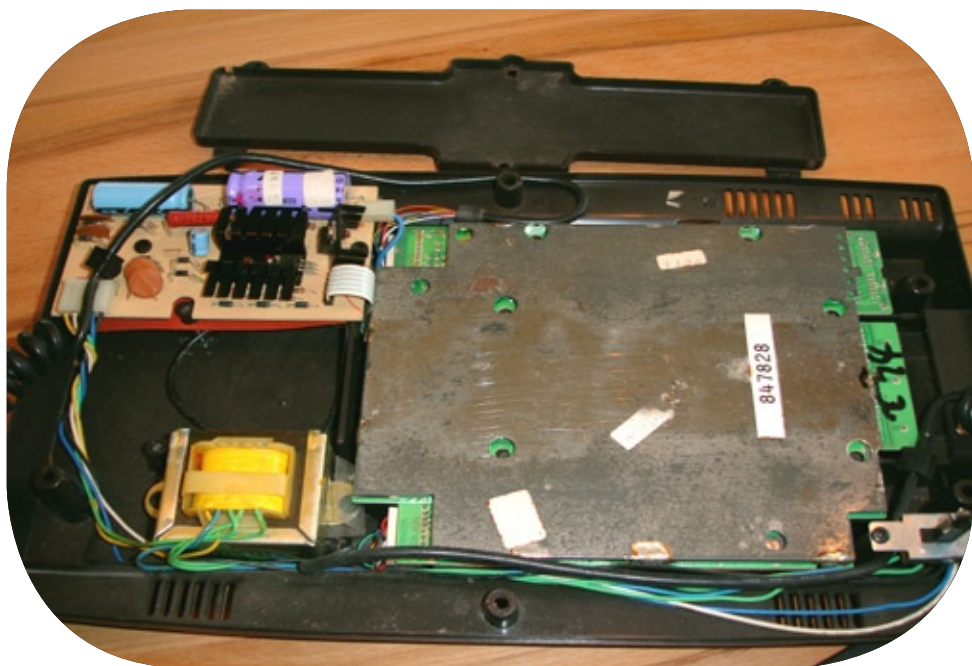


STEP 2

Unscrew all six screws that retain the joypad attachment:

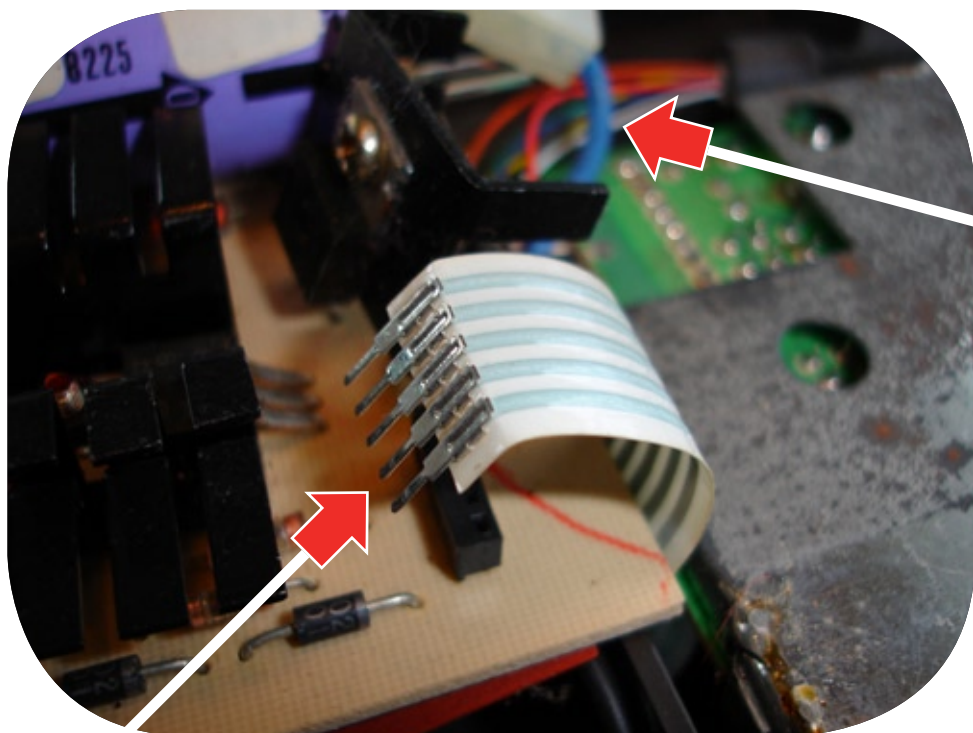


Remove it.

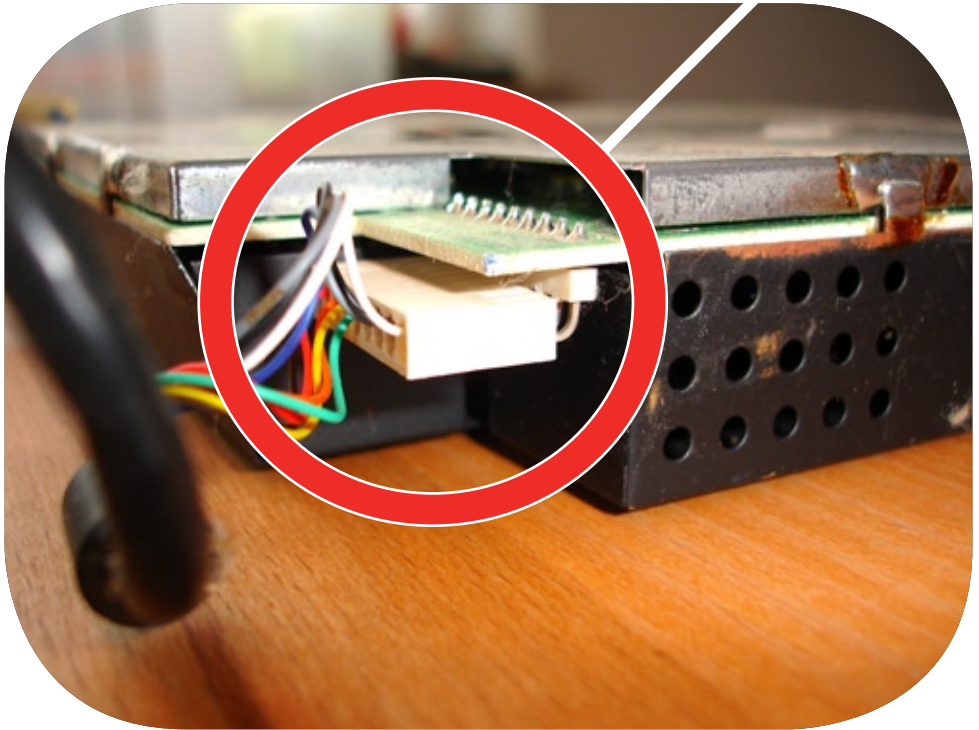


STEP 4

Locate the power supply unit and detach the white and the blue cable at the right side of the board. Be sure to memorize polarity of the white cable.



Detach the joypads from the main board. Again: Make sure to memorize polarity! You can help to ensure correct polarity is maintained when reassembling by marking the cable/connector and the PCB with a black felt-tip pen.

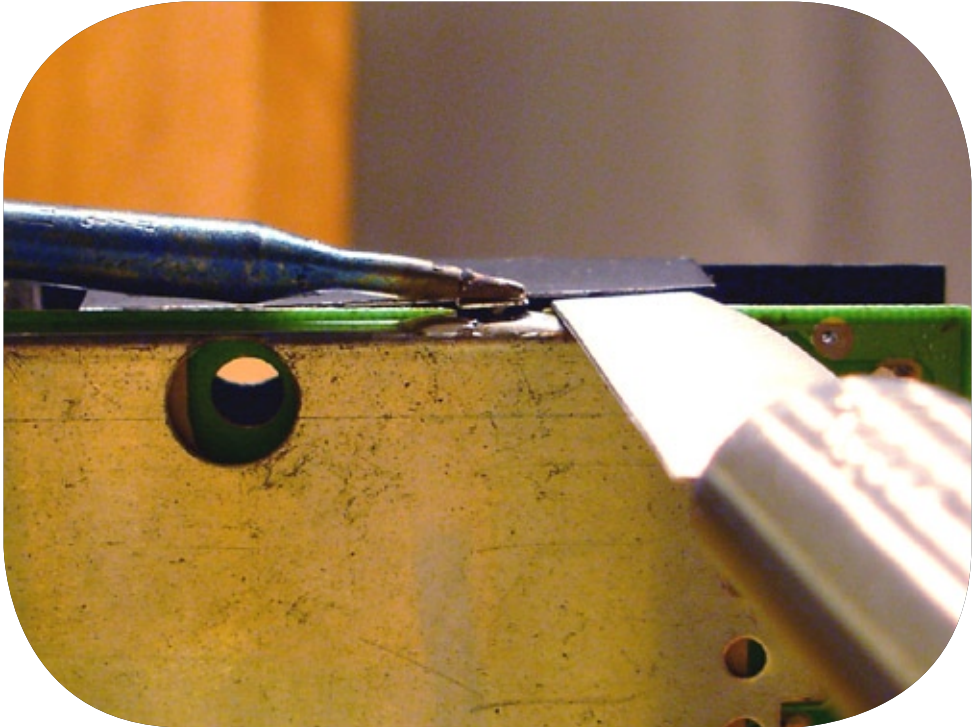


STEP 5

Put the housing and the joypads aside. You will need to open the black shielding now. There are nine soldering points that hold the shielding in place.

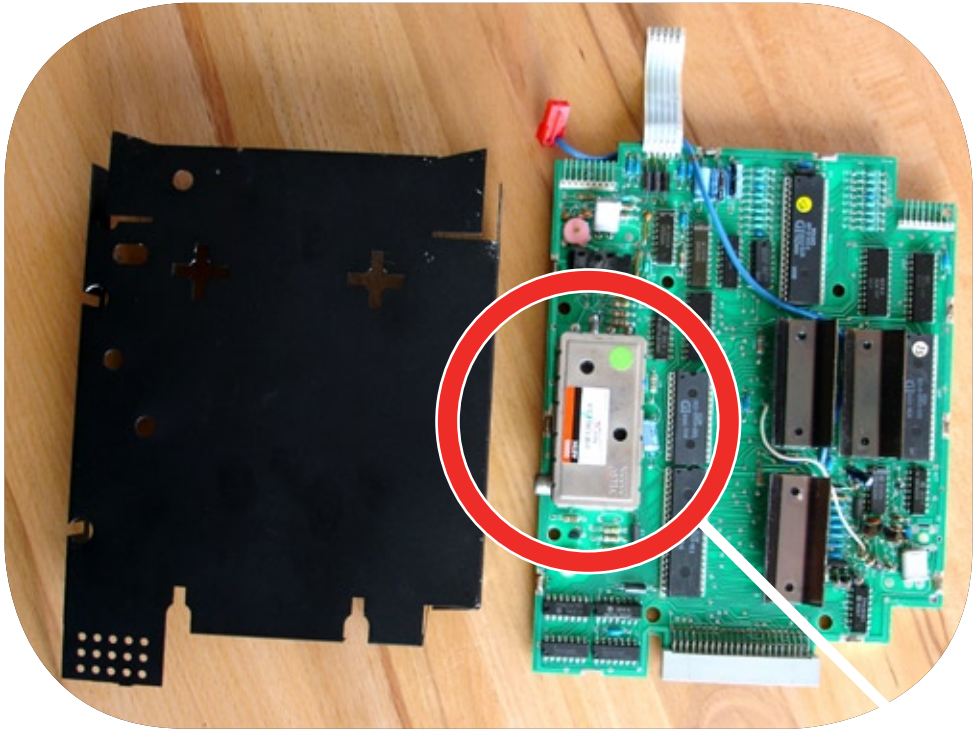


Gently push the knife between the main board and the shielding and lever the blade down a bit as shown in the photo. Break the soldering point with the soldering iron. Proceed until all soldering points have been desoldered. Check whether the small metal plate of the reset button is still in place. It tends to fall off...

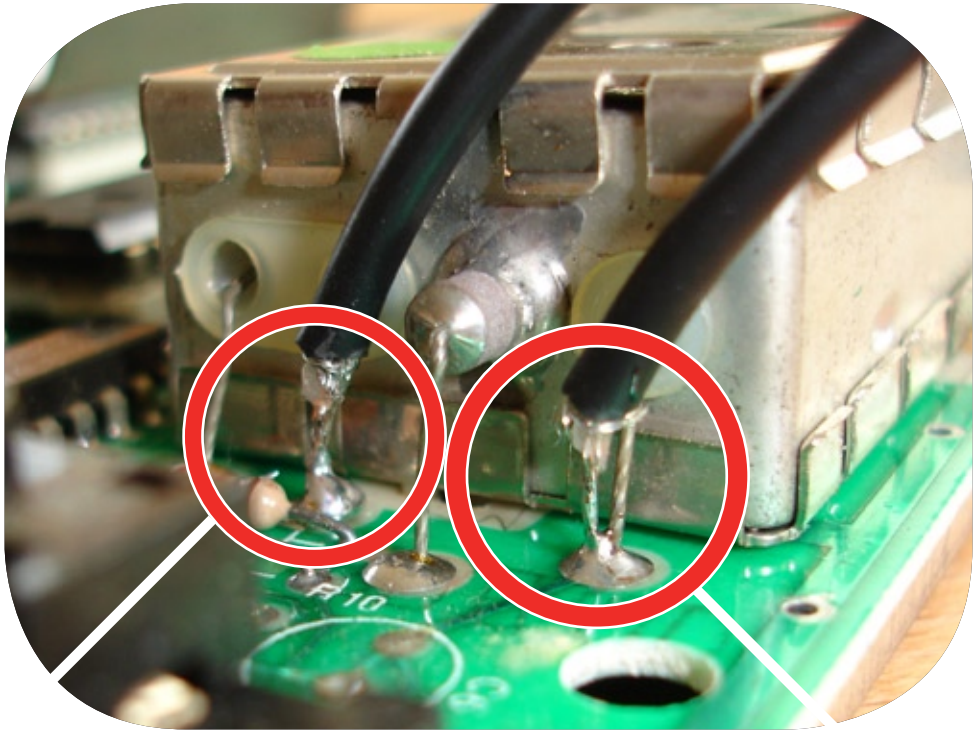


STEP 6

Remove the black shielding and locate the RF section.

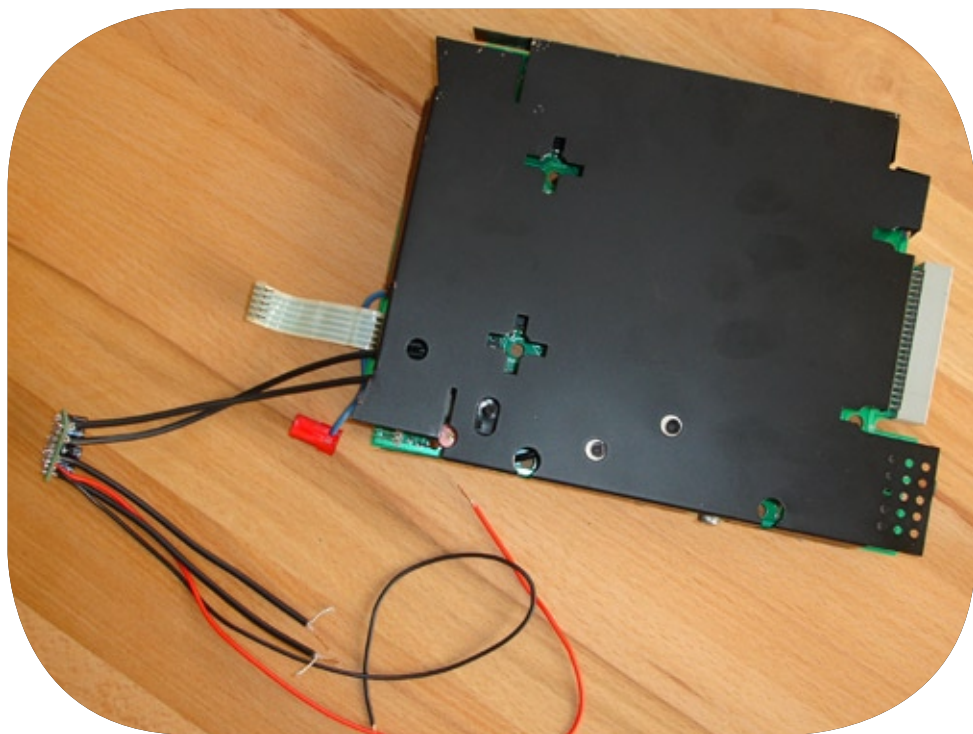


Solder the inner wire of cable “V IN” from the mod to the wire on the right side of the RF section as shown on the picture below. Solder the “A IN” cable from the mod to second wire from the left that leads into the RF section:



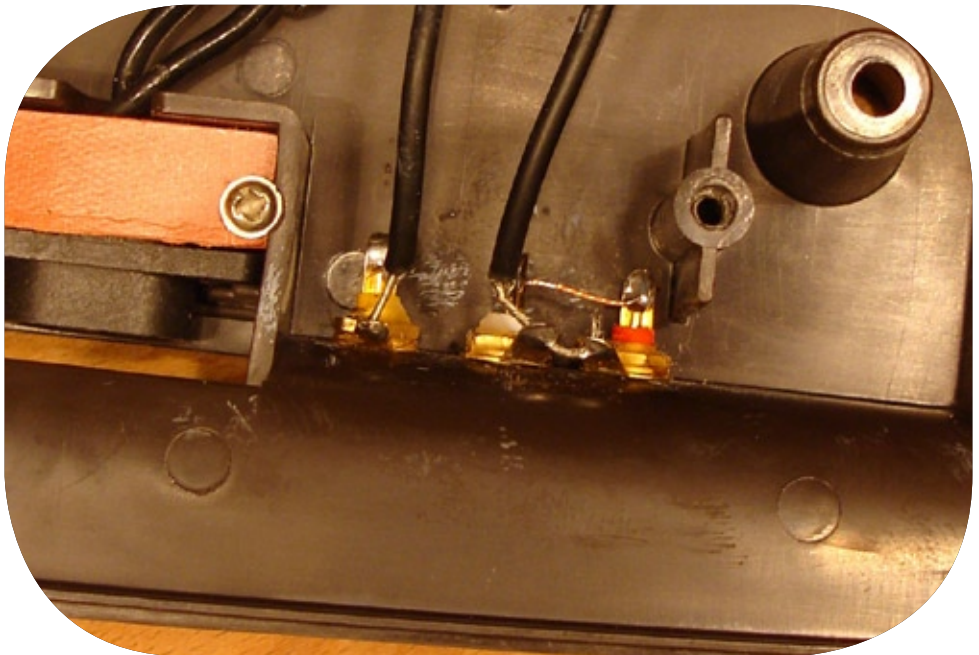
STEP 8

When the cables are correctly soldered to the RF section put the shielding back in place.



Now comes the hardest part. Drill two holes in the housing; choose the position shown in the picture, next to the power plug. You can use the positioning device provided on the last page of this guide. Be sure to use an appropriately sized drill bit, if you are unsure which size is correct, use a smaller sized bit first. Attach the rca connectors carefully.

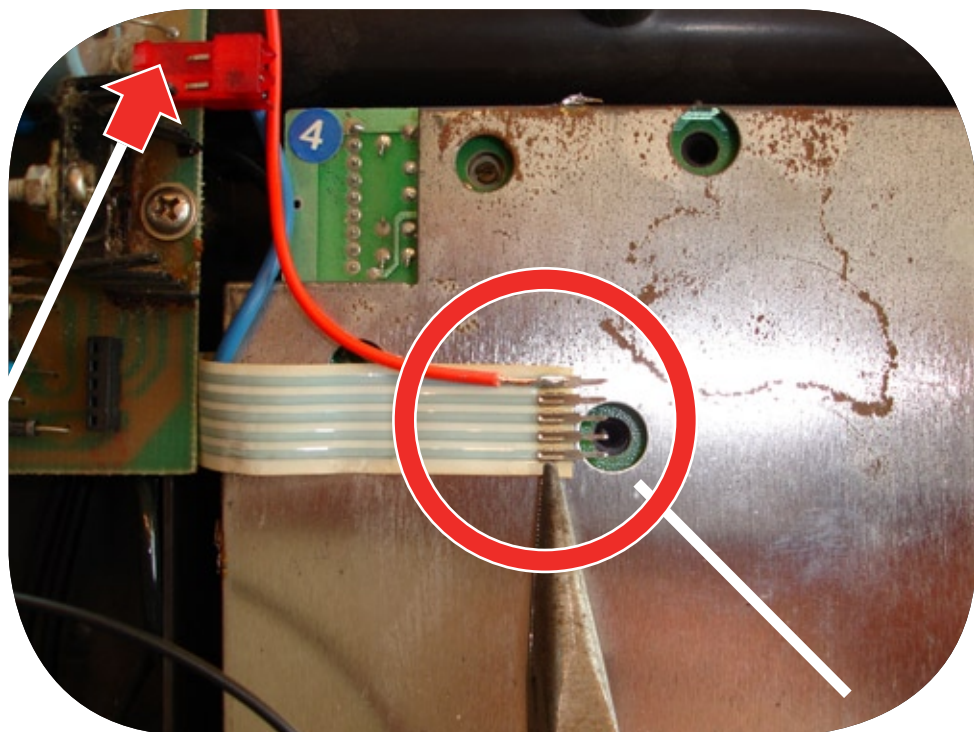
Note Your mod might be delivered with three RCA connectors. Bridge the wires from one audio connector to the other (inner wire to inner connection, outer wire to outer connection). You will find a positioning device on page 20 of this guide to help you finding the right position for the RCA connectors.



Tighten the RCA socket locking nuts. Solder wire „V OUT“ to the yellow RCA connector and „A OUT“ to the black RCA connector. Attach the wires as shown in this picture.

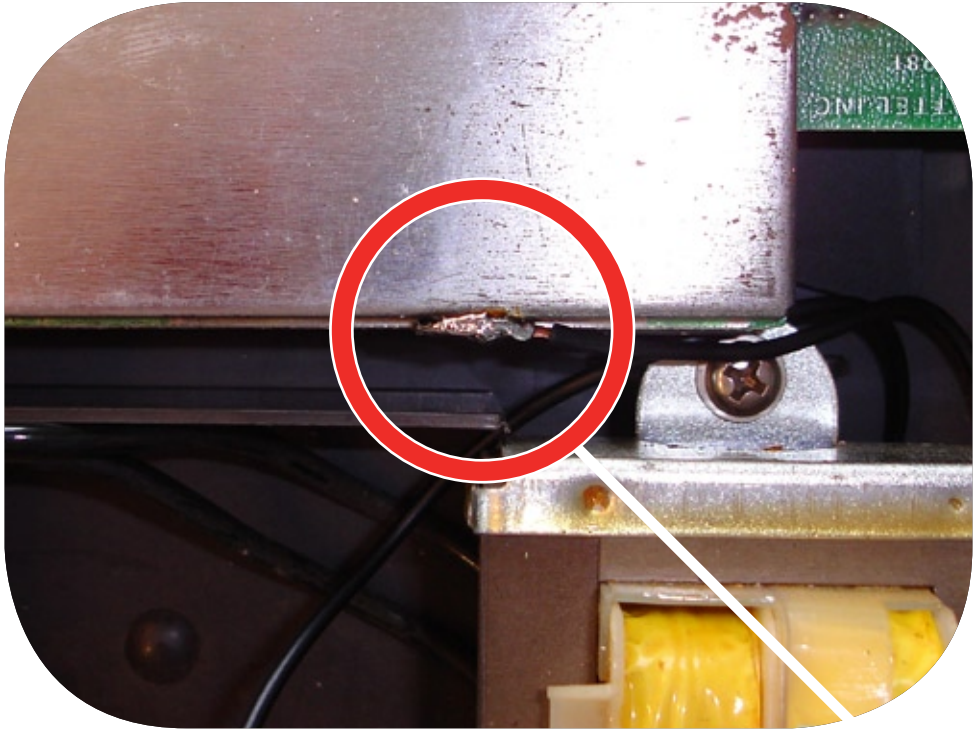


Put the main board back into the casing, connect the hand controllers to it (POLARITY!) and the blue wire to the power supply PCB. Solder the red wire „+5 V“ from the mod to the white power cable like shown in the picture. Choose the topmost connector and do not damage the other conducting paths! Be extra careful when you put the soldering wire to the white cable, it can melt when it is overheated. Connect the white power cable to it's jack on the power supply PCB, ensuring correct polarity.

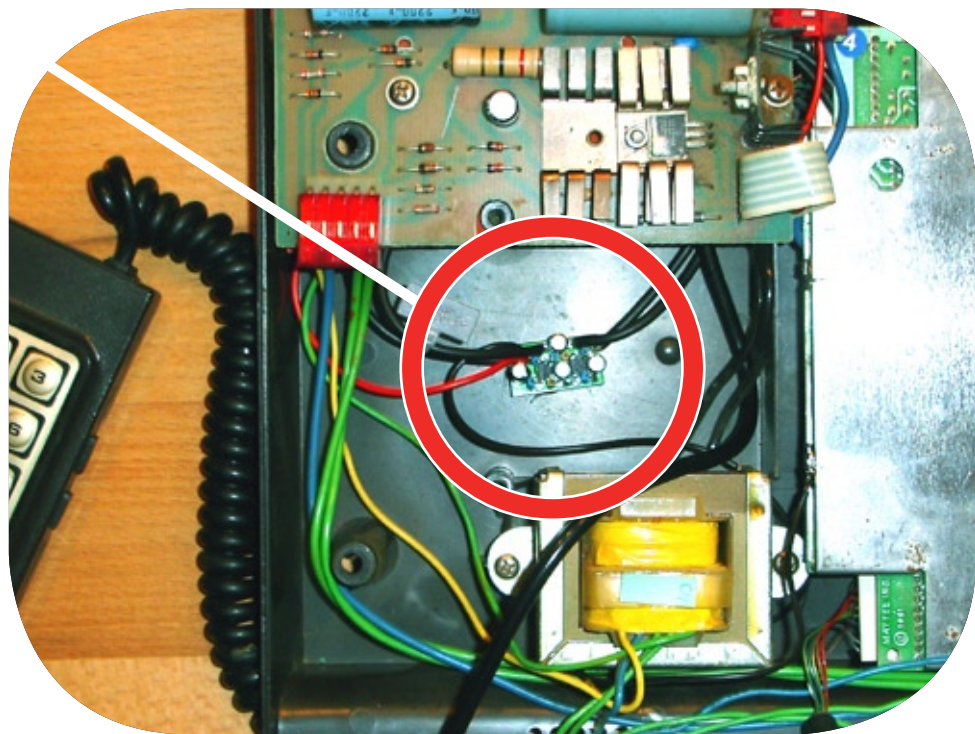


STEP 12

Solder the black wire „GND“ from the mod to any of the soldering points that hold the black shielding of the main board.



Your console and the mod should now be properly connected to each other. Put the joystick attachment back in place and tighten the screws.



Close the cover again and tighten all six screws you removed in Step 1. You now have the best video output for you Intellivision II!

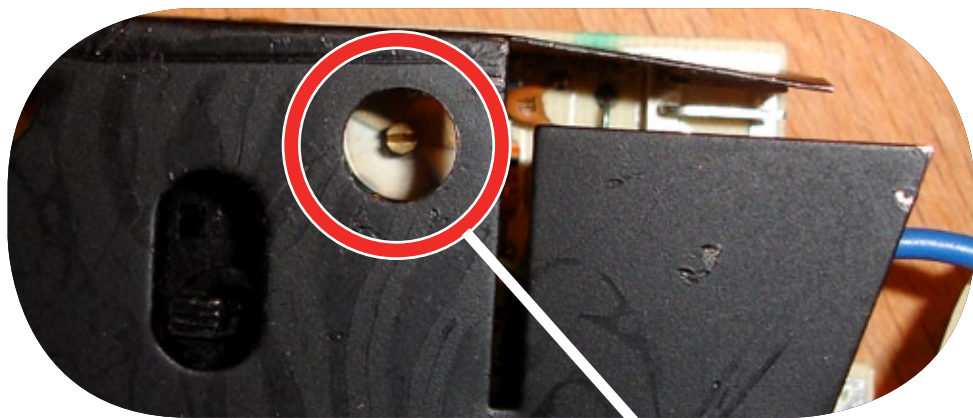
**** ALWAYS **** make sure you have the video wire connected to the **YELLOW** composite jack. You could cause damage to your TV if you have the wires reversed.



Improving picture quality even more:

Warning! Your game system has to be powered on while the cover is open in order to perform the adjustments. Please ensure that all safety precautions are taken to prevent contact with any powered cables or parts of the power supply unit. OK? Here is the interesting part:

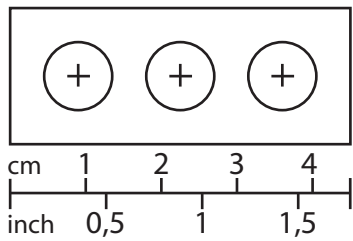
It is possible to adjust colors and the picture quality of your Intellivision I console. There is a tiny potentiometer on the main board that controls these parameters. This is what it looks like:



Take any game cartridge that uses the original title screen (the one with color bars). Power your system on. Turn the potentiometer with a very small pair of pliers. Adjust the picture until it looks best on your TV. You should have even better video output for your Intellivision I now!

Use the positioning device shown below to find the correct position for the RCA connectors.

Print the graphics at full size and check whether the scale is correct using a ruler. Attach the positioning device to the housing of your console using an adhesive tape and puncture the middle of the crosses with a needle. This is where the holes should be drilled.



This installation guide is subject to change without notice.