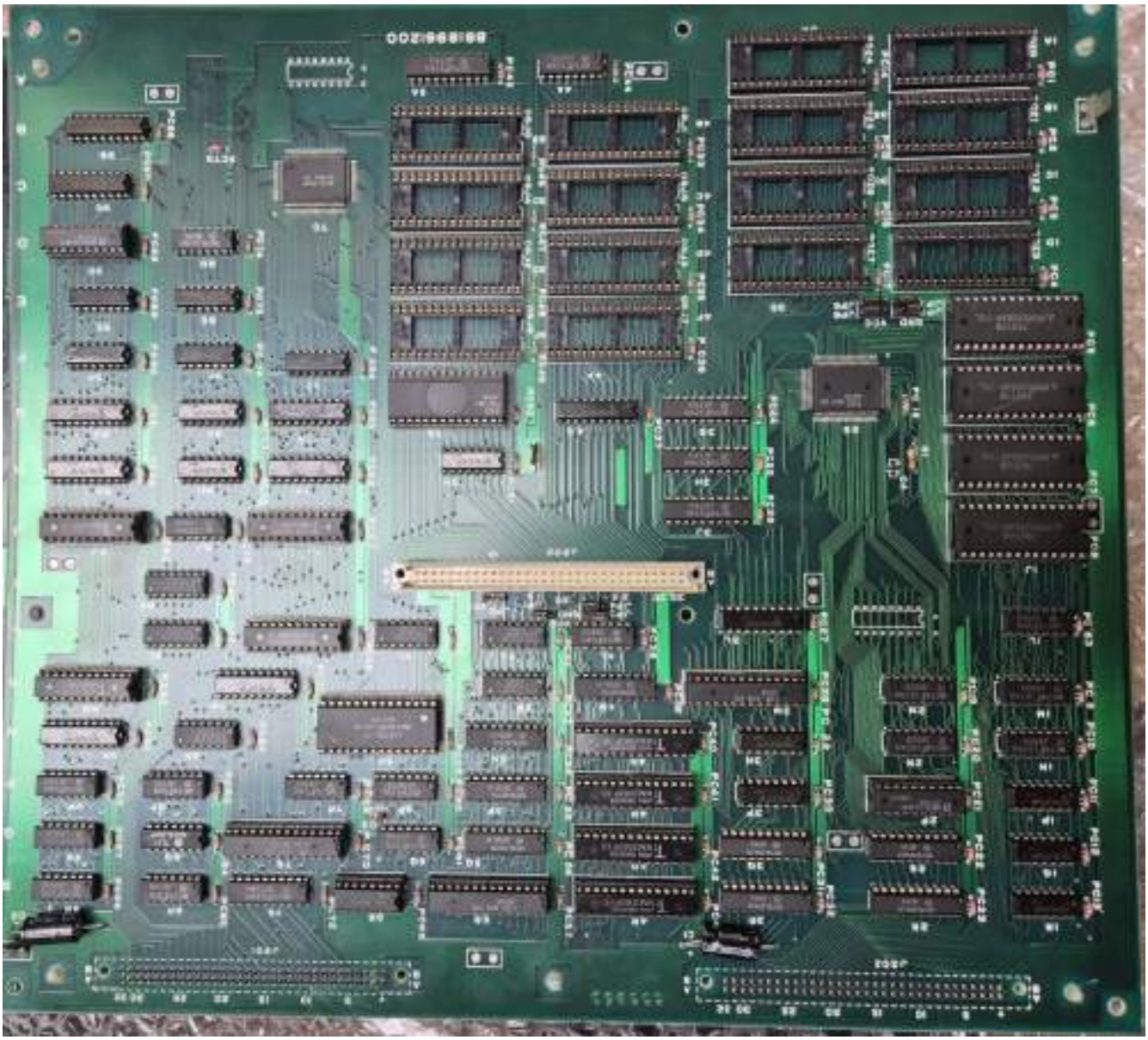
NAMCO SYSTEM 2 MULTIGAME!!!

Finally, development on this long awaited project has come to an end and Namco System 2 fans will be able to play all the games on the system using a single setup. It's been months of work and testing so I really hope you enjoy it as much as I did building it!

In order to make this work, you only need to have a Namco System 2 motherboard and a working cabinet or a supergun.

Notice that there are several revisions of Namco System 2 and only those that have the right Video Board will work with this multi. The following games should have the right PCB.

In order to be 100% sure, your Video PCB should look like this:

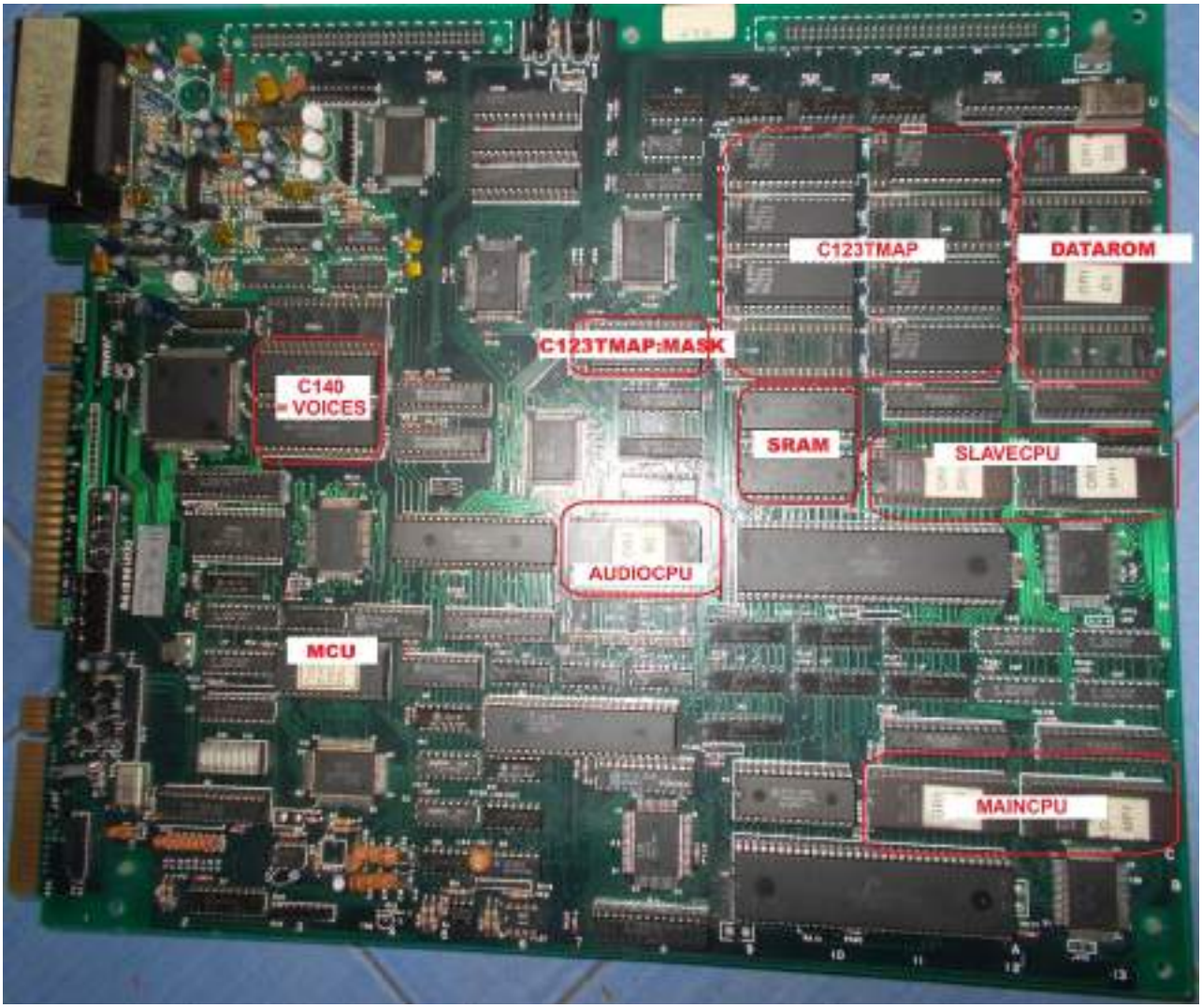


The following games should have that Video PCB:

Assault
Assault Plus
Bubble Trouble
Burning Force
Cosmo Gang The Video
Dirt Fox
Dragon Saber
Finest Hour
Golly Ghost
Kyuukai Douchuuki
Marvel Land
Mirai Ninja
Ordyne
Phelios
Rolling Thunder 2
Super World Stadium
Super World Stadium '92
Super World Stadium '93
Valkyrie No Densetsu

BEFORE YOU BEGIN INSTALLING YOUR KIT

The first thing that you need to do is to remove all the Mask ROMS and EPROMS from your Namco System 2 PCB. You can see in the pictures below which sections need their Eproms / Mask Roms removed:



DO NOT REMOVE the chips in SRAM or MCU. You only need to remove the chips in the sections: MAINCPU, SLAVE CPU, AUDIOCPU, C140=VOICES, C123TMAP:MASK, C123TMAP and DATAROM.

Now, you also need to prepare the jumpers in this PCB. They should connect as follows:

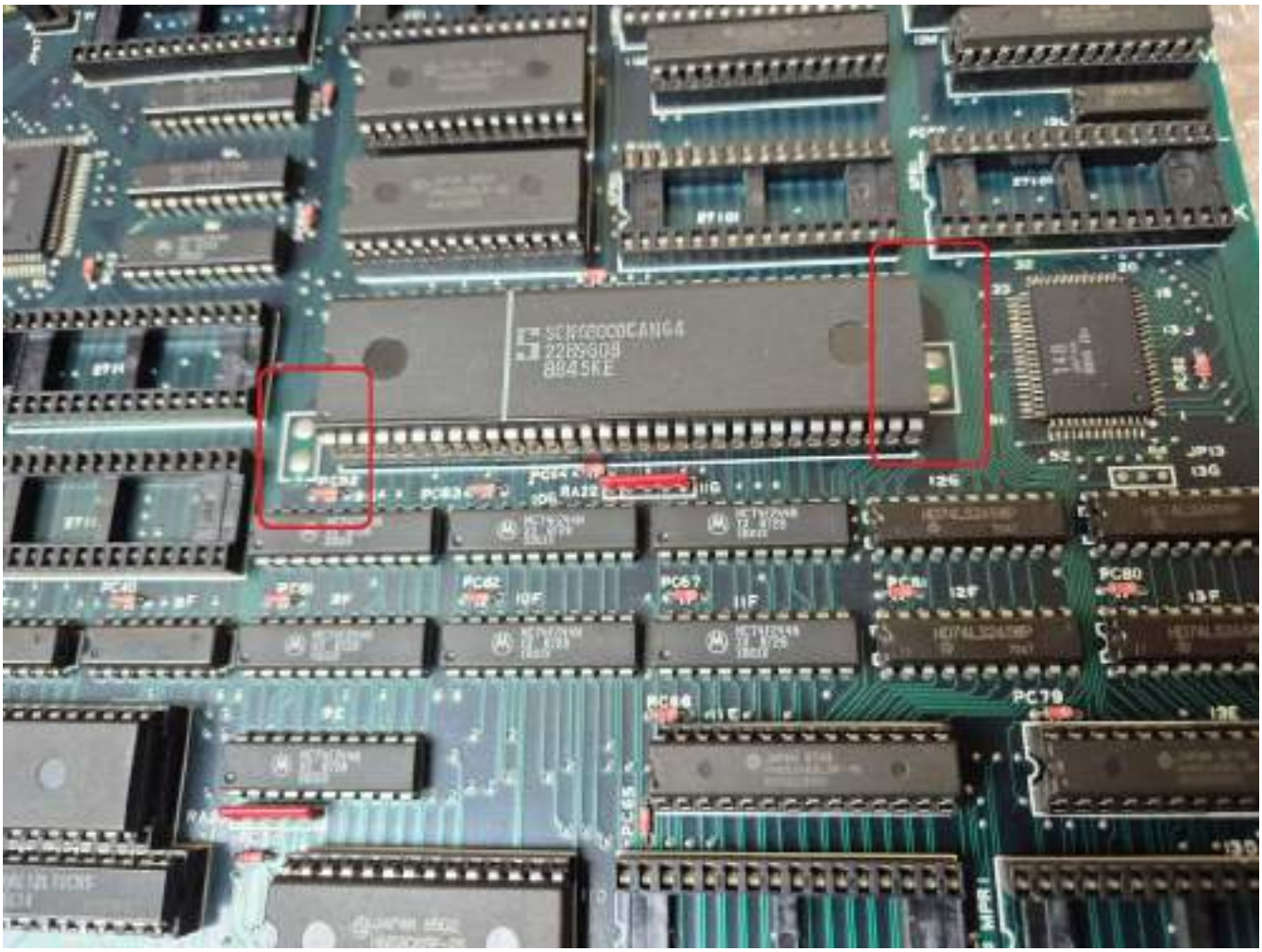
JP60 (* [O--])
JP66 (* [--O])
JP68 (* [--O])
JP67 (* [--O])

JP88 (* [--O])
JP86 (* [--O])
JP80 (* [O--])
JP87 (* [--O])
JP15 (* [--O])

The * is in the PCB marked in silkscreen as a dot. Change them to look as described.

Now, you need to pay VERY SPECIAL ATTENTION to some metal plates used for GND. We have found several ones in different locations, all close to the 68000 Processor and they look like this:

In some cases those GND plates are not mounted in factory, but if they are, you should either remove them or bend them. Notice that this only applies to the MAIN PCB of the (the one with MAINCPU and SLAVECPU), and if any you will find 2 or 3 that are just below the PCB of the multi. In some cases like below, they are not even mounted in the area that could collide with the multi.

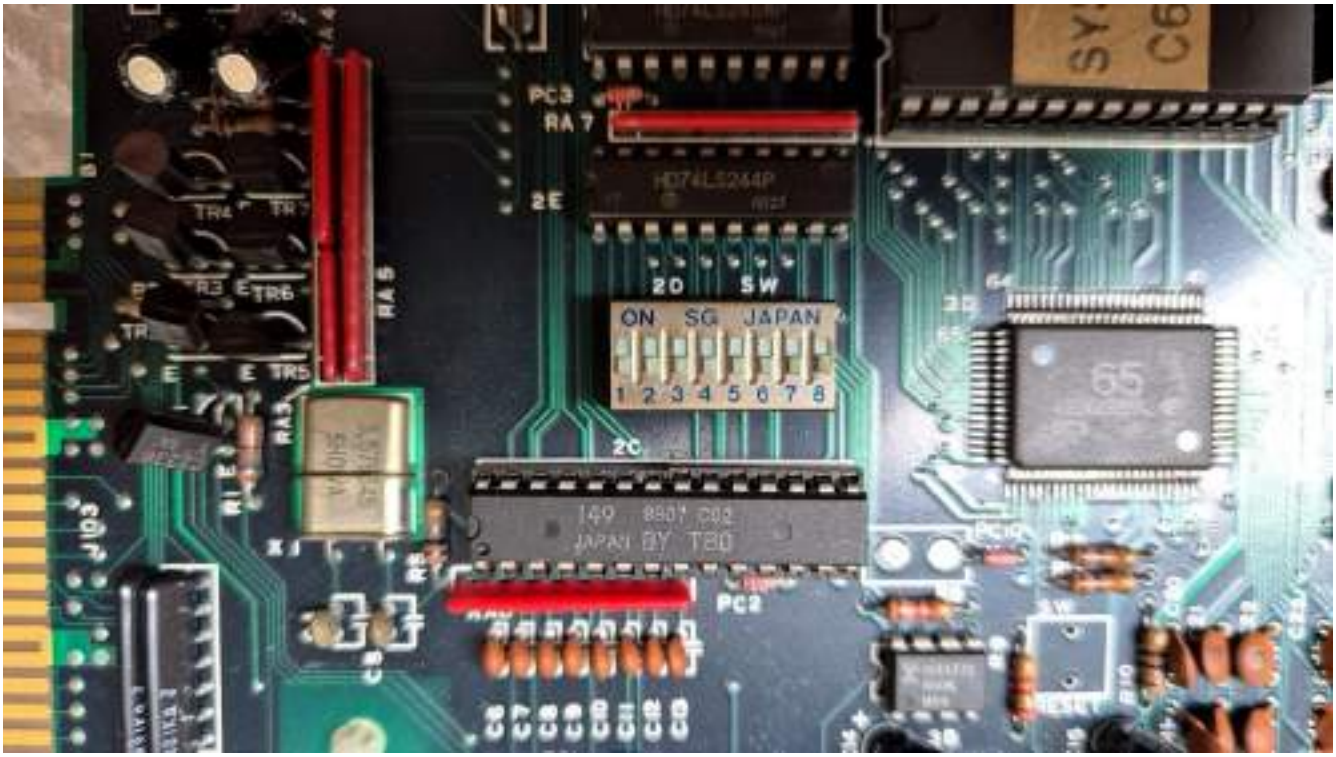


We can now proceed to setting up the Video PCB. In this one, you just need to adjust the jumpers and remove the Mask Roms.
JP3 (* [--O])
JP4 (* [O--])
JP1 (* [O--])
JP2 (* [--O])

JP8 (* [--O])
JP7 (* [O--])
JP6 (* [O--])
JP5 (* [O--])

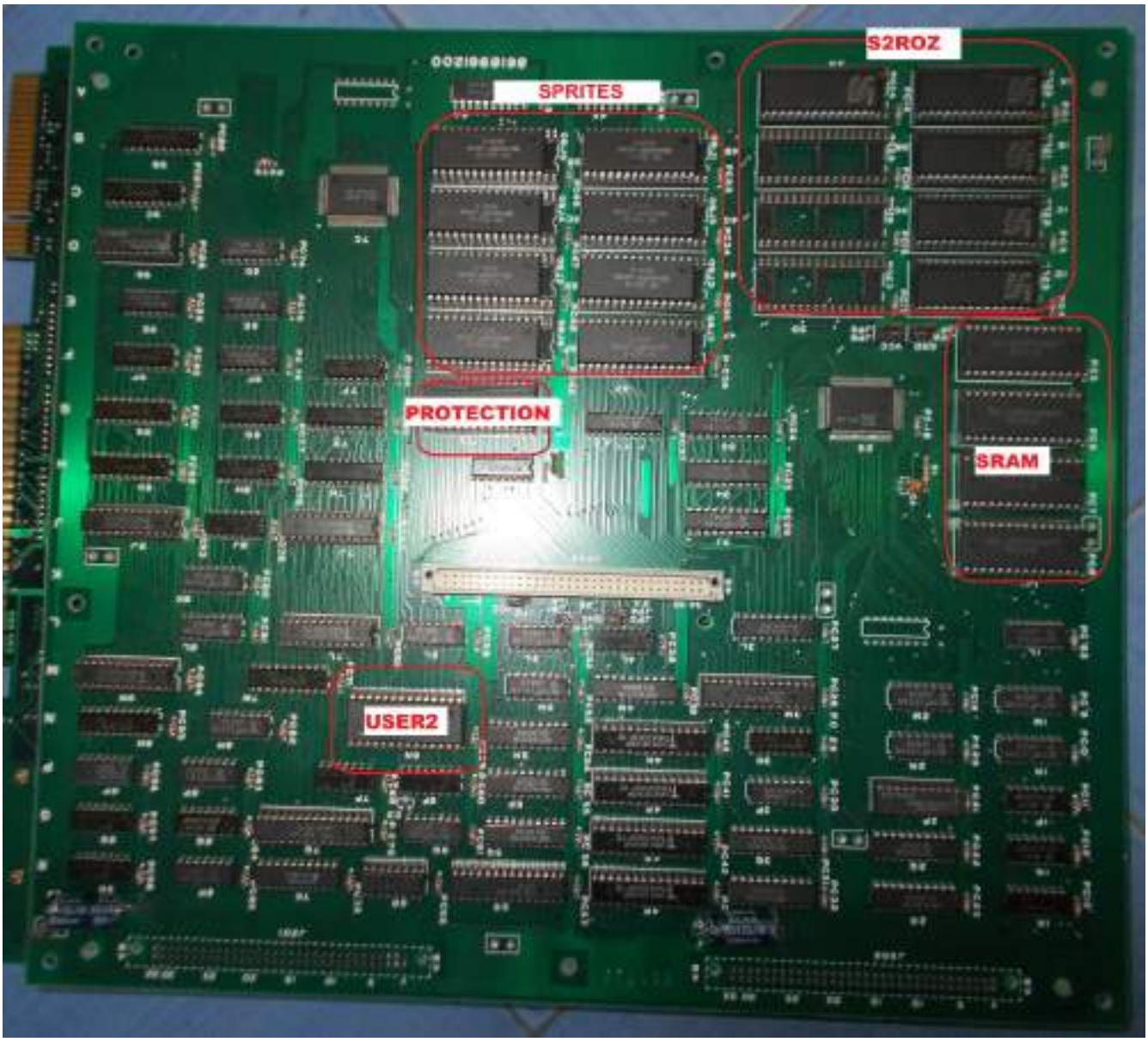
The * is in the PCB marked in silkscreen as a dot.

The next thing that you need to do is to set all dip Switches in the Main PCB to OFF. Make sure that they are set to OFF and then if you want, set them individually to another position in a per game basis. NOTICE that if you don’t put them all to OFF some games will not boot or have a weird behaviors. They are easy to locate and should look like this:



PREPARING THE VIDEO PCB

The Video PCB looks like this and you only need to remove the Mask Roms in the areas: S2ROZ and SPRITES. DO NOT REMOVE either the Keycus (Protection) nor SRAM nor USER2.



Once you have removed the GND plates that sit below the multi PCB in the MAIN PCB, adjusted the jumpers on both Video and Main PCB and have removed the Mask Roms on both Video and Main PCB, you can proceed to installing the multi.

IMPORTANT! #1: Let me repeat it again **YOU MUST** carefully check the GND plates before proceeding. If you leave them and they collide with the multi PCB, you may break it, which is of course easy to notice and not covered by any warranty. **YOU HAVE BEEN WARNED!**

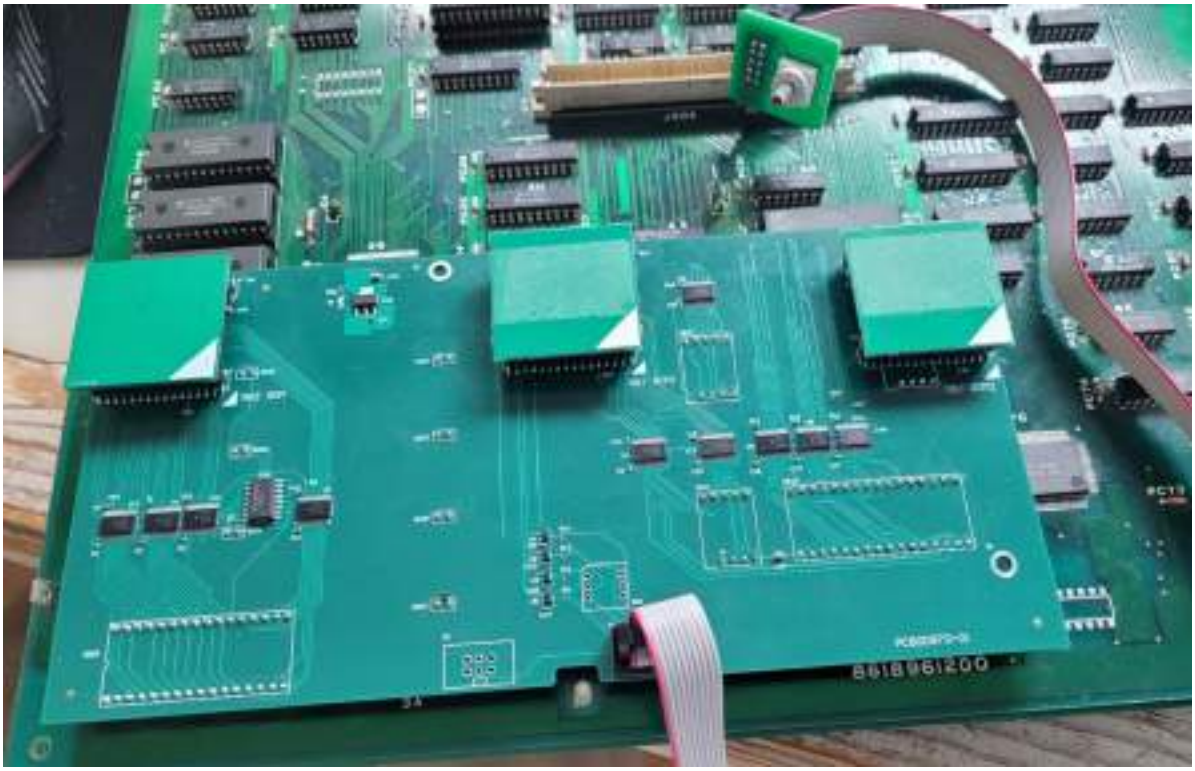
INSTALLING YOUR KIT

The kit is made up of one bigger ‘T’ shaped PCB that has 7 memory modules and has a connector for a rotary switch and another connector that goes to the other smaller PCB of the multi.

Next comes the delicate part of the installation. Gently remove the multi kit from the box it arrived in. Next, remove the protective foam from the underside of the PCB where the pins are. The only proper way to install this is by separating the 2 PCBs of the original Namco System 2 and installing each PCB of the multi separately. If you try to install the PCBs without disassembling them you may apply too much pressure, bend your PCB and break a lot of things. Now we will gently install the multi into place where the original EPROMs were on your System 2 PCB, first Video PCB, and then Main PCB.

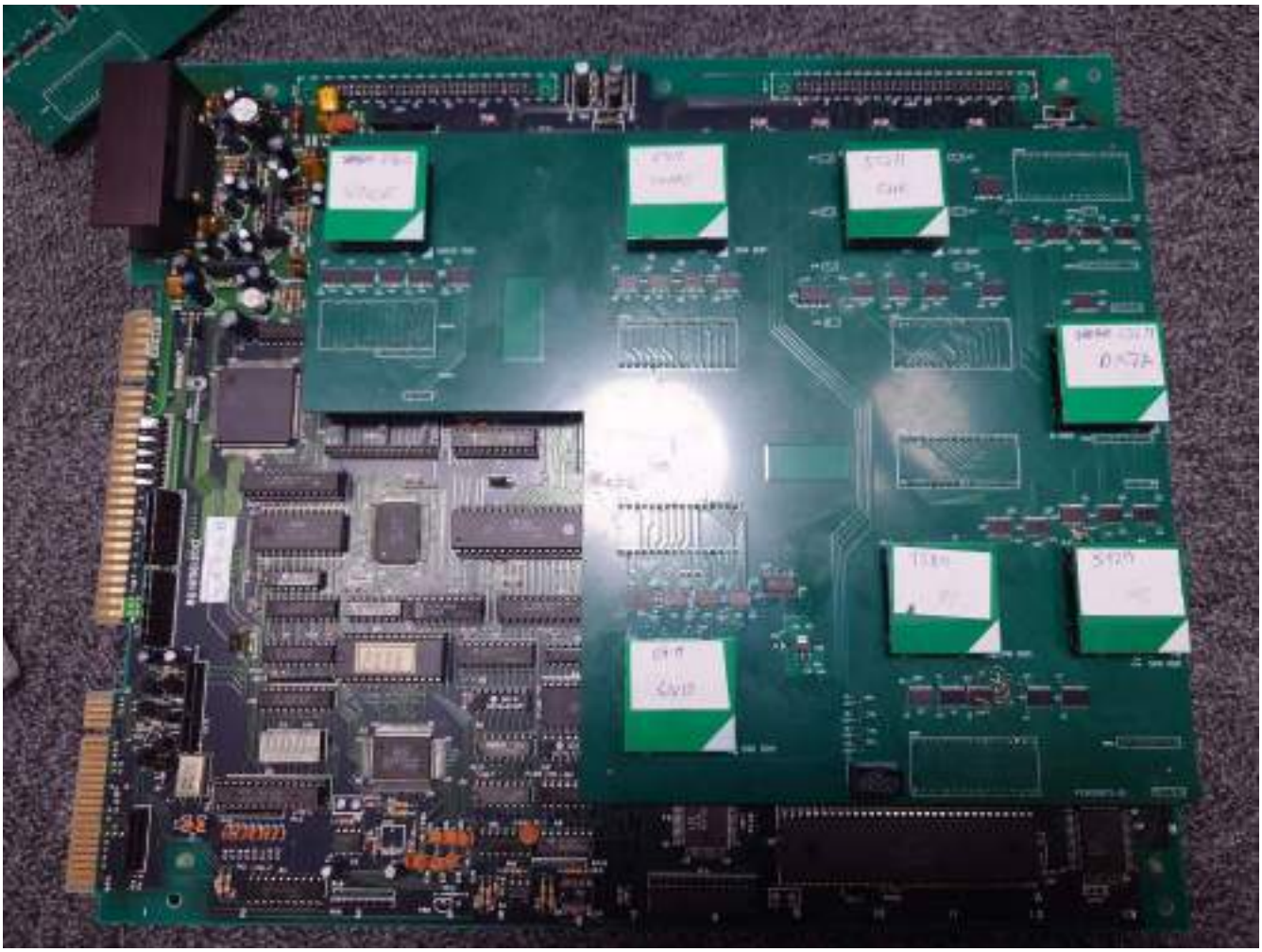
Take your time and install it in a clean and well lit place. Firstly, place the pins on the corners to make sure that it's sitting in the proper places. Once you think that the kit is sitting where it belongs, you can start to press gently on the left, right and corners of the kit until all pins are securely pushed down. Separating the two PCBs to install the multi is mandatory for a good snug fit.

IMPORTANT! When installing the Multi, please take extra care, making sure first that everything is properly aligned and then start pushing gently until all the pins go in and everything fits properly before finally giving it a firm (but not hard) push to secure the multi in place. Once you have done that, your PCB should look like this:



As you can see, the PCB for the Video PCB has only 3 memory modules, instead of many EPROMS. These memory modules can be unplugged and programmed separately. Note that each memory module has a white triangle on the lower right hand corner. Make sure that you align these with the triangles on the main PCB.

Now let’s do the same for the Main PCB:



In this case again, as you can see, the PCB for the Main PCB has 7 memory modules, instead of many EPROMS. These memory modules can be unplugged and programmed separately. Note that each memory module has a white triangle on the lower right hand corner. Make sure that you align these with the triangles on the main PCB.

PROGRAMMING THE MEMORY MODULES

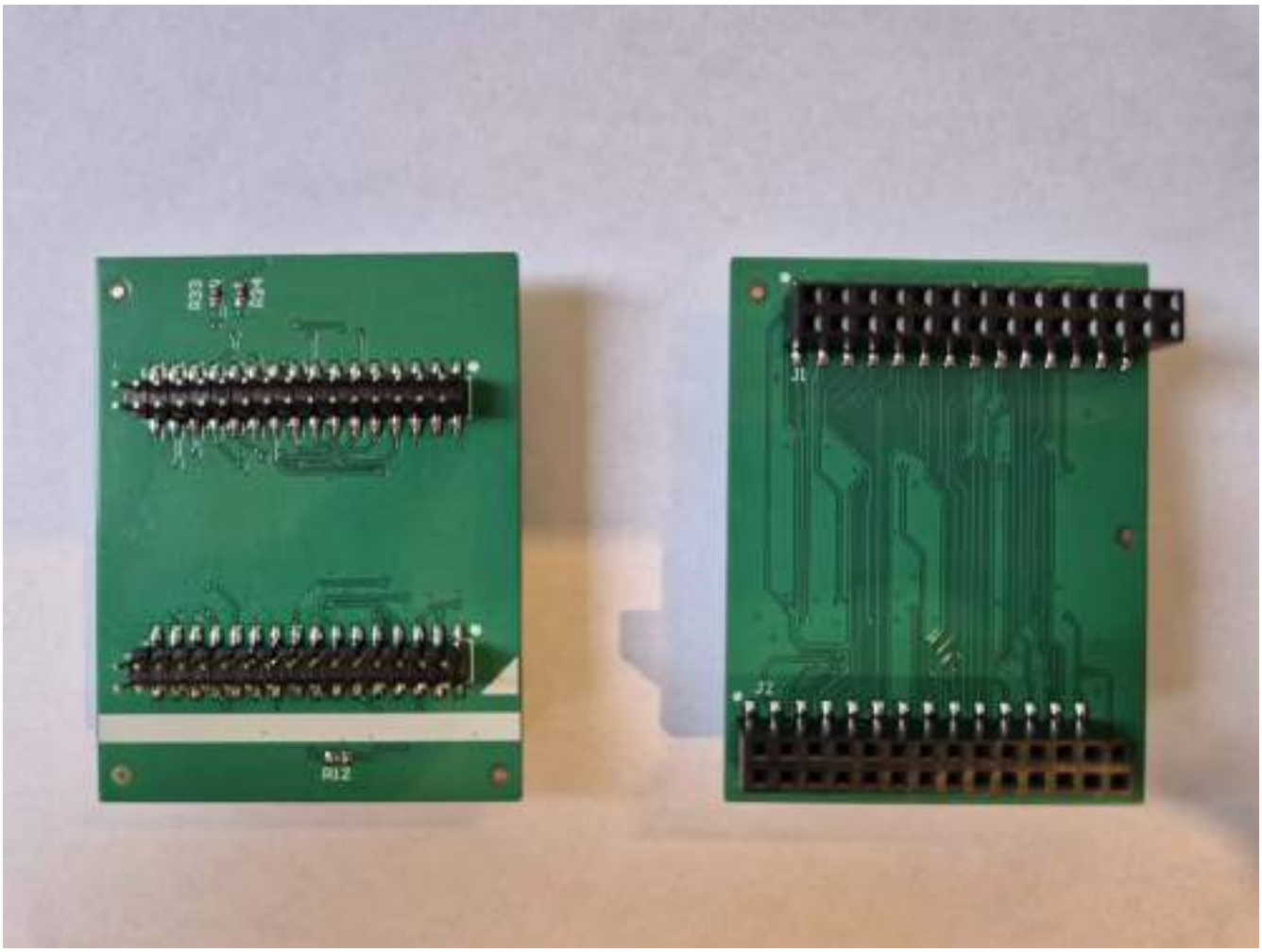
All the modules have different capacity ranging from 128Mbits to 512Mbits.

You need to program all 7 modules of the Main PCB and all 3 of the Video PCB, one by one, by placing them in your programmer using the adapter included.

In order to program the memory modules, you need to use the TL86_PLUS programmer (aka PROMAN). This programmer costs about $125 USD and is easily available through online vendors such as Ali express or eBay and looks like this:

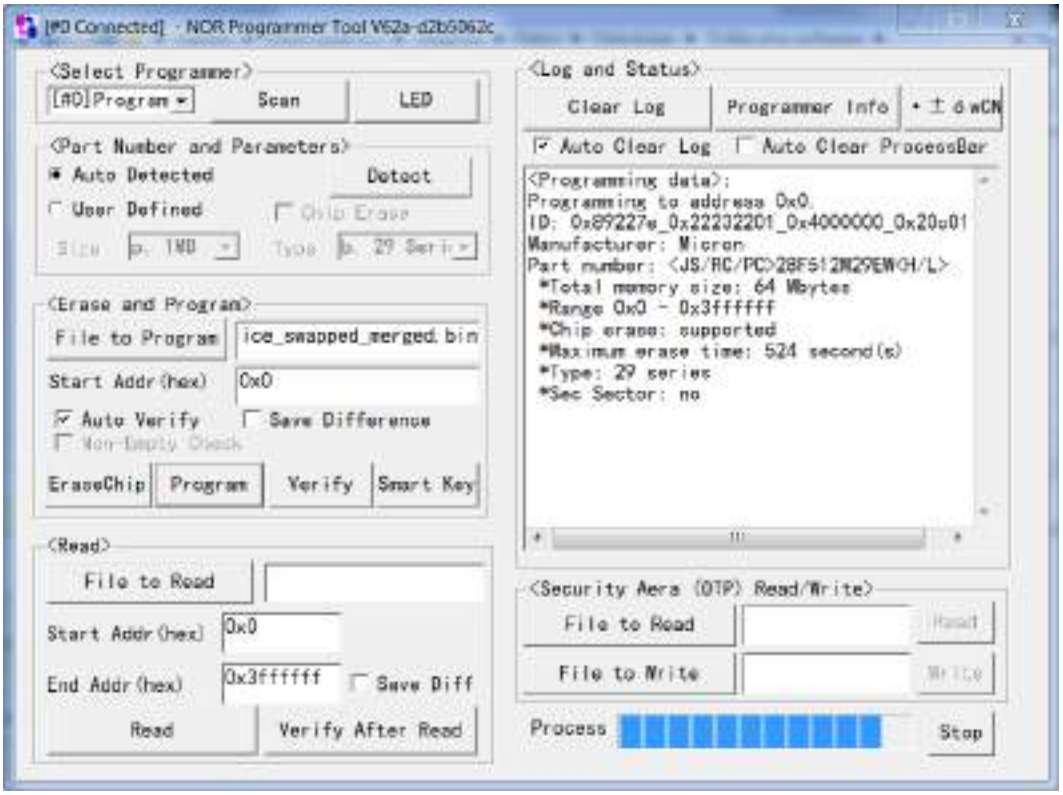
The multi kit come with one adapter. In order to program the 9 memory modules, you simply place each of the memory modules, into the adapter and then plug them into your programmer to write your files.

These is how the adapter looks before and once inserted on the Programmer with the memory module:



Once you have plugged the memory module onto the adapter and then onto the Proman, it should look like this (please refer to the two white markings on the adapter board that will indicate if it's inserted properly):

Once you are in the software for programming NOR flashes (Notice that there is also another .EXE for NAND flashes), press **SCAN** in the <Select Programmer> section, then **DETECT** in <Part Number and Parameters>, then choose the file you wish to program to the chip in <Erase and Program> then press the **SMART KEY** button which automates the erase/write/verify functions. The software should look like this:



There is a script available that you can run in your MAME folder and it will create all the files needed for each of the 9 memory modules for you.

Once you have those files ready, just program the 9 modules one-by-one using your programmer and place the modules onto the system where they were originally located. **Be sure not to mix them up!**

As a final step, make sure that everything is in place and is properly inserted. If everything looks good, set the rotary switch to the game that you want to play and power it on.

NOTE#1 Remember that Dip Switches in Main PCB should be all set to OFF

One possible configuration of games is shown below:

0 ASSAULT → Assault (Rev B)
1 ASSAULTP → Assault Plus (Japan)
2 BURNFORC → Burning Force (Japan, new version (Rev C))
3 COSMOGNG → Cosmo Gang the Video (US)
4 DIRTFOXJ → Dirt Fox (Japan)
5 DSABER → Dragon Saber (World, DO2)
6 DSABERJ → Dragon Saber (Japan, Rev B)
7 FINEHOUR → Finest Hour (Japan)
8 MARVLAND → Marvel Land (Japan)
9 MARVLANDUP → Marvel Land (US, prototype)
A MIRNINJA → Mirai Ninja (Japan, set 1)
B ORDYNE → Ordyne (World)
C PHELIOS → Phelios
D RTHUN2 → Rolling Thunder 2
E RTHUN2J → Rolling Thunder 2 (Japan)
F VALKYRIE → Valkyrie no Densetsu (Japan)

I trust this kit will give you hours and hours of fun, so enjoy!

Darksoft