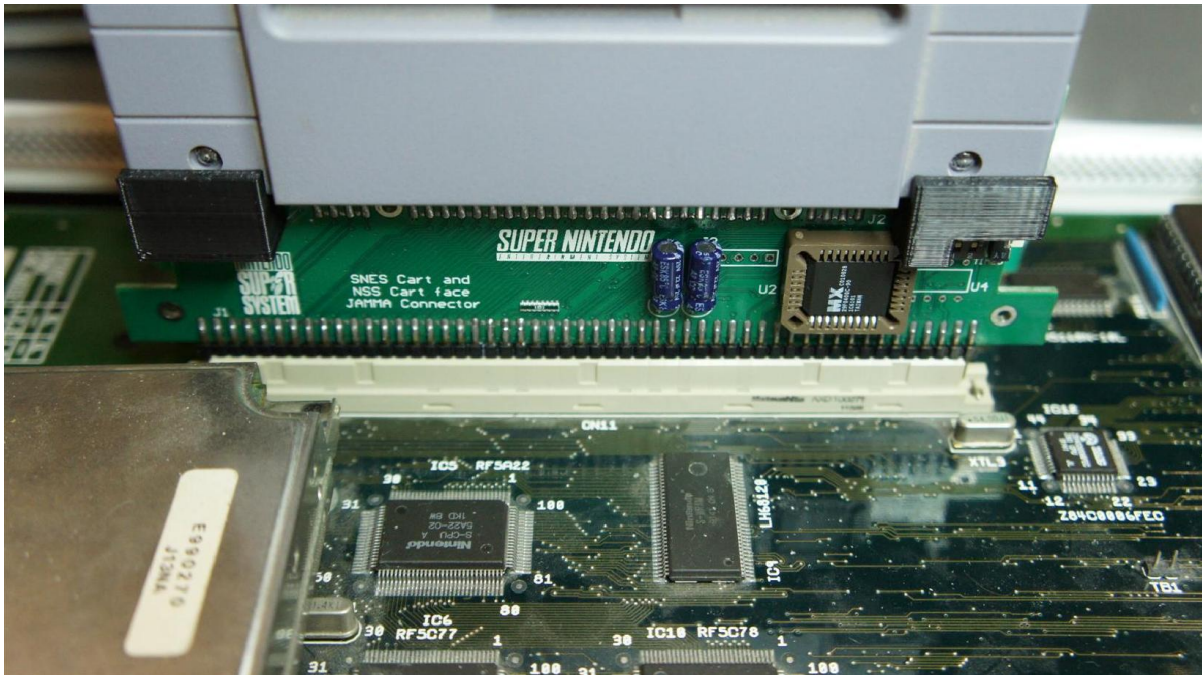


SNES / SFC Cartridge to Nintendo Super System Adapter Installation / Instruction Manual

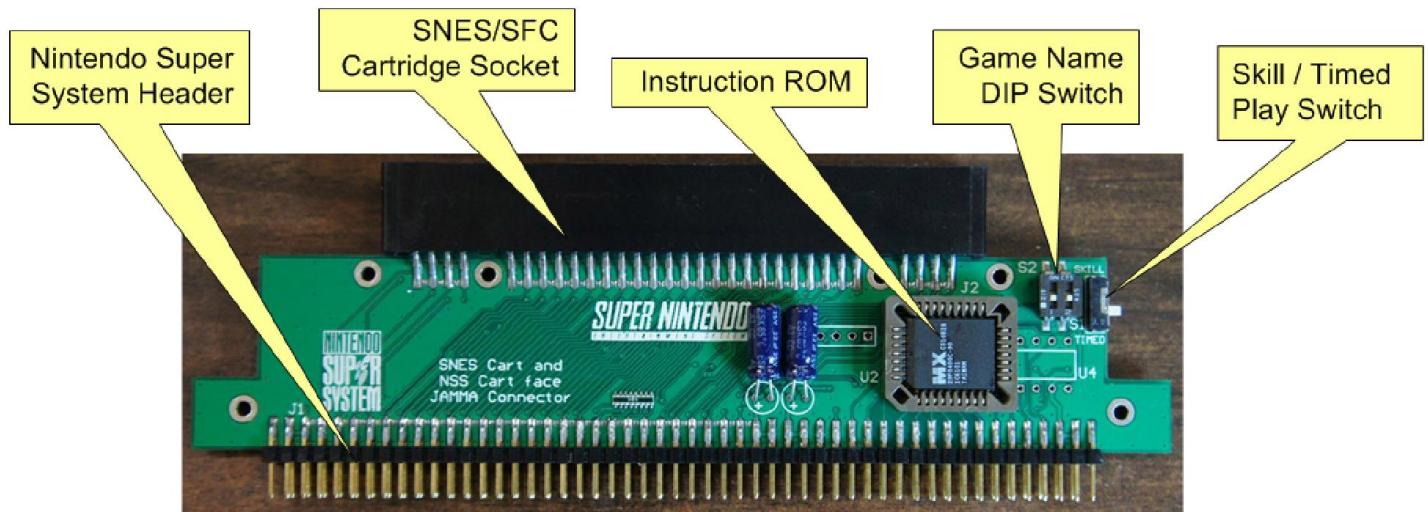
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The latest version of this manual can be found at:
<http://www.projectvb.com/nss>

Super System adapter features:

- Allows SNES/SFC cartridges to be played on the Nintendo Super System
- Works with nearly all SNES/SFC games
 - “Deluxe” model includes CIC clone for SA1 game support
 - Supports flash carts (PowerPak tested, Everdrive and SD2SNES unconfirmed)
- Works with any BIOS
 - V3 BIOS is the latest, and is recommended due to several nice features
- Works alongside original Super System cartridges, or additional adapters
- Supports Timed and Skill mode play
- Socketed instruction ROM allows customization



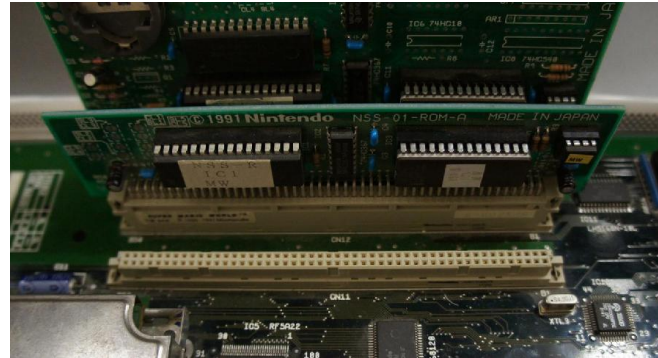
The Super System adapter is warranted for 30 days from date received, if properly installed. Improper installation or modification voids the warranty. The warranty covers only the Super System adapter, not the Nintendo Super System motherboard, SNES/SFC cartridges, NSS game cartridges, etc.

Note: Installation of this device may expose the installer to dangerous voltages. Installation must be performed by qualified technicians only. Install only at Electrostatic Discharge (ESD) safe workstations. Read this entire manual before starting. Install at your own risk.

Installation/use of the Super System adapter is nearly as easy as a standard Super System cartridge. Take your time, and follow the steps below.

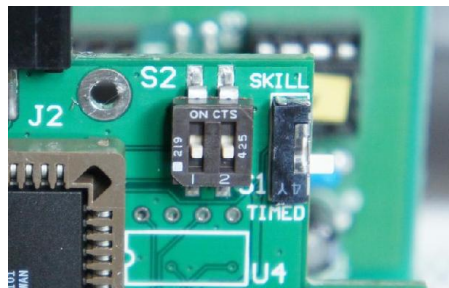
1) Remove Super System cartridge(s) (if necessary):

You must first have an empty slot in the Super System motherboard, so slide the tray out of the cabinet so you can access the Super System motherboard. Carefully remove one or more Super System cartridges if necessary. Do this by lifting the cartridge straight and evenly out of the socket. **Do not pull it out at an angle as this may bend the pins on the cartridge.**



2) Set switches on the Super System adapter:

If you are using more than one Super System adapter, you must make sure that the DIP switches are set to different settings. The DIP switches set the name that shows up on the menu, and if they're the same, the Super System BIOS will only show the first.



With just a single adapter, it's recommended to leave the switches at 1=OFF 2=OFF, which will be named "SNES Cart". If you have multiple adapters, it's recommended to make the switches correspond to the slot it's placed in. For example, 1=ON 2=OFF is named "SNES Cart 1". Likewise, 1=OFF 2=ON is named "SNES Cart 2", and 1=ON 2=ON is named "SNES Cart 3".

Using the slider switch, you can select between TIMED and SKILL modes. TIMED mode is the standard mode which lets you play for a specified time, and add credits to continue. SKILL mode is a mode supported on several Super System games, which lets you play until you lose. The game does not allow you to continue once you lose... it simply returns to the main menu.

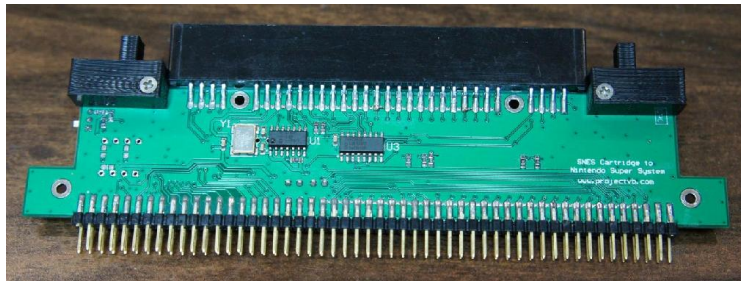
All switches must be set with the power off.

3) Install brackets (optional, included with “Deluxe” adapter only):

The “Deluxe” adapter included brackets to add additional support for the SNES/SFC cartridge, as well as to prevent the cartridge from being installed backwards. Brackets are provided for SNES (left) and SFC (right) cartridges.



To install, place the desired bracket on the proper side. The side with the notch goes over the switches. Press it firmly into place, making sure that the hole in the plastic is lined up with the hole in the PCB. The brackets fit snug, so while not completely necessary, screws are included to install the brackets (**they are small, and wrapped in masking tape... be sure to remove from the plastic bag before discarding**). Make sure the holes are lined up and install the screw (**do not over tighten or you may crack the plastic**).



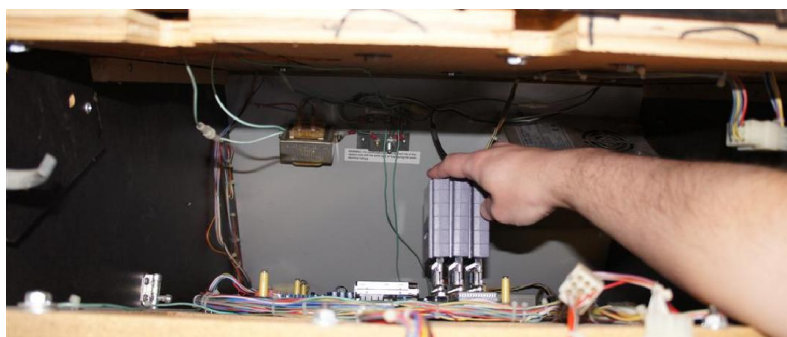
4) Install adapter(s) into Super System motherboard:

Now you're ready to install the adapter(s) into the Super System motherboard. Insert the adapter into the slot, like a standard Super System cartridge. **The front of the adapter (side with the logos) should face the JAMMA connector.** There is an extra pin on each end to ensure you don't install it backwards. **Make sure the pins are all lined up, and carefully push the adapter into the socket straight and evenly as shown below, with the extra pin going into the notched area of the socket.**



5) Slide the Super System motherboard back into the cabinet:

In a dedicated cabinet, the sliding tray won't clear the marquee panel with a cartridge installed in the Super System adapter, so **you must slide the tray back into the cabinet before installing SNES/SFC cartridges.** Likewise, the SNES/SFC cartridges must be removed before attempting to slide the motherboard tray out.

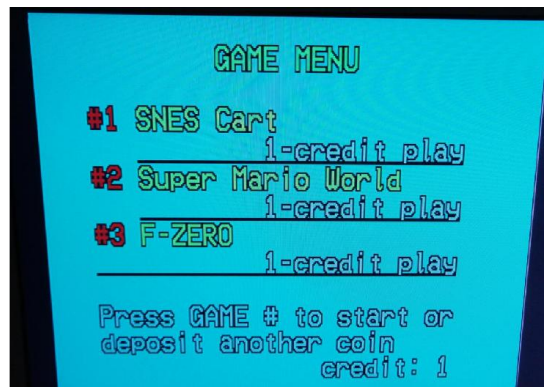


6) Install SNES/SFC cartridges into Super System adapter(s):

The final step is to install the SNES/SFC cartridge(s) into the Super System adapter(s) into the Super System adapter(s). **The cartridge must be installed with the label facing the JAMMA connector** as shown below.



Finally, turn the game on. You should see the adapter in the list as “SNES Cart”. If not, go back and confirm everything is installed as described above.



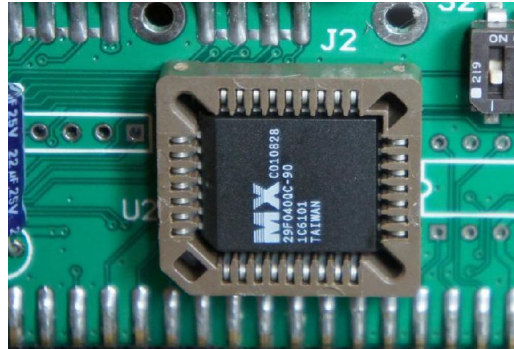
7) Removal of the Super System adapter:

When removing the adapter from the Super System motherboard, you must use care to ensure you don't damage the adapter by bending the pins. Using both hands, carefully and evenly lift by the “wings” of the adapter. **Do not lift by one corner or at an angle, or you may bend the pins.**



8) Instruction ROM (optional, advanced users only):

This adapter has a socketed flash chip which contains the name of the cartridge as shown in the menu, as well as the on screen instructions. This manual won't go into the details necessary to create new instructions, but will describe the technical details of the implementation used on this adapter.



The flash chip is an MX29F040QC-90, in a PLCC package. Address lines A0-A12 (8KB) are connected to the Super System motherboard, like a standard Super System cartridge. A13-A15 are connected to the switches, and A16-A18 are unused (connected to GND). A13 is connected to SW1 and A14 to SW2 on the DIP switch S2. A15 is connected to the SKILL/TIMED switch S1.

The data should be assembled on the chip in this order:

S/T	N1	N0	
0	0	0	- TIMED 3
0	0	1	- TIMED 2
0	1	0	- TIMED 1
0	1	1	- TIMED 0
1	0	0	- SKILL 3
1	0	1	- SKILL 2
1	1	0	- SKILL 1
1	1	1	- SKILL 0

Pad to 512KB (append 0x70000 bytes) to fill the flash chip.