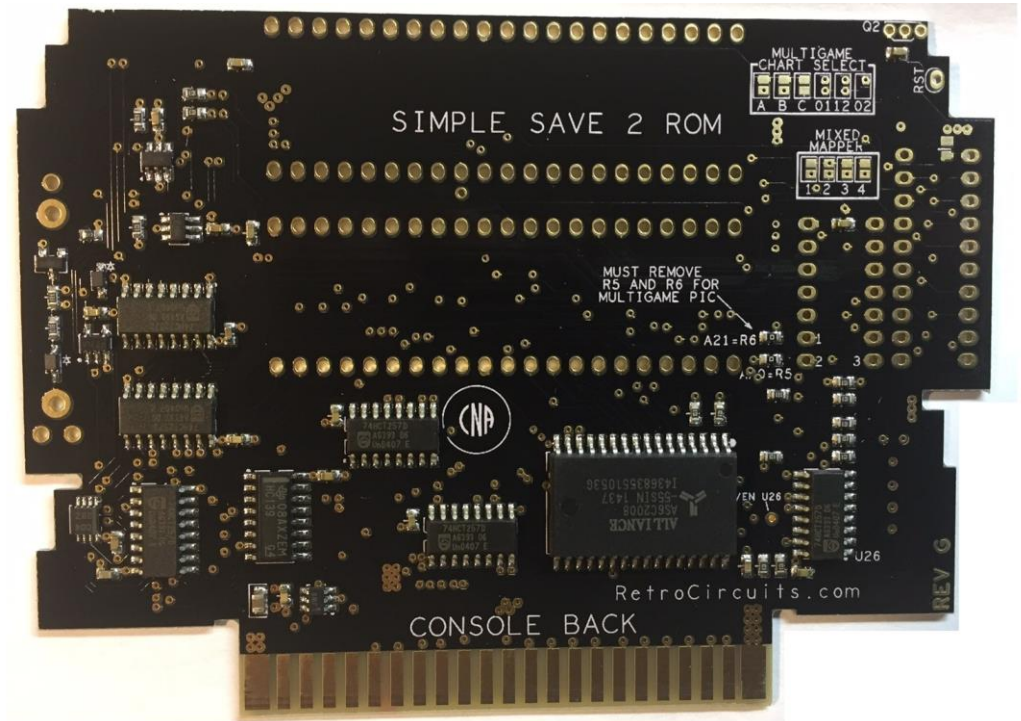
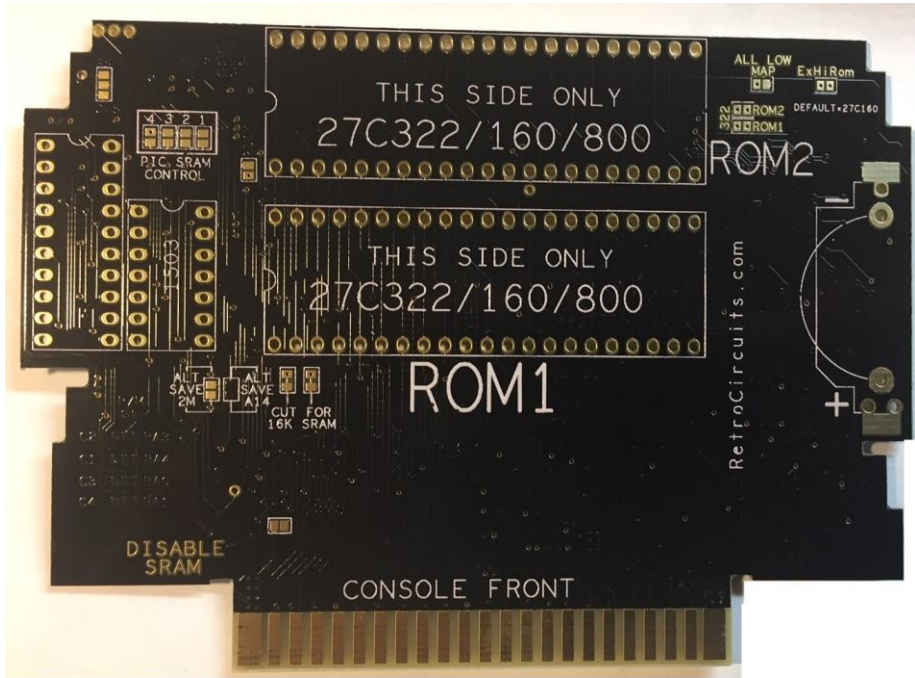


# The “Simple-Save 2 ROM” pcb for the Snes. REV G



The “Simple Save” pcb is a more simple design but still featured packed. It’s primary purpose is to make repo games that use only 1 or 2 roms (1 rom is the vast majority of snes games). **THIS PCB is for games that SAVE !**

**\*\*NOW with 16K SRAM support\*\***

Like its predecessors, it has many features, and they are:

Hi and Lo mapping

Exhirom mapping (2 roms)

256K sram games Hi or Lo mapped (Hi/Lo auto switching now)

Multigames (within a max of 2 roms) with optional Micro-controller

Multigames can be mixed maps.

## **This pcb can use these ROMs:**

**27c322 (32mbits, 4mBytes)**

**27c160 (16mbits, 2mBytes) This includes the Flash Rom version MX29F1615**

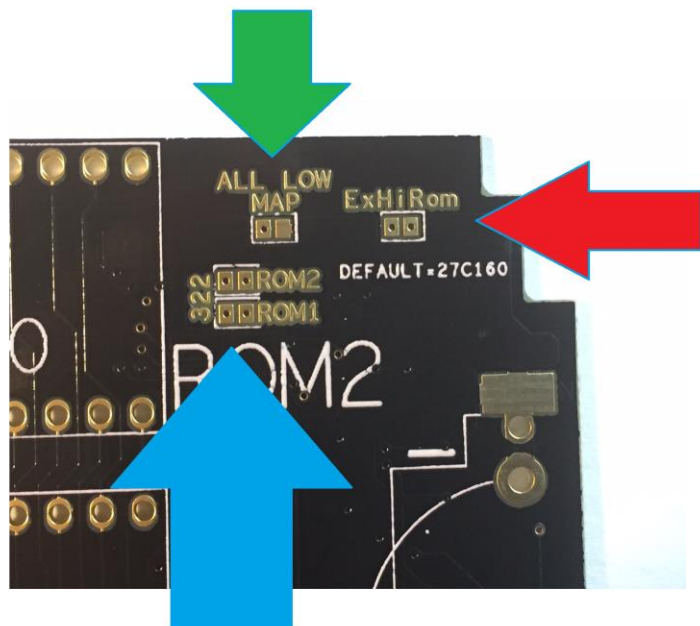
**27c800 (8mbits, 1mByte)**

## **I'll divide this manual into 2 sections.**

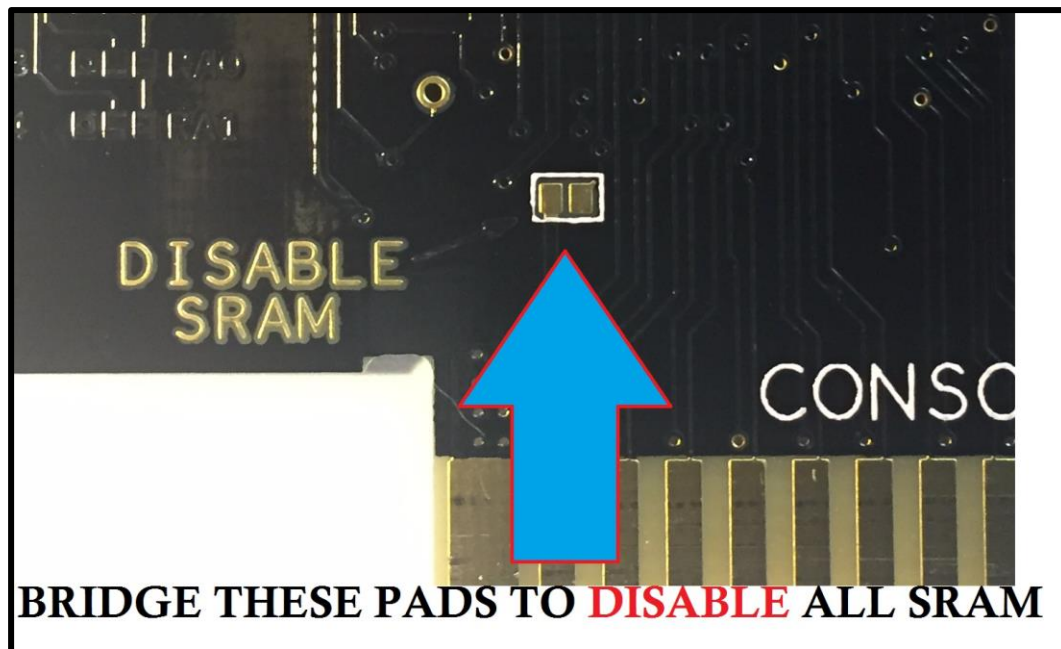
**Section 1: How to make a single game.**

**Section 2: How to use for multi-game.**

These jumpers are the main ones you will use.

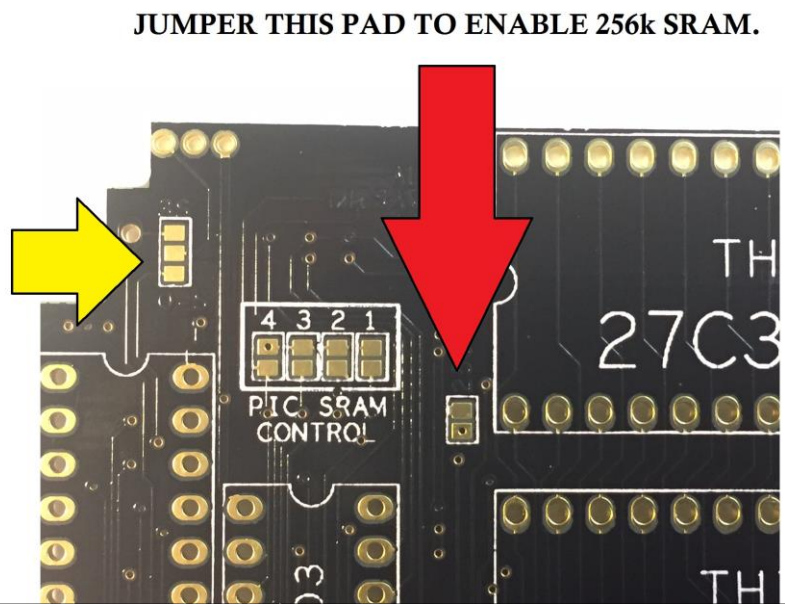


#1



#2

This jumper is used only if you are using the magnet sensor (rare)



#3

## Section 1: Single game that saves

Determine the size of the game and you want to make.

Set the ROM SIZE jumper ONLY if you are using a 27c322. Leave these jumpers open if 27c160/800. **PICTURE #1**, blue arrow

If your game is Lo mapped, bridge this “ALL LOW MAP” jumper (Green arrow). If your game is Hi mapped, then do NOT bridge this jumper. Solder your ROM in where it says – 27c322 “this side only” ROM1 spot.

Solder in your battery. **DONE!!!**

If your game requires 256k sram, then jumper the 256k shown in **PICTURE #3** red arrow. When using this jumper, Hi map and Lo map switching is automatic.

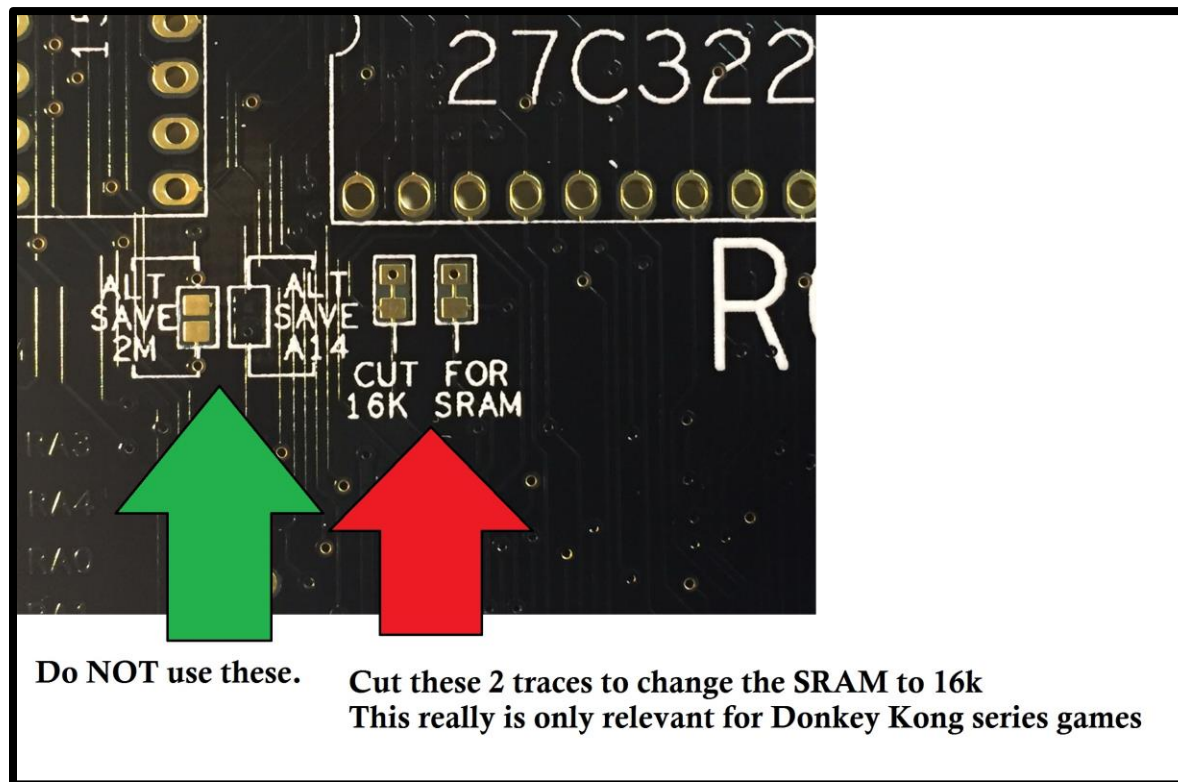
**ExHiRom games:** ExHiRom games (Extended Hi Rom) is a mapper that runs games that are 6Mbytes in size. Use same instructions as above but also bridge the Ex jumper. ExHiRom games require 2 roms. The first 4mB of the 6mB file is ROM1. The last 2mB of the 6mB game is ROM2. **PICTURE #1**, red arrow

To configure the cart to ExLoRom, just bridge both the ALL LOW MAP and ExHiRom jumpers. Only a few hacks utilize this mapping.

**SRAM DISABLE:** in **PICTURE #2** shows a trace you can cut that will disable all sram on the cart.

Donkey Kong 1,2,3 or competition uses 16k sram and has a protection to detect 16k sram. For any of the DKC games to work, the 16k SRAM trace cut is necessary. **THIS CUT MAKES THE ENTIRE CART 16K ONLY.**

See below picture for 16K cut points.



## Section 2: Multi-game (which are several single games in 1 cartridge)

General notes: PADS A, B, C set the “Chart” patterns (from the below table)

PADS 1, 2, 3 are for mixed mapper switching. (also in the below table)

**NEVER** jumper more than 1 of the pads 1,2 or 3 at a time

**NEVER** jumper the “ALL LOW” and any of the pads 1, 2, or 3

The Charts dictate how the build should go, especially with respect to the mixed mappers.

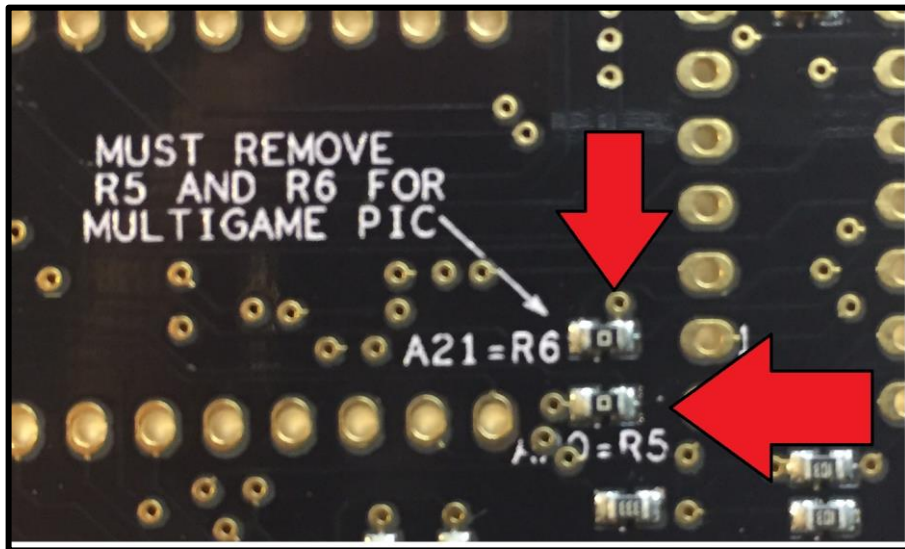


The charts automatically slice up the SRAM for multi-saves and it also controls A20 & A21 joining and “cutting”. So all you have to do is set the right chart jumper and build your rom(s) according to the chart. Remove the 2 resistors.

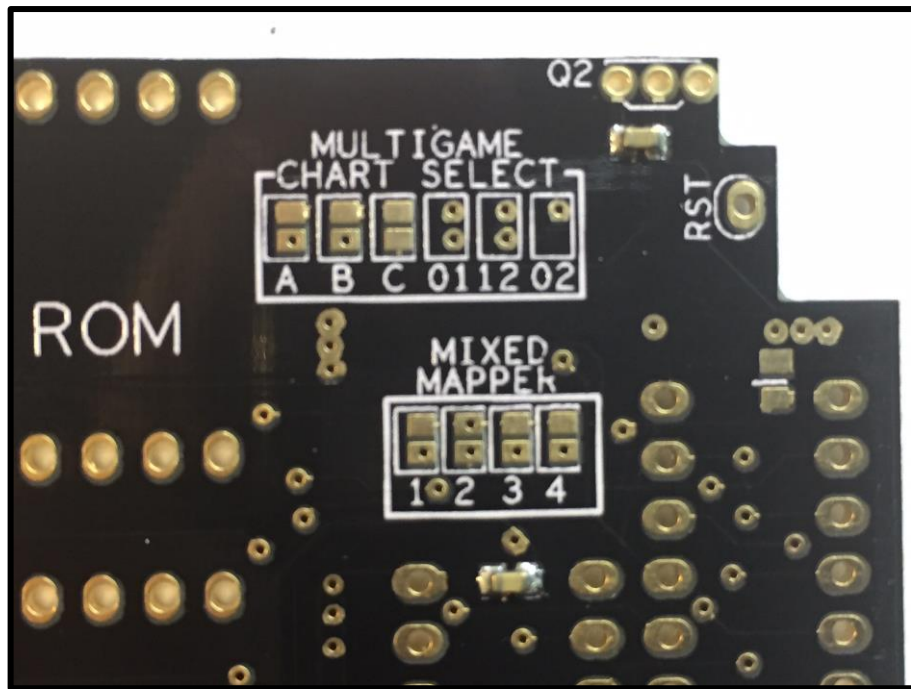
In the charts, ROM1 is the first rom to be installed ALWAYS. ROM2 is ALWAYS the top rom.

2 resistor need to be removed for Multi-games to work. See pic below.

Multi-game builds require the **OPTIONAL** micro controller PIC16F1503



Remove these resistors for multigame config. Usually just heating up the resistor enough and they will just side off. BE CAREFUL to not damage the pads!



Only use PADS ABC.

The Charts for Multi-games are divided into 2 regions. Multi-games that fit on 1 rom or 2 roms.

SINGLE ROM **27c322**: Using A20 & A21, a single 4mbyte rom can only be sliced up a handful of ways.

2mByte x 2

1mByte x 4

3mByte + 1mByte

1mByte + 1mByte + 2mByte

**\*SINGLE ROM 27c160:**

**1mByte x 2 (Chart B)**

**2 ROMS:** is just a combination of the above examples.

**THE EASIEST MULTIGAME IS TO HAVE GAME1 IN ROM SPOT 1 AND GAME2 IN SPOT 2. No need for a hex editor. Chart setting would be A,B. Then set your mapper (either mixed or fixed).**

**IF YOUR MULTI IS NOT MIXED MAPPER, THEN DON'T USE THE MIXED MAP JUMPERS. JUST USE THE "ALL LOW" for Lo map. CART IS BY DEFAULT (NO JUMPERS) Hi map.**

**With only 1 exception\*, ALL the multigames are on 27c322 ROM's.**

**General rule: charts for Single rom only use 1 letter, 2 roms use 2 letters.**

**The column "ROMS" in the charts shows how to build the multi's in the ROM.**

**Game Cycling is done by holding the reset button for about 3 seconds to switch over.**



**Reminder: Multi-Games are only possible with the optional (additional cost) micro controller.**

16F1503			Hi/Lo mapper settings			Chart Settings		
			SRAM A15		SRAM A16			
RESET			3	2	1	C	B	A
1 ROM	2 GAME MULTI 27C322	POWER ON	L	H	L	no chart settings (default)		
		CYCLE 1	L	L	H			
	4 GAME MULTI 27C322	POWER ON	L	H	L	A		
		CYCLE 1	L	L	H			
		CYCLE 2	H	L	L			
		CYCLE 3	H	L	H			
	2 GAME MULTI 27C160	POWER ON	L	H	L	B		
		CYCLE 1	L	L	H			
	3 GAME MULTI 27C322	POWER ON	L	H	L	C		
		CYCLE 1	H	H	L			
		CYCLE 2	L	L	H			

ROMS	GAMES	SIZES
2mb	1 ROM	
2mb		
1mb		
1mb		
1mb		
1mb		
1mb		
1mb		
2mb		

2 ROMS

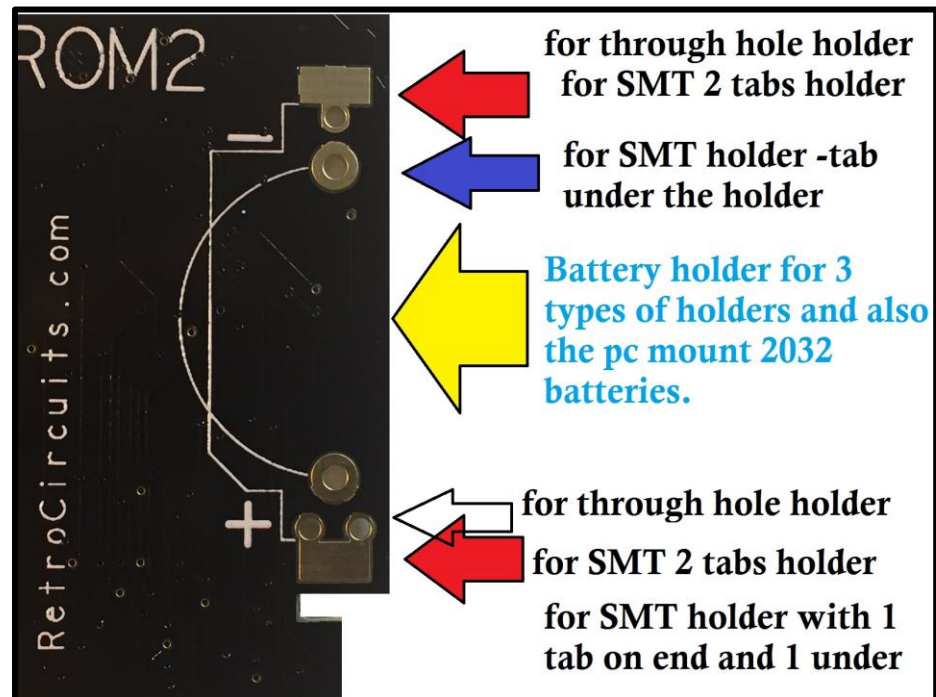
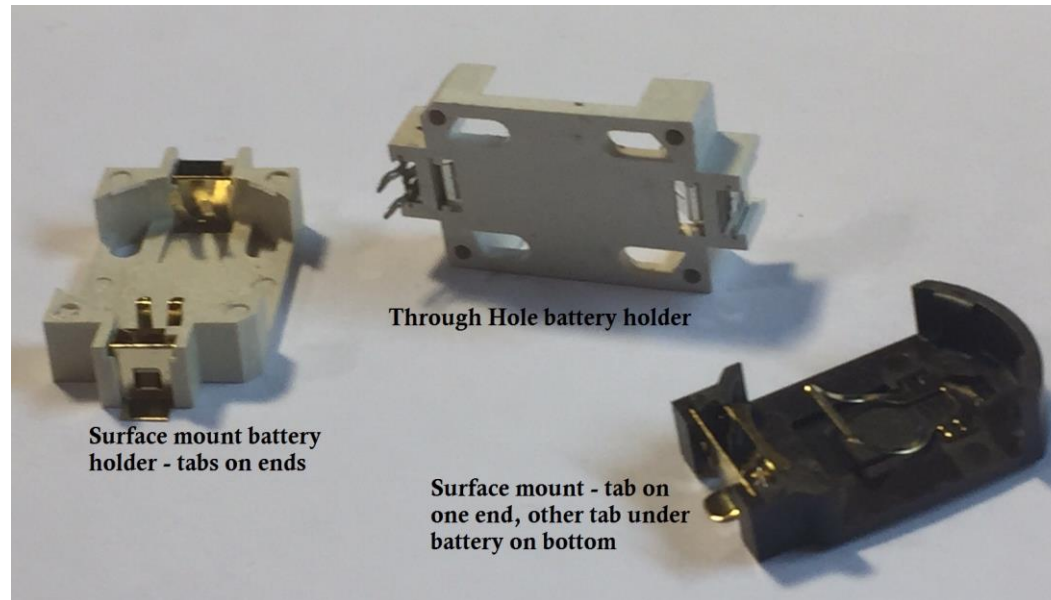
16F1503			Hi/Lo mapper settings			Chart Settings		
			SRAM A15		SRAM A16			
RESET			3	2	1	C	B	A
4			7	8	9	11	12	13
4 GAME MULTI 27C322	POWER ON		H	L	L	B,C		
	CYCLE 1		L	L	L			
	CYCLE 2		H	L	H			
	CYCLE 3		L	H	H			
NOTE: 2 ROM AST: for SMT OR DIP versions, cut pin 7 and 9 of uC								
3 GAME MULTI 27C322	POWER ON		H	L	L	A,B,C		
	CYCLE 1		H	H	H			
	CYCLE 2		L	L	H			
2 GAME MULTI 27C322 4m+4m ROM1+ROM2	POWER ON		H	H	L	A,B		
	CYCLE 1		H	L	H			
4 GAME MULTI 27C322	POWER ON		L	L	L	A,C		
	CYCLE 1		H	L	L			
	CYCLE 2		H	L	H			
	CYCLE 3		L	H	H			
						ROMS	GAMES	SIZES
						ROM1	GAME1	2mb
							GAME2	2mb
						ROM2	GAME3	2mb
							GAME4	2mb
						ROM1	GAME1	2mb
							GAME2	2mb
						ROM2	GAME3	1,2,4MB
						ROM1	GAME1	1,2,4MB
							GAME2	1,2,4MB
						ROM1	GAME1	1mb
							GAME2	1mb
							GAME3	2mb
						ROM2	GAME4	1,2,4MB

+

This pcb is made by SnesUnlimited. Contact at [snესunlimited@gmail.com](mailto:snესunlimited@gmail.com) for support.

## Battery Holders (if you want to use one)

This pcb can host several different battery holder types. (eBay is place to look)



## Known exceptions: Games that do NOT work on this pcb or cart creation pcb

Special chips games, of course will not work on this pcb. Games like StarFox, Yoshi's Island, Mario RPG, etc... are special chip games.

Star Ocean will not run on this pcb.

### **Standard Games known to not work:**

Y's III -- game runs but due to an unusual sram mapper, it won't save.

Donkey Kong 1,2,3 or competition uses 16k sram and has a protection to detect 16k sram. For any of the DKC games to work, the 16k SRAM trace cut is necessary. **THIS CUT MAKES THE ENTIRE CART 16K ONLY.** So making a multi with these traces cut limits which games you can mix.