

SEGA Game Gear McWill FULL MOD REV 2.1

Quick Guide 2ASIC and 1ASIC (except Majesco Game Gear)

ATTENTION ! Removing and soldering the ASICs needs some solder experience and is on your own risk!

Liability impossible!

Required materials:

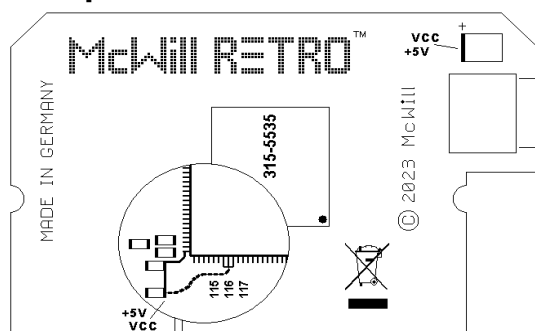
McWill GG FULL MOD PCB with 640x480 IPS, new power board with LiPo batteries, new sound board (optional), daughter board for 2ASIC OR 1ASIC and hot air station.

1. Step: Remove ASICs of the GG PCB and cartridge port

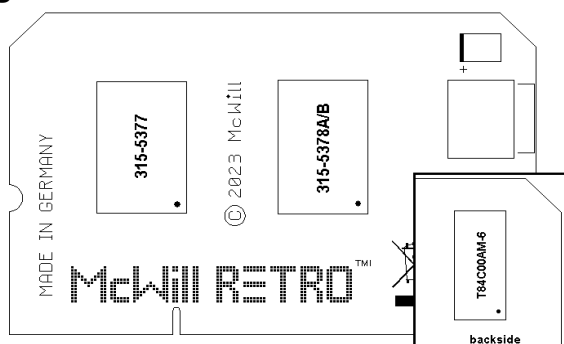
ATTENTION! Make sure that all power is **off**. Disconnect **ALL** cables.

1. Remove **32.2159 MHz** crystal and **cartridge port** of the original GG PCB.
2. Remove **2 ASICs** and the **Z80 cpu** (for 2ASIC PCBs) OR **1 ASIC** (for 1ASIC PCBs) with hot air station.
3. Clean all pins of the chip/chips if necessary.

2. Step: Solder ASICs to the daughter boards



Daughter board for the 1ASIC GG



Daughter board for the 2ASIC GG

Solder the ASIC to the daughter board. If you have a **2ASIC** PCB you also need to solder the **Z80** to the backside of the daughter board. Then insert the **cartridge port**.

After that you can solder the **32.2159 MHz crystal** to the PCB. Please check all pads again, especially **VCC** and **GND**! If there's a short circuit the **ASICs** and **FULL MOD** could be damaged!

PATCH for 1ASIC PCBs: PINs 115, 116 and 117 (connected together) need to be wired to +5V VCC. (+5V VCC can be found at the **yellow tantalum cap** at the upper right or on the left at resistor **912**)

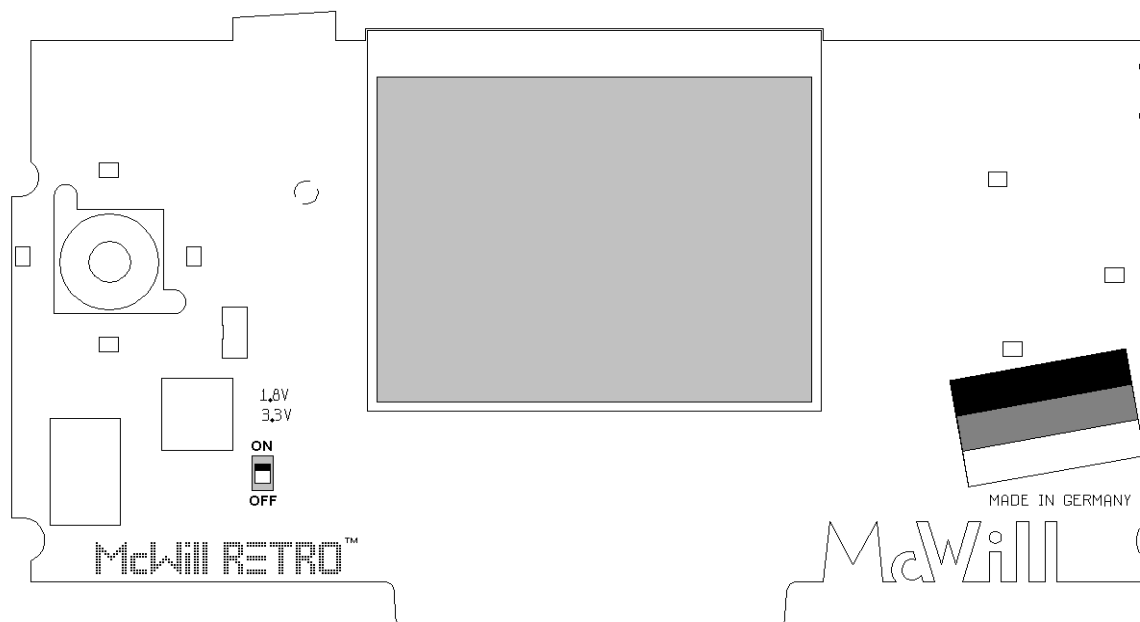
- - The 7th PIN of the lower left is PIN 115, the 8th PIN is PIN 116 and the 9th PIN is PIN 117 - -

For **1ASIC** PCBs you need to remove the **2 caps** and replace **resistor by 0 Ohm** or bridge (see last picture).

Analog stick / Dpad settings

The **analog stick** is optional ! If you want to use **Dpad** you can remove the **analog stick** and the switch setting has to be **OFF**. Setting **ON** activates the **analog stick** again.

But I recommend to test the analog sticks behaviour with different games before removing.



Menu options

Hold **BUTTON UP** and then press **START** to enter menu. For leaving menu press **BUTTON 2** always. The 1st menu is for switching from **3.5" display** to **DIGITAL VIDEO OUT** by pressing **BUTTON 1**.

Press the **RIGHT BUTTON** once for next menu for switching to scanlines by pressing **BUTTON 1**.

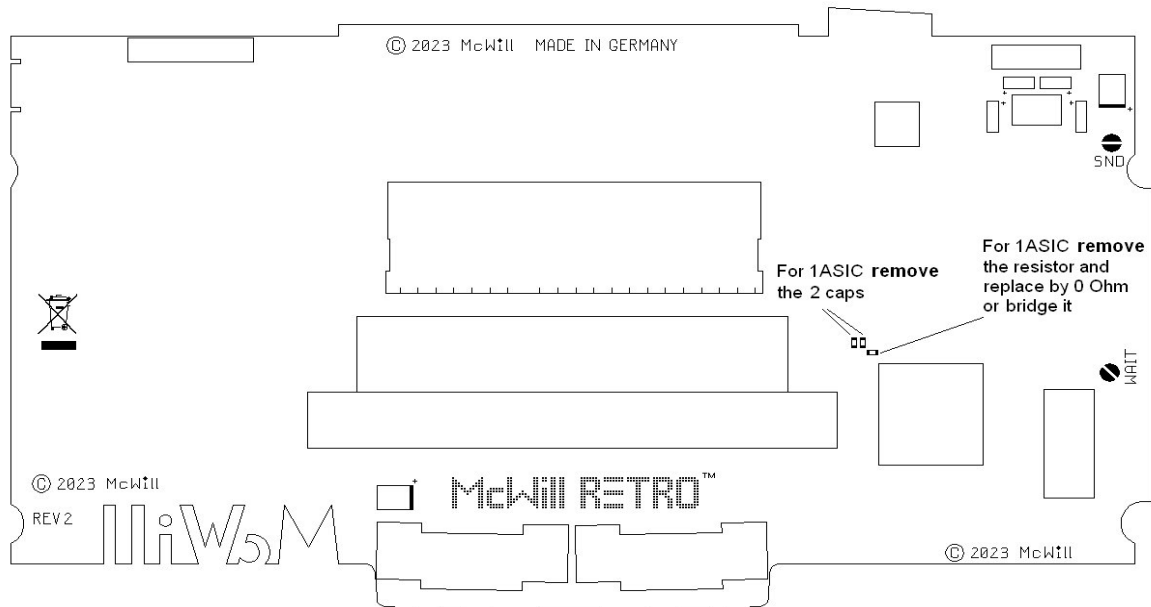
By pressing the **LEFT BUTTON** you will enter the RGB LED menu.

Pressing **BUTTON UP** or **BUTTON DOWN** changes the color of selected LED.

Confirming the LED color by pressing **BUTTON 1**. **BUTTON 2** turns off selected LED.

Once the menu is enabled the sound is still **ON** and the cpu is still working.

To disable the sound and / or the cpu you need to put a solder blob onto the **SND** jumper and / or the **WAIT** jumper at the right.



Consolized GAME GEAR

If you also want to use gamepads, joysticks or the GG link cable you need to add 1 or 2 **DSUB** 9pin female connectors. Of course you have to trim the upper and lower case then.

Trimming the window of the upper case

To have full size picture you need to trim the window at the left and right for the 640x480 IPS a littler bit. If you're also using the **analog stick** you need to trim a small part inside the upper case in the Dpad area. This mod kit has only integer scaling and scaling modes make no sence! Otherwise you can use a standard **McWill GG mod kit** with 320x240 LCD and scaling modes.

WARNING!

This product is a high quality and double checked item. Only use **original McWill power boards** and **sound boards** with the **McWill GG FULL MOD**. Also only use high quality LiPo batteries with protection circuit. Otherwise the **McWill GG FULL MOD** could be damaged.

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