

# SEGA Game Gear LCD Replacement MOD REV3.1

## Quick Guide PCB Revision 837-9130 / 837-9024 / 837-8560 (1 ASIC)

**ATTENTION !** Installing the LCD replacement is on your own risk! Your Game Gear could be damaged, if you are not able to do this modification!

**Liability impossible!**

### Required materials:

GG-kit, VGA connector with screws, 24 wires round about 15 cm (6 inches) length (old IDE cable)

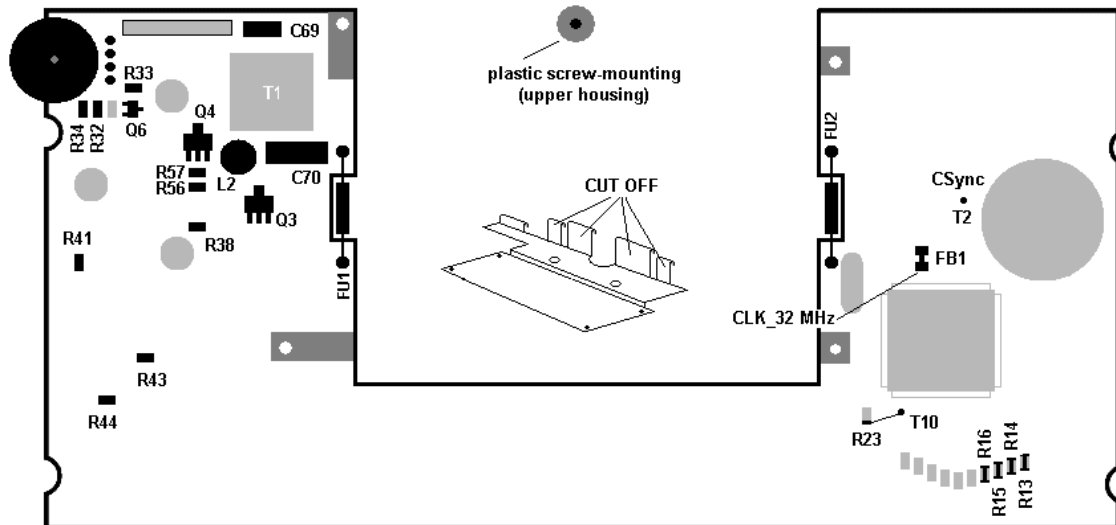
## 1. Step: Remove not needed Parts and 5 Volt check



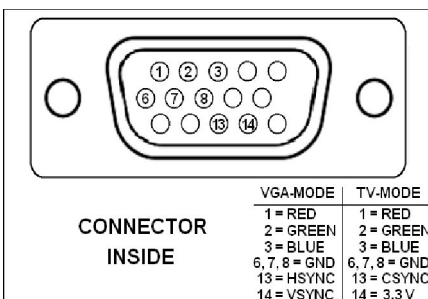
**ATTENTION !** Make sure that all power is **off**. Disconnect **ALL** cables.

1. Remove **R33, R34, R32, R57, R56, R41, R38, R44** and **R43** (9 resistors)
2. Remove **L2** coil
3. Remove **Q6, Q4** and **Q3** transistors
4. Remove **C69** and **C70** capacitors
5. Remove **LCD**; peel off the ribbon cable **carefully** from the GG PCB like tape
6. Remove middle **plastic screw-mounting** of the upper housing with pliers
7. Remove **CFL Lamp** and fuses **FU1** and **FU2**
8. Replace **R13, R14, R15** and **R16** with 0 Ohm / bridge

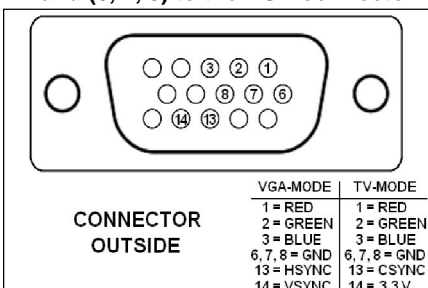
!!! Now check the 5 Volt with a voltmeter at **VCC / GND** of the Game Gear. If the voltage exceeds 5.45 Volt, fix your GG! Otherwise the GG mod will be **damaged!**



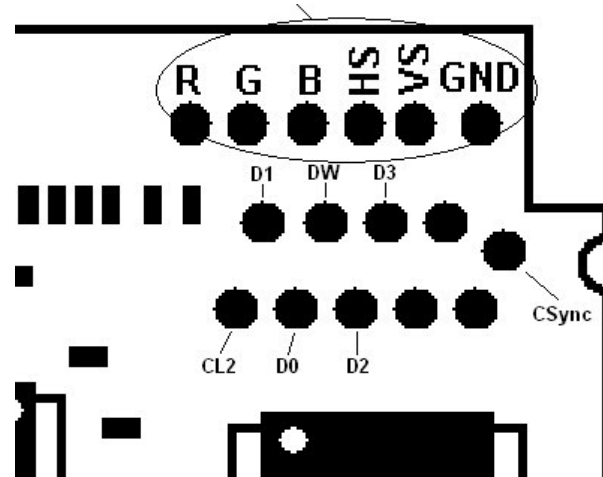
## 2. Step: VGA connector (if needed)



Connect the pins 6, 7 and 8 together.  
Solder 6 wires to the pins 1, 2, 3, 13, 14 and (6, 7, 8) to the VGA connector.



Now solder the other side of the wires to the GG mod.

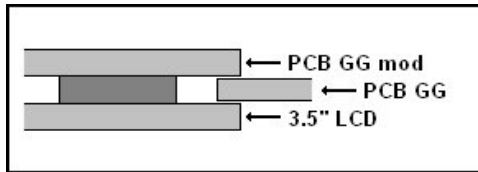
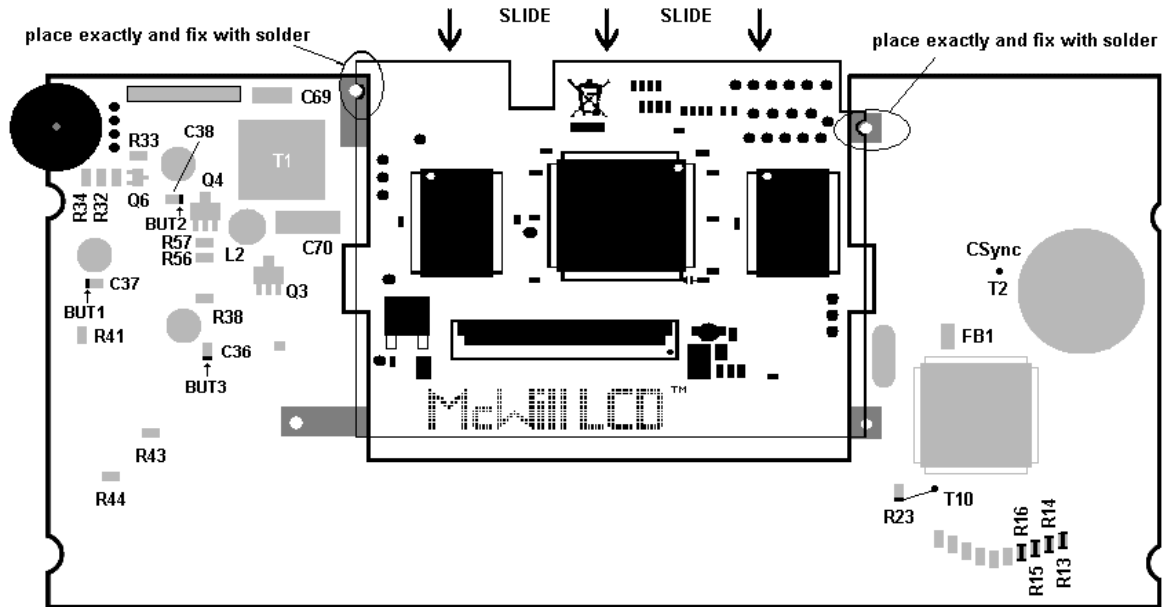


**!!! ATTENTION !!!**

Don't damage the ribbon cable / FPC of the LCD !  
You may disconnect the FPC, but don't forget connecting it correct after soldering.

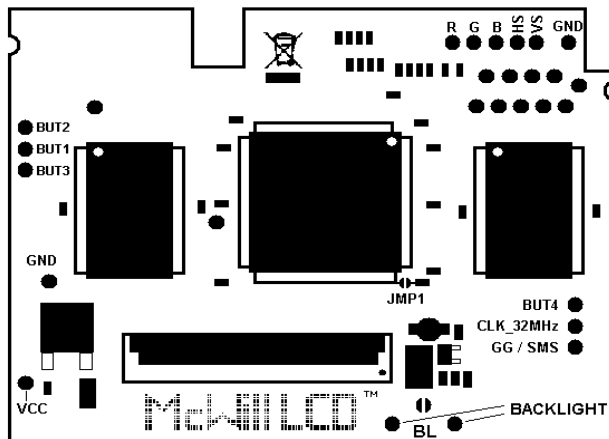
!! Use hot glue for the internal screws of VGA connector. Otherwise the screws may cause short circuit !!

### 3. Step: Slide the GG mod onto the GG PCB and solder data lines



First solder 1 wire to **VCC** of the GG mod and 1 wire to **GND** of the GG mod and leave the other ends. Now slide the GG mod onto the Game Gear PCB and solder the 2 wires **VCC** and **GND** of the GG mod to the Game Gear PCB. **DON'T MIX THEM UP!!!** Solder 1 wire from **T10** to the lower pad of **R23** on the GG Board.

Now solder 1 wire from **CLK\_32MHz** of the GG mod to **FB1** on the Game Gear PCB. Then solder 1 wire from **GG / SMS** of the GG mod to **PIN 42** of the Game Gear cartridge port.



Solder 3 wires from **BUT1**, **BUT2** and **BUT3** of the GG mod to **BUT1**, **BUT2** and **BUT3** of the Game Gear PCB.

Solder 1 wire from **BACKLIGHT (BL left)** of the GG mod to **PIN1** of the thumbwheel and 1 wire from **BACKLIGHT (BL right)** of the GG mod to **PIN 2** of the thumbwheel.

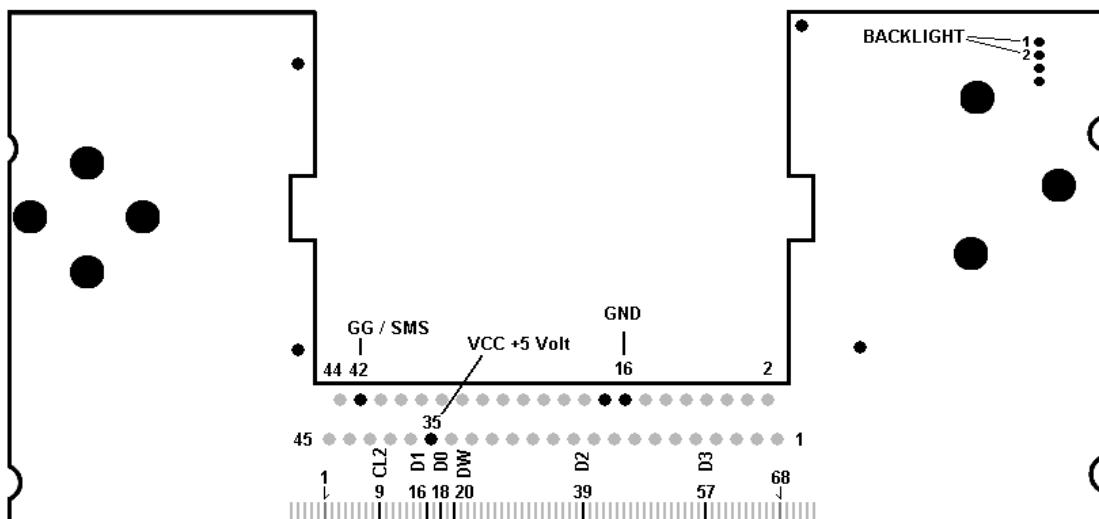
**For switching to VGA mode you need an extra SPST switch!**

Then solder 1 wire from **CSync** of the GG mod to **T2** of the GG PCB.

Last step is to solder 6 wires from the old LCD ribbon **CL2 (PIN9)**, **D1 (PIN16)**, **D0 (PIN18)**, **DW (PIN20)**, **D2 (PIN39)** and **D3 (PIN57)** to

**CL2, D1, D0, DW, D2 and D3** of the GG mod. **!!! At last check all connections again !!!**

You can switch scanlines, retro-style and scaling **ON / OFF** by pressing the buttons **START**, **FIRE1** and **FIRE2** together and hold. **For VGA out solder 1 wire from VCC to the SPST switch PIN1**, 1 wire from **GND** to the SPST switch **PIN3** and 1 wire from **BUT4** to the SPST switch **PIN2**.



If you made everything correct, you'll love it!