

SEGA Game Gear LCD Replacement MOD REV2.1

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)

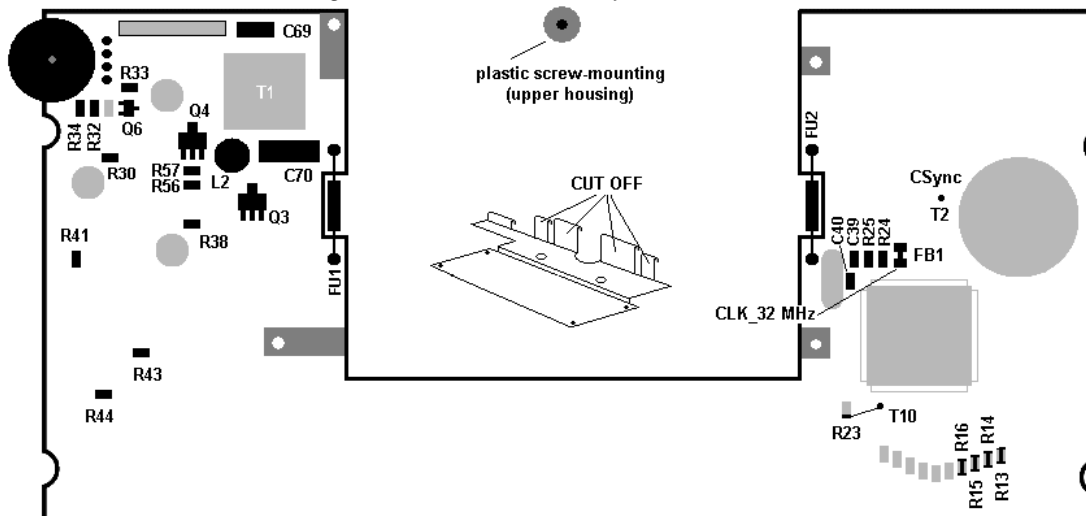
1. Step: Remove not needed Parts and 5 Volt check



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

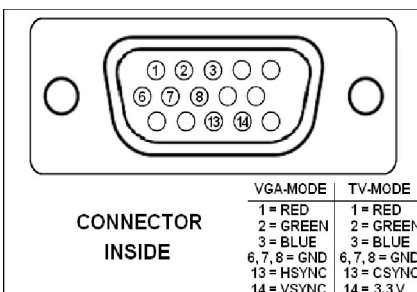
1. Remove R33, R34, R32, R57, R56, R41, R38, R44 and R43 (9 resistors)
2. Remove L2 coil
3. Remove Q6, Q4 and Q3 transistors
4. Remove C69 and C70 capacitors
5. Remove LCD; peel off the ribbon / FPC **carefully** from the GG PCB like tape
6. Remove middle **plastic screw-mounting** of the upper housing with pliers
7. Remove CFL Lamp and fuses FU1 and FU2
8. Replace R24 with R30 and replace R25 with 200 Ohm resistor (*1x enclosed*)
9. Replace C39 and C40 with 10pF capacitors (*2x enclosed*)
10. 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!**

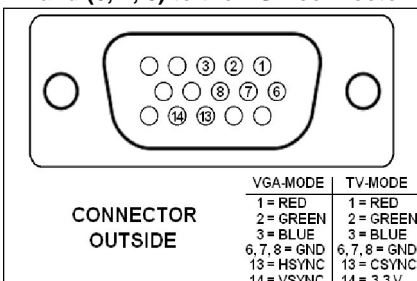


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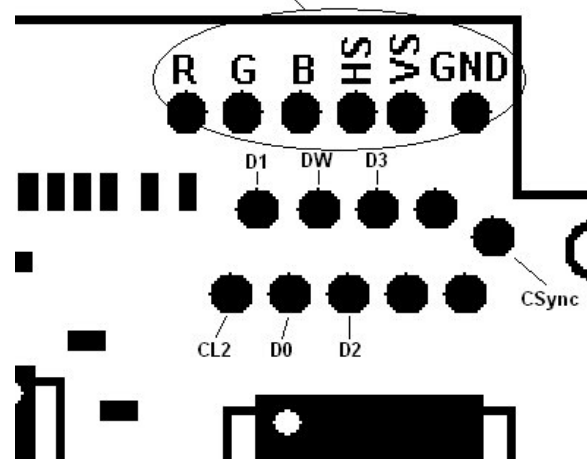
2. Step: VGA connector (if needed)



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.

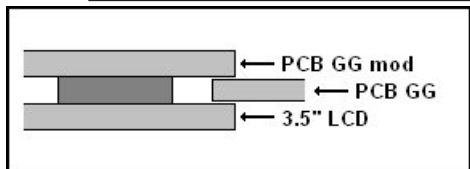
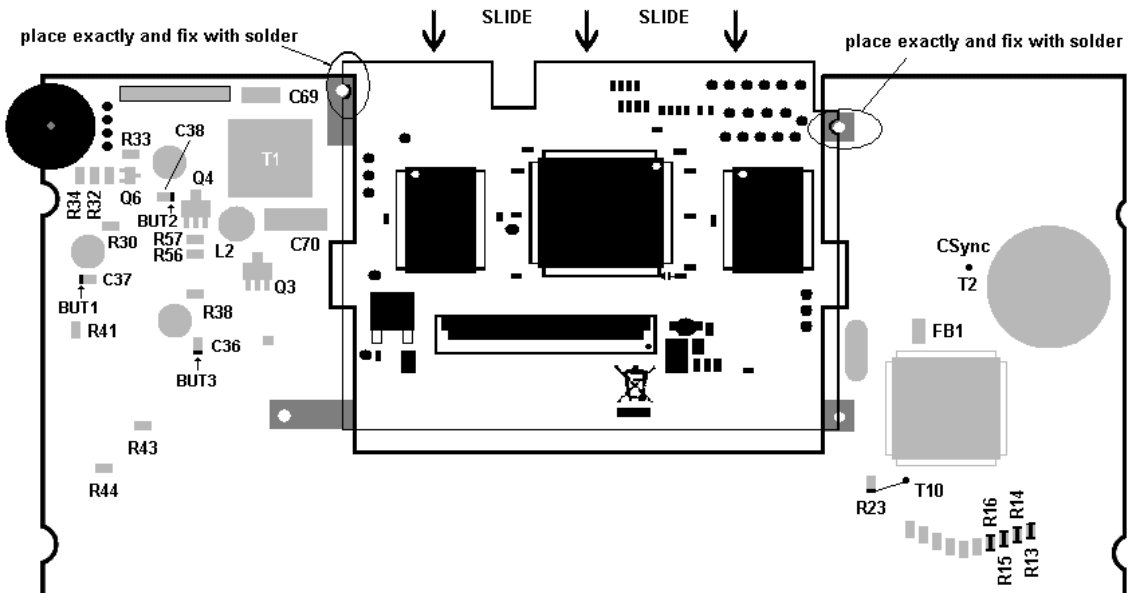


!!! ATTENTION !!!

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

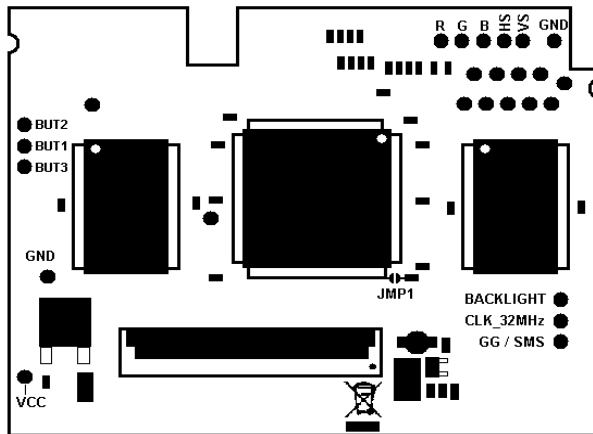
!! Use hot glue for the internal screws of VGA connector. Otherwise the screws may cause short circuit !!

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 confuse them !!!** 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 cartslot. Solder **PIN1** of the thumbwheel to **VCC** on the GG board. Then solder **PIN3** of the thumbwheel to **GND** on the GG board.

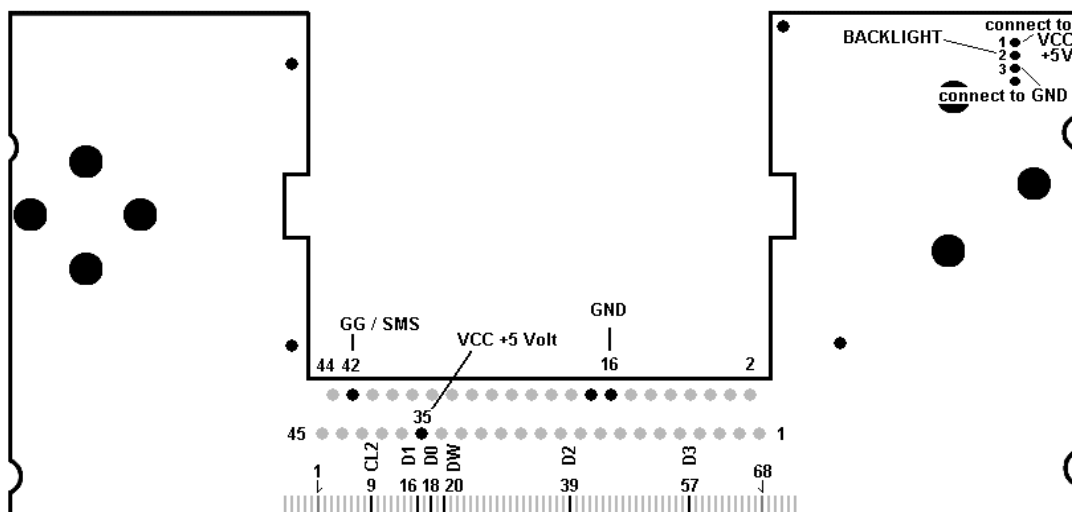


!!! If you DON'T want to install the VGA connector, you can leave the BACKLIGHT wire! Otherwise solder 1 wire from **BACKLIGHT** of the GG mod to **PIN2** of the thumbwheel and 1 wire from **CSync** of the GG mod to **T2** of the GG PCB. Solder 3 wires from **BUT1, BUT2** and **BUT3** of the GG mod to **BUT1, BUT2** and **BUT3** of the Game Gear board.

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. **Default: scanlines on VGA => ON; retro-style on 3.5" LCD => OFF** Switch VGA / internal 3.5" LCD by **backlight knob**. TV-mode is active, when 3.5" LCD is **ON!**



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