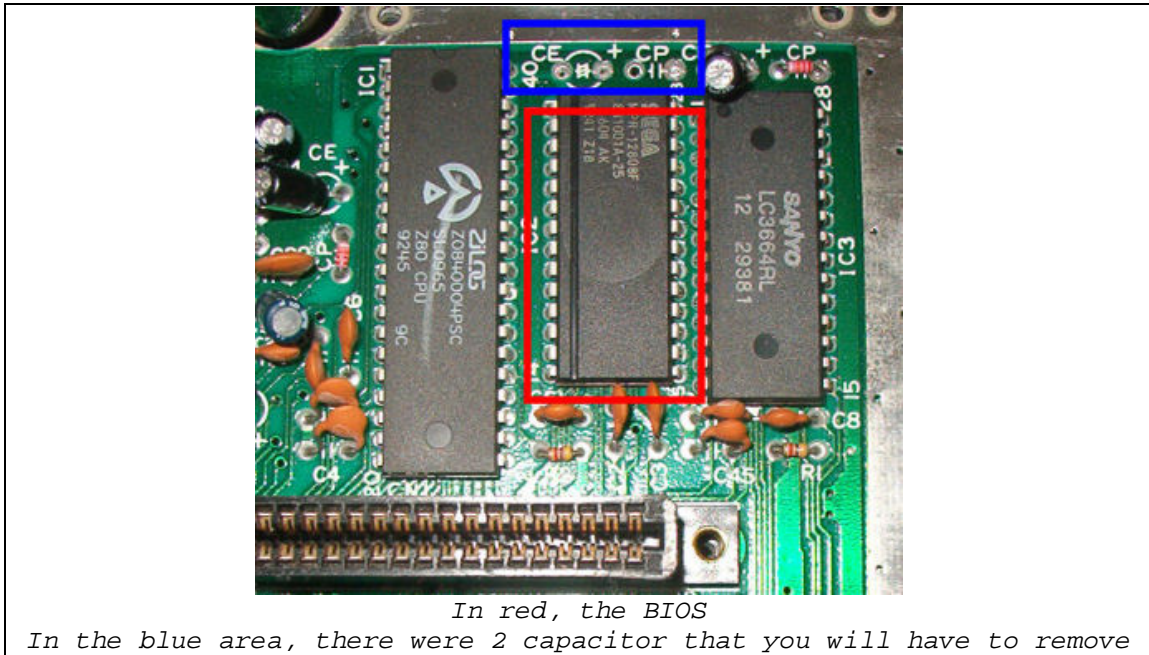


**TUTORIAL Master System:
How to change the BIOS**
By David Senabre, February 2006

This document is based on an original written in Spanish.
It is a very brief translation for people who don't speak Spanish.

We can use any 32Kb ROM instead as a BIOS.
Just desolder the original BIOS chip.



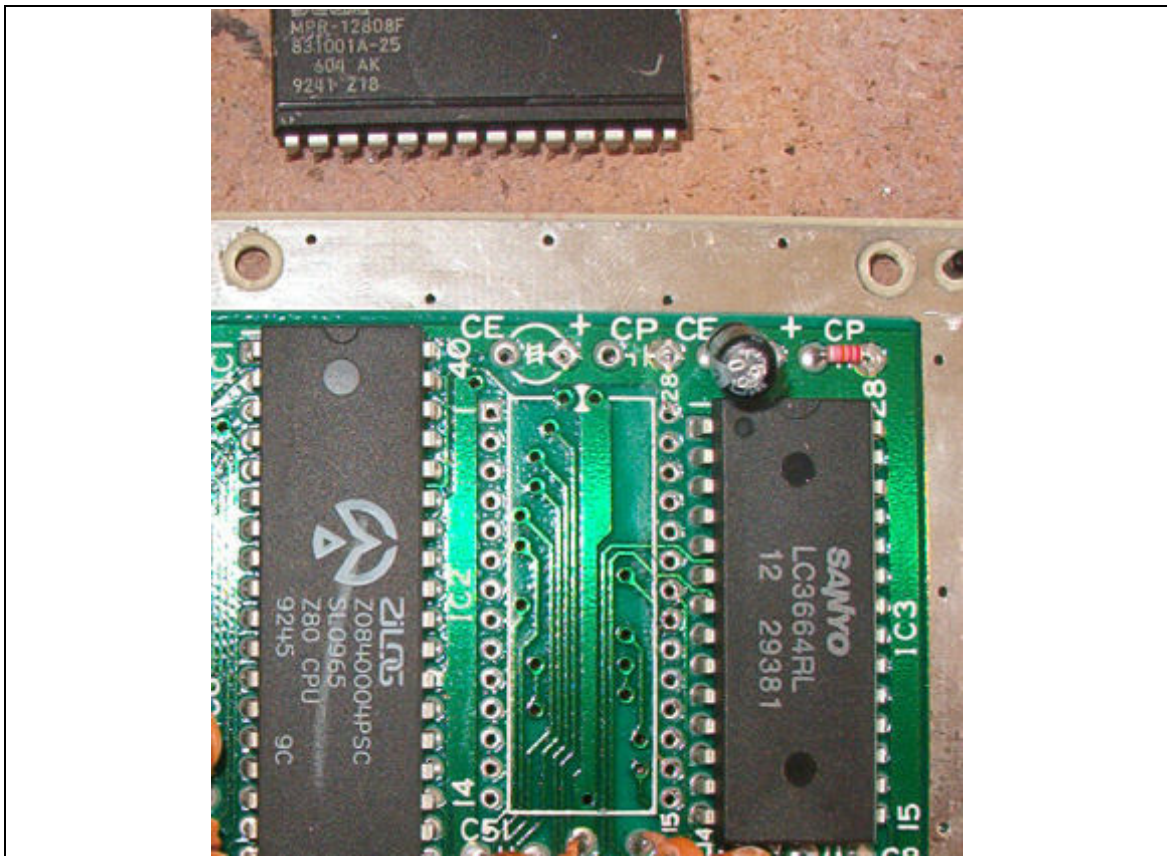
I will detail how to use a 29F0x0 flash rom.

Solder a 28 pin socket. I will the modification on a 32 pin socket that will go on top of this one. This modification are needed to make the pinout of our new ROM compatible with the original ROM.

The 32 pin socket is bigger than the original chip, so you will need to remove the 2 capacitor shown in above image.

BIOS Pinout

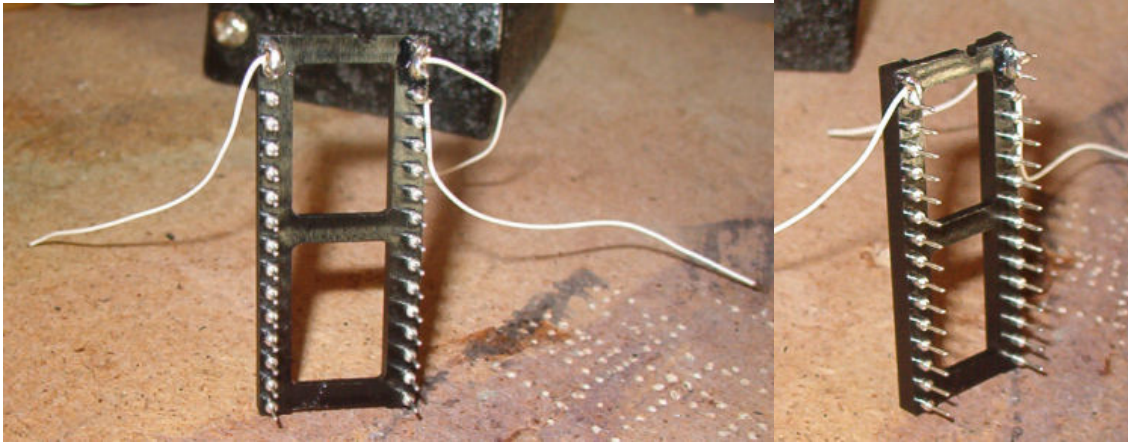
	+---	----	+
/WR	01	\ /	28 - +5V
A12	02		27 - A14
A7	03		26 - A13
A6	04		25 - A8
A5	05		24 - A9
A4	06		23 - A11
A3	07		22 - A15
A2	08		21 - A10
A1	09		20 - /CE0
A0	10		19 - D7
D0	11		18 - D6
D1	12		17 - D5
D2	13		16 - D4
GND	14		15 - D3
			-----+



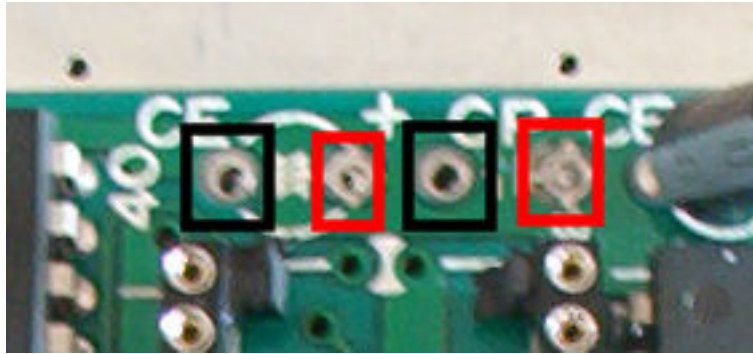
If you use a 29F010 then it is easy to make pinout compatible. 29F020 or 29F040 will need some more wires, to ground extra address lines.

You will have to connect /WE and Vcc together to 5V, taken from any place in the mainboard. Connect A15, A16 and A17 to ground. If your ROM chip has more address line, connect them to ground too. I do these modifications to the 32 pin socket.

Apart from these pins I mentioned, the rest is the same as a 29F0x0 flash ROM.



This is more or less what I did.



*Black pads are ground points.
Red pads are 5V points.*

