Amiga KickStart ROM Switcher with 27c800 eprom

You are here:

For replacement kickstart roms for the Amiga you can use 27c400 (100/120ns) 4Mbit (256Kbitx16bit) eproms.
Amiga 500,600 use 1 x 27c400, Amiga 1200, 4000 uses 2 x 27c400.

datasheet M27C400

2 KickStart roms in 1 eprom

For the 16 bit machines like Amgia 500,600, etc we can programm 2 KickStart rom in 1 x 27c800 eprom (datasheet 27c800).
This eprom is twice the size of the 27c400.

With the A18 addressline we can make a bank switcher. To make this happen the A18 addressline has to be pulled down to gnd or pulled up to 5V.

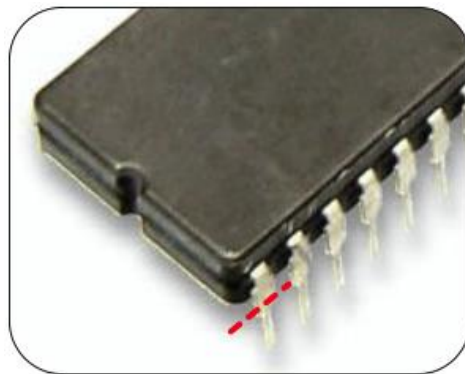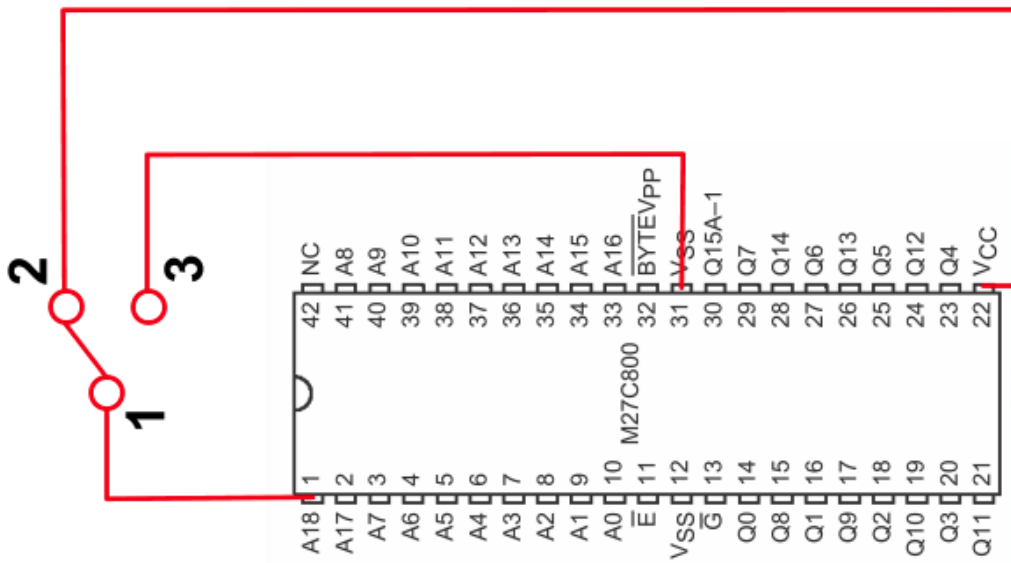## Switch to bank 0

A18 must be connected to VCC.
When A18 is high (5V) it means A18 is not addressed.

Switch to bank 1

A18 must be connected to GND (VSS).
When A18 is low (0V) it means A18 is addressed.

Schematic / build

Cut leg pin
(not whole leg)

2   1   3

Steps for the build:

1. Cut the leg of pin 18 as shown in the image
2. Wiring
    1. Connect (solder) pin 1 of the switch to pin 1 (A18) of the 27C800
    2. Connect pin 2 of the switch to pin 22 (VCC) of the 27C800
    3. Connect pin 3 of the switch to pin 12 or 31 (VSS/GND) of the 27C800

Time to program

To programm the 27C800 I use a TL866 (cheap china programmer).

The software for this programmer has not a 27c800 (or 27c400) in the supported chip list.
So I use a special adaptor (see link below) that was made by Keir Fraser to programm the eprom.
That adaptor reroute several pins so it is compatible with a 27C4096.

Mount the 27c800 into the adaptor and set the switch to bank 0, now you can programm the binary file of the KickStart rom into bank 0.
Repeat this for bank 1.

Step by step manual by Keir Fraser how to use the adaptor and programmer software:
https://github.com/keirf/PCB-Projects/wiki/EPROM-Adapter

*) please note that the adaptor must be set to 27c400 and not 27c800!

Testing time