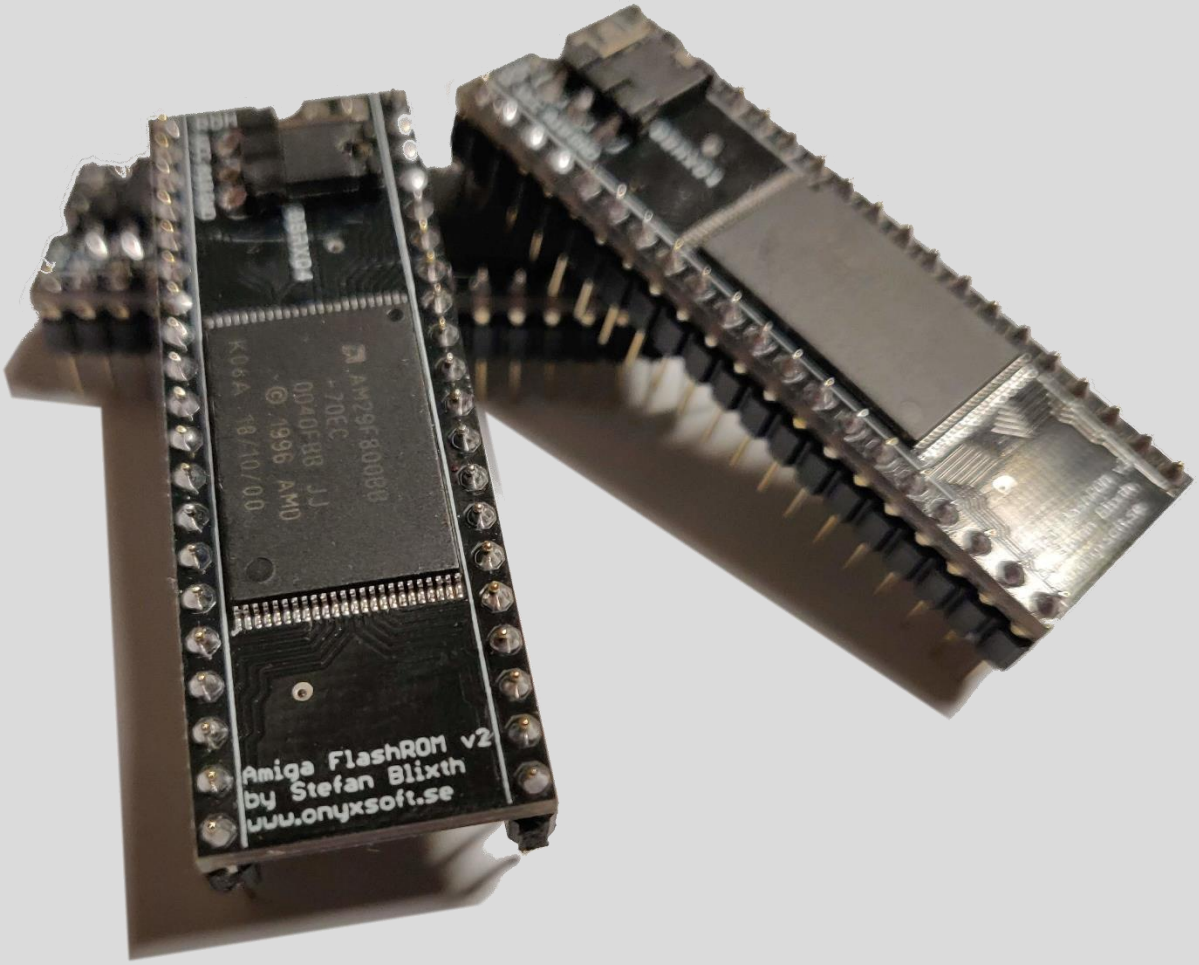


Amiga FlashROM

By Stefan Blixth, OnyxSoft

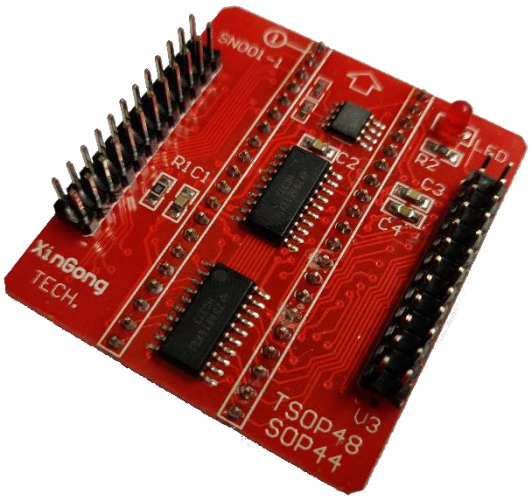
1. Preface

The Amiga FlashROM solution from OnyxSoft is a OpenSource project which is intended as a drop-in solution for Classic Amiga kickstart ROMs. The project is based around the flash chip **AM29F800BB** from AMD (and other manufacturer). This chip can (if used in the right pin configuration) be a direct drop-in solution for the older EPROM styled chipset like **AM27C400** but have the advantage to be by nature easier to work with since it's a flashrom and does not need a special eraser for UW light etc. One other feature of this FlashROM is that it's based around 8Mbit (1Mbyte) flash chipset which means that it can contain 2 normal sized AmigaROM kickstarts (which normally is 4Mbit (512kB) in size. And having this extra space available we added a jumper to the PCB which makes it possible to swap the content as a kickstart-switcher. The original plan was also to have a flash programmer specifically made and release for this project, this have been slighly delayed as this is written but it is still the main goal so please stay tune for future updates regarding this. But there is a solution how to overcome this at the moment which needs some additional adapters but can be obtained without to much money involved.

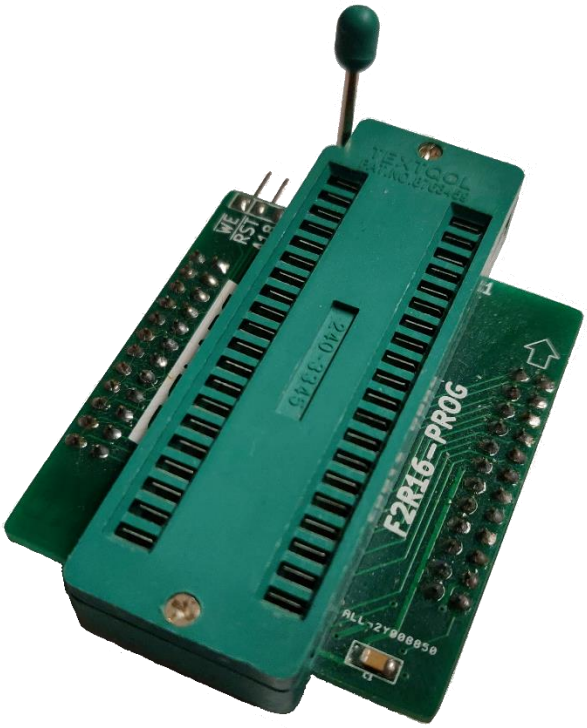
2. Requirements

Until the specific flash programmer is ready we use as an example the MiniPro TL866 universal programmer, a TSOP48/SOP44 Adapter from XinGong Tech. and yet another adapter from GGLabs. Having this combination makes it possible to flash/erase and read the content to the FlashROMs.

MiniPro TL866 universal programmer is available from several places on the internet and apart from be used in this case have a lot of support for a huge amount of chipsets.

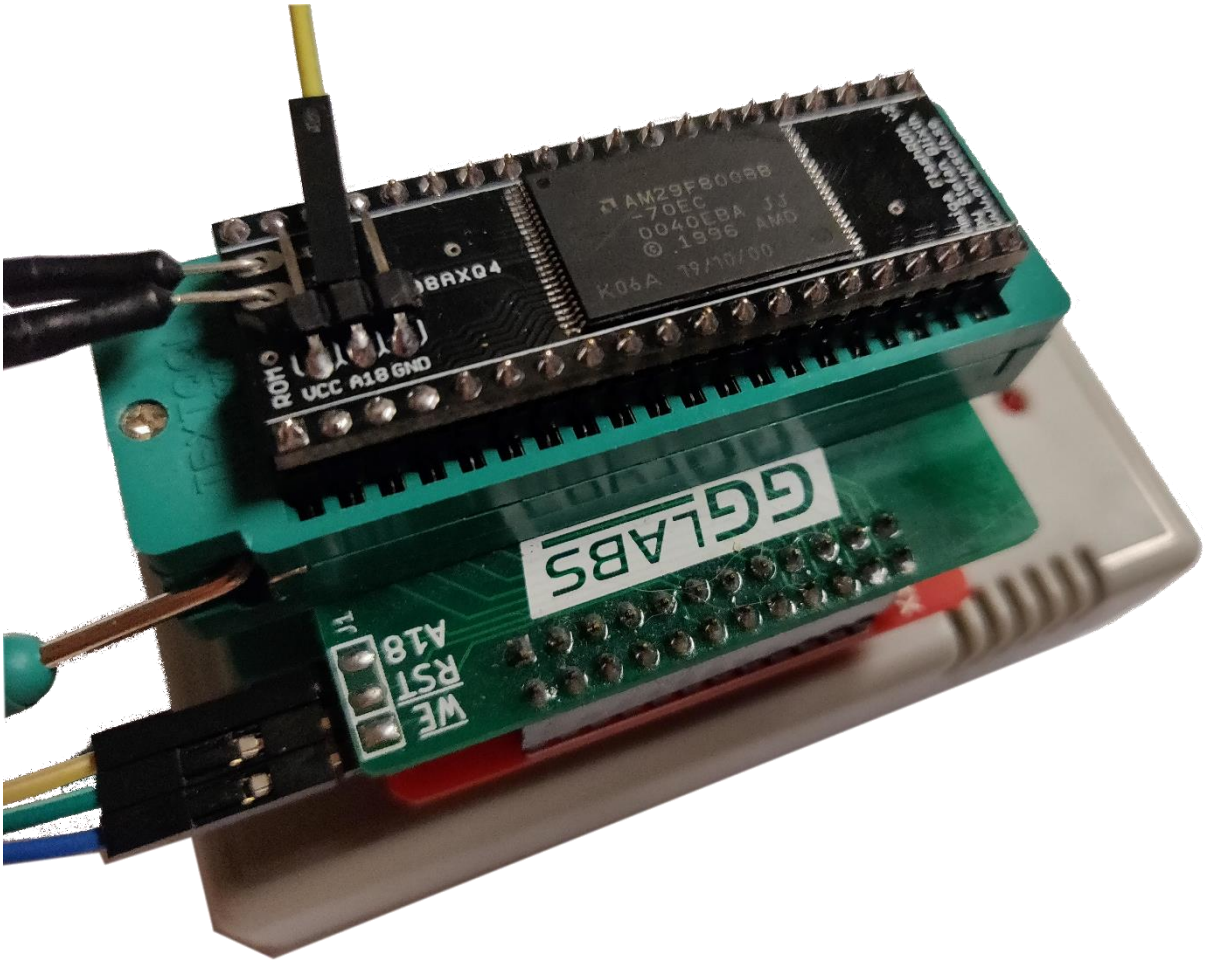


TSOP48/SOP44 Adapter from XinGong Tech is used to extend the pins and re-arange them correctly for our purpose. This can also be found of various places on the internet for a small amount of money.



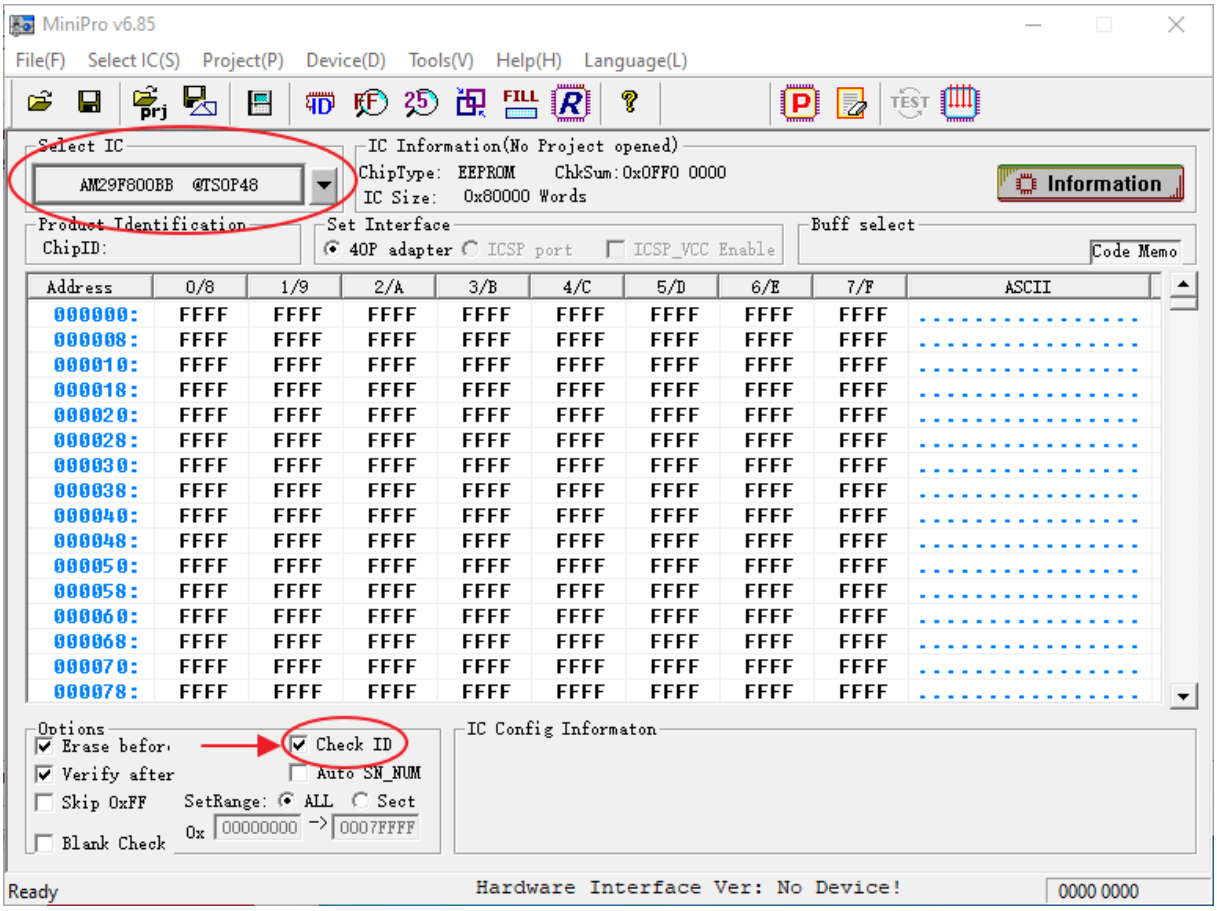
And last, the F2R16-PROG adapter from GGLabs which is used for their own nice flash ROM solution called F2R16. [Visit their home page how to obtain this.]

The last step is now to combined all the adapters and the FlashROM in a stack like the picture below. Attach the correct wires from the F2R16-PROG adapter to the FlashROM. When this is ready, it's time to start the MiniPro Programmer software which comes with the TL866 universal programmer.

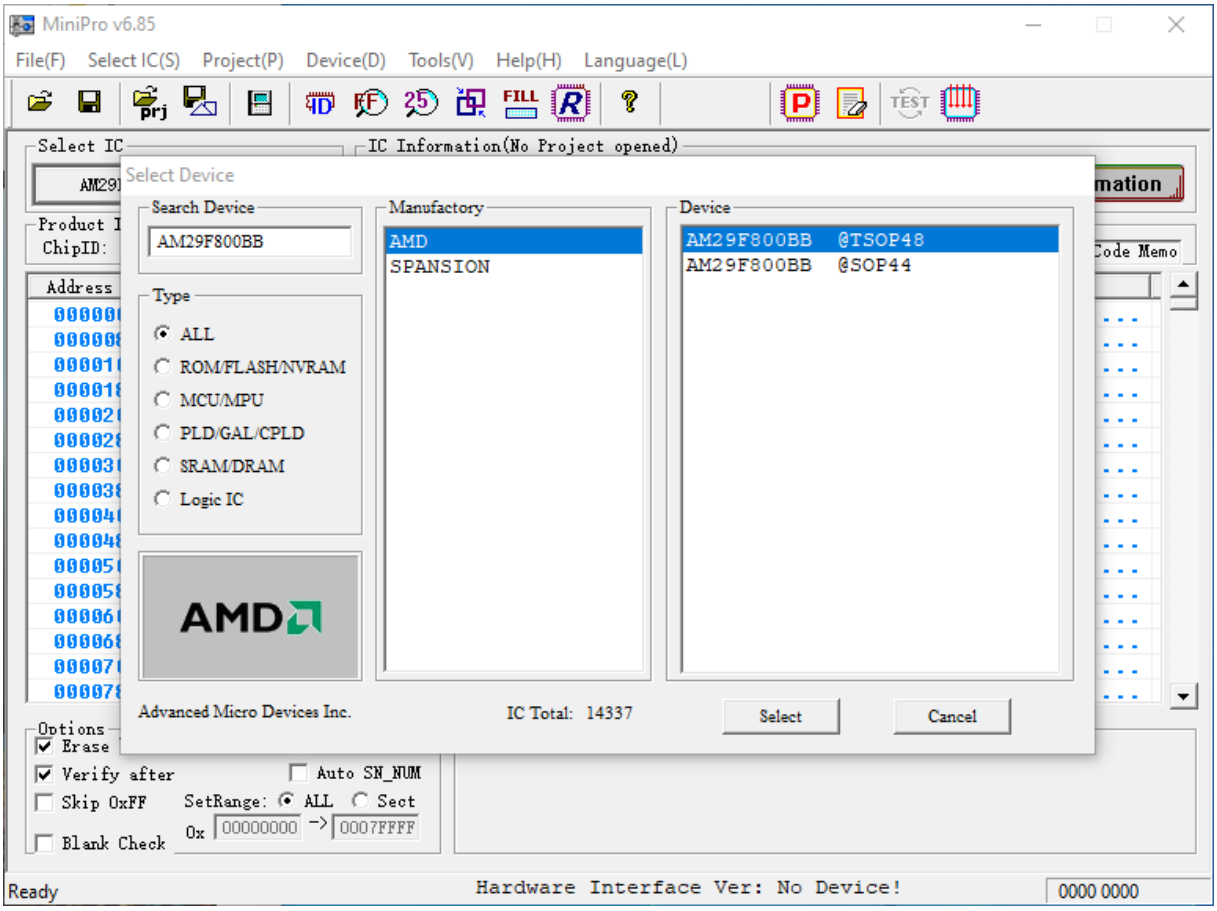


3.Programming the FlashROM

After that we have started the MiniPro Programmer software and connected the USB cable to the computer we need todo some adjustements to be able to program the specific chipset. Un-check the "Check ID" option since this is not always possible to utilies with the TSOP48/SOP44 adapter in place. If you experience strange behaviour and the flash chip is not recognized this is a good start to disable first of all.



Secondly press the "Select IC" button and search for AM29F800BB as shown on the image below



This is the basic setup to make it possible to flash and erase your FlashROM drop-in replacement for the Amiga.

4. Trouble shooting

- If the flashROM is not recognized by the programmer setup, please double and tripple check that the connections are correct. Since there is a lot of adapters in the arrangement it can be easy to miss a pin or two.

- Double check that the cables are connected correctly between the F2R16-PROG adapter and the FlashROM. A18 -> A18, WE -> WE and RST -> RST.

- FlashROM chipset are sensitive to ESD (as all logical electronics) so handle the chips with care and use a wristband for ESD safety.

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