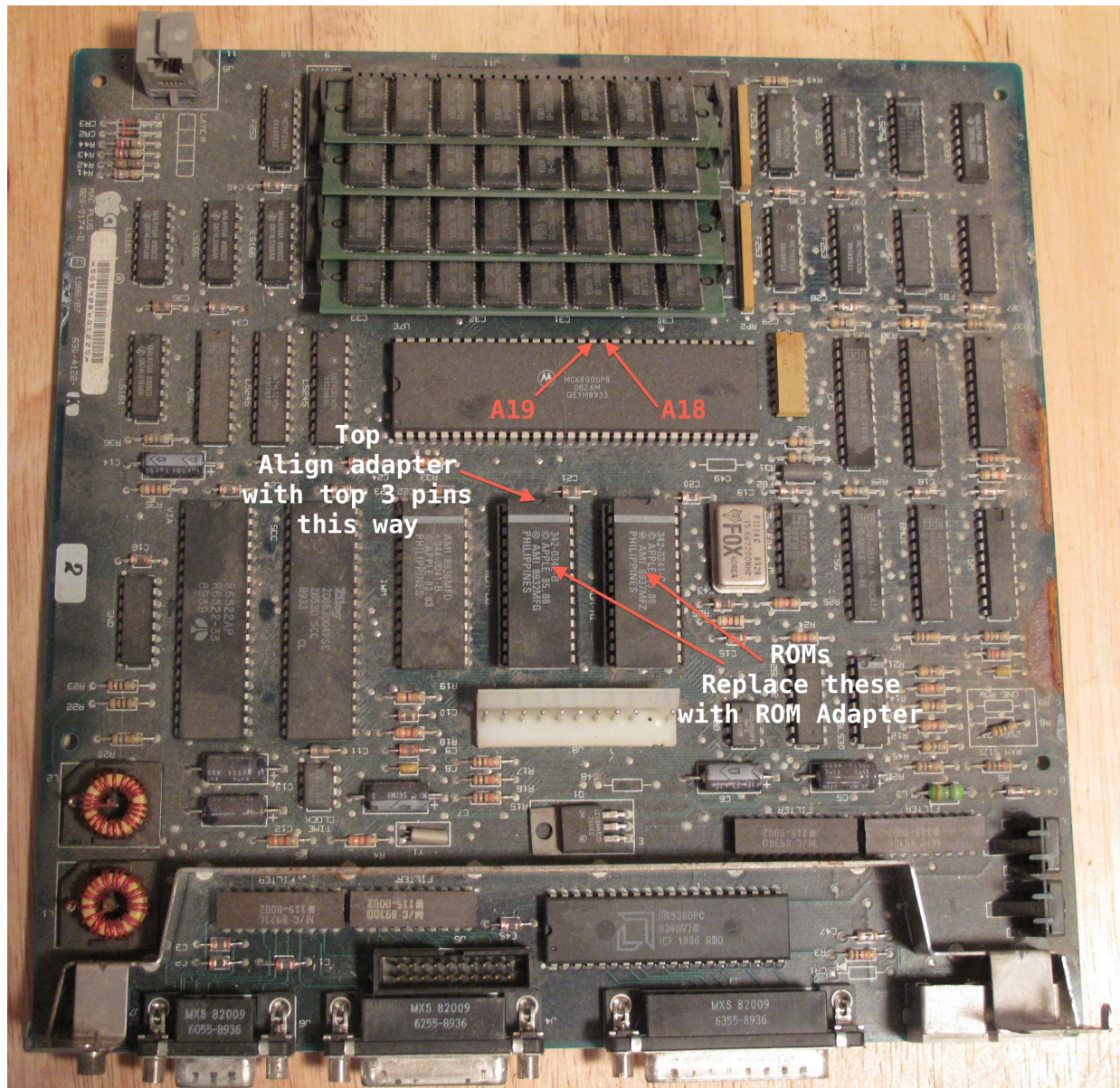


# Mac ROM Adapter User's Guide

## Installation:

The ROM Adapter replaces the logic board ROMs, and requires 2 extra address pins to be connected to the processor.

To install the ROM Adapter, first disassemble the Mac Plus, removing the logic board:



The picture above shows a Mac Plus logic board. The two ROM chips pointed to by the arrows should be carefully removed. They can be removed with a flathead screwdriver if you don't have a chip puller, but be extremely careful to work slowly and lift the chips evenly out of the sockets to avoid bending or breaking pins.



Once the two original ROMs have been removed, replace them with the ROM Adapter. The ROM adapter should be oriented such that the lettering and the 3 pins at the top are nearest the processor (the largest chip on the board), and away from the white analog board connector.

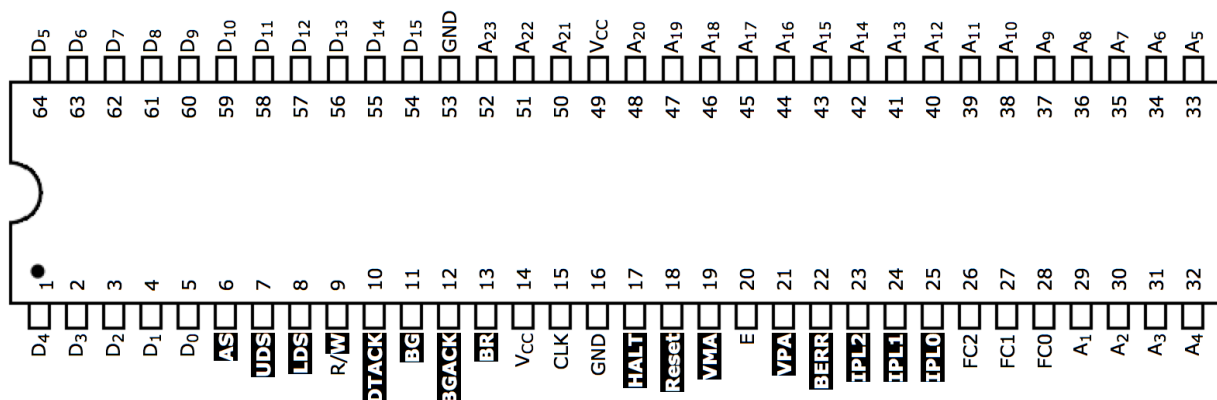
Once the adapter is in place, the two extra address lines need to be connected to the processor. The right most of the 3 pins on the top of the adapter is address line A18, which needs to be connected to A18 on the processor.

The left most of the 3 pins on the top of the adapter is address line A19, which needs to be connected to A19 on the processor.

The middle of the 3 pins on the top of the adapter is not used.

**In order to prevent the pins from coming in contact with the metal chassis of the Mac, they can be bent downwards.**

For reference, the pinout of the 68000 processor is show below.





## Use:

When the machine boots, it will first boot from a floppy, if one is inserted. If not, you will be presented with a screen that looks like this:



It will wait for approximately 5 seconds here, and if the 'r' key is pressed and held during that time, the machine will boot from ROM. Additionally, the 'r' and 'a' key can both be held down, and the machine will attempt to copy the ROM disk image into RAM, and boot from that. This can give a writeable boot disk, although obviously consumes limited system RAM.

## Advanced Use:

The ROMs installed in the adapter are DIP32 29F040 flash ROMs, and can be reprogrammed with an appropriate ROM programmer.

The two ROMs in the adapter are interleaved, meaning each contain every other byte of the ROM. If you wish to read the two ROMs, they will need to be combined into a single image with that in mind.

The total ROM size is 1MiB, 512KiB in each of the two 29F040's.

The first 128KiB is the Mac Plus ROM, which has been modified to support a disk image in ROM.

Following that is 32KiB which contains the ROM disk driver.

The remaining 884736 bytes is the disk image. The disk image is the same format as used by the minivmac and BasiliskII emulators.

A new disk image can be generated in an emulator, and the installed into the ROM image with something like:

```
dd if=yourdisk.img of=plusrom.bin seek=163840 bs=1
```

The result should be exactly 1048576 bytes long. Then split the image and burn.