ROM-inator Resurrections

Assembly Instructions

ROM disk kit for the Mac Plus, 512K and 128K



Based on the original ROM-inator designed by Steve Chamberlin at Big Mess o' Wires, used with permission.
bigmessowires.com/mac-rom-inator

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Before you start

Thanks for buying ROM-inator Resurrections. Check the packing list first and make sure everything is in the bag.

The ROMs come already programmed, so once it's built, the Mac starts right up. It's all through-hole soldering apart from one small chip, and that one is done for you.

This is a kit
We can't be held responsible for injury, fire or death while building it, damage to other equipment or fire caused by using it, or anything that follows from those. You're the one holding the iron, so take your time.

Watch the video
Our friend JDW made a great video of the whole build. It's well worth watching before you start.
youtube.com/watch?v=CVClCLgBm6k

What you'll need

Soldering iron with a fine tip, solder, flux, IPA or flux remover, flush cutters, a couple of rubber bands and a magnifier. Aluminum tape is handy too.

One habit for the whole build

Every socket and header: solder the four corner pins only, then check. Is it flat? Is it straight? With just a few pins tacked it's easy to reheat and push it into place. Once all the pins are done, it isn't.

What's in the kit

Qty	Part
1	ROM-inator board, with the 74HCT02D already soldered on
1	High ROM chip, pre-programmed ☐ System 6.0.8 ☐ System 3.2
1	Low ROM chip, pre-programmed ☐ System 6.0.8 ☐ System 3.2
2	32-pin DIP sockets (for the ROMs)
2	40-pin machined pin headers (board to the logic board, cut into four 14-pin strips)
1	4-pin right angle pin header
4	Jumper wires to the 68000 CPU

The Luxury Kit adds a spare set of HI and LO ROMs.

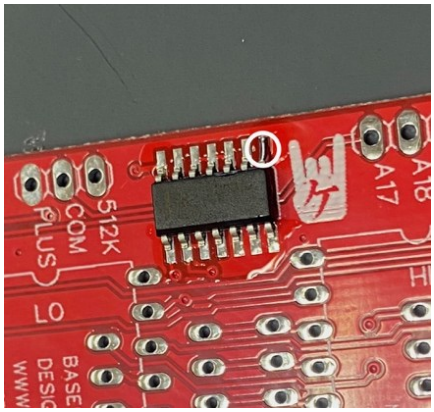
1. Building the board

The board is universal: the same board fits the Mac Plus and the Mac 512K/128K. Which one it's for depends on where you solder the pin headers and how you set the model jumpers, so keep your Mac model in mind the whole way through.

1-1 74HCT02 (already soldered)

This chip is soldered on before the kit ships, so there's nothing to do here.

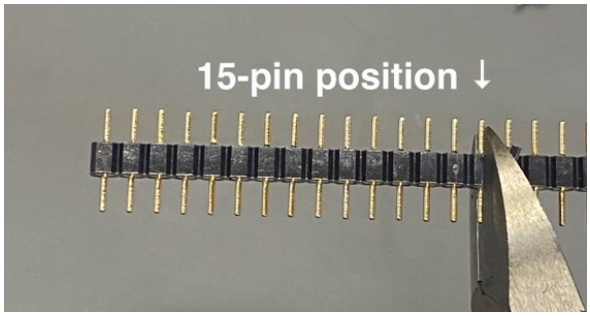
Have a quick look under a magnifier anyway and make sure none of its pins are bridged.

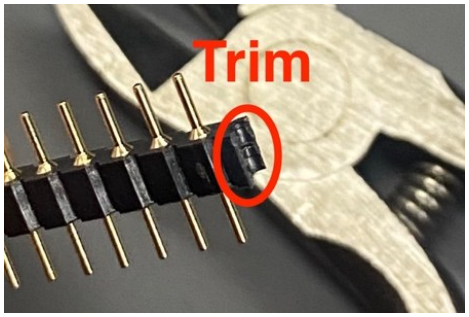


1-2 Cut the pin headers

The kit has two long 40-pin machined headers. Cut them into four 14-pin strips.

Don't cut right next to the 14th pin. Cut at the 15th pin and trim the leftover off afterwards. That way the plastic around pin 14 doesn't crack.

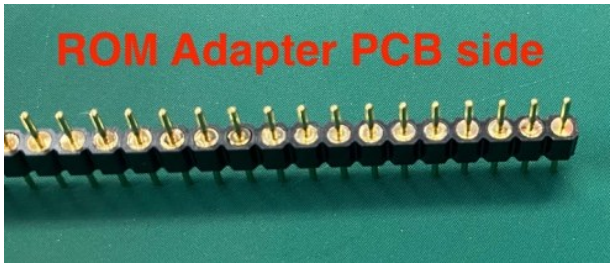




1-3 Which way up

The headers are low profile, so it's easy to get them upside down. The side with the flat shoulder goes against the board. The side with the cone-shaped pins goes into the ROM sockets on the logic board.

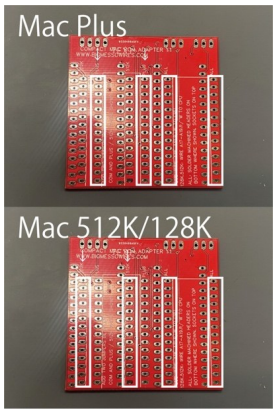




1-4 Mac Plus or Mac 512K/128K

The ROMs sit in different places on the Plus and on the 512K/128K, so the board has holes for both.

The columns marked ALL are used on every model. For the other two, use the PLUS position on a Mac Plus and the 512K position on a Mac 512K or 128K.

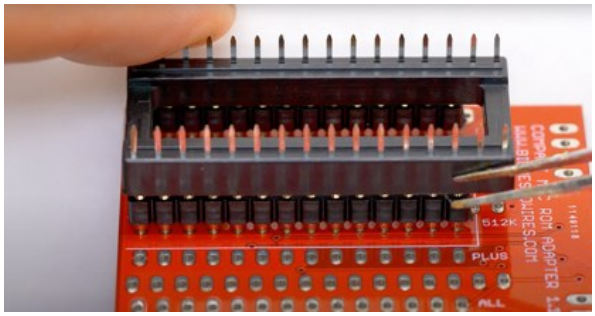


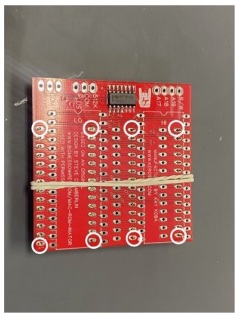
> **Get this one right**
> If the headers go into the wrong holes, getting them back out is really hard. Check your model and the holes twice before you solder.

1-5 Solder the headers

Like JDW does in the video, push the 32-pin sockets onto the headers first. They hold the spacing and keep the headers upright.

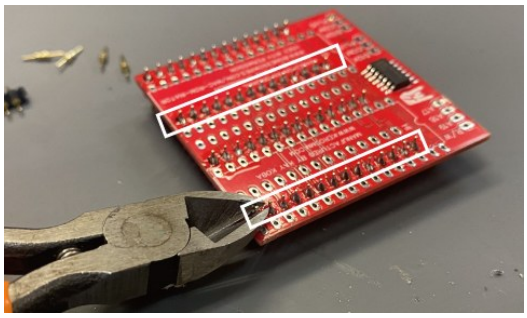
I wrap a rubber band around the board and headers so nothing falls out. Tack the corner pins, check for tilt and gaps, then solder the rest.

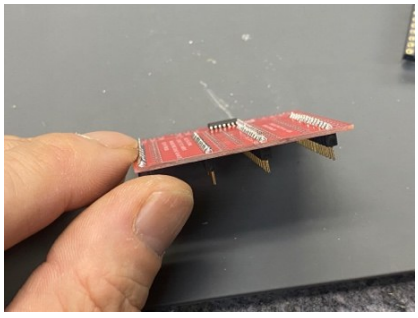




1-6 Trim the legs

Cut the legs in the rows marked in the photo with flush cutters. They'd get in the way of the 32-pin sockets that go on next.





1-7 Clean up

Clean off the flux with IPA after every step. It keeps the board tidy and makes bad joints much easier to spot.

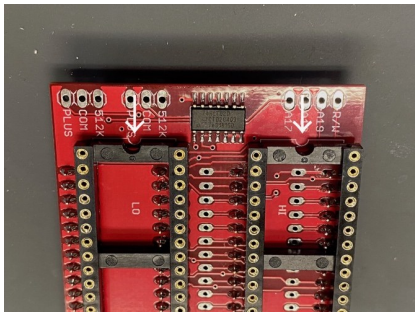


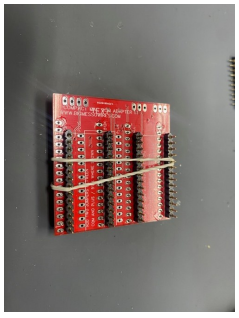
1-8 32-pin ROM sockets

Line up the notch in each socket with the half-circle on the silkscreen. That's how you'll know which way the ROMs go in later.

Rubber band again, corners first, check that it sits flat. If one corner is lifted, press it down, reheat that pin and it'll settle.

Be careful not to melt the plastic of the pin headers underneath. Masking them with aluminum tape helps.





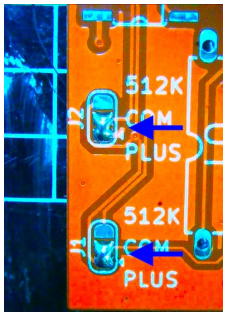
1-9 Model jumpers (solder bridges)

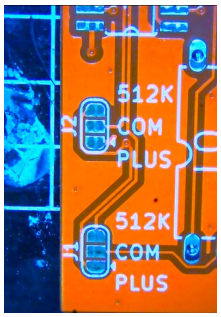
The model jumpers are solder pads, so no wires or pins are needed. The middle pad (COM) is shared on both jumpers.

Mac Plus: bridge COM and PLUS with solder.

Mac 512K or 128K: bridge COM and 512K.

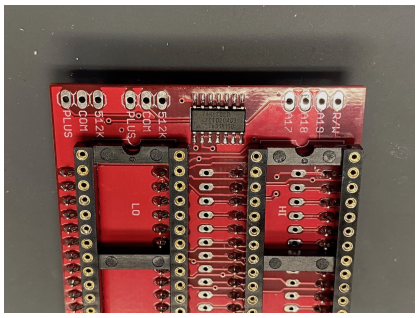
Do it on both jumpers. This picks which set of header pins the board uses.

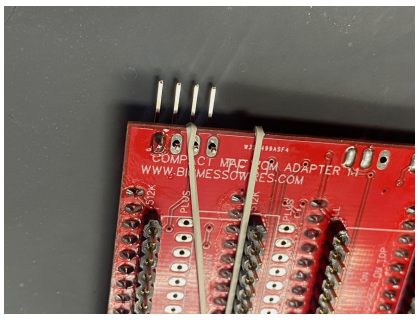




1-10 4-pin right angle header

Solder the 4-pin right angle header to the row of holes marked A17, A18, A19 and R/W. The jumper wires plug onto it later, so keep it straight. Tack one pin, straighten it if it's leaning, then do the other three.





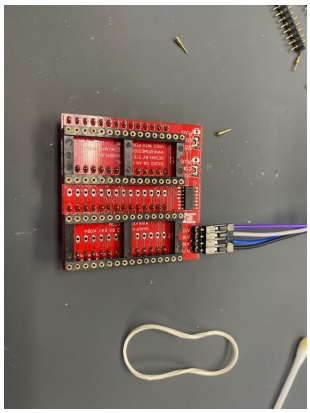
2. Wiring to the CPU

The board needs a few address lines and R/W from the 68000. These go on with the jumper wires in the kit, soldered straight onto the CPU legs.

2-1 Connect the jumper wires

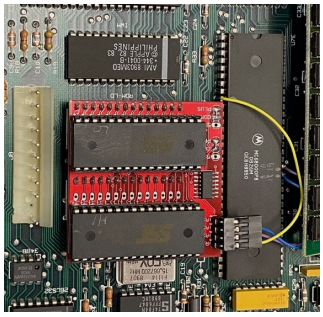
Plug the jumper wires onto the 4-pin header. The Mac 512K and 128K use all four wires. The Mac Plus uses three, and A17 stays unconnected.

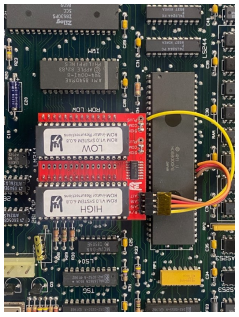
The kit comes with four wires. The colors are random, so go by position, not color.



2-2 Solder to the 68000

Solder each wire to its CPU leg using the tables below. Be careful not to bridge the wire to the leg next to it.





Top photo: Mac Plus. Bottom photo: Mac 512K.

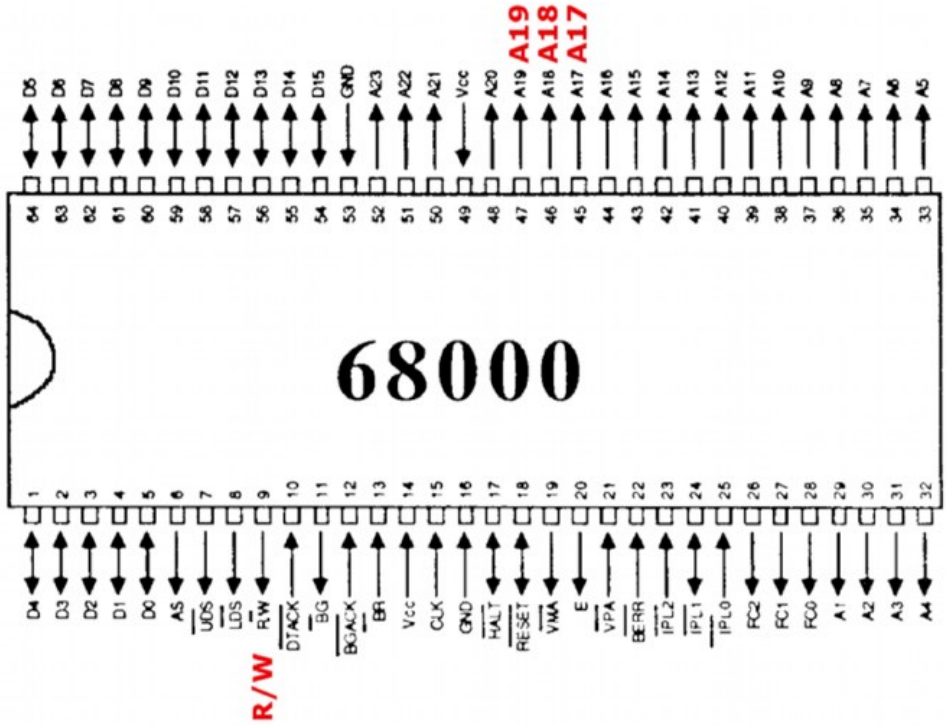
Mac Plus (3 wires)

Board pin	68000 pin
R/W	9 (R/W)
A19	47 (A19)
A18	46 (A18)
A17	Do not connect

Mac 512K / 128K (4 wires)

Board pin	68000 pin
R/W	9 (R/W)
A19	47 (A19)
A18	46 (A18)
A17	45 (A17)

68000 pinout



Triple check
Check the wiring to the CPU three times. One wrong leg and the Mac won't boot.
The board is low profile and sits about 1.8 mm lower than the original. On the Mac 512K and 128K the top of the LO ROM still just touches the chassis, so take care when you slide the logic board back in.

3. Using it

Booting the ROM disk. Hold R at startup and the Mac boots from the ROM disk.

Reflashing. To change the startup sound, the Happy Mac face or the ROM disk later, use Plus ROM Flash Tool 1.7. See Chapter 4.

Be careful of the high voltage inside the Mac while you put it back together. Then press R and enjoy your ROM disk!

4. Plus ROM Flash Tool 1.7

Plus ROM Flash Tool rewrites the ROMs while they sit in the Mac, so you never need a chip puller or a ROM programmer. Use it to change the startup sound, the Happy Mac face or the ROM disk, or to put the whole ROM back to stock. It's Steve Chamberlin's tool (Big Mess o' Wires) with some small improvements from us in 1.7.

It runs on a Mac Plus or a Mac 512K. It doesn't run on a Mac 128K, because there isn't enough memory. On a 128K, use a ROM programmer instead.

> **Downloads**
> **SCSI disk image** with the tool and all the ROM files already on it. Good for BlueSCSI and other SCSI emulators:
> https://mega.nz/file/nbxRhbZI#VLgZlZrE91K1EeTd4U2TBXaU7L53_BMqDDU8Umi6VIA
> **StuffIt archive** (Plus Flashtool V1.7.sit) with the same files, to copy over yourself:
> https://mega.nz/file/PXpBBChC#DzHHw99lYX7GCTkTGUV5uXjpe50aE1FGf5tfOYC_dMQ
> Both links are also on our product page: en.infinityproducts.co.jp

How to use it

1. Copy the file you want to flash onto the Mac.
2. Run Flash Tool 1.7 and click **Select File...** to pick it. Its size shows under File Size.
3. Pick the area you want to update.
4. Click **Update ROM** and confirm.
5. Wait for **ROM update finished**. Anything that changes the main ROM (ROM Code, Entire ROM, Happy Mac Face) is written last, and when it's done the screen tells you to switch the Mac off and on again. Do just that. The Mac won't respond to anything until you do.

Update areas

Area	Address	File size
Entire ROM	400000	exactly 1,048,576 bytes
ROM Code	400000	exactly 135,168 bytes (use code-patched.bin on a Mac Plus)
ROM Disk Image	428000	up to 884,736 bytes, whole 512-byte blocks, no Disk Copy header
Startup Sound	421000	up to 28,672 bytes, 8-bit unsigned, mono, 22,050 Hz, raw. The tool pads or trims it to the 15,540 bytes the ROM plays
Happy Mac Face	400FD2	exactly 20 bytes (16 x 10 pixels)
Custom Address	any even address	only if you know exactly what's there

Before you flash
Don't switch the Mac off or reset it while it's writing. If the power goes out mid-write, the Mac won't boot and you'll need a ROM programmer to fix it. Keep copies of your ROM files.
If you booted from the ROM disk, the tool won't touch the ROM disk, its driver, ROM Code or Entire ROM. Start up from a floppy or hard disk first. The startup sound can be changed either way.
WAV and AIFF files are refused for the startup sound. Their header would play as noise.
The Read Me in the download has the full details, including how to make your own startup sound in Audacity.

If something doesn't work

The HI ROM leg touches the crystal. Some Mac Plus boards have a taller RASCO crystal instead of a FOX one, and it can touch the HI ROM socket. Put some insulating tape on it and cut the socket legs as short as you can.

Bad contact in the logic board's ROM sockets. The Mac Plus is 40 years old now. Over the years the socket contacts lose their spring or rust. Typical symptoms: holding R won't boot from the ROM disk (mostly on the Mac Plus), or the screen shows a checkerboard and the Mac won't boot at all. If this happens, replace the two ROM sockets on the logic board.

It works as a ROM, but there's no ROM disk and R does nothing. Check continuity from A17, A18, A19 and R/W to the CPU. If a jumper wire has worked loose, solder it again.

A big thank you to Steve Chamberlin of Big Mess o' Wires, who designed the original ROM-inator, and to JDW for the build video.

Kay Koba, Kero's Mac Mods · first written Nov 3, 2021, revised Nov 28, 2026
Questions or problems: www.kerosmm.com