TOS 1.04 Upgrade
6 chips set version

02/2024

Before purchasing a 6 chips kit, make sure your motherboard is compatible for such set. You need your motherboard to be fitted with 6 IC supports.

Some versions of motherboards only have 2 support fitted for the 2 chips set version. Other motherboard will have the ROM chips directly soldered to it. No supports.

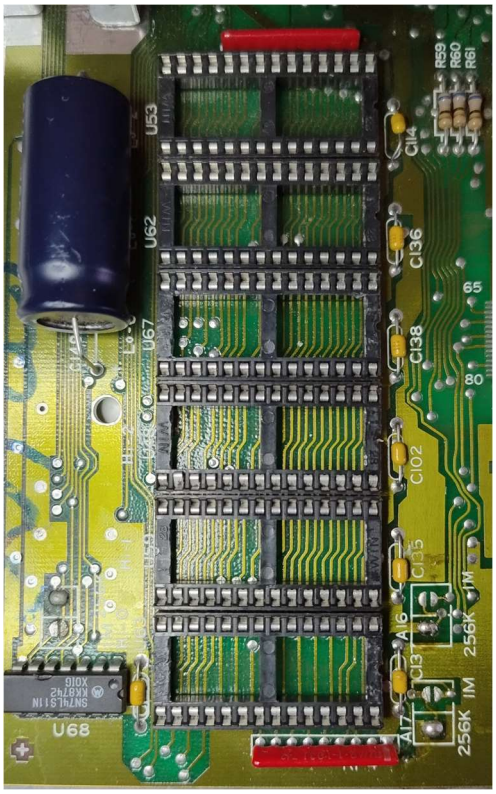
If you insist in fitting 6 chips set on such motherboards, you will have to set modify them to fit the 6 IC supports required. The documentation you are currently reading does not cover that part.

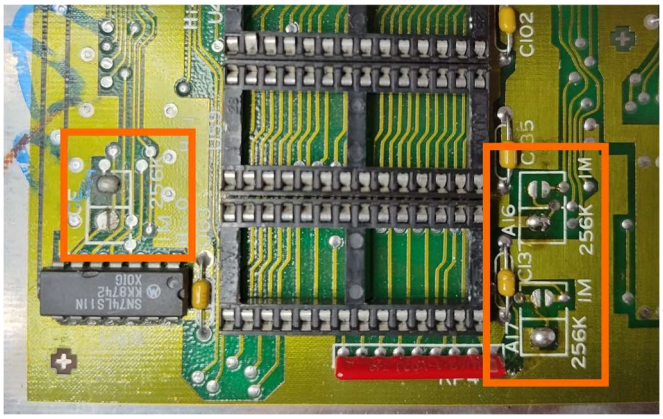
Open your Atari and check your motherboard before purchasing any TOS ROM set.

Although the fitting of these is a simple task, please be sure that you know what you're doing before fitting.

Some motherboards indicate which Rom is which (Hi-0, Hi-1, etc…), if your board does not have this information, but only Uxx, Uxx… then look for the information online. Other a search for pictures will show you the correct placement.

Some motherboards are designed to accept 2 chips and 6 chips sets. On these boards, 3 solder pads are present to configure the board to use 2 chips (1M) or 6 chips (256K). You must make sure you configure the board to 6 chips (256K). This may require soldering.





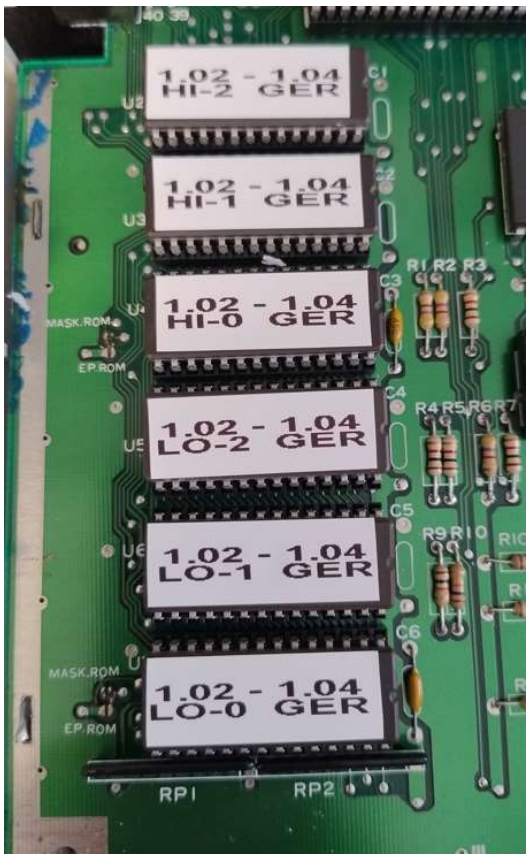
6 IC supports for 6 chips set

in orange, make sure the 256K solder pad are set

Be extra careful when removing your ROM chips. Take your time not to bend any pins.
You can also place a sticker on them to mark which one is which. It will be helpful for future use.

Be also super careful when you insert the new ROM chips. Take your time and make sure no pins are bents.

Here are some examples of 6 ROM chips fitted on different motherboards:

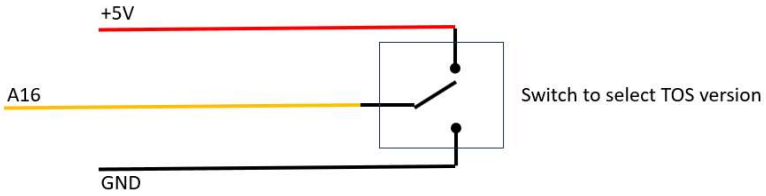
Early Atari ST version from 1985 (no 2 chips option solder pad, no ROM markings) 	More recent version (C070859-001 REV 2) See the soldering pad and the ROM marking Lo-0, Li-1, etc… 

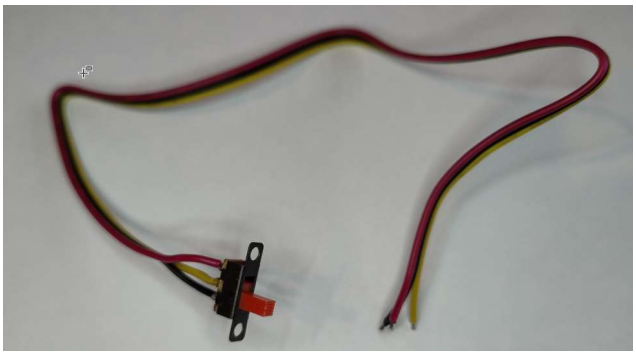
Dual TOS 1.02 and 1.04 (option not aways possible)

On Atari ST board where the solder pads are present and if the ROM chips mention the letter “D”, it is possible to setup a dual TOS solution.
This requires some soldering and few wires + a switch. This is not supported and you must feel confident to do it.
The Chips marked with a “D” are twice the size required. 2 TOS are present in them: 1.02 and 1.04.

When fitted normally, TOS 1.04 is loaded.

But if you force the address A16 to 0 instead of 1, you can load TOS 1.02.
One solution is to use a switch and 3 wires like so:





Connect the black to the GND
Connect the red to +5V
Connect the yellow to A16. If your motherboard has the solder pad A16 selection, remove the solder and solder the yellow wire like so: