

256 kB RAM for the Philips VG 8235/00

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Warning:

The most important part in the computer is the printed circuit board (PCB). Parts can be replaced, but not the PCB. Do not try to unsolder the parts, but cut them loose and then remove the solder pins. The use of IC sockets is recommended.

Requisites:

- 74LS08
- 74LS125
- 74LS139
- 81464 or equivalent (4 pieces when reusing the existing memory chips / 8 pieces when the existing memory chips are cut loose)
- 18-pins IC socket (4 pieces)

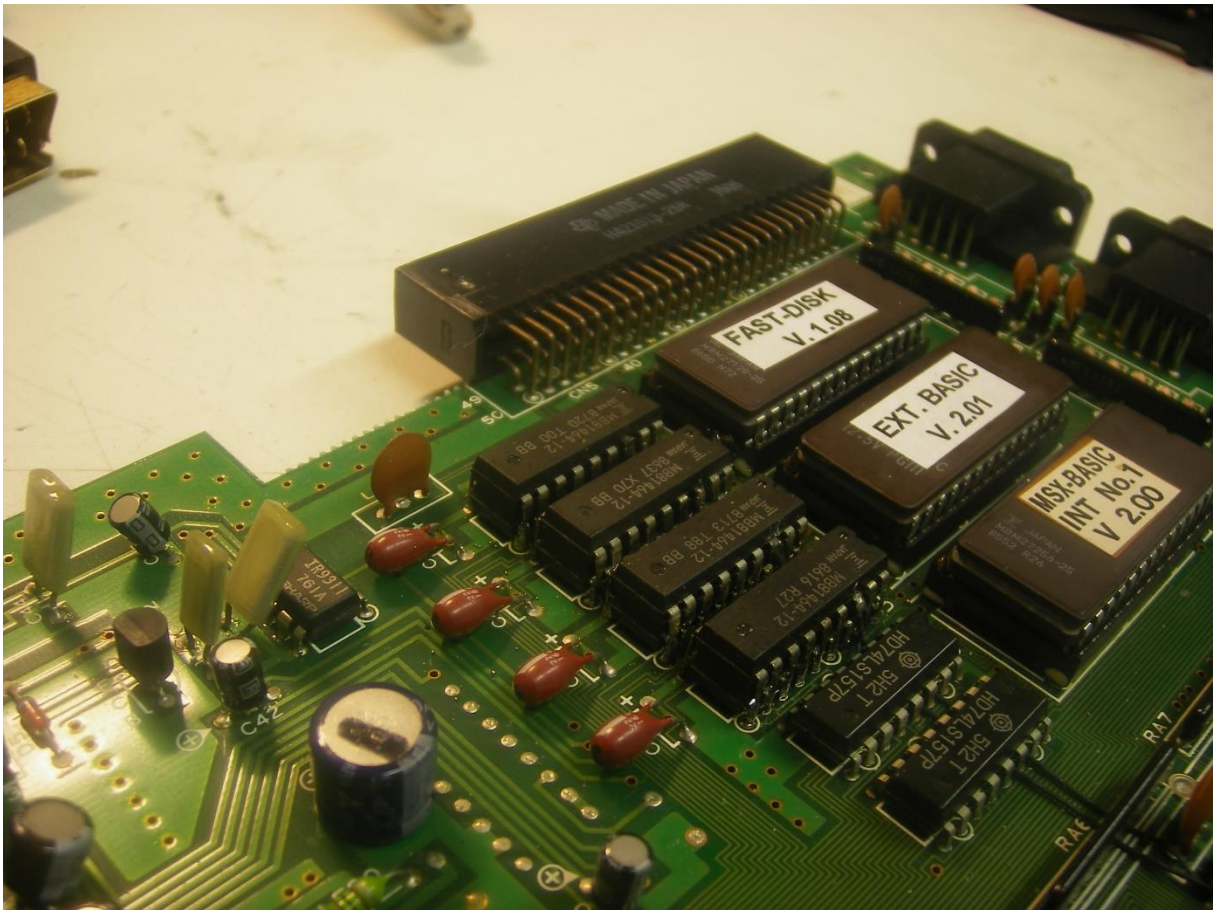
Preparation:

- 74LS08, shorten pins 1, 2, 3, 4, 6, 8, 9, 11, 12 and 13.
- 74LS125, shorten pins 1, 2, 3, 4, 5, 6, 8, 9, 11, 12 and 13.
- 74LS139, shorten pins 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14 and 15.
- 81464, shorten pin 16 of 4 pieces.

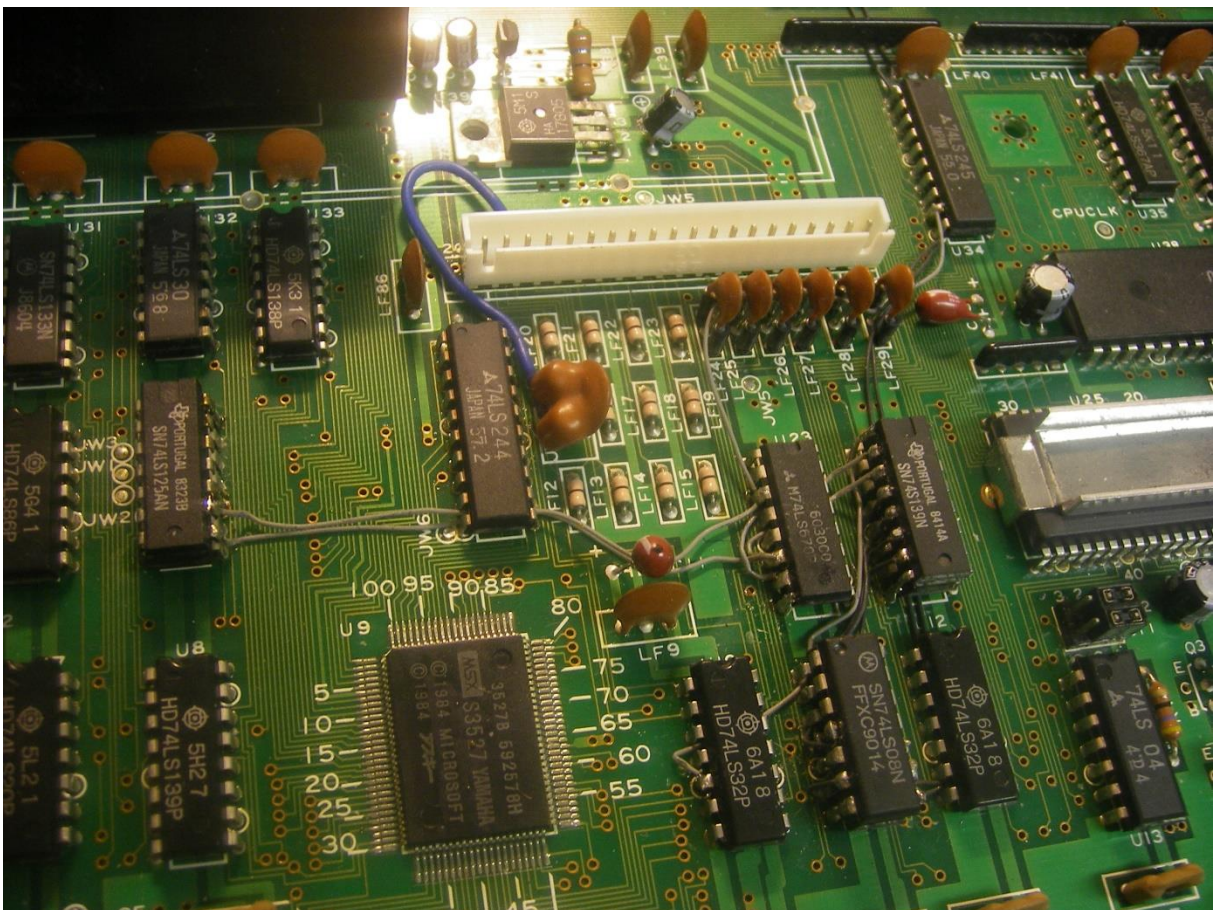
Installation:

- Cut pin 4 of U11 (74LS08) but not too close to the IC, as you need to solder a wire to the remains.
- Cut pin 9 of U11 (74LS08) but not too close to the IC, as you need to solder a wire to the remains.
- Solder the remaining pins of 74LS08 to the same pins of U11 (74LS08).
- Solder the remaining pins of 74LS125 to the same pins of U21 (74LS125).
- Solder the remaining pins of 74LS139 to the same pins of U24 (74LS157).
- Remove U44, U45, U46 and U47. Cut out or unsolder.
- Place 4 18-pin IC sockets on the free places of U44, U45, U46 and U47.
- Make 4 turrets of 2 chips each (81464). The top one is the IC with pin 16 shortened.
- Place the 4 turrets in the 4 18-pin IC sockets.
- Connect pin 16 of U47 (top) to pin 16 of U45 (top) and pin 8 of the 74LS08.
- Connect pin 16 of U46 (top) to pin 16 of U44 (top) and pin 6 of the 74LS08.
- Connect pin 8 of the 74LS125 to pin 3 of U23 (74LS670) and pin 9 of U34 (74LS245).
- Connect pin 9 of the 74LS125 to pin 6 of U23 (74LS670) and pin 3 of the 74LS139.
- Connect pin 4 of the 74LS08 to pin 6 of the 74LS139.
- Connect pin 9 of the 74LS08 to pin 7 of the 74LS139.
- Connect pin 1 of the 74LS139 to pin 5 of U10 (74LS32).
- Connect pin 2 of the 74LS139 to pin 7 of U23 (74LS670).
- Connect pin 4 of the 74LS139 to pin 4 of U11 (74LS08).
- Connect pin 5 of the 74LS139 to pin 9 of U11 (74LS08).

If everything is properly connected then a 256 kB Memory-Mapper will be present.



256 kB memory.



The mapper circuit.

The start-up screen will still show 128 kB, but after replacing IC118 with an EPROM with Memory-Counter the full amount of memory is shown.