**ROMulan PET RAMulator (with EAzy NOPulation) - Version 4.1**

## Installation

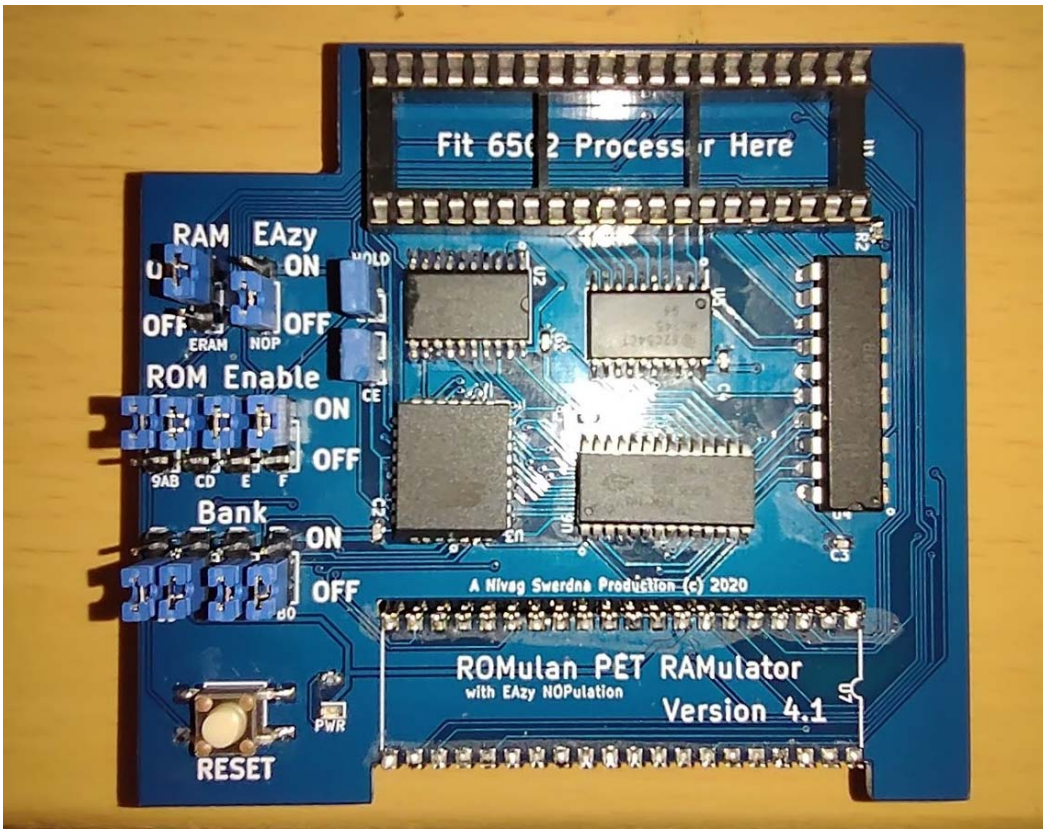
Remove existing 6502 Processor from Socket on motherboard and insert into ROMulan PET RAMulator taking care to follow the direction markings.

I have provided a DIP-40 socket attached to the ROMulan PET RAMulator legs and the easiest installation is just to install the assembly as one, i.e. to piggyback the supplied DIP-40 into the DIP socket on the motherboard. For a lower profile, but more fiddly installation, the DIP socket can be removed and the legs cut, equally, to length.

If extra clearance is required, e.g. ICs near the 6502 socket have been replaced and socketed then it is possible to stack additional DIP-40s sockets get raise up the assembly further.

Check orientation of the onboard 6502 and the ROMulan PET RAMulator before applying power.

Once power is applied the Green Power LED should light indicating that 5V is applied to the board.



## Operation


**RAM**

The Jumper should be between the top and middle pins for ON and middle and bottom pins for OFF. When ON the 32K of onboard static RAM will take priority over PET RAM and be mapped to $0000-$7FFF; When OFF PET RAM will be accessible.


**NOP**

By Default ensure this is OFF!

The Jumper should be between the top and middle pins for ON and middle and bottom pins for OFF. When ON the board will force the 6502 processor to always read $EA on the data bus. $EA is the NOP instruction so this will cause the processor to perform a read instruction to each address in turn as the PC increases. i.e. The Address Bus will increment continually from $0000 to $FFFF. The Addresses are presented to the motherboard and can help diagnosis.


**ROM Enable**

By default all ON

Areas $9000-$BFFF, $C000-DFFF, $E000-$E7FF and $F000-FFFF can be selectively mapped by using these jumpers. E.g. To only map the editor ROM $E000-$E7FF set the jumpers to OFF, OFF, ON, OFF


**Bank Selection**

The ROMulan PET RAMulator holds 16 banks of ROMs; each bank has 32K of ROM although the areas $8000-$8FFF and $E800-$EFFF are never mapped to avoid conflict with video memory and I/O areas.

The four jumpers encode the bank number in binary with the left most jumper being the Most Significant bit. E.g. Bank 12 is selected as Binary 1100 i.e. ON ON OFF OFF.

**Included ROM Sets (MegaV2 Version)**

**0 (OFF, OFF, OFF, OFF)**

PETTESTE2KV04

**1 (OFF, OFF, OFF, ON)**

VOSI tester

**2 (OFF, OFF, ON, OFF)**

Basic 1r

**3 (OFF, OFF, ON, ON)**

Basic 2 – Normal Keyboard

**4 (OFF, ON, OFF, OFF)**

Basic 2 – Business Keyboard

**5 (OFF, ON, OFF, ON)**

Basic 1 with VICE Patches

**6 (OFF, ON, ON, OFF)**

Basic 2 with VICE Patches

**7 (OFF, ON, ON, ON)**

Basic 4 with VICE Patches

**8 (ON, OFF, OFF, OFF)**

Basic 4 with edit-4-b-noCRTC.901474-02.bin

**9 (ON, OFF, OFF, ON)**

Basic 4 with edit-4-40-b-50Hz.ts.bin

**10 (ON, OFF, ON, OFF)**

Basic 4 with edit-4-40-n-50Hz.901498-01.bin

**11 (ON, OFF, ON, ON)**

Basic 4 with edit-4-80-b-50Hz.901474-04.bin

**12 (ON, ON, OFF, OFF)**

edit-4-80-b-50Hz.901474-04_.bin

**13 (ON, ON, OFF, ON)**

edit-4-40-b-60Hz.ts.bin

**14 (ON, ON, ON, OFF)**

edit-4-40-n-60Hz.901499-01.bin

**15 (ON, ON, ON, ON)**

edit-4-80-b-60Hz.901474-03.bin