

## README.DOS

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*   vMac/DOS README                               *
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NOTE: Using this software shows your acceptance to the End User License Agreement which was shown to you before downloading vMac. If you have not read or accepted it, you are not entitled to use this software!!! Please read EULA.TXT (located in the same directory as the readme), make sure you understand it and accept its terms. If you don't accept vMac's End User License Agreement, please delete vMac from your machine.

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### 0. Brief introduction

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What is vMac? vMac is a free software emulator that emulates the Apple Macintosh Plus(tm). That means that vMac does not cost anything, and does not use any hardware. A lot of the Macintosh Plus' functionality is already implemented in this port, and that includes:

- 68000 CPU, 68010 CPU, 68020 CPU + 68881 FPU emulation
- 4 MB of RAM
- Keyboard support
- Floppy support
- Sound support
- Mouse support
- Minimal printer support [Experimental]
- Minimal SCSI support
- Can run MacOS (System Software) versions up to 7.5.5

Currently, work is being done on IceCube, a new CPU emulator that would replace UAE's CPU emulator which we use currently, Hard Disk support, and other stuff :).

The system requirements for vMac are:

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- MS-DOS 5.0 or higher
- 80486 with a 80487 FPU  
A Pentium 133 recommended
- A minimum of 8 MB of RAM  
16 MB of RAM recommended
- Mouse
- About 3 - 4 MB of harddrive space for minimum install (vMac + ROM file + disk image)  
15 - 20 MB of harddrive space recommended (You do want to use some Mac software with vMac, right?)

### 1. Copyright Notice

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vMac is Copyright 1997 Philip Cummins and The vMac Team (ALL RIGHTS RESERVED). The UAE engine, which vMac's core is based on, is copyrighted by the UAE team. In addition to vMac core copyrights, each port author reserves the right to copyright his or her respective port.

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### 2. Getting vMac

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vMac's homepage is at <http://www.vMac.org>. If that doesn't work, try <http://leb.net/vmac>. If \*that\* doesn't work, try again another day, the site is probably down :\. Click on the Download link, fill a few blanks and download vMac. If you are reading this, however, you have probably already downloaded vMac. This section is here just in case...

### 3. Installing vMac

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Unzip the file you downloaded into a directory of your choice.  
You have to have a ROM in a file taken from a real Macintosh Plus in order to use the emulator.

NOTE: LEGALLY, YOU HAVE THE RIGHT TO USE A MAC ROM ONLY IF YOU OWN A REAL MAC PLUS. ALSO, YOU MUSTN'T USE YOUR REAL MAC AND HAVE vMac RUNNING AT THE SAME TIME.

If you do not have a ROM in a file, and you do own a real Macintosh Plus, read the file vmac\_rom.txt.

You also need a System Software disk image. System 6.0.8, System 7.0.0, and System 7.0.1 are distributed freely and can be downloaded from Apple's FTP site (<ftp://ftp.apple.com>), or the vMac Application Site (VAS - <http://www.hostus.com/vas>). A considerably large selection of Macintosh applications and games can also be found on VAS.

Once you've got your ROM and MacOS disk image, edit vMac.cfg and modify it to suite your system (and desires). All options are self explanatory. For example: to boot off Disk1.dsk put "Disk1.dsk" (without the quotes) beside DrivePath1=.

### 4. Configuring vMac

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vMac can manage several config files simultaenously. By default, it will use "vMac.cfg", but you can use other config files as well (see the command line help for more instructions - type "vmac -h").

The config file contains all you need to fine-tune vMac to suite your system needs and desires. The file is commented, so there shouldn't be any problem understanding what's going on.

### 5. Running vMac

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There are four binaries - vmac.exe for vMac with a 68000 CPU, vmac010.exe for vMac with a 68010 CPU, vmac020.exe for vMac with a 68020 CPU and vmac881.exe for vMac with a 68020 CPU + 68881 FPU. In the examples in this README we will always use "vmac". Note, however, that you can always substitute "vmac" with any of the above mentioned filenames.

Please note, that the 68020 and 68020/68881 binaries are slower than the 68000 and 68010 binaries. This is natural, of course, as emulating a more sophisticated CPU requires a stronger host machine.

Launch vMac (by typing "vmac") and if everything is alright, vMac should boot within a minute. Voila, you can run Macintosh software on your PC.

To get a command line help, type "vmac -h".

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If you want to enter debug mode you can press F9 at any time during the emulation. For further information about the debugger included with vMac see "debug.txt" (located at the same directory as the readme file).

### 6. While vMac is running...

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The keyboard mappings:

Alt : This key emulates the Command [or Pretzel] key on the Mac.  
Ctrl : This key emulates the Option key on the Mac.  
Shift : This key emulates the Shift key on the Mac.  
CapsLock: This key emulates the CapsLock key on the Mac.  
Keypad : The gray keypad emulates the Macintosh Plus keypad.  
          The regular [white] keypad acts like under Num-Lock.  
F1 : Inserts floppy-disk in internal floppy drive.  
F2 : Inserts disk-image in external drive 1.  
F3 : Inserts disk-image in external drive 2.  
F4 : Inserts disk-image in external drive 3.  
F8 : Will dump the screen contents [640x480] to a .BMP file.  
F9 : Enter online debug mode [see "debug.txt" for further information].  
F10 : This will close vMac.  
F11 : This key emulates the Interrupt/Programmer Switch of the  
      Macintosh Plus.  
F12 : This key emulates the Reset Switch of the Macintosh Plus.

### 7. Troubleshooting

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This section currently deals with very elementary stuff. Hopefully (or then again, maybe not) it will be expanded in the future.

#### A) Startup problems

1. vMac must be run in MS-DOS mode.
2. vMac requires a mouse driver. You must load the mouse driver [Any generic mouse driver should be fine, as long as it's not PS/2] before running vMac.
3. Sound driver - To use vMac's sound emulation, your sound card must be installed [Naturally], and all of its drivers [if there are any] must be loaded BEFORE running vMac. It is also recommended that you set the BLASTER variable in your environment setting. Refer to your sound-card documentation on how to configure it for DOS. You should also keep in mind, that vMac's sound code was written and tested for "Creative Sound-Blaster" cards. It was not tested under any other sound card brand.
4. "Cannot open printer port" means you specified the wrong parallel

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port of your printer. Most printers are usually connected through LPT1.

### B) QuickDraw hack issues - You should read this if you intend to use vMac's QuickDraw patch.

1. The Macintosh start-up icon [i.e. Happy Mac, Sad Mac etc] is hardcoded into the ROM, and will not be shown when you run vMac with the QDHack option set to ON.
2. In 640x480 mode, some alert boxes are smaller, and centered to the old 512x342 screen. This is not a major bug, of course, but still looks weird.

### C) Bootup issues

1. When vMac starts, a floppy with a question mark on it appears - the Mac can't find your disk image/partition/floppy. Double check the path and name of the disk-image in the config file.
2. When vMac starts, a floppy with an X on it appears - the Mac can't boot off your floppy/disk image/partition. It means that the disk-image/floppy/partition you were trying to boot from is corrupt.
3. When I try to boot System 7 or higher, the Mac writes something like "You need more RAM to boot this version of the System Software" - tell vMac to emulate more RAM, through the config file.
4. It takes longer for vMac to boot when I run it with 4 MB RAM than when I run it with 1 MB of RAM - this is natural. It takes time to check for all that RAM. In this version, however, you can disable the memory test through the config file.
5. MacOS 7.6 and higher won't boot! - MacOS version 7.6 and higher don't even work on a real Macintosh Plus. You can either downgrade to an older Macintosh operating system, or wait until new Mac models are implemented..

### D) During runtime

1. vMac is running incredibly slowly with MacOS x.x.x - You might have a slow machine. You might try to remove extensions and control panels from System Folder:Extensions and/or System Folder:Control Panels. You might not have enough RAM on your machine. You might want to try to downgrade your MacOS version.
2. You should keep in mind that 68020 emulation is slower, so if vMac is going too slow with the 68020 binary, you might want to use the 68000 binary instead.

### E) To get help with any other problem, e-mail the port author.

## 8. How to help...

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If you'd like to help, please e-mail the port author you want to help to. The e-mail addresses of porters are located on vMac's site (<http://www.vMac.org>), in the Port Roster. We appreciate all help we can get so if you are able/willing to donate some of your time, we'll probably find something for you to do.