Go Old School with Mac OS X
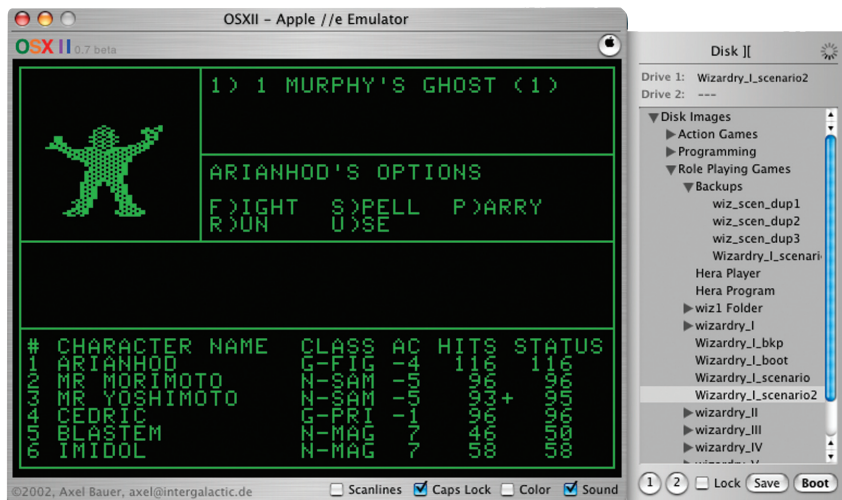
by Emory Christensen

EASY

WHAT YOU NEED
- Mac OS 10.2.2 or later ($129, www.apple.com)
- OSXII (free, http://homepage.mac.com/axelbauer/apple2)
- Apple II (or ROM image)
- Sir-Tech Software's Wizardry (or disk image)
- Internet connection

ON THE DISC
OSXII 0.7b

Does this old ghost bring back fond memories? Resurrect your old Apple II or other computer or game system with Mac OS X and an emulator.

If you've been using a computer for more than a few years (and we're talking *quite* a few years), odds are you've developed a bit of digital nostalgia for a few favored ancient apps. Back in the day, companies *knew* how to make software—none of this 32-bit, Aqua Extreme, OpenGL-enhanced, bloated nonsense. Remember MicroPro's WordStar, Broderbund's Choplifter, or Sir-Tech Software's Wizardry? Kinda makes you weepy, doesn't it?

Well, dry those eyes, you reminiscing ol' nostalgia addicts.

You can return to those glory days, and you don't even have to leave the comfort of Mac OS X to do it. How? Emulation. With the right software, you can bring an Apple II, a Mac Plus, a Commodore VIC 20, an Amiga, a TRS-80, or any number of other old machines back to virtual life in an Aqua window. We show you how by resurrecting the granddaddy of the Mac—the Apple II—and the grandmommy of dungeon crawls—Wizardry—on your Mac. So set your Wayback Machine to the early 1980s, and get ready to enjoy past memories in the present.
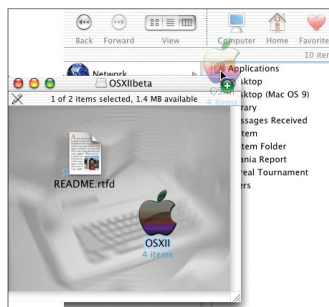
THE LEGAL ROMIFICATIONS

We interrupt this tutorial to bring you this important announcement.

The World Wide Web is not your oyster when it comes to downloading ROM images and disk images—stuff required for this how-to. Sure, you can find a ton of files out there, but you can't *legally* download and use any file unless you own it—meaning at some point in your life you plunked down the cash to buy that software, computer, game, or game system—or unless the license agreement allows for this use.

ROM images are generally proprietary—manufacturers copyright these files just like software. You need to own the hardware to have the ROM image. In other words, you should own an Apple II—working or not—before you download and use the ROM image. The same can be said of disk images—unless you bought the software at some point, you cannot legally download and use its disk image. OK? OK.

We now return to our regularly scheduled tutorial.

1 **Grab the Goods** The first step to running a machine-within-a-machine is deciding what type of machine to run. Emulators fall into two categories: computers and game systems. On top of that, each machine type may spawn a number of different software emulators. To emulate an Apple II, we chose a rock-solid open-source program called OSXII. However, if your Mac doesn't meet OSXII's steep 500MHz Jaguar requirements, check out "Emulators for Everyone," p70, for alternatives. To install the software, download OSXII from the Web or grab it from our Disc, mount the disk image, and drag the OSXII folder icon to your Applications folder (or anywhere else) to copy it.

Installing OSXII is a simple drag-and-drop affair—now you're ready to christen it with a ROM file and some disk images.

2 Round Up a ROM

To make an emulator run, you need a ROM (read-only memory) image, which is essentially a software version of a machine's read-only chip (or set of chips) that contains instructions for turning microprocessors and other hardware into an Apple II, an Amiga, a Mac, or some other machine. To boot OSXII, you need two ROM files—an Apple II ROM image and a Disk ROM image. If you have an Apple II, use a ROM imaging utility, such as GetROM (part of Basilisk II, a 68K Mac emulator), to create the files. If not, grab them from the Web (don't forget "The Legal ROMifications," p68). You can find both as part of a Windows Apple II emulator at ftp://ftp.apple.asimov.net /pub/apple_II/emulators/apple_2_for_windows/apl2em. Click the apl2em.zip link to download the package. Then open the apl2em folder and move the Apple.ROM and DISK.ROM files to the Roms folder inside the OSXII folder.
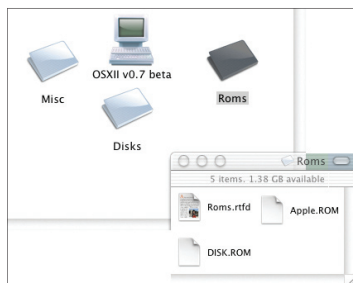

If you want OSXII to work, move the Apple.ROM and DISK.ROM files to the Roms folder.

4 Add 'Em to the Emulator

After you download and decompress everything you want, move the disk images to the Disks folder inside the OSXII folder. With the Wizardry packages, make sure you decompress the individual files within each folder too, or you won't be able to use them. The Disks folder contains five category folders—a System folder, three game folders, and a programming folder. File your disk images in the appropriate category (or not—hey, it's your machine). OSXII comes equipped with a few disk images in each category, so even if you don't download anything, you'll still have something to do.

As you can see, we _really_ like the Wizardry series—we stuck all the files in OSXII's Role Playing Games folder inside the Disk folder.
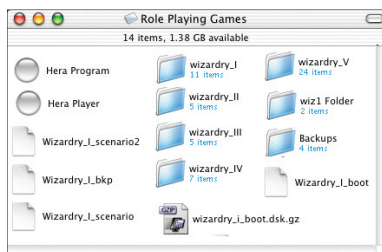

3 Snag Some Software

Now comes the fun part—choosing software for your new virtual Apple II machine. If you've got Apple II software, convert your floppies into disk images using Disk Copy and a floppy disk drive. Or download software—again, read "The Legal ROMifications." That said, Asimov's Apple II archive (ftp:// ftp.apple.asimov.net/pub/apple_II) has one of the biggest collections on the Web. Click the Images link; from there, select any software category (and subcategory), and download the disk images you want to use (and to which you have legal rights). Ah, Wizardry! Download this game by clicking Games, then RPG, and then Control-clicking wizardry_I and selecting Download Link To Disk from the contextual menu.
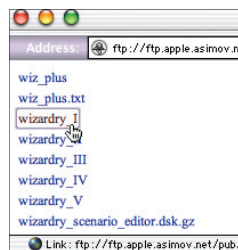
Asimov's Apple II site includes hundreds of disk-image downloads, including our prized Wizardry files.

5 Pick Your Preferences

Now that you have the requisite files, you're ready to rock. Double-click the OSXII emulator to fire up a main screen that displays Apple's prehistoric machine and a retractable disk drive panel on its right. If this panel doesn't appear, click the bitty black Apple logo in the upper-right corner to open it. This is where you'll "insert" disks in the emulator's "drive" to run an app. Use the check boxes at the screen's bottom to select preferences. The Scanlines box sets whether to show scanlines in the display. Caps Lock toggles letter caps on or off. Color lets you choose whether to show a color display (check the box) or a classic green display (uncheck it). Sound controls whether sound is enabled. For the full retro experience, we unchecked the Scanlines and Color boxes.
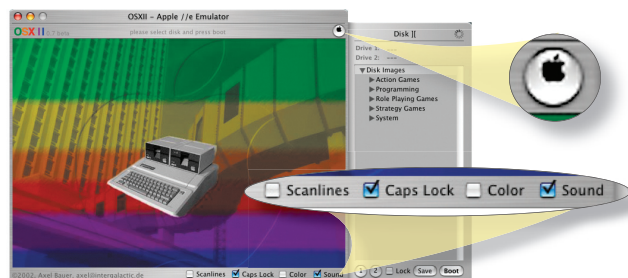

For a trip down memory lane, set OSXII to not show scanlines and display everything in its classic glory.

STUCK ON THE START SCREEN? READ THE MANUAL

For the uninitiated, Wizardry: Proving Grounds of the Mad Overlord is a role-playing game where you lead a party of up to six adventurers in search of the evil wizard Werdna (try reading that name backward). Summoned by the Mad Overlord Trebor (same name trick), you journey through a ten-level dungeon maze on a quest to find Werdna and return the amulet he stole from Trebor.

When you first fire up the game, you'll need to visit the training grounds to create some characters, and then go to the castle to gather them into a party. There you can equip your characters, let them rest (and gain levels), and heal them. Once you're set, go to the edge of town and down into the maze. But you knew all this because you read your original game's manual, right?

6 **Lock and Load** Time to roll. To play Wizardry, you need to boot a master disk (keep this locked to avoid writing over it when you save games) and a scenario disk. In the disk drive panel, click the disclosure triangle next to the category folder where you filed the Wizardry disk image (Role Playing Games, we assume). This displays a list of all disk images in that folder. Click the disclosure triangle next to Wizardry, select Wizardry_I_boot from the list, and check the Lock box. Click the 1 button to load the disk into Drive 1 in locked mode, and then click Boot to launch Wizardry. The main screen displays the boot process, and then the Wizardry splash screen when it's done loading.
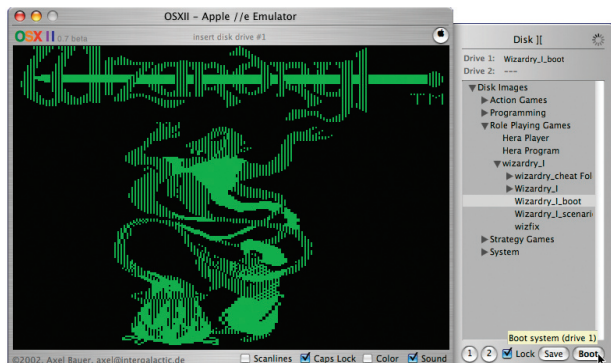
If you loaded the boot disk properly, Wizardry's animated splash screen appears.

7 **Go Play** Press Return on your keyboard to exit the splash screen and display the startup screen. Press S to start playing the game. The screen instructs you to insert the Scenario Master in Drive 1; select Wizardry_I_scenario in the disk drive panel, uncheck the Lock box, and click the 1 button to load the scenario disk into the virtual disk drive. Then press Return. Congratulations—you made it! You're now ready to play Wizardry just like you used to on your old-school hardware. To save your progress, click Save at the bottom of the disk drive panel so you can pick up where you leave off. Ready, Tiltowait!
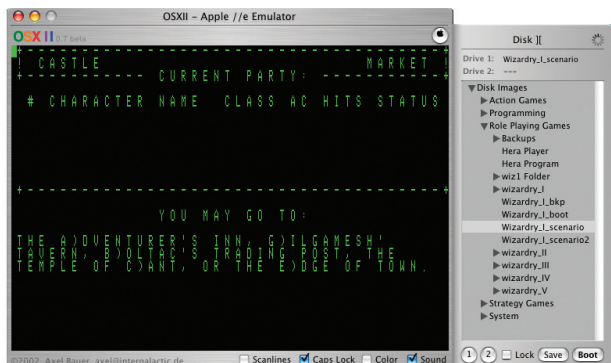
It ain't pretty (yet), but this start screen shows that Wizardry is alive and well and running in OS X—in a virtual Apple II machine.

Emory Christensen is a freelance writer who gets his kicks with Macs of all stripes. He recently had the misfortune of causing a motherboard fire—no joke—with an improperly configured G4 upgrade.

EMULATORS FOR EVERYONE

Do a quick search for *emulator* on VersionTracker (www.versiontracker.com), and you'll find tons of emulators for a wide range of machines. So if the Apple II doesn't exactly rock your world, maybe a different machine will. Whether you want to run software in a different computing environment or you got game, here's a list of some computers and game systems as well as their software emulators. Also check out Emulation.net (www.emulation.net)—a site devoted to emulation on the Mac—for downloads.

COMPUTER EMULATORS

SYSTEM	EMULATOR
680X0 Macs	Basilisk II, vMac
Amstrad CPC	CPC++
Apple II	OSXII, Virtual, KEGS
Atari, Amiga, Apple II, Nintendo, TRS-80, and many, many others (the list is truly astonishing!)	MacMESS
Atari 800	Atari 800, Atari 800MacX
Atari ST	Hatari, NoSTalgia
Commodore 64	Frodo, Power 64, sixtyforce
Commodore Amiga	MaxUAE
Commodore VIC-20	Power 20
IA-32 (x86) PC	Bochs
SAM Coupe 512K	SimCoupe
Thomson MO5	MO5
Thomson TO8	TEO
Windows	OpenOS X WinTel (based on Bochs)

VIDEO GAME SYSTEM EMULATORS

SYSTEM	EMULATOR
Atari 2600	Stella
Atari 5200	Jum52
Atari Lynx	Handy
CHIP8	Crazy-8
Game Boy/Game Boy Color	gnuboy, KiGB
Game Boy Advance	Boycott Advance, VisualBoyAdvance
MSX	fMSX, Zodiac
Neo Geo	GeoMAME (based on MacMAME)
Neo Geo Pocket Color	Neopocott
Nintendo 6 4	Mupen64
Nintendo (NES)	RockNES
Nintendo Virtual Boy	ViBE
Odyssey	O2Em
Oric-1/Oric Atmos	Oric
PC Engine	TGEmu
Sega Arcade	Modeler
Sega Genesis	Generator, Genesis Plus
Sega Master System and Game Gear	SMS+
Super Nintendo	SNES9X, SNES9X Converted
Wonderswan	Oswan