

# SO YOU WANT TO KNOW ABOUT DIGITAL VIDEO AND AUDIO FOR MULTIMEDIA AND WEB DEVELOPMENT?

## The Non-definitive A to Z\* Guide.

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Macintosh is an excellent multimedia and web development platform due to its ease of use, its operating system's provisions for cross-platform compatibility, and Apple's Quicktime Media Layer (QTML). Multimedia projects developed on Macintosh using Macromedia's Director and Authorware or Apple's Media Tool can be viewed by most Macintosh (MC68040 and PowerPC) as well as most standard Windows-Intel workstations. In addition, web development on Macintosh is simplified by its intelligent graphical user interface and can be delivered to any HTML 2.0/3.0 compliant browser.

#### A. *What does that mumbo jumbo mean?*

It means that using Macintosh to develop computer-based video and audio materials is the way to go. Macintosh is especially suited to converting video and audio so that it can be used by most computers and on the web.

#### B. *So, how do I develop these audio and video materials?*

If you have an 8500 or 8600 Mac, then you have almost all the tools you need straight out of the box. The 8X00 series has a built-in Digital Audio/Video board which allows input (digitizing, or the conversion from analog to digital) of audio and video signals and output (conversion back to analog) of audio and video signals.

##### Video Tools

Eventually, you may need some additional software tools, but for beginners, Apple's Video Player (1.6 in your Apple Extras folder) and Movie Player with Authoring extensions (2.5.1, in your Apple Extras folder:Quicktime Folder) will suffice for video capture and editing (including the audio soundtrack).

##### Audio Tools

Apple's Simple Sound (1.0, in your Apple Menu Items) or Sound Control Panel (8.0.5, found in your Apple Extras folder, but must be copied to your System Folder's Control Panels) and other shareware tools (SoundMachine 2.7.1 and ConvertMachine 1.2, both available for download from <http://www.kagi.com/rod> and SoundAppFat 2.3.1, downloadable from <http://www-cs-students.stanford.edu/~franke/SoundApp/>) will allow you to digitize audio and convert those audio clips to almost all existing and uniform audio formats.

##### Advanced Tools

If you plan on doing any "heavy-duty" video digitizing and editing consider Adobe's Premiere and/or AfterEffects or Avid/Strata's VideoShop (which shipped with 8500 Macs). An audio option, which is a good idea if you plan on doing any "heavy-duty" audio processing, is Macromedia's SoundEdit 16 II (part of Macromedia's Director 6 Studio).

#### C. *Okay, I'm ready, show me what I've got to do.*

Whoa, not so fast pardner. There are some things you must think about first.

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\* Okay, so you got me. This is really the A-G Guide, but I'm sure in time you will be able to add points H through Z.

- 1) Audio and Video files are extremely media and processor intensive. In other words, you'll need a fast machine (preferably a PowerPC), lots of memory (RAM), and lots of hard drive space. You've got this with the Macintosh Quadra 660A/V or 840A/V or a PowerMac 7100 or 8100 A/V or preferably an 8500 or 8600 PowerMac. Even with these setups you'll still have to tweak the machine for maximum performance. (See D. through F. in the "A to Z" Guide.")
- 2) You need to make some decisions prior to digitizing about what quality you may need or want.
  - Two questions that can guide your decision-making:
    - a) what is your final destination (web delivery vs. CD-ROM and/or video tape delivery)?
    - b) is this media content central to my goals or ancillary?
 

If the media is ancillary, digitizing at lower requirements is a good idea (faster, less taxing of resources, etc.), but if the media is central, digitizing should be done with more care (greater fidelity) while considering and optimizing for the final destination.

*D. Okay, so now what?*

For both audio and video digitizing, a minimalist approach toward extensions and control panels will yield the best results. Use Apple's Extensions Manager or Casady and Greene's Conflict Catcher (Apple Menu:Control Panels:Extensions Manager or Conflict Catcher) to create a new, digitizing extensions setup. (Consult with your Computing Center if you need help with managing extensions.)

For this new setup you will want to reduce the number of extensions and control panels, especially those for networking (AppleShare—unless your software is on a network server instead of your hard drive—, OpenTransport or TCP, FileSharing) and others which are processor intensive (i.e., menu clocks, timers and contact managers).

*E. So you mean that running lean makes me mean (at digitizing)?*

That's right! The leaner your digitizing extensions setup, the better your results (read less dropped frames), especially if you are digitizing the highest digitizing quality settings.

*F. Besides limiting my extension set, what else can I do to improve performance?*

- 1) Make sure you've restarted Mac with the limited, digitizing extensions setup. (Remember to turn off time-related and network extensions and control panels.)
- 2) Turn off AppleTalk in the Chooser. (Inactive.)
- 3) Insert a floppy disk and a CD-ROM so that your Mac will not occasionally stop to poll for these devices.
- 4) Make sure you've defragmented your hard drive. (Tools to do this include Norton Utilities by Symantec and Alsoft's DiskExpress II. Ask your Computing Center for more details and assistance.)
- 5) Use S-VHS inputs over Composite (RCA-jacks) if possible.

*G. Am I finally ready?*

Yes! If you've followed the items above you are ready to digitize, but before you actually digitize you must set the software to digitize optimally with the considerations you outlined in C) 2). When it comes time to save your digitized video material use Quicktime for Audio/Video content and save your digitized audio material in AIFF format (Macintosh) *and* WAV (Windows users).

(See the attached settings chart.)

*Other excellent resources:*

Jim Heid's Macworld New Complete Mac Handbook (4th) from IDG Books, ISBN 1-58684-484-0  
 Adobe Press' Adobe Premiere™ Classroom in a Book™ (2nd) from Adobe Press, ISBN 1-56830-119-7  
 Terran Interactive™'s Web Site: <http://www.terran-int.com>  
Digital Video Magazine's Web Site: <http://www.dv.com>  
 Jim Heid's Web Site: <http://www.heidsite.com>  
 Apple's Quicktime Site: <http://quicktime.apple.com>  
 Apple's QuicktimeVR Site: <http://qtvr.quicktime.apple.com>  
 A how-to Quicktime VR Site: <http://www.mcps.k12.md.us/train/qtvr/>

