The AV DSP Power Plug-in

The architecture of Adobe Photoshop™ 2.5 was designed to enable acceleration of operations that take a long time to execute. Many of these slow, calculation intensive routines can be accelerated using processors other than the computer's CPU.

To permit both high-quality results and acceleration, Adobe has licensed Photoshop™ code to several leading hardware manufacturers so they could develop *Adobe charged*™ software to accelerate Photoshop operations that work with their DSP (Digital Signal Processor) and RISC (Reduced Instruction Set Computing) add-in cards. Acceleration products for Adobe Photoshop are available in a variety of configurations, feature sets and prices for every Macintosh® with NuBus® or PDS capability. These products save valuable production time by letting the co-processor share time-consuming image processing tasks.

The Adobe charged logo identifies products that deliver high-quality results identical to unaccelerated Photoshop operations.

The AV DSP Power Plug-in enables Photoshop to take advantage of the DSP3210 built into the Quadra™ 660AV and 840AV. With the AV DSP Power Plug-in installed Photoshop can use it to accelerate many tasks in the same way as Adobe charged products. (See below)

Installation and Operation

1) Copy the AV DSP Power Plug-in into the Adobe Photoshop 2.5.1 Plug-ins folder on a Quadra 660AV or 840AV.

> **Note:** The AV DSP Power Plug-in will not function properly with pre-2.5.1 versions of Adobe Photoshop. If you own Adobe Photoshop 2.5, a free update will automatically be sent to you via first class mail when you send your completed registration card to Adobe. If you purchased a 2.5 upgrade more than six weeks ago and have not yet received your free 2.5.1 update, please call Adobe Technical Support at **1-408-986-6510** (USA and Canada only). Be prepared to clearly record a message with your name, address and Adobe Photoshop serial number.

2) Launch Adobe Photoshop. The plug-in automatically detects the Quadra AV's DSP and uses it to process certain operations and filters.

Performance

Several key factors determine how much acceleration to expect from the plug-in.

1) **Image size**: the larger the image, the longer an operation will take.

2) **RAM** : allocate at least 3X image size of RAM to Adobe Photoshop for optimum acceleration and performance. Using the virtual memory (scratch disk) instead of RAM can degrade acceleration. (Using the computer's fast internal hard drive as the scratch disk helps some.)

3) **Parameters and settings**: different options require different amounts of processing

4) **CPU and DSP speed:** certain operations, for example Rotate, benefit from DSP acceleration on the Quadra 660AV, but may not benefit noticeably on the faster Quadra 840AV.

5) **Multi-processing:** additional DSP cards to distribute the processing work will increase performance on features that are accelerated only slightly using the AV's DSP alone. See Options, below.

Features

Given the performance factors and exceptions noted above, the AV DSP Power plug-in can accelerate the following operations and filters between 10% and 300%.

Filters

Blur	Custom
Blur More	Sharpen Edges
Gaussian Blur	Find Edges
Sharpen	Despeckle
Sharpen More	Emboss
Unsharp Mask	Fragment
High Pass	

Operations

  Resize: Image Size, Scale
  Rotate
  Skew
  Perspective
  RGB to CMYK mode change

Options

You can disable DSP acceleration, or enable multi-processing for even faster performance, with additional DSP3210 cards. To select these options, choose About AV DSP Power from the About Plug-ins submenu under the Apple Menu.

Disable acceleration by selecting the None radio button. Each time Adobe Photoshop is launched acceleration is automatically reactivated. To permanently disable acceleration, remove the AV DSP Power Plug-in from the Plug-ins folder.

Enable multi-processing when additional DSP3210 cards from Spectral Innovations are installed by selecting the Both option. Other DSP accelerator cards, including DSP3210 cards from other manufacturers, will not function with this plug-in.

Other Acceleration Products

The companies listed below offer Adobe charged products for Photoshop. Please direct all inquiries regarding availability, pricing, features, performance, and support to your dealer, distributor or the company. Adobe is not equipped to answer questions about or provide support for these products.

    DayStar Digital™
    Radius™
    RasterOps®
    Spectral Innovations™
    SuperMac™

System Requirements

Apple Macintosh Quadra 660AV or 840AV*
Adobe Photoshop 2.5.1 with a minimum allocation of 5 MB of RAM
(For optimum performance a RAM allocation of 3X image size is recommended.)

or other Macintosh with DSP3210 cards from Spectral Innovations

The AV DSP Power Plug-in was developed for Adobe Systems by Spectral Innovations of San Jose, CA. For information on their DSP3210 add-in cards supported by the AV DSP Power Plug-in call (408) 955-0366 (USA).