

Preparing for printing: To allow for retouching Photo CD scans are not artificially sharpened during scanning. Before printing apply 'Un-Sharp Masking' (USM). The amount will vary according to image size and appearance required. For A4 prints try settings of: 180 - 350% / Radius: 0.6 - 1.0 / Threshold: 1 - 8. Greater threshold smooths the film grain and skin tones but if you overdo it you will get 'watercolour' effects. Big radius settings cause 'Halo' effects on image edges. Assess the appearance at 100% view.

RGB to CMYK conversions: If your file is Adobe RGB for imaging, photo posters, inkjet and dye sublimation printers you will need to convert to CMYK for offset printing before placing files into a page layout application.

Ask your printing house for their preferred CMYK colour space settings and assign them to your 'Colour Settings' panel in PhotoShop. Most printers will happily use PhotoShop's standard, 'U.S. Web Coated (SWOP) v2' but request 'dot gain' settings for your paper & ink combination.

CMYK Images look slightly flat and desaturated on-screen - this is normal! Monitors can only display RGB accurately - Do not be tempted to "tweak" the image by increasing the saturation or adjusting levels AFTER converting to CMYK as you will overload the ink coverage during printing!

PhotoShop lets you 'Soft Proof' RGB images before converting - Make sure your monitor is calibrated! Choose the default CMYK proof setting or select the required custom profile. Evaluate and make adjustments THEN convert to CMYK. See your PhotoShop manual or the Adobe website for more info.

For a Photo CD illustrated tutorial with info on calibration and colour profiles download our free Imaging Guide from the DMA website:

www.digitalmasters.com.au



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IMPORTANT INFORMATION

*Opening Pro Photo CD Scans • Resolution Choices
Image Sharpening • CMYK Conversion*

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Please don't 'double click' Photo CD image files: Open your imaging application and navigate to the 'IMGxxxx.pcd' file from your File/Open' menu. Pro Photo CD files are .pcd multi-resolution, 48bit 'ImagePacs' for all typical imaging applications so they are not specifically 'linked' to PhotoShop. If you wish though you CAN configure your computer to associate .pcd files with a specific application - usually PhotoShop.

PhotoShop Provides full ICC colour management. Firstly Make sure that your PhotoShop, 'Colour Settings' dialogue box is configured for 'Adobe RGB (1998)' Print imaging. Your PhotoShop may not be configured for pro printing as it's default is 'sRGB' - a limited 'web' colourspace. (Full info on our website!)

When you open a '.pcd' file the first time you will be asked to select a 'source' and 'destination' colour profile. Choose "Photo CD 4050 E6" (The Photo CD scanner) as the 'Source' and '8 bit RGB" or "16 bit RGB as the 'destination' profile. (These are the standard settings work perfectly with every film type)

Select Image PPI / DPI: 72ppi (Pixels Per Inch) for screen; 225 - 300ppi for photo prints up to A4; 150 - 250ppi for prints up to A3 and 100 - 150ppi for posters. Large format fine art Giclee, archival pigment printers only require 220 ppi maximum. as the papers and canvas used can not resolve more detail. [You can check the resolution of your printer by printing a file with alternating B&W lines one pixel wide at, 150, 180, 200, 225, 250 and 300ppi - print out and examine!](#)

Which size to choose from the 'ImagePac' file: You can choose one of five or six image sizes from the Pro Photo CD ImagePacs. The smallest is a thumbnail and the largest is poster size! The Web Offset print process measures resolution values as 'Line Screen Rulings'. Magazines are usually printed with a 133lpi (Line Per Inch) screen and brochures at 150lpi screen. Adobe recommends that, to maintain good image detail, the PPI of your image should be 1.5 times greater than the LPI screen ruling. So if you multiply a 133lpi screen by 1.5 we find that we need 200ppi as the required resolution (at 100% image size) and if we multiply the 150lpi screen by 1.5 we need 225ppi Easy! More info in your PhotoShop manual or Adobe Online.

225ppi is required for 150 line screen brochure: The Photo CD 'ImagePac' will give you the print sizes below...

<i>Photo CD File</i>	<i>File Size 48bit RGB</i>	<i>Pixel Size</i>	<i>Image Size @ 225ppi (150 line screen)</i>
1/16 Base	144 Kb	128 x 192 pixels	0.57" x 0.85" or 1.5cm x 2.2cm
1/4 Base	512 Kb	256 x 384 pixels	1.13" x 1.71" or 2.9cm x 4.3cm
Base File	2.2 Mb	512 x 768 pixels	2.27" x 3.41" or 5.8cm x 8.7cm
4x Base	9 Mb	1,024 x 1,536 pixels	4.55" x 6.82" or 11.6cm x 17.3cm
16x Base	36 Mb	2,048 x 3,072 pixels	9.1" x 13.66" or 23.1cm x 36.6cm
64x Base	144 Mb	4,096 x 6,114 pixels	18.2" x 27.3" or 46.2cm x 69.1cm

For intermediate size images...

Choose the higher resolution and sample the file down using PhotoShop 'Bicubic' interpolation. (sharpen afterwards).

See website for tutorials & guides...

Calibration & Photo CD Imaging Guide
Archival & Giclee Print Guide

Continued...