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Digital Imaging Information Guide (Non-ProShots)

High quality imaging requires good communication between the lab and the photographer. Please take the time to read the following information which will help you prepare your digital orders correctly so that you get the best quality and fastest turn-around. More information regarding services, pricing, and working in a digital format is available at our website, and as always, feel free to call us if you have any questions.

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Digital Services

Prints from Digital Files

Digital Print Lines

- **Digital Proofs** are available at a special price for 4x5 and 4x6 sizes. The same size and quantity must be ordered for all files in an order
- **Digital Individual (Candid)** prints are available for ordering of individual prints up to 30x40
- **Digital Package (Portrait)** service is available for ordering 8x10 units at special prices, as well as large prints
- **Digital Flex-a-Pose** service is available for orders of at least 17 8x10 units of the same subject or family

Free Gold Stamping and Die-Cutting is offered on the **Package (Portrait)** and **Flex-a-Pose** lines only. Wallets must be ordered in **full units** (8 wallets on an 8x10 unit) to receive these services.

About Digital Prints

Kodak Endura Paper: All prints are produced on Kodak Professional E surface Endura Photographic paper. This is the same high quality paper your film-based photographs are printed on.

Award Winning ZBE Chromira Printer: Digital prints are produced on a ZBE Chromira LED (Light Emitting Diode) photographic printer operating at 300 ppi. This is the printer that won the 2003 DIMA Digital Printer Shoot-Out for both 30 and 50 photo printer categories. Your digital images will be exposed onto photographic paper which will be conventionally processed the same way film-based photographs are processed. (These are not ink-jet or dye sublimation prints).

Print Size: Prints can be up to 30 inches on one side (width or height); the other side can be much longer, depending on your file size. Size is limited by the width and length of the paper rolls, which are approximately 30 x150 .

Digital Files Output to Film

We can convert your digital files into film negatives with our Management Graphics film recorder. All files for film output must be in portrait orientation. Files will be output at the size you send. The image size should be 4096X5028 to produce a 6X7 (59meg) negative, or 4096X4096 (50meg) to produce a square image. If you have a 2000X3000 image, this will produce an image the size of a 35mm neg in the center of a 6X7 neg.

Scans

Hi-res Scans of Individual Cut Negs:

Hi-res scans of negatives are made on our Kodak 4050 scanner, which produces 34-60 MB files, depending on the size of your negative. These scanned images are spotted, cropped, color and density corrected to produce the optimum image. Files of this size are good for making large prints up to 30x40, depending on the file size and quality of the image on the negative. *In addition, you can request the file be burned to CD and returned to you see below.

Low-res (Screen) Scans of Roll Film:

Low-res scans, sized at about 900kb-1.2MB, are available from rolls of film. Scans must be ordered at the time of developing. They are useful for projection sales, or monitor viewing, including emailing; these scans are not recommended for printing. Low-res scans will be written to a CD that you can use for presentation purposes or sell directly to your customers.

Flatbed Scans of Prints:

High quality scans of prints are made on our flatbed scanner which produces files between 10-24 MB. Files of this size are good for making moderate size prints up to about 16x20 depending on the size and quality of the print being scanned. *In addition, you can request the file be burned to CD and returned to you see below.

*You can order prints from files created by Hi-res and Flatbed Scans at the time of scanning. You can also order a copy of the file(s) on a CD, which we will provide. There is an additional charge to copy the file(s) to a CD. **We recommend that you order the CD, especially if you anticipate re-orders or will otherwise need it for archival purposes. Having the file on CD will also allow you to do your own digital art, retouching, and other file manipulation.**

For more information on digital printing services and prices, refer to the Easyview pricelist (available for download at <http://naphoto.com/NewFiles/easyview.pdf>), or contact customer service at 800-654-6544

Preparing Digital Files for Printing at NAP*

File Requirements

- JPEG or TIFF format, flattened (No layers, masks, paths, or compression)
- Cropped and sized at the largest size you are ordering at 300ppi
- RGB only (including B&W images), 8 bits per channel
- When burning to CD: ISO-9660 compatible= Mac or PC format

*If using a digital ordering software program supported by NAP to submit your order, please refer to the manual, as specific instructions and file requirements may vary.

JPEG or TIFF Format, Flattened-- No Layers, Masks, Paths or Compression:

We only support files saved in JPEG or TIFF format. We cannot accept files saved in other formats, such as .PSD. Also, please do not save layers, channels, etc., within the TIFF file; they must be flattened before saving.

Cropping and Sizing your File:

Using PhotoShop“ (or another image editor), size your prints at the largest size you will be ordering, at 300ppi resolution, and crop them at the correct ratio before writing to a disk.

You can use the **crop tool** in PhotoShop“ to crop to the exact size, ratio, resolution, and image you want. To check the size or resize, select **Image Size** from the Image drop-down menu. A window will pop up showing the current file size, document (print) size, and resolution. Make sure the size and resolution are correct.

If you need to resize the image, make sure you have the **Constrain Proportions** checkbox enabled, or the image will become distorted. If you need to increase the resolution, type in 300 pixels/inch and make sure the **Resample Image** checkbox is enabled. See the chart below for approximate file sizes at various print sizes rendered at 300 ppi.

Finally, check the image for possible defects by setting the navigator at 100%, so each pixel in your file will be represented by a screen pixel.

Approximate Print Sizes and File Size. (RGB)

<u>Print size</u>	<u>300ppi*</u>
4X5	5 MB
8X10	20 MB
16X20	80 MB
24X30	185 MB
30X40	309 MB

*PPI (pixels per inch) relates to the amount of information your image contains by multiplying the horizontal pixels by the vertical pixels, and by 3 if it is a color image.

Note: *Proper sizing of digital files will provide the best quality. Unlike film, bigger is not always better. There is no need to make the file size larger than required for printing of the largest size you are currently ordering. If your file is larger than the required size to print, the excess data will be removed by down sampling. Similarly, if the file is too small, it will be up sampled to the correct size when rendered by the printer. Both up sampling from a file that is too small and unnecessary down sampling may compromise the quality of the print.*

Different Print Sizes:

It is not necessary to make a separate file for each print size; you may simply size the file at the largest size you are ordering, and the printer will automatically re-crop the image for different ratios (8x10, 5x7, etc.) based on the center by cropping equally from both sides of the width or the height. *(Please see the Sample order form page in the appendix for a diagram of cropping guidelines used when different crop ratios are ordered from the same file. Pay special attention to horizontal images).*

However, if you would like a different crop, you can create a new file sized and cropped accordingly, with the resolution at 300 ppi.

RGB Only, 8 Bits per Channel:

All images, including black and white images, must be in RGB format; CMYK and other formats are not acceptable. An RGB image contains 3 channels: Red, Green and Blue. Each channel contains 8 bits of data, and has 256 levels from white to black.

If you are using PhotoShop“, you can check to make sure your file is in RGB/8bits per channel by selecting **Mode** from the Image drop-down menu, and making sure there are checks next to RGB and 8 bits. If they are not selected, select them before you save the file to send to the lab.

B&W:

For black and white, use -100% saturation, or the channel mixer in PhotoShop“, and **keep the image in RGB format**. If you need color and B&W from the same image, make separate files for each.

Color Correction:

As a people lab, our standards are set to producing a pleasing flesh tone image on all prints, optical or digital. There is no need for you to make color corrections; they will be made at the lab.

If you do choose to make corrections based on your personal preferences, make sure that your monitor is ICC calibrated and that you are working in the correct color space, so that what you see on your monitor reasonably represents what you want your prints to look like. (Refer to the Color Management section on pg. 8 for information on calibration). Additionally, do not make any major adjustments to levels or curves on your images. The lab can only correct prints within the limits of the data your image file contains. **Over adjustment can result in missing data, producing a marginal output.**

Note: We cannot match inkjet proofs; some colors in ink cannot be reproduced photographically. The color gamut of an inkjet printer is different than that of photographic paper, and the colors have a different tonality.

File Names:

Name your files with 8-10 lower case alpha characters and/or numbers; do not use spaces, dashes, or other symbol characters. The file name must end in .tif or .jpg, or the file will be not be accepted.

Disk Contents:

The only files that should be on the disk are those to be printed in the current job order; do not add text files or any other unnecessary additional files. Also, please do not zip or compress the files.

Simply create a folder, name it the job order number from a new NAP blue job envelope, and put only the image files you are having printed on this order inside of the folder.

Compatibility/Disk Format:

Before burning CDs, check the software that came with your burner. The disk format must be cross platform compatible (ISO-9660). Disks may need to be read by multiple systems - UNIX, Windows, Mac or NT.

Ordering Instructions

When you are ready to burn your images to a disk and fill out your order, please follow these steps:

1. Check to make sure the following is true:

All files end with .tif or .jpg (tiff files must be flattened, no extra layers, channels, paths or masks, etc.)

Files are cropped and properly sized at the largest size ordered at 300 ppi

If you need color and B&W from the same image, you are including separate files

All images (including B&W) are RGB, 8 bits per channel

Only the files to be printed will be included on the disk

2. Select a new NAP blue job bag.

3. Create a folder, and name it with the order number from the blue NAP job bag.

4. Place all files to be printed in the folder with the order number to be used, then write to CD-R, making sure you save it in a cross-platform compatible format (ISO-9660).

Use a marker to write your studio name, customer #, and order # on the disk. Do not use any sticky label on the disk.

5. Fill out an order form for the prints you need from these files, and enclose it with the CD. Use more than one form if needed.

6. Under **Special Instructions** on the front of the order envelope, write in which lines you are submitting the files to:

Digital Proofs (order form not necessary; please write the total number of files, size of proof, and quantity of proofs per file on front of order envelope)

Individual Digital Prints (or Digital Candid)

Digital Pkg (or Digital Portrait)

Digital Flex-a-pose

Also, include instructions for any mounting or spraying services on the front of the order envelope.

7. Place the disk in the NAP order envelope (one disk per order envelope), and send it to the lab.

Use this check list for working on your images until it becomes a habit. Please do not assume someone will see the mistake at the lab and call to alert you. In most cases with digital printing, the image has been printed before any error shows up. You should always check your images in PhotoShop™ (or another image editor) at 100% magnification for possible defects before submitting them. **We cannot be responsible for images that have been improperly adjusted or prepared. Over adjustment can result in missing data, producing a marginal output.**

Tips on Shooting Digital

Exposure:

Correct exposure is absolutely critical when using a digital camera. Much like transparency film, CCD s are not very forgiving. Overexposure will yield highlights with no detail and possible discoloration. Don't plan to save images later in Photoshop"; improperly exposed images lack the data necessary to produce professional quality prints.

Learn to use the histogram on your camera to check your images. This can be very helpful in determining proper exposure for the subject matter being photographed. Refer to the manual that came with your camera for more information on correct exposure and checking the histogram.

You can get an idea of how overexposure affects an image by opening one up in Photoshop". As you look at the overexposed image on a calibrated monitor, you will see no detail in the highlights. Using the eyedropper and the info window in PhotoShop", overexposed areas will probably read 255 or close to it. Photographic paper will not produce detail above approximately 245.

White Balance:

White balancing is a **critical** step for good color; you should white balance the camera at the beginning of a shoot and any time the lighting conditions change. (Indoors, flash, outdoors, etc.)

Failure to white balance can cause color errors in your images that may not be correctable in your image editor. Your camera manual should contain information on making a custom white balance for the lighting conditions you are shooting under.

Lighting:

Digital is a very contrasty medium, more so than film, so you may want to adjust your lighting accordingly. Lighting for digital should be large and low-contrast.

More Resources:

www.naphoto.com See our Digital Printing and Downloads & Links pages for more info, including links to articles and downloadable training videos about PhotoShop" and color management

www.shootsmarter.com Will Crockett s site, contains tips and articles on lighting, exposure, etc.; training DVD s available

Color Management

A color management system (CMS) compares the color space in which a color was created to the color space in which the same color will be output, and makes the necessary adjustments to represent the color as consistently as possible among different devices.

This is important so that the colors you see on your monitor will match as closely as possible those of the print. Keep in mind that you are viewing an electronic representation of a photograph, and that the color gamut of a monitor is significantly smaller than the color gamut of photographic paper. Therefore, some color differences are inevitable. Fortunately, by calibrating your monitor and developing your own color management system, you can minimize these differences.

Note: *Don't confuse color management with color adjustment or color correction. A CMS won't correct an image that was saved with tonal or color balance problems. Color management only provides an environment where you can evaluate images reliably in the context of your final output. In other words, if managed properly, the images you see on your monitor should be reasonably close to the final prints. For more info on Color Management, including articles and downloadable videos, see our Downloads & Links page at www.naphoto.com*

Suggested Conditions/Software/Equipment to Produce Consistent Results

- Neutral viewing conditions
- Colorimeter and software for monitor calibration (Gretag-Macbeth, X-rite, Colorvision Spyder, etc).
- Adobe PhotoShop“ 6.0 or higher (There is a great variety of software for photo editing available on the market and it is continuously being upgraded. We recommend PhotoShop™ since it has become an industry standard for photographers. The current version is 7.0x. Versions 5 and lower do not handle color management well).
- D5000 Kelvin light box for comparing prints to monitor (Macbeth, GTI).

Viewing Conditions:

Ideally, viewing conditions should be constant, with no windows changing the illumination or color temperature. Walls should be a neutral tone and the monitor should be shielded from any ambient reflections or glare.

Monitor Calibration

This is very important. If calibrated properly, the images you see on your monitor should match the images on the monitors at the lab. Calibrate your monitor using a colorimeter and software, available from Colorvision, X-rite, Kodak, Southwest, etc. A monitor profile will be generated for your system.

1. Start with the following settings:

- Set your monitor to White Point D6500 or 6500K by using the controls on the front of your monitor. (The factory default is usually 9300k - too blue for photographic work. 6500K is accepted as the norm for monitor viewing in the photographic industry.) If you cannot set the color temperature (White Point) on

your monitor, you should probably check the manual or purchase a graphics quality monitor and use with a high grade video card.

- Gamma 1.8
2. Then, use a hardware device such as the Colorvision Monitor Spyder or X-rite DTP-92 and a software calibration program* to build a calibrated monitor profile for your system. Calibrate your monitor using the software and install the default profile for your monitor. (If you are running any other calibration systems, such as Adobe Gamma, disable them first.)
 3. Using Adobe PhotoShop“ 6.0x or higher, go to Edit/ Color Settings and input the color preference settings shown on the diagram on the following page.
 4. Compare the calibration print from the lab (call Customer Service to request a print) with the digital calibration image on your screen (available at: www.naphoto.com/calnap.jpg). If you are using the correct input profile with the correct monitor profile, the screen should produce a neutral image (pleasing color).
 5. Open one of your digital camera files and adjust the color using PhotoShop“. Save the file as a tiff or jpeg, and check the box to imbed the SRGB profile. Burn a CD of the file and send it to the lab for printing. Make sure to note that it is a Test Print, and ask for No Corrections.
 6. When the print returns from the lab, compare the print with your screen image, placing it in a D5000 Kelvin light box, if possible.

The image on the screen should be a close match to the print. Check the overall picture, as well as saturation, contrast, exposure, flesh tone, and gray scale neutrality.

(If the prints do not match, check your monitor calibration, and make sure the profile is applied correctly and that the working space is correct. If all are set properly, your monitor profile may need to be corrected.)

After calibrating the monitor, do not change any of the monitor settings, except to re-calibrate. Weekly checks should be done to see if your monitor matches the prints from the lab when printed without correction. Monitors drift over time, so you should recalibrate about every two weeks, and more often if you notice changes.

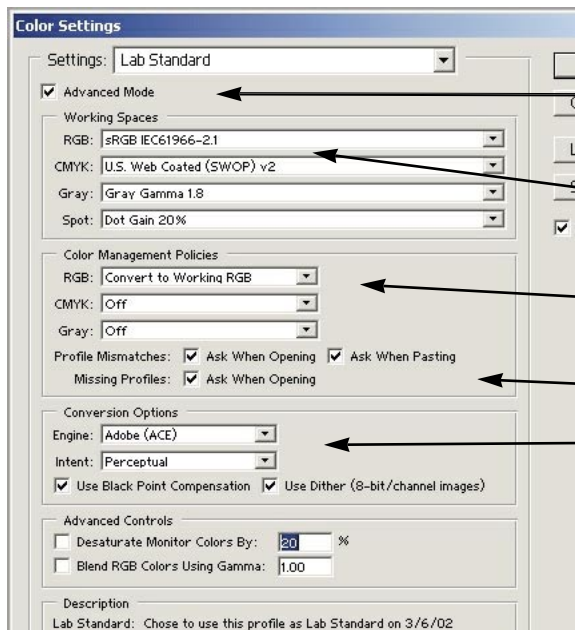
*If you do not currently have access to a calibration device and software, use Adobe Gamma or whatever resources are available. Once you are able to acquire calibration equipment, and are ready to calibrate, make sure to disable any other calibration systems you have running, or they will be in conflict with each other.

Photoshop setup for digital camera files



Set your Photoshop 7 color preferences

These settings are found using the photoshop menu bar at the top of your screen (EDIT/COLOR SETTINGS). The screen shot below shows the settings to use. I suggest you use the same working color space as the lab (SRGB IEC61996-2.1).



Advanced mode checked

SRGB IEC61996-2.1 profile

Convert to working RGB

All 3 boxes are checked

Adobe or Kodak CMM Perceptual

Studio ___ ACME studio _____ Cus # _12345_

Job Bag # _987654_ Disk ID ___ Jon Doe _____

Individual Digital Prints

SPECIAL INSTRUCTIONS _____



Working space sRGB												Texture, Spray, and Mounting -use front of job bag				
#	FILE											Your Image Resolution	RETOUCH		ART	
		2.5x3.5	4x5	5x7	8x8	8x10	10x10	11x14	16x20	20x24	Other		First	Addtl		
1	jenny.tif					2						300				
2	jenny2.tif		3									300				
3	dcsf01.tif							1			1-12x24	150				
4	dcsf055.tif	5										300				
5																
6																
7																
8																
9																
0																

SAMPLE

Studio - your name as it appears on the job bag.

Cus # your North American Photo customer number - eg: 9057900

Job Bag # - the six digit number printed on the job bag by the lab - don't change it. eg:123456

Disk ID - Write the job number on the disk, and your studio name

File name - Use any 8 letters and or numbers

Only files to be printed can be on the disk. **RGB.tif** or .jpg, 8 bits, No compression, layers, masks, channels etc. - .tif or .jpg must be appended to all image files.

Place all files in a folder, name the folder with the job bag number to be used, then write to CD. Do not use any stickey label on the disk.

Place the CD with this form in the order bag and send to the lab.

This form can be cut and fit in a jewel case with your CD. Use more than one form if needed. One disk per job bag.

Important - Read Me

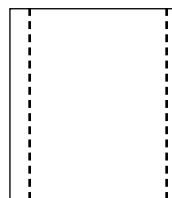
The disk format must be ISO-9660

We highly recommend that you calibrate your monitor with an X-rite DP92, Colorvision Spyder or equivalent. The suggested embedded color profile is SRGB - See color management setup for Photoshop 7.0 Do not make any major adjustments to levels or curves on your images. The lab can only correct prints within the limits of the data your image file contains.

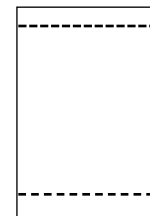
Subject to change without notice. Additional information and links at www.naphoto.com

Cropping

It is not necessary to make a file for each print size. Depending on the image aspect ratio you provide the image will be cropped as below. If you feel the need to change the position of the crop on your image, make a new file with the correct image shape at 300 ppi.



8x10 image format with 5x7 crop



5x7 image format with 8x10 crop

Black and White images must be in RGB mode, use -100% saturation.

All prints are produced on Kodak E Digital paper on a ZBE Chromira LED printer. We cannot match inkjet proofs.

