DIGITAL TECHNOLOGY GROUP

DTG

SYSTEMS > SUPPLIES > SUPPORT

Digital Technology Group,
Inc.www.DTGweb.com
800.681.0024
Tampa, FL

DTG Digital Color Learning Guide
Printing Targets for ICC Profiles

Printing Targets for ICC Profiles   **Page: 1**

The following instructions will guide you through the process of printing target files for the purpose of creating custom ICC Profiles for printers and medias. We will cover a few different methods for Epson and Canon printers.

General Philosophy & Overview

If you demand the highest quality and accuracy for your prints, it is necessary to use the correct ICC profile for your specific printer/ink/media combination. Different ICC profiles are required for each combination of printer/media/ink used. For example, if you have both an Epson 9880 and an Epson 9900 and you are printing to Reflections Vista Canvas, you would need 2 separate ICC profiles (1 for each printer). And if you were using only a Canon iPF8400, and were printing to both Reflections Silver Metallic Paper and Enhanced Matte Paper you would also need 2 ICC profiles (1 for each media).

In order to create a custom ICC profile for a specific printer and media combination, one or more target files must be printed and measured by a spectrophotometer and software. These target file(s) are either generated with your profiling software (if you own a profiling system) or will be provided to you by whichever profiling service you are using.

Basically, you want to print these target files through your printer driver (or RIP) with color management completely turned off. The target files will come without embedded profiles and its important that you do not assign profiles or convert these files to another color space. You also do not want to change the output size of these files as that will render the prints unreadable by the spectrophotometer.

Unfortunately, printing targets has gotten a bit more difficult since Adobe discontinued the ability to print files without color management since Photoshop CS5 (for a variety of reasons too lengthy to explain here). Starting on page 2, we will describe how to accurately print ICC targets outside of Photoshop.

DTG's Profiling Services & Capabilities

DTG offers ICC profles for popular printer and media combinations free of charge to our customers. We have hundreds and hundreds of profiles for Epson and Canon printers on a wide variety of papers and medias. We also offer a profiling service for those who want a specific custom profile for their printer/ink/media combination. Please contact DTG at 800.681.0024 for more information.
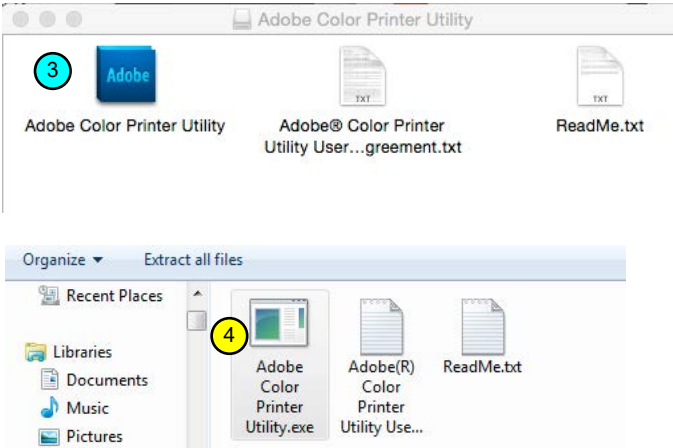
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Downloading the Adobe Color Print Utility (ACPU) to Print Targets

Since Adobe disabled the ability to print without color management in Photoshop CS5 and greater (hopefully one day they will bring this ability back), they developed a stand-alone application called the Adobe Color Print Utility (ACPU). You can google search this or download it from our web-site at www.dtgweb.com\support. We have both Mac and Windows versions located there.
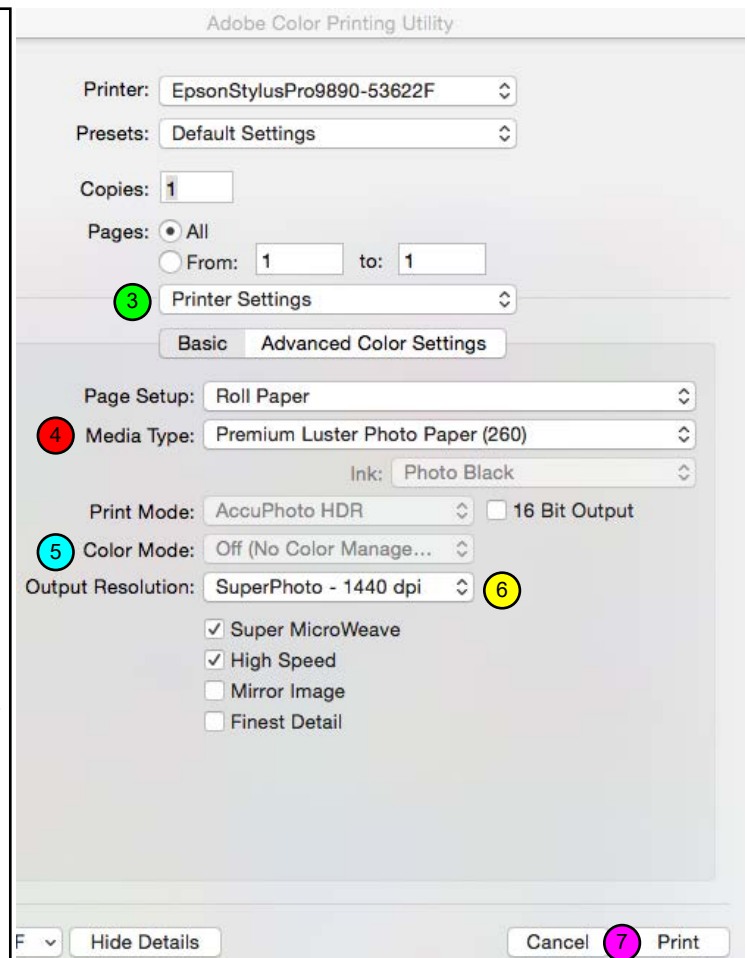
Google the ACPU or
go to www.dtgweb.com\support

1. Scroll down DTG's support page and click on the "Adobe Color Print Utility (ACPU) for Mac & Windows link.

2. Click on the link for either the Mac or Windows Version of the ACPU and download the file to your computer. Go to step 3 for Mac, step 4 for Windows.

3. Mac: Double click the download to unzip the file. It will unzip into a DMG file. Double click the DMG file and it will open a window with the Adobe Color Print Utility Icon (and readme files). Copy this icon to your Applications folder or desktop. This is the actual application you need to launch to run the utility.

4. Windows: Right click the zip file and choose to extract it (click ok to unzip) - this will unzip the file into a folder like the one to the right. Copy this file to your desktop. This is the actual application you need to launch to run the utility.

- Hasselblad/Imacon - Tel. +1-800-367-6434
- H.P. Support - Tel. (800) 474-6836

www.dtgweb.com/support

Resources

1 Adobe Color Print Utility (ACPU) for Mac & Windows
Adobe Photoshop Color Settings
Cleaning Digital Camera Noise
Color Management Defined
Epson Printing - Photoshop CS2 on Macintosh OS X 10.5
Epson Printing - Photoshop CS2 on Macintosh OS X 10.4
Epson Printing - Photoshop CS2 on Windows
Epson Printing - Photoshop CS3 or CS4 on Macintosh OS X 10.4
Epson Printing - Photoshop CS3 or CS4 on Macintosh OS X 10.5

Index of ftp://acpu@96.254.123.35/

Up to higher level directory

Name

2 ACPU for Mac.dmg.zip
ACPU for Windows.zip

Adobe Color Printer Utility

3 Adobe

Adobe Color Printer Utility

Adobe® Color Printer Utility User...greement.txt

ReadMe.txt

Organize ▾   Extract all files

Recent Places

Libraries
Documents
Music
Pictures

4 Adobe Color Printer Utility.exe

Adobe(R) Color Printer Utility Use...

ReadMe.txt

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Using Adobe Color Print Utility - This page is for Mac, for Windows continue to Page 4

1. Launch the Adobe Color Print Utility and you will be asked to "select a TIFF to Print". This is your target file or files (you can only open 1 at a time). Browse to your target file and open it.

2. From the File menu, select Page Setup, select your printer and your page size.

3. From the File menu, select Print. Make sure your printer is listed and then click on the layout drop list to select "Printer Settings" (this may also say something like Printer Features). This is where you will set your printer's specific settings including paper type, quality level, and color mode.

4. Choose a media type - you want this selection to be similar to the type of paper that you are about to print the targets on.

5. Color Mode should be set to Off, No color management.

6. Choose a quality setting (obviously we recommend a higher quality setting - for Epson typically 1440x720, for Canon one of the "high quality" settings.

7. Click Print

Adobe Color Printing Utility

Printer: EpsonStylusPro9890-53622F
Presets: Default Settings
Copies: 1
Pages: ⦿ All
        ○ From: 1   to: 1

3 Printer Settings
      Basic   Advanced Color Settings

Page Setup: Roll Paper
4 Media Type: Premium Luster Photo Paper (260)
            Ink: Photo Black
Print Mode: AccuPhoto HDR   ☐ 16 Bit Output
5 Color Mode: Off (No Color Manage...
Output Resolution: SuperPhoto - 1440 dpi   6
      ☑ Super MicroWeave
      ☑ High Speed
      ☐ Mirror Image
      ☐ Finest Detail

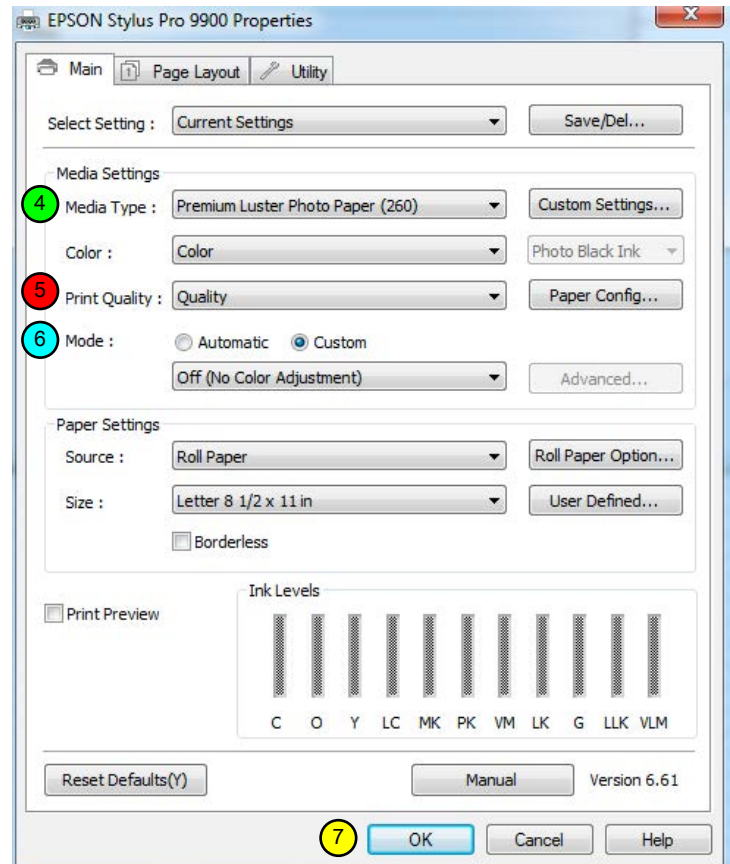F ⌄   Hide Details   Cancel 7 Print

* The dialog and instructions on this page are specifically for Epson printers (your settings may appear slightly differently). When using a Canon or other printer, the options will not be exactly the same and will use different terminology. However, the concepts are the same. In properties make sure any auto color or color management is turned off and also select a media and quality setting that is appropriate for the media that you are printing on. For Canon printers, although you can use the ACPU, we recommend using the Photoshop export plug-in (see Page 5).

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Using Adobe Color Print Utility - This page is for Windows, for Mac go back to Page 3

1. Launch the Adobe Color Print Utility and you will be asked to "select a TIFF to Print". This is your target file or files (you can only open 1 at a time). Browse to your target file and open it.

2. Click the Print button and choose your printer from the Name list.

3. Click the Properties Button.

4. Choose a media type - you want this selection to be similar to the type of paper that you are about to print the targets on.

5. Color Mode should be set to Custom then Off, No color management.

6. Choose a quality setting (obviously we recommend a higher quality setting - for Epson typically 1440x720, for Canon one of the "high quality" settings.

7. Click OK then click Print.

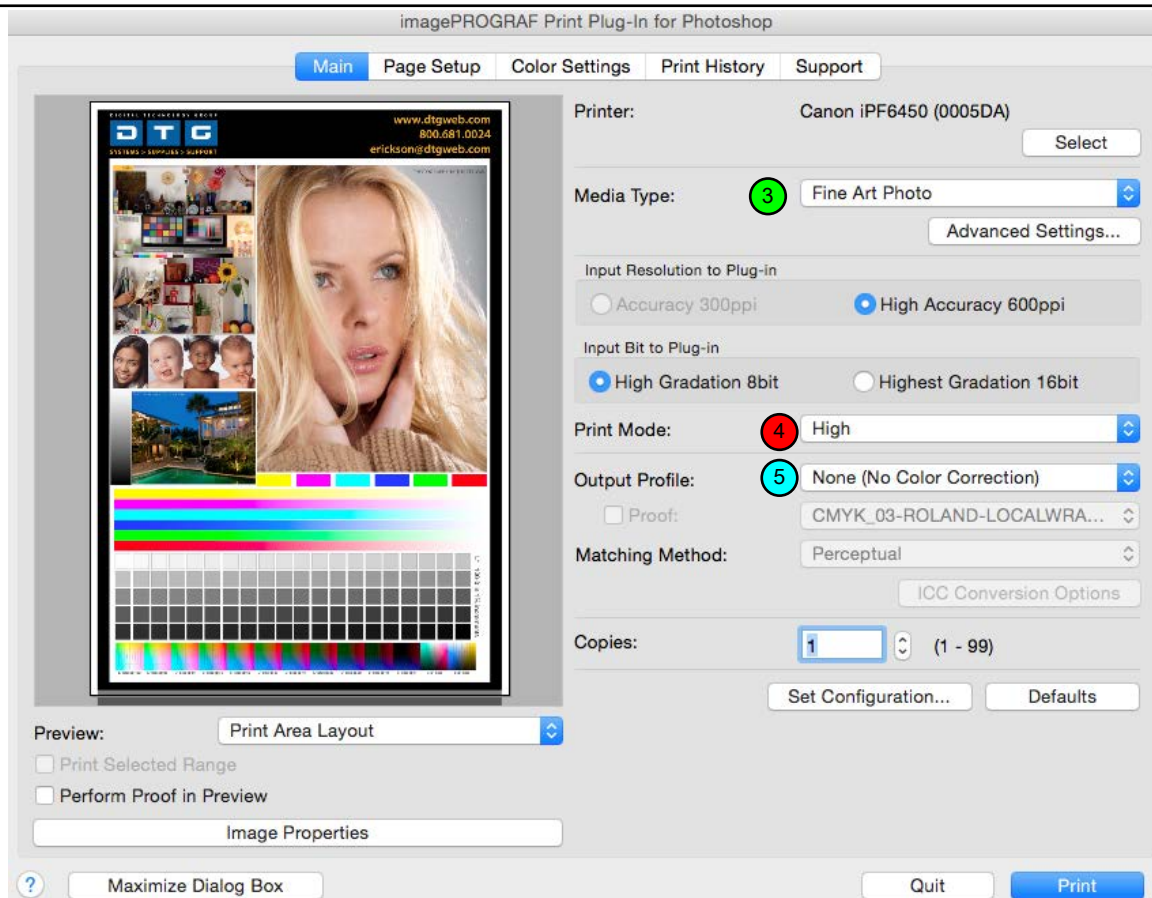8. Click OK again and it will print.

* The dialog and instructions on this page are specifically for Epson printers (your settings may appear slightly differently). When using a Canon or other printer, the options will not be exactly the same and will use different terminology. However, the concepts are the same. In properties make sure any auto color or color management is turned off and also select a media and quality setting that is appropriate for the media that you are printing on. For Canon printers, although you can use the ACPU, we recommend using the Photoshop export plug-in (see Page 5).

** We have occasionally seen where the Windows ACPU mis-sizes the actual print size of target files. This causes issues in reading the targets by a spectrophotometer. You may want to measure (with a ruler) the actual output if you or your profiling service is having issues reading the targets.

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Canon Export Plug-in - Printing targets for Canon iPF Printers using Photoshop

1. Open your target file in Photoshop - again, don't change target file in any way. Don't assign or convert to profile. If Photoshop asks then "Leave as is, Don't color manage".

2. Open the Canon Plug-in by going to File, Export, iPF xx... Print Plug-in.

3. Choose a media type - you want this selection to be similar to the type of paper that you are about to print the targets on.

4. Choose a quality setting in the Print Mode section (we recommend at least "high").

5. Choose "None" in the Output Profile section (this turns color management off).

6. Click Print.

imagePROGRAF Print Plug-In for Photoshop

| Main | Page Setup | Color Settings | Print History | Support |

Printer: Canon iPF6450 (0005DA)
                                                    Select

Media Type: ③ Fine Art Photo
                                            Advanced Settings...

Input Resolution to Plug-in
○ Accuracy 300ppi   ● High Accuracy 600ppi

Input Bit to Plug-in
● High Gradation 8bit   ○ Highest Gradation 16bit

Print Mode: ④ High

Output Profile: ⑤ None (No Color Correction)

☐ Proof: CMYK_03-ROLAND-LOCALWRA...

Matching Method: Perceptual

ICC Conversion Options

Copies: 1   (1 - 99)

Set Configuration...   Defaults

Preview: Print Area Layout

☐ Print Selected Range
☐ Perform Proof in Preview

Image Properties

? | Maximize Dialog Box   Quit   Print ⑥

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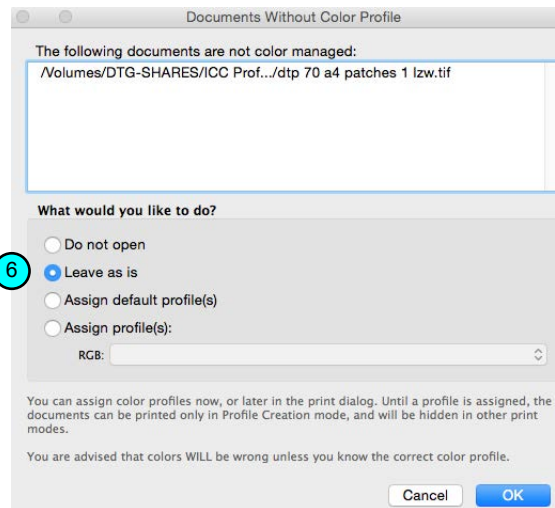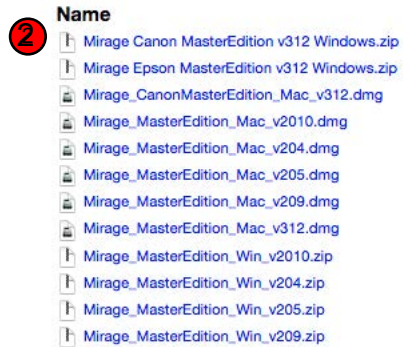
Using Mirage to output target files

If you are using Mirage you can print target files without color management in order to generate ICC profiles. Mirage is a print production tool that works with both Epson and Canon printers. Mirage can also be used for 14-days, free of charge, so if you are having any problems with the ACPU you can use it in a pinch.

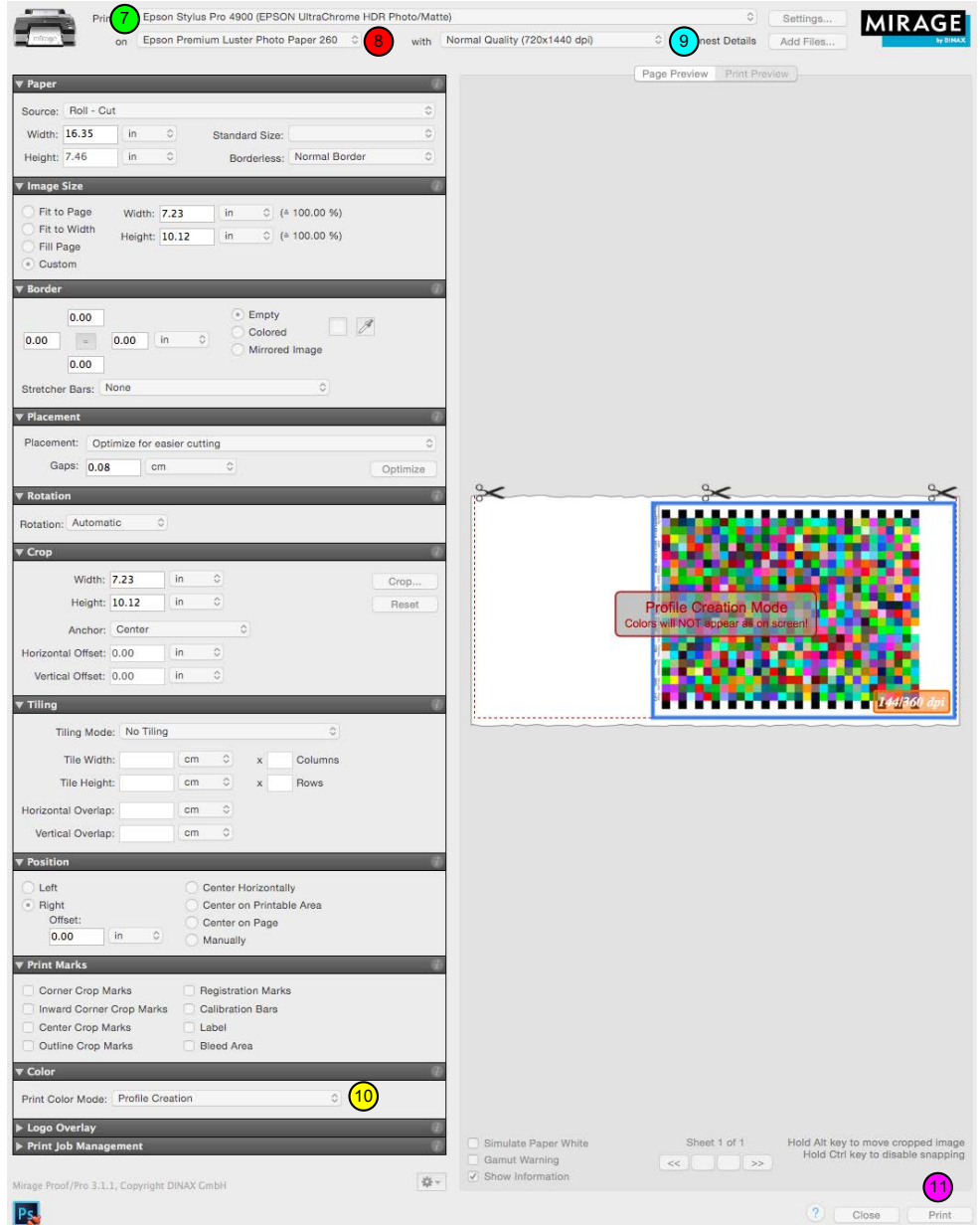Google the Mirage download or go to www.dtgweb.com\support

1. Scroll down DTG's support page to resources and click on the "Mirage Trial Download link.

2. Choose the appropriate version for your printer and operating system. Right click the appropriate version, and save to your desktop.

3. Once the download is finished, you can double-click it and proceed through the installation process

4. After installing Mirage, launch Photoshop and open your target file(s) - again, don't change target file in any way. Don't assign or convert to profile. If Photoshop asks, then "Leave as is, Don't color manage".

5. To Print through Mirage, go to the file menu in Photoshop, choose Automate... Mirage Print.

6. Mirage will recognize that the target file does not have an embedded profile and ask you how to handle it - choose "Leave as is" and click OK (continue on next page).

Epson Printing - Photoshop CS3 or CS4 on Windows
Epson Printing - Photoshop CS5 on Macintosh OS X 10.6
Epson Printing - Photoshop CS5 on Windows
Epson Printing - Photoshop CS6 on Macintosh OS X 10.6
Epson Printing - Photoshop CS6 on Windows
1 Mirage Trial Download
Photoshop CS5 Printing Targets
The Resolution Question
Soft Proofing

Up to higher level directory

Name
2 Mirage Canon MasterEdition v312 Windows.zip
Mirage Epson MasterEdition v312 Windows.zip
Mirage_CanonMasterEdition_Mac_v312.dmg
Mirage_MasterEdition_Mac_v2010.dmg
Mirage_MasterEdition_Mac_v204.dmg
Mirage_MasterEdition_Mac_v205.dmg
Mirage_MasterEdition_Mac_v209.dmg
Mirage_MasterEdition_Mac_v312.dmg
Mirage_MasterEdition_Win_v2010.zip
Mirage_MasterEdition_Win_v204.zip
Mirage_MasterEdition_Win_v205.zip
Mirage_MasterEdition_Win_v209.zip

Documents Without Color Profile

The following documents are not color managed:

/Volumes/DTG-SHARES/ICC Prof.../dtp 70 a4 patches 1 lzw.tif

What would you like to do?

○ Do not open
6 ● Leave as is
○ Assign default profile(s)
○ Assign profile(s):
    RGB: ⌄

You can assign color profiles now, or later in the print dialog. Until a profile is assigned, the documents can be printed only in Profile Creation mode, and will be hidden in other print modes.

You are advised that colors WILL be wrong unless you know the correct color profile.

Cancel   OK

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7. Once opened in Mirage, you can select your printer from the drop down list. (if this is first time using Mirage, you will have to select your printer model and choose the right port options).

8. Choose a media type - you want this selection to be similar to the type of paper that you are about to print the targets on.

9. Choose a quality setting.

10. Make sure that "Profile Creation" is shown in the print color mode in the color section of the options column.

11. Click Print

Mirage - Print Productivity Software

If you just downloaded Mirage and do not own a copy, this trial will last for 14 days. As you can see, Mirage has several more features for layout, auto gallery wrap, step & repeat, etc... so if you would like to purchase Mirage, please contact DTG at 800.681.0024.

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If you are using RIP software to drive your printers...

If you are using RIP software with your printer like ImagePrint, Onyx, Wasatch, EFI, Flexi, Colorburst, or any other software not covered in this guide, then please contact DTG for more information.

RIP software programs often have proprietary print engines requiring several additional steps in order to create an accurate ICC profile. Often, but not always, it requires a technican to be on-site with profiling equipment in-hand.

Again, if you need custom ICC profiles and are using a RIP in your production worfklow, please contact DTG at 800.681.0024 for further information.

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Do this before sending if you are using DTG to generate ICC Profiles

If you are using DTG to create your custom ICC profile please note:

1. Before you print, depending on your media size, there may be more than 1 target file that you need to print to generate the profile. For example, on letter size paper, you may need to print 3 different files for the complete profile. On 24 inch paper, its typically just 1 target file.

2. On a separate piece of paper or a post it note, include the following information with each target:
      a. Your printer model
      b. The actual media that you printed the targets on
      c. The media setting you selected in the driver, plug-in, or Mirage when you printed the targets
      d. The quality setting that you used when printing the targets

3. Once printed do not fold or crease the printed targets. You can roll them in a tube or ship them in a large envelope.

4. Send targets to: (you may want to check our website for current address information)
      Att: Custom ICC Profile
      DTG
      8176 Woodland Center Blvd
      Tampa, FL 33614