basICColor®

CMYKick

User Manual

Content

Chapter 1

Preface

1. Preface

With the purchase of basICColor *CMYKick* you have received a product that will allow you to take control of color reproduction of your workgroup RGB-printing systems.

basICColor *CMYKick* brings you the possibility to do color correct printing on your RGB printing system in an easy way.

Allmost all digital production systems are working with at least 4 inks (cyan, magenta, yellow and black) or simple spoken CMYK.
The aim of basICColor CMYKick is to provide customers with a easy to handle, non-expensive but still proffesional CMYK-profiling software.
A lot of the digital procuction printing systems are driven with an integrated or optional PostScript-RIP. For certain reasons a solution (an ICC-Profiling tool) to create color correct outputs is missing in the package. Instead of this they are using a generic color profile in the system.
It is easy to imagine that this color profile will the users not give the most possible color results for their printouts under all printing conditions.
basICColor *CMYKick* was created to improve color output quality for your CMYK-printing system on your specific media. The created ICC-Profil can be integrated into the RIP of your

printing system (if supported by the printing system) or it can be embedded into a PostScript-File so that the printer can read it out from there. Even RGB-data will be separated in the best possible quality by the RIP into the color gamut of the printing system.

Chapter 2

Installation And Licensing

2. Installation and Licensing

2.1. Minimal System Requirements

Apple Computer

- Apple® with G4 / G5 processors
- Mac OS X (10.5.6 or higher)
- min. of 1 GB available system memory (RAM)

- Apple® with Intel Processors
- Mac OS X (10.5.6 or higher)
- min. of 1 GB available system memory (RAM)

Windows®

- Intel® Pentium® III or 4 Prozessor
- Windows® XP SP2, Windows® 7, Windows® 8 (32 and 64 Bit)
- min. of 1 GB available system memory (RAM)

All Systems

- Min. 1 GB free hard disk space
- DVD-drive
- Color monitor with a resolution of least 1280 x 1024 pixels and color depth of 24-Bit (16,7 million colors)
- Software and spectrophotometer to measure the profiling targets and creating measurement data (e.g. basICColor catch and i1pro)

Knowledge requirements:
These instructions assume familiarity with the basic operation of the Mac OS X and/or Windows operating systems.

Documentation:
This document describes the application of *basICColor CMYKick* for both Mac OS X and Windows. Any differences in operation or special instructions that apply to either system will be indicated.

Before beginning the installation process, please make sure that your measurement device is not connected to the computer. Connect it after the software has been successfully installed.

2.2. Installation

1) Turn on the computer on which you wish to install and use the software.

2) Insert the *basICColor* DVD into your drive.
   - **Mac:** The *basICColor* DVD folder will appear on your screen. Click on it to access the *basICColor CMYKick* installer or open the downloaded installer. We recommend a look at our download area as this ensures you have the latest version.
   - **PC:** If the *basICColor* DVD icon does not appear automatically go to "My Computer" and select the DVD-drive.

   Alternatively you can download the installer from www.basICColor.de.

3) Begin the installation by double-clicking the *basICColor CMYKick* installer. Follow the instructions on the screen.

4) Once *basICColor CMYKick* has been successfully installed, you can begin to profile your printer.

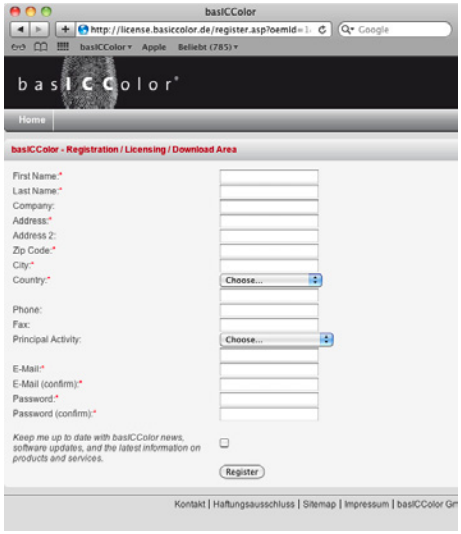
Note - Licensing

Each computer has a unique Machine ID which will be used to generate your individual license key. You can find the Machine ID in the „Licensing" window of the software in the upper left corner.

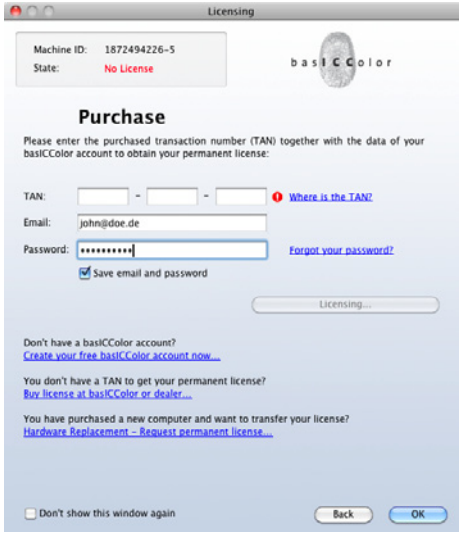
2.3. Product registration and licensing

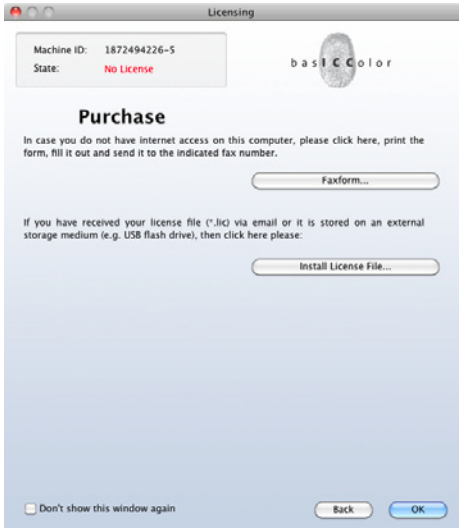
Licensing and unlocking *basICColor CMYKick* software is linked to an individual computer. You will receive an individual license that allows you to "unlock" and use the software on the computer on which it was installed.
The first time you start *basICColor CMYKick*, the "Licensing" window will pop up.

You can now choose to trial a full version of *basICColor CMYKick* for 14 days or request your permanent license with a click on the button <Licensing> if you have purchased a license for *basICColor CMYKick*.



If you have never registered on the *basICColor* website you will need to complete the registration process in order to obtain your personal *basICColor* account. Please follow the link "Create your free basICColor account now" in the licensing window. Alternatively you can go to our website www.basiccolor.de and navigate to the registration page via the "Support" tab and the link to "Licensing". With a "click" on <Register> you can create your personal *basICColor* account. Within seconds you will receive an email to your nominated email address. (Please check your spam folder also.) You need to confirm this email via the provided link to activate your account.





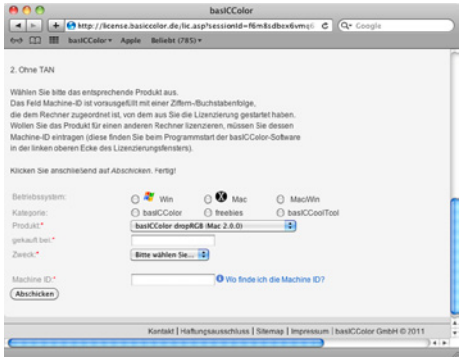
IMPORTANT: Without confirming this link your *basICColor* account won't be activated!

If you are already registered on the *basICColor* website you can directly unlock your license from the licensing window. Enter your email address and your password and then either unlock a 14 day full trial version or your purchased permanent license.

If your computer is not connected to the internet please log yourself onto the *basICColor* licensing website ***http://mylicense.biz/basiccolor*** on a computer that is connected to the internet. Once you are logged in you can request a 14 day full trial version OR - in case you have a TAN - you can request your permanent license. Once downloaded please transfer the license file on the computer where *basICColor CMYKick* is installed. With a "click" on <Offline licensing...> and <Install License File...> in the next window you will activate *basICColor CMYKick*.

If you do not have an Internet connection at all, use the <Faxform...> button to open a PDF document. Fill it in and fax it to the number provided. The license file will be sent to the nominated email address.

On the inside of the DVD box you will find the TAN-Number.

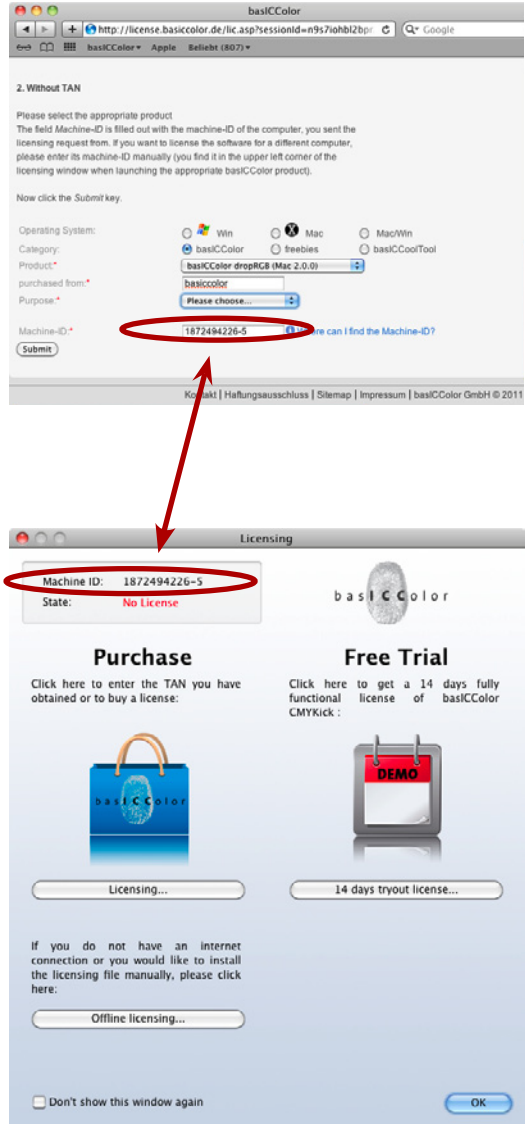


If required a storage device can be obtained at additional cost. Please contact *basICColor GmbH* for further information.

When you request a license you need to consider the following:

- **TAN... T**rans**A**ction**N**umber. You will find the TAN on a sticker on the *basICColor* DVD cover. Enter the TAN into the input field. Your license file (.lic file) will be downloaded and installed immediately.

  If there is no TAN on your *basICColor* DVD cover your license request needs to be processed by *basICColor* before you can access your license file. (.lic file). Please log into your *basICColor* account and go to Licensing 2. Without TAN. Select *basICColor CMYKick* as product in the pull down menue. This way you request a license for *basICColor CMYKick*.



Fill in the remaining input fields (purchased from/Machine ID) and select from the pull down menu the purpose for your license request: Initial License, Additional License, Upgrate, Site License, Hardware Replacement

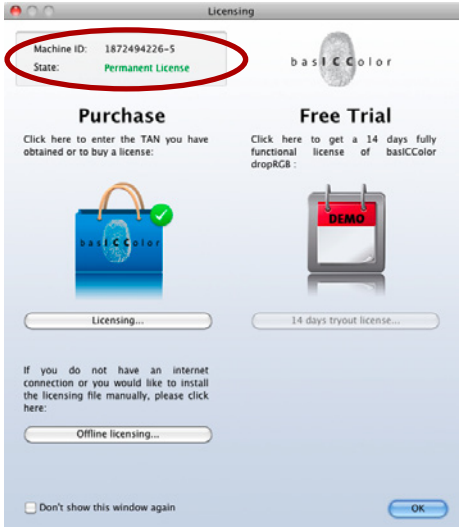
When all fields are filled in please click the <Submit> button. You will be informed that your license request is beeing processed on an that you will be informed via email once you can access your license file (.lic file).

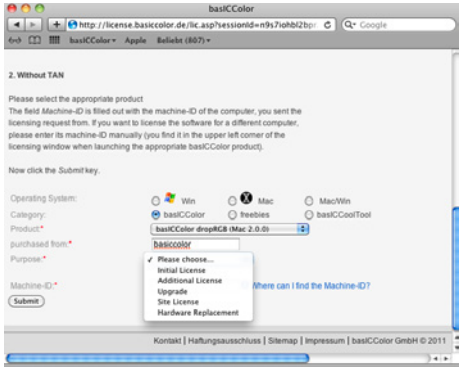
- **Machine ID...** the number in this input field must match the number in the licensing window of the application because the license file is built for this computer specifically.

- **Product...** *basICColor CMYKick* must be selected in the pull down menu

Important: the license file is stored in your *basICColor* account. You can access it at any time. Please ensure to remember your login information.

Once you have received your license file (**basICColor_CMYKick_12345.lic**) you can install it with <Offline licensing...> and <Install License File...> You will find the license file in the download folder of your web-browser. Now the application is ready to use.





Once you have received your personal license file (**basiccolor_CMYKick_123456.lic**) you wont need a new license file if you run a software update or you reinstall *basICColor CMYKick* on the same computer.

If you wish to use *basICColor CMYKick* on an additional computer you will need to obtain a new license file for this computer. You can purchase additional licenses at your *basICColor* dealer or at *basICColor GmbH* directly at any time.

Hardware Replacement

If you have purchased a new computer and wish to transfer *basICColor CMYKick* please proceed as follows:

1.) Install the software on the new computer

2.) Start the software and click in the licensing window the button <Licensing> and then onto the link ”Hardware Replacement - Request permanent license...“

3.) Log yourself into your basICColor account - follow the link “Licensing” and navigate to “2. Without TAN” and fill in all the required fields. Once submitted *basICColor GmbH* is processing your request and a new license file is sent to you.

You can check the status of your license in the licensing window of *basICColor CMYKick*. Open the licensing window via the menu bar “Help ¬ License...”.

Chapter 3

Preparing The Printing System

3. Preparing The Printing System

For the creation of an ICC-profie with bas**ICC**olor *CMYKick* it is basiccally it is regardless what kind of CMYK-printing system is used. Toner based printing systems are supported in the same way like InkJet systems, large format systems, thermotransfer printers or thermosublimation printers.
The preparation respectively the calibration of the CMYK-printing systems with their differnt printing technologies can be done in certain ways.

Some systems are offering an hardware integrated calibration and others are set up with an additional or intergrated software tool to be calibrated respectively linearized.

This documentation can not handle every system calibration for the various prinint systems. Please contact your dealer or the vendor of the printing system to get additional information for the setup.
Beside the calibration/linearisation of your CMYK-printing system the maintenance of the system is very important. Bleeding of ink, plugged nozzles, banding, flaking of toner, etc. will reduce the printing an color quality of your CMYK-printing system. So please ensure that the CMYK-printing system is in an excellent shape before you start to create an ICC-profile with bas**ICC**olor *CMYKick*. Otherwise please contact the vendor of the printing system.

3.1 Generall preparations

This section explains how to deactivate the default color settings and the colormangement system of the printer driver/RIP of the CMYK-printing system. This step is needed to create an individual ICC-profile for the CMYK-printing system.

The data transfer to the CMYK-printing system can be done in two ways. The data can be send directly from the application via a PostScript-printer driver to the printer or via hotfolder where the printdata will be copied in (e.g. PS-files, PDF-data, TIFF files, JPEG files, etc.).

Today the possiblities to transfer data to the printing system don't know any limits. So we will concentrate on this two main method of data transfer. The transfer and so the profiling of the CMYK-printing system via PostScript-printer driver and the setup of an external color PostScript-RIP (EFI Designer Edition) which can use a printer driver and/or hotfolders.

3.2 Calibration/linearisation

Allmost all desktop CMYK-printing systems (Letter, DIN A3) have an integrated PostScript-RIP (or emulator) including an integrated automatic color calibration/linearisation.

Normally those printing systems are starting the integrated calibration process when they will be turned on or after a certain amount of prints and the user will not notice this procedure.

This automatic calibration of the printing system is the base for the correcet color output supported with an ICC-profile and will ensure that the printing system is allways set up with the same parameters.

In most cases the operator of the printing system has no chance to influence calibration/linearisation and with this automatic process the calibration/linearisation of the printing system is completed.

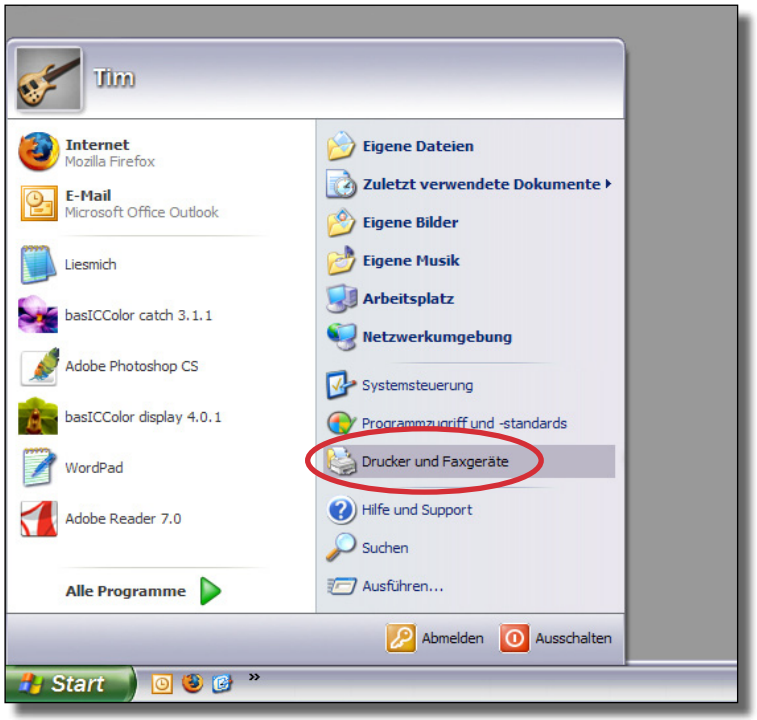
For detailed information belonging the calibration/linearisation of your CMYK-printing system please contact your dealer or the vendor of the CMYK-printing system.

3.3 Windows - setting up PostScript-printer drivers

This section explains how to set up PostScript-printer drivers to create an ICC-profile for a CMYK-printing system.

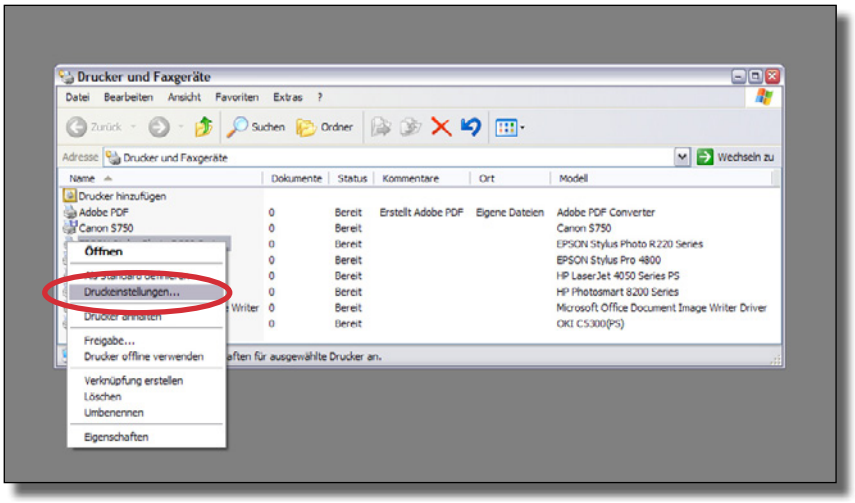
Initially we explain all the steps and settings which are identical for all printing systems under the Windows operating system.

Please open the setting „Printers and fax devices“ in the menu „System preferences“ of the Windows „Start“ menu.



In the window „Printers and fax devices“ you select the printer which you like to profile with a right mouse click. In the menu which shows up now please select the option „Printer settings“.

The next window that will show up differs from printer to printer and depends on the driver of the printing system.

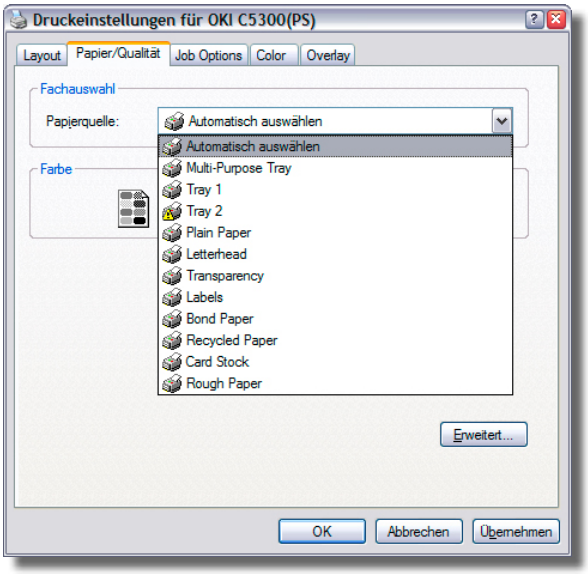


The individual settings for the different printers differ in their option. For example we will explain the settings for an OKI LED-printer to explain the options briefly.
Generally you can copy the procedure to your personal CMYK-printing system. For detailed information please contact your dealer or the vendor of the CMYK-printing system.

3.3.1 Printing resolution and quality

Depending on the printing system you have you can setup different parameters for the printing resolution, quality which paper size should be used and from which paper tray the media should be loaded.

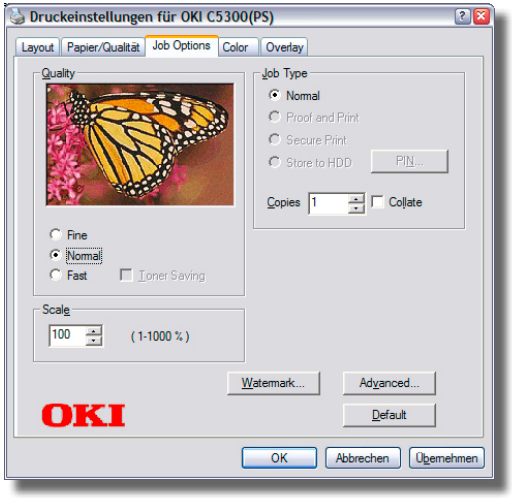
With the OKI printer we use for explaining the options you can select the color mode (black and white / color) and the tray for the paper in the section “Paper and Quality” (if you haven’t set up the settings allready in the panel of the printer).



In the section “Job options” it is possible to define the setting for the printing quality and the color mode more precisely.

For our example we have choosen the setting “normal” for the output quality.

The setting under this option has a big influence on the printing



quality of your printer. It defines how much toner/ink will be used for each channel as well as the total amount of toner/ink. Printout with different media setting will generate different output results on the media you use. If the printout looks to light, you should try the next higher printing quality/media weight to improve the printout quality. If the printout is much too dark and the toner is flacking from the media you should use the next lower printing quality/paper weight.
For other CMYK-printing systems other option might be choosen. Therefore please contact the vendor of the printing system.

3.3.2 Deactivating the colormanagement

PostScript printing systems are offering two possibilities to output an uncorrected CMYK-profiling target:

Colormanagement off

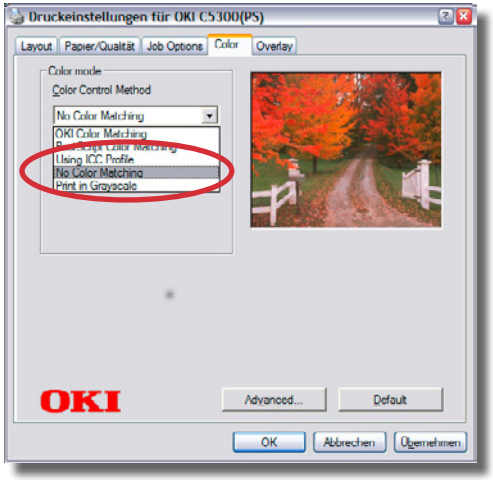
The most save way to printout a CMYK-profiling target is to deactivate all colormanagement options in the PostScript-printer driver.

PostScript Colormanagement

If a PostScript-file contains CMYK-data without embedded colormanagement information (like every profiling chart does) the PostScript-printing system will printout this file without any corrections.

If it is not possible to deactivate the colormamagement of the printing system manually (via the driver) this is a good workaround to create an uncorrected printout of the profiling target.

The colormanagement system of the OKI printer in our example can be activated by selecting the option “No Color Matching” in the section “Color”. So please use this option if it is available for your printer.



If you have done all the setting for the printing resolution, the printing quality, the papier weight and deactivated the color-management system of the printer the printer is prepared to be profiled.

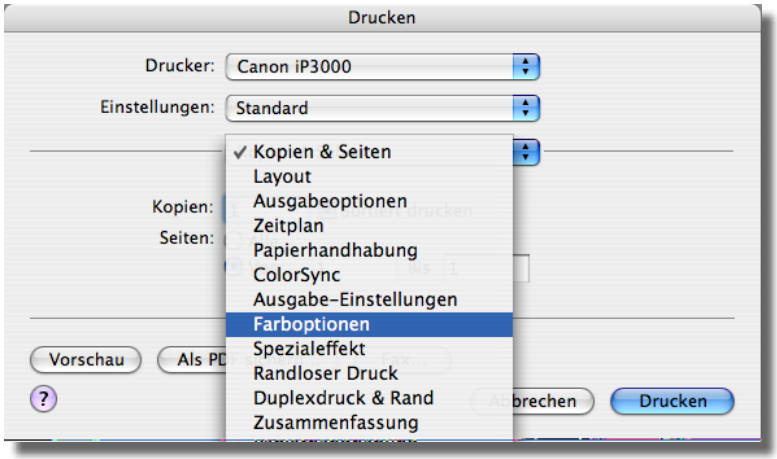
Please proceed with chapter 5.

3.3.3 Mac OS X - setting up PostScript-printer drivers

The printer driver of Mac OS X are set up directly from the applications. For all printers the generic general setting (e.g. “copy and pages” are available from the printing dialogue. The set list will be extended by the individual settings of the different printers (e.g. paper trays).

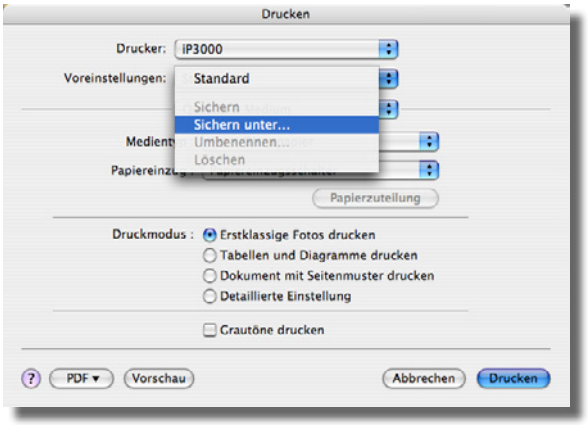
The settings for print quality and color management are also individual driver settings of the different printer manufactures. For more information about these individual settings please contact the manufactor of your CMYK-printing system.

This section use the settings of an OKI LED-printer as an example to show how to setup the options of an CMYK-PostScript-printer driver.

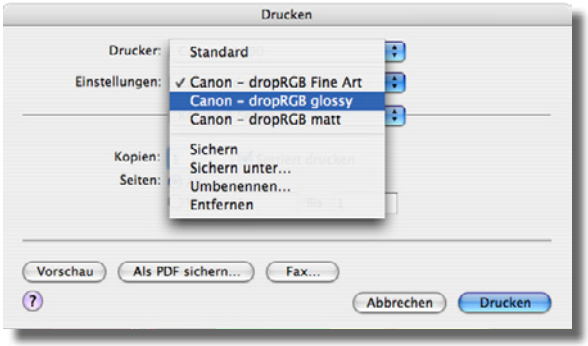


In the printing dialog of Mac OS X you can select between the different settings of the printer.

All the settings you made in the printer driver can be saved as a configuration set in the menu “Presets”,
If you want to create a printout with your individual settings (after the profiling), you just select the printer and the preset with your settings.
So you can define optimized settings for different media (e.g. photo glossy, photo matte, fine art, canvas, etc.).

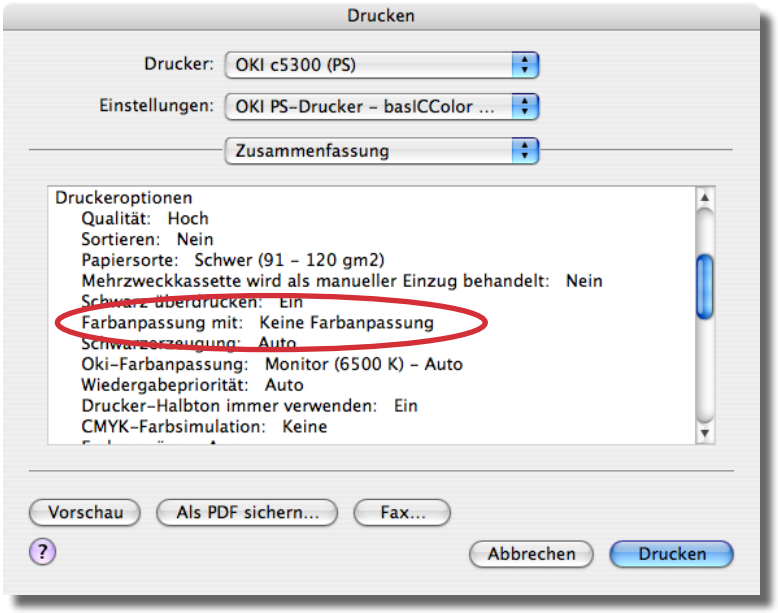


In the menu “Presets” you can permanently save the settings you have chosen.



By selecting a preset you can load the specified settings with just one click.

The option *"summary"* gives you an overview of all the settings you made. In the section *"ColorSync"* the selected ICC-profile for your printer will be displayed.

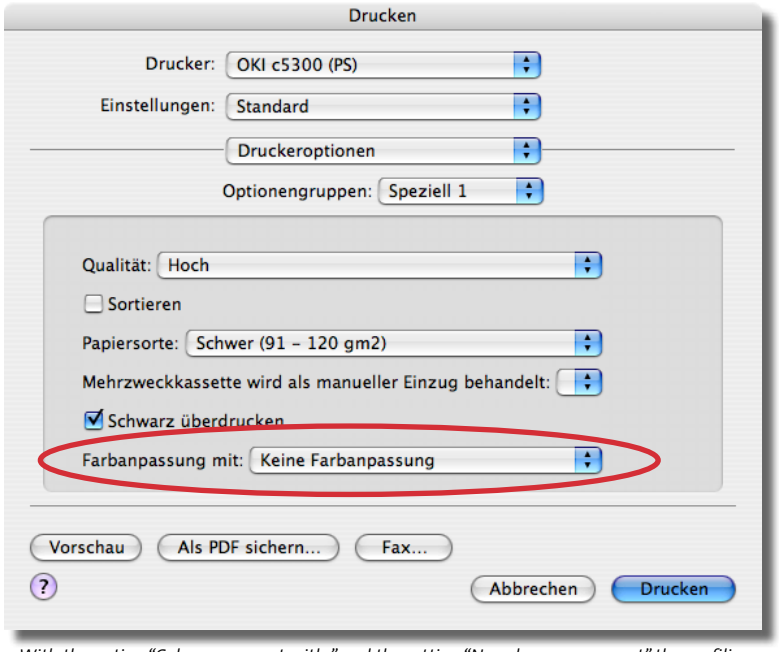


If the printer driver is using the ColorSync system you can see in the "Summary" menu of the driver.

Printer options

In case of the OKI PostScript printer we use for the explanations all color relevant settings are collected in the menu “Printer options”.

The most important option can be found in the section “colormanagement with:”. To deactivate the integrated colormanagement of the printer/driver you have to select the option “No colormanagement”. This setting will be needed to printout the profiling target like it is without any color adjustments.



With the option “Colormanagemt with:” and the setting “No colormanagement” the profiling target will be printed out without any color modifications.

If you have done all the setting for the printing resolution, the printing quality, the papier weight and deactivated the color-management system of the printer the printer is prepared to be profiled.

Please proceed with chapter 5.

3.4 Setting up a Software RIP

A lot of (InkJet) printers can be upgraded by a Software-RIP and so the possiblity to use a CMYK-PostScript-RIP for the output. Compared to the standard system printer driver (RGB only) the user can output his data directly in CMYK and has often the possibility to calibrate/linearize the printer much more precisely. Also other features like nesting, control strips, etc. will enhance the functions of the printer.

By using the EFI DesignerEdition (version 4.2) the creation of an ICC-Profile for an colormanagement RIP will be demonstrated in this section.
If you have a colormanagement RIP from an other manufacturer please contact your dealer or the vendor of the RIP for more information about creating a profile for those RIP.

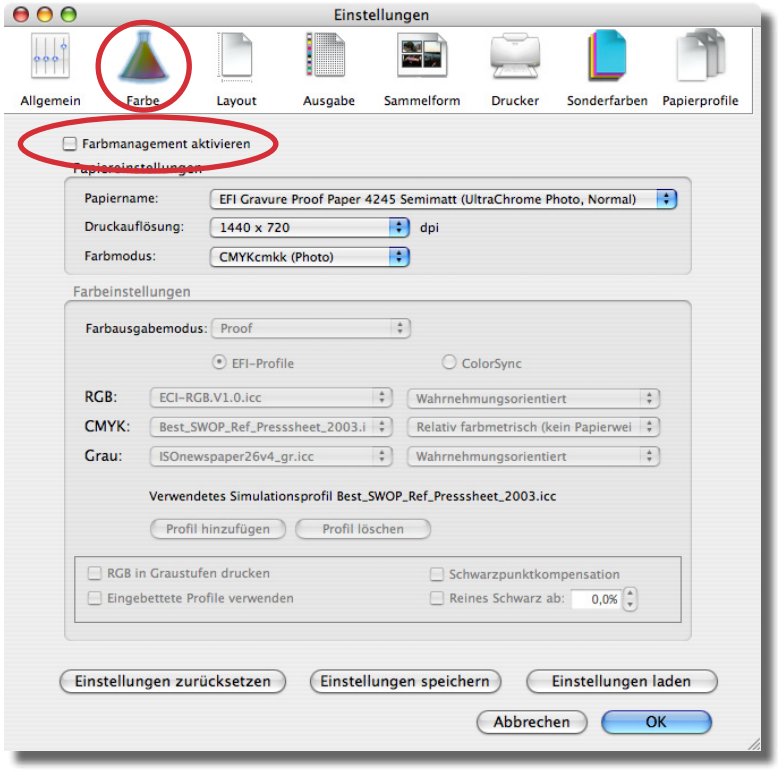
Linearisation of RIPs

The linearisation process differ from (software) RIP to RIP. This documentation can not explain the settings for all RIPs in the market.
So please contact your dealer or the vendor of the (software) RIP how to linearize your printer with the RIP.

3.4.1 Deactivating the Colormanagement

If you would like to create an individual ICC-profile for the EFI DesignerEdition the RIP has to be completely set up before.

In the section “Color” the actual settings for the paper will be shown. By deactivating the checkbox “activate colormanagement” the colormanagement of the RIP will be disabled. But the linearisation which belongs to the paper selection will be still active.The ICC-profile and the linearisation/calibration are allways conected



with each other in the EFI DesignerEdition. So if you select a paper profile you also automatically select a linearisation for the printer.

Even when you can not create an individual linearisation for your own paper with the EFI Designer Edition you can use one of the exsisting linearisations as base to create an individual ICC-profile with basICColor CMYKick. Simply select a paper profile/lineraisation in the EFI Designer Edition which fits best the paper you use. The “disadvantages” of the generic linearisation will be corrected by the ICC-profile created with basICColor CMYKick. And the general charakteristic of the printer will be descriped quite good with the generic linearisation.

The selection of the paper linearisation has a big influence on the printing quality of your printer. It defines how much ink will be used for each channel as well as the total amount of ink. Printout with different media setting will generate different output results on the media you use. If the printout looks to light, you should try the next higher media quality to improve the printout quality. If the printout is much too dark and the ink is bleeding (blurred lines and edges of the single patches) you should use a media type with the next „lower“ quality.

Please keep this fact in your mind if you use a media which is not supported by the EFI Designer Edition.

Chapter 4

Printing The CMYK Profiling Target

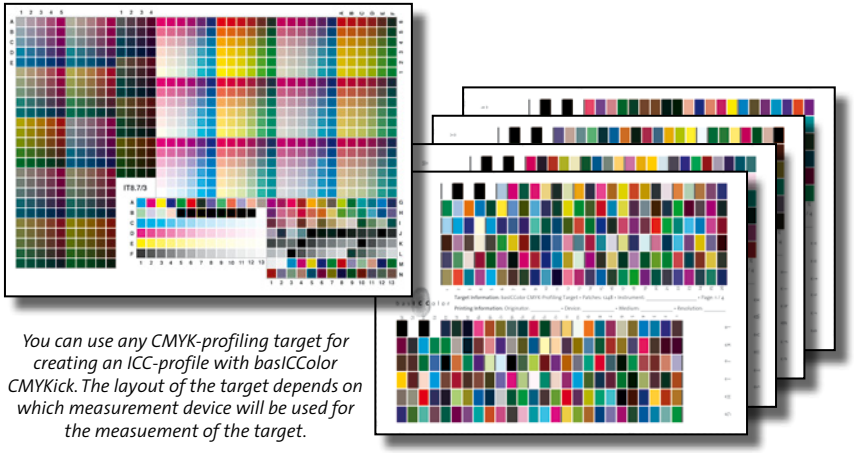
4. Printing The CMYK Profiling Target

The next step after deactivating the color corrections in the PostScript printer driver or the RIP is to print a CMYK-profiling target (e.g. ECI2002 CMYK target). This section explains how to print the right target on your printer.

4.1 Selecting the right CMYK-profiling target

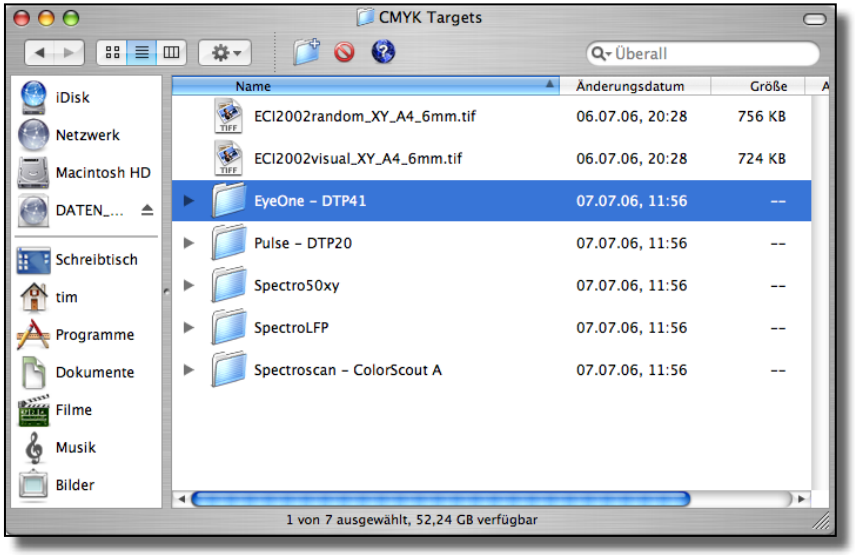
Depending on your measurement device you need to select a TIFF-file which fits the needs of your measurement device.

If you use the measurement service of your basICColor dealer, please ask the dealer which target you need to print out.



You can use any CMYK-profiling target for creating an ICC-profile with basICColor CMYKick. The layout of the target depends on which measurement device will be used for the measuement of the target.

In the subfolder "CMYK targes" of the basICColor *CMYKick* program folder you will find some ECI2002 CMYK target with different layouts for the different measurement devices.
Please ask your basICColor dealer which target layout you have to use for the printout if you use the measurement service of the basICColor dealer.



The ECI2002 CMYK targets you can find in the sub folder „CMYKick Targets" in the application folder of basICColor CMYKick.

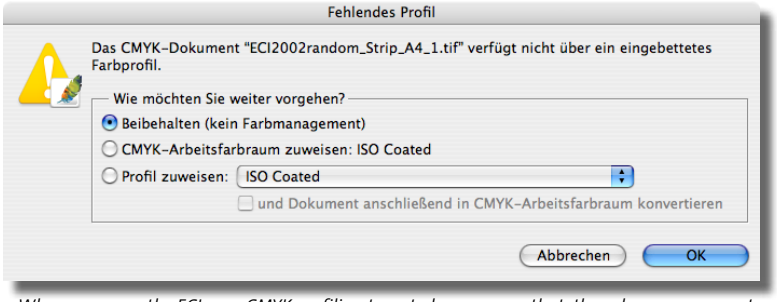
When you have an own measurement device please ensure that you will print the ECI2002 CMYK target in the layout that fits for your measurement device and your measurement software (e.g. basICColor *catch*).

4.2 Printing the ECI2002 CMYK profiling target

After selecting the target you print it. Open the TIFF-file from Adobe Photoshop or another application with an integrated color management system.
This manual shows the output procedure with Adobe Photoshop, because this application is the de facto standard application in the Graphics Arts industry for image editing/composing.

4.2.1 Opening the ECI2002 profiling target in Photoshop

When you open the ECI2002 CMYK profiling target in Adobe Photoshop a dialogue shows up which tells you that the file has no embedded ICC-profile. The dialogue also gives you certain options on how to proceed. Please select the option “Leave as is (don’t color manage)”, when opening the file.

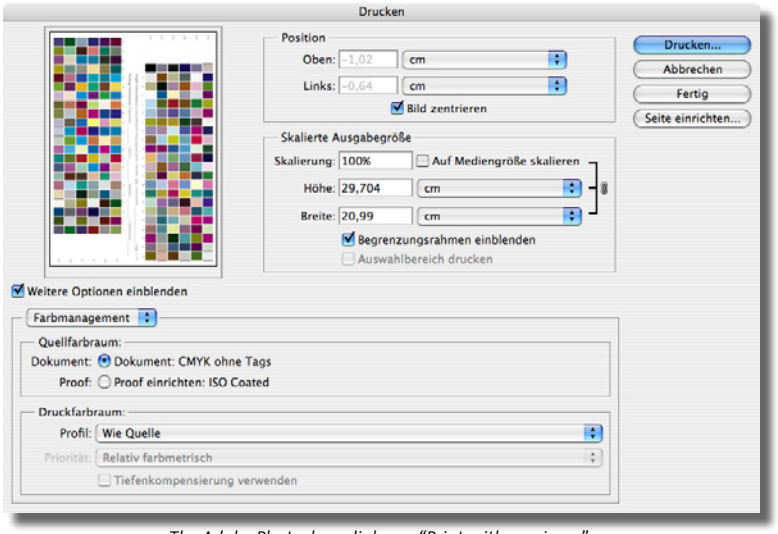


When you open the ECI2002 CMYK profiling target please ensure that the color management for the file is deactivated (“Leave as is (don’t color manage)”).

4.2.2 The Photoshop dialog "Print with preview..."

To print the ECI2002 CMYK profiling target without any color corrections, please select the option "File/Print with Preview...".

Now the advanced printing dialogue of Adobe Photoshop will pop up. In the top left of the window you will see a preview of the ECI2002 CMYK profiling target on the print sheet. If necessary, rotate the page orientation (portrait/landscape) in the "Page Setup..." menu.



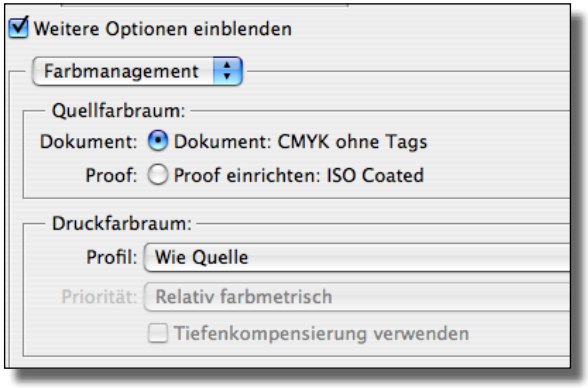
The Adobe Photoshop-dialogue "Print with preview...".

Please ensure that all the patches of the target fit onto the page without changing the scaling (Scale = 100%)

Show more options

Please activate the check box “Show more options” if it should be deactivated.

Under this option you can find all the color management printer output options of Photoshop.



To print out the ECI2002 profiling target without any color modifications you have to select the option “Profile: Same as Source” in the section “Print Space”.

Color management - Source Space

Please activate the option “Color Management” in this advanced print dialogue. Then activate the option “Document” in the section “Source Space”. You should see the information “Document: Untagged CMYK” for the color space of the document. If you don’t see this information please go back to section 4.2.1 and open the ECI2002 CMYK profiling target as described there.

Color Management - Print Space

To advise Photoshop to print the basICColor *dropRGB* target without any color changes you need to activate the option "Profile: Same As Source" in the section "Print Space".

All relevant settings to print out the basICColor *dropRGB* target without any color changes are done now. You can start printing with a click on "Print...".

Please check the print after printing for fingerprints, blurring, banding and the correct layout. If the print should show any unexpected issues please check your printer hardware as explained in *section 3.1* and check if you have set up your PostScript printer driver with the correct settings (*section 3.2* for Windows printers, *section 3.3* Macintosh printers or *section 3.4* for software RIPs).

Chapter 5

Measuring The CMYK Profiling Target

5. Measuring The Profiling Target

The next step after printing the CMYK-target is to measure the color characteristic of you printer on the paper used. The final ICC-profile will be calculated from these measurement data.

5.1 Measurements by an authorised basICColor dealer

One of the aims during the development of CMYKickwas to care about the customers without measurement devices. Therefore basICColor has established a network of service points. The users can send the CMYK-target prints to their bas**ICC**olor dealer. The dealer will measure the printout for a small handling fee and will send the measurement file(s) back to the customer via E-mail.
From this measurement data the user can create the individual ICC-profile for his printer.

Information

You can find an actual list of authorized basICColor dealer on the basICColor website (www.basICColor.de).

For information on which target to print and how to send the printed target please contact your authorized bas**ICC**olor dealer.

5.2 Measuring a CMYK-target with basICColor catch

If you own a spectrophotometer (e.g. gretagmacbeth Eye-One pro) you can read out the target to create an ICC-profile with basICColor *CMYKick* target with basICColor *catch*.
You can find basICColor *catch* on your basICColor install-CD or you can download it from the download section of the basICColor web site (***www.basiccolor.de)***. You will find detailed information on installing the software, supported measurement devices and other features of basICColor *catch* in its documentation.

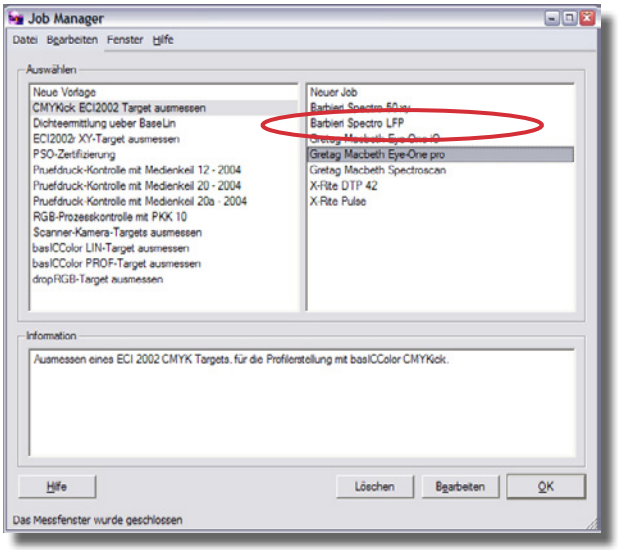
The next section shows how to measure a basICColor *CMYKick* ECI2002 target with a basICColor *i1 catch pro* spectrophotometer in basICColor *catch* (instrument available from basICColor GmbH as a bundle: basICColor *i1 catch pro*).

basICColor i1 catch pro

5.2.1 Selecting the CMYKick target in basICColor catch

When you launch basICColor *catch* the **Job Manger** will show up. On the left side of the window you can find a few predefined templates. One of them is named “measure CMYKick ECI2002 target”. If you mark this template a list of jobs will show up in the right half of the Job Manager window.

Those jobs are named by the supported devices and the format of the ECI2002 target. Please select the job named by the measurement device you use and click on the “OK”-button in the bottom right corner of the Job Manager. To show you how to measure the ECI2002 target we have selected the “gretagmacbeth Eye-One pro” job to explain the next steps.



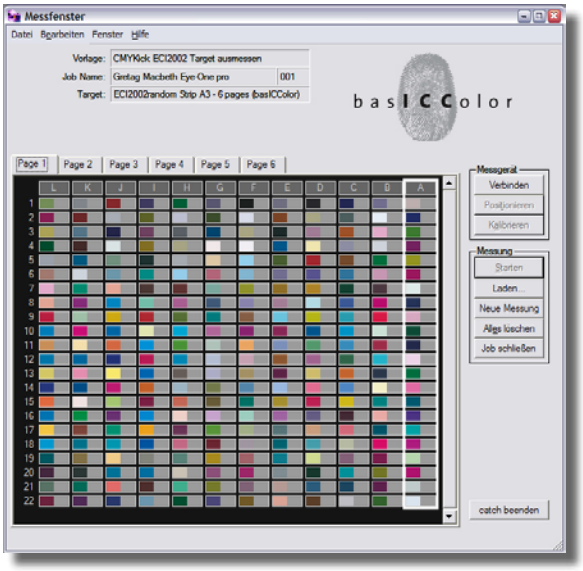
The main window of basICColor catch 3: The Job Manager

5.2.2 Measuring the ECI2002 target with the Eye-One

First you will be asked to calibrate the measurement device. The procedure differs depending on the type of your instrument. basICColor *catch* will guide you through the process with clear instructions.

The measurement window has three main areas. At the top you see information on important parameters of the job, target name, measurement number, etc.

On the right you see all elements to connect/disconnect, calibrate and start the measurement. You can even load/import existing measurement data e.g. for averaging, reset the actual measurement and save/close the measurement job.



The measurement window of basICColor catch without any measured data.

basICColor catch measurement window: With the options in the section "Instrument" you can operate the main functions of your measurement device. In the section "Measurement" you have all the options for handling the measurement jobs.

basICColor catch: In the empty measurement window the first strip of the target is marked. This means you have to measure this strip next.

If you use a semi-automatic measurement device (e.g. gretagmacbeth Eye-One pro) the "Start" button is greyed out. The measurement will be started with the measure button of the instrument.

In the main part of the window you see a preview of the measurement chart. For every single patch you will see an approximation of the expected color on the left. With this preview you can check if the single patch and the whole strip was measured correctly.
A white frame around the strip shows you which strip will be measured next. If there is a frame around a single patch then the measurement device is set to patch mode.
Click on the headline of the column you want to measure next (e.g. "A") to set the instrument to strip mode or click on a single patch to set the instrument to path mode.

5.2.3 Preparing the target print

Before you begin to measure the chart, please ensure you use a neutral, non-glossy opaque surface free of optical brighteners (at least two sheets of your printing paper will do in most cases) as a background.
This will minimize the negative influence of the backing of the target print (e.g. the structured surface of your desktop).

Positioning the gretagmacbeth Eye-One Pro on the measurement ruler.

To identify the strip correctly the head of the Eye-One Pro has to be positioned in the white area if front of the first patch of the strip.

5.2.4 Positioning the measurement device

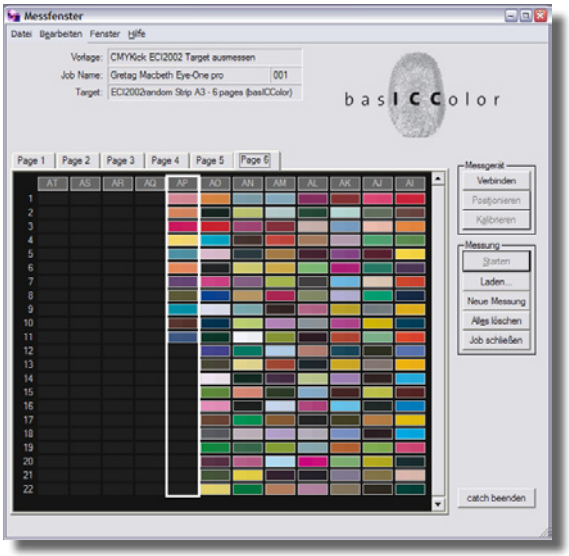
The next step is to position the ruler of the measurement device on the first strip of the chart (marked with "A").
Then please put the measurement device on the ruler as shown in the picture on the left. Make sure the instrument is positioned on the white area in front of the first patch of the chart. This is required to recognize the strip correctly and is highly important.

5.2.5 Starting the measurement

With one hand you fix the ruler on the strip and with the other hand you drag the measurement device across the strip.
For starting the measurement please press the measure button on the Eye-One Pro and hold it until you have finished measuring the entire strip. After pressing the button on the Eye-One Pro please wait until you hear a short beep from bas**ICC**olor *catch*. Now you start measuring the strip (starting in the white area in front of the first patch and ending in the white area after the last patch of the strip). Drag the Eye-One Pro across the strip slowly and continuously and hold the keep the measure button of the Eye-One Pro pressed.

After scanning the strip the gray area next to the colored column of patches will be filled. Then the next strip will be outlined in white and you can measure the next strip of the chart.
Repeat this procedure until you have measured all the strips of the ECI 2002 CMYK target.

If a strip is not measured correctly basICColor *catch* will output a warning message. After you have confirmed this message you can re measure the strip. You don't have to re-measure the entire chart, just the strip that failed to measure correctly.
After having measured the entire ECI2002 CMYK *target* you can close the job with a click on the button "Close Job" or you can close basICColor *catch* by clicking "Exit catch".



basICColor catch measurement window: After you have measured the entire ECI2002 CMYK target all patches have to be filled out.

5.3 Where to find the measurement data

The measurement data will be saved in the folder **"***C:/program files/*basICColor *Software/*basICColor *catch 3.1/Jobs/measure CMYKick ECI2002 target/gretagmacbeth Eye-One pro"* for Windows or in the folder "*Documents/Jobs/measure CMYKick ECI2002 Target/ gretagmacbeth Eye-One pro"* in Mac OS X.

The name of the measurement file is *"CMYKick-Target-xxx.cie"*. The "xxx" in the file name represents the number of the measurement. The latest measurement will bear the highest number.

Chapter 6

Creating The ICC-Profile

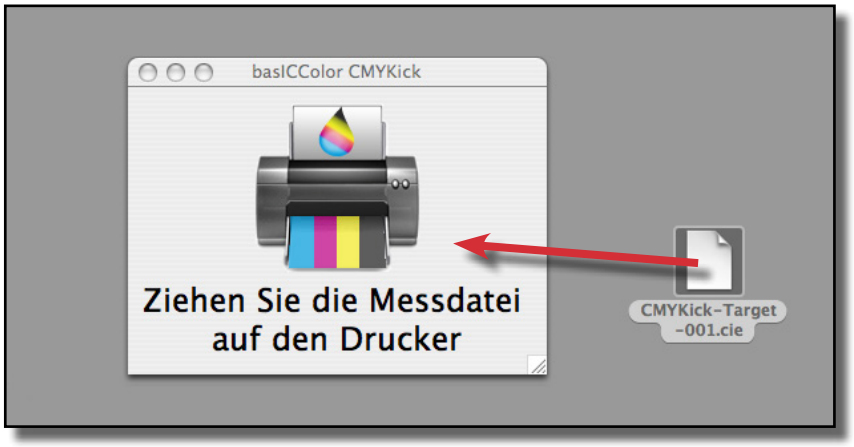
6. Creating The ICC-Profile

This sections shows how to create an ICC-profile form the measurement data of the ECI2002 CMYK profiling target measured with basICColor *catch* or the measurement data sent from you authorized basICColor dealer.

6.1 Drag and drop measurement data

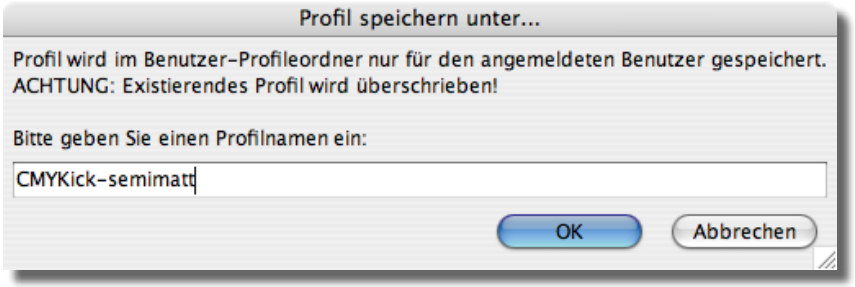
Simply drag and drop your measurement data (*"CMYKick-Target-xxx.cie" in our example)* on the program icon of basICColor *CMYKick* or the Alias on the desktop of your Windows computer that has automatically been created at installation time.
Alternatively, you can open basICColor *CMYKick* with a double-click and drag and drop the measurement file on the basICColor *CMYKick* window.

Via „drag'n'drop" of the measurement file onto the basICColor CMYKick window you can load the profiling data very simple.



6.2 Naming the ICC-profile

After dropping the measurement file basICColor *CMYKick* asks for a name for the ICC-profile. As a default basICColor *CMYKick* will suggest the name of the measurement file. You can (and should) change the name for the ICC-profile to a name which corresponds with your printer an the media you use (e.g. OKI - CMYKick semimatte). The OS and the applications will identify the ICC-profile by this name. Click "OK" and the profile will be created.



Windows - Where to find the ICC-profile

Windows stores ICC-profiles in a central folder of the Operating System where most applications will find them.
„C:/Windows/System32/Spool/Drivers/Color/"

Mac OS X - Where to find the ICC-profile

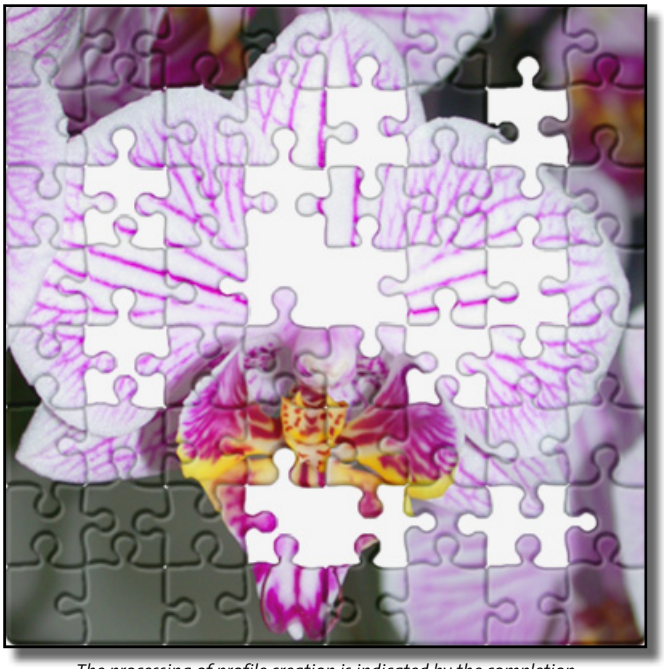
basICColor *CMYKick* saves the ICC-profiles into the user ColorSync folder („*Home/Libary/Colorsync*"). To make the ICC-profile available for ALL users, you need to copy it into the system ColorSync folder (*Macintosh HD/Libary/ColorSync*). In order to do so, you need administrator rights, otherwise the copy process will fail.

Where to set up the parameters for the separtion ?

One essential feature of basICColor CMYKick is to use an intelligent and automatic preselection of the separation parameters (Ink limits, UCR, GCR, etc.).
A separate setup of the parameters of the user is not needed and not supported.
So even non-professional user can create excellent ICC-profiles without having any knowledge about the technical background the used parameters.

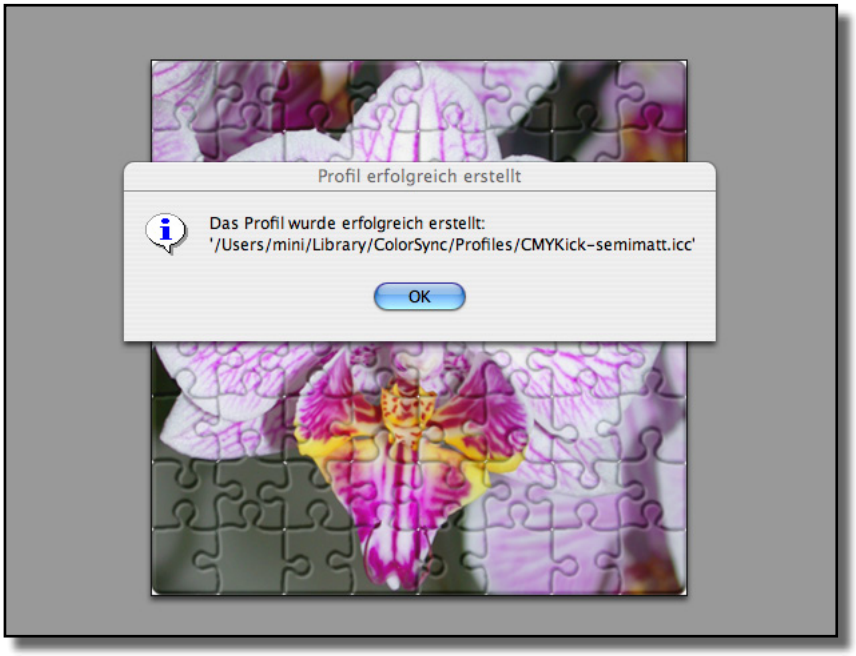
6.3 Calculation process of the ICC-profile

The main window of basICColor *dropRGB* disappears and the process window which looks like a jigsaw puzzle shows up.



The processing of profile creation is indicated by the completion of an jigsaw puzzle

When the puzzle is completed a new information window shows up. The message informs you that the ICC-profile has been created successfully and where it was saved.



Nachdem das Profil berechnet wurde, erscheint noch ein Informationsfenster mit der Meldung, in welchem Systemordner das ICC-Profil abgelegt wurde.

The creation process for the ICC-profile is finished now and the ICC-profile can be used by the operating system and the applications.

basICColor *CMYKick* will be closed by clicking the “OK”-button.

Chapter 7

Color Correct Printing With ICC-Profiles

7. Color Correct Printing With ICC-Profiles

Now you have created an ICC-profile with bas**ICC**olor *CMYKick* The next step is to re-activate the color management in your PostScript printer driver and to provide the driver with the ICC-profile information.
Printing with these settings will be explained in chapters 7.2 and higher.
First we learn how to do a color correct output from applications with integrated color management.

7.1 Printing from Adobe applications

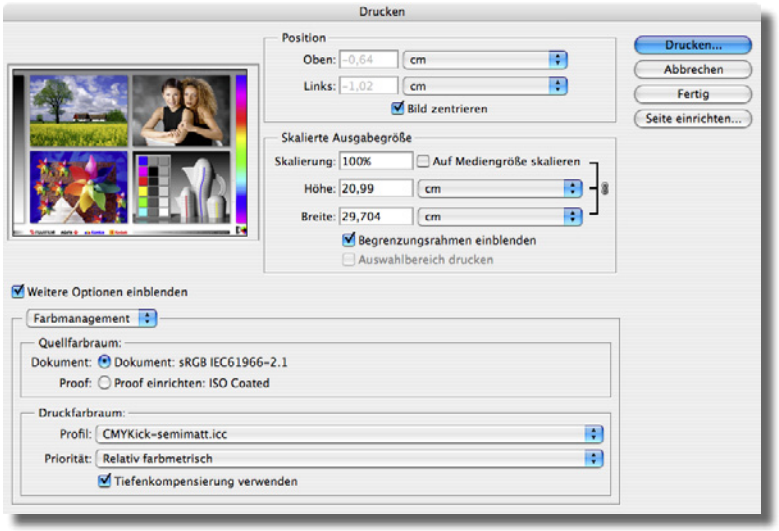
Adobe provides the customer with an excellent color management system (CMS) embedded in the applications of the Creative Suite CS (Photoshop, InDesign and Illustrator).
The functionality of the applications are identical under Windows and Mac OS X. So the following screens hots show the functionality for both operating systems.
To use the full power of the embedded Adobe color management system it is important to deactivate color management in the printer driver (how to deactivate the CMS for your printer see *Chapter 3. Preparing the printer*), because color management will be handled completely by the Adobe application.

Information: PostScript printer

PostScript-printers without a sepreate user interface are using the PostScript-code to transfer the printers ICC-profile into the printer. The printer will use this embedded profile (CRD) then for the output.

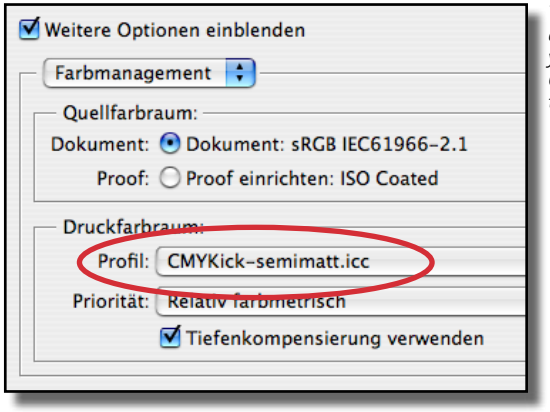
7.2 Adobe Photoshop CS

The best way to create color correct prints from Photoshop is via the *"Print with Preview..."* dialog. Only in this dialog Photoshop all color management options are directly accessible.



If you use the standard *"Print"* dialogue you only have the same options as in all the other applications. In this case Adobe Photoshop will use the OS color management settings (*Windows: ICM; Mac OS X: ColorSync*).

You need to activate *"Show More Options"* of the printing dialog in order to see the working space ICC-profile ("Source Space") of the image you are trying to print (radio button: *Document*).



To printout an image with an embedded ICC-profile color correct you have to select the with basIC-Color CMYKick created ICC-profile in the section "Print Space".

In order to output a color correct document on your printing system Photoshop needs to know which colors your printing system is able to print. The ICC-profile you created with bas**ICC**olor *CMYKick* contains this information. Under "Profile" in the "Print Space" menu you select this ICC-profile (In the example use an ICC-profile for a Canon printer with a glossy media).

Under *"Intent"* you decide how the colors will be transformed from the *"Source Space"* to the *"Print Space"*.

Perceptual
Roughly speaking this intent compresses the colors of the Source Space into the Print Space. Images will loose some of their saturation (compared to the monitors full-gamut-view), but overall the image will retain its "look-and-feel".

Saturation
Initially this method was planned for "clean, saturated" colors like they are being used in business graphic. For a photographic output this intent should not be used at all. Most profiles do not even contain this rendering intent.

Relative Colorimetric
This intent outputs the colors of your image one-to-one on your printing system (like you see them on your monitor). Images with highly saturated colors or dark shades (e.g. a man with a black suit in front of a dark background) will eventually loose contrast and details. Sometimes the printouts will look too dark.

Information: PostScript printer

PostScript-printers without a sepreate user interface are using the PostScript-code to transfer the printers ICC-profile into the printer. The printer will use this embedded profile (CRD) then for the output.

Relative Colorimetric with Black Point Compensation (BPC)
To compensate for the loose of contrast and details in the dark shadows you can activate the option "Black Point Compensation". This will bring back the details in the dark shadows, but the image will be lightened up in the very dark tones.

Absolute colorimetric

This method is similar to the intent "relative colorimetric". Additionally this intent takes the white point of the Source Space into account.

For example if your image has a D65 white point (e.g. sRGB, Adobe RGB) the printout will look too blueish. This problem will not occur with a D50 working space (e.g. ECI-RGB V1.0 (www.eci.org) or LStar-RGB (lstar-rgb.com).

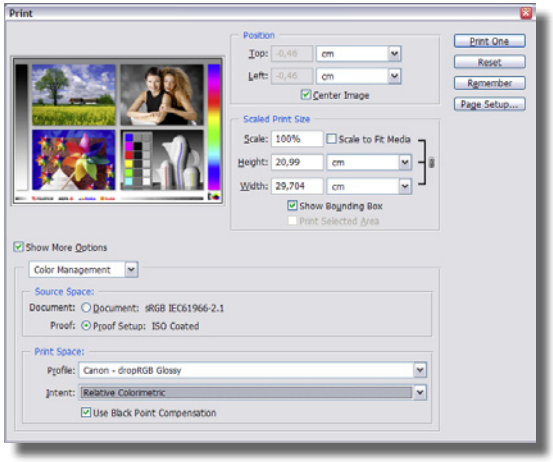
Absolute colorimetric should be used for proofing purposes only (paper simulation).

For a photographic output mainly the intents *"Perceptual"* or *"Relative Colorimetric with black point compensation"* will give you the best visual results.

7.2.1 Proofing from Photoshop

In addition to the direct output to the printer using all its colors (full-gamut-print) it is possible to simulate the output of a different printing system (like an offset printing press) on your printer. This is called “Proof”. By choosing a “Proof”-ICC-profile under “Source Space” you can define the simulation color space.

This is a cheap way to create a proof. But even when the print shows the correct color you can not be sure that it is contract-proof-quality. Additionally some important information is missing (e.g. control strip, profile information) to be a real proof-print.



You can create with the print dialog “Print with Preview...” proof like prints.

The prints might show the entire gamut of a printing press. But without a control strip (for quality control) and all the other information you can not proof this. It’s not a contract proof, even if the color output is correct.

But for the semi-professional or for internal use this method can be good enough and might be an alternative to a Proof-RIP-system.

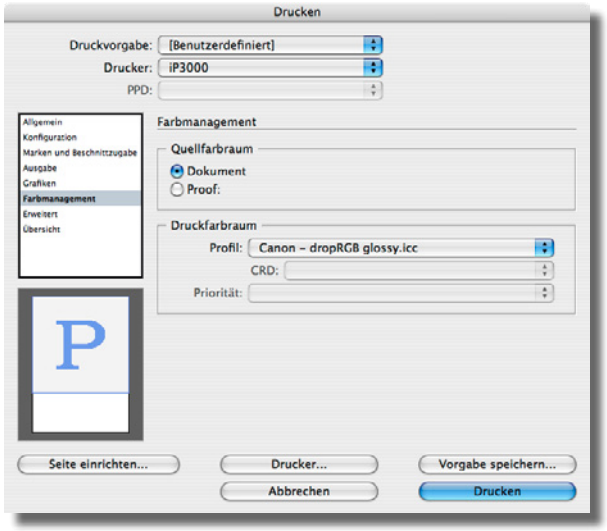
7.2.2 Proofing from Photoshop (Proof-RIPs)

If you have an external colormanagement software RIP (e.g. EFI Designer Edition) the RIP takes over the colormanagement for the output. Adobe Applications like Photoshop don't have to preparate the data for the output first. The data has to remain into their original color space.

For this you have to use the option "Profile: Same As Source" in the Photoshop print dialogue.

7.3 Abobe InDesign CS

The print settings of InDesign are equal to the settings of Photoshop. At this point this manual skips all the options. For detailed information please take a look at the explanations for Photoshop (*Chapter 7.1.1 Adobe Photoshop*).



The color management options in the Adobe InDesign print dialog.

In the *"Print"* menu you will find the option *"Color management"*. In the section *"Print Space"* you select the ICC-profile you created with basICColor *CMYKick*.

In the section *"Source Space"* you can choose if you like to convert directly from the color spaces of the documents images/elements (RGB, CMYK, Gray, Lab or Spot Color) to the printer colors or to the simulation color space first (*"Proof"*).

7.3.1 Scource Space

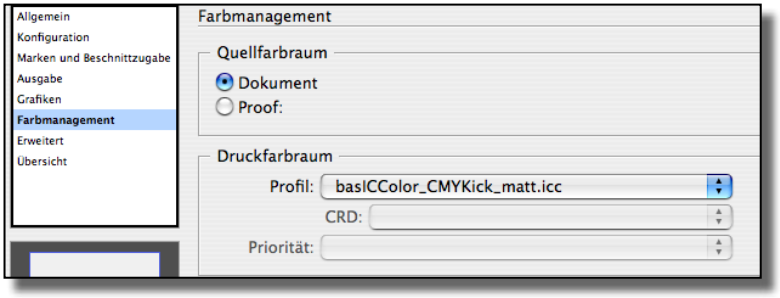
In the menu "Scource space" you can decide if the document colors will be transformed directly into the printers color space (check-box "Document") or if the document colors should be transformed into the proo-simulation colorspace (checkbox "Proof").

7.3.2 Print Space

In the section "Print Space" of the Colormanagement menu you can load the ICC-profile created with basICColor *CMYKick*.

InDesign will transform/separate all Document/Proof data into this colorspace.

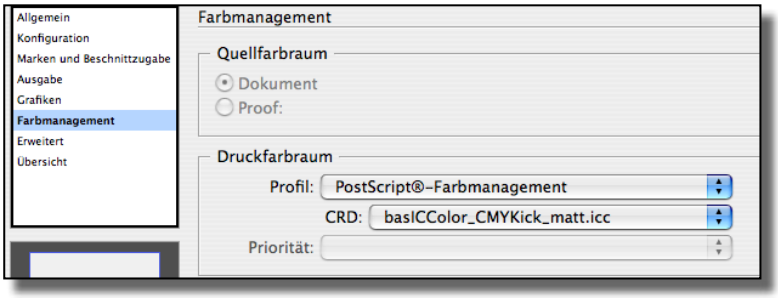
Only this mode supports a proof output on the printer.



Colormanagement with InDesign in InDesign CS-printing dialouge.

7.3.3 Print Space - PostScript colormanagement

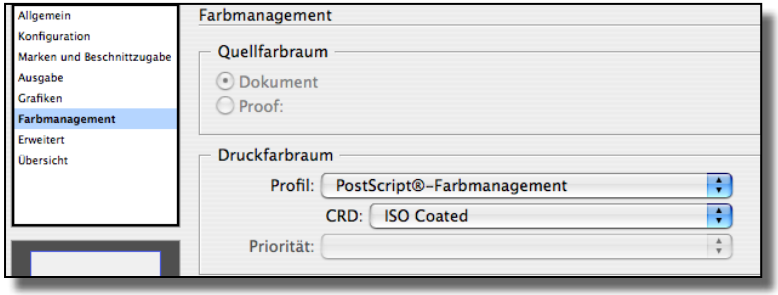
If the PostScript printer should separate the document data internally directly into the printers color spac you have to select the option “PostScript-Colormanagement”. Select the ICC-profile created with basICColor *CMYKick* in the menu “CRD”. It will be send with the document data to the printer and the printer will use it for separation instead the printers default separation profile.



The PostScript printer will be instruct to use the basICColor CMYKick ICC-profile for separating the documents data by selecting it as CRD and the PostScript-Colormanagement (Profile).

7.3.4 Assigning output color space for Proof-RIPs

If a Proof-RIP (z.B. EFI Designer Edition) will be used for the output the simulation color space should be assigned as CRD to the PostScript file. The Proof-RIP should use the embedded CRD to separate the document data to the output color space. The basICColor *CMYKick* ICC-profile has to set in the RIP as printer output profile.



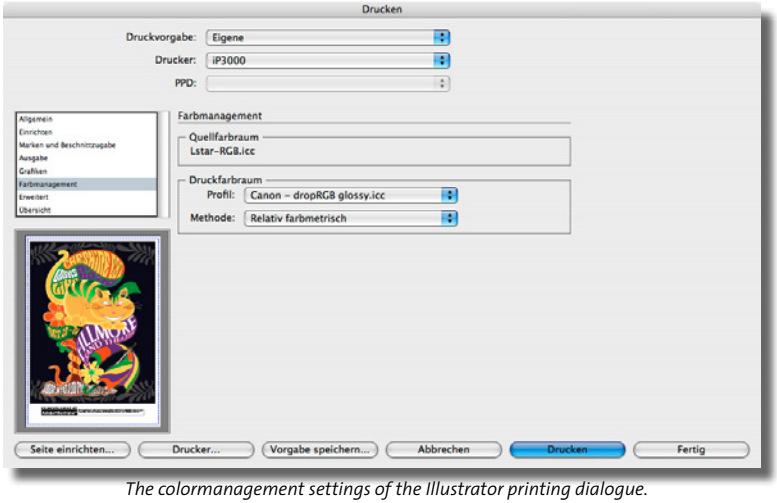
The PostScript interpreter of the ProofRIP will use the print space (CRD) of InDesign for the separation of the document. Then it will do another transformation into the basICColor CMYKick profiler for the output on the proof printer (paper profile).

7.4 Adobe Illustrator CS

In IllustratorCS the basICColor *CMYKick* ICC-profile has to be set as print space to get a color correct output.

The document color space will always be used as source space. All data of the document have use this color space. Because the document is using always one color space for output it's not possible to enable a simulation color space (proof).

Only the rendering intent can be selected for the transformation form the source space into the print space.



The colormanagement settings of the Illustrator printing dialogue.

Proof-RIPs

To get a correct output on proof RIPs (e.g. EFI Designer Edition) "same as source" should be selected as print space.

PostScript-Printer

Illustrator integrates the source space of the document as CRD into the PostScript file. So if you like to have a color correct output on the color space of your printer you have to select the basI**CCo**lor *CMYKick* ICC-profile as “printer space” in the printer drivers color-management dialouge of Illustrator CS.

7.5 Using ICC-Profiles systemwide in operating systems

To use the CMYK-printer ICC-profile created by basICColor *CMYKick* the ICC-profile has to be selected in the printer drivers settings (if possible). basICColor recommends to use the Windows ICM and Apples ColorSync for applications which doesn't supports PostScript colormangement. And it can not be guaranteed that the output with ICM and ColorSync will be color correct when the basICColor *CMYKick* ICC-profile can't be selected in the printer driver.

7.5.1 ICM - The Windows colormanagement system

Most Windows applications (e.g. MS Office) are using the ICM system for the print output. Internally the ICM is using (s)RGB as default color space. So the document data will be transfered as RGB-data to into the printer driver. The driver transforms the data to the printers color space.

So if it is not possible to select a printer profile in the printer driver it is not possible to use the basICColor *CMYKick* ICC-profile.

7.5.2 ColorSync - Colormanagement in Mac OS

Like Windows the Mac operating system uses RGB data internally.But some drivers are allowing it to set an ICC-profile in the ColorSync Utility. But it's open if the driver is really using this profile for the output.

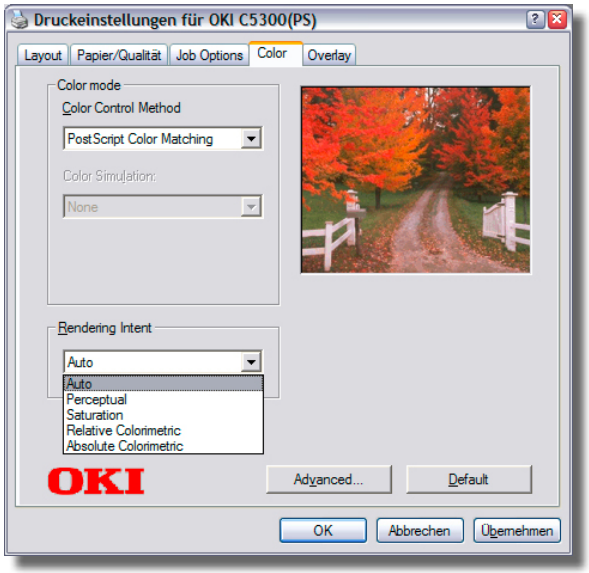
So the PostScript Colormanagement should be used for all applications for the printout. If possible the basICColor *CMYKick* ICC-profile should be used as CRD then.

7.5.3 PostScript-Colormanagement

If a printer has an integrated PostScript RIP the user has a lot of options to output his data. For example a lot of different color models (e.g. RGB, CMYK, Grayscale, Lab, etc.) and color systems can be processed by the RIP.

A very important feature is that the RIP can be told which color space it should be used for separation and output (CRD = Color Rendering Dictionary). So the CRD describes the printer output color space of the PostScript printing system.

If a PostScript-file contains a CRD normally it will use it for separating non CMYK-data (e.g. RGB data). If a CRD is not embedded into the PostScript file the printer will use its default CRD which is fixed embedded in the RIP.



The OKI printer which we are using for the demonstration just offers to use the PostScript Colormanagement. But it doesn't offers to select a "default CRD".
So the basICColor CMYKick ICC-profile has to be embedded into the PostScript file by the applications to get a color correct output.

So if the printer driver of your printing system does not support to select a printer default CRD the CRD has to integrated into the PostScript file. Applications like Photoshop or InDesign can embedd a CRD into the PostScript file.
Most Proof-RIPs are naming CRD (separation profile) like "Simulation Profile" or "CMYK-Reference Profile. After processing the PostScript file a Proof-RIP will do another transformation into the printers color space (printer profile). So in a Proof-RIP the bas**IC-C**olor *CMYKick* profile has to be selected as printer profile or paper profile (e.g. EFI Designer Edition).

7.6 Using basICColor CMYKick ICC-Profiles with software-RIPs

Software-RIPs are using an additional external colormanagement system. The simulation color space can be send as CRD to the RIP for separating e.g. RGB-data. But the output printer profile (the bas**ICC**olor *CMYKick* ICC-profile) has to be integrated into the external RIP and not into the PostScript file.
The EFI Designer Edition will be used to show this procedure as example. To integrate the bas**ICC**olor *CMYKick* ICC-profile to other RIPs please contact the dedicated vendor of the RIP or your service provider.

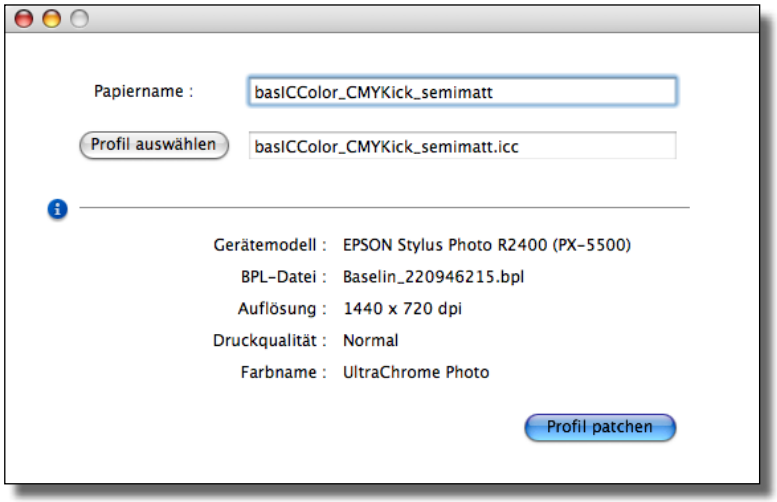
7.6.1 Embedding an ICC-profile to a software RIP

The EFI Designer Edition combines an ICC-profile with an linearisation/calibration of the printer. To use the bas**ICC**olor *CMYKick* ICC-profile it has to be merged with the liniarisation file to a paper profile. EFI provides is offering a tool the „EFIProfileConnector“ to do this.

To create the printout of the CMYK-profiling targets a linearisation file was already used. This Linearisation has to be combined now with the bas**ICC**olor *CMYKick* ICC-profile.

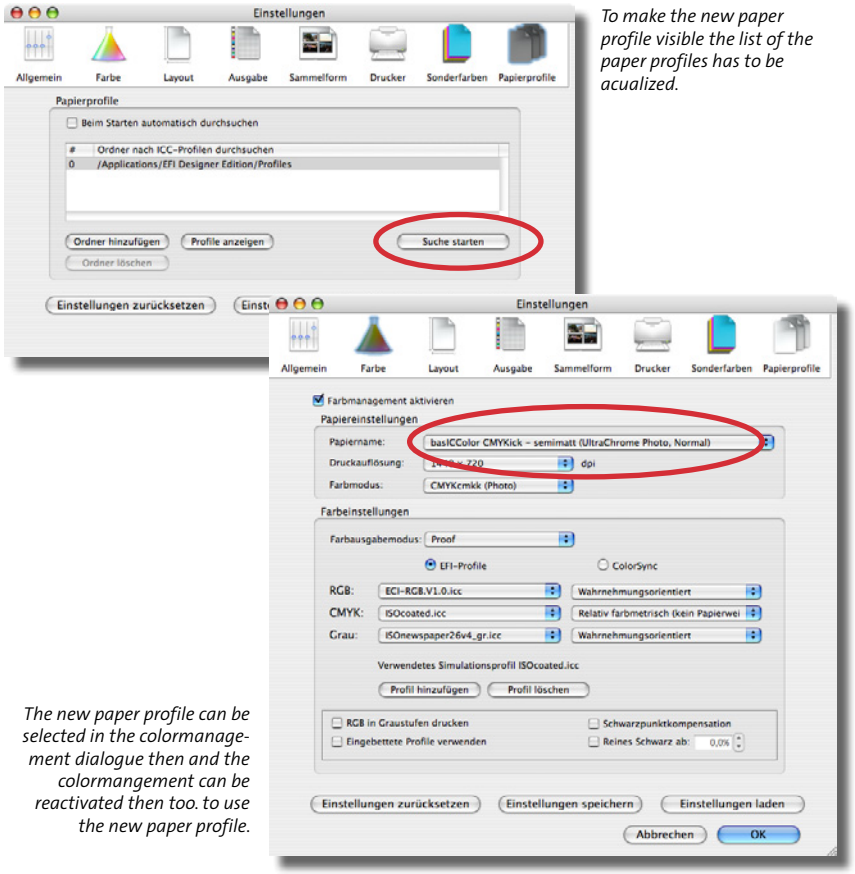
If the „*EFIProfileConnector*“ will be opened it will show the current used linearisation file of the RIP and some additional settings for the printers resolutions, print mode, etc.. Please enshure that these settings are the same like you have choosen for creating the target print.

Under the point "Select Profile" load the ICC-profile which you have created with basICColor *CMYKick* (where to find the ICC-profiles see chapter 6.2).



After loading the ICC-profile you have to choose a new name for the paper profile. The choosen name will be display in the EFI Designer Edition for the combination of linearisation an ICC-profile. At this point it's a good idea to choose a unique name for the paper profile (e.g. "basICColor *CMYKick* Epson semimatte"). This makes it easier to identify the new paper profile in the EFI Designer Edition. To finish this action click on "Patch Profile".
The new paper profile will be automatically stored into the profile folder for the EFI Designer Editon.
To make the new profile visible in the RIP you have to actualize the profile list of the RIP.

After selecting the new paper profile the colormanagement of the RIP can be acticated again and the RIP will use the basICColor *CMYKick* ICC-profile for the output.



To make the new paper profile visible the list of the paper profiles has to be acualized.

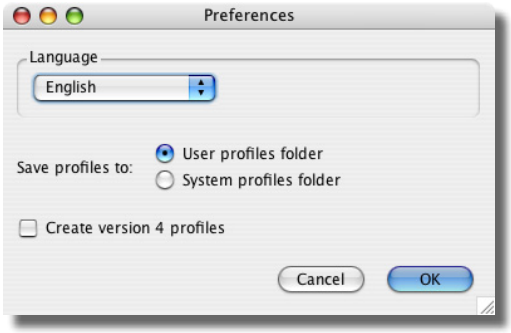
The new paper profile can be selected in the colormanagement dialogue then and the colormangement can be reactivated then too. to use the new paper profile.

Chapter 8

Advanced Settings Of basICColor CMYKick

8. Advanced settings of basICColor *CMYKick*

The basic idea of basICColor *CMYKick* is to offer a easy to handle application. So the advanced settings are reduced to the needed minimum, too.



8.1 Language

In this menu you can select the language basICColor *CMYKick* is using for prompting the dialogues.

8.2 Location for ICC-Profiles

Windows only supports to install ICC-profiles into the central system folder. But on a Mac the user can select where to store ICC-profiles. So Mac users can choose if the basICColor *CMYKick* ICC-profile should be stored into the user folder or the system folder.

Attention!!! To store ICC-profiles to the system folder (Windows and Mac) the user needs administrator permissions!

8.3. ICC V4-profiles

When this option is selected the ICC-profiles will be stored in the ICC-V4 format.

ICC-V2-compatible applications should use these type of ICC-profiles without any problems. The preset of bas**ICC**olor *CMYKick* is V2 because some printer drivers are having problems by using the V4 standard profile type.

Chapter 9

Product information *basICColor CMYKick*

9. Product Information basICColor *CMYKick*

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