TUTORIAL

GMG ColorProof

Creating a new Printer Calibration

GMG ColorProof 3.4

Please send suggestions and criticism of this tutorial to support@gmgcolor.com.

Contents

1 INTRODUCTION

This GMG tutorial guides you through the creation of a new printer calibration and gamut.

IMPORTANT NOTICE:
GMG recommends using the *self backing* standard for all measurements. In addition all calibrations and gamuts provided by GMG HQ are created without UV Filter – please consider this if you are using a UV measurement device. Please note also that GMG recommend the usage of the same measurement device for the entire profiling process.

1.1 Create a new job

First you need the appropriate "Starter-Kit" for your connected printer. The packet contains the following files:

Vorlage.tif or InkCoverage.tif
linear.mx3
180.mx3
195.mx3
210.mx3
225.mx3
240.mx3
255.mx3
270.mx3
285.mx3

Copy the files to your hard disk.

In GMG ColorProof:

Menu *File* → *New Job*

Menu *Job* → *Add*

Select the tiff file, *"Template_K.tif"* (or the image *InkCoverage.tif*).
Then select the testchart *"IT8.tif"* as the second image.

This process is necessary in order to define the color job and create a gamut of the maximum color space.

Select in the field
Color adaptation ➔ *"linear.mx3".*

Menu *Job* ➔ *Print*

The template for evaluating the *"Template.tif"* color job is output to your printer. The individual fields are assigned to a number. These numbers correspond to the appropriate MX3 files and specifying the maximum possible ink coverage on your media.

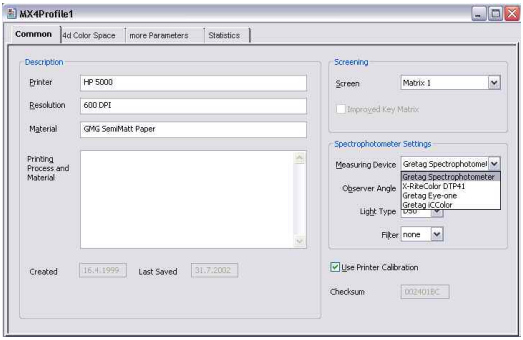
Check the results of the fields:

The best result should be the field that shows sharp unbroken lines with the highest saturation.

For example: Field 240 shows the desired result,
then select the *"240.mx3"* profile for further processing.

1.2 Create the "Full Gamut" with GMG ProfileEditor

In ProfileEditor:
Menu *New* → *New MX4*
Select start template → Select *"HP5000_IT8" in case you are using this device. In case of another printer use the appropriate setting. (i.e. E76-96_IT8)*
In ProfileEditor:
Check the spectral photometer settings:
Tab *General* → Field *Spectral photometer settings* → Select *SpectroScan*



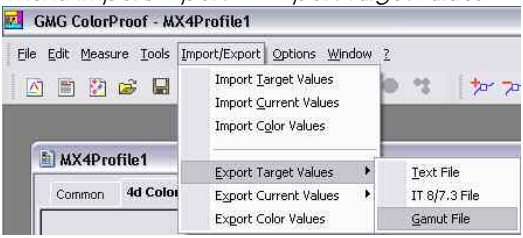
Menu *Options* → *Settings*
General settings → *Measuring device* → Select *SpectroScan (or the appropriate device that you are using)*

In ProfileEditor:
Menu *Measure* → *All target values…*

Then select the appropriate template for the IT 8.7 testchart and put the printed IT8 testchart on the measuring device. The measuring process has been initiated after selecting *Start Measurement*.

We recommend measuring by reference points by using the advanced options, these feature is used to compensate possible scaling fluctuations or misalignments on the SpectroScan. Usage of this options is only recommended in combination with the SpectroScan device.

After successful measurement in the ProfileEditor:
Menu *Import/Export* ➔ *Export Target values* ➔ *Gamut file*



Save the file name, for instance under:
"HP5000_600dpi_Glossy_Dye_FullGamut.csc"
We recommend using following naming convention:
"<Printer>_<Resolutiuon>_<Paper>_<Ink>_ FullGamut"

The gamut file for the printer calibration is ready. The measured LAB values will be calculated later by using this file. (Calculate from target values as well as calculations with target/current values)

In addition LAB measurements for spot colors can be calculated in the spot color editor with this gamut file.

This MX4 measurement file is no longer required – this file can be deleted, or closed without saving.

2 OUTPUT OF THE TARGET VALUES FOR THE CALIBRATION AND THE GAMUT

2.1 Output of the target values

In ColorProof:

Menu *File* → *New Job*

Menu *Job* → *Insert*

Select the TIFF file, *"TC3.tif"*.
Then select *"IT.8_7.tif"* as second file.

Select in the
Field *Color Profile* → 240.mx3 (in this example!)

Menu *Job* → Print

3 MEASURING THE TARGET VALUE AND THE GAMUT

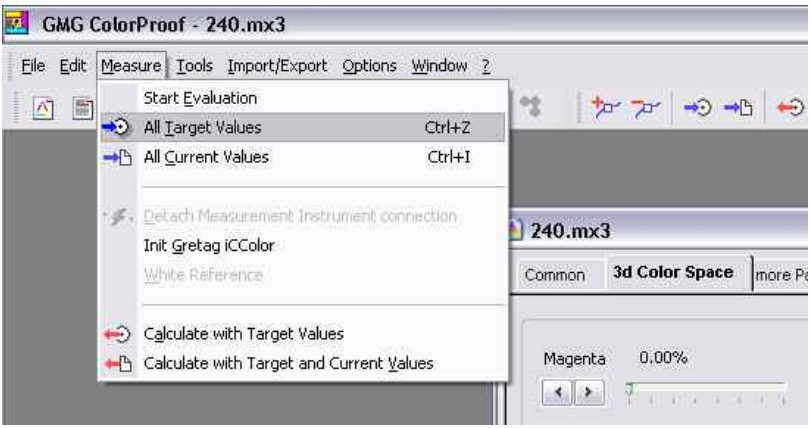
3.1 Measure in the ProfileEditor

In ProfileEditor:

Menu *Open* ➔ *240.mx3*

Menu *Measure* ➔ *All target values …*

Place the proofed TC 3 chart on your measuring table to measure it as target value in your start template (in this example The 240.mx3)



Then select the appropriate TC3 template (.tpl file). The measuring process is initiated.

The TC3 measurement can be made via the "simple" measurement (without reference points) if the edges of the TC3 test form have been fixed exactly on the limiting lines of the measurement table.

After the measurement has been completed, save the printer calibration containing the target values. DK has now been created completely.

The second test chart, IT8.7, will now be measured:

For this, follow the same procedure as used for the first IT8 measurement (execute point 1.2)

Save the second gamut file, for instance under:
"HP5000_600dpi_Glossy_Dye_FA.csc"
" "<Printer>_<Resolutiuon>_<Paper>_<Ink>_FA"

This file is used later as calculation file in the creation of color adjustments for this printer-resolution-paper-ink combination.

Notice:

• **Do not** calculate the printer calibration from target values.

• The TC3 is measured into the actual values to update the printer calibration. Use this gamut file_FA.csc for a (later) calculation of the target / current values.
Select in the field *Calculation from LAB values* → the *Gamut file_DK.csc*

• If the delta E is outside of the desired tolerances: Recalibrate the proofing device with iterative steps to achieve a better result.
GMG is recommending a maximum delta E of approx. 3 and an average delta E of approx. 1 for the printer calibration.

• **Do not** calculate after the last measurement and verification. Otherwise an comparison of the measured values is not possible. (Old calibration vs. new calibration)

• Always save under the same file name. Please recalibrate the printer regularly.