Idealliance ISO 12647-7 3-Row Control Wedge 2013

This document describes the Idealliance ISO 12647-7 3-Row Control Wedge 2013, hereinafter called "the wedge", which includes a major overhaul from the original Idealliance ISO 12647-7 Digital Control Strip 2009. This is an enhanced and improved version including some of the original patches, new patches, and other patches with improved values. The wedge has 3 rows and 84 patches vs. the 2-row 54 patches in the original.

Primary Uses

- The wedge is intended primarily as a control device for pre-press proofs but may also be used to control production printers or presses.
- The target must pass through exactly the same imaging process as a live image, including RIP curves, color management, screening, etc.
- The target MUST be included on all proofs submitted for Idealliance Proofing System certification. Values measured from the target will be used as part of the Idealliance proofing system certification process.
- The target SHOULD be included on all production proofs and measured to confirm accuracy of every proof.

Target Size

The new "2013" wedge is larger than the 2009 version to accommodate the 84 patches in 3 rows. It is provided in two formats; an i1 Pro/Pro2 format and an iSis format.

Supplied Image Files

Six image files of the wedge are supplied in Illustrator EPS and PDF formats along with a bitmap TIFF format:

Idealliance ISO 12647-7 Control Wedge 2013 (i1).eps
Idealliance ISO 12647-7 Control Wedge 2013 (i1).pdf
Idealliance ISO 12647-7 Control Wedge 2013 (i1).tif
Idealliance ISO 12647-7 Control Wedge 2013 (iSis).eps
Idealliance ISO 12647-7 Control Wedge 2013 (iSis).pdf
Idealliance ISO 12647-7 Control Wedge 2013 (iSis).tif

The wedge was created in Adobe Illustrator CS5.5 on a Macintosh.

Fractional Percentage Values

All patches are defined as integer percentages except the magenta and yellow CMY gray scale patches, which contain fractional percentages required for proper G7 gray balance. Systems that can only render integer percentage values (1 to 100 in 1% steps) or do not render the exact patch values in the target, may exhibit gray balance errors.

Generating New Image Versions

Users and vendors are at liberty to create new versions of the target, for example to fit a new measuring device or to add the target to an automated software product. The same precise fractional percentage values MUST be used as shown on the target labels and in the CMYK columns of the provided reference files.

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Reference Files

There are three sets of measurement reference files for ColorPort, MeasureTool and i1Profiler. Each set contains reference files for the i1 Pro/Pro2 and iSis. These reference files can be used when reading the wedge in any of the three applications above.

While many customers are familiar with how to use reference files in X-Rite's ColorPort or ProfileMaker's MeasureTool module, they may be less familiar with using the supplied reference files with X-Rite's i1Profiler.

In version 1.5 and below of i1Profiler there is no support for the 2013 Idealliance 3-row Control Wedge in the quality tool. You can however capture data in one of two other tools within i1Profiler. The process is described below.

There are two ways to measure the predefined targets that Idealliance supplies in eps, pdf, and tif format. Both allow you to measure and save a CGATS file in i1Profiler:

1. The CMYK profiling path
2. The measure reference chart path

i1Profiler Path 1:

Step 1: Select:
User Mode: Advanced
Device Selection: CMYK Printer
Workflow Selection: Profiling

Step 2: Choose the Test Chart icon in the Printer Profiling Workflow at the bottom of the window

Step 3: Click Load from the divider between the Test Chart section and the Printer Profile Workflow section

Step 4: Choose the appropriate reference file supplied by Idealliance Reference Sets/i1Profiler Reference Sets folder depending on your instrument:
i1Pro: Idealliance ISO 12647-7 Control Wedge 2013 i1Profiler (i1).txf
iSis: Idealliance ISO 12647-7 Control Wedge 2013 i1 Profiler (iSis).txf

Step 5: Choose the Measurement icon in the Printer Profiling Workflow at the bottom of the window

Step 6: Choose the appropriate Measurement Mode based on your instrument type and the specification you are testing for

Step 7: After measurement is complete click Save from the divider between the Measurement section and the Printer Profile Workflow section

If exporting to an external quality control program or for use in a spreadsheet choose one of the CGATS output options as appropriate.

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i1Profiler Path 2:

Step 1: Select:
User Mode: Advanced
Device Selection: CMYK Printer
Workflow Selection: Measure Reference Chart

Step 2: Choose the Define Chart icon in the Measure Reference Chart Workflow at the bottom of the window

Step 3: Click Load from the divider between the Define Chart section and the Measure Reference Chart Workflow section

Step 4: Choose the appropriate reference file supplied by Idealliance Reference Sets/MeasureTool Reference Sets folder depending on your instrument:
i1Pro: Idealliance ISO 12647-7 Control Wedge 2013 Reference Data MeasureTool (i1).txt (after loading make sure the *Use legacy charts* checkbox is selected)
iSis:Idealliance ISO 12647-7 Control Wedge 2013 Reference Data MeasureTool (iSis).txt

Step 5: Choose the Measurement icon in the Measure Reference Chart Workflow at the bottom of the window

Step 6: Choose the appropriate Measurement Mode based on your instrument type and the specification you are testing for

Step 7: After measurement is complete click Save from the divider between the Measurement section and the Measure Reference Chart Workflow section

If exporting to an external quality control program or for use in a spreadsheet choose one of the CGATS output options as appropriate.

Reference files containing CMYK percentage values and nominal CIELAB characterization data values are supplied for the following data sets:

1. *TR006 - Idealliance ISO 12647-7 Control Wedge 2013 GRACoL2006 Coated1 Ref.txt*
2. *TR003 - Idealliance ISO 12647-7 Control Wedge 2013 SWOP2006 Coated3 Ref.txt*
3. *TR005 - Idealliance ISO 12647-7 Control Wedge 2013 SWOP2006 Coated5 Ref.txt*
4. *CRPC1 - Idealliance ISO 12647-7 Control Wedge 2013 CGATS21-2-CRPC1 Ref.txt*
5. *CRPC2 - Idealliance ISO 12647-7 Control Wedge 2013 CGATS21-2-CRPC2 Ref.txt*
6. *CRPC3 - Idealliance ISO 12647-7 Control Wedge 2013 GRACoL2013UNC_CRPC3 Ref.txt*
7. *CRPC4 - Idealliance ISO 12647-7 Control Wedge 2013 CGATS21-2-CRPC4 Ref.txt*
8. *CRPC5 - Idealliance ISO 12647-7 Control Wedge 2013 SWOP2013C3_CRPC5 Ref.txt*
9. *Idealliance ISO 12647-7 Control Wedge 2013 SWOP2013C5 Ref.txt*
10. *CRPC6 - Idealliance ISO 12647-7 Control Wedge 2013 GRACoL2013_CRPC6 Ref.txt*
11. *CRPC7 - Idealliance ISO 12647-7 Control Wedge 2013 CGATS21-2-CRPC7 Ref.txt*

There are 2 sets of each of these reference characterization data sets, one in a standard layout and the other in a visual layout for MeasureTool. Use these data sets to verify measurement data.

Copyright and Usage

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- User acknowledges that the wedge design and combination of patch values are the copyright and intellectual property of Idealliance, Inc.
- The wedge may not be altered in any way, including the addition or subtraction of patches, or altering of patch percentage values, except for scaling and layout changes necessary for different measuring devices.
- The wedge may not be sold with, or incorporated into, or represented as having any commercial value in, any commercial product or service without the express written permission of Idealliance.
- All versions or derivatives of the wedge must include the Idealliance logo (or the name Idealliance), wedge name and version number, as shown here;

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This wording must appear on every target used in a commercial product or service

- Versions of the wedge configured in different sizes or layouts must be submitted to Idealliance for approval prior to being offered publicly as part of any commercial product or service.

Limitations and Liability

This control wedge is offer by Idealliance, a non-profit industry association, free of charge. No warranty is expressed or implied by Idealliance regarding the accuracy or effectiveness of the wedge in any given usage. The end-user accepts all risk and liability in connection with their use of the wedge.

- Because the wedge contains only a small sub-sample of the total printable color gamut, it may not detect some types of process variation.
- The wedge contains too few patches to prove an accurate match to a specification like GRACoL or SWOP, but it does contain enough patches to monitor the stability of a system that has previously been tested with a target such as the IT8.7/5.

Large Aperture Device Targets (LAD)

Recent years have seen an increase in the volume of printing onto fabrics. This increase has heightened the popular demand for large aperture color instruments in order to capture more accurately a better overall sampling of color on uneven surfaces. With the growth in demand has come new instruments on the market which serve to make large aperture measuring more affordable and available to more users. With this in mind, Idealliance and the Print Properties Committee, have made available several of the more common Characterization targets and control wedges, with large enough patches to meet Instrument Manufacturers' minimum requirements including:

IT8.7/5 - Available at www.idealliance.org/specifications/gracol/

12647-7 3-Row Control Wedge - Available at www.idealliance.org/specifications/gracol/

These charts are fundamental to industry leading color management strategies including G7® based print production

When possible, the larger, multi-page targets should be used rather than the smaller targets. There are other LAD patches provided through other applications designed for specific purposes, but many may not yield optimal results that are found when using certain targets.

The image files of these charts include 16-bit precision of color in certain gray patches. The included reference (.txt, .pwxf, .rwxf) files can be used to create your own custom layout charts in your own chart generating software, but custom targets may not have the same precision as the .tif files included in this package. For many calibration purposes, this image precision (or lack of it) may not make a difference in the final outcome.

Unless stated otherwise, these charts will be able to be measured on all large-aperture instruments popular in the industry today. They can be measured using the Barbieri LFP and LFPqb using the 8mm aperture, and the X-Rite i1IO3 using the Plus version of the i1Pro, for M0, M1, M2 and M3 (polarized) measuring modes.

Essential resources including G7 Master Qualification test charts such as the Idealliance P2P (proof to print) target, and G7 Verifier, formatted for large aperture devices, are also available to certified Idealliance G7 Experts & G7 Professionals, G7 Process Control Experts, and BrandQ Experts. Sign in to www.idealliance.org to access those resources.