CMYK Flexo Printing Calibration Checklist
With the Optimal Method and PressCal Open-Source Software

Goals and Pre-Press

- ☐ Meet with management and production personnel to discuss the goals and methods of the calibration process
- ☐ Determine the calibration goal(s) (e.g., Optimal Match to Proof, G7 certification, TVI)
- ☐ Choose an ICC profile as your color reference, typically the same profile used for proofs (e.g., CRPC6, GRACoL2013, FOGRA51)
- ☐ Download example press forms: http://optimalmethod.org/resources/Press_Forms.zip
  Alternating stripes (50 K and 50 C 40 M 40 Y) give visual estimate of CMY color balance
- ☐ Choose the press form and appropriate PressCal charts for your goal(s) and equipment
- ☐ Add your own test images (see FTA *FIRST*) and important brand colors (images should be tagged with a reference profile)
- ☐ Add standard company color bars
- ☐ Send a PDF of the completed test form to _____ for approval
- ☐ Determine digital front-end (DFE/RIP curve file format) _____
  (load sample curves as a test (e.g., ESKO.ted, Hybrid PACKZ, Kodak Prinergy, FUJI XMF, …)

Verify Proof

- ☐ Print a color managed Prepress Proof of an IT8.7/5 chart (assign reference CRPC Profile)
- ☐ Verify Prepress Proof color aligns with the reference CRPC profile – use PressCal **Grade Tool** and **Curve Building Tool**

Printing Preparation

- ☐ Make test plates with your typical pre-compensation curves (Dot Gain Compensation DGC) applied – measure tone values on plates
- ☐ Choose test media(s) - typically your regular material, and others (quantities for a stable press run)

Press Work Optimization

- ☐ Mount the test plates and makeready the press (use standard CMY color rotation)
- ☐ Use the FTA *FIRST* methodology to Optimize press work (see FTA *FIRST*) [normal TVI, no slur, etc. on all units]
- ☐ Begin with a regular media; use coating if that is your normal practice
- ☐ Begin with standard hue angles and densities (adjust color & register as a normal job)

Ink Balance

- ☐ Make spectral measures of the test chart of a single press sheet
- ☐ Run the PressCal **Ink Balance Tool** to compute adjusted solid ink densities, for balanced RGB overprints to more closely agree with the reference ICC profile (likely several repetitions)
- ☐ Record these new solid ink densities (SID) as revised company standards for future work

Fingerprint Press Run (Uncalibrated)

- ☐ After achieving ink balance, print a stabilized press run at normal speed
- ☐ Repeat with other media stocks (coated first, then uncoated)
- ☐ Make spectral measures of multiple test charts (PressCal will average and compare the color difference of the fingerprint to the CRPC reference ICC profile)
- ☐ Run the PressCal **Curve Building Tool** to calculate Optimal calibration plate curves to achieve stated goals (e.g., Optimal appearance match to proof)
- ☐ Combine the new calibration plate curves with the pre-compensation DGC curves, with the PressCal *"plate_curve_path:"* setting

Characterization (Calibrated) Press Run*

- ☐ In your DFE, replace the original pre-compensation DGC curves with the new combined curves for platemaking
- ☐ Output characterization plates with the new combined curves applied
- ☐ The Characterization press run should be identical in materials and procedures to the fingerprint; it should verify a match to the stated goal (e.g., printing is a good visual match to the proof)
- ☐ ***PressCal can eliminate the necessity of the characterization run.
  The *"adjust_path:"* setting applies the combined curves to adjust the press measurements; a curve-adjusted file is produced to be used as input to create an ICC profile of the printing process.

Optional Grading for Certification

- ☐ Make colorimetric measures of multiple test charts from the verification run
- ☐ Run PressCal **Grade Tool**, which compares chart measures with the certification aims. The deltas and pass/fail are displayed for your designated grading standard.