Measuring Dot Area Using the X-Rite 528

Applies to

☑ Trendsetter Spectrum
☑ Proofsetter Spectrum

Background

These instructions describe how to use an X-Rite 528 Spectrophotometer to measure dot gain on digital halftone proofs created by a Spectrum proofing device.

Tools and parts

- X-Rite 528 SpectroDensitometer
- White calibration target

Steps

Note: Use the standard aperture (3 mm) for all measurements.

1. From the Main menu, scroll down to Calibration, and press Enter.
2. Place the instrument on the White calibration target. Press down on the head and wait until the calibration function is complete. The instrument will beep twice and the display will read “Completed.”
3. Go back a level to the main menu and scroll to Dot. On the right side it should read Dot Area, Auto Status T. (It is very important that you use Status T. This can be set under “Configuration” on the main menu.) Press Enter.
4. Scroll to Options by pressing the up button once, and press Enter.

Settings should be:	Color	Auto
	Nfactor	Off or 1.00 (same as off)
	50% cal	Leave as default
	Reflec	25%, 50%, 75% leave as default

5. Go back a level by pressing the button next to Enter.
6. Make sure Paper is selected. Read an area of the proof that has been laminated but has no pigment. This is the “Paper” reading.
7. Read the “Solid” ink color (i.e., Cyan, Magenta, Yellow or Black). This must be 100% coverage of the chosen ink color.
8. Read the same patch in Tint mode. When you lift the head, the percentage that appears should be 100%.

   Note: If the X-Rite jumps back to Solid, change it back to Tint and the percentage will appear. This problem is related to a firmware bug that X-Rite has fixed in all current specrodensitometers. If yours has this problem, downoad the firmware upgrade from X-Rite’s Web site (http://www.x-rite.com/Support).that fixes this problem. See the procedure, *Upgrading the Firmware in the X-Rite 528 SpectroDensitometer* –link available on **TL Home > Spectrum > Tools > Measuring dot gain using the X-Rite 528**.

9. Proceed to read all color patches. The percentage that the X-Rite displays is the actual dot area of the proof (i.e., the dot area of the source file plus the dot gain of the proof).

10. You can enter Dot gain or Dot Area into Harmony. Select the view in which you wish to enter the Data.

    Dot gain is the total dot area read – nominal % ink coverage of the swatch. For example if the swatch was created from a postscript file that indicated a n 80% tint, and the measured dot area is 95.5% then the dot gain is 15.5%.

    Dot gain = % dot area – nominal % tint of swatch

    Dot Area = %of dot area + nominal % tint of swatch

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