RIT Screen Ruling Indicator

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This is a nifty little device you can keep in your wallet with such other important items as your driver’s license and credit cards. That way it is always handy when you need to determine the screen ruling of printed samples or films.

The Screen Ruling Indicator is placed over the sample and rotated until a moiré pattern in the form of a cross appears. If the horizontal arms of the cross are aligned with the bold centerline of the fan, then the vertical arms of the cross indicate the screen ruling, either in lines per inch or lines per centimeter.

A cross will appear at more than one screen ruling. Generally, the one with the highest screen ruling indication is the valid one, and weaker ones will show at 2/3, 1/2, 1/3, 1/4, etc. of the true screen ruling. The crosses that can be seen in the sample below are due to a moiré between the fan lines and the scan lines of the 600 dpi laser printer that printed this document.

On printed samples, the color of the cross indicates the color of the printer being checked. Since yellow is such a light color, it may be difficult to detect. Each color uses different screen angles, and the indicator needs to be rotated to align the center line with the direction of the screen dots.

If no moiré appears, then it is possible that the halftones were made with so-called FM or stochastic screening. Such screens do not have a regular dot pattern and, therefore, produce no moiré. FM screens are specified by their dot size. To see the dot pattern, you need a magnifier, which means that you also have to carry a loupe in your wallet!

To place an order, call the Printing Applications Lab at (585) 475-2687 or email bagter@rit.edu.