

R·I·T Screen Pattern Analyzer

The RIT Screen Pattern Analyzer is a device for determining the screen ruling and screen angle of a halftone image.

The Screen Pattern Analyzer is a piece of film that can be placed over a print and rotated until the bottom line of the frame aligns with the bottom edge of the image. Several moiré patterns in the form of crosses appear. The arms of the crosses that are aligned with the radial lines of the fan, indicate the screen angle. The center of the crosses indicate the screen ruling at the circular lines of the fan, in lines per inch.

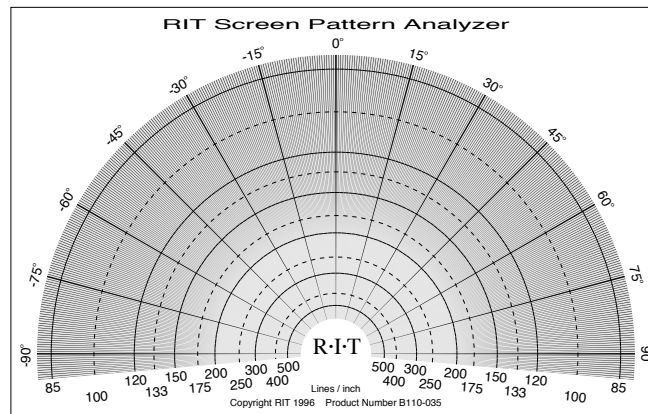
Crosses will appear at more than one screen ruling and angle, because the dot pattern has more than one symmetry. Generally, the cross with the highest screen ruling indication and strongest contrast is the valid one, and weaker ones will show at 2/3, 1/2, 1/3, 1/4, etc. of the

true screen ruling and angle. The crosses that can be seen in the sample below are due to a moiré between the fan lines and the halftone of the 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 customarily is printed at different screen angles to avoid moirés. Sometimes, the screen rulings are not the same for all 4 colors.

The Screen Pattern Analyzers are for AM screening. If no moiré appears, then it is possible that the image was made with FM or stochastic screening. Such screens do not have a regular dot pattern and, therefore, produce no moiré.

A similar test pattern, called the RIT Screen Ruling Indicator, is also available.



Screen Pattern Analyzers are available in the following ranges and formats:

Range (Lines/inch)	Size (inches)	Order Number
12.5 to 100	6.3 x 10.4	B110-020
25 to 200	6.3 x 10.4	B110-025
85 to 500	3.5 x 5.5	B110-030
85 to 500	2 ¹ / ₈ x 3 ³ / ₈ (credit card size)	B110-035

To order, call the Printing Applications Lab at (585) 475-2739 or email to bagter@rit.edu