

KIWO ExpoCheck

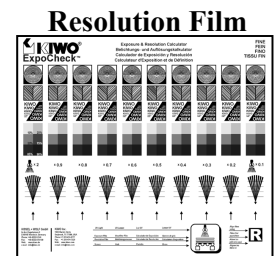
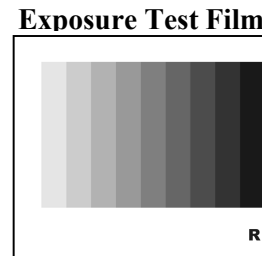
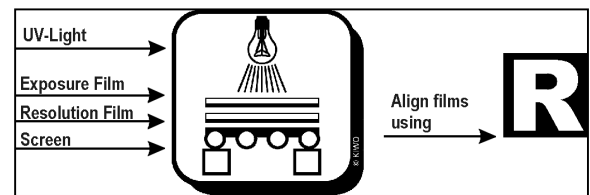
1 Choose the appropriate Resolution Film.

Choose the RESOLUTION FILM that best represents the artwork resolution used in production. Follow the guide below to determine the most appropriate match of resolution to mesh.

	Mesh	Thread Diameter
Fine Resolution	260 tpi (102 tpcm) and above	40 microns or less
Medium Resolution	110 tpi (43 tpcm) to 260 tpi (102 tpcm)	40 microns to 80 microns
Coarse Resolution	110 tpi (43 tpcm) and below	80 microns or greater

2 Combine the Exposure Calculator Film with a Resolution Film.

- Place the chosen RESOLUTION FILM (artwork film) and the EXPOSURE TEST FILM (gray filter film) on the screen – according to the diagram to the right.
 - NOTE:* The surface of the film’s artwork (the film’s emulsion side) needs to contact the emulsion side of the screen.
- Using the ‘R’ of each film, align the RESOLUTION FILM and the EXPOSURE FILM.
- Place the screen with the 2 films in the exposure unit.



3 Test Exposure Time.

- Calculate the Test Exposure time, by using the formula to the right. DOUBLE the Expected Exposure.
- The Expected Exposure could be the...
 - Regular exposure time (current production exposure time).
 - An estimate of the exposure time based on information from the stencil manufacturer.

Expected Exposure x 2 = Test Exposure

Example: **Expected Exposure = 100**
100 x 2 = 200

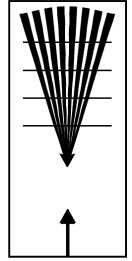
4 Expose using the Test Exposure, Develop, & Dry.

- Using the TEST EXPOSURE time (calculated in Step 3), EXPOSE the screen under the same conditions used in production: the same intensity, the same lamp distance, the same amount of vacuum, etc.
- DEVELOP the screen under the same conditions used in production: the same pressure of developing, the same water temperature, the same time spent on each side of the screen, etc.
- DRY the screen under the same conditions used in production. Ideally, remove the excess water from the screen by vacuum or blotting with a chamois or paper. Dry in a screen dryer or other circulating air system.

INSTRUCTIONS FOR USE

5 Determine the EXPOSURE / full stencil hardness.

- By looking between the arrows of the artwork, determine the exposure area where 'No-Color-Change' is found for a DRY or WET screen. For an explanation of the methods for determining 'No-Color-Change', see the technical article: *Using an Exposure Calculator: Determining the Degree of Resistance*. This article is available on KIWO's web page at www.kiwo.com.
- Mark or note the FACTOR found above the arrows for FACTORS: 'x 0.9', 'x 0.8', 'x 0.7', 'x 0.6', 'x 0.5', 'x 0.4', 'x 0.3', 'x 0.2'.

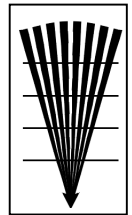


6 RETEST.

- IF the 'No-Color-Change' is found in the farthest right or farthest left exposure area of the test film, RETEST using the factor suggested on the film.

7 Determine the RESOLUTION for the various exposures.

- Evaluate the RESOLUTION, EDGE DEFINITION, and MESH BRIDGING of the stencil for all 10 exposure areas.
- Determine the exposure area with the 'best' reproduction of the artwork.
- Mark or note the FACTOR found above the arrows.
- The arrow with the descending lines is a quick means to show resolution differences between under-exposure through over-exposure. With under-exposure, the smallest lines may wash away (not anchor to the threads). With over-exposure, the artwork 'fills-in'.



8 Calculating the Production Exposure.

- For both the Exposure and the Resolution, calculate the Production Exposure time using the following formula.
- The resulting Production Exposure(s) may be different for the Exposure and the Resolution.

Test Exposure X (Factor) = Production Exposure

Example: Test Exposure = 200, Factor = 'x 0.6'

$$200 \times 0.6 = 120$$

When considering what exposure time to use for production based off of information found by using an exposure calculator, keep in mind...

- The point of 'No-Color-Change' indicates high resistance.
 - Longer exposure times continue to **increase** resistance.
 - Shorter exposure times **decrease** resistance.
 - The point of 'Acceptable Resolution' should be a balance of reproducing the same size positive and negative lines, text, and halftones.
 - Longer exposure times **fill** negative detail in the stencil, but **increase** the size of the positive detail in the stencil.
 - Shorter exposure times **open** negative detail in the stencil, but **decrease** the size of the positive detail in the stencil.
- Determine the best compromise between Full Exposure and the Best Resolution.

9 (Optional) Print and Evaluate results.

- Print the stencil to evaluate the artwork reproduced in the various exposure areas. Use these results to help determine the Production Exposure.