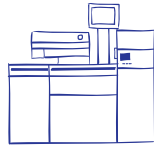


Technical Notes

Digital Workflow



Rotary Input Scanning

Mounting - All artwork is sized and angled to match the customer supplied stat. All transparencies are mounted in oil to eliminate any dirt, dust and fine scratches that may be present on either the surface, or emulsion side of the transparency.

Transparencies are mounted on one of three varying drum sizes according to the individual enlargement factor for optimum resolution and quality of reproduction.

Scan Set Up - All scans are programmed 'off-line', on separate pre-scan color workstations for maximum productivity. This set-up procedure involves the qualification of the correct highlight and gradation curve necessary to accurately reproduce the supplied artwork. In setting the correct gradation curve, consideration is given to not only the paper stock, but also the printing conditions, i.e. offset publication, rotogravure, newsprint, etc. Problem images such as poorly exposed transparencies or artwork that contains 'day-glo' or 'fluorescent' colors can be previewed on a digital color work station prior to actual scanning, and any necessary adjustments can be made.

Soft Proof - All scans and clients supplied Digital images are initially 'soft proofed' on color calibrated monitors to view not only the quality of the actual image, but also to adjust for any special customer requests that were not fully accomplished at inception.



Page Assembly Desktop Publishing

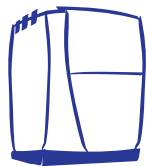
Pre-flight - All incoming files are checked at numerous pre-fighting stages. Spectragraphic, Inc. uses 'Pitstop', 'Flight Check Pro' etc. in addition to several manual procedures in order to qualify a file for further processing.

If questions arise due to a pre-flight failure, the customer is immediately contacted by phone, fax or e-mail to elicit an answer. If that is not forthcoming, the job will be placed on hold until a solution is arrived at. This is our normal procedure unless otherwise instructed by the client.

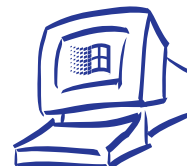
Technical Notes

Page Assembly - If a file is to be processed via O.P.I./A.P.R. (client positions a supplied low-res image) the hi-res images residing at Spectragraphic, Inc. will automatically be linked up through our O.P.I. server for replacement. In cases where files do not run O.P.I./A.P.R. Spectragraphic, Inc. replaces the client's low-resolution scan with one of our scans. In either case, a confirming laser print is made and checked to the laser print or P.D.F. file supplied by the client.

File Creation - Once the file and laser print have been checked, a Postscript file is created with all images in position and all type fonts embedded. This procedure ensures that no discrepancies will occur after pre-flighting. Depending on which type of file format the printer requires, the resulting Postscript file can be processed in several different ways.



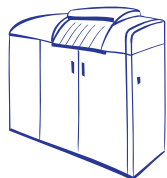
Page Processing



File Process - The Postscript file that is received from the Desktop Department will be processed through a work flow specifically designed for the type of digital file required by the printer. Spectragraphic, Inc. endeavors to keep the file in the same existing format until it is shipped.

Page Trapping - All files are trapped with a .06mm trap, unless specific instructions to the contrary are given by the client, or the printer. Examples of this would be metallic and fluorescent colors, special ink rotations, flexo, and labels, etc. All 'rich' blacks will be adjusted and we recommend that these types of blacks be at least a minimum of two colors.

Quality Control - Color laser prints are made from each file and checked once again to the customer supplied laser print or P.D.F. file. This color laser print will be verified prior to any file being sent for further processing of a Kodak Digital Proof or Dupont Waterproof.



Digital Proofing



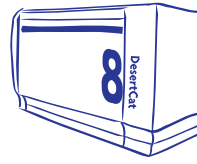
Kodak Approval and Ink Jet Proofs - Spectragraphic, Inc. can provide a Kodak Approval proof on a customer selected stock. We also have the ability to create recipe colors to show 'Spot' and 'PMS' colors. Spectragraphic, Inc. can also provide inkjet proofs on gloss and matte stocks. Our inkjet proofs are profiled to match our SWOP Kodak Approval proofing system.

Technical Notes

Gradation Curves & Dot Gain - Custom curves can be generated to match specific printing conditions, in addition to standard SWOP dot gains. We will normally request your printer's 'lookup' tables as well as press bars, in order to determine the actual printing curves to be used.



Digital Imposition



Templates - The Spectragraphic, Inc. Stripping Department creates all digital imposition templates. Our Stripping Department is staffed by only experienced press strippers.

Quality Control - All customer approved proofs are ruled out and checked for any potential problems that could occur during the printing process (i.e. bleed, ghosting, crossovers).

Page Imposition - All pages are then imposed, and 'soft proofed' for further verification of pagination. All forms are then sent to our Impress proofer, where a four color, two sided, 'booked' proof is made.

C.t.P. Plates - Once the 'booked proof' is verified by the client, we output all printing plates using C.t.P. technology. Impositions are profiled by line screen and selected stock.



Spectragraphic, Inc.

Quality Color Reproduction
for

Offset Lithography • Rotogravure • Newsprint • Flexography

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