



# HOWARD PRINTING NEWSLETTER

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PRINTING  
COMPANY  
INC.**

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**VOL. 8, NO. 1**

## **SCANNING OPTION Q&As** BY PATTY SMETANA

**M**OST PRINT BUYERS DON'T THINK TWICE ABOUT who will scan their color photography or what kind of scanning equipment will be used. The demand for color accuracy, fine detail, and resolution make a print shop's drum scanner the only logical choice for color printing. But when the photos are black and white, we printers often hear challenges to the print shop's handling of halftone scans.

**Q:** "I save money when I scan photos. Why involve the print shop?"

**A:** Yes, you save money. But, when your image is on the line, do you want to take a chance on quality to save a few dollars? You've invested time, money, and the effort needed to produce a good photograph. Don't stop there. Think about your audience as you decide. Are you mailing to a hot prospect, the final decision-maker, or a current client who will bring repeat business and referrals?

Check out the side-by-side scans inside this newsletter.

They show you exactly what you get with flatbed-scanned photography vs. drum-scanned photography. The quality of the photography used in your marketing materials helps build your (or your client's) image. We repeat, do you want to take a chance?

**Q:** "I have an in-house scanner, and my boss expects me to use it. What do I tell him/her?"

**A:** Tell the truth: that you are using your in-house scanner for what it should be used for — line art scans and photographic position prints. Line art is any image that does not have a shaded or grayscale quality. Black and white logos, pen and ink drawings, and schematics are all examples of line art. Photographic position prints are photo scans that are "place-holders" that will eventually be replaced with higher quality scans. Position print scans are perfect for the mock-ups or comprehensive proofs you will be showing the boss. They are also helpful in communicating exact photo

sizing and cropping instructions to the printer. When you are ready for final, high-resolution scans, turn the document and photos over to the print shop for drum scanning and position print replacement.

**Q:** "What do I do when I want to use Photoshop to clean up and manipulate photographs?"

**A:** We know how practical (and fun) it is to use Photoshop. So let us give you an excellent quality, original, high-resolution scan to modify. Take a moment to crop and size the photographs and turn them over to us. We will scan and return high-resolution images that you can manipulate to your heart's content. (All you need to tell us is how much to reduce or enlarge the original.) After the document is completed, we will import your retouched scan through the automatic picture replacement process. You get the best of both worlds — high quality scans and personal retouching action.

**Q:** "It looks good on my monitor — what's missing?"

**A:** Monitors show images at a resolution of 72 dpi using RGB color. At that low a resolution, anything will look good.

Don't be fooled by your monitor — make sure your

**Continued on back page.**

### **REMINDER**

**Howard Printing maintains an FTP site for large art file transfers. If your company uses FTP and you would like to use this service, call Patty Smetana at (800) 968-4726 or e-mail her at [Patty@HowardPrinting.com](mailto:Patty@HowardPrinting.com)**

# HERE'S WHY YOU SHOULD ASK HOWARD PRINTING TO SCAN YOUR BLACK AND WHITE PHOTOGRAPHY

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PRODUCTION NOTES:

This newsletter is printed on a 40-inch Roland lithographic four-color press using process inks and Eloquence Gloss Cover Basis 80

Photography for scans courtesy of Siegfried, Crandall, Vos & Lewis, P.C.

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THE FLATBED SCANNER'S SHORTER TONAL RANGE RESULTS IN OVERALL DARKER SCANS

TINY "PINHOLES" OFTEN APPEAR IN HIGHLIGHT AREAS

BECAUSE A DRUM SCANNER'S OVERALL CONTRAST RANGE IS EXTENDED, MANY MORE SHADES OF GRAY BECOME VISIBLE

MORE "NATURAL" LOOKING FACIAL FEATURES EMERGE

HIGHLIGHT AREAS REMAIN SMOOTH AND CONSISTENT

"HALOS" APPEAR WHERE DARK AREAS MEET LIGHT AREAS

FINE DETAIL REMAINS ESPECIALLY OBVIOUS IN A DRUM-SCANNED PHOTO'S DARK AREAS

NO "HALOS" APPEAR WHERE LIGHT AREAS MEET DARK AREAS

HIGHLIGHT AREAS REMAIN SMOOTH AND CONSISTENT OVERALL

LOSS OF DETAIL IN THE DARKEST AREAS QUICKLY BECOMES APPARENT

"BANDING" CAN BECOME A PROBLEM IN HIGHLIGHT AREAS



Shareholders standing, left to right: Jeffery Russell, William Sage, Robert Kent, Daniel Missad  
Sitting, left to right: Michael Crandall, Kryn Vos, Donald Vos, James Lewis

Shareholders standing, left to right: Jeffery Russell, William Sage, Robert Kent, Daniel Missad  
Sitting, left to right: Michael Crandall, Kryn Vos, Donald Vos, James Lewis

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**Flatbed-Scanned Halftone  
(175 LPI)**

**Drum-Scanned Halftone  
(175 LPI)**

**I'm still not convinced. Enclosed is one photographic print/slide/transparency that I would like drum scanned and returned.  
Also enclosed is a floppy disk for downloading.**

Name

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Company

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Address

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Phone

Fax

E-Mail



e-mail

[messages@HowardPrinting.com](mailto:messages@HowardPrinting.com)

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We invite you to visit our web site  
[www.HowardPrinting.com](http://www.HowardPrinting.com)

Leave us an e-mail message and  
we will keep you posted about  
special programs and industry news.

***We appreciate your business!***

# WHY DRUM SCANNERS EXCEL

**A**S A RULE, YOU CAN ASSUME THAT A DRUM SCANNER CONTAINS PMTs AND A FLATBED SCANNER contains CCDs. A drum scanner is based on photomultiplier tube (PMT) technology and produces the best quality reproduction because it has a complete dynamic range. Tonal and spatial resolutions relate to the amount of data that can be captured by a scanner over a fixed space. The more data (color or gray information) that is captured, the more resolution will be retained and ultimately reproduced. In printing reproduction, the most critical image benchmark is resolution.

With a drum scanner, the original is attached to a drum that spins while a moving, laser recording head reads the color or gray values of the original. The photomultiplier itself is a vacuum tube. The reflected light from the image hits the tube and is converted into electricity. This electrical signal is strengthened (i.e. multiplied), and the strengthened signal is what is converted to digital form. This multiplication feature is the reason PMT scanners are able to capture a larger density range than CCD scanners.

Offices usually have moderately priced flatbed scanners. These are charge-coupled device (CCD) scanners that have a fixed number of sensors arranged on a computer chip called a "CCD array." Fixed sensors allow only a certain amount of pixel information to be gathered, regardless of the original's size. This limitation generally results in a lower quality reproduction — becoming especially apparent when images are enlarged.

CCD scanners have a flat bed, usually glass, on which the original is placed. Upon scanning, the bed is moved past the CCD array, where the image is captured and converted to digital form. The shorter dynamic range and limited resolution inherent in CCD technology are what lead to negative effects such as darkening, halos, banding, and pinholes.

## Howard Printing's work garners new awards

**Excellence Award** from the United Way of Michigan for the publication titled: *Business of Caring* (1997 Annual Report) in the "Best Practices" contest. The contest included more than 90 United Ways throughout Michigan and judging was conducted by the United Way of Illinois. The publication was entered by Carol Janowicz, communications director for Greater Kalamazoo United Way.

**Superb Award** from the Lansing Gallery of Superb Printing for the publication titled: *MSU/MAES 1997 Annual Report*. The publication was entered by Chris Altese, owner of Altese Design in Lansing, Michigan.

**Best of Show Award** from the Library Public Relations Council and the Library Administration and Management Association for the publication titled: *Kids and Books*. LPRC included *Kids and Books* in their annual packet of "40 best marketing/public relations pieces" from libraries across the U.S. LAMA declared *Kids and Books* "best" in their "Special Programs" category. The publication was entered by Marti Fritz, community relations coordinator for the Kalamazoo Public Library.

## Scanning Q&As

Continued from page 1

resolution is within the acceptable range for commercial printing. Rule of thumb: a final printed image requires a minimum resolution of 2400 dpi. This means your input resolution must be a minimum of 300 dpi.

**Q:** "I need position prints for my client anyway — so why not use the same scans in the final document?"

**A:** See answer No. 2 (for the boss). Use your scans for position prints — but please — let the print shop do the quality scanning in the end.

**Q:** "It's just a one-color job. Why bother?"

**A:** So were the *Constitution* and the *Gettysburg Address*. Those documents would have included drum scans (had the drum scanner been invented at the time). Why can't the "lowly" one-color job get the same respect as a four-color job? Many times, the one-color job has just as significant a message as the fancy color piece.

**Q:** "Isn't it faster if I do my own scans?"

**A:** Have you ever asked the print shop how long scanning takes? With two shifts and a dedicated scanner operator, we find most orders take one day. We may be scanning your original photos while you are tweaking the final corrections of the document. The net result: no time lost on print shop-scanned halftones.

**Q:** "I use flatbed scans for internal pieces. Why not use them for everything?"

**A:** Use flat-bed scans for position prints, internal publications, web site updates, and any other non-external item you can find. But please use drum-scanning services on your image pieces — for all the reasons explained above.

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