HOWARD PRINTING NEWSLETTER

UNDERSTANDING CTP

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Editor's note: Earlier this year Howard Printing invested in the latest printing technology with the installation of a Screen thermal platesetting system. Screen is the industry leader in computer-to-plate (CTP) technology. We take pleasure in sharing the many benefits that CTP has to offer our clients.

FEW DOUBTS REMAIN ABOUT THE ADVANTAGES OF computer-to-plate technology vs. conventional film-based platemaking. CTP's elimination of film and the film-imaging step not only reduces material costs, it also increases productivity and image quality.

The Way It Was

Until the mid-1980s, pasted-up black and white type and art was shot on a large-format camera to produce printer's negatives. These film negatives were used to control the separation, ink color identity and placement of images on printing plates. One negative was required for each ink color printed, and each negative produced one printing plate. Creating and handling these various pieces of film were time-consuming and tedious tasks that required many highly skilled employees.

The beginning of the end of this labor-intensive work came in 1984, when Apple Computer introduced the Macintosh. The Macintosh's unique operating system and finesse in handling type and images revolutionized graphic design for print. Macintosh files quickly became the industry standard for processing print images. Digital art for multi-color commercial printing could be keyboarded and sent to an automatic film-output unit that used a laser imaging head to create printer's negatives. Suddenly camera-ready art and cameras were obsolete.

From that point many refinements were made, but computer-to-film production continued much as it always had. Negatives were created and used to, first, produce a proof for clients to review and approve, and again when plates were "burned" and processed for print. (It should be noted that while plates can be made out of metal, polyester or paper, metal is the only acceptable plate material for high-quality print production. This is still the case, regardless of whether the plate is made from film or directly from a disk.)

The Way It Is

The simplest way to describe how computer-to-plate technology has changed print production workflow is to say that it eliminates another major step in the platemaking process. With CTP, digital art is routed directly to the plate-setting unit that laser-images the plates. Highlights of this new technology include:

- Film is no longer part of the platemaking process.
- CTP plates can run up to 1,000,000 impressions.
- No chemical or darkroom processing is required.
- CTP plates carry "first-generation" images.

How CTP Changes the Way We Proof

In the past, clients received one or more proofs to approve. When an order included four-color process printing, full-color proofs were presented for the review of color quality. Blueline proofs were shown for approval of page back-up, order of pages, margins, die-cuts and overall trimming. When an order was printed in only one or two ink colors, a blueline would usually suffice for all levels of approval.

With the elimination of film came the elimination of film-made proofs such as bluelines, silverprints, match-prints, waterproofs, color keys, pressmatches, and chromalins. Instead of juggling multiple proofs, clients now

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EDITOR:

Patty Smetana

PRODUCTION NOTES:

This newsletter was designed using Quark 5.0 and output direct-to-plate on a Screen Plate Rite CTP system. It is printed on a 40-inch Man Roland lithographic four-color press using process inks and Sappi Lustro Offset Enamel Gloss Cover Basis 80.

Printed by a MICHIGAN GREAT PRINTER

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enjoy the convenience of viewing one digital proof for both color quality and page layout.

Ink-jet proofs have become the most popular digital proofs available. Ink-jet proofing systems are reliable, repeatable and flexible enough in calibration capacity to accurately fingerprint their color output to that of a commercial printing press.

In keeping with this industry practice, Howard Printing has installed a wide-format Epson proofing system that is consistent with current digital photography industry standards and commercial printing quality benchmarks. These proofs have "contract-color" quality and are light- and water-resistant. Most professional digital photographers are using a smaller-format Epson system for photographic proofs.

Why CTP Is Better

Computer-to-plate technology reduces the number of steps to platemaking. This saves time and material costs. When the file has been prepped and queued up for output, a 26x40-inch plate can be imaged and ready to print in less than 10 minutes.

First-generation images yield better reproduction quality because they produce a sharper printer's dot. Dot formation is essential to image quality. CTP images have no "dot gain" on the plate. (Dot gain is the small amount of dot enlargement that occurs when light is refracted during the film-to-plate exposure process.) A better printing dot guarantees better highlights and shadows in the printed image.

CTP technology allows images to be printed using very high line screens: 200 line for coated papers and 150 line for uncoated papers. Line screens are the physical measurement of the size of a printer's dot. The higher the line screen, the more dots that are being printed per inch. The more dots per inch, the more detail will be captured.

Other advantages with CTP include the fact that, with suitable software, the ink settings and amount of ink required on press can be calculated, and it is generally found that CTP plates fit better than film-generated plates. This makes it much faster to obtain accurate press register and on-press color approvals.

Lasers and CTP Technology

Lasers are an integral part of the platemaking process, because they are the light source used to burn the printable image onto the surface of the plate. Areas exposed to the laser's light become ink-receptive. Areas having no light exposure remain nonreceptive ink areas. This precise separation of image and non-image area is an element of excellent print quality.

The defining characteristic of a laser is its output power and the shared wavelength of its light. Output power is the energy a laser emits per second. Wavelength is the length of a single wave, measured crest-to-crest, and is denoted by spectral color: infrared (IR), green, yellow, ultra-violet (UV), etc. Wavelengths range from below visible light (UV at 400nm) through the visible spectrum to more than 750nm (IR).

Thermal platesetters are based on the use of infrared diode lasers. Semiconductor diodes are compact light sources that are configured as bars or "stripes" of lights. Single-stripe diodes can be modulated and coupled to optical fibers for a simplified imaging head. This imaging head sweeps the plate's surface and burns the image areas onto the plate. Areas burned and hardened become ink-receptive and are the carriers of the printed image.

In addition to being affordable, thermal CTP plates use daylight processing and create plates that can guarantee print runs up to 1,000,000 impressions. Perhaps the biggest advantage is the processless plate, which eliminates the need for chemical-based development and is an environmental advantage.

DIRECT MAIL

THE POSTAL SERVICE RECENTLY DEPLOYED 1,000 automated flat-sorting machines across the United States. This new automation equipment is capable of processing flat-size mail at a rate of more than 17,000 pieces per hour. With automation, direct mail pieces move more quickly through the mail processing system—often cutting delivery times in half.

To make mail pieces compatible with this new equipment's scanning capabilities, high readability of barcode and address information becomes imperative. Using the recommendations described below will speed the delivery of printed flat-mail pieces.

What is a flat?

Mail piece sizes are post card, letter and flat. Flat-size mail is anything that exceeds the size of a letter. Letters can have a maximum size of 6.125 in height and 11.5 inches in width. Letters must also be less than .25 inches in thickness. After that, the printed piece is regarded as a flat. Magazines, newspapers, catalogs, large envelopes, and folded or bound brochures are examples of flat-mail pieces.

Where should I put the address or mailing label on a flat?

The delivery address should be at least one inch below the return address and clearly separated from other text. One-half inch of clear space is recommended all around the mailing address information for the best results. Avoid skewing the address information; keep tilt to less than 5 percent off horizontal.

For flat mail with portrait orientation, the preferred address area is the upper right quadrant, adjacent to the bound or final folded edge. For flat mail with a landscape orientation, the preferred address area is the lower right quadrant.

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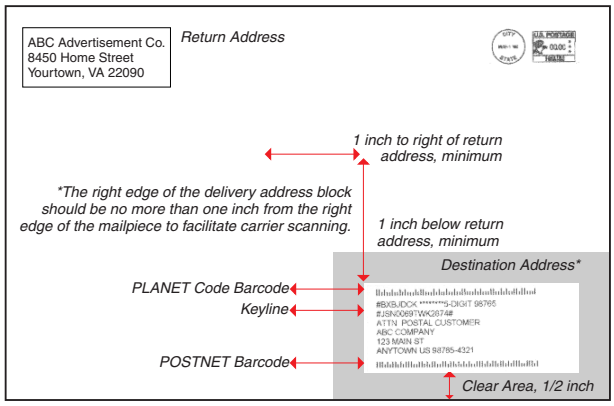
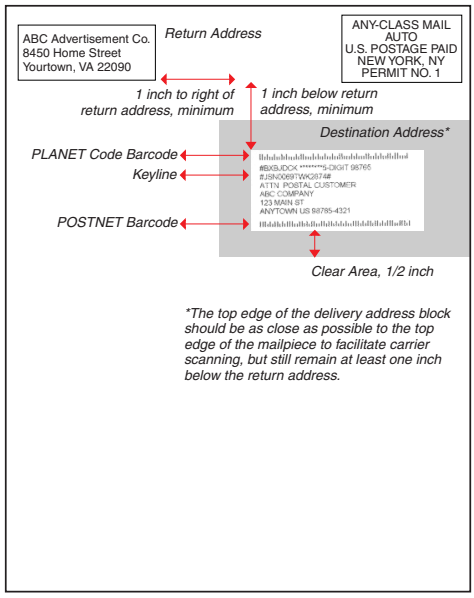
Flat Envelope With Landscape Orientation (Any Class)

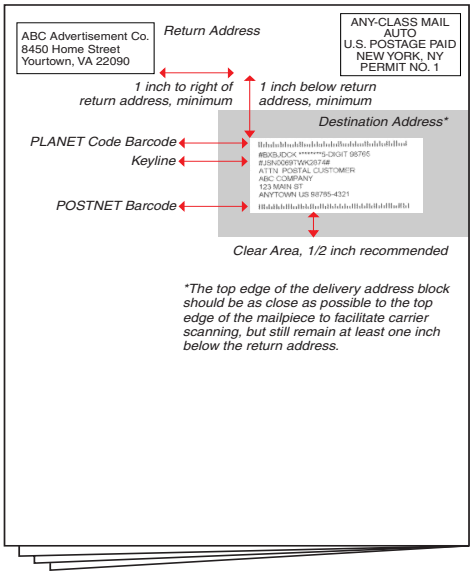


These flat-mail diagrams illustrate how to design a printed mail piece and correctly position the delivery address information.

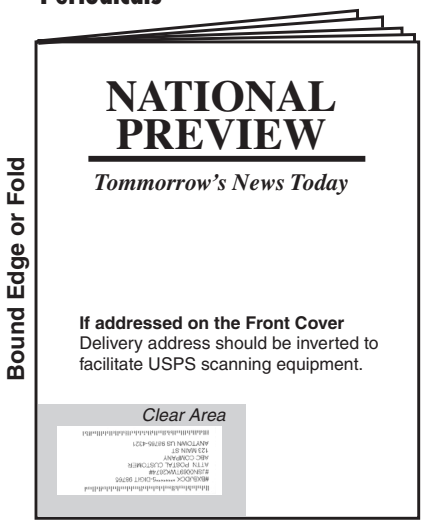
Flat Envelope With Portrait Orientation (Any Class)

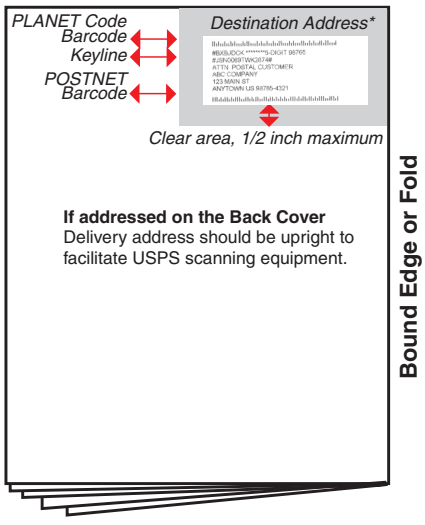


Bound Edge Piece With Portrait Orientation (Standard Rate)



Periodicals





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How should I set up the addressing or label printing?

The delivery address should be left-justified on three or four lines and in this order: recipient's name on the top line, followed by the company name, address, city/state/ZIP code. The city, state and ZIP code should always be placed together and on the last line.

John Doe
Acme Widget Company
1234 Main St.
Springfield, IN 46512-8957

Using 10- or 12-point size block or serif fonts is recommended. Avoid script and narrow or condensed fonts, whose characters tend to touch each other. All caps or a mixture of upper- or lower-case letters is acceptable. Black ink on a light color or white background is the best choice for USPS scanner readability. Avoid dot-matrix printers that leave tiny voids in the printed characters. Ink-jet or laser-printed addresses are the best choice.

When possible, use CASS-certified software to clean up and standardize addressing formats with 9- or 11-digit ZIP code addressing information. CASS-certified mail can quickly be processed, sorted and routed to the correct home or building and will yield the lowest postage rates.

FINE PRINT COMPETITIONS

Stora Enso North America announces a unique design and print competition

Stora Enso North America is a major coated-paper producer based in Wisconsin Rapids, Wisc. The mill is known for two coated-paper lines: Centura and Productolith, both of which are available in gloss, dull or matte finishes. These two lines are the basis for the "What Teams Can Do" competition.

Any printed work produced on Stora Enso Centura or Productolith paper from March 31, 2003, to March 31, 2004, is eligible, as long as it represents the work of up to four members of a team (e.g., designer, editor, proofer, printer, client, project manager, paper specifier) who consent to take part in the competition. Each entry must be an original example of graphic design communications work completed entirely on Centura or Productolith paper and submitted with an official entry form.

Categories for the competition are "Best Work, up to three colors" and "Best Work, four colors and up." A panel of renowned graphic designers and printing professionals from across the United States and Canada will judge the works in two phases—primary and final. Winners of the primary judging will be entered in the final judging, which will take place in May 2004. Six teams will receive awards, one each per category for first place ($1,000), second place ($500) and third place ($250).

For more information and to order an entry kit, visit www.storaenso.com/teams or call Howard Printing Company. We will be happy to assist you with your entry.

Howard Printing receives fine printing award

Competing against nearly 5,000 entries from printing and graphic arts firms from around the world, Howard Printing received an award for outstanding achievement in the "Printing Self-Promotion" category of the 2003 Premier Print Awards. Premier is the graphic arts industry's largest and most prestigious worldwide printing competition and is hosted by Printing Industries of America (PIA).

Howard Printing Company received a Certificate of Merit for its "Peace of Mind" capabilities folder. The folder featured six ink colors plus an overall gloss coating. It was printed on a 40-inch six-color Roland press. Carol Derks provided the graphic design.

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