PRINTING DEFINED

THE COMPREHENSIVE GUIDE TO
UNFAMILIAR TERMS IN THE WORLD OF PRINT

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ABOUT THIS eGUIDE

If you've been following our blog, you'll notice we've been assembling for you *a complete guide to unfamiliar print terms*. The goal of this eguide is to combine those posts and bring you everything you need to know about print, all in one place.

Each of the sections outline everything you need to know about different stages of the printing process, unpacking the seemingly complex terms that have to do with each.

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PREPRESS DEFINED

Prepress describes everything that happens before a project is printed and finished. Before the advent of modern technology, it took up to two weeks to complete the prepress process.

Prepress used to mean:

- Typesetting and pasting onto a mechanical boards.
- Shooting in camera to make a negative.
- Opaquing the negatives to remove pin holes in film.
- Shooting halftones on camera for black-and-white photographs.
- Creating 4 separate pieces of film for CMYK – if color adjustments were made, this required dot etching.
- Proofing (one method was called "matchprints") to make sure the color was exactly what the client wanted.
- Assembling film onto masks (this was called "stripping").

Now that we have modern computers, prepress simply means:

- Computer-to-plate (see below).

And that's it! As long as the files are properly composed for the press, they are simply sent via computer, right to the plate.

Pre-Press Station

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MODERN PREPRESS TERMS TO KNOW

- **4 Color Process (CMYK):** The four main primary colors (cyan, magenta, yellow, and key/black) combine to form a full-color image. Every color that comes out on the final copy is a combination of these four colors.
- **Computer-To-Plate:** Also known as direct-to-plate, this new technology reduces the printing press to one step – sending files right from the computer to the printing plate.
- **Design:** The layout of a piece, including copy and photography. This is often done in Adobe InDesign, Adobe Photoshop, and QuarkXPress.

- **Digital Proofing:** Proofing is done to show what a printed piece is going to look like. This ensures that the printed job has been set up correctly and will print the way it is intended to.
- **Hardproof:** A physical copy of a proof.
- **Printing Plate:** A very thin piece of sheet metal that an image is transferred onto. Ink is rolled onto the plate and later transferred to the paper.
- **Softproof:** A non-physical copy of a proof.

LEGACY PREPRESS TERMS TO KNOW

While these processes have in most cases been updated to more modern technology, you may still come across some of these terms as well:

- **Blueline:** Also known as brownline, blues, and low-res blues, this term refers to a photo-print that is used as a final proof before printing to check position of images and color breaks (sometimes supplied as color-broken) for each page. Bluelines are similar to digital proofs in that they show text, image placement and general idea of color.
- **Camera Ready:** When a document is ready to be printed, it is known as camera ready.
- **Color Correction:** When an image is scanned, the colors may need to be adjusted so that they better match the colors in the original image.
- **Color Management:** Checking to make sure that the correct color combinations are being used.
- **Color Separation:** A process that involves the separation of full-color originals into four printing colors (CMYK) to prepare them for printing.
- **Continuous Tone:** This is how photographs are made up. They must often be broken into halftone using dot etching in order to get the photograph to print correctly.
- **Dot Etching:** Using chemicals to break continuous tone into halftone.
- **Halftone:** The reproduction of a continuous tone image, such as a photograph. An image gets broken into dots using dot etching methods, and recreates the full tone range of a photograph so that it is able to print correctly.
- **Masks:** If there is a certain part of an image that should not be printed, a mask is something that is placed over it to block it out.

- **Matchprints:** Similar to proofing, this is a process that shows completed work. It uses actual prepress film to match the colors. With the advent of computer-to-plate technologies, this type of proofing is generally more expensive compared with the newer technologies of digital proofing.
- **Mechanical board:** This includes the design and layout of copy and images, as well as instructions that are sent to the printer so it knows exactly how to print the piece.
- **Negative RRED:** Abbreviation for negative film which is Right Reading Emulsion Down. This type of film is used mostly by printers in the United States and by clients in supplying film to publishing houses and magazines for ad placement.
- **Negative:** Film containing an image in which the values of the original are reverse so that the dark areas appear light and vice versa. Rarely seen now that things have gone digital.
- **Opacity:** The property of paper which minimizes the "show-through" of printing from the back side or the next sheet.
- **Phototypesetting:** A photographic process that puts type onto photographic paper using negatives and chemicals.
- **Preflighting:** Making sure that all digital data is present and valid.
- **Press Proof:** Also known as a wet proof, this is a test printing of a subject prior to the final production run. Press proofs are generally printed on the paper stock that will be used for the finished project. A few sheets are run as a final check before printing the entire job and may or may not be made on press to show the general color of a project.
- **Stripping:** Assembling film onto masks and to create plates.

TOP TAKEAWAYS ON PREPRESS

- Modern technology has simplified the process from several complex steps to one simple step.
- Digital proofs are the fastest, easiest, and least expensive ways to proof a project.
- It is much, much easier to prepare a project for printing.

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PRINTING PRESSES DEFINED

After everything has been carefully designed and proofed in the prepress process, it's time to send that project to the printing presses.

Each press has its own capabilities and serves different functions:

- Offset presses run at rapid print times and achieve high volumes of production. Ink is rolled onto a plate, and then transferred onto and absorbed into paper. Offset presses are best suited for projects that require long runs of the same static image.

- Web presses (not to be confused with web-to-print) also allow for rapid production. Web presses are run on continuous rolls of paper (as opposed to cut sheets), and can print on both sides of the paper at once.

- Digital presses are perfect for long and short runs of highly variable pieces. Instead of rolling ink onto a plate and transferring it onto paper, toner is electrostatically charged and then transferred to the paper.

Manroland Rotoman Web Press

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PRINTING PRESS TERMS TO KNOW

- **Bleed:** Once trimmed, printed images that extend to the edge of a sheet or page are known as bleeds.
- **Bulk:** How thick a piece of paper is. Bulk can be measured in thousandths of an inch, or number of pages per inch.
- **Coated Paper:** Paper whose surface, prior to printing, has been applied with a coating that produces a glossy or silky finish.
- **Collating:** Taking signatures and pages and aligning them in proper page order.
- **Color Bar:** Strips of color that are printed along the edge of a printed piece, used to determine color consistencies across press sheets, so each sheet being printed exactly matches the next.
- **Continuous Rolls:** Large rolls of paper used in web presses that are fed through the printer as one continuous sheet, cut after they are printed.
- **Cut Sheets:** Paper fed through the printing press as single sheets of paper, already cut before they are printed.
- **Densitometer:** An instrument that is used to measure the density of ink (compared across color bars) to make sure that each sheet is color consistent.
- **Density:** The precise make-up of an image, including weight, tone, and color.
- **Ghosting:** Faint images that appear where they are not supposed to, often as a result of printing dense images.
- **Grade:** The quality level of a piece of paper, determined by brightness, weight, and finish.

- **Grammage:** A term for the basic weight of a piece of paper.
- **Hickey:** Marks that appear because there was dust or dirt on the sheet of paper that was printed, causing an irregularity in ink coverage.
- **Ink Drawdown:** Used to evaluate ink colors and determine color consistency, these are samples of ink and paper.
- **Ink Holdout:** Ink normally absorbs/soaks into a piece of paper, but coated papers are more resistant to that. Ink holdout doesn't allow for penetration of ink.
- **Ink:** Liquids used in inkjet printers. Absorbs into a piece of paper.
- **Newsprint:** Thin, inexpensive paper made from wood pulp.
- **Overrun (overs):** Occurs when more copies are printed than originally specified. Also referred to as run-on.
- **Pantone Matching System (PMS):** System of color swatches that shows availability of color options. Colors are standardized by Pantone to ensure color consistency across all projects.
- **Picking:** When ink is too tacky (sticky) for the paper it's printed on, removing its coating and ruining the surface of the paper.
- **Press Sheets:** Standard pieces of paper that are used in printing presses.
- **Toner:** Fine powder used in digital printers that sits on top of a piece of paper and doesn't fully absorb into it.

TOP TAKEAWAYS ON PRINTING PRESSES

- Depending on output quantity, projects can be printed on offset, digital, or web presses.
- Ink is used on offset and digital inkjet presses, and toner is used on digital presses.
- Paper can either come coated, or be coated later on in the finishing process (we'll explain more about that later).

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BINDERY DEFINED

Once a job has been printed on one of the presses, there are a variety of bindery services that can be performed.

These include:

- Drilling holes similar to a 3-hole punch.
- Perforating sections so they can be torn off easily.
- Scoring signatures to produce a better fold.
- Folding signatures into numerical order.
- Cutting so the signatures can open.
- Collating signatures (if you have more than one) so they are in order to be bound.
- Binding them with stitches or glue.
- Trimming the edges so they are smooth and even.
- Packaging the bound books so they are ready for shipping.

Perfect Binder with 28 Pocket In-Line Gathering

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BINDERY TERMS TO KNOW

- **Casebound:** A book is considered casebound if it has a hard cover.
- **Cracking:** When book or catalog is opened, the adhesive keeping the spine together weakens, producing a "cracked" effect.
- **Cut Flush:** Trimming a cover so that it is exactly the same size as the signatures or pages underneath.
- **Cutting:** Using guillotine-like blades to cut large quantities of paper at one time.
- **Drilling:** Using a round, hollow drill to punch holes into a sheet of paper.
- **Endsheets:** Also known as end papers, these are stronger sheets of paper put in the front and at the back of a book to ensure that it can withstand weight when the book is glued.
- **Flat Back:** Reinforcing the spine of a book so that it remains flat and stiff. Also referred to as square back.
- **Folding:** Creasing a sheet along its edges. Depending on the desired number of panels, many folds can be made.
- **Folio:** The page number of a book.
- **Gatefold:** Commonly used for magazine advertising, this consists of parallel folds on a sheet of paper that fold inward to create panels.
- **Grinding:** Roughing the edges of collated signatures so glue adheres better.
- **Gutter:** The inside margin or blank space found in the center of a book, that indicates where it has been bound.
- **Head/Foot Bounds:** A strip of material that is stitched along the very top and bottom of a casebound book where the pages show that have been adhered to the cover. This results in two things: making the top and bottom of the book more aesthetically pleasing, and adding strength to the binding by adding extra reinforcement.
- **In-Line:** Web presses can perform some bindery services in-line, meaning that they can make initial cuts and folds right in the machine without having to walk them over to the bindery department for it.
- **Layouts:** Show how many signatures there are, what order to put them in, and where to cut/score/perforate.
- **Loopstitch:** Same process as regular stitching, but with different stitch heads. Ideal for putting into a 3-hole binder.
- **Notch Binding:** Making notch marks along the spine of a book, allowing adhesive to penetrate deeper into the spine of the book and produce a better, stronger bind.
- **Packaging:** Shrinkwrapping bundles and placing them in cartons to be shipped.

- **Passes:** How many times a project is run through machines.
- **Perfect Binding:** Signatures are stacked on top of each other, and the edge to be bound is ground down. Glue is applied to the text pages, and the cover is slipped over them and pressure is applied to adhere it to the text. The thickness of the signatures in a perfect bind is generally more than 1/8".
- **Perforating:** Making a series of dotted holes along a piece of paper to make it easier to tear a section off.
- **Plus Cover:** When a book cover is printed on stock that is heavier than text pages, the additional weight is known as the plus cover.
- **Printed Laminated Cover:** Applying a clear film to a cover, to protect and finish the cover of the book.
- **Saddlestitch:** A technique that stitches a book together, applies the staples ("stitches") that keep a book together.
- **Scoring:** Pressing into a sheet and leaving marks (similar to perforated marks) to ensure easier folds and minimum cracking. The marks act as a soft crease that allows the piece to fold more smoothly.
- **Self Cover:** Unlike plus cover, self cover occurs when the book cover is printed on stock that has the same weight as that of the text pages.
- **Signature:** A press sheet that lays out the order the pages should be printed in so they will appear in numerical order when cut, folded, and bound.
- **Smyth Sewing:** Collating signatures and weaving thread through them to stitch them together as if with a sewing machine.
- **Soft Fold:** When a project is stitched, and then folded in half.
- **Spiral Binding:** A technique that, instead of using staples, involves punching a series of tiny holes along the side that is to be bound, and inserting wire in a spiral form through them.
- **Stitch Binding:** Signatures are slipped inside one another, and wire is stitched along the edge to make a stapled effect. The thickness of signatures in a stitch bind is generally less than 1/8".
- **Trimming:** Cutting the job to its final size and getting rid of excess around the edges.
- **Turned Edge:** To complete a hard cover book, material is wrapped (turned) and then fastened onto the board or other material that is being used as the book's hard cover.
- **Wire-O Binding:** A variation of spiral binding that uses two pieces of wire at a time.

TOP TAKEAWAYS ON BINDERY

- Bindery is where drilling, perforating, scoring, folding, cutting, collating, binding, trimming, and packaging all happen.
- Binding techniques depend on the thickness of signatures.
- The difference between plus cover and self cover is whether or not the text and cover pages have the same weight.

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FINISHING DEFINED

Along with bindery comes finishing, where varnishes, laminates, and other final coatings are applied to increase protection as well as add aesthetic value.

Finishing services are often performed in-line as a piece is being printed.

FINISHING TERMS TO KNOW

- **Aqueous Coating:** A water-based coating that is applied to a project at the end of the process to add protection and water resistance to the piece.
- **Blind Embossing:** Leaving an imprint on paper, producing a raised or recessed effect without the use of ink or foil.
- **Bronzing:** Giving a piece a metallic finish by using a special kind of adhesive ink that allows a bronzing powder to stick as it makes its way through a bronzing machine.
- **Cold Foiling:** A UV-curable adhesive is printed on the paper in the shape of the design that is to be foiled. The foil is pressed onto the paper, and is stripped away where no adhesive was printed. After a quick run under the UV light, the product is finished.
- **Embossing:** Leaving an imprint on any material of paper, producing a raised or recessed effect, and enhancing that effect with ink or foil.

- **Hot Foiling:** A die, or stamp, of the design to be foiled is mounted on the stamping machine above the paper and is then heated. The sheet of foil runs between them so that when pressure is applied from the die onto the paper, the foil is fixed to its surface.
- **Printed Laminated Cover:** A paper cover that is printed, and then laminated between clear sheets of film.
- **Spot Aqueous/UV/Varnish Coatings:** Highlight only certain areas of a piece, rather than the whole sheet.
- **UV Coating:** For the highest gloss, a layer of UV ink is added to a piece and then cured under ultraviolet light.
- **Varnish:** A clear coating that is applied to a project at the end of the process to add protection and water resistance to the piece.

TOP TAKEAWAYS ON FINISHING

- Adding varnishes, laminates, and other coatings to a piece provides an extra layer of protection and water resistance.
- Which coating you use depends on what you want the finished piece to look like.
- You can apply spot coatings to specific areas of a sheet to help that area stand out.

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PAPER STOCKS DEFINED

When creating a printed marketing piece, the paper stock you select is almost as important as the design itself. But with all of the stocks out there to choose from, how do you know which one is right for you?

Given that print is such a highly tactile medium, it all depends on the way you want the finished product to look – and feel (meaning it also depends on the varnish, laminate, or other final coating you apply at the end of the printing process).

Great design needs the right paper stock and finish. Think about it: Would you want to read a textbook printed on a glossy, shiny paper? Or look at a high quality image on a dull, non-gloss surface?

The right paper stock depends on the way you want the finished product to look – and feel.

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PAPER STOCK TERMS TO KNOW

- **Coated Stock:** Paper whose surface, prior to printing, has been applied with a coating that produces a glossy or silky finish. This type of stock is often shiny, and produces a glare when held up to the light.
- **Cover Stock:** This thick type of stock is more durable than normal paper or text stock. It is typically used on the cover of a bound book.
- **Dull Coated Stock:** While glossier than matte coated surfaces, dull coated surfaces have soft, smooth, low-gloss finishes.
- **Gloss Coated Stock:** The opposite of matte, gloss coated surfaces are shiny and best used to display images and to make designs pop.
- **House Stock:** Your printer's preferred stock. House stock is typically ordered in bulk and stored in inventory to reduce material costs.
- **Linen Stock:** One of the more elegant stocks, linen has a distinctly subtle rough (but not coarse) textured feel.
- **Matte Coated Stock:** Also referred to as flat, matte coated surfaces are not glossy or shiny. Matte stocks are best suited for reading materials, as their low-gloss nature makes it easier and less distracting to read the message.
- **Newsprint:** Thin, inexpensive paper made from wood pulp.
- **Soft Touch:** Technically a finish, soft touch is a coating that makes the paper stock feel velvety to the touch. Soft touch is very tactile and makes long lasting impressions on those feeling them.

- **Text Stock:** This type of stock is lighter than cover stock, making it best suited for the inside pages of a bound book. The most commonly used text stock is 80# text.
- **Uncoated Stock:** Paper whose surface, prior to printing, has not been applied with any coating. Uncoated paper is duller and feels slightly rougher than coated paper. There is no glare when held up to the light.
- **Weight:** Paper weight refers to the relative thickness of a piece of paper. The heavier the paper, the thicker and more durable it is. (***Check out this handy conversion chart***)

If you're having trouble deciding between a certain stock or finish, check with your printer for samples and swatch books for a more accurate tactile comparison. And don't forget to ask for a hard proof before sending the whole job through the press, to make sure you've achieved the desired effect.

TOP TAKEAWAYS ON PAPER STOCKS

- Choose your paper stock early. Great design is nothing without the right paper stock and finish. It all depends on the way you want the finished product to look – *and feel.*
- Ask for samples. Print is a highly tactile medium. Deciding between two (or more) stocks is easier when you can feel them for yourself.
- Run proofs. Make sure that your paper stock and finish work together to achieve the desired effect.

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WIDE FORMAT AND SPECIALTY IMAGING DEFINED

By now you should have an excellent base knowledge of the terminology and processes surrounding digital, offset, and web printing. Let's switch gears and focus on a printing process that reinforces brands in perhaps an even more visual and memorable way: wide format printing and specialty imaging.

Wide format printing is best suited for (but not limited to) retail locations, corporate offices, and trade show displays. It covers everything from indoor and outdoor graphics to point-of-sale and digital die-cut displays. With a print area of up to 10' high and 100' long, wide format printing can be applied to just about anything.

HP Color Flatbed Printer

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WIDE FORMAT TERMS TO KNOW

- **Backdrop Display:** A large banner that takes up the entire space of the back of a trade show booth. These can be printed as one piece, or multiple pieces that fit together for easier travel.
- **Backlit Display:** A type of display that uses lighting technology behind it to illuminate an image or message.
- **Cloth Banner:** This type of banner involves a graphic being printed directly onto a cloth material. This is best suited for backdrops and tablecloths for trade shows.
- **Corrugated Cardboard:** Typically used for standing displays, corrugated cardboard is stronger and more durable than regular cardboard. Images can be directly printed on corrugated cardboard up to 2" thick, and die cuts can be made to produce unique shapes.
- **Die:** A special, customized tool that cuts or shapes material.
- **Die-Cutting:** The process of using a die to cut out unique shapes.
- **Eyelet:** Banners are supported by eyelets or grommets, which are small for wire or rope, reinforced by metal or strong plastic to prevent tearing of the material the banner is printed on.
- **Foam Core Board:** A type of thick material that you can directly print images on. Easel stands can be attached to foam core boards to allow the board to stand on its own.
- **Grand Format:** A large format printer that prints on surfaces up to 10' high and 100' wide.
- **Grommet:** See eyelet.
- **Indoor Graphics:** Commonly used in retail locations and corporate offices, these include banners/banner stands, posters, backlit signs and displays, floor and stair graphics, elevator wraps, trade show displays, and directional and wayfinding signs.
- **Kiss Cut:** Similar to die-cutting, kiss cutting is also the process of using a die to cut out unique shapes. The difference is that kiss cutting uses a lighter cut and only cuts through the top layer of a substrate, rather than cutting all the way through. When printed on a substrate with an adhesive backing, a kiss cut would produce a sticker sheet and a die cut would produce a standalone sticker.

- **Native Art File:** The file format that a design was originally created, edited, or published in. Printers require customers to send native files to ensure that the image is not damaged or blurred as it is resized.
- **Outdoor Graphics:** These include anything displayed outside: street pole banners, bus shelter signs, bus and vehicle signs, and other outdoor signage.
- **Popup Banner:** This type of banner comes with a metal stand that allows for easy travel and display. A metal bar supports the banner so it can stand up on its own (without needing to use wire, string, etc.)
- **POS & Product Marketing:** These types of materials are featured all around retail locations. Types of materials include POS Displays (anything displayed near the cash register), shelf talkers (printed cards or signs attached to store shelves), comment cards, table tents, ceiling danglers, or bottleneck/door hangers.
- **PVC Board:** Similar in look and feel to Foam Core Board, but made from a stronger and more durable material.
- **Retractable Banner:** See popup banner.
- **Scrim Vinyl Banner:** These types of banners are made of a strong, plastic material that is difficult to curl or tear.
- **Substrate:** The material something is printed on (paper, plastic, corrugated plastic, acrylic, wood, foam core, vinyl, etc.)
- **Super Wide Format:** See grand format.
- **Vector Image:** Unlike a JPEG, PNG, TIFF, or other fixed graphic image, vector files are easily scaled and resized to fit any format without stretching or blurring.
- **Wide Format:** A type of printer that prints on large surfaces.

KEY TAKEAWAYS

- For best results, provide your printer with vector images and native art files, so they are able to easily resize your images to fit even the largest of print formats.
- Wide format printing is great for reinforcing your brand in a visible and memorable way.
- Popular applications for wide format printing include retail locations, corporate offices, and trade show displays.

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GET YOUR FREE PRINT QUOTE

Now that you've learned everything you need to know about print, it's time to take that knowledge and apply it to your next print project.

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