



TIPS: HOW TO PREPARE **YOUR GRAPHICS FILES** FOR BOOK PRINTING



DATA REPRODUCTIONS CORPORATION



HIGH-QUALITY PRINTING AND INDUSTRY-LEADING EXPERTS

At Data Reproductions Corporation, we take pride in being the premier choice for businesses seeking reliable book printing solutions. Our commitment to excellence ensures the highest quality and consistency on every project, all at competitive rates.

Our experienced prepress technicians apply meticulous attention to detail when preparing each book file. Every element is carefully reviewed and verified multiple times before reaching our state-of-the-art digital & web presses. Accurate file preparation is at the core of our print process, ensuring your project meets our exacting standards while reducing the risk of errors or delays.

To help streamline your experience, we encourage you to familiarize yourself with the key aspects of graphic file preparation. This guide will walk you through the essential steps to optimize your files for our professional printing process, resulting in flawless, high-quality printed materials.



DATA REPRODUCTIONS CORPORATION

STEP 1

Lock in the specs (before layout)

Before you start laying out your book, take a few minutes to lock in the printing specs. Getting these details sorted early will save you headaches later and make sure your files are set up exactly how Data Reproductions Corporation needs them. Things like trim size, binding, paper, colors, and margins all affect the final product, so it's best to confirm them up front. Here are the key specs to check off your list:

- **Trim size:** e.g., 6"×9" (152×229 mm).
- **Binding:** perfect bound (paperback), casebound, sewn, adhesive case (hardcover), saddle stitch (booklet) or Plastic Coil/Wire-O. (Mechanical Binding)
- **Paper:** pick text + cover stocks (coated/uncoated, weight).
- **Color:** B/W (grayscale) or 4-color (CMYK). Note any spot/Pantone colors or specialty finishes (foil, varnish).
- **Bleed:** standard **0.125" (3 mm)** on all trim edges.
- **Margins/safe area:** keep live text at least **0.375" (9.525 mm)** from trim; **0.375–0.5" (9–13 mm)** on the spine side to allow for binding.
- **Page count:** total must be divisible by **2** (all books) and often by **8** for signatures (offset).
- **Deliverables:** ask for the shop's preferred PDF flavor (**PDF/X-1a:2001** or **PDF/X-4:2010**).



STEP 2

Set up the interior document (Use professional layout software: Adobe InDesign, Quark, ect.) **Microsoft Word/ Publisher are both unstable & unreliable.*

Setting up your interior file correctly from the start will save time and prevent costly errors later in production. By using best practices in Adobe InDesign (or similar software), you'll ensure clean typography, proper image handling, and files that are easy for your printer to process. Follow these steps to create a professional interior layout that's ready for export and print.

- 1. Create a new doc** at final trim (e.g., 6"×9") while it is ok to start your design with **Facing Pages ON** we ask upon exporting your pdf that you set it to **Facing Pages OFF**.
- 2. Set Bleed = 0.125" (3 mm);** Slug optional.
- 3. Define Master Pages** for running heads/folios and grids.
- 4. Styles:** Paragraph/Character/Object styles for consistent typography and spacing.
- 5. Hyphenation/justification:** Fine-tune early to prevent rivers and widows/orphans.
- 6. Place text & images** (File > Place). Don't paste images; link them.
- 7. Keep pages as single pages** in reading order (not printer spreads). The printer will impose.



STEP 3

Digital PMS Color Conversions and Expectations

When working with color across both print and digital platforms, it is important to understand how Pantone Matching System (PMS) colors behave outside of spot inks. While Pantone provides a universal language for consistent print reproduction, those same colors must often be converted into CMYK, RGB, or HEX for use in digital workflows. These conversions are approximations because each color space has its own limitations, so results may look slightly different depending on the medium, device, or printing process. Setting clear expectations upfront helps ensure consistency while avoiding surprises when colors shift between platforms.

1. What is PMS?

- Pantone Matching System (PMS) is a standardized color system used in print to ensure consistency across inks, materials, and printers.
- PMS colors are spot colors—specific pre-mixed inks—not blends of CMYK.

2. Why Conversion is Needed

- Digital displays (screens) use RGB/HEX (light-based color).
- Most printers (outside of specialty Pantone inks) use CMYK (ink blends).
- PMS doesn't always translate perfectly into these models, so conversions are approximate.

3. Conversion Types

- **PMS → CMYK**
 - Conversion often results in a color shift because CMYK cannot reproduce the full vibrancy of many Pantone inks.
 - Expect muted or slightly altered tones, especially in neons, metallics, and very bright colors.
- **PMS → RGB / HEX**
 - Digital approximations are designed to look correct on screens, but actual appearance varies by monitor calibration, brightness, and viewing environment.
 - RGB/HEX values are “closest matches,” not guaranteed equivalents.

- **PMS → Lab (L*a*b*)**

- Lab values are device-independent and often used as a bridge for more accurate conversions.
- Best for color management across different platforms.

4. What to Expect

- Consistency in Print (with Spot Colors): Using Pantone inks ensures accuracy in offset/screen printing.
- **Variability in Digital/CMYK:** Color shifts are normal. Designers should proof with Pantone’s official guides and digital libraries.
- **Monitor Dependence:** Colors on screen are not absolute—expect differences between devices.
- **Special Finishes (metallics, fluorescents):** Cannot be replicated digitally or in CMYK; only true in Pantone spot inks.

5. Best Practices

- Always check Pantone’s official conversion guides (Pantone Connect, swatch books, Adobe libraries).
- Manage expectations with clients: “Digital matches are approximations.”
- Use Lab values for the most consistent cross-platform color management.
- Provide both PMS and CMYK/RGB/HEX values in brand guidelines.



STEP 4

Prepare your images (so they print correctly)

To ensure your project prints accurately, always provide high-resolution images and properly formatted text. Images should be at least 300 DPI at final size, saved in CMYK color mode for true color output. Avoid using RGB images, as colors may shift during conversion. All fonts should be embedded or outlined before submitting your files, and text should be proofed carefully for spelling and layout consistency. Following these guidelines helps us maintain precise color, sharp detail, and professional results on every job.

Resolution

- **Photographs:** effective **300 ppi** at final size.
- **Line art/1-bit graphics (pure black & white):** **600–1200 ppi**.
- **Vector art (logos, charts):** keep as vector (AI/SVG/EPS/PDF) when possible.
- **Color & profiles**
 - Offset is **CMYK-based**; digital can be CMYK or expanded-gamut but still accepts CMYK.
 - **Safe, widely accepted CMYK intents:**
 - North America (coated offset): **GRACoL 2013 (CRPC6)** or **U.S. Web Coated (SWOP) v2**.
 - Uncoated papers: **PSO Uncoated / Uncoated FOGRA** equivalents.

Total Ink Coverage (TIC) limits

- Coated offset: aim \leq **300–320%**.
- Uncoated offset or many digital presses: \leq **260–280%**.
(Your ICC choice should enforce this; verify in preflight.)

Black handling

- **Body text & fine rules:** **100% K** only (no CMY).
- **Rich black for large solids:** e.g., **C60 M40 Y40 K100** (or the specific printer's recipe).

Covers only - **NO RICH BLACK IN TEXT**

- Don't set small text to rich black.
- **Overprint:** allow black text to overprint; never overprint white. (use knockout)

Formats

- Use **TIFF/PSD** (no compression or LZW/ZIP) for photos; **AI/EPS/PDF** for vector.
- Avoid repeatedly re-saving JPEGs; if JPEG, use maximum quality.

Cleanup

- Convert stray RGB/spot colors as intended.
- Remove ICC-profile mismatches and hidden layers you don't need.
- Apply final sharpening for print after scaling to final size.

STEP 5

Color & typography basics that help both processes

Good color and typography choices go a long way toward making your book look sharp in print. A few small adjustments, like setting safe minimum text sizes, using sturdy line weights, and handling tints or gradients with care, can make a big difference in readability and print quality across both offset and digital presses. Keep these basics in mind as you design:

- **Minimum text size:** 6.5–7 pt for light faces; 8 pt safer on uncoated or digital. Thin serif fonts not smaller than 9/10 pt.
- **Minimum line weight:** **0.25 pt** positive, **0.35 pt** for reversed (knockout) lines.
- **Hairlines:** avoid. Use 0.25 pt+.
- **Tints & gradients:** avoid ultra-light (<5%) or ultra-dark (>95%) flat areas; add **0.3–1%** noise to long, flat gradients to prevent banding (especially on digital).



Step 6

Cover and spine setup

Designing a professional-looking book cover means planning beyond just the front artwork. You'll need to set up a full spread that includes the back cover, spine, and front cover, with the correct bleed, safe zones, and barcode placement. Getting the spine width right and preparing any special finishes in advance will save you from rework and ensure the printer can produce your cover exactly as intended. Use the checklist below as a guide:

Create the cover as a **single spread**: back cover + spine + front cover (plus bleeds).

Spine width formula

- **Spine PPI (pages per inch) = (Page count / ppi = bulk)**
 - Example: 240 pages / 512 ppi = 0.469 spine bulk
 - Your paper mill/printer can provide caliper. (If stock is made to caliper)

Safe zones & bleed

- Add **0.125" (3 mm) bleed** on all outer edges.
- Keep titles/logos $\geq 0.125\text{--}0.1875\text{'}$ (3–5 mm) from spine edges; more for casebound. (*Case bound channels widths vary between page counts and paper stock*)
- If you have French flaps or dust jackets, get the printer's template.

Barcode

- EAN-13 at **100% size ~ 1.47" x 1.0" (37.3 x 25.9 mm)** including quiet zones.
- Set the background color of the barcode to a white fill
- Place on back cover, **100% K bars** on a light background; no rich black.

Special finishes

- Put foil/spot-UV/emboss on **separate spot-color layers** named clearly (e.g., "SPOT UV"). Set to Overprint Fill.

Step 7

Preflight (catch problems before export)

Before you export your final PDF, it's worth running a preflight check. This quick step helps you catch common problems, like missing links, incorrect colors, or bleed issues, before they cause delays or print surprises. Think of it as a final quality check to make sure your fonts, images, colors, and file settings are all press-ready. Here are the key items to review:

- **Links:** no missing/modified links; effective ppi OK.
- **Colors:** only intended color spaces; spot color usage deliberate.
- **Fonts:** all embedded; no faux styles; check licensing if outlining.
- **Ink coverage:** under the target TIC.
- **Blacks/Overprint:** small text 100K; rich black only for large solids; white never overprints.
- **Bleeds:** objects that touch the trim extend 0.125" past it.
- **Transparency:** if delivering **PDF/X-1a**, ensure complex transparencies are flattened cleanly (drop shadows over spot colors can be tricky).



Step 8

When your layout is finished and preflighted, the last step is exporting clean, press-ready PDFs. Setting the right export options ensures your files print exactly as expected and saves time by eliminating the need for corrections. The interior and cover each have slightly different requirements, so use the following guidelines to get both set up correctly:

Exporting print-ready PDFs

Interior (single pages, not spreads)

- **Preset:** Printer's choice; if unknown, use:
 - **PDF/X-1a:2001** (maximum compatibility, all CMYK+spots, flattened), or
- **Compression:** Downsample images **>450 ppi to 300 ppi** (bicubic).
- **Marks & bleeds:** Use **Document Bleed Settings**; include crop marks outside of the image area.
- **Output intent:** set to the ICC profile you chose (e.g., GRACoL 2013).
- **Subset fonts at 100%** (embed all).

Cover (spread)

Export as **one PDF spread** with bleeds.

Include spot separations for finishes as additional plates (kept as spot colors).



How to Make a Print Ready PDF

DIFFERENCES TO MIND: OFFSET VS DIGITAL

When preparing a book for print, it's important to understand how offset and digital presses differ. Each method has unique strengths and technical considerations that influence everything from file setup to paper choice and color handling. By keeping these differences in mind, you can ensure your files are optimized for both processes and avoid common pitfalls during production.

Offset

- Best for long runs; most stable once dialed in.
- **Paper matters** (dot gain higher on uncoated). DRC uses (ADC) Auto Dot Compensation
- Be strict about **TIC limits, rich blacks, and ink trapping** (printer/RIP often handles trapping; don't force it unless requested).
- Expect slight **creep** in perfect-bound signatures: keep folios/headings well inside safe area.

Digital (toner/inkjet)

- Great for short runs & proofs; some devices accept **RGB PDFs/X-4** well.
- Large flat areas may show **banding**; prefer textures or images over giant flat tints.
- **Registration** of tiny multi-color type can drift; keep small text 1-color.
- Some stocks require lower TIC (e.g., 260%); ask for the press profile

PROOFING & APPROVALS

Before sending your book to press, taking time for proofing and approvals is essential. Careful proofing helps catch technical issues, ensures colors and content appear as intended, and gives you confidence that the final product will meet expectations. By following a few key steps, you can minimize surprises on press and streamline the approval process.

1. **Soft proof** in Acrobat Output Preview (simulate separations, overprint, TAC).
2. Order a **digital proof** (contract proof) for color-critical pages.
3. For offset, consider a **press check F&G's** or at least **Hard Copy Proof** for covers.
4. Do a final **preflight report** (Acrobat Preflight or your layout app).



COMMON PITFALLS (AND FIXES)

Even well-prepared book files can run into common mistakes that cause production delays or printing issues. Knowing what to watch out for and how to fix it will save time and ensure your project moves smoothly through prepress. Below are some of the most frequent pitfalls printers encounter, along with straightforward solutions.

- **No bleeds:** extend all edge-touching objects by **0.125"**.
- **RGB images in a CMYK job:** convert or deliver via PDF/X-4 with proper output intent.
- **Rich black on small text:** switch to **100K**.
- **White set to overprint:** set to **Knockout**.
- **Low-res art:** re-place at 300 ppi (photo) / 600–1200 ppi (line).
- **Too much ink on uncoated:** switch to an uncoated CMYK profile; reduce TIC.
- **Fonts missing:** embed or outline after verifying license.

QUICK “STARTER SETTING” YOU CAN COPY

InDesign Document

- Facing Pages: ON
- Bleed: 0.125” (3 mm) all sides
- Margins: Top/Outside 0.5”, Bottom 0.6”, Inside 0.75” (adjust to taste)

Black recipes

- Body text: 100K
- Rich black solids: C60 M40 Y40 K100 (confirm with printer)

PDF Export

- Facing Pages: OFF
- Standard: **PDF/X-4:2010** (preferred)
- Downsample: >450 ppi → 300 ppi
- Compatibility: Acrobat 7 (PDF 1.6) or later
- Marks: Crop marks ON (2–3 mm offset)

FINALIZE

Once your cover and text PDF files are finalized, please email your files to your Data Reproductions Corporation CSR. Our team will conduct a thorough review before beginning production. You will receive an email notification once your files are in production. Typically, orders are shipped within 15-20 business days of confirmation.





OUR TEAM IS HERE FOR YOUR

Should you encounter any queries or challenges along the way, rest assured that our dedicated support team is readily available to provide guidance.

Visit [datarepro.com](https://www.datarepro.com) or call [800-371-3665](tel:800-371-3665) to speak to a Print Specialist.



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