# IMPOSITION

Imposition is the arrangement of pages on the printer's sheet. This arrangement is effected by many factors, which could include:

1. Format of the product: The size of the finished page determines how many pages can be printed on a single sheet.
2. Number of pages of the printed product: The compositor must determine how many sheets are to be printed to create a finished book.
3. Stitching/binding method: The compositor must understand how the sheets are placed to form the signatures that compose the finished book.
4. Paper fiber direction: Many papers have a "grain," reflecting the alignment of the paper fibers. These fibers must run lengthwise along the fold, which influences the alignment, hence the position, of the pages on the printed sheet.
5. Finishing and binding

To understand how the pages are related to each other, an imposition dummy may be used. This is made by folding several sheets of paper in the way the press will print and fold the product. A little copy is then created, and this can help paginate the product.[1]
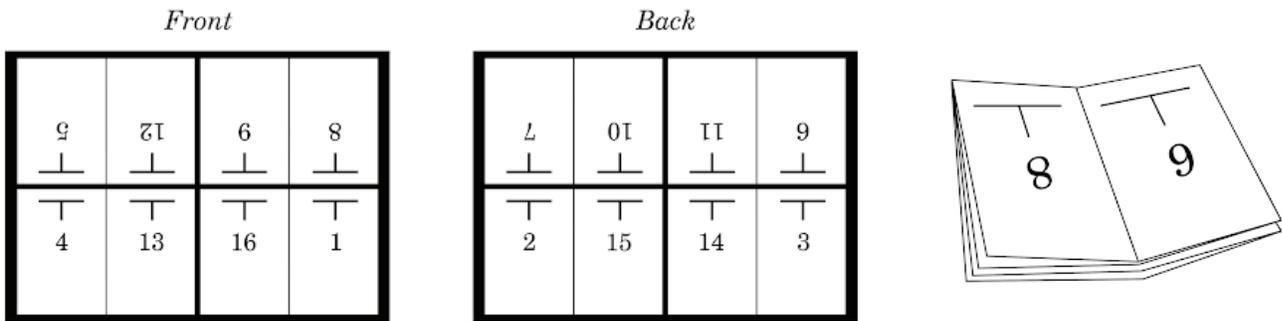
In the example above, a 16-page book is prepared for printing. There are eight pages on the front of the sheet, and the corresponding eight pages on the back. After printing, the paper is folded in half vertically (page two falls against page three). Then it is folded again horizontally (page four meets page five). A third fold completes this process (page nine meets page eight). The example below shows the final result prior to binding and trimming.

Non-Digital Techniques:
Imposition has been a requirement since the earliest days of printing. When pages were set using movable type, pages were assembled in a metal frame called a chase, and locked into place using wedges called quoins.

By the late twentieth century, most typesetting was onto photographic film. These sheets were combined manually on a light table, in a process called stripping. Skilled workers would spend many hours stripping pieces of film together in the correct sequence and orientation. The term stripping was also used for other changes to a prepared page, such as a spelling correction, or a stop press story in a newspaper. Digital techniques rendered stripping less necessary, but what has forced increasing numbers to abandon it completely is the introduction of "platesetters", which put pages directly onto printing plates; these plates cannot be adjusted with a sharp knife. In addition, an extremely high precision would be needed for stripping of colour work, as each ink colour is on a separate piece of film.

Digital Techniques:
Manual imposition processes tend to cause bottlenecks of the whole printing production. The first digital imposition software, Impostrip, was released in 1989.[2] The advent of digital imposition has not only helped a lot in making sure layout and sheet arrangement are correct with higher register precision, but it significantly reduces the usual imposition errors (e.g., slight movements of register due to parallax). An entire book may be imposed and many complex functions applied in an instant. Binding options may be changed on the fly and impositions produced to multiple output devices at once, often with no user intervention. In turn, digital techniques help to reduce material costs, time and resolves production bottlenecks. There are several different approaches to digital imposition. Here are two ways:

InDesign Imposition Process 1
1. Open InDesign, create new document that's 5" width x 8" height with a .025 bleed all around.
2. Make sure images that extend to edges of paper are placed to bleed line outside of 5" x 8".
3. Under Pages menu, create a total of 8 pages, or more pages if you'd like, but make sure your number is divisible by 4.
4. Once you've placed all of your images and text and feel good about the design of your book, click 'file' at the top, and select 'print booklet'.
5. Under 'Print Setup' select 'custom', Booklet type: 2-up saddle stitch, margins: automatically adjust to fit marks and bleeds
6. Select Print Settings at bottom
7. Printer: Post Script File, under set up: select horizontal orientation, under marks and bleed: select 'all printers marks'. Under advanced: select preset high resolution. Save preset.
8. Select Print. This saves it as a ps file.
9. Open Acrobat Distiller.
10. Default settings: high quality print.
11. Under 'settings' at top, select 'Edit Adobe PDF settings'. Change width to 11.0000, and height to 8.5000. Save settings with a name.
12. Drag your .ps file into the distiller file window. Double click on file to preview once it's distilled.
13. Print your PDF!

Impose Online
This is a free imposing software: http://www.imposeonline.com/index.php

Instructions from their website:
YOUR ORIGINAL FILE
Your original pdf file will not lose any quality when imposed, so please create your pdf with the quality setting you require for your final imposed file.

BLEED
If your document has images or items extending right to one of the edges of your page, you should provide bleed. Bleed is an extra area around the page where the page content extends past the trim line; usually around 5mm, but sometimes less. This is to allow for small inaccuracies in the printing/trimming process. In other words, if your page was 100mm wide by 150mm high, and you were providing 5mm of bleed on all four edges, you would actually provide a page that was 110mm wide by 160mm high, but making sure that there is no important page content in the bleed area.

STEP 1—UPLOAD YOUR PDF FILE
Click the "Choose File" button and navigate to the location of the pdf file you wish to impose on your local hard disk. Click "Upload" to continue. Your pdf file will begin uploading. This may take some time, depending on the speed of your connection. A 20Mb file can take over 10 minutes on a standard 256kb/s connection.

STEP 2—INCLUDED BLEED AND/OR TRIM MARKS
If your document already includes bleed or trim marks, select "Yes". You will be prompted to provide the actual trimmed page size of your document. In other words, if your document was originally 100mm wide by 150mm high, with 5mm bleed added to all four edges, the PDF you uploaded would be 110mm wide by 160mm high. Enter the actual page size of 100mm by 150mm into the relevant fields so that Impose online can crop (where required) and position the page correctly.

STEP 3—BLEED
If your document already includes bleed or trim marks, it may have more bleed than necessary. Typically 5mm is enough, but your document may have much more. Enter the amount of bleed you require, and your page will be cropped to this size where necessary.

STEP 4—TRIM MARKS
If your document does not include bleed or trim marks, Impose online can add these to the finished pdf if you require.

STEP 5—REGISTRATION MARKS
Registration marks are used for checking the alignment of different colours during the traditional printing process. If you are not sure whether to include registration marks, you should consult your printer.

STEP 6—IMPOSITION TYPE
At this time, there are three imposition types available. The first is saddle stitched, the second is perfect bound and the third is Manual. Saddle stitching is used in many magazines and brochures where you have binding (e.g. staples) at the very centre of the publication. Perfect bound is often used in books that are made up of smaller individual bundles of pages. Manual gives you complete control over the number of rows, columns, sides, forms and numbering sequence. If you were planning to impose a business card 8-up on a page, you would select Manual. If you are not sure which imposition to use, you should consult your printer.

STEP 7—IMPOSITION LAYOUT
Your impostion layout should be selected based on the sheet size required for a particular printing press. If you are not sure which layout to use, you should consult your printer.

STEP 8—PAGE NUMBERING AND ROTATION
The numbering and rotation is shown as per the impostion type and layout selections made in steps 5 & 6. You can change the rotation of an individual page by clicking the grey area of the page. Each click rotates 90º clockwise. The red "H" indicates the "head" or top of the page. If you wish to rotate an entire row of pages, click the rotation icon to the left of the row. If you wish to rotate an entire column of pages, click the rotation icon above the column. Changes made to one form will be reflected on all the other forms. Page numbers can be changed by altering the numbers in the fields displayed inside each page.

STEP 9—VERTICAL PAGE MARGINS
Page margins are the gaps between each page on the imposed form. Where there is a fold (between page spreads) the margin should be zero. Other margins should be as per the requirements of your printer. The margins on the far left and right of your imposed form should be large enough to include trim marks and colour bars (if required). You may also need to provide space for "grip". Please consult your printer if you are not sure what to use.

The final imposed sheet size will always be the sum of the actual page size plus the margins. In other words, if you were imposing a 100mm wide by 150mm high document 4 up (2 pages across) with a left margin of 15mm, a right margin of 15mm and a centre margin of 0mm, your sheet width would be 230mm.

STEP 10—HORIZONTAL PAGE MARGINS
Page margins are the gaps between each page on the imposed form. Margins should be as per the requirements of your printer. The margins on the very top and bottom of your imposed form should be large enough to include trim marks and colour bars (if required). You may also need to provide space for "grip". Please consult your printer if you are not sure what to use.

The final imposed sheet size will always be the sum of the actual page size plus the margins. In other words, if you were imposing a 100mm wide by 150mm high document 4 up (2 pages down) with a top margin of 15mm, a bottom margin of 15mm and a centre margin of 10mm, your sheet height would be 340mm.

STEP 11—FOLIOS
Folios are a small text identifier placed just ourside of the bleed area, providing identification of the form number, the form side and the individual page number. Folios appear as follows:

"Page 1 of 32. Form 1 of 8, Front. File: Your pdf name.pdf"

STEP 12—COLOUR BARS
Colour bars are placed along the edge of the imposed form (usually the long edge) and are designed for checking and measuring ink density and consistency during the printing process. If you require colour bars, you will be prompted to select the edge on which the colour bar appears on your imposed form. You will also be asked to provide the distance from the page edge. This distance is measured from the actual page edge, not the bleed. If you have 5mm of bleed, and you want the colour bar to be positioned at the very edge of the bleed, you should enter 5mm as your distance. If you are not sure whether to include colour bars, you should consult your printer.