## 1) It's Possible!

Okay, so I have a shelf full of manuscripts, messy and awkward. Can I really turn those into bound books I can lend to my friends and get some feedback coming? I know I can send out for such a service but that takes a while and if I've done it a few times I know the money really adds up. If the printing seems reasonable they get me on postage.

With an initial investment for the tools and supplies it's possible to print books for about 1.5 cents per 8.5 x $5.5 "$ page. That comes out to about $\$ 6.00$ for a 400 page book. Counting the labor we wouldn't exactly make money if we were trying to do it as a business but I get my own labor wholesale and that's how I like to buy things.

## 2) Formatting the Manuscript.

To turn our letter sized, double spaced manuscript into a book we need to re-format the page. Some of these options may be found in different parts of a wordprocessing program but they should all be there somewhere.

## Page Setup:

Size: Letter ( $8.5 \times 11$ ")
Orientation: landscape

> 2 Pages per sheet Header and Footer: different odd and even.

Margins- Top: 1"
Bottom: 1"
Inside: 0.8"
Outside: 0.8"
Gutter: 0.1"

> Format/ Paragraph- Indent $=$ First Line
> By $=0.3 "($ adjust to preference $)$
> Line spacing $=1$ or $1.5($ adjust to preference $)$
> Alignment $=$ Justified

Header \& Footer (may be accessed under view)
Left Header: Author's Name
Right Header: Italicized Title
Instead of title a person can also put chapter names but this will involve section breaks and can get tricky if revisions are not complete.

Insert page numbers and any applicable graphics here too to dress up the pages. Header and footers can be grayed-out using font color options if desired.

Adjust chapter headings as desired. Font, letter size, graphics, layout...

Design a Frontpiece- This is how I refer to the opening pages of a book. I usually keep it separate from the main body of text. It will contain my title page, book
info, Table of Contents, Cast of Characters, or anything I might add to whet a reader's appetite.

## 3) Printing the Manuscript.

Basically just load up the printer with your special 'book paper' and hit print. When the job is finished true up the paper, turn it over, and feed it though again. You want to wind up with double sided pages with the same thing on either side so that when they are cut apart they will be two complete books.

Just a suggestion too, whenever you print anything on this scale, open a window. Laser printers generate positive ions as well as ozone, which are very irritating to a person's respiratory system. Printing 400 or so pages at a time requires some ventilation.

## 4) Cutting and Gluing

True up your pages again, add a guard sheet front and back and set your guillotine cutter for 5.5". You will wind up with one book ready to go and the other needing to have its pages shuffled as they will go 2,1-4,3-6,5...

Mark your guard pages with arrows to show where the glued edge needs to go and load them into your gluing press, taking pains to make the glued edge as flat
as possible. Right now it's your one finished edge as the other three will be trimmed at the final step.

Using glue that has been watered down approximately $50 \%$ paint the glued edge twice, allowing it to dry between coats. Then give it at least 2 hours to dry, overnight is better.

## 5) Perfect Binding, Cutting in the threads

Here is the step cheaper binding processes leave out and it does make a difference in the finished product. Using a saw cut grooves @ $1 / 16^{\text {th }}$ of an inch deep in the spine about an inch apart, in pairs facing each other. (refer to video). Glue threads into the grooves leaving about $1 / 2$ " of thread on each side and trying not to get any glue on the loose portion of the thread at this time.

After the threads have had at least a half hour to dry clamp the books into the binding press. Use wax paper to keep them from sticking to anything and cushion the books with loose paper to prevent the press from marking them. Allow them to sit at least two hours to compress the spine and make it ready to receive a tight cover.

## 6) Designing a Cover

Unless you are planning on self-publishing this step is not critical as your publisher will come up with
something professionally done. They say you can't judge a book by its cover but the truth is we do it all the time and in a highly competitive market the very best cover is none too good.

If you do choose to self-publish consider getting help here too and taking all the advice you can get concerning the packaging of your product. Nobody will read it if they don't buy it.

But for this stage where you are just sharing your book around for evaluation and comment, whatever you feel good about should be just fine.

If you want to keep your books looking good the U/V protective spray is helpful. It does tend to make the yellows a bit more intense, more so with some toners than others but in most cases the shift is negligible.

## 7) Final Assembly

Mark your cover where you want the first fold to go and score the line with a bread knife. Remove the books from the press and after making sure the strings are not attached to it, remove the guard sheet by pulling it sharply back at right angles to the spine.

Put dots of glue at the base of the strings, on the inside of each pair of strings. Lay each string toward its mate so that pulling against the strings will draw them deeper into the book, making it very strong.

Spread a layer of glue along the spine and press it into the folded cover, seating it well and working the cover tightly onto the spine of the book. Holding the back taut, fold in the second crease and massage as much slack out of the spine as you can get.

Put the books back into the press, again with the wax paper and the cushioning for at least two hours.

When the book is thoroughly dry put it into the cutter and trim the three ragged sides. At this point your somewhat untidy collection of paper will be transformed into a genuine book, something you may become very proud of.


Once again, let me point out this series is pitched for the starving author. It is taken as a given you'll beg, borrow (but not steal) whatever it takes to get you where you want to go. Shop carefully, keep your eyes open and be $\boldsymbol{c}^{*} \boldsymbol{r} * \boldsymbol{e}^{*} \boldsymbol{a} * \boldsymbol{t} * \boldsymbol{i} * \boldsymbol{v}^{*} \boldsymbol{e} \ldots$

Computer- Basic graphic and word processing functions. Does not have to be state of the art . It's worth taking a few computer classes if you feel challenged.

Source- office supply store, corporate liquidations, yard sales

Cost: \$100 and up
Printer- Black and white laser. Should be an office workhorse capable of handling large loads of paper and having extra size toner cartridges available. The rubber rollers should be in good condition as far as paper handling-missed sheets are costly when you're doing double sided book pages. There are many good office printers out there, I'm rather partial to the HP machines. This is your main tool, spend the money here.

Printer- Color laser. Should be capable of handling fairly stiff card stock for printing covers. Must handle at least $8.5 \times 14$ " paper, $11 \times 17$ " would be a plus. One could get by with a color inkjet but a laser is recommended. Don't try to do black and white pages on this printer as it costs several times as much as on a straight black and white machine.

Speaking of black and white, if a monochrome cover would do for your test copies you could save this expense entirely, although most of us really love playing with color.
Source- office supply store
Cost: \$400-700
Guillotine Cutter- This is the trimmer that allows you to do a smooth cut of an entire book. The premier brand seems to be Martin-Yale for about $\$ 800$. The Chinese knock-off is on Ebay for around $\$ 200$. Shop carefully.

Cost: \$200-800
Knife Trimmer- This is the old classic you remember from school days, the big knife that pivots against a square table. The main use will be trimming your cover stock from $11 \times 17$ " to $8.5 \times 14$ " so you will need one with at least a 14 " table. The bigger the better.

Source- office supply store, corporate liquidations
Cost: \$10-\$75
Book Press- (binding press) This is used for compressing the pages before gluing on the cover and then for making sure the cover is firmly bonded. A
picturesque item, they can turn up at estate sales or be sold as decorative pieces. I found mine at a used tool shop for $\$ 10$, originally used as some kind of shop press.

Source-As is/Where is Cost: \$10-\$250

Gluing Press- You need something to hold the pages for the initial gluing operation. The quickest and dirtiest solution is to clamp the manuscript between two boards. Anything from there on is just refinement. See the video for what I built and proceed from there.

Source- You're on your own, do your best.
Cost: \$15- \$35

Text Paper- To print a high quality book you need good paper. The industry standard is 60\# opaque. A note is in order. The 60\# in this instance is equivalent to $24 \#$ bond paper. The reason for the discrepancy is the standard roll for text printing is somewhat larger than the standard quantity of bond, or writing paper. The opaque designation means the page is suitable for double-sided printing. In order to get the proper grain for an $8.5 \times 5.5$ " page it is usually necessary to start with an $11 \times 17$ " sheet and trim it to $8.5 \times 11 "$ with your guillotine cutter. Many of these papers are designated as acid-free meaning they will create a book that will last many years.

Although there are online sources unless you're sending a pallet by truck shipping paper is expensive, one can easily pay more in shipping than for the paper itself. Wherever possible find a local supplier although this is
not always easy. One excellent paper is Accent Opaque Digital by International Paper. Their \# 109397 is a very serviceable $8.5 \times 11 "$ product.

Cost: @ \$20 per ream

Cover Stock-Covers need to be heavier and there are a lot of choices out there. Just make sure what you get is able to go through your color printer. Most covers seem to work okay even if they're printed and folded across the grain. There is an $11 \times 17$ " short grain paper available from International, \# 188092, but I haven't tried it yet.

Cost: @ \$20 per 250 sheets
PVA Glue- Poly-vinyl acetate is a big word but it's very nice to use. It's white and water-based like Elmer's but stays tacky and flexible when it dries so it bends with the book rather than cracks and heals itself of minor injuries. There are several sources such as www.Hollander.com, or www.Demco.com (they specialize in libraries). This glue is also used by speaker repair shops and if you have one in your area they might be inclined to sell you some. At room temperature it has a shelf life of about six months but will last for years in the refrigerator (don't let it freeze).

Cost: @ \$10
Binding Thread- This reinforces your book in the perfect binding process. Just ordinary sewing thread although I wound up using blended polyester floss, just a bit heavier than for normal sewing. Avoid bleached
cotton for that has a lifespan of about 20 years and a well made book will last much longer.

Source: Any sewing shop
Cost: \$2-\$5

U/V Preservative Spray- If you want your covers to stand up to abuse and still look good hit them with Krylon's Preserve It! While it can shift colors slightly to the yellow side it will seal in the printing and provide a wear layer that makes a big difference. It has a strong, lingering odor but it helps greatly to place the treated covers in a $150^{\circ}$ oven for a half hour. A fruit dryer works well for this.

Source- www.jerrysartarama.com
Cost: @ \$10

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