DIY SCREEN PRINTING PRESS

HOW TO:

BUILD A 4-COLOR SCREEN PRINTING PRESS ON A BUDGET!

6th Edition

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6th Edition

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Preface

This guide was first written in June 2009. It was created to help hobbyists and enthusiasts who wanted to “test the waters” on a budget. However, you should also know that professional screen printers have chimed in saying that it’s capable in a commercial environment.

How to use this guide

Before you begin, take a few minutes to read this guide once or twice to familiarize yourself with the processes involved. I have prepared a list of materials you need and where you can source them from. The list is at the end of the guide.

Let’s get started!

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Materials List

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Step 1: Find a table you can absolutely trash!

Like the 1-color press, we'll also be building this press on a table top. Ideally, pick a table that's about waist high. Don't get something that's too low as this will put a strain your back when you're printing. If you can't find something waist high, going a little higher is fine.

Here's what we're trying to achieve – make a mental note.

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Step 2: Prepare five (5) equally cut pieces

You can either cut them yourself or pick them up at the local Lowe's, Ace or Home Depot. Remember, these 5 pieces are completely dependent on the size of the screens and table you have. *You do not have to follow my measurements.*

Rule: Make sure the length of the piece is longer than the WIDTH of the screens.

Now, the screens I use have widths between 10" and 12", so my 5 pieces measures 2"(width) x 15" (length) x 0.75" (thickness)

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Step 3: Making the frame

Now that you have the wood pieces cut, we're going to make the center frame. To do this, we'll join them together using a *'corner halved' or 'L' joint* – see the image below.

Before you begin, label each piece of wood on each end so it's easier to identify them later. I use both numbers and alphabets to match the ends up.

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Step 4: Determine the corner joints

Use a marker pen to shade out the ends that you will cut out later. The ruler is your best friend.

You will end up with something like this.

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Step 5: Break out the saw, chisel, or wood chipper

Again, this can get tricky for the uninitiated. Hardware stores have a service that will do this for you. Small price to pay for keeping those fingers intact ☺

Saw, chip, and smooth out the ends that you have shaded. Here's what you should have.

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Step 6: Use white glue (or wood glue) and nails to join each side together

Apply enough glue and secure the ends with nails. Be careful not to use big nails.

Let the glue dry. Once you line them up, you should now see the press taking shape.

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Step 7: Add clamps

Now that the frame is finally complete, add a pair of clamps to all four sides. The type of clamps I have uses 2 screw holes.

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Keep in mind spacing between clamps. Once you have everything setup, here's how it'll look:

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Step 8: Drill down the middle

We’re going to attach the frame to table. For this, drill a hole in the middle of the frame, all the way through the tabletop. But before you power up that drill, make sure to allocate an ample amount of print space.

Use a long enough screw to hold down the frame for rotation. I have added a washer between the table and frame to reduce friction.

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Step 9: Securing the frame

It is quite common that while printing, the press will move due to pressure and other accidental factors. To secure it, I use a simple technique called the *Stop-Release system*.

Here's how it works.

During a print, a rod (I use a nail) is fitted in to secure the frame from moving or jerking. Once the print is done, the rod is pulled out to release the press for rotation.

There will be four (4) holes on the press on each end, and one (1) hole on the table. The hole on the table can either be on your left or right – whichever feels comfortable, but it must be on the side where you are stationed.

Now let's create this system.

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First, adjust the frame in a neutral position. Then draw a line where the press meets the table top.

It's important to have each side of the press fall in the same position every time.

Next, drill a hole on each side of the press. Again, you will have 4 holes in total on each end. Drill one more hole through the tabletop.

Rod type: Pick a metal/aluminum rod that is suitable. Make sure the width and length is appropriate to the size of your press and table. It goes without saying that the rod must also feel secure. Do not use one that is smaller than the hole.

"I chose a nail because it has a flat top that gives me a nice grip to pull from."

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Here’s how the hole looks from the top.

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Final result: Notice the holes and their positions on the press. You can also see where the rod is placed.

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Step 10: Propping up the screen

This happens to be the most experimented part for most. I've used rubber bands, springs, and even toothpaste caps but have finally settled for plain wire strings.

For this setup, you need:

A. Wire (some have used electrical wires, even old guitar strings!)
B. Wire cutter
C. Marker pen
D. Pliers.

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Here are the steps:

1. Cut the wire into four (4), 5-inch strips.
2. Wrap each wire around the marker pen to create a loop.
3. Twist to secure it.

4. Unscrew a jiffy clamp and slide the wire in between the clamp and the frame.

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5. Put the screws back tightly, adjusting the length of the wire as you go along. The idea here is to be able to prop the screen up with the wire after a print.

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Final step: Give yourself a pat on the back!

Congratulations!! You now have a homemade 4 -color 1-station screen printing press! Start screen printing today and test out all the kinks of your new workhorse.

Before that, I'd like to add that this press is the collective result of many people just like you. If you've found a better, more efficient and cost saving method, please share it with us.

If you need more information about this manual, the press you've just built, or just want to say 'hi', send me an email – and once again, good luck and happy screen printing!

Thanks

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Materials List

1. **A Scrap/ work table**

2. **5 pieces of wood for frame -** Get them here or here

3. **For cutting and prepping joints:**
   Saw, Wood chipper, G-clamps, Chisel, Sandpaper, Glue, Nails, Hammer

4. **4 Pairs jiffy clamps** – Get them here

5. **Attaching the frame:**
   Drill, Screwdriver, Metal washer, Ruler

6. **Stop-Release System** - Metal Rod

7. **Propping up the screen:**
   Wire, Wire cutter, Pliers

Disclaimer

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