

PRINTING PDF PLANS ON YOUR HOME COMPUTER

USING ADOBE ACROBAT READER SOFTWARE

By Ed Larsen

Based on a previous document and with many thanks, by
Douglas Morris, PE (Retired)

I use a technique that is used by modelers world-wide and I'll try to break it down to computer-novice level.

Some history - the Adobe company invented a file variety called "Portable Document Format" which is known by many as a file type (.PDF). That became a new "Type" of file. For the first time a scale could be "locked in" and anyone that printed that file would get the same thing that the file's creator made. No more fiddling with a non-scale image that might be distorted by the camera lens. Improvements have been made and PDF is the standard that is used for accurate plans in our modeler world. The best thing about a PDF is that it is scalable. You can change the original file to any size by using a percentage value of increase or decrease.

There are online collectors of these plans files that will share them for free when you register your name and email address with them. Common sites to use are Aerofred.com, and <https://outerzone.co.uk/search>. Their listings are searchable to make things easy to find, or you can just browse around like you might when you are at the Public Library looking for a book. When you find what you are looking for, that file can be downloaded to your computer for your use.

Now you have a plan file on your computer in PDF, how does that turn into a plan to read and build from? Simple answer is Print it, and there are several ways to do that. That PDF can be sent or taken to a local shipping or office company store like UPS, Office Depot, or FedEx because they have printers capable of printing on 36" or 42" wide rolls of paper. It is done at a reasonable cost and can be done while you wait.

Or as the alternative, and that's what this instruction is all about, you can do it on your computer and print your large plan onto a stack of letter-sized pages that you trim, and then tape together to make your scaled plan.

That printing process is called "Posterizing" and it is just like what old billboard advertisers did when they printed pieces of wallpaper that they pasted on the billboard surface.

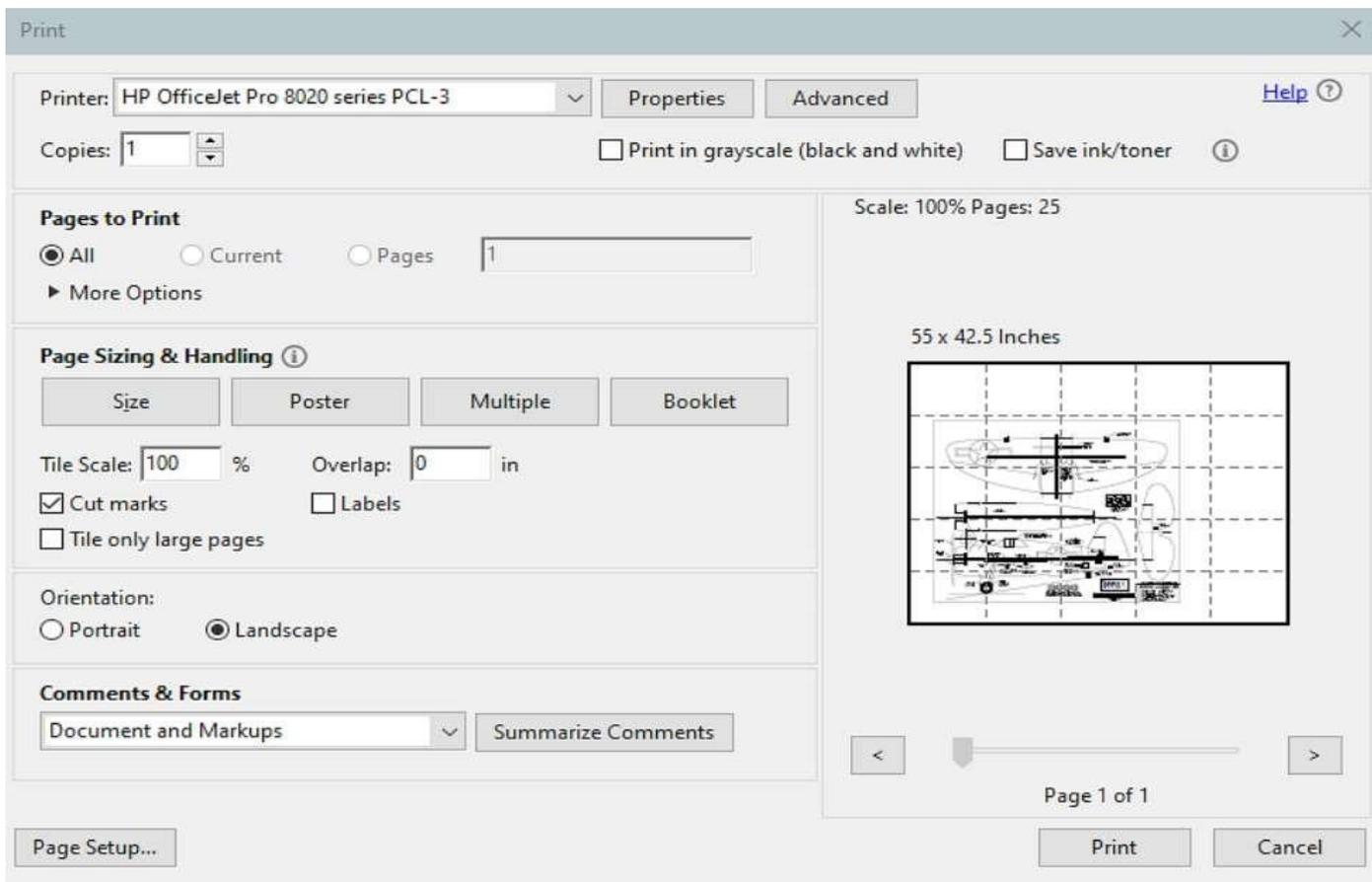
Down to the nitty gritty. We will use Adobe Reader to open and print your file, To get started, double click your PDF Plan file.

Next you just click "Print" to open a new window of Printer Options. Click on "Poster" to print multiple (tiled) sheets.

Here's where things get tricky. Do you know what size you want to print your plans?

The "Scale Factor" is set at 100% for the original size plans. If this is the size you want, easy peasy, click on "Cut Marks" to put "Tick Marks" in the corners of the sheets for alignment purposes and hit print. The Cut Marks define the limits of the plan portion and that is where the pages overlap by about 1/8". With the exception of the plan border, I usually trim the left side and top of the sheets with a straight edge aligned with the "Cut Marks" so as I lay the edge onto the adjoining sheet the drawing lines up and I can tape them in place.

A quick note about the "Cut Marks". I have found that turning them on or off will sometimes change the "Tile" layout to less sheets of paper. You can still trim and tape as you would with "Tick Marks", you just carefully use the ends of the lines in the drawing to trim your sheets.



The picture shows the typical Adobe print screen after you select “Poster”. Notice the boxes “Tile Scale” and “Overlap”. Your “Overlap” should be set to “.005” or your printer tries to print the tile all the way to the edge of your paper sheets, “Pages to Print”. The plan is considered one page, so if your file contains more than one plan sheet, or as in the case of Plans saved from a magazine, the related article, you can select the pages you wish to print. Note that an attached article is going to print at the scaled size as well, either really small print, or REALLY BIG!

Now then, the “magic”! Remember that I said the file has the scale locked in? This is how you use it. We already talked about when you print at 100% you get the original size plan. But maybe you do not want a 60” wingspan, but maybe a 24” wingspan fits your needs better. Let us make a Scale Factor change. The simple math is the Desired size (D) divided by the Original size (O) then multiplied by 100 equals the new Scale Factor percentage.

$$D/O \times 100 = \%$$

Let’s try it: desired wingspan is 24”, original wingspan is 60”, so $24/60 \times 100 = 40\%$. Use that new “Scale Factor” in the box instead of the default of 100%. Notice that there are a whole lot less tiles? Bingo!

You can use this formula to change any plan to another size. Of course, you have to adjust material size but you have the size that you want.

A little more about the print preview: After making your selections, the preview pane will show your plan with a grid of dotted lines to show how your pages will be printed. Click Print to print the stack of sheets. They usually print out by rows, so wait until the printer stops before looking at the pages. Then you can break the stack into smaller stacks by row. Notice that the paper size above the preview pane (for instance 55 x 42) is bigger than the plan and there are blank sheets. My printer ignores the empty pages and doesn’t process them. Other printers may spit out the blank sheets, but they can be put back into the printer later. This Options page has another slick trick that you can use. Sometimes you want to print

just a small portion of the plan, say for a couple of ribs. Go back to the main program and highlight a window to fit the area that you want to print, right click over this area and then click "Print" to get the Options window, then select "Current View" and only that area will print. You will need to set the "Scale" each time you return to the Print tab.

Finish notes to assemble your plan. As I pointed out previously, I trim the left edge and top edge of each sheet so that there is that 1/8" overlap under each page. I also use a straightedge to help align the pages to keep each row straight as I put them together. Start at the left of the row and place the two sheets together, align them, and put a small piece (1/4") of tape near the top and bottom to tack it in place. This makes adjusting easier if needed. Continue tacking the rest of the row together, then lock the pages together with a strip of tape from top to bottom of each seam. Set this row aside and assemble the remaining rows. Align the first two rows using tabs of tape at each intersection of pages. Then use strips of tape to lock the rows together. Add the other rows and you have your plan.

If this has helped you, Great! If you notice errors, let me know and I can update the file. Happy building!!!