

Building a Model Box in 10 Steps and 20 minutes

By George White

In a recent issue of the Southern California Ignition Flyers “Flightplug,” Mike Myers, editor, I read a discussion of building boxes to protect your model from hangar rash. That article, plus several others I’ve read over the past few years reminded me of the difficulty many modelers have in building boxes from two-ply corrugated paper board. The purpose of this article is to provide a step-by-step procedure I learned in the Navy which makes the process easy. I only use telescoping boxes — i.e. the kind in which the lid fits down over the top of the bottom portion — they are stronger and easier to build and use.

The first question many have is where to obtain reasonable size sheets of corrugated board. If you are in a large enough city, you may be able to find a wholesaler who will sell you sheets, which are normally 4’X8’. The downside is that they normally want to sell you several sheets at a time, which will crowd the shop or garage. A more likely place to look is to visit a local custom picture frame shop. Framers use 2-ply corrugated board for backing of framed work, and normally keep a stock on hand. You’ll pay more (perhaps \$10/sheet) but it beats wasting time dumpster diving to find what you need. I found a framer locally which not only has the board, but one side of it is white — not that it makes the box any better, but it looks prettier.

Once you’ve got your sheet of corrugated board, you need only some duct tape, a large straight edge measuring tool, pencil, a sharp box knife (the Stanley retractable blade knife sold at Lowes works great) and a pizza cutter. You can assure your roommate that the pizza cutter won’t be damaged!

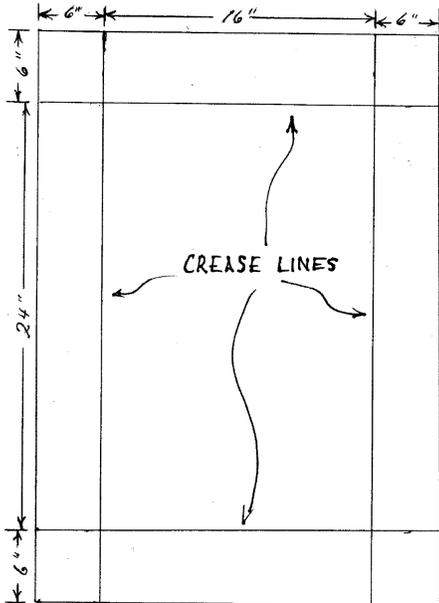
Here are the steps to make the box:

1. Sit your model and its component parts on the floor and arrange them in such a manner that they will fit into the smallest footprint. Determine the size of that footprint. Then measure the tallest dimension of the model in order to decide how high the sides of the box must be.
2. Measure and mark the overall outline of the box as shown in drawing (1) For purposes of illustration, let’s assume you want to make a box which is 24” long, 16” wide and 6” deep. You mark and cut the box bottom blank to be 24”+6”+6” long and 15”+6”+6” wide. A carpenter’s square or something similar is handy to help get the blank cut squarely. The flutes in the cardboard can run either way, but generally you’re best bet is to run them the long dimension. Surely your model’s not heavy enough to make a difference.
3. Using the sharp knife, cut the outer dimensions, which in our sample is 36” X 28”.
4. Draw the crease lines as shown in Drawing (1), then roll the pizza cutter along those crease lines, using just enough force to cause an indentation, but not cutting through the cardboard.

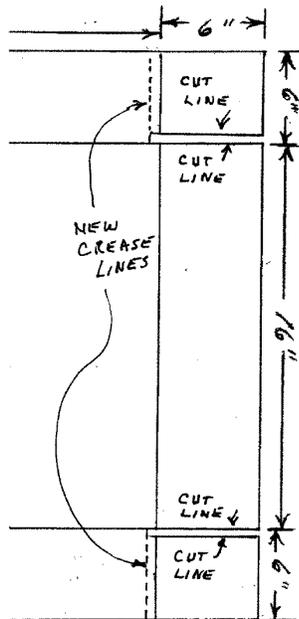
5. As shown in Drawing (2), do the following on each end or short dimension only:

A. Cut $3/8$ " wide strips **outboard** of the long dimension crease lines and extend those cut-outs $3/8$ " beyond the crease line you made in step 4 across the narrow end of the box blank.

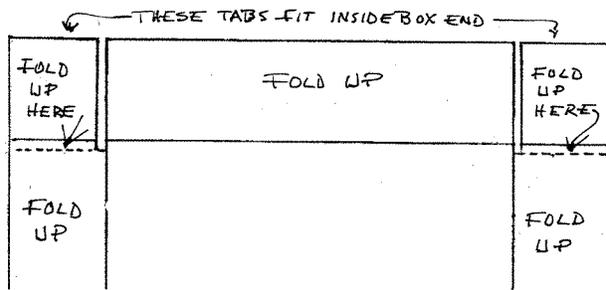
B. Take the pizza cutter and make another crease line $3/8$ " **inboard** of the crease lines you made across the narrow dimensions in step 4. The resulting $6\ 3/8$ " X $5\ 5/8$ " tabs will be folded inside the narrow ends of the box when we assemble it. See Drawing (3)



Drawing (1)

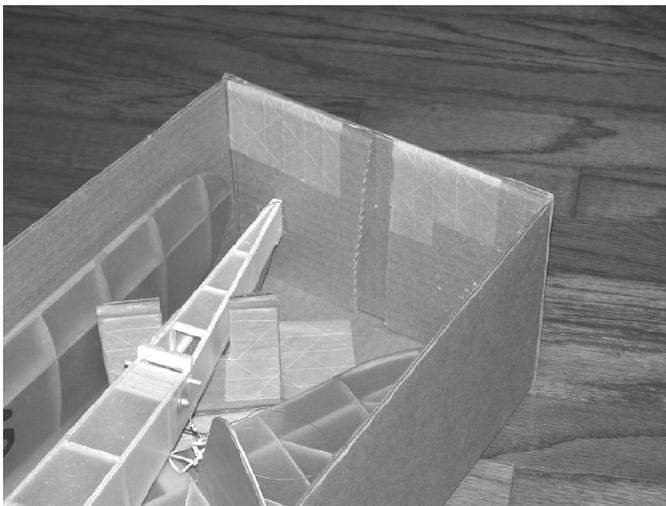


Drawing (2)



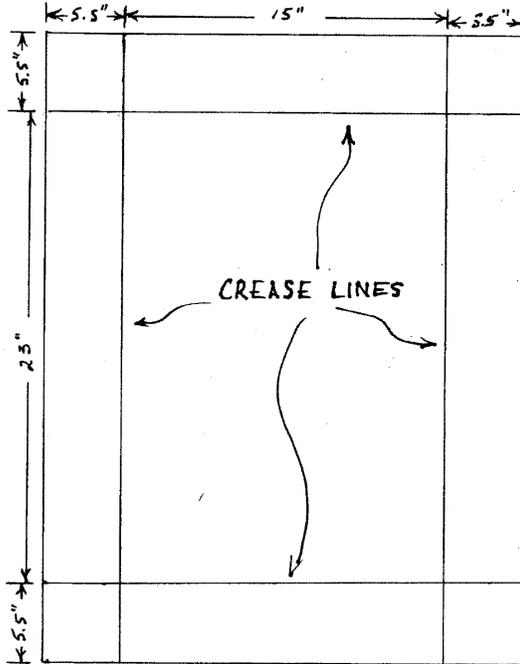
Drawing (3)

6. Carefully fold all four sides of the box up along the crease lines and fold the tabs at each corner **inside** of the narrow end of the box as shown in Drawing (3). Use tape to secure the tabs in place as shown in the photo below, and the bottom portion of the box is complete. You can use foam or scrap pieces of corrugated board to make “seats” to hold various pieces of the model in place.



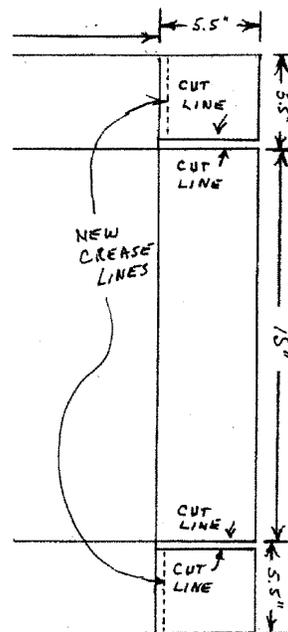
7. Now, for the lid. To make a full telescoping box in which the sides of the lid covers most of the full height, cut another blank using the same **outside** dimensions you used to make the bottom. **DO NOT** mark the crease lines until you’ve read step 8.

8. To prevent the lid from fitting too tightly, measure in from the outer perimeters $1/2$ ” less than you did for the bottom box part. See Drawing (4). In our example box, that means you measure in from the 26”X38” outer dimensions $5\ 1/2$ ” on each side and make crease marks as shown in Drawing (4). If you want a tight fitting top, you can move those creases only $3/8$ ” closer to the outer perimeter than the 6” you used on the bottom, i.e. on our example the crease lines would be $5\ 5/8$ ” in from the perimeter. Be aware that this will allow almost no room for error, and you may end up with a top which does not fit unless you were very precise with your measuring, cutting and folding— something I have difficulty doing!



Drawing (4)

9. As shown in Drawing (5), cut out the same 3/8" strip **outboard** of the long dimension crease line as you did on the box bottom. However, note that the new crease lines on the tab are different than on the bottom — they are **outboard** of the narrow dimension crease line.



Drawing (5)

10. Fold the tabs and sides of the box top up along the crease lines and secure the tabs on the **outside** of the end piece with tape. Once you've done that, you have the top completed and it

will fit down over the sides of your bottom portion. It takes more time to study and understand these steps than it does to build the box.