

# Cardboard File Computer Desk

## • Introduction

This desk is built from a whole lot of corrugated cardboard, glued into thick panels, cut to shape, primed with shellac, and painted. All the cardboard is recycled from boxes. Only a few simple hand tools are needed to build the desk and it can be distinctive and attractive if you make it so.

The construction steps are simple. Collect boxes and cut them flat with a utility knife. When you have enough to completely fill up the space under your bed you probably have enough.

Cut the cardboard to the rough sizes you need and place them in stacks one to two inches thick. This takes a lot of cardboard. Glue the stacks with white or tan glue and let them dry under weights. Trim the panels to your design with whatever saws you have available. You are not limited to the simple shapes in the sketch you can make it look really fun.

Seal the panels with a thinned coat of shellac. Fit the panels together and seal the joints with glue and paper tape. Seal with a thinned shellac coat again. Then you paint or decorate your desk. Be sure to do all painting in a well-ventilated area.

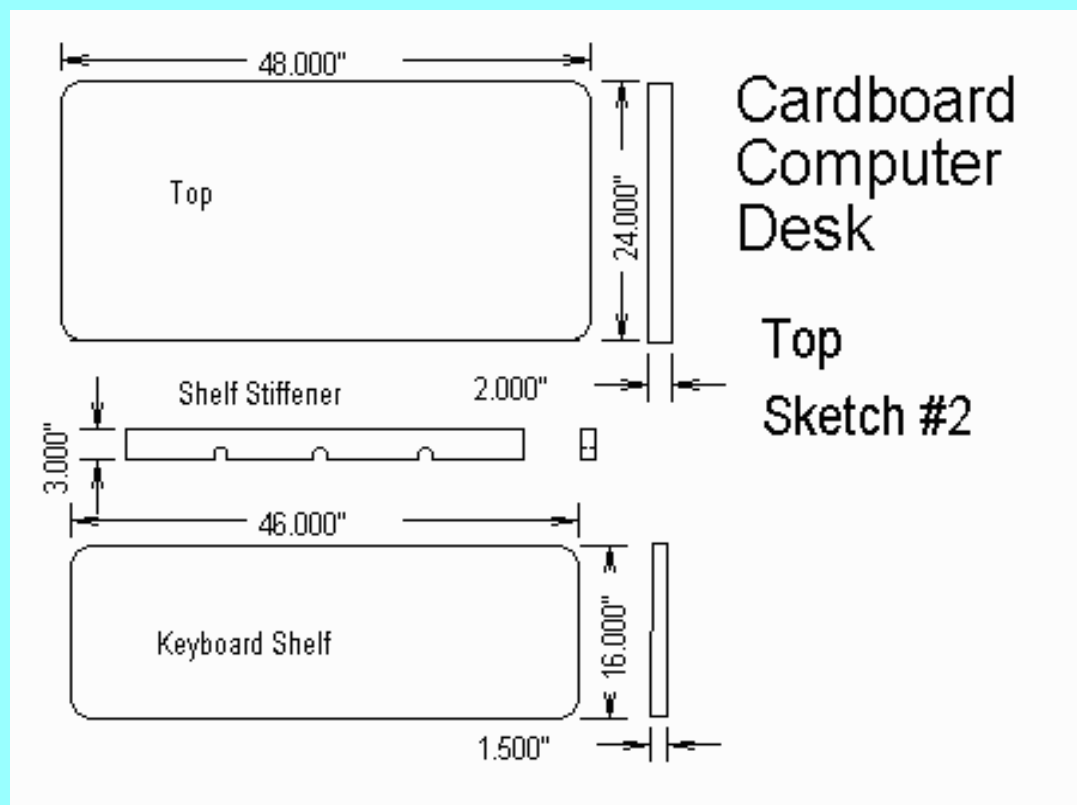
The finished piece is light, yet strong enough to last a few years. It is certainly cheap.

## • Sketches

Here are four drawings for this desk in this text but they may be a little fuzzy.

### 1. All Cardboard Computer Desk

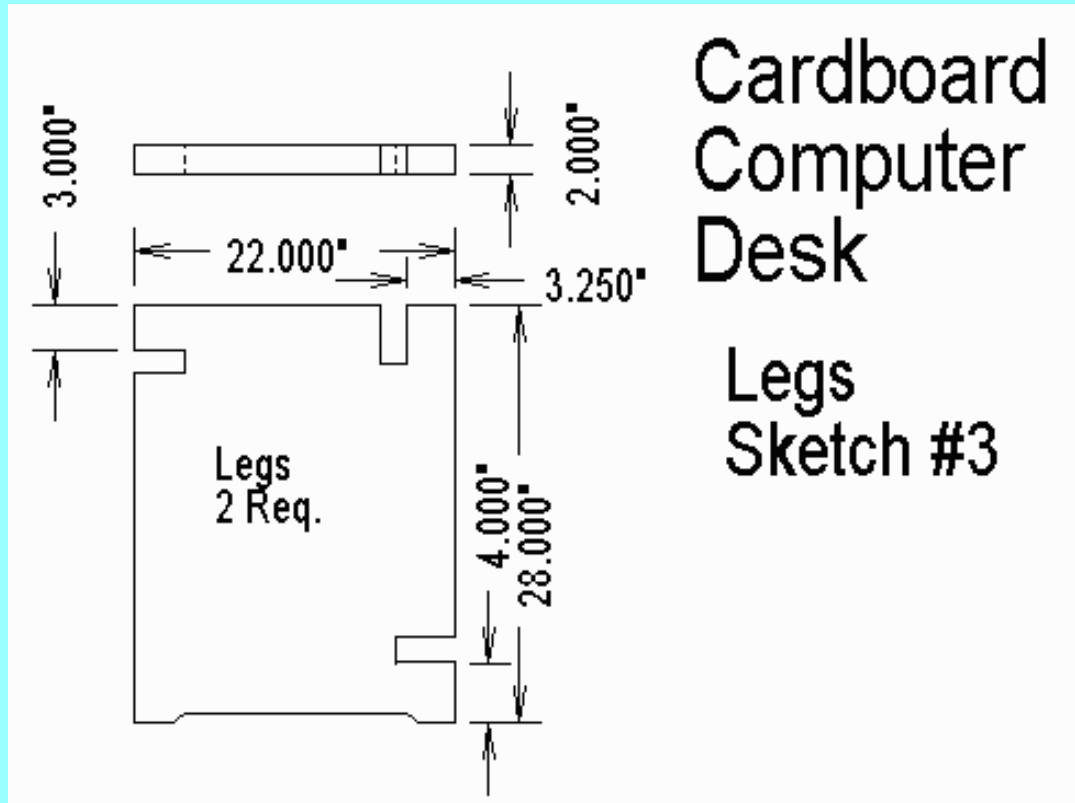
At the start of this note is a drawing of the all Cardboard Computer desk. It shows the front, side, and top views.



### 2. Top, Sketch #2

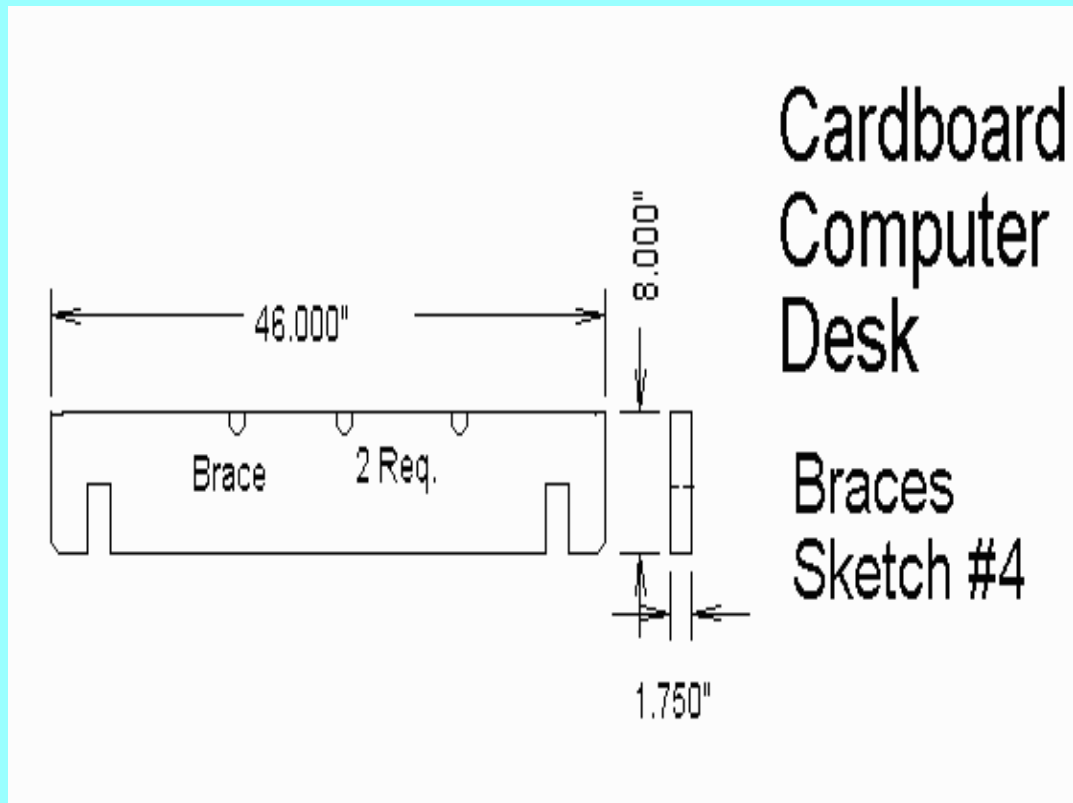
The desk top and keyboard shelf are shown with dimensions. The Shelf Stiffener is glued across the back of the Keyboard Shelf and is notched for cables. It is a tight fit between

the two legs.



### 3. Legs, Sketch #3

This sketch shows details of the leg pieces. Two are required that are the same thickness. The notches receive the Keyboard Shelf and the two braces. The bottom is cut away to form feet on the front and back.



#### 4. Braces, Sketch #4

The two cross braces are knotted for the legs. The top brace can be have small notches for cables.

## • Materials

You can build this desk with the following inexpensive materials:

### 1. Cardboard

- A lot of large cardboard boxes -- free

### 2. Other Materials

- White Glue 32 oz. -- \$ 10.00
- Shellac -- \$ 7.00
- Shellac Thinner -- \$ 4.00

### 3. Omissions and Contingencies

- Allow %15 for tax, glue brushes etc. -- \$ 4.00

#### 4. **Total -- \$ 25.00**

The secret is to get good cardboard for free.

## • **Tools Required**

You will need the following tools:

### 1. **Saw**

A saw of some kind is needed. It could be a jig saw, a hand saw, coping saw, table saw, a radial arm saw, or a circular saw. It should have a plywood blade with many teeth.

### 2. **Utility Knife**

You need a utility knife with at least three blades.

### 3. **Square**

You need a good sized square. This could be carpenter's or even a piece of plywood with a factory corner. A nice piece of poster board will do.

## • **Construction Notes**

### 1. **Gathering Cardboard**

Many companies recycle cardboard and you're going to help them a little. You can often find enough to make this desk already waiting on the loading dock to be hauled away. Be neat and do not leave a mess. When you are thought with the desk you can even bring back the scraps and put them neatly in the pile.

First thing cut two long narrow pieces of cardboard that are the maximum length and width that will fit in your car. Mark these with a 'P' for pattern and keep them.

Go for the biggest pieces first. Cut boxes flat by opening the top and bottom and cutting the corner edge that had the glued overlap. Use the patterns to rough cut the boxes into pieces that are as large as possible but will fit in your car.

### 2. **Safe Cutting**

Cut the cardboard with a utility knife. Always work cutting away from your body. Never work in such a way that if you slip you will cut yourself.

If the boxes have large metal staples in them these must be removed with care before doing any cutting. Watch out for them even in flat boxes. They can cut you badly. A pair of diagonal wire cutters works very well for removing them.

### 3. **Rough Cutting**

Rough cut the cardboard into pieces two inches larger than the finished size of the panel. If possible make large panels and rip them into pieces later. For example, make both braces as one piece and the shelf stiffener as the back three inches of the shelf.

Select the nicest piece to be the top and the second nicest to be the bottom. Stack the pieces up and see if you have enough thickness.

Don't start gluing until you have all the pieces for a panel and pieces a nice top and bottom. It is easiest if you glue the the separate panels on different days as the material becomes available.

### 4. **Gluing Up Panels**

Poor some glue into a plastic container and get a one inch cheap glue brush. Do not thin the glue as it makes it weak.

Lay down a sheet of plastic to control spilt glue. An old shower curtain works very well but tapped together trash bags will do.

Set the stack of cardboard aside and place the bottom and second piece in your work space. Brush a good layer of glue on one entire side of the second piece and set it aside. Brush the inside of the inside of the bottom piece. Be sure to get a good coat of glue on both surfaces for four inches all around the edge. If you leave any voids they must be in the middle. Now place the two glued sides together and even up the best long edge.

Continue this process. Using the stack as a work space to glue the next space. Set the glued piece aside and then coat the top of the stack.

### 5. **Drying the Glue**

Place the glued up stack on plastic on the floor. Even up the best long edge as best you

can. Weight the stacks with books, flat pieces of wood, or boxes of stuff. You want lots of weight spread wide and evenly over the panel.

Let the glue dry over night or at least four hours.

## 6. **First Sealing**

Seal the panel with a 50-50 mix of 3 lbs shellac and alcohol. The shellac stiffens the surface and is the very best paint primer for paper. This coat will make the edges cut much cleaner.

All painting must be done in a well ventilated area.

## 7. **Cutting Panels**

Cut the panels to the finished size with whatever saw you have available. Use a saw blade with lots of teeth like a plywood blade. Use a board for a straight edge if cutting with a jig saw or circular saw. If the saw does not go all the way through then finish the cut with a utility knife.

You can mark the rounded corners with a can.

Cardboard dulls the saw blade rather quickly. You may need a couple jig saw blades and you might need to touch the teeth on some saws with a small triangular file.

## 8. **Notching Panels**

The keyboard and braces fit into notches in the leg panels. Make the distance between the insides of the leg panels the same for all three pieces. The notches can be cut with a jig saw or coping saw.

When you are finished with the sawing, coat all new surfaces with thinned shellac.

## 9. **Gluing Together**

Glue the keyboard shelf softener to the back of the keyboard shelf. It must just up to the top of the legs and completely fill the space between them.

The desk is much stronger if you glue all the panels together but this makes it difficult to transport. You can either wait till you are at the final location for the desk and put it together with lots of glue, or glue it together only lightly.

To glue it together lightly, place a small amount of glue inside the notches as you slide the panels together. Cut strips of brown paper about 2 inches wide and fold them in two long ways. Coat the outside with glue and stick this tape over the joints where the panels come together. If you have to take the desk apart later you can cut this tape.

Prime the tape with shellac before painting the desk.

## 10. **Optional Additions**

You can make the desk last much longer by covering the top and keyboard shelf with masonite or heavy poster board. You may need to rough up the top coat of shellac a little before gluing on the covering.

Gluing on small rectangles of plywood or masonite to the feet also extends the life of the desk.

## 11. **Finishing**

Shellac is a good primer for cardboard and will let it take most paints. Water based paints are easiest to work with but are not as durable. Sand the shellac surface lightly before painting.