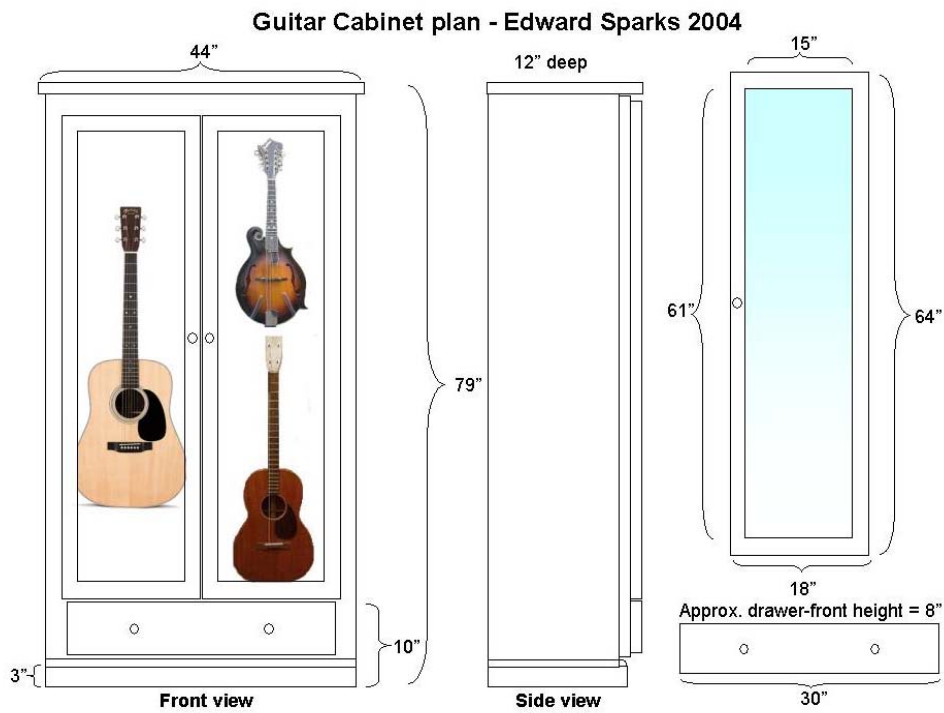


Building your own Guitar Display Cabinet

By Edward and Teri Sparks

After finishing a two-year-long project of remodeling the three bedrooms and the kitchen in our “Old House,” my wife and I began remodeling the living room. We made sketches of our ideas, which included a TV cabinet to hide the darn thing (we are not big fans of TV), and some cabinets to hold CD’s, DVD’s, and videocassettes (we love to watch old movies), and plenty of bookshelves for her extensive collection of books. We walked around the room, visualizing bookcases and cabinets, trying to decide what to do with a corner that until now had been unused space. She suggested the idea of a cabinet to store some of our instruments. I thought about building a display cabinet to show off a few instruments, and make them a little more accessible. I was thinking of the old adage that if the instrument is within reach...we would be more likely to reach for it! She liked the idea, especially when I told her we would put the 1920’s Bruno tenor guitar I gave her for Christmas on display in the case with my Martin D-28 and an old mandolin. So I drew out plans for a display cabinet with big glass doors that would neatly fit into that corner.



As with any project, the most important thing is the planning. The first thing was to decide on the maximum size the cabinet could be, and then determine if there would be room inside for the three instruments we wanted to display. Ultimately the cabinet had enough room inside for four instruments; the three I mentioned above, plus the Baby Taylor my wife gave me as a present for remodeling her beautiful kitchen (did I mention that she loves to cook too!). The outer dimensions of the cabinet are 78" high by 44" wide by 12" deep. Decisions about the outer appearance of this cabinet were easy, since we wanted it to match the other new cabinets we were building in the room. The design is fairly plain except for some decorative "ogee" molding used as crown molding, as well as the top of the baseboard. We decided on "bead board" for the back of the cabinet, a 1/4" thick panel made of Birch with a double groove cut every 2", simulating old-style tongue-in-groove paneling. The cabinet was to be painted a light tan color.

Because the front face boards would hold large cabinet doors with equally large pieces of glass, I used 1" by 3" Poplar hardwood, which would yield a nice smooth finish when painted and be strong enough to hold the screws on the door hinges. I also decided to put a storage space at the bottom to hold accessories and bring the display area up about 12" off of the floor. We decided on a door hinged at the bottom to drop down when opened instead of a drawer, which would have been heavy and hard to open and close.



Cabinet bottom with "drawer front" removed

The last step in planning was to design the “hangers” for the instruments. The three smaller instruments were so lightweight that I decided to go with a wooden hanger, which would hold the instrument at the head only. The Martin was heavier, of course, and I didn’t want to simply hang the guitar, putting all of that weight on the headstock. So, I created a small “foot” for the guitar to rest on, with a hole for the endpin to fit into. In this way, it relieved the weight on the headstock hanger. This hanger would need only keep the guitar vertical and against the cabinet back.

The sides were made of $\frac{3}{4}$ ” “cabinetmaker’s” Birch plywood, cut 78” long and $11\frac{1}{4}$ ” wide. This $11\frac{1}{4}$ ” depth, plus the $\frac{3}{4}$ ” thick Poplar face board equaled the final outer depth of the cabinet of 12”. The top, bottom and shelf, made of the same plywood, were cut $42\frac{1}{2}$ ” for a finished outer cabinet width of 44”. Once I had glued and nailed the top, bottom, sides and finally the face boards together, I attached the bead board to the back of the cabinet. I used construction glue, which comes in a caulking tube, to glue the cabinet to the wall, and then nailed it into the wall studs. This done, I cut and nailed on the top trim and the 1” by 4” baseboard, and then sanded and first-coated the entire cabinet with flat wall paint as a primer.



All four hangers in place with the stinger supports

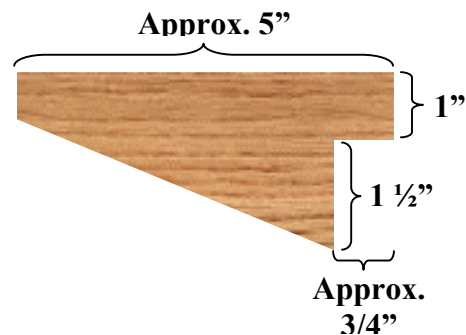


Diagram of guitar hanger cut from a Poplar 1” X 3”

Next I had to make the instrument hangers. I decided to make them from 1” by 3” Poplar. I fashioned a kind of a wedge (see diagram) with a notch in the back to fit onto a 1” by 2” Poplar stringer running horizontally across the back of the cabinet. I located where each instrument headstock

would be placed and glued the horizontal stringers onto the back of the cabinet and nailed them into the wall studs. I then attached the hangers to this stringer with glue and nails. I held up the Martin and decided where to place the foot it would rest on and attached it in the same manner. After the glue was dry I put a little hand pressure on the foot and quickly realized that my design was too weak to hold the Martin. Since what I had done so far was already glued and nailed into place, I decided to strengthen each hanger and the foot by adding another 1" by 2" stringer on top of them. Again I glued this stringer to the back of the cabinet, resting on top of each hanger and then nailed it into the wall studs. The result, once the glue dried, was very strong hangers and a strong foot to support the Martin. I then sanded and first-coated the stringers and the foot with latex primer paint. Once dry, I sanded and finish-coated the entire cabinet with semi-gloss paint.



Close up of "foot"

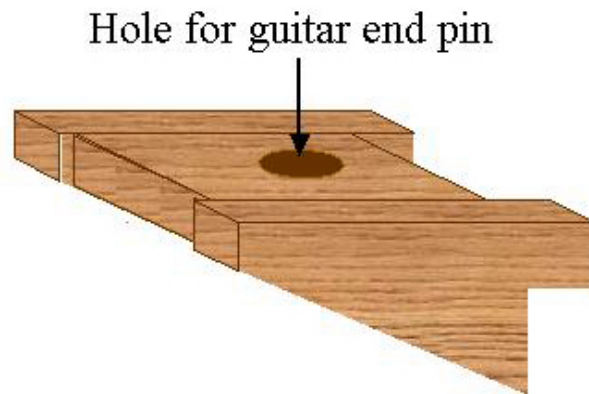
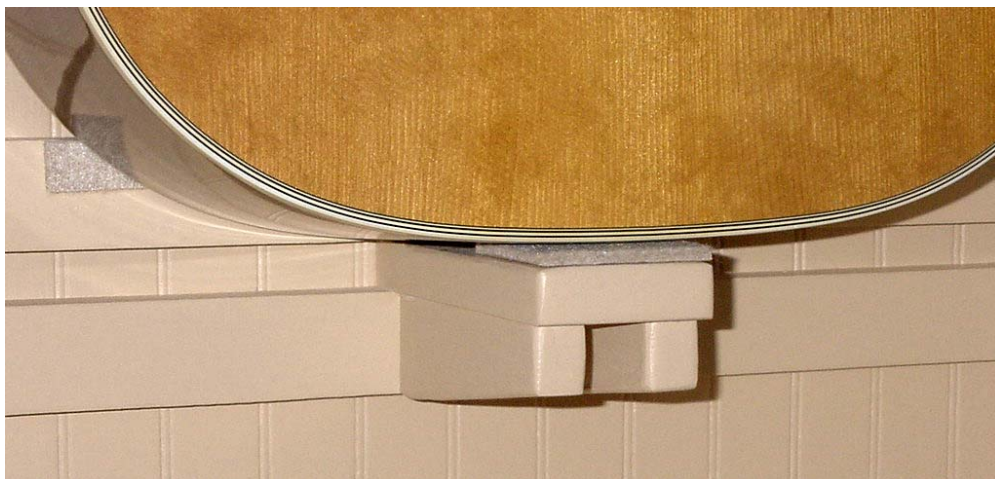


Diagram of "foot"



Close up of "foot" with guitar in place

I needed to cushion the contact points of the instruments on the hangers and foot. I used some thick peel-and-stick felt sheets designed to be cut and attached to the bottom of furniture to keep it from scratching the floor, and attached it to each hanger and the foot where they made contact with the instruments.



Hanger with felt pads in place

I constructed the doors from 1" by 2" Poplar with a rabbit cut in the back to accommodate the thickness of the glass. I ordered ¼" thick safety glass similar to that used for car windows. This glass is actually two 1/8" pieces of glass with a sheet of transparent plastic sandwiched in between. In the event that the glass is hit and breaks, it will not shatter inward into sharp pieces and damage the instruments, but instead will crack into small pieces, resembling a spider's web. I installed the glass into each door. Because the glass was large and very heavy, I decided to use three hinges on each door, one at the top and bottom and one in the middle.

I hung the instruments in the cabinet and they looked great, but being behind glass made the cabinet dark inside and therefore difficult to see the instruments. I installed a fluorescent light, similar to those used under kitchen cabinets, in the top front of the cabinet. The fixture is pretty much hidden by the face board along the top. I choose a fluorescent type tube fixture because it burns much cooler than incandescent or halogen lamps. These types of lights, especially the halogen type, would build up too much heat inside the cabinet and damage the instruments. I also drilled a few holes in the cabinet above the fixture to allow any built up heat from the bulb to escape into the room. Once again I hung the instruments and we

stepped back to admire the finished product! The illuminated instruments look especially nice at night.

The finished product makes a beautiful display cabinet and a great storage place, keeping the instruments safe but within easy reach, and the bottom storage area is great for strings, polish, sheet music, etc. Happy building.



The finished product minus the glass doors and drawer front.



The finished product with the glass doors and drawer front and light.