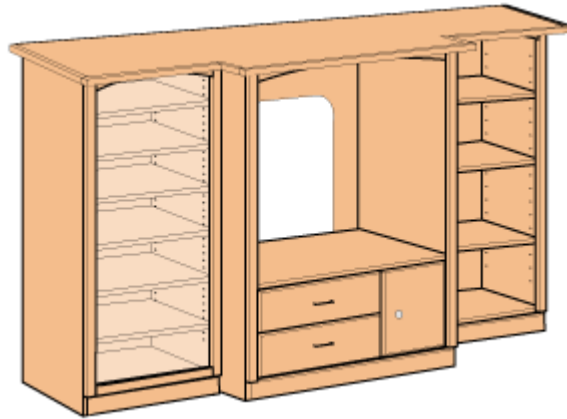


# Modular Entertainment Center

## OVERVIEW



### Introduction

Light up your family room or den with this modular entertainment center constructed largely of oak, and oak veneer, plywood and top-quality solid oak trim. Television, CDs, DVDs, videos -- bring them all together in one attractive spot that's sure to be the centerpiece of your room.

This plan is for building an entertainment center to house a 32" television.

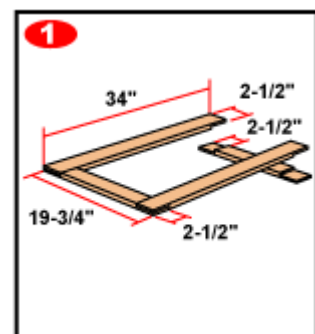
### BEFORE YOU START...

#### SKILL LEVEL & TIME TO COMPLETE

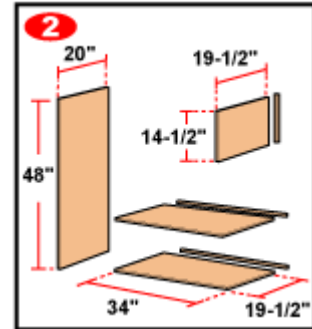
- Beginner - about 4 to 5 days
- Intermediate - about 3 to 4 days
- Advanced - about 2 days

## STEPS

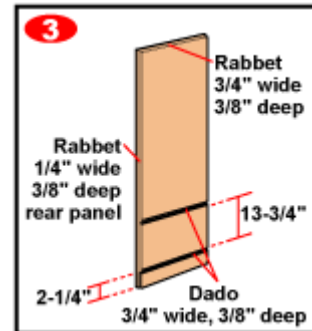
1. We'll begin with the television module. First cut to size your lapframe longs and lapframe shorts. Cut the half laps  $2\frac{1}{2}$ " wide and to one-half the depth of the wood. Then glue and clamp the lapframe together with C-clamps, checking that it's square.



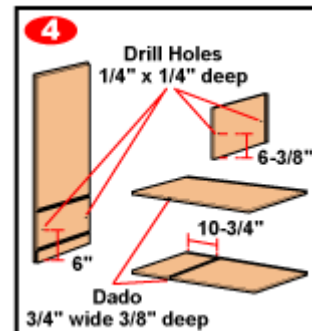
2. Cut to size the side panels, fixed shelves, the partition and the shelf edge strips. Glue the edge strips to the fixed shelves and the partition and allow the glue to dry before sanding the surfaces flush.



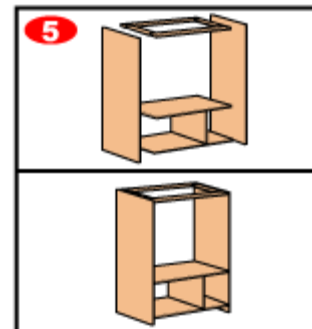
3. Cut a rabbet along the inner rear edge of a side panel. Then cut a dado from the bottom edge and make another cut of appropriate size above that one. Next, cut a rabbet along the top edge. The bottom of the rabbet should be 47-1/4" from the bottom of the panel. Now repeat the process, making the second panel a mirror image of the first.



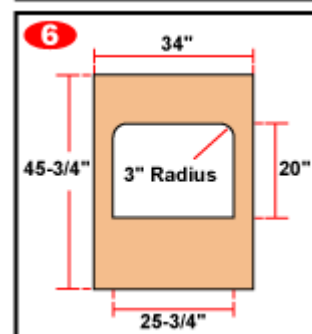
4. Cut a dado on each of the fixed shelves, as shown from the door end. Then, on the side panel that will have the door, drill a pair of holes from the front and rear edges, for the shelf support pins. On the cabinet side, they should be above the fixed shelf. Drill corresponding holes on the partition from the lower edge.



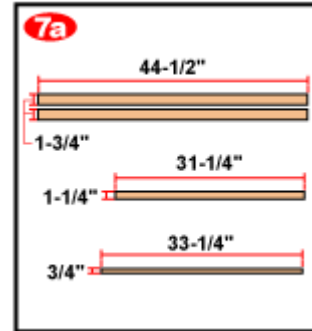
5. Assemble the two fixed shelves to the partition with glue and finishing nails. Then attach this sub-assembly to the side panels at the dados, using glue and nails. Check the assembly for square. Now nail in the completed lapframe at the top, in the same way.



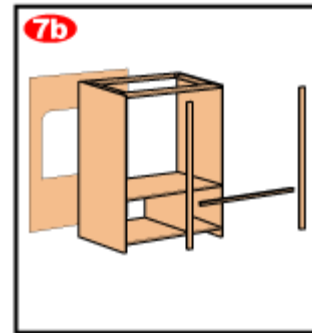
6. Cut the back to fit the opening on the cabinet. Cut out the opening for the TV overhang, starting from the bottom of the back panel. If necessary, adjust the height of the opening to fit your set, then sand the exposed edges.



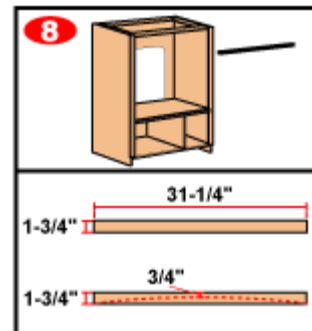
7. a Now cut two strips of side trim and one section of front trim from your solid oak stock. Also, cut the arch cleat from your pine to length.



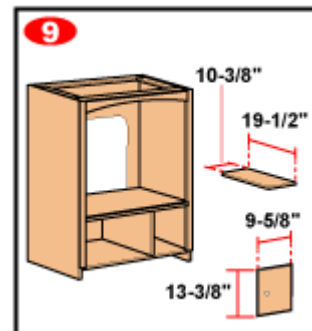
7. b Next, install the front trim and the two side trim pieces in position with glue and finishing nails. Note that the side trim stops just short of the bottom shelf. Now install the back.



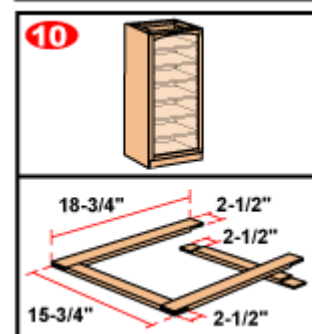
8. Next, install the arch cleat with glue, clamping it to the underside of the lapframe. Then cut your arch from solid oak stock and trace an arch shape over it and cut it to shape. The arch should be 1-3/4" at the ends, and 3/4" at the center. Round over the bottom and ends of the arch and glue it in place over the cleat.



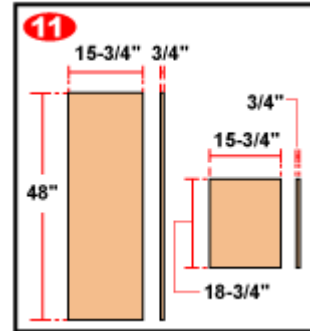
9. Cut a moveable shelf from your plywood, sand the exposed edge and glue it into position. Then cut the shelf door from edge-glued oak stock. Add a door handle, hinge it with two blum hinges, and install it.



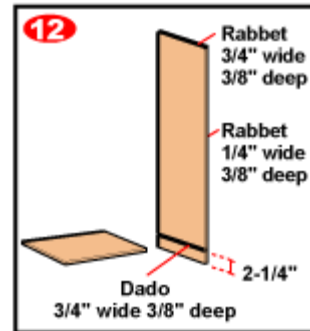
10. When building the audio rack module with adjustable shelves for holding tapes and CDs, start by constructing a lapframe similar to the one you made for the television unit. You'll again cut lapframe longs and shorts to size, and cut half laps like before. Use glue and clamps to connect sections.



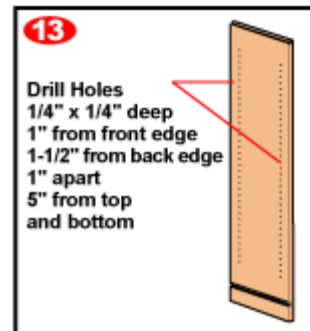
11. Cut to size the side panels and the two edge strips, the fixed shelf and its edge strip. Glue the edge strips to the sides and to the shelf, using clamps, tape or small finishing nails to hold them. When the glue is dry, sand the surfaces flush.



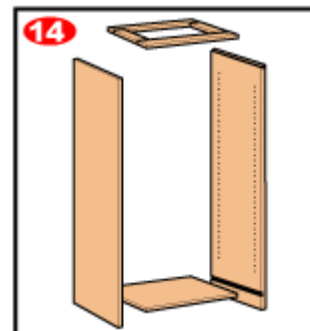
12. On a side panel, cut a rabbet along the inner rear edge, making sure the good side will face out. Cut a dado to length from the bottom edge, and then cut a rabbet along the top edge. Now cut corresponding dados and rabbets on the other panel, making sure the sides are mirror images and that the dados line up.



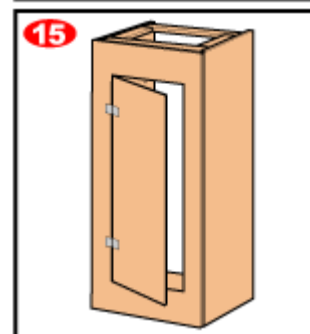
13. On the inside of each side panel, drill two vertical columns of holes—about 1" from the front edge and 1-1/2" from the rear edge—for the shelf support pins. The holes should be evenly spaced, and end as shown from the top and bottom. Each must line up with the corresponding holes on the other side.



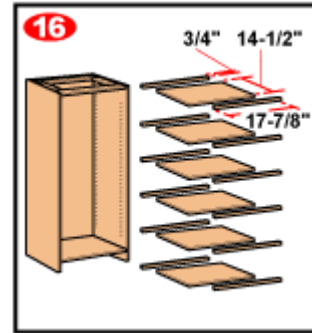
14. Glue and nail the sides to the fixed shelf at the bottom and to the completed lapframe at top. The edges of the parts should line up at the front.



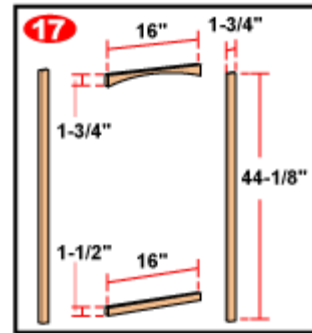
15. Cut the back from the plywood. At this point, determine if you want an access panel behind your unit. This is especially important for ventilation if you plan to operate audio equipment in here. If so, cut the access opening to length from top and bottom, and from both sides. The cut-out can be saved if you wish to hinge it and create a back door. Just sand the edges and add hinges and perhaps a turn-button as a catch. Nail the back into place.



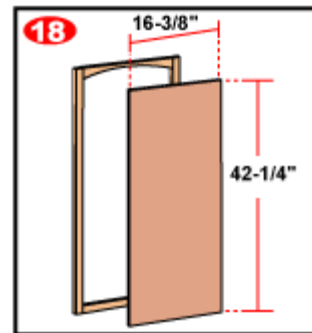
16. Cut six moveable shelves from the oak veneer paneling, and twelve edge trim strips from the solid oak stock. Glue the edge strips to the front and rear edges of the shelves, and sand the completed panels when the glue dries.



17. Cut the door stiles, the bottom rail and the arched rail to size. Trace the arch similar to that on the television module. It measures as shown on the ends and in the center. Cut the arch and sand all of the parts. Now drill holes in the ends of both rails, and in the inner lower edges of the stiles to accept dowels. Glue and clamp the frame together and round over the sides and the bottom of the doorframe, leaving the top square.



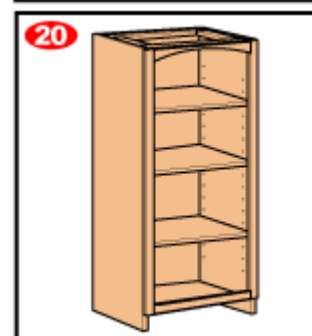
18. In order to precisely fit the glass, cut a cardboard template to the glass dimensions and center it over the inside of the frame. It will overlap the inner edge of the frame as shown. At the ends of the arch, the overlap is to length. Trace the template onto the frame and cut a rabbet within the traced line, all around. Square up the corners with a chisel and test fit. Take the template with you to order a piece of glass.



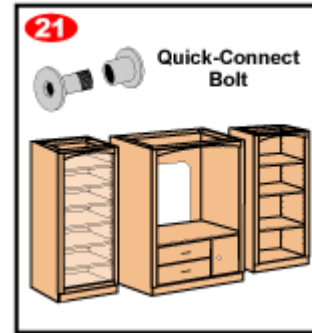
19. Decide which direction your door should swing, and install it using brass piano hinge cut to the same length as the door. Leave room at the bottom for installation of the skirt. Secure it with a magnetic door catch, and add a handle, if desired.



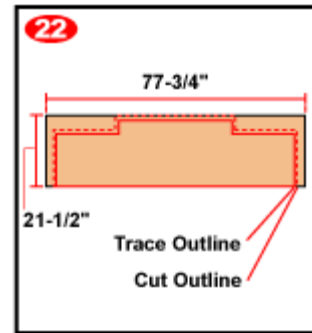
20. Your bookcase, for the opposite end of the television module, is just like the audio rack except for the following minor modifications:
- the door stiles are rounded over on both edges and the bottom end, and are mounted directly to the cabinet
  - the back has no opening unless you require one
  - the shelf support holes are spaced 2" apart
  - the door arched rail is rounded over on the ends and the curved edge, and mounted directly to the cabinet.
- This is done with an arch cleat, cut from scrap stock and glued into place under and flush with the lapframe. Glue and clamp the arch to the face of the cleat.



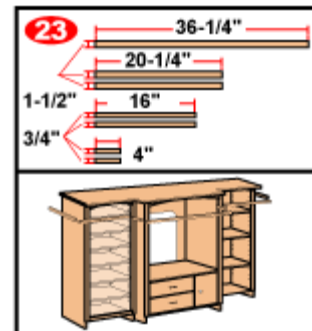
21. To attach the three modules, use sets of quick-connect nuts and bolts for easier disassembly in the future. With two allen wrenches, use four fasteners to connect each side module to the television cabinet.



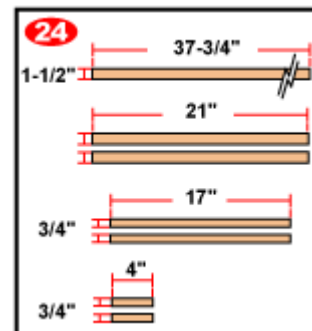
22. Now cut the top from your oak plywood, and place it over the TV cabinet, good side up. Trace the outline of the cabinet on the underside, flip it over, and draw your cut outline away from the front edges and from the end edges. Then cut the top, place it in position on the cabinet and screw it into place from underneath the three modules, four screws per module.



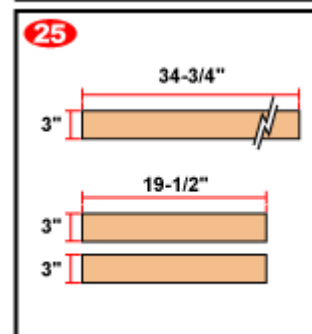
23. You'll now need to cut and mount filler strips from your spruce or pine stock. These will go under the top for the purpose of eliminating the gap that would otherwise occur behind the edge trim.



24. Now cut the trim pieces from your solid oak stock. Cut them a little long, and then round over the long edges. Round over one end of each side trim, then trim them to fit, and miter the inner ends. Also miter the matching end of the shortest trim piece, leaving the remaining end square.

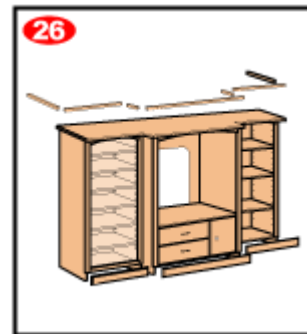


25. Cut the center skirt and two side skirts from your solid oak stock and round over all four edges. Then sand all parts before installing.



26. Now install all trim strips using glue and finishing nails. Install the end trim first, then side trim, and finally the short trim. Cut the center trim to fit over the short trim, round over its four edges, and install it. If necessary, round over the edges to blend the parts together. Then install the center skirt and the side skirts.

And there you have it, an entertainment center sure to draw compliments. Finish it as you'd like, and be sure to visit [ideasinwood.com](http://ideasinwood.com) for details, cutting diagrams and additional do-it-yourself inspiration.



## SHOP LIST

### Materials List

Pine or Spruce 1x6s  
Oak veneer plywood  
1/4" plywood  
#6 x 3/4" screws  
2-1/2" finishing nails  
Arch cleat  
Glue  
3/4" oak plywood  
Oak Stock  
Brass piano hinge  
Magnetic door catch  
Handle

### Tools List

Jigsaw or Bandsaw  
Drill or drill press  
C-clamps  
Sander  
Table saw  
Router  
Basic Hand Tools