OPEN FOR VIEWING

A handsome home for your TV and VCR.

Remember the old console TVs? Mounted in wooden cabinets, those early sets were as much furniture as new technology. The designers knew, or at least thought, that no one would want the naked machine in their home. After all, it just didn't match anything else. In fact, many of the TV cabinets had doors to keep the tube tastefully under wraps until the family's favorite weekly show came on.

Well, everything old is really new again--only with a twist. After living with plastic TVs and vestigial wood-grain accents for the last several decades, we're all ready to reincorporate The Box into the design scheme of our homes. TV cabinetwork is finally back--only now we do it ourselves.

A television cabinet, though, does more than just keep the interior decorator of the house happy. With most sets wired to a VCR at least, the modern household needs a central location for everything--including a place to hide the wires and store videotapes. Plus, an independent cabinet means

we're not wedded to this year's TV when next year's model looks too good to pass up.

With the doors closed, our TV cabinet blends into any decor. Open (above), the doors hide inside to provide a clear view of the screen. Shelves and drawers accommodate DVDs, tapes and accessories.

We designed our TV cabinet with enough room for a typical 27-in. set. There's a shelf for a VCR and cable or satellite box, and two roomy drawers for tapes and DVDs. The full-width front doors on the cabinet are mounted on retractable slides that allow the doors to slip back into the case sides for unobstructed viewing.

We constructed our cabinet out of a combination of solid maple and maple-veneer panels. The case sides, shelves and back are made from veneer-core panels, while we used flat, stable MDF (medium-density fiberboard) stock with maple veneers for the door panels. The doorframes and the 1 5/8-in.-thick case top are made from solid maple stock
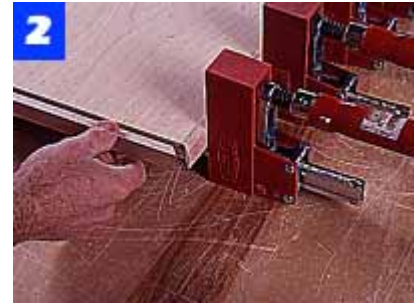
The Case Panels

Begin by cutting 3/4-in. panels to rough size for the case sides, shelves, drawer partition and insert-case parts. Rip maple edge-banding strips from 13/16-in. maple, and glue the strips to the front edges of the case sides, drawer partition and insert panels. Center the strips so they protrude beyond the panel faces an equal amount on both sides.

Use a plane to trim the edge banding flush with the panel surfaces. If the wood tears, try planing in the opposite direction.

Let the glue set for about 20 minutes, then scrape off any excess. When the glue is dry, use a block plane to trim the strips flush with the faces **(Photo 1)**. Then, cut the panels to exact size.

Install edge banding on the case bottom ends and front edge, using miter joints at the corners **(Photo 2)**, and plane the strips flush. Do not edge-band the middle shelf at this time. The edge molding for that shelf will be applied after you've assembled the case.

Cut the case bottom panel to finished size. Glue mitered edge-banding strips to the front and both ends of the panel.

Make the 24 3/4-in.-wide maple top by gluing up several narrow pieces of stock. Cut each piece an inch or two longer than finished dimension and joint the mating edges. While simple glued butt joints are fine, joining plates help align the pieces during assembly. After cutting the slots **(Photo 3)**, spread glue, install the plates and clamp the boards. Scrape off excess glue after about 20 minutes. When the glue has fully cured, use a circular saw and straightedge guide to cut the panel to size.

Glue up solid maple stock to form the case top. Joining plates in mating surfaces help keep pieces aligned during assembly.

Case Assembly

Lay out the joining plate positions for the case panels and cut the slots. For slots in a panel face, use a straightedge guide to position the plate joiner **(Photo 4)**.

Cut joining-plate slots in case parts. Clamp a guide across the panels to help position the joiner for slots in the panel faces.

Use a router with a straight bit and edge guide to cut the rabbets along the back edges of the case sides **(Photo 5)**. Note that the rabbets for the top and bottom panels stop short of the panel ends. Use a sharp chisel to square the rabbet ends after they've been routed.

Use a straight bit and edge guide to rout the rabbets along the back edges of the case sides and the top and bottom panels.

Rout the edge profile on the case top in two steps. First, use a 5/8-in.-rad. rounding-over bit to cut the profile along the bottom edge of the top panel **(Photo 6)**. Then, turn the panel over and use a 30 degree chamfer bit to cut the top profile.

Use a 1/4-in. cove bit to rout the edge band on the case bottom edge. Adjust the depth of the bit so it makes only a 1/8-in.-deep cut, and test the cut on a piece of scrap stock before moving on to the actual piece.

Use the same bit in the router table to cut the molding for the middle shelf and case sides. Start with a maple blank about 48 in. long, 4 in. wide and 3/4 in. thick. Rout both corners of one edge of the blank, and use a table saw to rip the molding from the blank.

Join the drawer partition to the middle shelf with joining plates and screws **(Photo 7)**. Because this joint is hidden, use plates to align the parts and use screws instead of glue. Clamp the parts together while you bore pilot holes for 2-in. No. 8 screws and drive the screws.

Next, spread glue in the plate slots to join the case sides with the middle shelf and assemble. Use cauls to distribute the clamping pressure **(Photo 8)**. Apply glue to the slots to join the top and sides, position the top and use clamps to pull the joints tight.

Bore and countersink screwholes in the case bottom, and pilot holes in the case sides and drawer partition. Then, install joining plates and screw together the parts **(Photo 9)**.

Use a 5/8-in.-rad. rounding-over bit to shape the bottom edge of the case top. Rout a 30-degree chamfer around the edge.

Because screwheads will be hidden, use screws to join the partition to the case's middle shelf. Plates keep parts aligned.

Glue the case sides to the middle shelf. A caul with a thin veneer shim at the center distributes pressure across the panel.

Use a combination of joining plates and screws to fasten the case bottom to the

Miter the molding to length for the middle shelf and case sides. Spread glue on the shelf strip and clamp it in place. Install the side strips using glue and 1-in. brads **(Photo 10)**. Now you're ready to set the nailheads and fill.

Use glue and 1-in. brads to fasten molding to the case sides. Set the nailheads and fill with a matching, sandable wood filler.

Making The Base

Cut 4-in.-sq. leg blocks of 1-in. maple, with one edge of each parallel to the grain beveled to 45 degrees. Cut a No. 0 plate joint slot in the beveled edge. Next, use a dado blade in the table saw to shape the rabbet at the top inside edge of each leg block **(Photo 11)**.

Use a clamp to hold the leg blanks to the table saw miter gauge when cutting the rabbet along the top inside surface.

Spread glue on the beveled edges and plate slots, insert the plates and assemble the legs. When the glue has dried, make the angled cuts to taper each leg.

Cut the base rails to size with mitered ends. Glue and screw the rails to the legs **(Photo 12)**. Bore and countersink pilot holes for attaching the rails to the case, and then install the base.

After cutting the base rails to size with mitered ends, use screws and glue to fasten the rails to the mitered legs.

Cut the case back from a sheet of 1/2-in.-thick plywood. Mark the location of the 2-in.-dia. cord-access hole in the back panel and bore the hole with a multispur or Forstner bit. Then, mount the back to the case with 1-in. No. 6 screws.

Rout the mortises in the doorframe components. Clamping stiles together

Door Construction

For all door parts, rip and crosscut 13/16-in.-thick maple to size. Lay out the joints and use a router with a spiral up-cutting bit and edge guide to cut the mortises. Clamp the stiles together to form a wide, stable base for the router, and cut the four mortises in each stile **(Photo 13)**. Next, cut the mortises in the top and bottom rails and mullions. Use a sharp chisel to square the rounded ends of each mortise **(Photo 14)**. Then, rout the panel grooves in the edges of stiles, rails and mullions **(Photo 15)**.

Use a dado blade in the table saw to cut the tenons on the rails and mullions. First, cut the tenon cheeks **(Photo 16)**, and then readjust the blade height to cut the shoulder at the outside edge of the top and bottom rails. Clamp the short rails to the miter gauge so your hands stay safely away from the blade.

Cut the door panels to size and use a straight bit in the router table to shape the rabbet around the inside edges of each panel. Sand the panels with 120-, 150-, 180- and 220-grit sandpaper before beginning the door assembly.

Spread glue in mullion mortises and corresponding short rail tenons, assemble these parts and clamp. Next, spread glue on the mullion

provides an extra-wide base for the router.

When the routing is done, use a sharp chisel to square the ends of the mortises in stiles, mullions and rails.

Adjust the router bit cutting depth and shape the panel grooves in the edges of the door stiles, rails and mullions.

Use a dado blade in the table saw to cut the rail and mullion tenons. A stop clamped to the miter gauge positions the work.

After joining short rails to the mullion,

tenons and top and bottom rail mortises and join **(Photo 17)**. When the glue has set, slide the panels into the grooves. Then, spread glue on the rest of the joints, add the stiles and clamp.

Study the instructions included with the door hardware so that you understand the operation of the slide before beginning the installation. Secure the door slides to the inside of the cabinet sides. Cut small spacer blocks to help position the slides accurately from the case top and bottom and parallel to each other. Next, attach the rack drives to the case sides. Secure the pinion wheels and mounting hardware to the profile rods as shown in the slide instructions. Mount the rod assembly on the slides **(Photo 18)** and fasten the mounting plates.

Use a Forstner or multispur bit in a drill press to bore a 35mm-dia. x 1/2-in.-deep recess in the doors for each hinge. Install the hinges **(Photo 19)** and mount the doors on the slides. Use the mounting-plate screws to adjust the doors for proper operation and a uniform 1/8-in. margin.

Final Steps

Bore the 2-in.-dia. wire-access hole in the insert shelf. After assembling the case insert with joining plates and screws, slide the insert into the cabinet, bore and countersink pilot holes, and secure the insert to the cabinet top and middle shelf with screws **(Photo 20)**.

Cut 1/2-in. maple to size for the drawer parts. Use a dado blade to make the rabbet and dado joints in the drawer sides and the grooves for drawer bottoms. Assemble the drawer boxes with glue and 4d finishing nails.

Cut bottom panels from 1/4-in. maple plywood, slide them in place and screw each to a drawer back. Cut drawer faces from 13/16-in. stock, and screw them to the drawers. Mount the drawer slides following the manufacturers instructions. Bore pilot holes for the door and drawer knobs but don't install them until the case is finished.

Disassemble the case and remove the hardware for finishing.

apply glue and clamp the rails in place. Then install panels and stiles.

Screw the pinion-wheel/mounting-block assembly to the door slide. Detailed instructions are included with the hardware.

Bore 35mm-dia. recesses in the door stiles for the hinge cups. Then, install the hinges to the doors and adjust for proper operation.

After assembling the case insert, bore pilot holes and fasten it to the cabinet top and middle shelf with screws.

Sand all case parts to 220 grit, dusting carefully between grits. Wipe all surfaces with a tack cloth before applying the first coat of finish. We applied three coats of Behlen's Water White Restoration Varnish, following the manufacturer's instructions. When the last coat is dry, buff the finish with 4/0 steel wool and polish it with a soft cloth. Finally, reassemble the case and install the doors, drawers and hardware.

Key	No.	Size and description (use)
MATERIALS LIST--TV CABINET		
A1	2	3/4 x 25 5/8 x 38 3/4" plywood (case side)
A2	2	3/8 x 3/4 x 25 5/8" maple (edge band)
B1	1	3/4 x 5 1/2 x 22 1/4" plywood (partition)
B2	1	3/8 x 3/4 x 5 1/2" maple (edge band)
C1	3	3/4 x 22 1/4 x 36" plywood (insert shelf)
C2	3	3/8 x 3/4 x 36" maple (edge band)
C3	2	3/4 x 22 1/4 x 32 1/2" plywood (insert side)
C4	2	3/8 x 3/4 x 32 1/2" maple (edge band)
D1	1	3/4 x 24 x 43 1/2" plywood (case bottom)
D2	2	3/8 x 3/4 x 24 3/8" maple (edge band)
D3	1	3/8 x 3/4 x 44 1/4" maple (edge band)
E	1	3/4 x 23 1/2 x 42" plywood (middle shelf)
F1	2	3/8 x 3/4 x 24 3/8" maple (molding)
F2	1	3/8 x 3/4 x 44 1/4" maple (molding)
G*	1	1 5/8 x 24 3/4 x 45" maple (top)
H	8	1 x 3 1/4 x 4" plywood (leg)
I1	2	3/4 x 1 3/4 x 42 1/2" maple (base rail)
I2	2	3/4 x 1 3/4 x 23" maple (base rail)
J	1	1/2 x 39 3/4 x 43" plywood (back)
K	4	13/16 x 4 x 32 1/4" maple (stile)
L	4	13/16 x 5 1/8 x 14 13/16" maple (rail)
M	2	13/16 x 2 13/16 x 24" maple (mullion)
N	8	13/16 x 2 x 7" maple (short rail)
O	12	1/2 x 6 x 7" plywood (door panel)
P	4	1/2 x 4 3/4 x 22 1/2" maple (drawer side)
Q	2	1/2 x 4 3/4 x 19 1/8" maple (drawer front)
R	2	1/4 x 19 1/8 x 21 3/4" plywood (bottom)
S	2	1/2 x 4 1/4 x 19 1/8" maple (drawer back)
T	2	13/16 x 5 1/4 x 20 13/16" maple (drawer face)
U**	2	pair 22" drawer slides (Accuride No. 3832-

		22)
V**	2	pocket door hardware
W†	4	knob
X1	as reqd.	1" brad
X2	"	4d finishing nail
Y1	"	1/2" No. 6 rh woodscrew
Y2	"	1" No. 6 rh woodscrew
Y3	"	1" No. 8 fh woodscrew
Y4	"	1 1/4" No. 8 fh woodscrew
Y5	"	2" No. 8 fh woodscrew
Y6	"	2 1/4" No. 8 fh woodscrew
Z1	"	No. 0 joining plate
Z2	"	No. 20 joining plate

Misc.: 30 degree chamfer bit (No. 160-325), Wesley Tools Ltd., 346 Maple Ave., Westbury, NY 11590; glue; 120-, 150-, 180- and 220-grit sandpaper; tack cloth; 4/0 steel wool; Behlen Water White Restoration Varnish (No. 849-328), Woodworker's Supply, 1108 N. Glenn Rd., Casper, WY 82601; 800-645-9292.

* **Laminate from narrower stock.**

** Pocket door hardware (No. 31131) and drawer slides (No. 32516) available from Rockler Woodworking and Hardware, 4365 Willow Dr., Medina, MN 55340; 800-279-4441.

† Knob (No. 74RE4) available from Whitechapel Ltd., P.O. Box 136, Wilson, WY 83014; 800-468-5534.

Note: MDF-core stock preferred for door panels.

TV CABINET
24-3/4" DEEP X 45" WIDE X 45-1/8" HIGH

35MM X 1/2"-DEEP HINGE HOLE

4-1/8" 1/2" L 1-1/16" 4-1/8" 1/2"

7" 6-1/2" 5-1/2" 1-13/16"

5" 1/2" 3/8"

1/2" 1-1/16"

1/2" (GROOVES)
1-1/16" (MORTISES)

K M N

7"

7" 6-1/2" 1"

6MM

4-1/8" 1-13/16"

3-1/8" 1/2" A1, A2

DOOR DETAILS

TENON AND MORTISE DETAIL
1-1/16" 1"
7/32" 3/8"

PANEL AND FRAME DETAIL
O 1/2"
1/16" REVEAL ON
INSIDE OF DOOR
1/8" 3/8" 7/32"
A1, A2
9/16"

PARTIAL SECTION AT FRONT
3/4" (TYP.) V
1"
3-1/4"
RACK
1"
1-13/16"
PROFILE ROD
SLIDE
A1, A2
3-1/4"
1"
7/8" 5-1/2" E
U
2-9/16"
D1 B1

1/2 X 1/2 X 43"
STOPPED RABBET
G

30° 3/8"
5/8" RAD.

Y4 C1 C2 Z2

2"-DIA. HOLE
C3 C4 C1 3"
V
Y6

J Y5

2"-DIA. HOLE
C1 C2
J 11-1/2"

L O M N K K N O L

5" J
Y2
C3 C4
W

Y2 J A1
A1 A2
1/2 X 1/2" RABBET

8-1/8"
1-1/8"

E F2 Y5
P R S
Y3 X2 U
T W O

3/8"

Q R

7/8" 2-1/4"

B1 B2 Z2
2-5/16"

1/2 X 1/2 X 43"
STOPPED RABBET

D1 D2 D3

45° MITER

1/4 X 1/2" RABBET 1/4 X 1/2" DADO

13/16" (INNER EDGE) P S

W
3/8" 1/4 X 1/4" GROOVES R Y1
1/4" 1/2"
1/8" **DRAWER DETAILS**

NOTE:
1/8" CLEARANCE ON
ALL SIDES OF DOORS
AND DRAWER FACES

I1 Y5 Y3 I2 Y6

7/16" 1/4"
1/8" 1/4" RAD.
D2, D3, F1, F2
(MITER FRONT CORNERS)

F1 X1

Z1 45° MITER 1/2"
3-1/4"
H 1-3/4"
2-1/4"
1-3/4"
LEG DETAIL