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Dave Campbell
Editorial Content Chief, *WOOD* magazine

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BASIC-BUILT™
GREAT PROJECTS MADE SIMPLE.

Slim-Profile TV/Game Cabinet

Give your flat-panel television or dartboard a wall-mounted hideaway that's a breeze to build.

Build the cabinet with two or four doors, depending on what's inside. Chalkboard-painted panels inside the dartboard cabinet doors provide a place to keep score.

As bulky tube-style TVs gradually disappear, so go the old-style armoires and entertainment centers that held them. Today's televisions require smaller, sleeker storage—the kind you can build yourself using basic tools and home-center materials. In this article, we'll first take you through the steps to build the TV cabinet. Then, on *page 8*, you'll learn about the minor modifications necessary to construct a matching dartboard case.

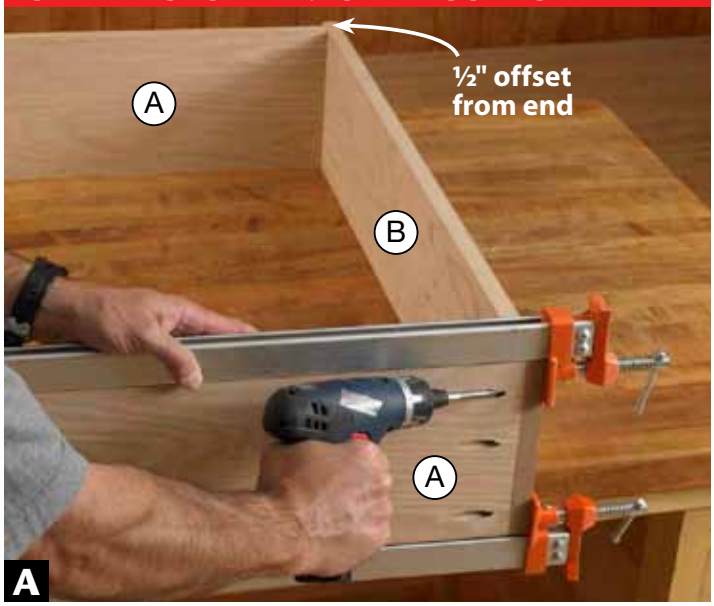
WHAT YOU'LL NEED

- **Materials:** ¾" oak, ¼" and ¾" oak plywood, 5/16×¾" oak molding.

PROJECT HIGHLIGHTS

- Overall dimensions: 52¾" wide × 8½" deep × 36¼" high.
- The interior dimensions accept most 42" flat-screen televisions up to 49½" wide × 5½" deep × 32" high.
- Make a half-size version to conceal a standard-size dartboard.
- Build the doors without the expense of cope-and-stick router bits.

CLAMP CASE PARTS IN POSITION



A

Clamps keep the top and bottom (A) from moving while drilling and driving pocket-hole screws into the sides (B).

Assemble the case

1 Cut the top and bottom (A), sides (B), and hanging cleats (C) to size [**Materials List**, *page 7*]. ***Quick Tip! A hang-up without hang-ups.*** To make the hanging cleat fit snugly within the case, cut the cleat with the tablesaw setup used to cut the top and bottom to length.

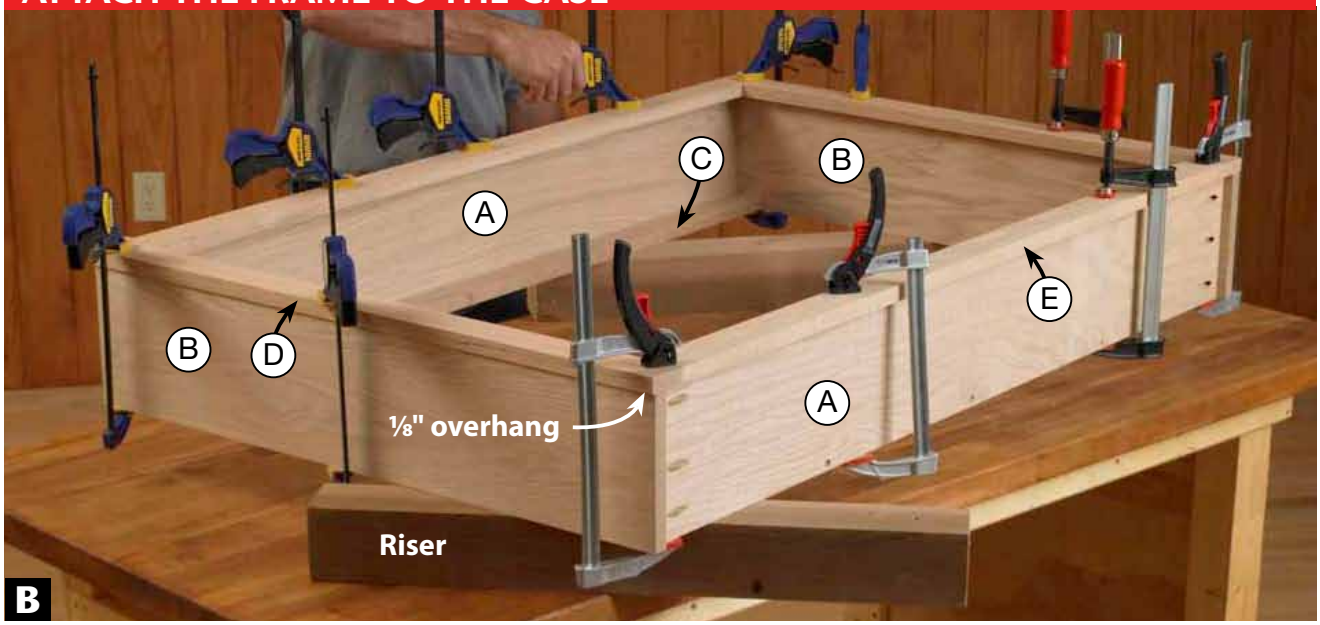
2 From the outside face, drill and pocket-screw the bottom (A) ½" from the bottom ends of the sides (B) [**Drawing 1**]. Then pocket-screw the top (A) to the sides, keeping the ends and edges flush [**Photo A**].

3 Screw the cleats (C) to the top and bottom (A) and drive pocket screws from the cleats into the sides (B). (For the #8 screws in this project, drill ⅛" pilot holes.)

4 Cut the face-frame stiles (D) and rails (E) to size. Pocket-screw the rails to the stiles.

5 Glue and clamp the frame (D/E) flush with the top of the case (A/B/C), with the stiles overlapping the sides by ⅛" [**Drawing 1a**, **Photo B**].

ATTACH THE FRAME TO THE CASE



B

Raise the case (A–E) on riser blocks to provide clearance for the clamps. This also makes it easier to use an assortment of clamps.

6 Cut two 54"-long blanks for the top/bottom front trim (F), a 38"-long blank for the top/bottom end trim (G), one 56"-long blank for the front cap trim (H), and a 22"-long blank for end-cap trim (I). ***Quick Tip! Rout, then cut to size.*** You can machine long parts easier and safer than short ones, so rout profiles on the end trim and end-cap trim before cutting them to length. Rout ½" coves on the top/bottom front trim and top/bottom end trim. Rout ⅜" beads on the front cap and end-cap trim [**Drawing 1a**]. Sand trim parts to 180 grit.

7 Miter the top and bottom front trim (F) to length. Center, drill, and screw the front trim pieces on the case (A–E) with a ¼" front overhang.

8 Cut the top/bottom end trim (G) about 1" oversize and miter one end to make two left and right parts. Mark and cut one top/bottom end trim [**Drawing 1**, **Photo C**]. Then glue and screw it to the case (A–F) [**Photo D**]. Repeat for the other end trim and the front-cap trim (H) and end-cap trim (I).

Make two pairs of doors

1 Cut the door rails (J) and stiles (K) to size. Attach the rails to the stiles by drilling and driving two pocket-hole screws [**Drawing 2**]. **Note:** *Place pocket-hole screws at least 11/16" from the edges of the rails to keep them clear of rabbets to be routed later* [**Drawing 2a**].

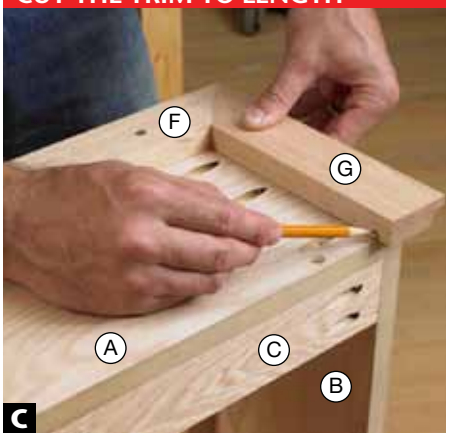
2 Install a ¼" rabbeting bit and make several progressively deeper passes to rout a rabbet ¼" deep around the inside edges of the door frame (J/K).

3 Cut four door panels (L) to size. Mark an 11/16" radius at each corner [**Photo E**] and sand to the lines until they fit between the rabbets [**Photo F**]. Finish-sand the panel faces to 180 grit, then apply a thin bead of glue to the frame rabbet and clamp the panels in place or use two ⅜" brads to secure each panel.

4 After the glue dries, cut the door horizontal trim (M) and vertical trim (N) 1" oversize from molding like that in **Drawing 2b**. (We bought ours at a local home center.) Miter one end of each trim part, then miter each trim part to fit the door frame [**Photo G**]. Glue and clamp the trim in place.

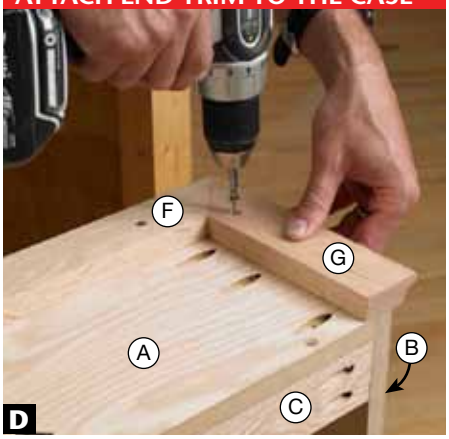
5 Rout ⅜" rabbets on the ends of all doors. On the two doors that will receive hinges, rout an additional rabbet along the door edge that hinges to the frame stiles (D) [**Drawing 2**].

CUT THE TRIM TO LENGTH



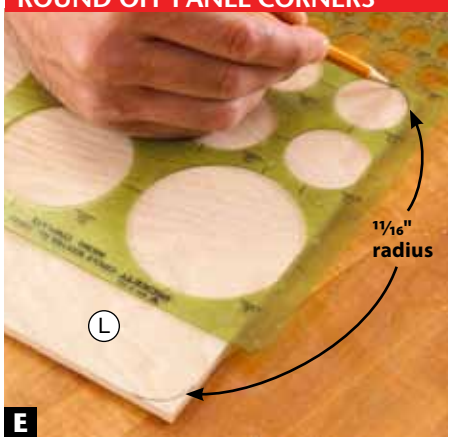
C With the top/bottom end trim (G) miter against the front trim (F), mark the end trim at the edge of the top/bottom (A).

ATTACH END TRIM TO THE CASE



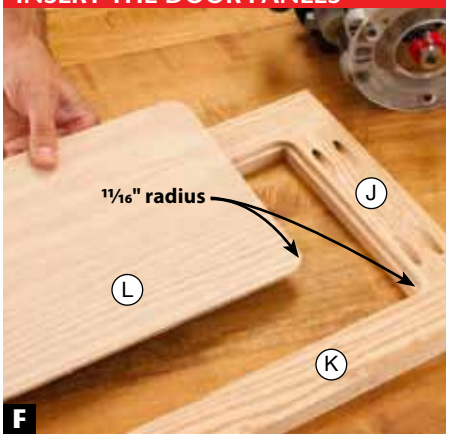
D Drill countersunk ⅛" pilot holes in the top/bottom end trim (G) and pilot holes in the sides (B) before gluing and screwing them.

ROUND OFF PANEL CORNERS



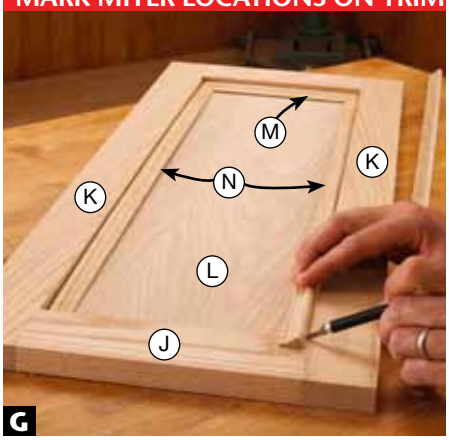
E Use a template from an art or office supply store to mark corner radii on the door panels (L) to match the door-frame (J/K) rabbets.

INSERT THE DOOR PANELS



F Sanding the panels (L) before they're glued in place eliminates the problem of sanding in tight corners.

MARK MITER LOCATIONS ON TRIM

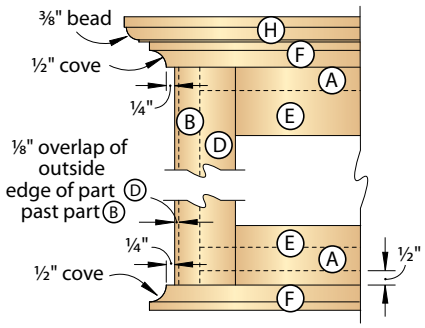


G By scribing the outside edge of the door trim (N) with a crafts knife instead of a pencil, you can miter the end for an exact fit.

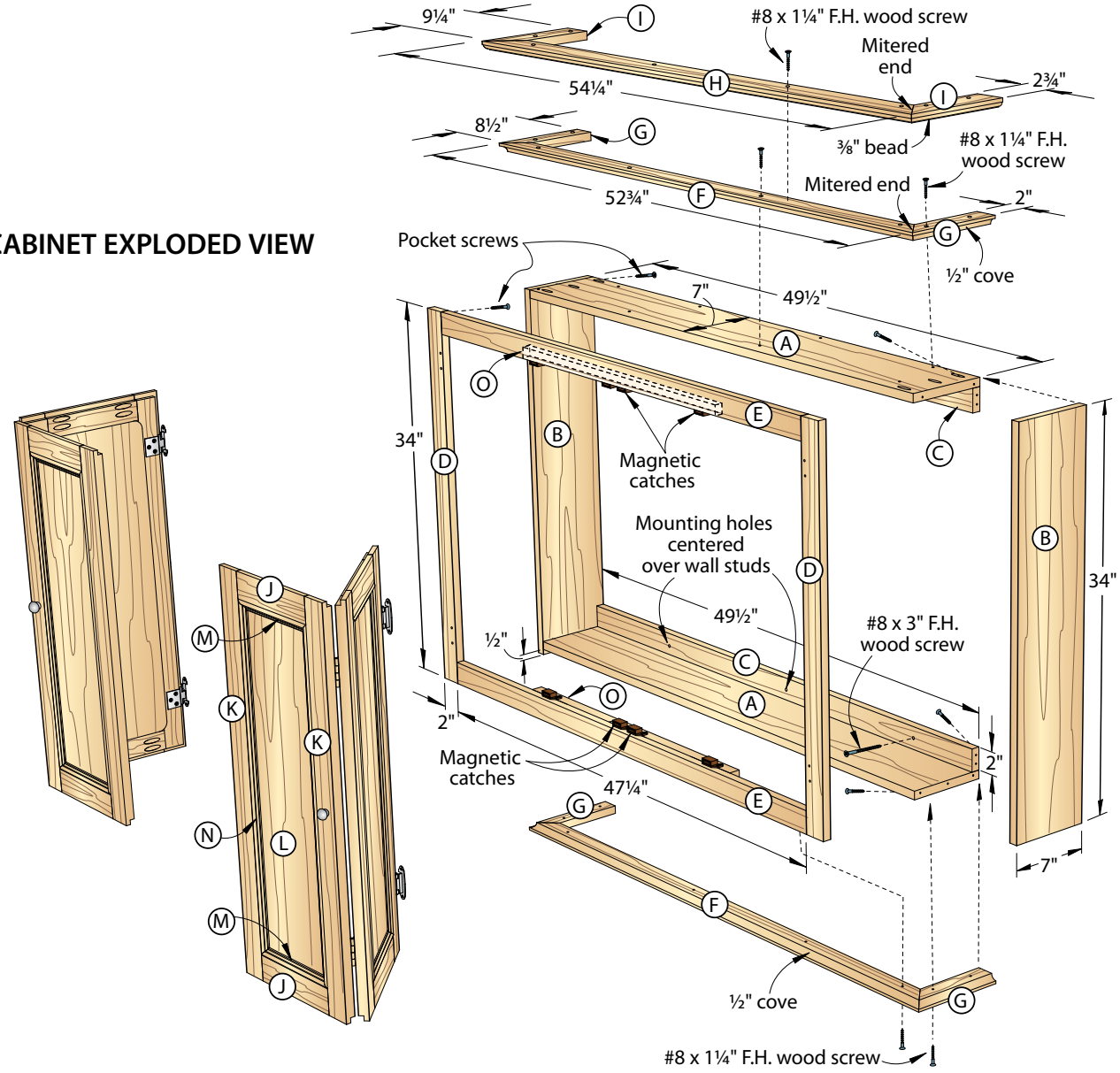
MOUNT HINGES TO THE DOORS

H Center and screw on the hinges between two doors separated by a folded business card that acts as a spacer.

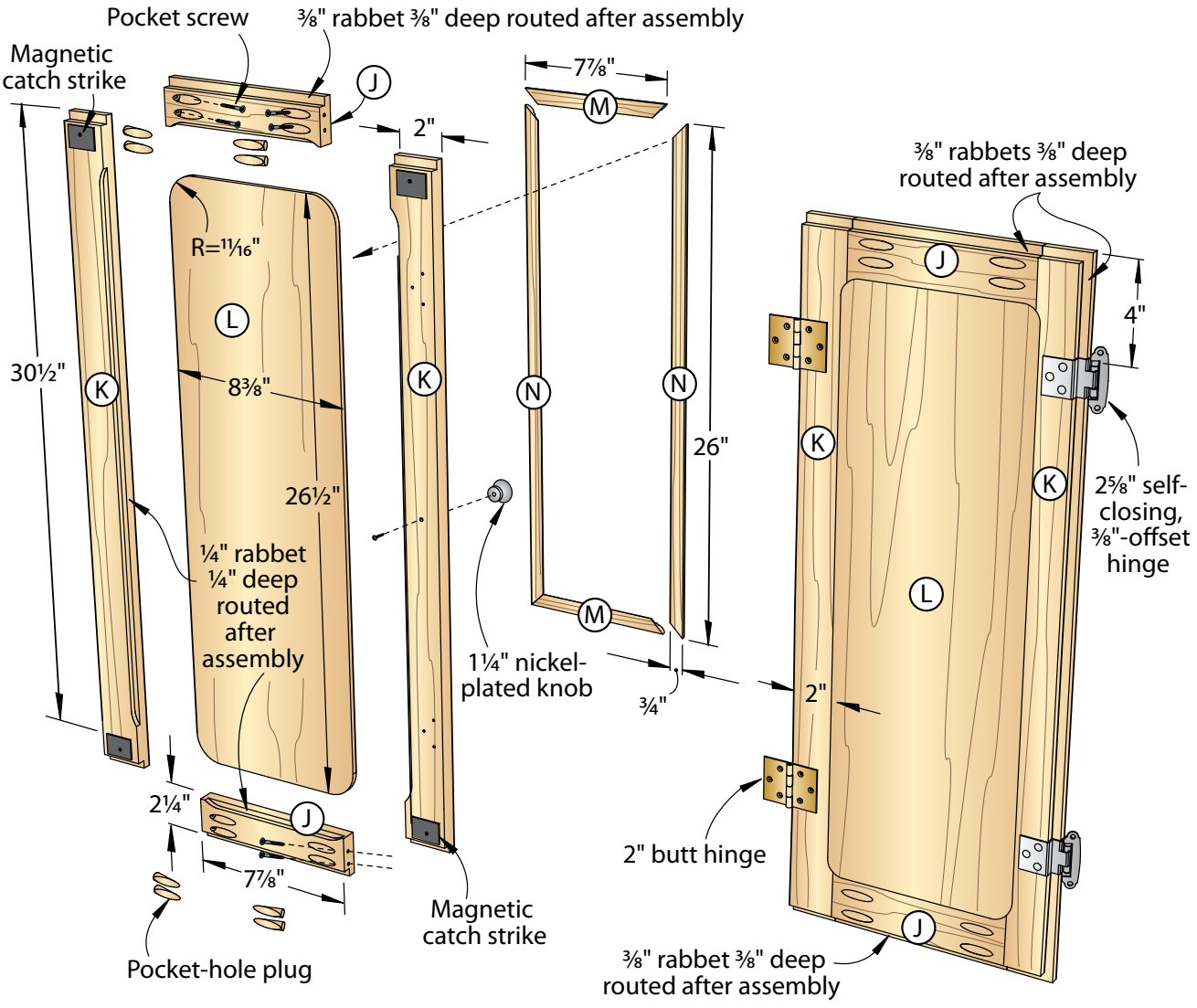
1a CABINET FRONT VIEW



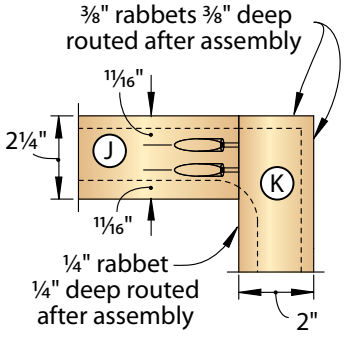
1 TV CABINET EXPLODED VIEW



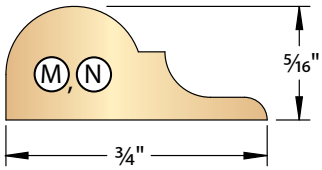
2 DOUBLE-DOOR ASSEMBLY



2a DOOR DETAIL



2b DOOR TRIM PROFILE



Assemble the cabinet

1 Lay one outside door (J–M) side by side with one inside door and space them apart using folded business cards. Center a 2" butt hinge over the gap, then drill and fasten the hinge in place [**Photo H**]. Repeat for the other hinge, and again for the other double door.

2 Drill and screw the ⅜"-offset hinges to the rabbeted door stile (K) of an outside door (J–M). Center the double doors between the frame rails (E). Then drill and screw the hinges to a frame stile (D) [**Photo I**]. Repeat for the other double door. ***Quick Tip! Shrink doors to fit***. If the two inner doors bump when closed, cut them some slack on your tablesaw. Note the amount of door overlap, then remove the hinges from both doors. Adjust your tablesaw to remove half the overlap from the adjoining door stiles. Then reassemble the double doors and recheck the fit.

3 Cut the magnet blocks (O) to size; then glue and clamp them to the frame rails (E), centered from side to side and flush with the rail edges [**Drawing 1**]. Drill and screw magnetic catches to the blocks; then drill and screw knobs and strike plates to the doors (J–M).

4 Remove the hardware, fill the pocket holes in the doors with plugs, and sand smooth. Then sand all parts to 180 grit and finish. We applied Varathane no. 209 Golden Pecan stain and two coats of Old Masters water-based finish.

5 Reattach the hardware and mount the cabinet on a wall where you'll hang the television by screwing through the hanging cleats (C) into wall studs. Mount the television using tips in the sidebar *Wire Your TV Like an Expert*, and close the doors on a successful project.

Wire Your TV Like an Expert

Before you mount your television cabinet, plan how you'll wire it for electricity, antenna, cable, speakers, and add-ons such as a DVD player. This can be as simple as installing a wiring chase from the TV cabinet to the baseboard or as sophisticated as running in-wall wiring.

For help with this, we turned to the online Learning Center at Crutchfield, a mail-order and retail electronics specialist. Learning Center topics include everything from audio/video basics to installing home-theater systems. To get you started, we worked with Crutchfield to bring you these Learning Center tutorials:

- **Tips and Techniques for Home A/V Cable Management** covers how to conceal wires behind raceway channels without in-wall wiring. Visit woodmagazine.com/cables
- **A Guide to Wall-Mounting Your Flat-Panel TV** explains in detail how to safely attach a flat-panel television to the wall behind your new cabinet. Visit woodmagazine.com/flatpanel
- **In-Wall Wiring Guide** explains how to run wires and cables within walls. Visit woodmagazine.com/inwallwiring
- **TV Connections** helps you make sense of ports on the back of today's televisions and describes which types of cables give you the highest quality picture and sound. Visit woodmagazine.com/connect
- To explore topics ranging from how to shop for a high-definition TV to creating a home theater, visit the Crutchfield Learning Center at crutchfield.com

FASTEN HINGES TO THE CASE

With rabbets on the centered double doors resting on the frame stile (D) and rails (E), drill and drive hinge screws.

Materials List (TV Cabinet)

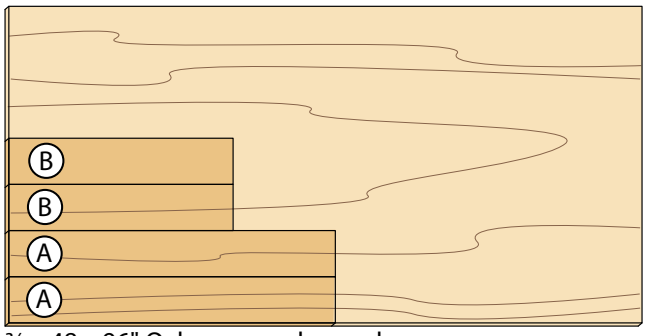
Part		FINISHED SIZE T	W	L	Matl.	Qty.
Case						
A	top/bottom	¾"	7"	49½"	OP	2
B	sides	¾"	7"	34"	OP	2
C	hanging cleats	¾"	2"	49½"	O	2
D	frame stiles	¾"	2"	34"	O	2
E	frame rails	¾"	2"	47¼"	O	2
F*	top/bottom front trim	¾"	2"	52¾"	O	2
G*	top/bottom end trim	¾"	2"	8½"	O	4
H*	front-cap trim	¾"	2¾"	54¼"	O	1
I*	end-cap trim	¾"	2¾"	9¼"	O	2
Doors (4)						
J	rails	¾"	2¼"	7⅞"	O	8
K	stiles	¾"	2"	30½"	O	8
L	panels	¼"	8⅜"	26½"	OP	4
M*	horizontal trim	5/16"	¾"	7⅞"	O	8
N*	vertical trim	5/16"	¾"	26"	O	8
O	magnet blocks	¾"	¾"	30"	O	2

*Parts initially cut oversize. See the instructions.

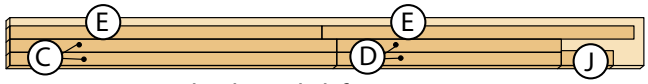
Sources

Materials key: OP–oak-veneer plywood, O–red oak.
Supplies: Pocket screws, #8×1¼" flathead wood screws, #8×3" flathead wood screws, knobs (2), 2" butt hinges (4), ⅜"-offset hinges (4), magnetic catches (8), pocket-hole plugs, 1¼" nickel-plated knobs (2).
Bits: ¼" rabbeting bit, ⅜" rabbeting bit, ⅜" round-over bit, ½" cove bit, pocket-hole drill bit and jig.

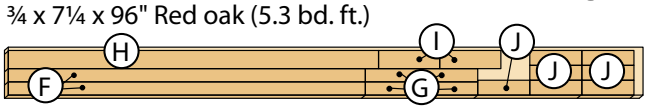
Cutting Diagram



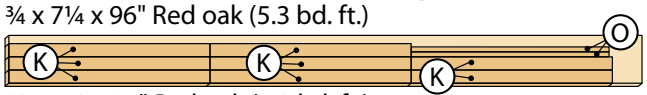
¾ x 48 x 96" Oak-veneer plywood



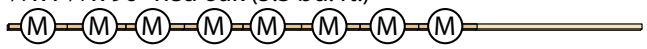
¾ x 7¼ x 96" Red oak (5.3 bd. ft.)



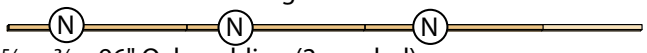
¾ x 7¼ x 96" Red oak (5.3 bd. ft.)



¾ x 7¼ x 96" Red oak (5.3 bd. ft.)

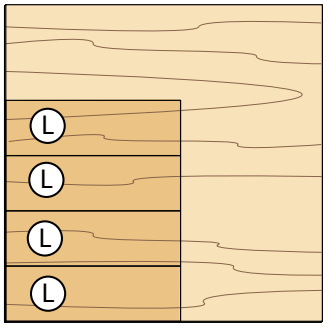


5/16 x ¾ x 96" Oak molding



5/16 x ¾ x 96" Oak molding (2 needed)

5/16 x ¾ x 96" Oak molding



¼ x 48 x 48" Oak-veneer plywood

Written by **Bob Wilson** with **Kevin Boyle**
Project design: **Jeff Mertz**
Illustrations: **Roxanne LeMoine; Lorna Johnson**
Graphic design: **Lorna Johnson**

Build a dartboard cabinet that scores a bull's-eye

Make an open-back dartboard cabinet using most of the same techniques and parts as the television cabinet.

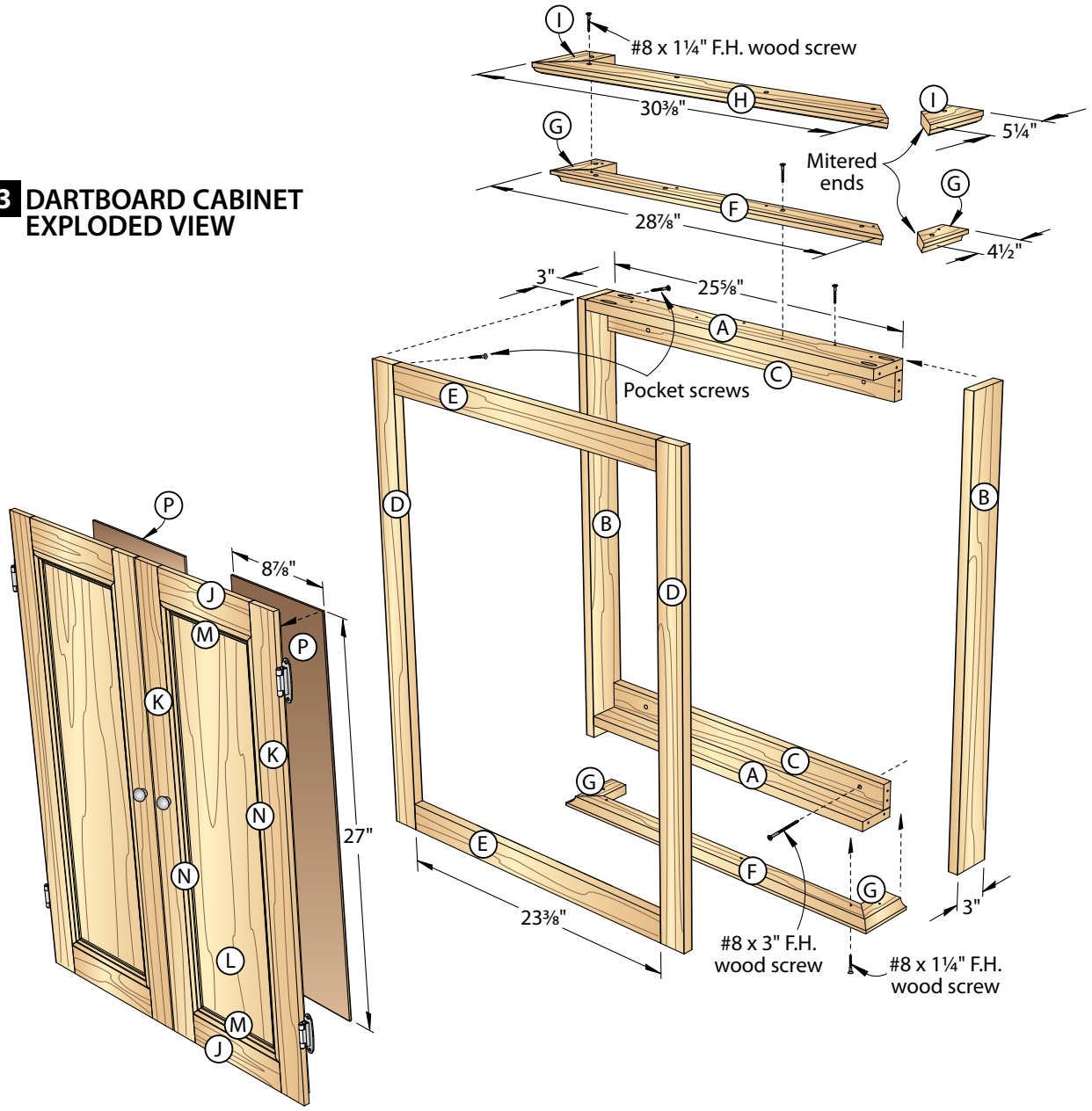
1 Cut the parts to size where noted [**Materials List,** *page 9*], as with the television cabinet. Note that you'll make only two single doors this time and no magnet block [**Drawing 3**]. Instead, you'll add two chalkboard panels (P).

2 Assemble the cabinet (A/B/C) and frame (D/E) as before. Attach the front and end trim (F, G) to the top and bottom, followed by the front and end-cap trim (H, I).

3 Make two single doors (J–N) like the outside doors on the TV cabinet. Cut the chalkboard panels (P) to size and cover the front face with two coats of chalkboard paint [**Sources**]. Then center, glue, and clamp a chalkboard panel to the inside panel of each door.

4 Mount hinges on the doors and fasten them to the stiles (D). Sand where needed up to 180 grit and finish as desired. Hang a dartboard with its bull's-eye the regulation 5'8" above the floor and center the cabinet over the dartboard. Screw it through the hanging cleats (C) and into the wall studs.

3 DARTBOARD CABINET EXPLODED VIEW



Materials List (Dartboard Cabinet)

Part		FINISHED SIZE T	W	L	Matl.	Qty.
Case						
A	top/bottom	¾"	3"	25⅝"	OP	2
B	sides	¾"	3"	34"	OP	2
C	hanging cleats	¾"	2"	25⅝"	O	2
D	frame stiles	¾"	2"	34"	O	2
E	frame rails	¾"	2"	23⅜"	O	2
F*	top/bottom front trim	¾"	2"	28⅞"	O	2
G*	top/bottom end trim	¾"	2"	4½"	O	4
H*	front cap trim	¾"	2¾"	30⅜"	O	1
I*	end cap trim	¾"	2¾"	5¼"	O	2
Doors (2)						
J	rails	¾"	2¼"	7⅞"	O	4
K	stiles	¾"	2"	30½"	O	4
L	panels	¼"	8⅜"	26½"	OP	2
M*	horizontal trim	5⁄16"	¾"	7⅞"	O	4
N*	vertical trim	5⁄16"	¾"	26"	O	4
P	chalkboard panels	¼"	8⅞"	27"	HB	2

*Parts initially cut oversize. See the instructions.

Sources

Materials key: OP–oak-veneer plywood, O–red oak, HB–hardboard.
Supplies: Pocket screws, #8×1¼" flathead wood screws, #8×3" flathead wood screws, knobs (2), ⅜"-offset hinges (4), pocket-hole plugs, 1¼" nickel-plated knobs.
Bits: ¼" rabbeting bit, ⅜" rabbeting bit, ⅜" round-over bit, ½" cove bit, pocket-hole drill bit and jig.
Sources: Blackboard paint no. 203261, $12 per quart, available at Lowe's stores. Or use Rust-Oleum no. 206540

MORE RESOURCES

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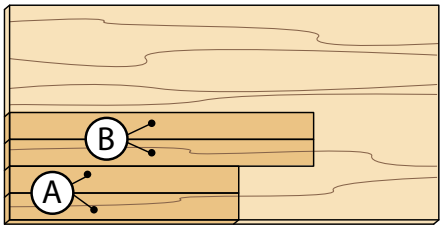
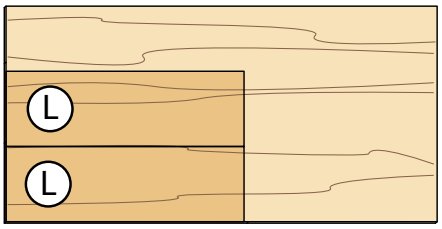
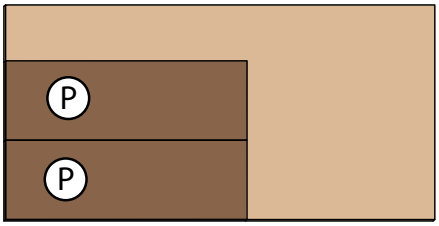
Cutting Diagram



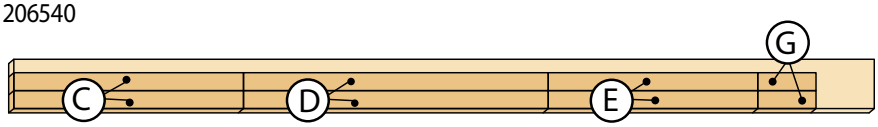
¾ x 24 x 48" Oak-veneer plywood



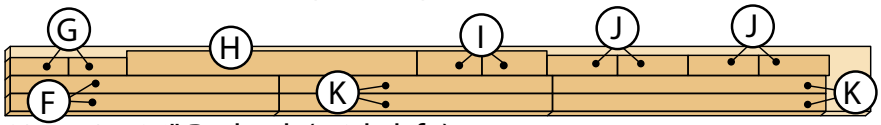
¼ x 24 x 48" Oak-veneer plywood



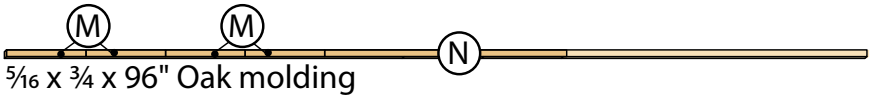
¾ x 24 x 48" Hardboard



¾ x 5½ x 96" Red oak (4 bd. ft.)



¾ x 7¼ x 96" Red oak (5.3 bd. ft.)



5⁄16 x ¾ x 96" Oak molding

5⁄16 x ¾ x 96" Oak molding

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