Single-chamber Bat House (wall mounted)

Materials (makes one house)
¾ sheet (2’ x 4’) ¾” AC, BC or T1-11 (outdoor grade) plywood
One piece 1” x 2” (¾” x 1 ¼” finished) x 8’ pine (furring strip)
20 to 30 exterior-grade screws, 1”
One pint dark, water-based stain, exterior grade
One pint water-based primer, exterior grade
One quart flat, water-based paint or stain, exterior grade
One tube paintable latex caulk
1” x 4” x 28” board for roof (optional, but highly recommended)
Black asphalt shingles or galvanized metal (optional)
6 to 10 roofing nails, ⅝” (if using shingles or metal roofing)

Recommended tools
Table saw or handsaw
Variable-speed reversing drill
Screwdriver bit for drill
Tape measure or yardstick
Caulking gun
Paintbrushes
Hammer (optional)
Tin snips (optional)

Construction
1. Measure and cut plywood into three pieces:
26⅜” x 24” 16⅜” x 24” 5” x 24”
2. Roughen inside of backboard and landing area by cutting
   horizontal grooves with sharp object or saw. Space grooves ¾”
   to ½” apart, cutting ½” to ¾” deep.
3. Apply two coats of dark, water-based stain to interior surfaces.
   Do not use paint, as it will fill grooves.
4. Cut furring strip into one 24” and two 20⅝” pieces.
5. Attach furring strips to back, caulking first. Start with 24”
   piece at top. Roost chamber spacing is ¾”.
6. Attach front to furring strips, top piece first (caulk first).
   Leave ½” vent space between top and bottom front pieces.
7. Caulk all outside joints to further seal roost chamber.
8. Attach a 1” x 4” x 28” board to the top as a roof (optional,
   but highly recommended).
9. Apply three coats of paint or stain to the exterior (use primer
   for first coat).
10. Cover roof with shingles or galvanized metal (optional).
11. Mount on building (south or east sides usually best).

Optional modifications to the single-chamber bat house

1. Wider bat houses can be built for larger colonies. Be sure to
   adjust dimensions for back and front pieces and ceiling strip.
   A ¾” support spacer may be needed in the center of the roosting
   chamber for bat houses over 24” wide to prevent warping.
2. To make a taller version for additional temperature diversity,
   use these modifications: From a 2” x 8” piece of plywood, cut
   three pieces: 31” x 24”, 33” x 24” and 12” x 24”. Cut two 8”
   furring strips into one 24” and two 44” pieces. Follow assembly
   procedure above.
3. Two bat houses can be placed back-to-back, mounted between
   two poles, to create a three-chamber nursery house. Before
   assembly, cut a horizontal ¾” slot in the back of each house
   about 9” from the bottom edge of the back piece to permit
   movement of bats between houses. Two pieces of wood, 1” x
   4” x 4⅛”, screwed horizontally to each side, will join the two
   boxes. Leave a ¾” space between the two houses, and roughen
   the wood surfaces or cover the back of each with plastic mesh
   (see item 5 below). Do not cover the rear exit slots with mesh.
   One 1” x 4” x 34” vertical piece, attached to each side over the
   horizontal pieces, blocks light but allows bats and air to enter.
   A galvanized metal roof, covering both houses, protects the
   center roosting area from rain. Eaves should be about 3” in
   southern areas and about 1½” in the north.
4. Ventilation may not be necessary in cold climates. In this case,
   the front should be a single piece 23” long. Smaller bat houses
   like this one will be less successful in cool climates. However,
   those mounted on buildings maintain thermal stability better
   and are more likely to attract bats.
5. Durable plastic mesh can be substituted to provide footholds
   for bats. Attach one 20” x 24½” piece to backboard after stain-
   ing interior, but prior to assembly.

More bat-house plans and additional information can be found in BCI’s Bat House Builder’s Handbook,

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