Although many bats are remarkable for their habit of retreating deep into the depths of cool, moist caves during winter to hibernate, their behavior outside the hibernating period couldn’t be more different. During spring, summer, and fall bats prefer to spend their days in tight, warm spaces among trees and streams where they feed at night. Many bats are highly social during the summer, preferring to spend their days in the company of others like the large groups of mothers that raise young in maternity colonies. By creating a bat box and placing it where bats want to be, you may be lucky enough to host a group of bats each summer. This box is challenging to build because bats are picky with what they need from their habitats. Careful attention to the design elements in this guide will guard against creating a box for wasps or other critters. Be sure to choose a dark paint or stain for the box to keep it warm. Mount the box on the side of a building, a tree, or a tall post where it will get 10 hours of sunlight during summer. Watch closely during summer nights for bats exiting the house to monitor its use. A bright light shined into the bottom during day can also reveal bat use, but be sure to only disturb them once a summer. If you’re lucky, bats will find the box and you’ll be the beneficiary of their insect-rich diet all summer, while enjoying the beautiful sight of the flight of bats at dusk.

### Cut Sheet

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot; x 24 1/4&quot;</td>
<td>A</td>
</tr>
<tr>
<td>22&quot; x 24 1/4&quot;</td>
<td>B</td>
</tr>
<tr>
<td>22&quot; x 19 1/2&quot;</td>
<td>C</td>
</tr>
<tr>
<td>20&quot; x 23 1/2&quot;</td>
<td>D</td>
</tr>
<tr>
<td>31&quot; x 24 1/4&quot;</td>
<td>E</td>
</tr>
<tr>
<td>14 1/2&quot;</td>
<td>F</td>
</tr>
</tbody>
</table>

### Assembly

1. Cut one long edge of the top with a 15° angle with a circular saw.
2. Use a utility knife to make shallow scours every 1/4" on both sides of D, E, and F, one side of A, and all but the top 2" of one side of F to provide rough attachment points for bats inside the box.
3. Clamp the two sides A together in perfect alignment and predrill holes for screws in top, bottom, and middle in this pattern.
5. Mount the inside boards D and E with wood screws. Align tops with the angled roof line, allowing C and D to have landing spaces on middle boards.
6. Mount the top C with wood screws with the angled side facing the back.
7. Drill two 1/2" holes in vertical alignment between boards B and D and E on each side for ventilation.
8. Stain or paint the outside surfaces. If you are using paint, do not cover the roughened inside surfaces. Dark paint or stain is important to attract heat and warm the box. Caulk all seams along the top and sides of the box to prevent water leaks.

### Supplies

- 2 8 foot 1x12 boards
- 36 1" deck screws
- 1/2" drill bit
- Drill bit to pre-drill screws
- Dark wood stain or paint
- Circular saw
- Outdoor caulk
- Tape measure
- Utility knife
- Wood clamps
- Drill and 1/2" drill bit
- Drill and 1/2" drill bit
- Drill bit to pre-drill screws
- Circular saw
- Tape measure
- Utility knife
- Wood clamps

By Adam Janke, assistant professor and extension wildlife specialist at Iowa State. This design conforms to standards for bat boxes published by Bat Conservation International with exception of the width of the box.

Iowa State University Extension and Outreach does not discriminate on the basis of age, disability, ethnicity, gender identity, genetic information, marital status, national origin, pregnancy, race, color, religion, sex, sexual orientation, socioeconomic status, or status as a U.S. veteran, or other protected classes. Direct inquiries to the Diversity Advisor, 515-294-1462, extdiversity@iastate.edu.