WORM BINS

- For fruit, & vegetable trimmings
- For indoors or outdoors, very compact
- Most fun! (*See Composting Fruit & Vegetable Trimmings* brochure)
- Produces small amounts of excellent fertilizer

1-PERSON PLASTIC WORM BIN

- Very easy to build; tidy for indoor use
- Plastic bins keep compost moist–will require regular additions of dry bedding
- $6 - $20 for new materials

MATERIALS

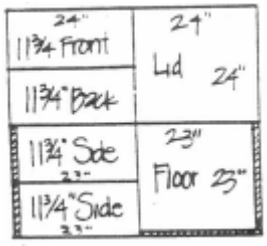
♦ (1) Plastic storage container with a tight-fitting lid – min. 10"-tall, 12"x24" base

TOOLS

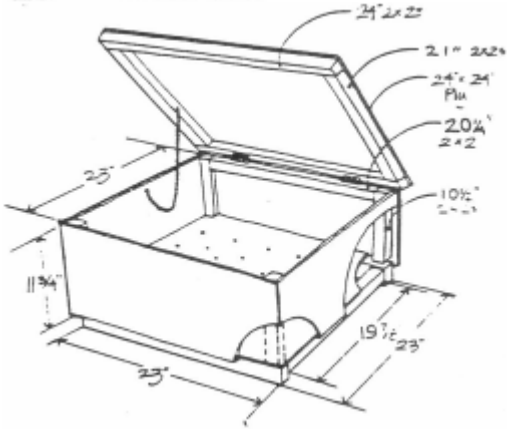
Power drill with 1/4" bit *or* utility knife

ASSEMBLY

For indoor use, drill several holes for ventilation about half-way up the sides of the bin. For outdoor use, holes can be drilled in the bottom for ventilation and drainage. If you are using a utility knife to make holes, cut out triangles 1/4" or smaller.



♦ 1 lb. 4-penny galvanized nails
♦ 16" light chain with (2) 1/2" wood screws
♦ (2) 2" hinges, with 3/4" wood screws
♦ Waterproof wood glue



Based on design by

City Worms & Compost

2-PERSON WOODEN WORM BIN

- Basic carpentry skills needed for construction
- Doubles as a seat!
- Breathes well–will need occasional watering
- $20 – $30 for new materials

MATERIALS

♦ (1) 4'x4' pieces of 1/2" exterior-grade plywood
♦ (3) 6' pieces of 2x2" wood
♦ (1) 4' piece 2x4" wood

TOOLS

Power drill saw (use eye protection) or hand saw, hammer, measuring tape, pencil, square, drill with 1/4" and 3/32" bits, sandpaper.

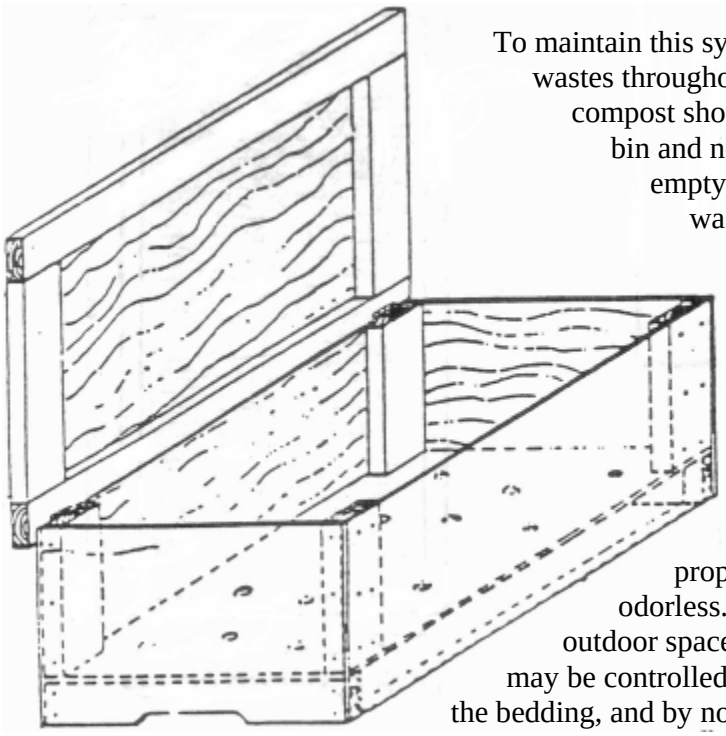
ASSEMBLY

Glue all wood pieces before nailing.

1. **Base:** Nail the two 23" 2x4s and two 19-7/8" 2x2s to the bottom of 23x23" plywood as drawn. Drill several 1/4" holes for drainage.
2. **Side, front & back walls:** Nail the four 2x2 uprights to the two side walls along the 11-3/4" edge, with one end of each 2x2 flush with the top edge of the walls. Nail a 20-1/4" 2x2 hinge support to the top edge of the back wall piece, leaving 1-1/2" on each side for 2x2 uprights. Assemble box by nailing the 1-1/4" overhang of the side walls to the 2x2s on the base as drawn. Then nail the front and back walls to the 2x2 uprights and to the 2x4s on the base as drawn. Be sure the hinge support is at the top of the bin.
3. **Lid:** Nail lid together as drawn. Attach to box with hinges, make sure to pre-drill screw holes into the 2x2s, and position hinges as in detail. Attach chain with 1/2" wood screws so lid can rest in an opened position.

WORM COMPOSTING BIN

This system is designed for composting vegetable food wastes using red worms. Food wastes and worms are "bedded" in shredded and moistened newspaper, cardboard, peat or brown leaves. The worms turn both food wastes and bedding into a high-quality compost suitable for use on house plants, seeding or general garden use.



To maintain this system simply rotate burial of food wastes throughout the bin. Every 3-6 months the compost should be moved to one side of the bin and new bedding added to the empty half. At this time, start bury wastes in the new bedding only. Within one month, worms will populate the new bedding, finished compost may be harvested from the first half, which can then be re-bedded. During the winter worm bins may be kept in a cool indoor space such as a basement or warm garage to avoid freezing. A properly maintained worm bin is odorless. Bins may be placed in a shady outdoor space the remainder of the year. Flies may be controlled by placing a sheet of plastic over the bedding, and by not over feeding the worms.

This bin can be built for about $35 with new wood and hardware or less using recycled materials. Worm bins can also be made from wooden boxes or other containers. Any worm bin must have drainage in the bottom and a tight fitting lid to keep moisture in and pests out. A starter batch of worms can be purchased at a small additional cost, or find some in an old compost pile! For more information, see Mary Appelhof's book, Worms Eat My Garbage.

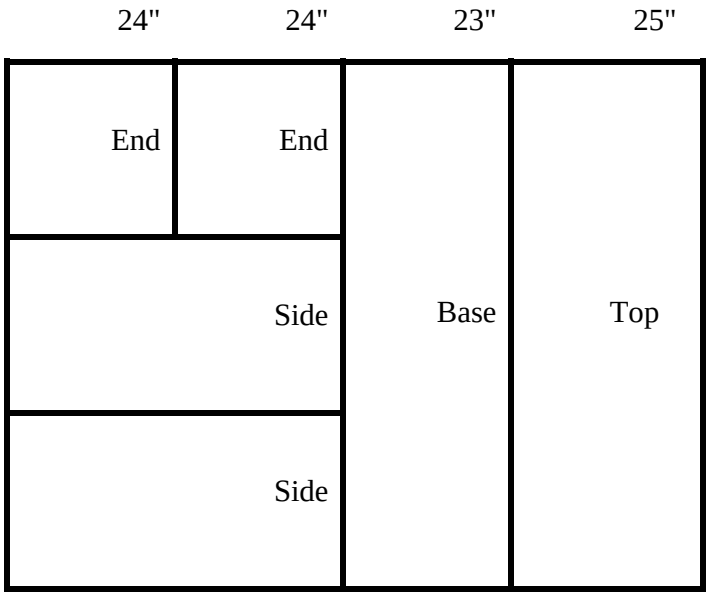
Materials:

1 1/2" treated sheet of plywood
1 14 foot utility treated 2" x 4"
1 16 foot utility treated 2" x 4"
1 pound 4d galvanized nails
1/4 pound 16d galvanized nails
2 3 inch door hinges

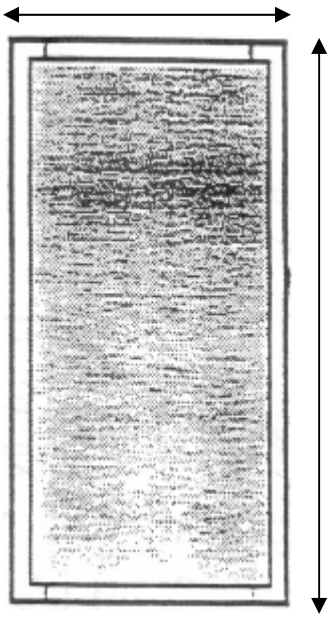
Tools:

Tape measure, skill saw or rip hand saw, hammer, saw horses, long straight edge or chalk snap line, screwdriver, chisel, wood glue, and drill with 1/2" bit.

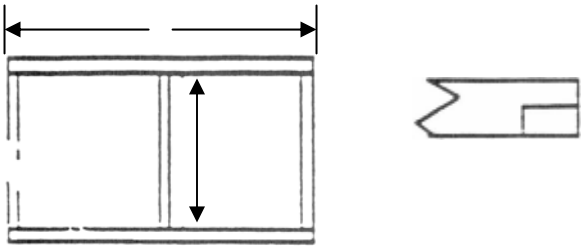
Wear eye and ear protection.



4' X 8' SHEET OF 1/2" PLYWOOD



TOP LID 2 X 4 FRAME WITH PLYWOOD COVER



BASE FRAME 2X4s

Construction Details:

Measure and cut plywood as indicated in the drawing above. To make the base, cut the 14 foot 2x4 into five pieces: two 48 inches and three 20 inches long. The remaining 12 inch piece will be used to make the sides. Nail the 2x4s together on edge with two 16d nails at each joint as illustrated in the Base Frame diagram. Nail the plywood base piece onto the 2x4 frame using the 4d nails.

To build the box, cut three 12 inch pieces from the 16 foot 2x4. Place a one foot 2x4 under the end of each side panel so that the 2x4 is flush with the op and side edges of the plywood. Nail the boards into place. Nail the side pieces onto the base frame. To complete the box, nail the ends onto the base and sides. To reinforce the box, place a nail at least every 3 inches wherever plywood and 2x4s meet. Drill twelve 1/2 inch holes though the bottom of the box for drainage and air circulation.

To build the lid, cut the remainder of the 16 food 2x4, into two 51 inch lengths and two 27 inch pieces. Cut lap joints in the corners, then glue and nail the frame together. Center the plywood onto the 2x4 frame and nail with 4d nails. Lay top on ground with plywood touching the ground. Attach hinges to the top and back using the short screws to the top and the long screw to the back. Position hinges so the screws go through the plywood to 2x4s.

PALLET WORM BIN

(DESIGNED BY BOB RUSKAN, SEATTLE, 632-0991)

List of Materials

1-2 good pallets yielding
8 planks and 3 ribs (see Diagram A)

60 bugle head (drywall) screws, 1-5/8" long

4 bugle head screws, 3" long

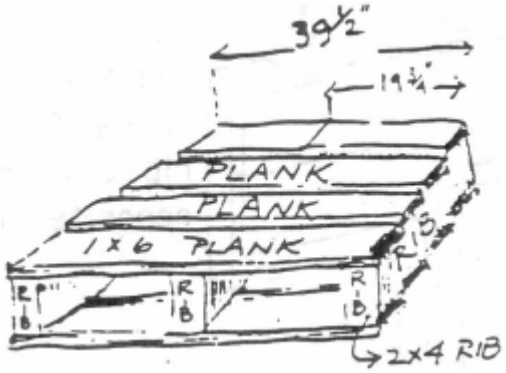


Diagram A

Tools

hacksaw or metal blade to separate pallet wood

tape measure

hand square or something to draw right angles

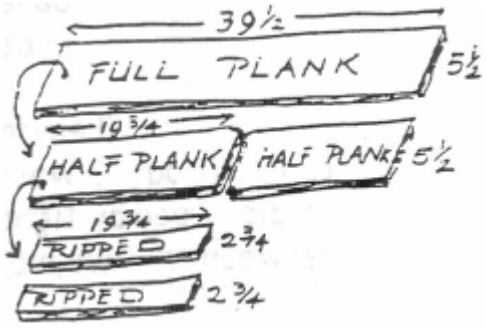
skill saw or rip hand saw

screwdriver (phillips)

drill with 1/8" bit for pre-drilling screw holes
1/2" bit for draining holes

Wear eye and ear protection.

Diagram B



Construction Sequence

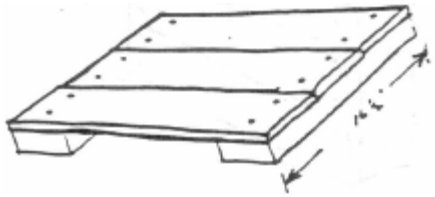
1. Separate all lumber. This is the toughest part of the job.

2. Cut the eight full planks in half, making sixteen pieces 19-3/4" x 5-1/2" (Diagram B).

Rip one of these (cut lengthwise) to make two pieces 19-3/4" x 2-3/4" (Diagram B).

You now have two ripped pieces and fifteen half planks. Discard one of the halved planks; you only need 14 of them.

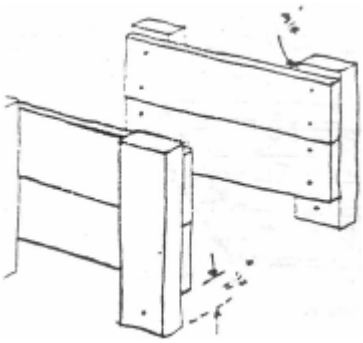
Diagram C



3. Cut the 2x4 RIBS as follows:
   For BASE, 2 pieces @ 16-1/2"
   SIDES, 4 pieces @ 14"
   TOP, 2 pieces @ 14-3/4"

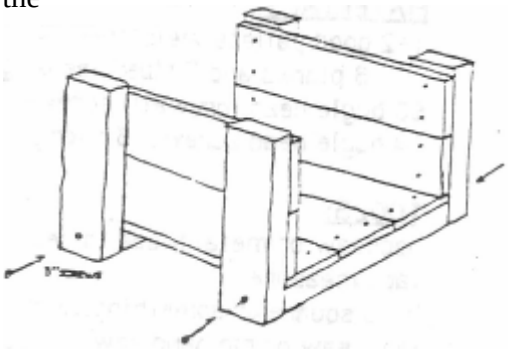
4. To make BASE, pre-drill and screw three half plank pieces flush to two 16-1/2" ribs, as in Diagram C.

Diagram D



PRE-DRILL SCREW HOLES throughout the following steps.

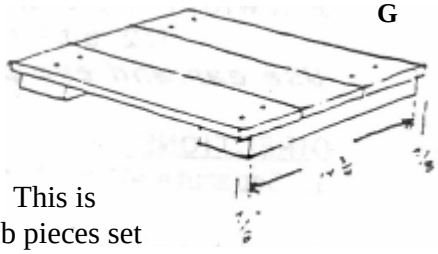
Diagram E



5. To make SIDES, see Diagram D. Screw two plank pieces to two 14" rib pieces, leaving 3/4" from the top of the rib (so the box lid can fit flush) and 2-1/4" from the bottom of rib (to accommodate base). Repeat for opposite side.

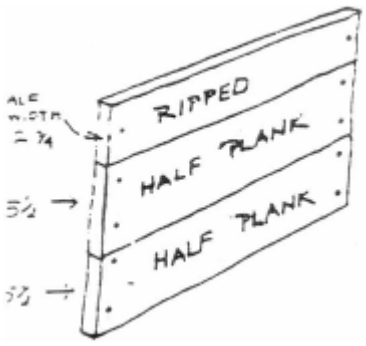
Screw these sides into the base using 3" screws, as in Diagram E

Diagram G



For each of the remaining sides, screw a ripped half plank piece to the top of the 14" rib, and add 2 regular half plank pieces below it. See Diagram F and Diagram H.

Diagram F

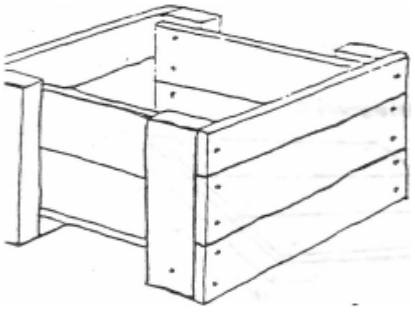


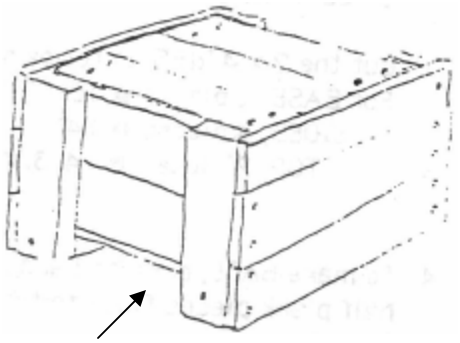
6. To make LID, see Diagram G. This is like the base, but uses two 14-3/4" rib pieces set back 7/8" under the plank pieces to allow lid to close flush.

[Leaving the middle lid plank unscrewed allows children to lift it out to watch worms without opening the lid. Worms won't be disturbed by light if red cellophane (gift-wrap) is stretched between the two rib pieces before screwing in the other planks.]

7. Drill four or six 1/2" holes though the bottom of the box for drainage.

Diagram H





Completed worm bin

Drill drainage holes in bottom

BENCH-SIZE BIN: Follow the same directions, keep ribs the same size throughout, keep the sides in Diagram F the same size. Substitute 10 full uncut planks (39-1/2" long) for half planks needed in the BASE, LID, and the sides seen in Diagram E. You'll need 4 pallets, 15 planks in all, 3 ribs.