Portable Practice Table Plans

This table is light enough to be set up by one person. It also flexes so you can make it fit in a car. It is more durable than insulation board and will not get damaged as easily. An adult with some power tools are needed to help make this.

Bill of Materials

Materials	Size	Qty.	Est. Cost
Hardboard	4' x 8' x $^{3}/_{16}$"	1	$14.59
#2 White Pine	1" x 6" x 8'	2	$13.90
Wood Dowel Rod	¼" x 48"	1	$ 0.81
Wood Dowel Rod	½" x 48"	1	$ 1.08
Wood Dowel Rod	$^{7}/_{8}$" x 48"	1	$ 1.35
Scrap Plywood	Roughly 12" x 12" x $^{3}/_{16}$"	1	n/a
#10 Flat Head Phillips Wood Screws	¾"	24	$ 2.12
3 Hole Brass Hinges	2 ½" x $^{8}/_{11}$"	4	$13.08
Flat Black Paint	½ pint	1	$ 5.08
Foam Brushes	1" wide	4	$ 2.14
Wood Glue	8 fl. oz	1	$ 4.37
Duck Tape	Roll (1.88" x 10 yds)	1	$ 7.57
1/8 " Dia. Nylon Cord	Package	1	$ 3.98
3M Dual Lock ™ squares	(Extras from FLL Field Set Up Kit)	14 pairs	
		Est. total	$70.07

Portable Practice Table Plans

IMPORTANT

- Wood working skills are required.
- A table saw, circular saw, drill, screwdriver, wood glue and duck tape are required to complete the project.
- All wood working equipment safety precautions must be follow.

Table Building Directions

1. Trim the $^{3}/_{16}$" hardboard to the required dimensions (94 ¾ " x 46 ½").

2. Rip the #2 pine boards into two equal parts on the table saw.
   The resulting boards should be roughly 2 $^{5}/_{8}$" H x 8' L.

3. Cut two of the 2 $^{5}/_{8}$" H boards to a length of 48 $^{1}/_{8}$" (table side board inserts).

4. The resulting two 2 $^{5}/_{8}$" H board ends can be cut to lengths of 46 ½" (table end boards).

5. Cut the two remaining 2 $^{5}/_{8}$" H boards to obtain four 23 $^{3}/_{16}$" boards (folding side boards).

6. Cut hinge pockets on one side, on both ends of the two 46 ½" boards.

7. Cut 45 ^{o} angle on both ends of the two 46 ½" boards (same side as hinge pockets).

8. Cut hinge pockets on one end of the four 23 $^{3}/_{16}$" boards.

9. Cut 45 ^{o} angles on one end of four 23 $^{3}/_{16}$" boards (same end and side as hinge pockets).

10. Cut $^{1}/_{4}$" x 1 ½" slots in flat ends of four 23 $^{3}/_{16}$" boards.

11. Cut $^{1}/_{4}$" x 1 ½" slots in flat ends of two 48 $^{1}/_{8}$" boards.

12. Cut four tabs from scrap $^{3}/_{16}$" plywood (2" W x 3" L).
    Cut two $^{3}/_{8}$" chamfers on one end of each tab with two 45^{o} angles.

Portable Practice Table Plans

13. Insert and glue tabs into both ends of the two 48 1/8" boards with chamfer ends out.
    Be sure to center tabs in boards.

14. Cut 16 spacers from leftover white pine wood (1/4" W x 1 ½" L x 5/16" H).

15. Glue 8 spacers into openings above and below each tab in both ends of the 48 1/8" boards.

16. Glue 8 spacers, top and bottom, into slotted ends of four 23 3/16" boards.
    Leave opening for tabs to slide into.

17. Mount hinges in pockets on both ends of each 46 ½" board.

18. Connect two 23 3/16" board with hinge screws (hinge in pockets) to hinged 46 ½" board.

19. Be sure two shorter boards will lay flat on longer board.
    Slightly trim shorter boards equally to fit properly if necessary.

20. Cut trimmed 3/16" hardboard into three pieces.
    The two end panels should measure 23 5/8" W x 46 ½" L.

21. Use Duck tape to hinge the three panels together to form a panel 94 ½" L x 46 ½" W.

22. Lay hardboard in top of assembled sideboard frame (on saw horses).
    Center hardboard on frame.

23. Clamp hardboard to frame. Frame board edges should be even with all hardboard edges.
    Frame four joints should be tight together.

24. Cut 14 ea. 1/4" dia. pegs (1/4" dia. x 5/8" L).

25. Drill 4 1/4" dia. x ¾"deep holes into the hardboard:
    2 holes @ 18" from end of long side of hardboard and 2 holes @ 12" from end of short side of hardboard.
    All holes should be roughly 3/8" in from edge of hardboard.
    Drill similar hole pattern in opposite end of hardboard.

Portable Practice Table Plans

26. Determine center of long side of hard board (47 $^{1}/_{4}$" from the end).
    Drill 1$^{1}/_{4}$" dia. x ¾" deep hole on the centerline and 2¼" dia. x ¾"deep holes 20" on either side of the centerline. All holes are to be roughly $^{3}/_{8}$" in from hardboard edge.
    Drill a similar hole pattern in opposite side of hardboard.

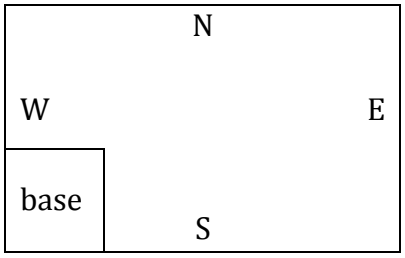
26. Remove clamps and hardboard from frame. Support frame on saw houses.

27. Use wood glue to coast pegs and set pegs into holes in frame.

28. Pegs should protrude roughly $^{3}/_{16}$" above wood surface.

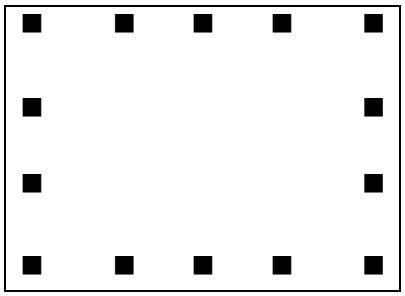
29. Paint all wood frame surfaces with flat black paint.

30. Mark on hardboard with a sharpie marker N, E, S, and W and where base is when mat is place on the portable table. This is important so you will always position the mat correctly for your missions.



Top of Hardboard

31. Take 3M Dual Lock ™ squares that may be left over from your FLL Field Set Up Kit.
    It works best to position the Dual Lock squares on the back of your mat first.
    Place a Dual Lock ™ square evenly spaced along the sides and in each corner of your field mat like this:


Back of FLL Field Mat

32. Position the FLL Field Mat on the top of the finished portable table according to FLL regulations. Add the remaining Dual Lock ™ squares to the hardboard to lock your mat into place.

Portable Practice Table Plans

Carrying Handle Building Directions

To easy in transporting the table hardboard, a handhold is necessary.
The handholds consist of a $^{1}/_{8}$" dia. cord attached to a handle and two dowel latching pins.

1. Cut a handle 6" long from the $^{7}/_{8}$" dia. dowel. Drill a $^{9}/_{32}$" dia. hole 1" from each end.

2. Cut 2 - 2" pins from the ½ " dowel. Drill a $^{9}/_{32}$" dia. hole in center of pins 1" from end.

3. Drill 2 - $^{3}/_{8}$" dia. Holes, passing through all three hardboard panels when folded together, ~3" on either side of centerline.

4. The $^{3}/_{8}$" holes should be drilled at a comfortable arm's length down from the edge of the folded hardboard.

5. Tie long loops (~2" long) in one end of two 5" long lengths of cord. The two loops must be equal in length. Include a ½ " dia. washer inside each loop to prevent the loop passing through the hardboard.

6. Tie knot in each cord ~ 4" above loop knot. The two knots must be equal distance for the loop knots.

7. Insert two cords into handle. Slide handle down to knots.

8. Tie a second set of knots to secure the handle in both cords.

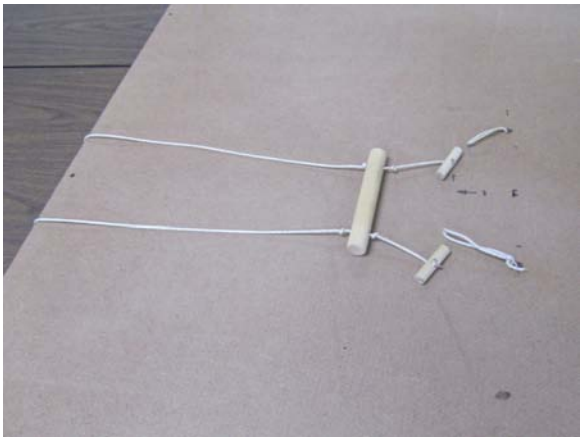
9. Insert looped ends of cords through $^{3}/_{8}$" holes in the hardboard panels.

10. Pass handle end of each cord over the top of the hardboard and pass ends through the loops protruding through the hardboard on opposite side.

11. Pass cords through $^{9}/_{32}$" holes in pins, tighten cords while inside loops, and tie knots in cords.

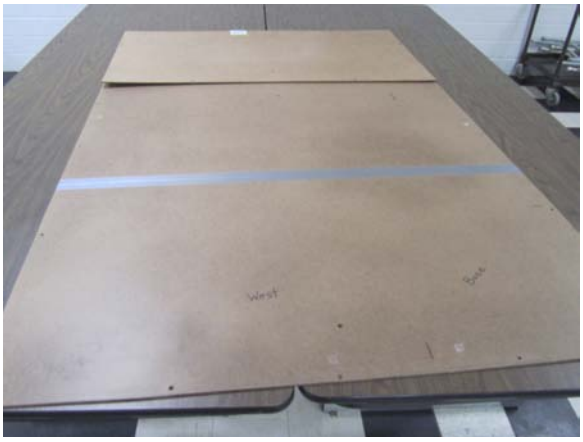
12. Adjust knots, if necessary for comfort and tightness, and cut cord ends to eliminate excess cord.

Portable Practice Table Plans

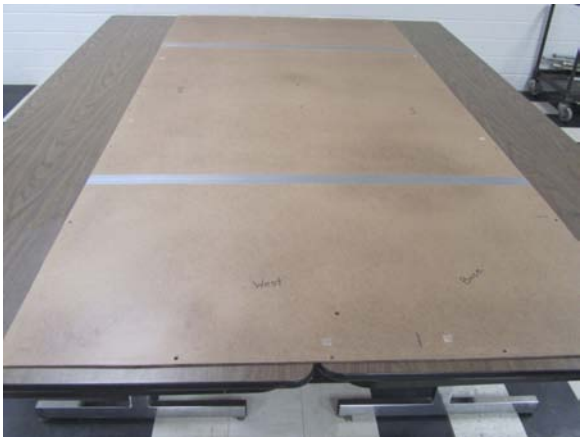


Carrying Handle Detail

Folded up with dowel handholds removed.



West side/Base unfolded.

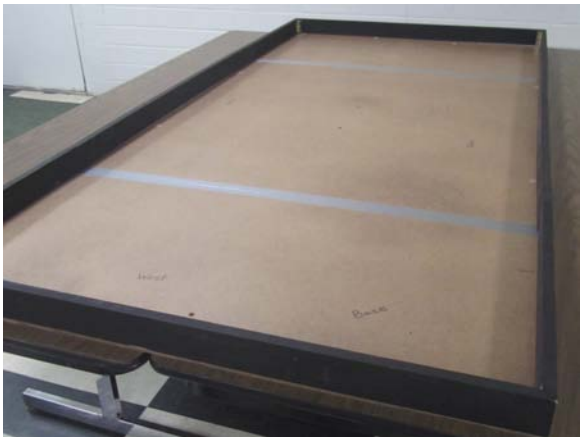


East side unfolded.

Portable Practice Table Plans

Wall sections

Assembling Walls



Finished Portable Table

Placing FLL Field Mat