build a *Mandolin* in four days

Have you ever wondered how wood and wire make music? Come find out by building a mandolin in four days under the tutelage of veteran luthier Rick Turner. If you can turn the pages of a book, you can build and play an instrument...

with Rick Turner

What you will build

In four days you will build a flat top and back mandolin patterned after the Gibson Army/Navy model of 1918 using techniques both old and new. The mandolins are built with fine tone woods: western red cedar for tops, maple or other hardwoods for the backs and sides, rosewood for fingerboards, and mahogany for the necks. The mandolin you build will surprise you with its volume and tone; you'll have built an instrument worth well more than the cost of the course.

Over the four days there are numerous "jumping off points" for discussions of the theories of musical instrument construction, wood working techniques, guitar and mandolin history, fine food and wine and just about anything else a group of people focused in on a goal might want to chat about!

For whom is the course designed?

This "Instant Mandolin" building course has been designed for folks of all ages and skill levels; no previous experience in woodworking is required. We start from a kit of parts prepared by Rick in his shop in Santa Cruz, California, and all assembly operations are done by the end of the third day. On the last day we string up the mandolins "in the white" and hear the miracle of how the wood makes the strings sing in the air.

1

2

3

4

5

1: We're finishing up one of the "soleras" — the traditional Spanish work board on which we construct the instrument.

2: Rick carving out the last bits of mahogany on the neck to prepare for gluing on the top.

3: This shows the neck and two braces glued to the inside of the top.

4: A student sees an instrument coming together and contemplates the next steps.

5: Another student contemplating crashing power chords to be played upon his mandolin!

6

7

6: The sides are glued to the end block.

7: Carving the longitudinal braces.

8: Checking how the sides will fit into the neck block.

9: Closeup of where the sides will be wedge/glued to the neck block.

10: Contemplation, concentration, and very little conversation at this point!

8

9

10

11

12

11: A low tech solution for gluing the sides to the top.

12: Have I merely started a new rubber band ball here?

13: This is one that got dropped on the floor which broke the top. We fixed it! Sometimes the course involves repair techniques as well as building...

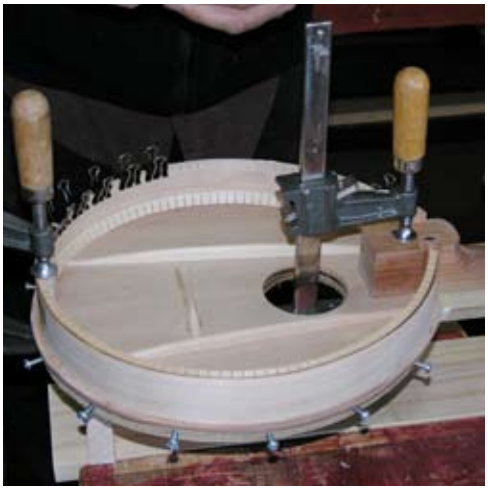
13

14

14: Fitting and gluing the sides to the top.

15: This shows the "kerfing" — the notched lining that reinforces the glue line between the top and sides.

15



16

17

18

19

20

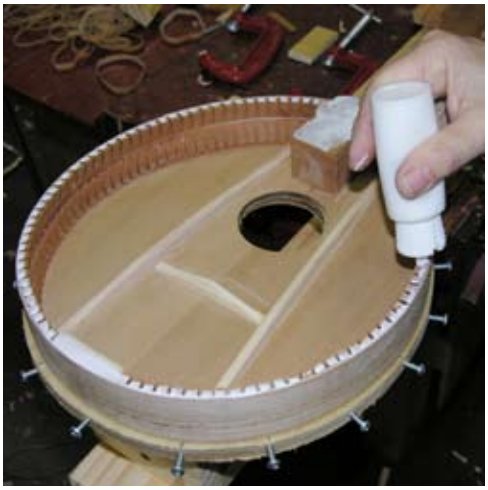
16: The top kerfing is in, and the strips for the back joint are going in.

17: Using spring paper clips to clamp the sides to back kerfing.

18: Mandolin or ping-pong paddle?

19: Trimming the overhanging top using a router table and a pattern bit.

20: Planing the peghead face surface and gluing the back braces.

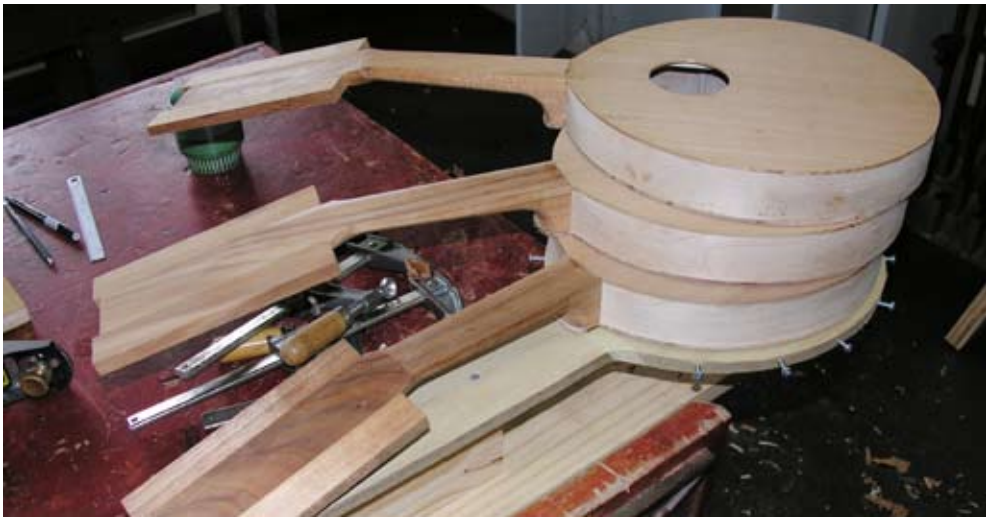


21

22

23

24



25

21: Applying glue for the back.

22: The back goes into place. This back was "Tasmanian Oak", a eucalypt species.

23 – 24: Once again, low tech is the way to go. Yes, rubber bands to clamp on the back.

25: They're starting to look like real mandolins by the end of the second day!

26

27

26: Uh-oh! The professor is waxing eloquent about mandolin bridge design...

27: Sanding the nut end of the peghead overlay.

28

29

28: Rick applying glue for the decorative peghead face overlay.

29: Fitting the overlay against the string nut.

30: Clamping on the peghead face overlay veneer — walnut in this case.

30

31

32

33

34

35

31: Drilling holes for the tuners using a simple plastic templet.

32: Sometimes three hands are better than two.

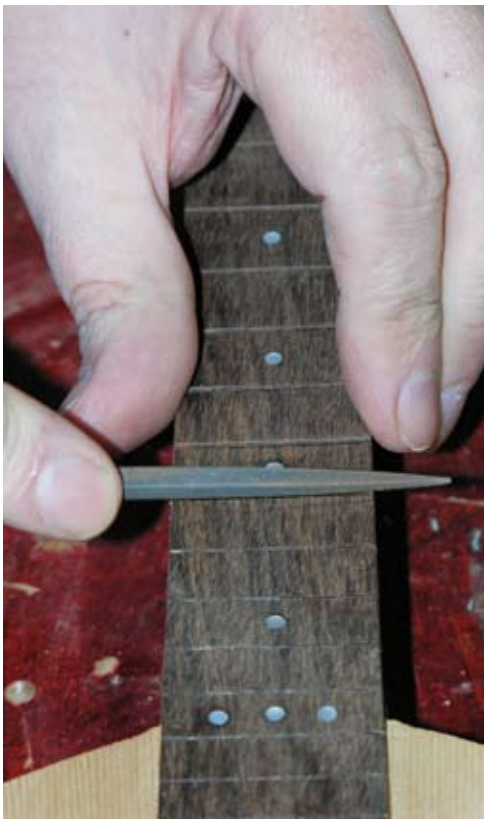
33: Hand planing the side of the peghead.

34: Details, details! Fine sanding the neck.

35: If the devil makes work for idle hands, he's got no place here!

36

37



38

39

40

36: Rick and a rasp working on a neck.

37: We do fret the small stuff...

38: Filing a bevel at the mouth of the fret slots.

39: An impromptu site-made fret press shoe for the drill press.

40: Pressing in frets using a drill press.

41

42

43

44

45

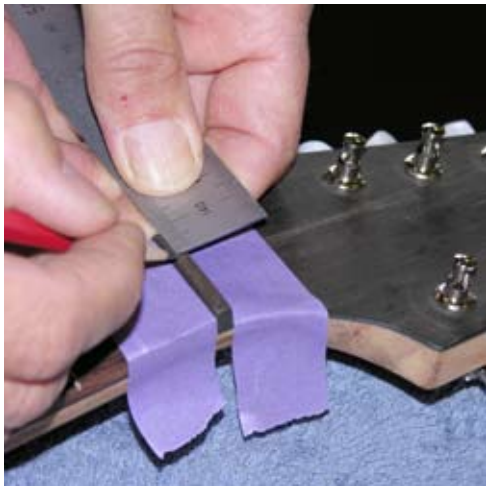
41: Checking the level of the fret tops with a straight edge.

42: Fitting tuning gears.

43 – 44: Hammering in tuning gear bushings.

45: Rick's mando ready for a bridge, tailpiece, and strings.

46



47

48

49

50

46: Cutting a bone nut blank on the band saw.

47: Laying out string slots on an ebony string nut.

48: Carving one end of the bridge.

49: In this example, the bridge is made of Padouk.

50: The moment of truth — the first string goes on.

51

52

51 – 52: Lunch time, fourth day. Mandolins waiting for food to be brought to them.

53

53: Builders contemplating their labour of 3 ½ days.

54

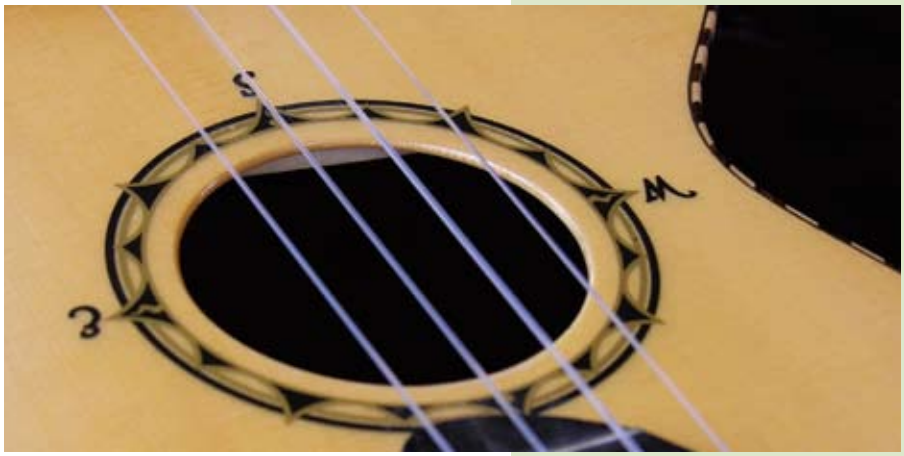
54: Nine pegheads, seventy two tuning gears, and many hours of fun.

55

55: A plural group like this should be called a "carousel of mandolins".

56

56: Nine happy builders (Rick front and center).



Who is Rick Turner?

Rick Turner has been repairing, restoring, and building stringed instruments since his high school days in the early 1960s. He formally apprenticed as a luthier in Boston in 1963, played guitar professionally for several years, and then committed to production guitar making in the early 1970s. He has built and repaired instruments for members of Fleetwood Mac, the Grateful Dead, the Police, the Jefferson Airplane, the Who, Led Zeppelin, the Doobie Brothers, the Youngbloods, Men at Work, Van Morrison, Ry Cooder, David Lindley, David Crosby, Graham Nash, Joni Mitchell, the Beach Boys, Ricki Lee Jones, Bela Fleck, and many others.

Rick currently runs a small guitar factory in Santa Cruz, California, called "Rick Turner/Renaissance Guitars" and he is a partner in "D-TAR" which specializes in acoustic instrument amplification.

www.renaissanceguitars.com
www.d-tar.com

The international connection

Rick teaches "Build a Mandolin in Four Days" in Australia under the auspices of the Tasmanian Adult Education Department, and in the US at The Crucible in Oakland, California, at the Roberto Venn School of Lutherie in Phoenix, Arizona, and at his own shop in Santa Cruz, California. For information on upcoming classes or to have Rick come and teach in your area, email him at:

rick@renaissanceguitars.com