

For ages
9 to 99



Make: Kids

The UnaBox

MAKE A KEYLESS,
SECRET, WOODEN
COMPARTMENT.

BY CLAUDIO BERNARDINI



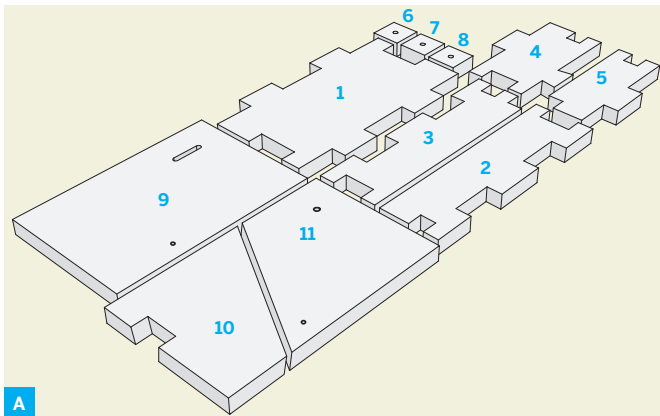
My architect friends Lorenzo Bini and Roberta Pezzulla made this little project for a very young and dynamic client: Lorenzo's 6-month-old goddaughter. They wanted to make a box that the child could use her whole life to store small, personal, precious things. So they created the UnaBox, taking inspiration from an Indian box (by an anonymous designer) that had an obscure opening system with 2 pivoting lids.

The box's dimensions are based on the golden ratio, and it allows access only to patient and curious people; many adults have tried to open it and failed. Here's how to build one yourself!

For ages
9 to 99



Make: Kids



MATERIALS

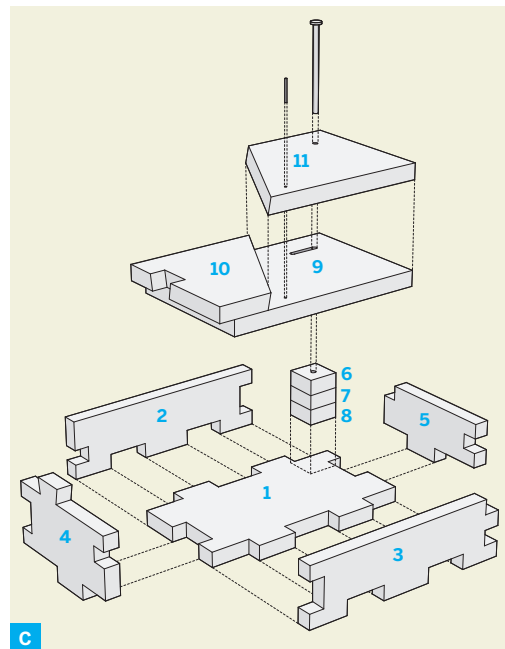
Hardwood board 27.5cm×57.5cm×1.5cm thick
Our original box used the best Italian olive wood. Sourcing the wood locally avoids hardwoods with uncertain (and possibly destructive) origins.

Thin wooden peg 3mm×20mm for the locking pin
Screw, 4mm×60mm for the cover pivot

Wood glue
Natural wax

TOOLS

Band saw or small handsaw
Carpenter's square ruled
Pencil
Drill press or drill
Clamps
File
Sanding block with sandpaper, various grits



Build Your UnaBox

Time: 1-2 Days Complexity: Easy

1. Cut the pieces.

The box is made from 11 pieces cut from a single board, plus a screw and a thin peg for the pivot and locking pin. Visit makezine.com/20/unabox for CAD drawings and an assembly sequence (Figures A and C).

To make the pieces, you can send the drawing to a CAD/CAM company and wait for the mailman, give it to a good carpenter, or cut the pieces yourself using a small handsaw or band saw (Figure B). Finish everything roughly with a wood file, and then more precisely with plenty of sandpaper.

2. Assemble the lid and box.

Following the plan, drill a hole in piece 11 and a slot

in piece 9 that your screw will slide through (to cut the slot, drill each end and then thread in a saw blade). Also drill smaller holes in the pieces for the locking pin, running the drill only partway through piece 9. Drill both holes with the 2 pieces stacked together to make sure they align.

Figure C shows how the parts of the UnaBox fit together. With precise cutting, the bottom and sides of the box, parts 1–5, should assemble with almost no glue; use small clamps to hold them while the glue cures (Figure D). Glue stacked pieces 6–8 together and glue them to piece 1, the bottom of the box. Also glue together pieces 9 and 10 for the box's top. Once you're done with the glue and the clamps,

Photography and CAD drawings by Lorenzo Bini, GroS, and Roberta Pezzulla



drill pieces 6–8 to hold the bottom of the pivot screw (Figure E).

Finally, finish the box with a good natural wax and polish it. This makes the most of the wood, and gives it a nice smell and touch that kids love.

3. Learn the secret.

The closed box gives few clues to how it's opened. You need to remove the peg and swing part of the top away before the rest of the top has enough clearance to slide back and swing open (Figures F–I).

So far, we've built 2 of these boxes: the first one with olive wood, the second with cherry. If you build

your own UnaBox, the architects would love to hear from you at mail@studiometrico.com.

+ Get SketchUp and AutoCAD models of the Una-Box pieces, and drawings of the assembly sequence in Flash and SVG, at makezine.com/20/unabox.

Claudio Bernardini lives in Milan, Italy, where he runs the clothing design and distribution firm Comvert. In his spare time he rides a skateboard, writes on blog.bastard.it, and builds things.