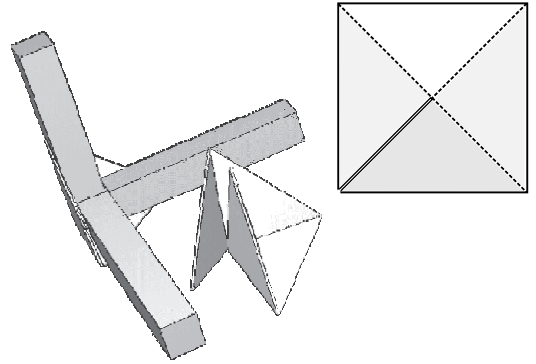


This is the development of the basic Jinks frame. You now have three pieces of wood meeting at each corner. You can use separate card triangles to reinforce each joint, or you can make single card units that cover all three faces. Take a square of thin card approx. 5 x 5cm. Fold on both diagonals and cut up one fold to the centre. You can now fashion a triangular corner by overlapping the two triangles on either side of the cut. Note, however, that each right angled joint is supported by card on only one side. If you need a large cube or cuboid with flush corners this is the way. The question to ask is always, "Do I?"

The easiest way to build is to make up two opposite frames which are then joined with four extra sides. So for a 20cm cube you would make two 20cm squares and join with four 18cm pieces.



We like to think this is a more elegant solution, but it does depend on using proper PVA wood glue.

It involves only pieces of wood - no card shapes, and all the pieces of wood are the full length of their respective sides. In other words, to build a 20cm cube you cut 12 pieces 20cm long, and . . .

. . . for a cuboid that is 10cm x 15cm x 30cm you cut:

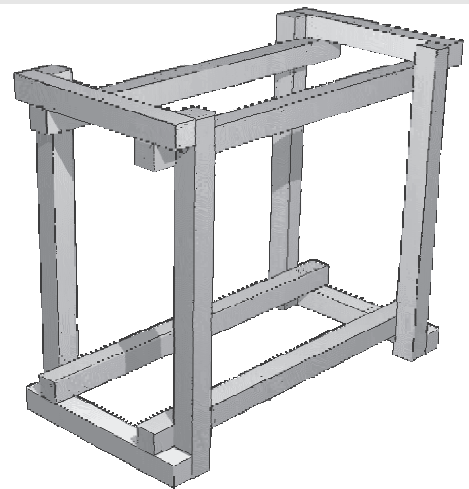
4 @ 10

4 @ 15

4 @ 30

What could be easier?

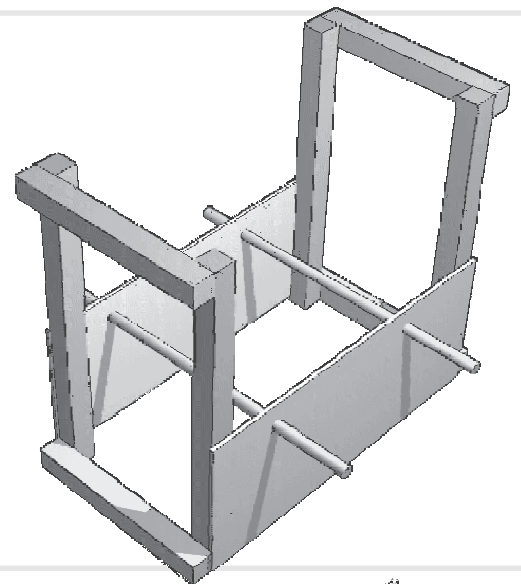
As above, make up two opposite frames first and allow the glue to set. Stand the glued frames on edge and glue the bottom pair of sides in position then turn assembly over (carefully) and do the same with the top pair.



In certain circumstances it is possible to use stiff card for two of the sides. It will depend on how rigid you wish the structure to be. The one shown here could deform into a parallelogram depending on the forces it has to withstand. Gluing it all to a base would avoid this.

If you stiffen the card sides with card angles or girders you can get away with using fairly light card (cereal box sides perhaps). See the page on folding girders.

Working this way is a great help if you are going to have several shafts or axles passing across the frame. You can punch the two sides together or, if the card is very thick, mark one set of holes off the other.



It is uneconomic to always use all-wood frames for smaller machines.

A 3cm wide box frame, like the one shown, is easy to make and ideal for pulley gearboxes and the like.

It consists of two stiff card sides spaced by a base of three pieces of wood glued side by side. The centre strip can be two short lengths, or just one shorter piece, and these can come from the scrap box.

An extra spacer has been added here to keep the top of the sides the same distance apart - again the scrap box will come to the rescue.

