

# Top Bar Hive Assembly



## Parts

*Check sizes in the shop as they may differ*

6 lengths of tongue and groove: 18mm x 119mm x 2100mm	<b>£31.55</b>
Pack of 8: 34mm x 18mm x 2400mm	<b>£16.52</b>
2 x "Legs": 38mm x 63mm x 2100mm treated	<b>£12.70</b>
1 pack feather edge: 1500mm long x 125mm wide	<b>£14.64</b>
4 x M8 coach bolts, washers and nuts: 75mm long	<b>£5.42</b>
40 x 30mm Number 8 wood screws	<b>£2.00</b>
20 x 40mm Number 8 wood screws	<b>£2.00</b>
10 x 50mm Number 8 wood screws	<b>£2.00</b>
Small quantity of wood glue	
<b>Total</b>	<b>£86.83</b>

## Tools

- Saw
- Screwdriver
- Drill
- Stanley Knife
- Chisel
- Tape measure
- Clamps, ratchet straps or string



## Procedure

Set to with the saw, cut your timber into the lengths listed in the cutting lists.  
(Base not shown)



Select the two sets of three short planks for the divider boards. These need glueing together.

The 3 x 2 off-cut helps keep the boards straight while the glue dries.



Once the glue is dry, remove the clamps, string or ratchet straps. Clean up any excess glue with a sharp chisel. Then with a Stanley Knife, carefully remove the tongue from the widest board. Score along both sides a couple of times and it will snap off quite easily. Any unevenness can be fixed with the chisel.

Now for some accurate measuring -  
Find the halfway point along the top edge, draw a line down at right angles (Many saws have a square built in).  
Mark off 189mm either side of the centre line at the top and 108mm at the bottom. Draw a line to connect your marks and cut it out. You should end up with something like this.



Next, take two of the 395mm top-bars and drill two pilot holes in each, approx. 3mm diameter.

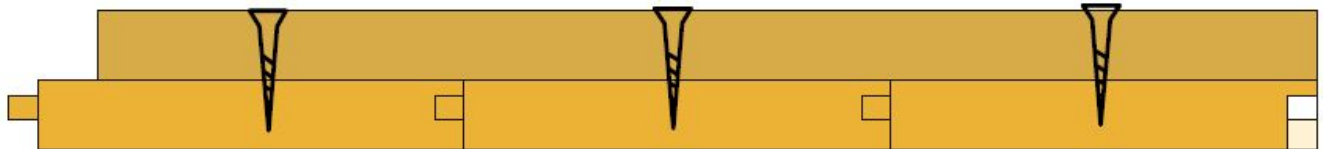


Using two 40mm wood screws, fix it central on the top of the divider board.  
Put these to one side.

Take one set of three 850mm boards and two of the 320mm batons.

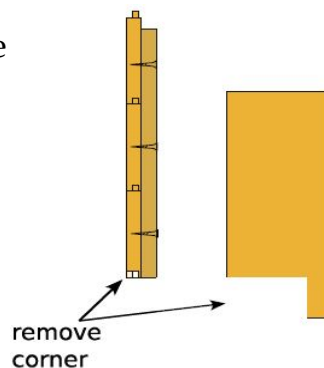
Fit the batons to each end of the sides as shown in the picture on the right.

**Note:** the tongue and groove are off-set and not central on the boards. Fit the baton to the side with the smallest shoulder as in the drawing below.



Once both sides are assembled, the larger side of the groove must be cut off using the Stanley Knife again.

**Take care and if in doubt, wear gloves.**

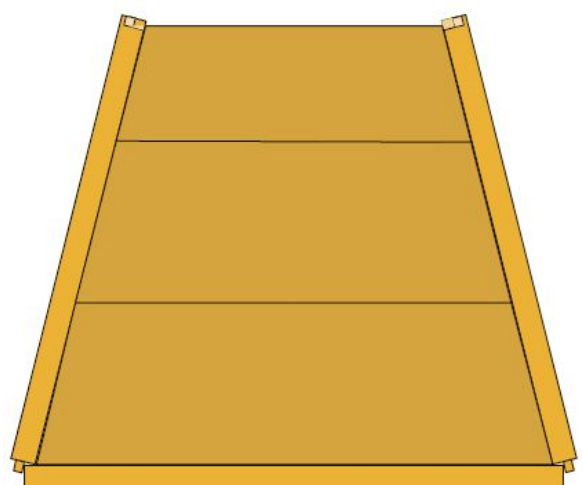


Use a straight edge (I used the back of a saw) and take a few light cuts rather than going in too deep.

Now we have two sides and two divider or follower boards.

Place the two divider boards approximately 800mm apart, upside down resting on the top bar then carefully place the sides on them.

Looking from one end it should look a bit like this.

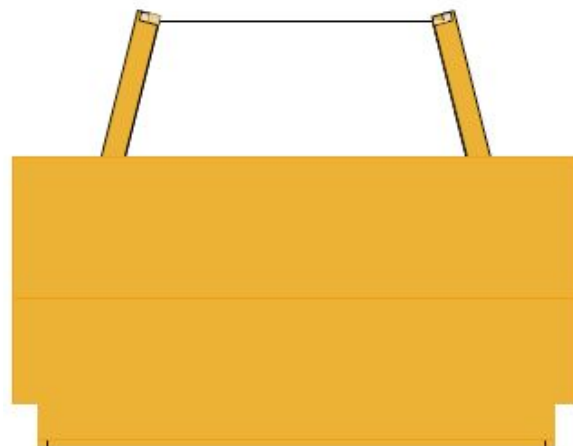
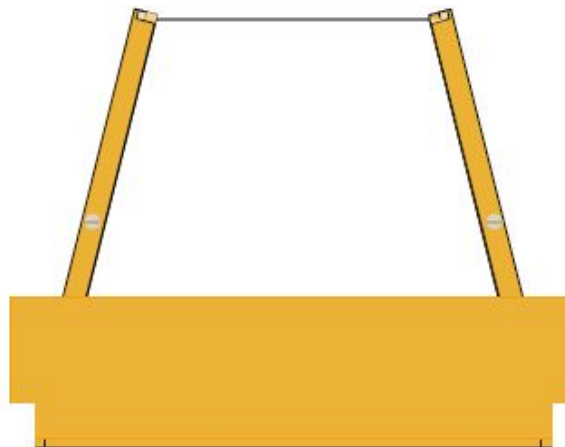
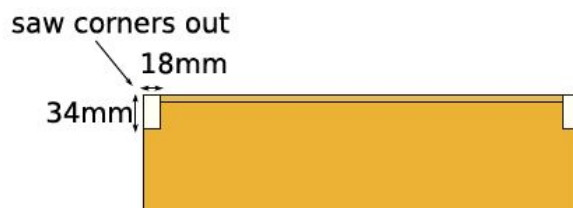


Next find the two sets of three 450mm boards for the ends. Take two of them and saw a 18mm x 34mm rebate for the support rails.

Turn the board upside down and place again the end of the hive so it rests against the batons.

It can help to use clamps or straps to hold the sides in place. Feel with your fingers in the cut-outs for alignment then once you are sure, drill pilot holes and screw the first end in place. Do the same on the other end and then add the next board and so on.

When all six pieces are fitted you are ready to cut the entrance hole.



## The Entrance Hole

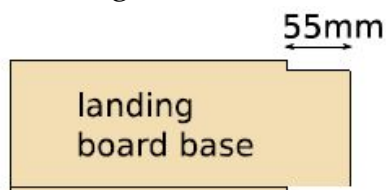
Place one of the base (245mm) pieces into position at one end with the tongue towards the centre of the hive. Draw a vertical line down from the end of the tongue for 20mm. Measure 103mm along the edge from the line and draw another 20mm line down. Draw a line to connect the bottom of the two lines.

Saw down the 20mm lines and then a few other verticals.

Using a chisel cut the entrance hole.



Take the one longer base piece and cut 55mm of the tongue and groove off.



This piece can now be fitted in place. Then fit the other base pieces until you reach the other end of the hive.

You will find the last piece needs cutting down to fit. Once in place, the base can be pilot drilled and the screwed in place.



**Turn the whole assembly over and you have your top bar hive!**

Now take the two 886mm long side rail batons and drill 4mm holes 10mm from each end. Screw them to the hive with 50mm screws (green arrows) and 30mm screws (blue arrows).



## The Legs

Length of legs can be adjusted to suit the height of the beekeeper. I have used 900mm. At this point it is easiest to place the body of the hive on a support so it is at the height you require.

Clamp the legs in place one at a time and drill two 8mm holes through each leg and the end wall, being sure to avoid hitting the side walls. One will be inside the hive and one outside. I have also cut the tops level. Bolt into place with the coach bolts, nuts and washers on the outside.



# The Roof

For a simple flat roof:

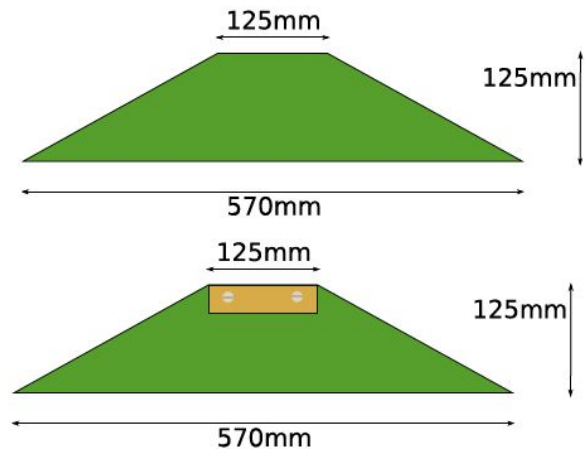
Just a sheet of ply cut to 18mm wider than the hive top on each side and a baton frame to keep it in place. This is then covered with weather protection - metal, plastic or roofing felt.

If the sides are deep enough, insulation is recommended to help keep cool in summer and warm in winter.

For a gabled roof:

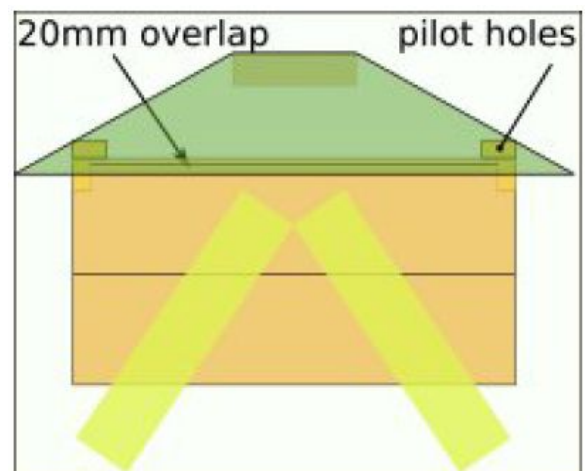
First cut the ends with the wider edge at the bottom.

Then fit a 125mm baton to the top edge.



Take the two 890mm batons and lay them flat over the side rails on the hive. They should be very slightly longer than the hive. Place the gable end against the end of the hive with a 20mm overlap. It can be useful to rest a spacer on top of the legs to keep things level. Drill pilot holes through the gable into the end of the roof rails and fix with 40mm screws. Once both ends are fixed, fit the top rail 970mm. It will overhang the gables equally at each end. Pilot drill and fix in place with the 50mm screw.

Finally, fit the cladding.



As the hive is made of soft wood, it is a good idea to protect it from the weather.

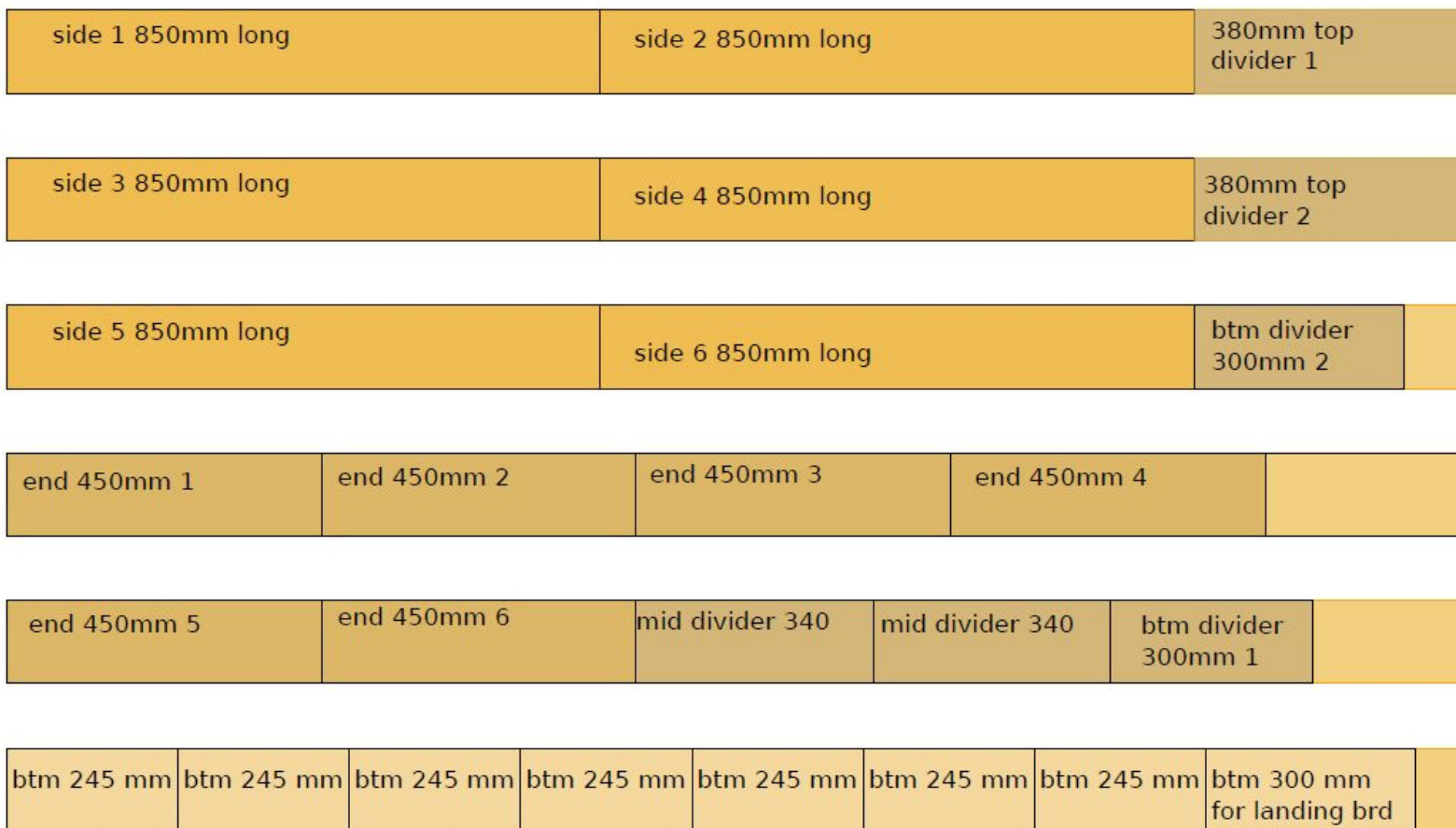
**Note: Only the outside.**

Eco paint or a mix of 10% beeswax to 90% linseed oil can be used.

For added protection and insulation, the feather edge off cuts can be fitted to the sides.



## Cut Diagram for 18mm x 119mm x 2100mm T & G Floor Boards



### Baton cutting list (34mm x 18mm)



**For the body**  
 4 x 320mm  
 2 x 886mm  
 26 x 395mm

**For the roof**  
 1 x 970mm  
 2 x 890mm  
 2 x 125mm

### Feather edge for roof (125mm x 1800mm)



6 x 970mm  
 2 x 570mm



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