Nucleus Hive

All beekeepers should have at least one nucleus hive for every two colonies that they keep. It's usually easier to perform swarm control and queen rearing activities with nucleus equipment. This article outlines the plan and build of a cedar nucleus hive.

Design Considerations

The floor is separate from the nuc body and is retained in place by two spring clips. Rather than having a deep roof I tend to use an eke to accommodate a feeder when required. The two key considerations for my measurements were:

- The roof metal was 500x275mm and in hindsight I should have used slightly thinner wood for the roof sides to make it a looser fit - probably 15mm rather than the 19mm shown in the plan.
- The overall inside length needs to be checked to make sure you can get your frames in – around 436mm across the top is fine.

The joints and rebates are the same as those on a standard hive; indeed I kept the overall length the same so that I can perform a unite with the nuc box on top of a standard brood body. If you can't get the right thickness timber for the floor runners then consider gluing two pieces together to give the correct dimensions. Not included in the plan are the entrance block and cover-board which are fairly easy to make up. You should also consider putting batten strips in the roof to make sure you don't squash any bees when putting the roof on.

Cutting List

Part	Quantity	Description	Length(X)	Width(Y)	Thickness(Z)
1	2	body - end	202	196	19
2	2	body - side	460	231	19
3	1	floor - top end	184	25.5	19
4	2	roof - end	275	101.6	19
5	2	roof - side	500	101.6	19
6	2	body - bottom fillet	222	44	25.4
7	2	body - top fillet	222	50	25.4
8	2	floor - support end	154	29	25.4
9	2	floor - long runner	460	50	34
10	1	ply roof	500	275	6

All measurements in mm.

Assembly

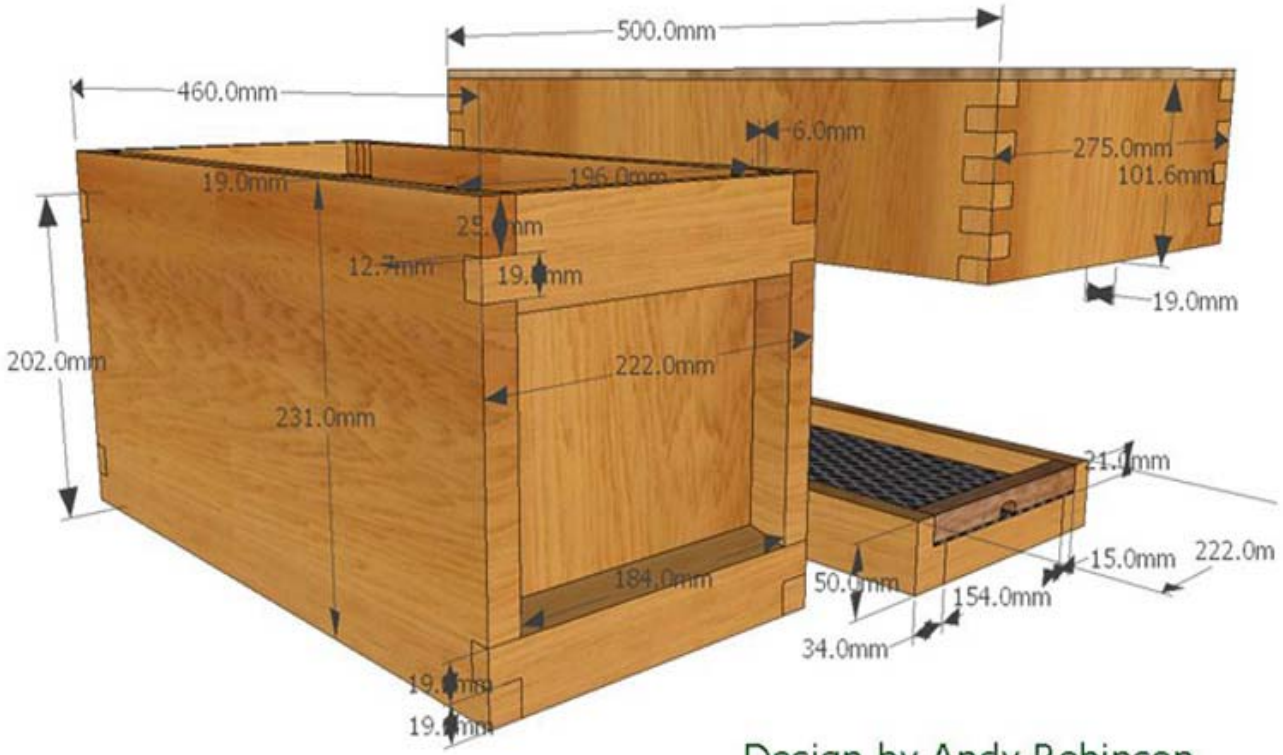
I use a table saw to cut the pieces to size and then a router for making the joints and rebates.

1. Glue up the floor, nuc body and roof. Check for square and clamp up.
2. Nuc body - use 30mm nails to strengthen support for the key areas:
    - Top and bottom fillet tenons into ends of nuc sides – 8 in total
    - Both front and back ends of the body where they slot into the shallow rebates – 2 per rebate -8 in total
3. Floor- fix at each corner with 30mm screws. Pre-drill with pilot holes to prevent splitting. Secure the mesh floor on the rebates on the long runners and the top of the front and back supports with 10mm staples
4. Roof – Cut the ventilation slots in the end boards – either use a saw and a chisel or if you know what you are doing a router can be used. Fix some gauze or mesh to prevent the bees from trying to use it as an exit/entrance. Use panel pins to fix the ply to top of roof. Fit battens to inside of roof. Fix metal cover to roof once any finish, such as linseed oil has been applied

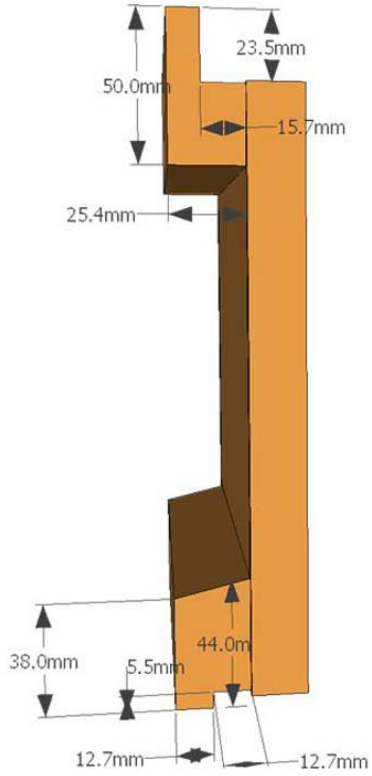
Finishing

Sanding all pieces prior to assembly makes it easier than trying to do it once glued up. Cedar is durable and doesn't need any finishing but I like to apply 2 coats of boiled linseed oil. This gives the hive a bit more protection and makes the surface of the wood a bit more resistant to denting.

Nucleus Hive Plan



Design by Andy Robinson



End Cross-Section View