

Building the Hybrid Hive

Frame: The fundamental design feature of the hive is a comb frame similar to that of the Einraumbeute.

To achieve accurate replication of individual frames, without resorting to sophisticated machinery, simple jigs were built for small batch production.

All frame parts are cut from timber planned to **27mm** thick.

Frame: Overall length **464mm**; body width **285mm**; depth **27mm**

The Top bar is **325mm** long and **22 mm** thick and is cut to form a 'V' section from which bees can anchor their combs. The lugs are 20mm long and 10mm thick.

Side Frames are 464 mm long; timber is 27mm wide and 10mm thick

The Bottom bar is 285 long, 15mm wide and 10mm thick .

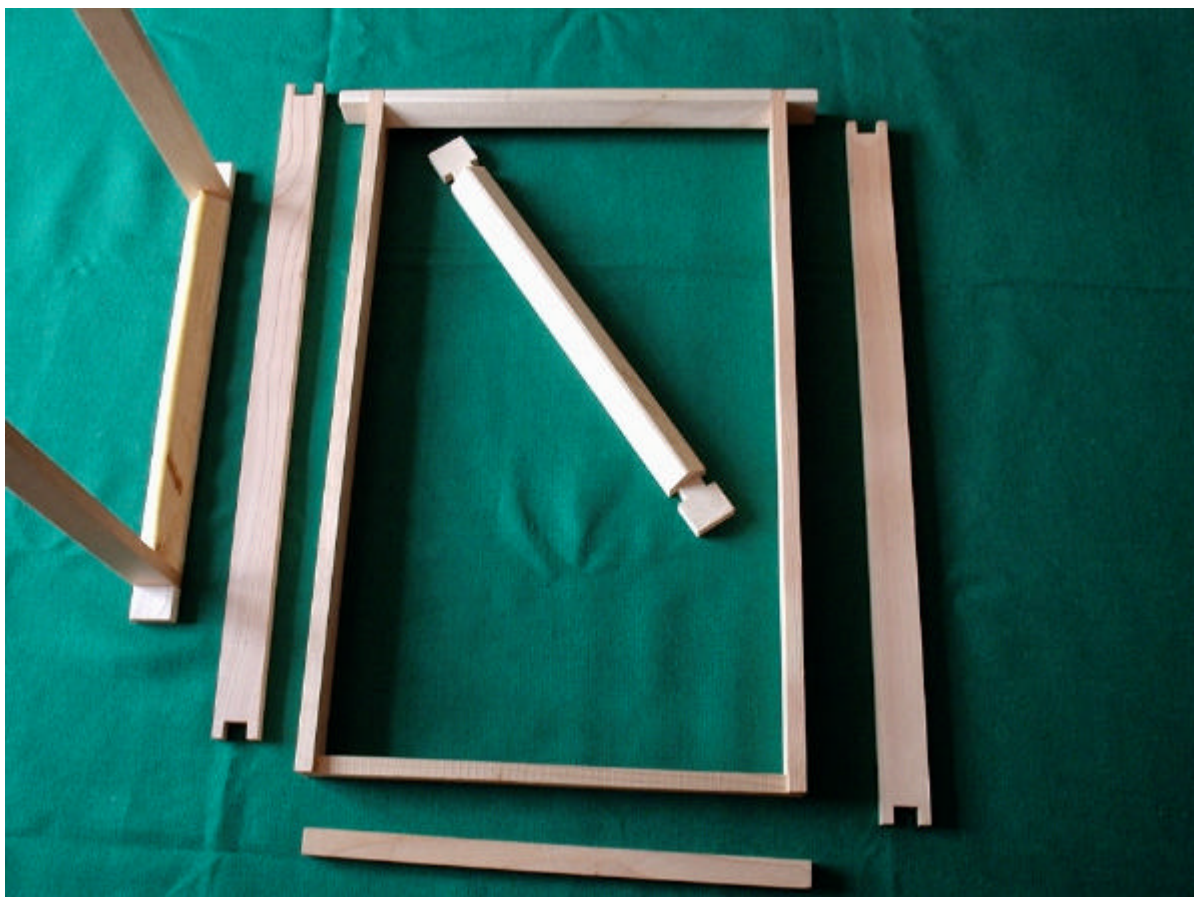


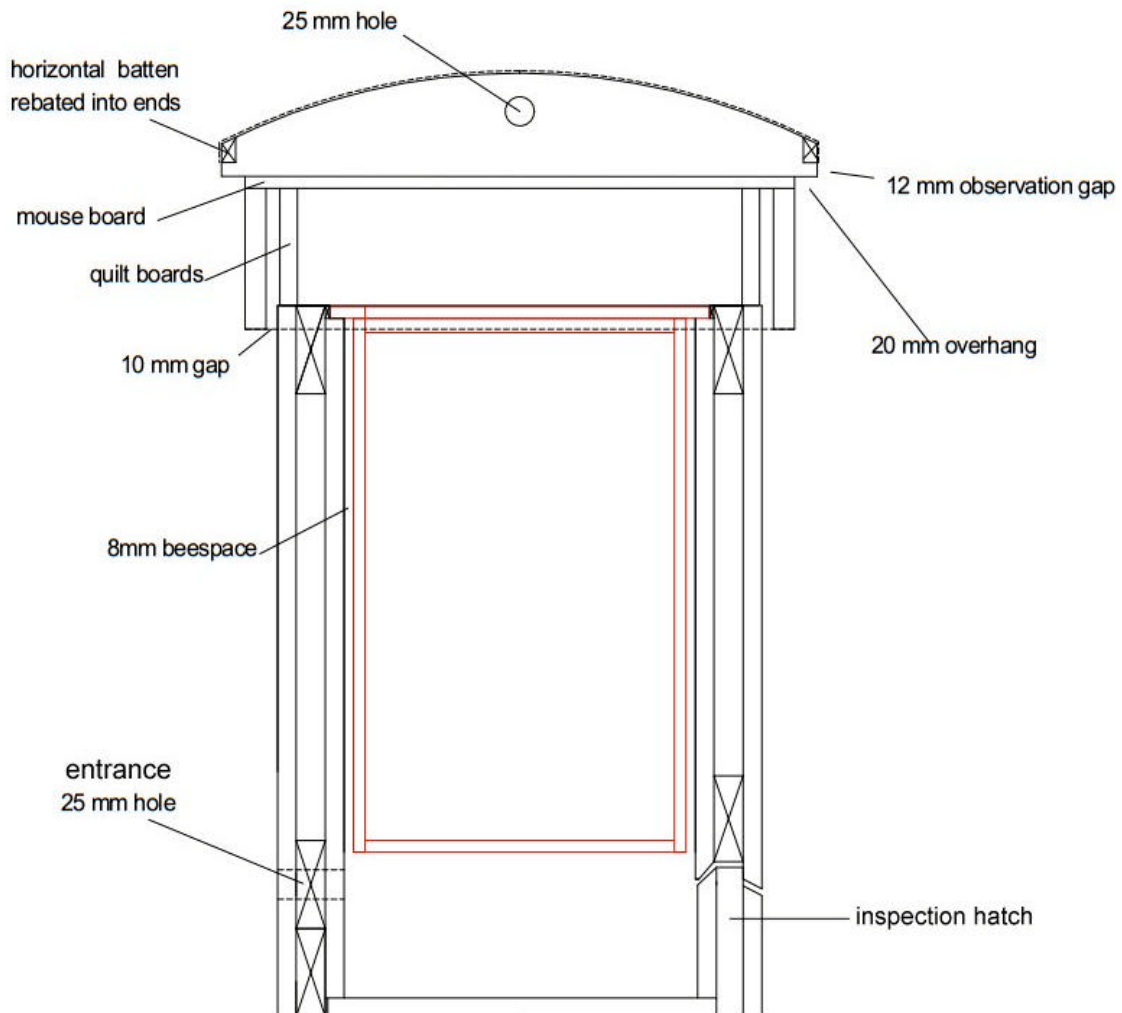
Photo: Frame parts. Note one frame 'V' has been primed with beeswax

When assembling frames, ensure they are square by measuring diagonals or using a rectangular template. Top-bar to side-bar joints can be

strengthened with a dab of glue and/or a horizontal screw (size 3 x 25mm).

The hive-box is built to fit the comb frame; the critical dimension of the box is the allowance of 8mm of bee-space between sidewalls. The hive-box comprises a structural frame built from 3 x1 inch (75 x 25 mm) timber, clad inside and out with 16mm of Western Red Cedar timber. The space between the cladding is filled with straw. The structure incorporates a deep sump and a full length rear inspection hatch.

Section through the hybrid hive body



roof radius 572 mm
 chord 510 mm
 rise 60 mm

matt sorenville	
Working Wood	
Tel: 01264 730243	
Job	woon
Date drawn	1/07/14
Scale	1:5
Dwg.No.	2

Dimensions:

Internal: Width **301mm**, Length 800mm (31.5") Height 610 (24")

External over cladding: Width 415mm (16.4") length 915mm (36")

Hive Box Frame: End frames and side frames are built separately using half-lap joints and then assembled together.

End Frame dimension: Width 333mm; length/ht 610mm: thickness 25mm

Side Frame overall : Length 870mm; Height 610mm; thickness 25mm



Photos: End frames: Side frames and corner joints: Assembled frames



Note the difference in side frames; one is designed to hold a 5" deep inspection hatch, the other to hold a board (not shown) tacked in place to support the entrance hole bores.

Cladding Internal cladding is fitted to allow:

1. A comb frame rebate 11 mm deep and 16mm wide on the sides. A lath (11mm x 3.5mm) is later fitted in the rebate to locate top-bars.
2. A floor rebate 20mm deep and 16mm wide on all sides.

As the external cladding is fitted straw is packed in the cavity.



Entrances. Seven entrance holes of 25mm diameter were bored below the frame line. These can be used to vary the nest position, during low intrusion husbandry, to facilitate old comb removal.



Quilt boxes Two quilt boxes are constructed from timber 100mm x 10mm (+) each 410 x 450 mm external dimensions

Inspection hatch. The removable rear inspection hatch incorporates 3 mesh covered vent holes of 38 mm diameter which can be adjusted to suit weather conditions.

Floor. The floor is a 20mm thick board which fits up into a rebate in the hive-box.

Roof. A breathable roof incorporating a mouse-board sits over the two quilt boxes. The frame has a curved profile over which is fitted a metal sheet of aluminium, zinc or copper sheet. The roof covering is stiffened by turning over the edges.

The roof options include a pitched roof as well as being hinged to the box. The hinge version requires a minor modification to one side of the quilt boxes.



Photo of curved roof parts and roof without metal covering

