

## Description of the Warre hive

The Warre Hive comprises tiers of identical boxes fitted with top-bars, but no frames. Its essential design and usage features can be summarised as follows:

Image and description courtesy of the [Warre English Portal](#)

- hive-body box internal dimensions 300 x 300 x 210 mm, with projecting handles
- eight 36mm centred 24mm wide top-bars resting in rebates in each box (NO FRAMES)
- wax starter strips under each top bar (NO FOUNDATION)
- flat floor, notched with a 120mm wide entrance, alighting board
- coarse weave cloth covering the top-bars of the top box
- 100 mm high 'quilt' boxed with wood, filled with straw, sawdust, wood shavings etc., retained with cloth
- gabled roof containing a ventilated 'loft' and separated from the quilt by a mouse-proof board

Here are some more features of the Warre Hive:

- the bees build natural comb in the first (top) box and extend downwards into further boxes
- new boxes are added at the bottom
- one or more boxes of honey are harvested from the top after the main flow
- the bees winter on two boxes of comb containing a minimum of 12 kg stores (France)
- honey is harvested by draining, or by centrifuging combs in baskets
- at the spring visit, the hive is expanded by one or more boxes, containing with starter strips or comb

## History of the Warre hive



The Warre Hive (also known as the People's Hive) was developed in France by Emile Warré (1876?-1951). Warré developed the People's Hive after experimenting with over 350 hives of various designs and types. It was his goal to find a hive system that was simple, natural, economical, and bee-friendly. The result was the People's Hive (Ruche Populaire). He outlined the construction and operation of the hive in his book "Beekeeping for All." This book is available in English as [a free download](#). If you are interested, [English Plans for the Warre Hive](#) are also available.

Warré is not alone in his findings, though. In 1783, a German beekeeper named [Johann Ludwig Christ](#) developed a beekeeping system almost identical to that of Warre. And in Japan, many beekeepers still employ [a similar system of beekeeping](#) that has been in constant use since the Edo period of Japanese history (A.D.1586 to A.D.1911).

### I want a Warre hive...Where Can I Get One?

Currently, there are no US or Canadian suppliers of ready made Warre Hive parts and supplies. In fact, there is only one commercial supplier in the world at this time; [Herr Thuminger and Associates](#). They are located in Vienna, Austria and can deliver ready made hives and hive parts to most of Europe and the UK. For beekeepers in North America there are two options: [build your own](#), or [download the plans](#) and have a carpenter build a hive for you. Hopefully in the near future beekeepers in US and Canada will have the option of purchasing ready made Warre Hives from a North American supplier.

## The Quilt – Warre Hive Construction Guide

In this part of the Warre Hive Construction Guide we will assemble the quilt. The quilt rests between the top hive box and the roof. It is the easiest hive component to build...just four pieces of wood and some cloth.



### Step 1: Prepare the Parts

To build the Warre Hive Quilt, you will need to cut the following wood pieces:

- 2 short sides measuring 30cm long by 10cm wide (11 13/16" long by 3 15/16" wide). The edge width of the board is up to you. A good size is anywhere between 20mm to 25mm (3/4" to 1") wide.
- 2 long quilt sides measuring 34cm long by 10cm wide (13 3/8" long by 3 15/16" wide).
- 1 piece of cloth measuring about 40cm by 40cm (15 3/4" by 15 3/4")

You will also need:

- Nails or screws
- Staples or small brads

### Step 2: Build the Box

Take the pieces of wood and assemble them into a box. As you can see in the picture below, the longer sides go on the outside of the shorter sides of wood. As you build

the box, check the internal measurements every so often. They should be 30cm by 30cm (11 13/16" by 11 13/16").



### Step 3: Attach the Cloth

Take the box you built in Step 2 and lay it on a flat surface. Lay the cloth over the box, as in the picture below.



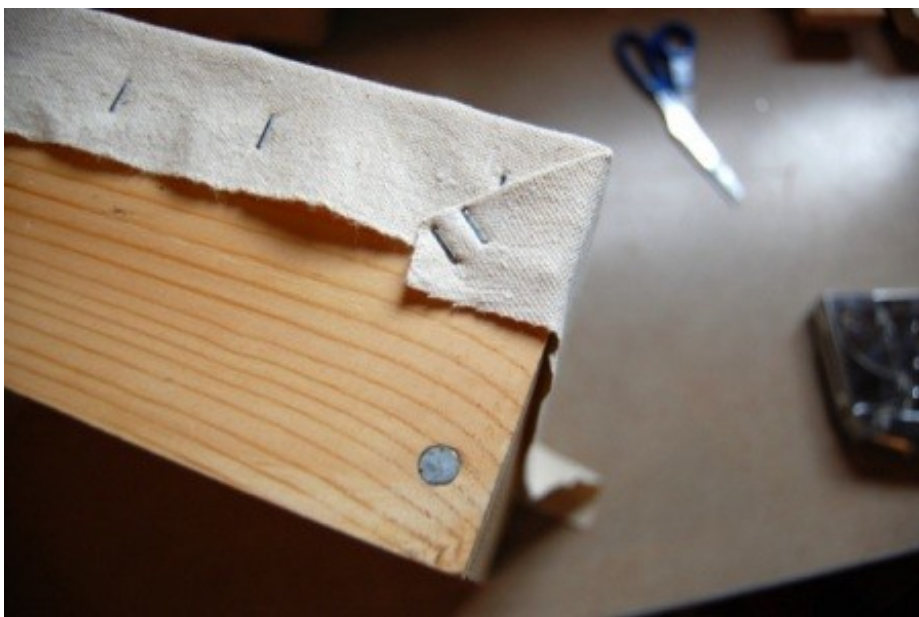
Use your staple gun to staple the cloth to the box. You can also use a hammer and



small brads. It works best to put a couple of staples in one side to hold the cloth to an edge, and then stretch the cloth to the opposite side and staple it. Do the same for the remaining two sides. Go back around the box stapling every few inches to hold the cloth in place. You want the cloth to be taut across the top of the box with no wrinkles. It will stretch over time, so get it good and tight.



Trim any loose ends of the cloth, and fold the extra amount of cloth over the edges and down the sides of the box. Staple or nail the cloth to the sides of the box. This will keep the edges from fraying. You can also fold the cloth around the corners of the box to further prevent fraying. As you can see, I cut my edges long to demonstrate the corner for you. You are welcome to trim your fabric shorter to save on cloth.



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Congratulations on completing the Warre Hive Quilt!

## The floor - Warre Hive Construction Guide

In this section of the Warre Hive Construction Guide we will build the floor. The floor acts as a foundation for the Warre Hive; it supports the hive boxes, quilt and roof. The Warre Hive Floor is fairly easy to build with common woodworking tools. Let's begin!

### Step 1: Prepare the Parts



To build the Warre Hive Floor, we will need to cut the following wood pieces:

- 2 floor halves measuring 33.5cm long by 16.75cm wide (13 3/16" long by 6 5/8" wide)
- 2 short pieces of wood measuring 21cm long by 3cm wide (8 1/4" long by 1 3/16" wide)
- 1 landing board measuring 41cm long by 16cm wide (16 1/8" long by 6 5/16" wide)

You will also need:

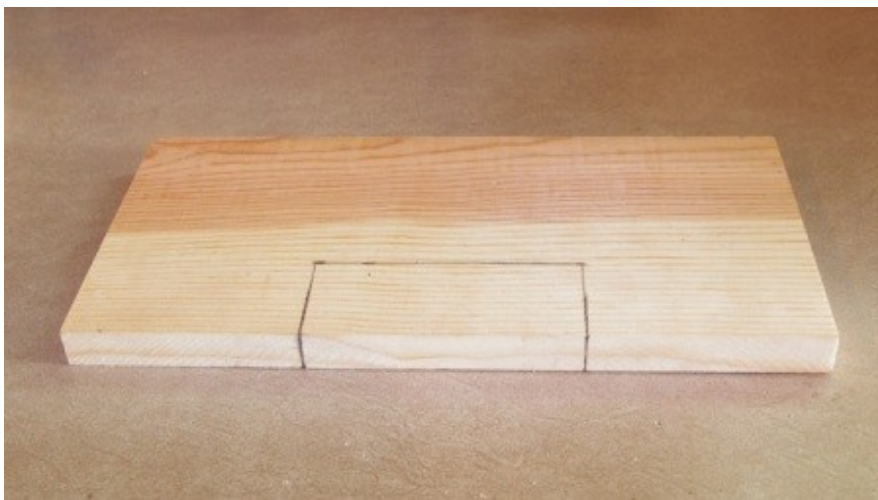
- Nails or screws



First we need to outline where our hive entrance will be. Take one of the floor halves measuring 33.5cm by 16.75cm (13 3/16" by 6 5/8") pieces and grab a ruler. Measuring from one edge of the board, mark the following points on the long side of the board:

- 10.75cm (4 1/4")
- 22.75cm (8 15/16")

These are the edge points of our hive entrance. At each of these points, use a square to draw straight lines 5cm (1 15/16") long at right angles to the edge of the board. Using a straight edge, draw a line connecting the two edge lines to form a rectangle. When finished, your board should look similar to the one below.





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Now cut along the two 5cm (1 15/16") lines with a handsaw or table saw. Stop each cut at the end of the line. See the picture for details.



Take a chisel and remove the extra wood between the two cuts. When finished, you may want to use some sandpaper to smooth out the chiseled area.



### Step 2: Build the Floor

Take both floor halves and lay them on a flat surface. We will attach these together to make our floor. Make sure the hive entrance you just cut is facing outward.



Butt the edges flush together and lay the two short pieces measuring 21cm by 3cm (8 1/4" by 1 3/16") pieces crossway over the two floor halves about 1 cm from the edge. Center each piece on the seam formed by the edges of the two larger boards. Fasten the wood together. Be sure to hold the assembly straight as you fasten it.



Now it is time to add the landing board. Rotate the fastened assembly 90 degrees and lay the 41cm by 16cm (16 1/8" by 6 5/16") board on the floor. Measure from one

edge of the floor and mark a line at the center of the floor. The mark should be made at 16.75cm (6 5/8"). Now, mark the center of landing board. Align the two boards as shown below.



Now measure in from the edge of the floor about 1cm and make a mark with your pencil. Align the edge of the landing board with the mark. Add a fastener to hold the landing board in the center of the floor.



Now flip the floor assembly 180 degrees and measure the distance from each edge of the floor board to the side of the landing board. Nudge the landing board left or right until the distances on each side are equal. Use a fastener to hold the board in place.



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Fasten the landing board to the floor assembly. Make sure that you do not put any fasteners where you cut out the wood to create a hive entrance. Here is a picture of the landing board fully fastened.



### **Step 3: Attach the Legs**

To add some legs to our Warre Hive Floor, we will need to cut the following wood pieces:





- 4 legs measuring 10cm tall by at least 4cm wide (3 15/16" tall by at least 1 9/16" wide) 2x4's cut to 3 15/16" tall make good legs.
- 4 feet measuring 10cm by 10cm square by at maximum 2cm thick (3 15/16" by 3 15/16" square by at maximum 13/16" thick)

Take one of the legs and lay one of the feet on it. Center the foot over the post and fasten it in place.



Finish the other three legs in the same manner, attaching the feet of the legs to the posts.

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Now we can take our four legs and arrange them under the floor. Once you have aligned them to your liking, fasten them in place from the top, fastening through the floor into the legs .



Here is a view of the underside so you can see how I aligned the feet on my floor.



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### The hive box – Warre Hive Construction Guide

In this section of the Warre Hive Construction Guide we will build the hive box. It forms the living space where the honeybees create their beeswax home. The Warre hive box is fairly easy to build with regular woodworking tools. Let's begin!



## Step 1: Prepare the Parts

To build a Warre hive box we will need to cut the following wood pieces:

- 2 long sides measuring 34cm long by 21cm wide (13 3/8" long by 8 1/4" wide)
- 2 short sides measuring 30cm long by 21cm wide (11 13/16" long by 8 1/4" wide)
- 8 topbars measuring 32cm long by 2.4cm wide by 1cm thick (12 5/8" long by 15/16" wide by 3/8" thick)

You will also need:

- Nails or screws
- Shorter nails or screws to attach the handles
- Even shorter nails to attach the top bars. Very small nails or pins work best, so you can remove the top bars easily during harvest time.

Top bars are an integral part of the Warre Hive Box. Each hive box needs its own set of top bars. You will need to cut rebates into two sides of the hive box to support the top bars. You can cut the rebates with a router, or you can use a table saw. Following are the instructions for a table saw. Set up your saw so that the fence is 1cm away from the blade.

Set the blade to a depth of 1cm. Take one of the short sides measuring 30cm long by 21cm wide (11 13/16" long by 8 1/4" wide) and run it through the saw lengthwise.











Please note that I have removed the table saw protective guard for demonstration purposes. Please do not use your table saw without proper safety precautions. Refer to the information provided by your table saw manufacturer. Thanks!

You should now have a board with a slot cut into it, as shown in the picture below.



Now take the board and stand it upright. Place the previous cut towards the fence and run the board through the table saw.



You should now have a nice rebate cut into the long side of the board. Repeat this process for the other short board measuring 30cm long by 21cm wide (11 13/16" long by 8 1/4" wide).



## **Step 2: Build the Hive Box**

Take the two short sides and stand them up on your work surface with the rebates towards each other. Be sure you have edges with the rebates in them facing the same way. Lay one of the long sides over the top of the two short sides and fasten them together.







Flip the box assembly over and lay the other long side over the top of the two short sides. Fasten it in place. Congratulations on completing the main hive box assembly! Next we will add the top bars.





### Step 3: Attach the Top Bars and Handles

Take the 8 topbars measuring 32cm long by 2.4cm wide by 1cm thick (12 5/8" long by 15/16" wide by 3/8" thick) and lay them on the rebates in the hive box. Fasten them in place.



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Place the hive box on its side and attach some handles. You can use scrap pieces of wood for your handles, or you can cut handles measuring 20cm to 25cm long by 5cm to 15cm wide (7 7/8" to 9 13/16" long by 1 15/16" to 5 7/8" wide). You can style them with rounded edges or leave them plain. Feel free to experiment to find what works for you.





## The Roof – Warre Construction Guide

In this section of the Warre Hive Construction Guide we will build the hive roof. It forms the covering for the whole beehive. The Warre hive roof is fairly easy to build with regular woodworking tools. Let's begin!



### Step 1: Prepar the Parts



To build a Warre hive roof we will need to cut the following wood pieces:

- 2 end gables measuring 39cm long by 21cm wide (15 3/8" long by 8 1/4" wide)
- 2 sides measuring 35cm long by 12cm wide (13 3/4" long by 4 3/4" wide)
- 2 roof panels measuring 50cm long by 21cm wide (19 11/16" long by 8 1/4" wide)
- 1 ridge panel measuring 50cm long by 6cm wide (19 11/16" long by 2 3/8" wide)
- 1 coverboard measuring 39cm long by 35cm wide by 1cm thick (15 3/8" long by 13 3/4" wide by 3/8" thick) This cover board can be made from 3/8" or 1/2" thick outdoor grade plywood.

You will also need:

- Nails or screws
- Smaller nails or screws to fasten the coverboard

Take one of the end gables measuring 39cm long by 21cm wide (15 3/8" long by 8



1/4" wide) and lay it on your work surface. Decide which long side of the board you want to be the top. Now place a mark on each side of the board 16cm (6 5/16") up from the bottom. If you have a combination square or speed square, set it for 72 degrees. Place the square at the mark and draw a line towards the top of the board

If you do not have a square, simply find the middle of the board and put a mark there. It should be around 19.5cm (7 11/16") from either side. Now place two marks 2cm (13/16") on each side of this middle mark. Draw some lines from these marks to the marks you put on the side of the board. Cut along these lines to create the gables. Complete this same process for the other long side measuring 39cm long by 21cm wide (15 3/8" long by 8 1/4" wide).

## Step 2: Build the Roof

Take both of the short roof sides measuring 35cm long by 12m wide (13 3/4" long by 4 3/4" wide) and stand them up on your work surface. Lay one of the end gables you just cut on top of the short sides. Align the bottoms together so that the gables extend beyond the tops of the short sides. Fasten the three sides together.

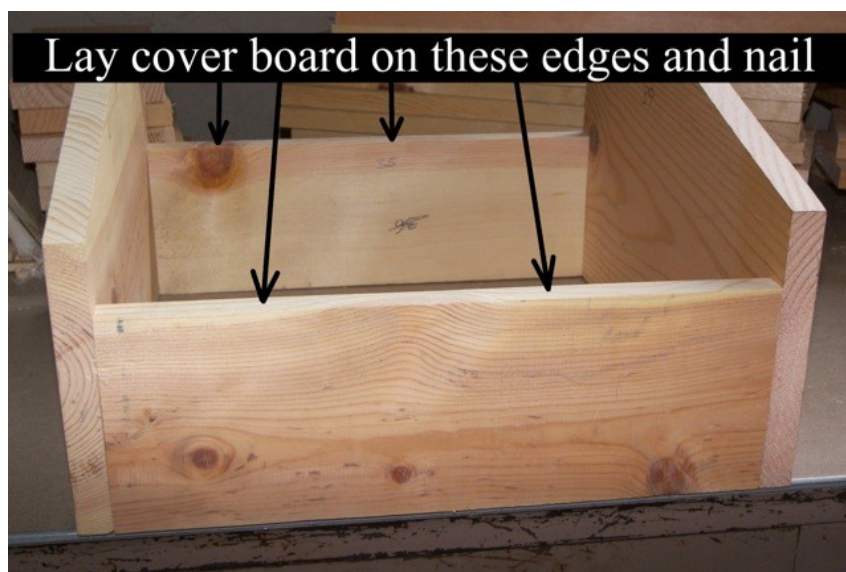


Take the roof assembly and flip it over. Lay the remaining end gable you cut on top of the two short sides. Again, align the bottoms together so that the gables extend beyond the tops of the short sides. Fasten the sides together.





Take the cover board and lay it on the short sides of the box. It should just fit between the end gables of the longer sides. Fasten it in place.



Take the two roof panels measuring 50cm long by 21cm wide (19 11/16" long by 8 1/4" wide) and lay them on top of the gables. The long sides of the roof panels should hang over the gables about 5.5cm (2 3/16"). Align the roof panels with edges of the flat tops of the gables. Fasten the roof panels onto the gables.



Take the ridge panel measuring 50cm long by 6cm wide (19 11/16" long by 2 3/8" wide) and lay it over the space between the roof panels. It will hang over a bit on each side. Align the ends of the ridge panel flush with the ends of the roof panels.



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Fasten the ridge panel to the gables. Be sure to drive the fasteners between the roof panels.



## Paint and Finish – Warre Hive Construction Guide

In this section of the Warre Hive Construction Guide we will paint and finish the Warre beehive. Adding paint or finish to your beehive protects it from the rain and weather. Finishing a Warre hive is probably the easiest part of the building process. Let's get started!



### Step1: Prepare the Parts

Take all of the Warre hive components you have built and lay them on some cardboard, newspaper or scrap wood. You can stack the hive boxes if you have more than one. You can also lay thin strips of across two saw horses to provide a place to



paint the roof and floor as in the photo above. The quilt does not need to be painted.



### Step 2: Apply the Finish

After you have set up your painting area, prepare the paint or finish of your choice and apply it. You can use a rag or paint brush for oil finishes and a paint brush for paint. Be sure to coat all the corners and joints of the hive parts as you apply the finish.





### Step 3: Apply a Second Coat



When you are finished applying your finish of choice, let it dry for the period of time recommended by the manufacturers of the finish. When your Warre hive is dry, apply a second coat of finish to further weatherproof your Warre beehive.

## Installation – Warre Hive Construction Guide

In this section of the Warre Hive Construction Guide we will install the completed Warre hive. Once installed, your beehive will be ready for a new package or swarm of bees. Let's begin!



To install a Warre hive, find a good flat area on your property. It should be somewhat shaded, but not so shaded as to be completely blocked from the sun's warmth. The area that you select should have good soil drainage, and preferably be out of the path of strong prevailing winds. The area in the photo below satisfies all of the above criteria.





Place your Warre hive floor on a level space of ground in the area you have selected. Use a carpenter's level to make sure the floor is level. You can lay the floor right on the ground, or you can put the feet on bricks or cement blocks. Alternately, you can build the floor without feet and just use a stand of your own construction to support your Warre hive.



Next, place your Warre hive box onto the floor. Situate the hive box so that there is an even overlap on all sides of the box. The box is designed to be slightly larger than the floor. This prevents water from running down the sides of the box and into the hive via the floor.





Now for the Warre hive cloth. In his book [“Beekeeping for All,”](#) Emile Warre recommends coating the cloth in a flour paste to prevent the bees from chewing the cloth. This is a messy process to say the least. My personal solution was to purchase some metal window screen material from a hardware store. I cut a piece from it the same size as the cloth. Then I taped the cloth and the screen material together to make one assembly and put this assembly on the beehive with the metal side down. This prevents the honeybees from chewing the cloth. If you want to use a flour paste to stiffen your cloth, the instructions can be found in [“Beekeeping for All.”](#)



Lay the Warre hive cloth over the uppermost hive box. The cloth should measure 31cm by 31cm (12 3/16" by 12 3/16"). For more information on the cloth please see [the Materials List](#).





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Now place the quilt on the top hive box, sandwiching the cloth between the box and the quilt. Fill the quilt with your choice of insulating material. In the photo, you can see that I have used some chopped pine shavings for insulation.





Once the quilt is full of insulating material, place the roof over the quilt. The sides of the roof will cover both the quilt and a small part of the top hive box. Center the roof over the hive, so that there are equal amounts of air space on all sides of the hive box.

Congratulations! You have built, finished and installed your own Warre Beehive! Stand back and admire your handiwork, pat yourself on the back...and then go find some honeybees to live in your amazing new beehive.

Thanks for viewing the Warre Hive Construction Guide. I hope you found it useful. If you have any questions or comments...just drop me a line in [the comment box](#) or on [the Contact page](#).

Enjoy your new Warre Hive!