

Hexayurt playa

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Newsflash: we now have fire test data on R-MAX / Tuff-R. . Please read the Hexayurt Safety Information before building your hexayurt

Hexayurt Project at Burning Man 2007

The Hexayurt Project just won the Participate! Treehugger / Current.TV / Burning Man prize (http://www.treehugger.com/files/2007/08/participate_win.php) for eco-nifty Burning Man stuff. In honor of this event, I have linked one of my playa pictures. Never let it be said that weirdos can't get things done :-)

The serious stuff is at:

- Hexayurt Presentation PDF - refugees, including infrastructure like solar lights, wood stoves and clean drinking water using SODIS.

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- The Hexayurt Mass Evacuation Plan - evacuating cities in an American context.
- <http://appropedia.org> - the wonderful folks hosting the Hexayurt project and thousands of pages of other sustainability information. You're on this site right now.

What is a Hexayurt

A hexayurt is a shelter I designed for refugees and other people with a small housing budget.

Please watch the two minute video introduction at Hexayurt.com (<http://hexayurt.com/>)



This Hexayurt was made from about \$200 of materials, mostly from Home Depot, and took three hours from unloading the truck to a finished building. The ball is an inflatable T1 to orbit (<http://youtube.com/watch?v=DomTyuxiSbQ>) .

The Hexayurt is completely free. It's great for Burning Man. Anybody can use it.

This means you.

Why is this a good idea?

Millions and millions of people do not have proper housing. Designing like you give a damn (<http://www.architectureforhumanity.org/>) can help.

Oh, you meant *why for the Playa?*

That's simple. Hexayurts *really* enhance the Burning Man experience. **You get two or even three hours a day more sleep. You have a cool place to hide out mid-afternoon. You have a warm place to party at 4AM.**

In short, it rocks.

That boiling early morning? You sleep right through it. At 9AM a tent is an uninhabitable solar cooker, a hexayurt is blissfully cool and dark. Sometime around 11AM, maybe you wake up, mist the hexayurt down to cool it off and doze for another fifteen minutes, then get up fresh and ready for another wonderful

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day. On the Playa this is life-changing because it means that at the end of the week, you're still fresh and sharp and ready to have fun. Your gear is dust free, and you feel great.

This is like extending your Burn by two days every year.

And you did it yourself, without lugging an RV with air conditioning to the Playa. You built your own shelter with your own two hands. It's creative and *very* participatory. By building a hexayurt you're joining a community of engineers and creators who are helping to transform the planet.

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Hexayurts aren't just for the playa, they're for the world.

PS: Don't be alarmed by all the military folks in the hexayurt construction videos. They're friendly!

How do I build one?

The basic instructions are **super** simple.

1. Buy 2 rolls of six inch wide bidirectional filament tape, like 3M 8959 (http://products.3m.com/catalog/us/en001/manufacturing_industry/packaging/node_GSX56YFN5Kbc for example.
 - Total cost: \$40?
2. Buy 12 sheets of a suitable 4' x 8' building material, like Thermax

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(http://www.dow.com/styrofoam/na/iso/thermax_s.htm) , from your local building supply store.

- Total cost: \$200 - \$400.
3. Using a craft knife, cut six of those sheets in half along the diagonal, three from right to left, three from left to right.
 - Total labor: less than an hour.
 4. Tape the edges of each board to protect the playa from moop, and yourself from sharp edges and stray fibers.
 - Total labor: two or three hours,
 - or far less with three people and practice.
 5. Tape the building together by forming the roof from the triangles, and the walls from the six boards you did not cut.
 - Total labor: two or three people for about an hour.

Hexayurt playa checklist has a much, much more detailed list of instructions, a shopping list, and links to video clips of the process.

Take a look at this Hexayurt from Burning Man 2006.



It has a slightly more complex (and less durable) doorway (the raised section) than we recommend for this year, but this is basically what we are talking about building. Also it has a lot of junk in front of it, including a spare blue panel. Sorry, I wasn't holding the camera!

Look at the picture and go through the steps in your mind again. You get the boards and you get the tape. Then you cut some of the boards into triangles, and tape them together to make the roof, and then you tape the roof to the walls and you are done. You just built a Hexayurt.

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This is easy. You can do this. If we were working with index cards and sticky tape, you could make one right now on your desk. You know how this works now. You can do this.

There are details you will get have to get right to make sure the building stands on the Playa but all playa projects have details, and we cover the details in detail on this page and in the videos.

Why is the Hexayurt cool and dust-free?

The Hexayurt is dust free because, once it is securely staked down and taped to a tarp, it is basically air tight.

The outside is silver, so it reflects away sunlight. You may want to bring some paint or other material to Burning Man to matt the surface if you wind up located in a position where the reflected light and heat is causing somebody a problem and you can't move. On top of that, the material itself is an insulator. Thermax has an R-value (insulation value) of 6.5 per inch, which is about the same as fiberglass. Between this and the reflective surface, very little heat enters a closed Hexayurt.

The ground is always at around 58F at a depth of six or more feet. If you shade an area for a day or two, the surface of the earth settles towards that temperature. So the floor of the Hexayurt gets cool, and stays cool, and tends to suck the heat out of the air inside making you feel cool. For maximum cooling, in the day time, keep the floor of the Hexayurt free from insulating materials like blankets and cushions. For maximum warmth, at night, cover the floor of the Hexayurt with blankets.

Finally, the greatest trick on the playa is to take a little spray bottle (or, better still, a pump up five gallon garden sprayer!), close all the doors and windows, and spray high into the air in your yurt. The evaporation of the water rapidly cools the air of the Hexayurt. If you spray for a minute or two you can get shivering cold in the middle of the day. Also the air gets very humid, which is very nice. Then the air begins to warm up again as heat re-enters the space. So instead of being dry and hot, you are now damp and hot. This is worse. So you open a door or a window, and let out the warm, moist air, let in the warm, dry air, and then close the window and spray again. Usually you have to do this every fifteen minutes or

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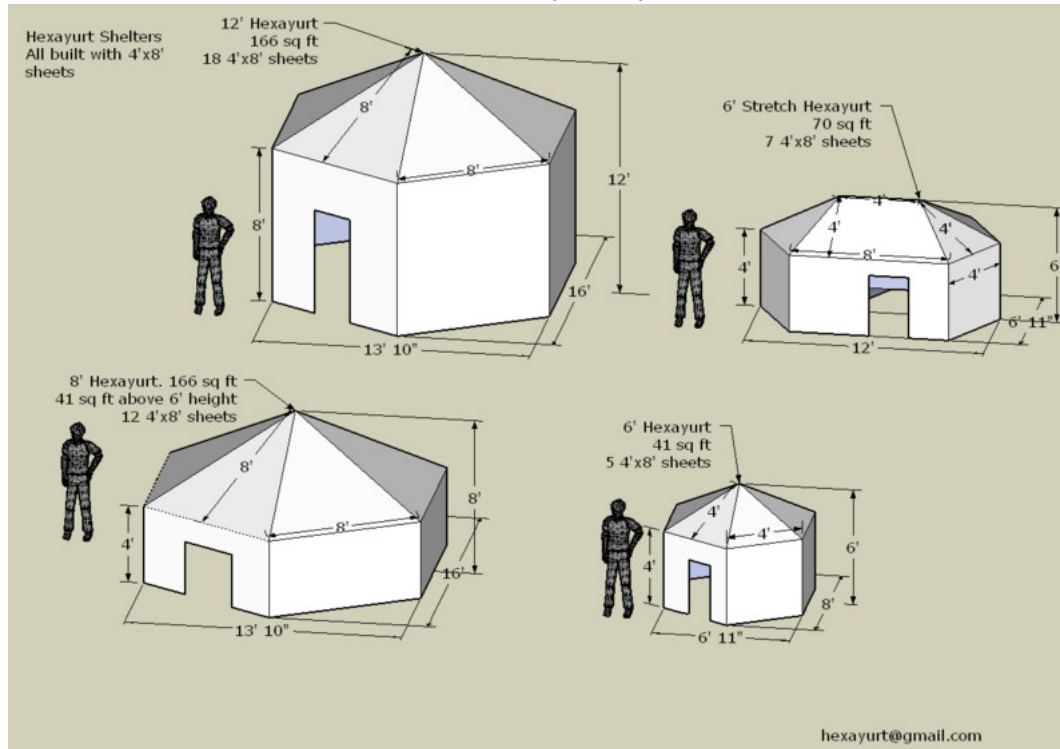
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half an hour, and it takes about a *half a cup* per cycle.

I've spent entire days sitting in the hexayurt doing this with friends, having people come in, sit down, drink some water, take their shoes off, cool down for a while and then go about their day. It's a really fun way of making a space to get to know people on the playa, and offering them something they need and enjoy.

Building Basics

Which Hexayurt?



There are four basic Hexayurt sizes which cover a variety of needs. In 2006 the models we recommended that people build were the smaller two. You can see the somewhat basic instructions we provided last year. Given that the smaller buildings went up quite nicely, and the experimental large Hexayurts (<http://flickr.com/photos/agb/sets/72157594213706612/?page=2>) we built at Burning Man last year were a roaring success, this year it's time to build the **One True Hexayurt** - the 8'. That's the one on the

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lower left. The 8' Hexayurt is the best one for the Playa because it's a good size, not too vulnerable to high winds, and very easy to build. It is also the least complex Hexayurt design.

The other Hexayurts have their niches, of course. The 6' Hexayurt is good for one person, although very cramped for two. The 6' Stretch is cosy for two, but provides little storage or room for people to socialize in your cool, dust-free place. The 12' Hexayurt is pushing the envelope on 1" Tuff-R rather than I am comfortable advising for Playa use.

You can also build the 8' as a **folding Hexayurt**. The folding Hexayurt needs a table saw and precise angle cutting on the edges of boards, as well as being a fairly large object to transport (8' x 12', although only six inches thick.) If you can swing that, you get a Hexayurt that goes up **in 20 seconds plus the time it takes to stake it down**. You might have some issues with people letting you actually use it, rather than keep taking it up and down as an art project. Just letting you know.

There's also the Anwar Door (<http://flickr.com/photos/agb/241062287/in/set-72157594213706612/>) option - an 8' hexayurt with a high entryway. The Anwar Door (named after its creator) is quite difficult to get right under Playa conditions. Maybe give it a shot next year.

(You can download Google SketchUp models (<http://sketchup.google.com/3dwarehouse/details?mid=55bb4f64f35260ea58dcaaaca166fc1d>) of the basic Hexayurts.)

Watch the videos

We don't yet have a perfect start-to-finish video resource. We probably have the footage from which a pretty decent guide could be made, but I have no significant video skills. For example, here's the raw footage from Hexayurt showing us constructing a roof cone. (http://www.archive.org/details/RAW_FOOTAGE_Hexayurt_Roof_Cone_Combined_Endavor)

Get the Flash Player to see this player.

C:/cd3wd_40/ap/Hexayurt_playa.html

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This is all in the public domain, so perhaps there will be a tutorial video cut from there. I may even take a crack at it myself. In the mean time, I'm going to refer you to the raw footage.

Start with the Roof Cone construction video above. It's also better to download and watch full screen than in the little flash video window. It's really complete and very easy to understand. You'll have the principle down in the first five minutes. Unfortunately the camera person had to leave before we put the roof cone on the walls, but that's the easy part.

You can also read through the **step by step instructions** which have video clip links for specific steps.

These instructions are long because they are very detailed. Not quite to the "now put the tape in your other hand" level, but pretty close.

The rest of the videos are in the Additional Resources section at the end of this page.

Make a model

You can build a paper model really easily. Try 1' to 1" - cut 12 pieces of paper or card, 4" by 8". Cut six of them in half with scissors, three left to right, three right to left. Now tape together a roof cone that looks like the one in the pictures, and tape the walls under it. Surprisingly sturdy, isn't it?

If you want to try a bigger experiment, build Woody's Pup Hexayurt. This requires a trip to the hardware store. You buy a single sheet of Tuff-R type board, for about \$15, and get a three foot tall model hexayurt. It's a really, really good way of understanding the process. You can also build a folding hexayurt at this scale.

Materials

The Panels

There are two right materials to make Hexayurt panels for Burning Man.

The Dow Route

The first is a Dow (<http://dow.com/>) insulation product. You can pick Thermax, Tuff-R, Super-Tuff-R or anything else they have at your supply store. They all work more-or-less the same, just some have a thicker, more protective foil surface. You want 1" or thicker. 1" is just fine. There are parallel products from other manufacturers. RMAX is one possibility. I have not personally worked with these materials.

You can see from the video that the panels made of this stuff are very light, fairly strong, and easy to work with. Note that the edges of each panel are taped. Tuff-R is dusty, nasty, and **at no point to be cut on the playa** for it is sacred to the gods of moop, shedding copious amounts of **nearly** playa colored crap all over the place. This is **bad**. It is also hairy with fiberglass, dozens of threads per inch of board. You can cut it with a craft knife, or you can cut it with a saw that has an excellent dust collector, but in either case, be aware and take care of your lungs. Gloves, N95 dust masks and goggles are recommended.

Anyway, for these reasons, you will see the edges are **fully taped**. No moop gets out, and no fiberglass makes your fingers itch on the playa after handling the boards. Take a look at them in the hardware store. They're not bad to work with, it's not evil stuff, it's just not cotton or wood. It's a technical product.

Pros

Cheap (\$15 a sheet approx.) Easy to find. Easy to cut, easy to work with, insulating and robust. A perfect material for the job you want to do in the Black Rock Desert.

Cons

It's basically polystyrene with fiberglass added.

Make no mistake, this stuff is environmentally questionable *unless you treat it responsibly and reuse it many, many times*.

Now, an aside here. Plastic is, when respected, capable of being a very environmentally friendly material.

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Tupperware, for instance, does a job that no non-plastic material I'm aware of can: it stores food in a robust, reliable, reusable and sanitary way. Glass breaks in your bag, a thermos is expensive and usually full of something already and is bulky and costs 20 times as much. Compare to a yoghurt container, used once and abandoned. Tupperware is a good use of plastic, as far as I can tell, because the plastic is saving resources every time it is used.

So if you're going down the insulation board path, be sure that you take good care of your Hexayurt, and use it for many years, or pass it on to somebody who will. You can also **reuse** the insulation board in home construction projects because the design specifically tries to keep the building materials relatively whole. This is the correct way to bury your Hexayurt - in the walls of a building, keeping other people (or yourself) warm and dry in a permanent dwelling.

The Hexacomb Route

Hexacomb (<http://hexacomb.com/>) is what the first hexayurt ever built was made out of. Hexacomb for the structure, and R+Heatshield (http://insul.net/prod_heatshield.html) as the insulating layer. R+Heatshield is about \$0.25 a square foot and is completely lightproof and reflects away 97% of the heat of the sun. Very useful to cover tents and cars with.

Hexacomb cardboard is a miracle product. It's an inch or more thick and looks a bit like corrugated cardboard, but it is stronger and lighter because instead of little ridges, the interior is filled with hexagonal honeycomb cells. It looks like a bee hive inside. It can be recycled and, for playa use, burned (if you must!) Better to reuse it, of course.

It can, however, be tricky to find distributors for Hexacomb. I really like this material, but it's just not as easy to find as the Polyisocyanurate. My expectation, however, is that if and when we go to mass production of Hexayurts, it will be a hexacomb-based board we use to make them. Great stuff.

If you would like to really go the Green route this year, I would recommend getting together with other Burners and putting in a bulk order for Hexacomb cardboard. Please contact me if you are interested in

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doing this, and I will put you in touch with the supplier, or you can contact them directly.

It's more hassle, but it's the right thing to do.

Other Materials

There are a lot of other materials that we have not tested. The 6' and 6' Stretch Hexayurt designs are much more forgiving, so if you want to try Coroplast or Triplewall corrugated cardboard or something like that, consider a test run on one of them first. One material you should not use is plywood, or any other heavy building material. The strength-to-weight ratios of plywood does not work well with the Hexayurt design. It's too heavy. They could hurt somebody.

The Tape

The other material involved in constructing Hexayurts is tape. Specifically, 6" wide bidirectional filament tape. In English, that's a six inch wide tape with re-enforcing strands running in both directions, so that it will not break or tear under almost any imaginable circumstance, including howling playa dust storms.

The recommended Hexayurt tape is 3M 8959 (http://products3.3m.com/catalog/us/en001/manufacturing_industry/packaging/node_GSX5 at 6" wide.

You will note that 3M does not give you the option to buy it in that width on the web site. I do not know why.

<http://buytape.com/> (harrison bros. inc.) has 6" bidirectional filament tape. to purchase, click here:
<http://bit.ly/tNaW3>

I used to buy the tape from Tapes Unlimited, 1245 Hartrey Ave, Evanston, IL. (847) 866-6060. But as of 07/03/2008, this company no longer offers this product. I just got off the phone with this guy and he's

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getting a ton of calls, but unfortunately he can't help. These very nice people have a warehouse full of tape of all kinds, and excellent prices. They do not have a web site. But they do sell tape and they do know all about Hexayurt tape because they've been our primary supplier of the stuff for quite some time. No, I'm not getting a kick back, they just helped me out on several occasions when I needed to know about tape.

They used to sell 3" but not 6" tape. If you find another cheap supplier of 3" wide tape, consider it. Using 3" tape means you need to be much more precise in the construction process, but is otherwise perfectly viable. You can save tape and money this way: get a roll of 6" tape from the supplier above. Slit it in half the long way as it comes off the roll. Hold the roll and press a razor blade against it while a friend pulls one 3" wide strip off at a time.

The tape needs another layer of protection from the elements if you expect to leave the Hexayurt up for months or years. Foil tape is one good option. There may also be paints which are appropriate.

You can also see the Tape Spreadsheet in the additional resources section of this page. It explains why you need all this tape, and also how much tape you need for manufacture, and on each subsequent building use.

European source for Hexayurt Tape: Eurobands <http://eurobandstapes.eu> EURO LVB 16165 TRANSPARENT 16 EUR a roll roughly.

Building Options

Windows

Every hole you make is a place where heat comes in during the day. A single badly-placed window can turn a Hexayurt into a solar cooker. So the smart plan is to put any window on the shaded side of the hexayurt, and also to keep the "plug" made by cutting out the window so it can be pushed back into the window to seal out the day.

Remember to tape all seams!

You can cover windows with plastic, or bubble wrap (translucent like shower glass.) You can also leave them open. If you cut the windows as rectangles or very-slightly V-shaped rectangles, you can usually wedge the window piece back into the window at an angle and use it as a sun shade. This is a good solution.

But if it's windy one day and you left a window open, so much for your dust-proofing. The cure for this is furnace filters, which are cheap, very effective, and can be taped over windows on the outside. You must put them on the outside, or when they fill with dust and you shake it off them, the dust falls inside your Hexayurt. Keep them on the exterior wall.

My own preference is to cut small portholes, about four or five inches round, and cover them up on the outside with the 6" tape. It's fairly translucent. I leave the inside sticky surface exposed to act as a dust magnet.

Doors

Everything said about windows goes double for doors.

The strongest door is two feet wide, cut one foot from the end of a wall. It should go from the ground to about six inches from the top of the wall. Cut the section out completely, and tape all exposed edges. If the door doesn't quite fit now, you can crush the door flap a little by banging it on the ground (really.) Then tape the top edge of the door into a hinge, like a cat flap. This is not the most convenient or aesthetically pleasing door.

Try not to interfere with the tension ring if you want a bigger door. Doing that has structural implications. The door is the one thing that really isn't perfect about the 8' Hexayurt. Sorry.

Oh, and remember to put it on the North side, otherwise your yurt will be hotter than it has to be. All these little efficiencies add up to comfort.

The Anwar Door

This is a hack. It's a hack because the pieces don't *quite* fit, but the tape deals with the one inch problems you will find. It works, and it does make for a much more open space inside, but it's much harder to build on the playa, and a little more vulnerable to wind. You will have to assemble this one all the way at least once or twice at home if you are going to get it right on the day.

The trick is this. If you cut down one of the isosceles triangles on the roof, and flip the two pieces vertically (using the seam where they are taped to the rest of the roof as a hinge) they mark out an equilateral triangle, 8' x 8' x 8' from the apex of the roof to two corners of the Hexayurt, with the whole triangle level with the apex. In short, you get a flat roof.

So you make an equilateral triangle for that hole. Now if you imagine this modified roof section on the 4' high wall, you see you have an 8' x 8' hole to fill. Two boards, preferably in the vertical orientation (for strength) fill it, and you now cut the door here.

In practice this is hard because there is no good way of taping the edge of the equilateral triangle to the now-vertical roof section. There's just no way to get at it that I know. And everything is off by the thickness of one board.

I mean, I'd love it if this worked. But it just doesn't. I think that in a high wind it's likely to be quite weak and it's a bear to put together. In short? Let's work on this one together and try and figure out a better way of doing it, or something equivalent. It's not ready for prime time, however convenient it appears.

Rooms

This one is easy. From the corner of the Hexayurt to the center is eight feet. The wall is four feet high. The point of the roof is eight feet high. So a whole 4' x 8' sheet, laid on its side, from the corner to the center of the Hexayurt divides the space perfectly up to 4' in height. The remaining space above the wall is 8' long by 4' high at the point, in short, it is half of a 4' x 8' board. So for three extra boards, one of

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which is cut in half, you get the ability to divide the hexayurt internally into rooms, either 1/6th, 1/3rd or 1/2 of the hexayurt in size. You could even divide the hexayurt into six small bedrooms with their doors on the outside if you liked. It would be weird, but it would be fifty bucks each.

Accessories

The combination of a Hexayurt plus a swamp cooler is unbeatable. You will need a solid solar panel, or grid power, but the containment of the coolness and the moisture inside of the Hexayurt produces the most pleasant space I've ever experienced on the playa. It's totally unlike air conditioning, which is still very dry. It's more like... being in Florida rather than Nevada!

Furniture

<http://playatech.com/> has an incredible range of efficiently designed flat pack playa furniture. Each piece - a chair, shelves etc. - is cut from a sheets of 4' x 8' plywood (or other crush-proof materials - not hexayurt boards!) They slot together like puzzle pieces without bolts or screws.

Just like the hexayurt, you just download the designs and make them yourself.

Perfect for the playa, and the hexayurt plus furniture will pack down into a single 4' x 8' box in your truck or on your roof rack.

We think it's an unbeatable combination.

The Folding Hexayurt

The folding Hexayurt is a really serious piece of engineering. Looks exactly like a regular Hexayurt, but it folds flat. You basically just take it out of the truck, yank on the sides, and it pops out into a building. It's amazing.

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You can watch a clip us figuring out how to open the folding Hexayurt here.

(http://www.archive.org/stream/Hexayurt_Clips_From_Combined_Endeavor/Folding_Hexayurt_Discovery

The raw footage of the entire folding hexayurt build process

(http://www.archive.org/checkin/RAW_FOOTAGE__Hexayurt_Folding_Combined_Endeavor) gets interesting about half way through.

We have only ever built one. You can see fairly full documentation of that process in the Video Resources at the bottom of this page.

I will be uploading some clips from that video and some notes on how to build one yourself soon.

The hard part about building a folding Hexayurt is the exactness that the building has to be cut with. You will need a table saw. If you cut the Dow materials with a table saw, it will put a lot of fiberglass dust into the air. So you need a table saw with a proper dust handling system, like you would find in a workshop. This is probably not something you should do in your garage.

Should you want to try it be very precise in cutting the dimensions of your unit. A quarter inch can make a significant difference to folding performance. Remember that the walls fold mid-way, so each wall board is now cut into two squares. Otherwise, just like a simple Hexayurt apart from the angles.

The angles are:

- 15 degrees on the hypotenuse of each roof panel.
- 30 degrees on the bottom edge of every roof panel.
- no angle cut on the 8' edge of each roof panel.

- 30 degrees on the top of every wall square.
- 30 degrees on the edges of the wall squares which meet at the corners of the hexayurt.
- no angle cut on the bottom or mid-wall side of each wall square panel.

Opening and closing can be tricky to get the hang of, as you will see in the video. Once you get the

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knack, however, it is fairly easy. One person pulls one corner of the folded package, a second person pulls the opposite corner (that is, diagonally on the other side of the folded package), and other people grab the sides and pull. It's pretty amazing, really.

You can also make the Hexayurt roof cone at home, leaving just one seam untaped, so that the entire roof cone concertinas down into a package the size of one roof triangle, 12 panels thick.

Partial Folding Hexayurt

Complete folding Hexayurts, from the 8' instructions as described above, are great provided you've got the space to haul them to the playa, but even in two separate roof (12 panel tall 4x8 base triangle) and wall pieces (4x4 12 panel tall stack) the final folded shape can be awkward to pack in/on a single small pickup truck.

The necessity to get a hexayurt to the playa with minimal setup effort and without a trailer or moving truck begat a solution - the partial folding hexayurt, consisting of two half-roofs and two half-walls arrangable into a neat space-efficient 4x8 stack to be sandwiched between light particle board and wrapped with your floor tarp for easy playabound transport. The only additional materials required are two 4x8 sheets of particle board (cheap, I used 1/2" I think), sawhorses or equivalent, a saw with a blade that can be angle-locked, some light spring clamps, scraps of cardboard, and maybe a small, accurate carpenter's square.

I didn't have access to nice shop equipment to cut the fitting angles along the panel edges, so I came up with a cleaner but more time-consuming method. Make guides for your razor/craft knives by ripping edges of the particle boards with the saw that are angled to match the cuts from the edges of the panels: One at 30 deg down a long side for the wall tops, 30 again along the two short sides for the wall corners and roof bottoms, and then one at 15 deg down the other long side for the roof hypotenuse cuts.

Once guiding edges are ripped, secure a panel to the board with a few spring clamps, making sure to put small pieces of cardboard between the panel and the clamp to distribute the pressure and not impact the

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panel. When lined up properly, you'll be able to slowly work your way down a panel with your knife at the proper angle by holding the base of the blade along the guiding edge you ripped. You still have to pay attention, as the texture of the panel can mislead the blade increasingly as it loses its sharpness.

I only ripped guiding edges with one particle board, but if I were to do it again I would do it to both so I could put them on both sides of the panel and line up their angled edges with the square. That way the tip of the blade could run along the top guide edge just as the base does along the bottom, and probably not be as easily led astray. You'll need both boards to transport the taped and folded panels to the playa anyway so you might as well.

Make all of your cuts to get 12 equally sized roof and wall pieces each. Tape over all the cut edges and then tape together six of each wall and roof in the same manner as described elsewhere on this page. You want to end up with two 6-piece half-roofs that fold down and fit together as a 6 panel tall 4x8 stack, and two 6-piece half-walls that placed next to each other make another 6 panel tall 4x8 stack.

Setting up isn't as easy as unfolding from one huge piece like a complete folding hexayurt, but connecting the half-roofs (and adding tape anchors at each fold) and half-walls is considerably easier than taping together all 6 walls and roof panels. It's also pretty easy to break down (just cut the half roof/walls apart and refold) and store partial folding hexayurts. Mine is hiding out in a tiny storage space for the next few months in wait for its third Burn.

Global Impact

More than a billion people do not really have good housing. It not that they do not want a good place to live but they often simply cannot find one they can afford. They do not have access to modern building materials, and local materials are often really unsuited for building. Europeans used to thatch their roofs and now we mostly use tiles and shingles because we prefer the results. We are probably not alone in this preference.

Everybody needs to be warm, dry and well-fed. If you go to Burning Man and the Hexayurt is a good

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shelter for you, consider helping us develop and test the Hexayurt until it is polished and ready to be made available globally. It's a free / open source project, and with your help perhaps it can become the Linux of housing.

Vinay Gupta (mailto:hexayurt@gmail.com)

A Step By Step List of Everything You Need To Do

The **Hexayurt Playa Checklist** is an **exact sequence of instructions for making a Hexayurt**. If you want to build a Hexayurt, start there. It is also designed for you to print out and take with you to the Playa to remind you what to do. Take additional copies for your friends who will be helping out.

It contains full (but basic) build instructions, shopping list and everything else you might need to know to do construction successfully on the Playa this year. Make sure you read and understand it before you leave a place where you can watch the videos one more time!

Additional Resources

Personal Technical Support

- The Hexayurt Google Group (<http://groups.google.com/group/hexayurt>) (direct sign up) (http://howtolivewiki.com/code/join_hexayurt_group.php) .
- #hexayurt on irc.freenode.net (<irc://irc.freenode.net/hexayurt>)
- hexayurt@gmail.com (mailto:hexayurt@gmail.com)
- http://files.howtolivewiki.com/8_foot_hexayurt_worksheet.xls - 8' Hexayurt worksheet which shows in detail how much tape is used for which applications, if you want to, for example, use different tapes for edging the boards and doing the main assembly.
- Hexayurt thread on Burning Man's ePlaya (<http://eplaya.burningman.com/viewtopic.php?t=26890>)

Hexayurt Applications and the Big Picture

If you want to know more about:

- Our long term global vision - read The Unplugged (<http://liveunplugged.org/>) .
- Evacuating Cities, like after a big earthquake - read The Hexayurt Mass Evacuation Plan. This was presented to the American Red Cross and highly praised. It's for real.
- Our Refugee and Slum Revolution - read Hexayurt Presentation PDF or Scribd (<http://www.scribd.com/doc/3083/Hexayurt-presentation>) (broken, rotated 90° can anybody fix?). This was presented at the Pentagon to a group of senior logistics officers to high praise. It is also for real.
- Hexayurt-style Distributed Infrastructure (like toilets, stoves and drinking water) - read the Hexayurt Presentation PDF
- Why all the military stuff? - read Military Hexayurts?
- Who we are? - read this interview with Vinay Gupta (inventor of the Hexayurt system) on The Sietch (<http://www.blog.thesietch.org/2007/03/18/10-questions-vinay-gupta-creator-of-the-hexayurt/>) .

Raw Video Footage

I have no skill with video, but we have acquired a decent amount of raw video footage over the last year or so. All of this footage is in the public domain.

Hexayurt Roof Cone Construction

(http://www.archive.org/details/RAW_FOOTAGE_Hexayurt_Roof_Cone_Combined_Endavor) Google Video (<http://video.google.com/videoplay?docid=-3250468222683727200&hl=en>)

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Folding Hexayurt Construction

(http://www.archive.org/details/RAW_FOOTAGE__Hexayurt_Folding_Combined_Endeavor) - gets interesting about half way through. Google Video (<http://video.google.com/videoplay?docid=749557699387512853&hl=en>)

Interviews from Combined Endeavor

(http://www.archive.org/details/RAW_FOOTAGE_Hexayurt_Vinay_Gupta_Robert_Vrtis_Combined_Endeav) - gives some context about what we are doing, and what the Department of Defense thinks about Burning Man. Google Video (<http://video.google.com/videoplay?docid=-2099181090550684596&hl=en>)

Other Video

Old, not very good, 8' Hexayurt construction video. (<http://www.youtube.com/watch?v=dEFKOIZXzn0>)

6' Stretch Hexayurt video (<http://www.youtube.com/watch?v=yKS4yJto44Y&mode=related&search=>)

Video from Strong Angel III (<http://www.youtube.com/watch?v=1ikEPzLHPdM>)

3D Models

Google SketchUp models of all the Hexayurts (<http://sketchup.google.com/3dwarehouse/details?mid=55bb4f64f35260ea58dcaaaca166fc1d>)

Other Resources

Architecture For Humanity (<http://architectureforhumanity.org/>) Our friends and allies.

Strong Angel III (<http://www.strongangel3.net/>) - the demonstration where the hexayurt was first introduced to the military.

History

is the old Hexayurt web site

(<http://web.archive.org/web/20050426010855/http://mindismoving.org/hexayurt/>)

Of course, like any good idea, it has some deep roots. The hexayurt is based on the work of Buckminster Fuller (<http://bfi.org/>) and Amory Lovins (<http://rmi.org/>) was designed around the conclusions of the Sustainable Settlements Charrette (<http://www.carebridge.info/carebridge/community/charrette2.html>) .



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