

# Canoe Sail

by [TimAnderson](#) on May 30, 2008

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## intro: Canoe Sail

This 5 meter spritsail rig makes a canoe go really fast.

It's easy to build, easy to control, easy to put up and take down. It tolerated gusts well and can be tuned for really light winds also. I use an aluminum sign as a leeboard and steer with a paddle.

If you don't have a canoe yet, try these [complete plans for an outrigger sailing canoe](#).

action photos by [Star](#)



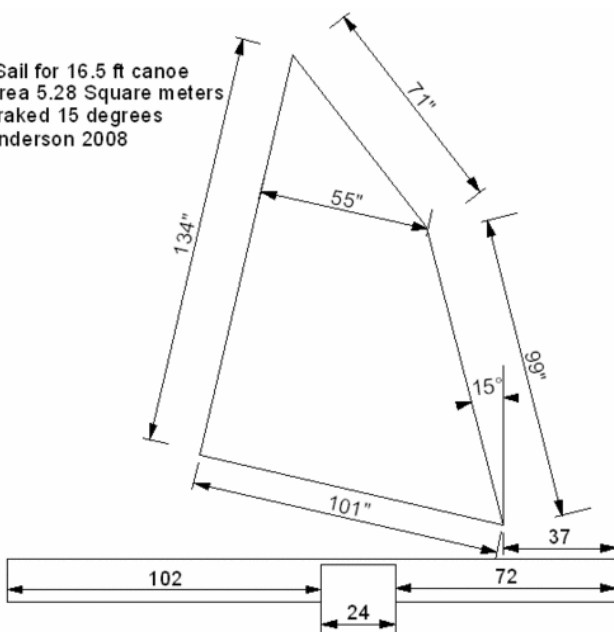
### Image Notes

1. peak
2. throat
3. clew
4. tack
5. leech
6. head
7. foot
8. luff

### Image Notes

1. leeboard. a 2ft by 2ft aluminum street sign

Sprit Sail for 16.5 ft canoe  
Sail Area 5.28 Square meters  
Mast raked 15 degrees  
Tim Anderson 2008



## step 1: The Sail

Is made from a brown polytarp.

It's heavier material than such tarps are usually made these days.

Polytarp is a fabric woven from strips of polypropylene that's then heat-laminated to a sheet of polyethylene.

Each side and corner of the sail has a traditional name.

The sides are called Foot = bottom, Head = top, Luff = front, Leech= trailing edge.

The corners are called. Peak , Throat , Clew, and Tack.

The Leech and Foot are the original edges of the tarp. That saves some sewing.

The other edges are cut, folded over and sewed.

Sometimes I'll put a "bolt rope" cord inside for extra strength.

I used a regular home sewing machine with the thickest needles I could find for it.

Here are the dimensions of the sail:

foot: 101"

leech: 134"

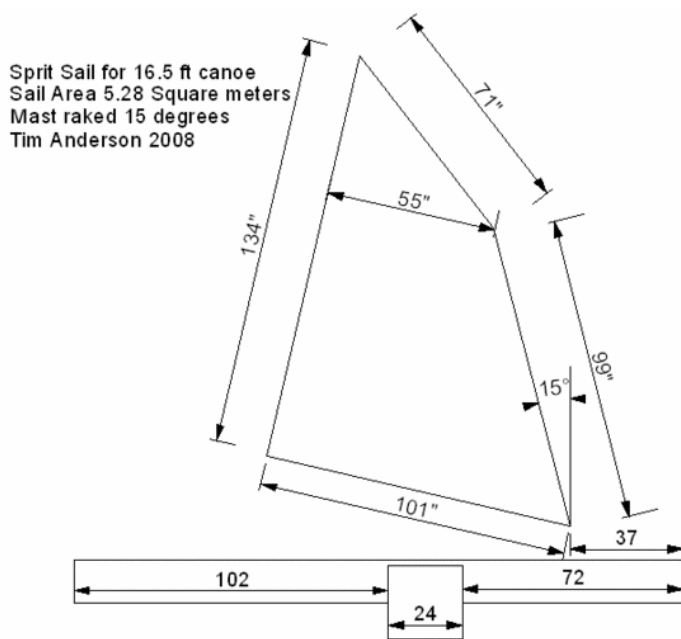
head: 71"

throat to leech distance: 55"

This sail is made for a mast that rakes backward at a 15 degree angle.

If your mast is vertical you you should use the other sail drawing, or your clew will be too high. The leeboard stays in the same place but the mast partner is moved a few inches back.

I reduced that version of the sail to 5 sq. meters, which wise Canadians have decreed is the perfect size for a canoe sail.



### Image Notes

1. peak
2. throat
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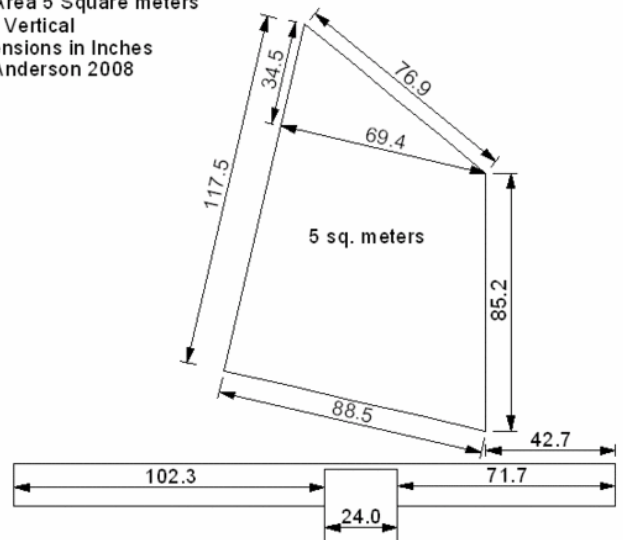
**Image Notes**  
1. peak

**Image Notes**  
1. mast  
2. throat  
3. head  
4. luff



**Image Notes**  
1. foot  
2. snotter  
3. sprit

**Sprit Sail for 16.5 ft canoe**  
Sail Area 5 Square meters  
Mast Vertical  
Dimensions in Inches  
Tim Anderson 2008



## step 2: Leeboard

The leeboard is an aluminum street sign 2 feet square. The corners are round and there are two holes in the top edge near each corner. I tied cord to these holes and tied the other end of the cords to the canoe's center thwart. I wrapped some innertube around that to make sure it wouldn't slip.

When I tack and turn the canoe so the wind is on the same side as the leeboard it swings up. I pick up the leeboard and toss it into the water on the other side of the canoe.

The leeboard should be just in front of the center thwart to balance this sail well. Then it's very easy to steer with the paddle.

When things are right the canoe will turn into the wind when you pull the paddle out of the water. You'll have an easy time steering and water pressure will hold the paddle against the leeward side of the canoe. This set of conditions is called moderate "weather helm".

### Image Notes

1. leeboard. a 2ft by 2ft aluminum street sign

### Image Notes

1. I'm tacking. The leeboard swings up because the canoe drifts away from the leeboard. Hence the name. The board that only works when it's to lee of the boat. (downwind)

## step 3: Sprit

The long diagonal stick that holds up the high corner of the sail is called "The Sprit". Hence the sail's name, "Sprit Sail".

My sprit is a cypress pole from a Florida swamp.

I cut it from a standing dead cypress sapling to use as a push pole.

You don't need a push pole if you're sailing and vice versa, so it's nice to use it for both jobs.

This pole is very light wood but it's springy. It's about 2" thick at the thick end and just over 1/2" thick at the tip. Mine is about 10 feet long.

At the thick end I attached a fin Seminole style to steer the boat at the end of the push stroke, and to paddle in spots of deeper water.



#### Image Notes

1. foot
2. snotters
3. sprit

#### Image Notes

1. peak

### step 4: Mast, Mast Partner, and Mast Step

My mast is a spruce pole I cut in the Maine woods, also from a standing dead blighted sapling. It's about 12 feet long, 1.5" thick at the top, 2.25" thick where it passes through the mast thwart. The mast thwart, also called the "partner" is a board with a hole in the middle that holds the mast up. I added this board across the canoe near the bow of the boat. It's attached with epoxy, screws, and lashings. I wanted to make sure it would stay put.

The base of the mast tapers down to 1.5" thick. It sits in the "mast step", a block of wood I epoxied to the floor of the canoe just ahead of the mast thwart. The mast step has a socket carved in it that's just big enough to accept the base of the mast.



#### Image Notes

1. mast
2. throat
3. head
4. luff

### step 5: Simplest Sail

It's traditional to agonize over sail shape.

If you're in a hurry a rectangular 5'x7' army poncho will work well as a spritsail on a canoe.

The extra stick at the bottom isn't necessary.

It's called the "boom" because of the noise it makes when it hits your passenger in the head.

This sail is tuned for very light wind. When you tighten the "snotter" to raise the sprit as seen here, that puts belly into the front part of the sail. Good for light winds. In heavy winds you can remove the sprit entirely. The peak of the sail flops over and doesn't draw.

That's called "scandalizing" the sail. It looks bad but it works fine. It reduces the sail area by almost half and the area that's left is very low and easy to manage.

Notice the sticks the canoe is sitting on. If you make a little stick railroad like this you can drag your canoe over rocks without harm.

Here's a cute old book with a discussion of other types of sails for canoes.

## Related Instructables



**Third Hand for Sailing or Other Things** by Wade Tarzia



**Sailing Canoe Chapter X: Maiden Voyage** by TimAnderson



**Kenya Outrigger Sailing Canoe** by TimAnderson



**Sailing Canoe Chapter 9: Dipaakak** by TimAnderson



**Sailing Canoe Chapter 10: Independent Suspension** by TimAnderson



**Skin-On-Frame Outrigger Sailing Canoe (guide)** by TimAnderson



**The Handsewn Sprints'I** by notjustsomeone



**Polytarp Sailmaking - Crab Claw** by aerohydro

## Comments

[21 comments](#) [Add Comment](#)



**ktdidd** says:

Its called a boom because thats the Dutch word for tree. And dingy is the Dutch word for thingy.

Jun 26, 2008. 9:57 AM [REPLY](#)



**henkmans** says:

wij Nederlanders noemen een "boom" een giek  
we in holland call a boom a "giek"

Jun 18, 2009. 5:22 AM [REPLY](#)



**LuminousObject** says:

I always thought that it was called a boom because thats the sound it makes when it wacks you in the head.

Jul 16, 2008. 2:17 PM [REPLY](#)



**smithy813** says:

how might one come by an aluminum street sign (legally)

Jan 13, 2008. 6:38 PM [REPLY](#)



**drawe21** says:

They sell them online

Feb 3, 2009. 8:53 AM [REPLY](#)



**shmuki** says:

lol have ur dad who works aat public works get one =]

Aug 17, 2008. 9:15 PM [REPLY](#)



**hchaug** says:

ok check this ok people...use fiberglass poles from your dome tent which your carrying onboard if your camping. I have a 2 seater coleman inflatable kayak with drink holders inbetween the leggs. place a cup in the holder and place your pole in there. BINGO sailboat in a bag!!!! I knew I'd get something out of 22 years in the Army...a sail.

Jan 29, 2009. 8:42 AM [REPLY](#)



**coronel** says:

Tim,

Great stuff!! I always liked both sailing and canoeing. Though I have the feeling your canoe has a nag to tip over and drown. Is a sidebar as polenesians have not making the canoe stable? As Joejoerowly I hope you can put someday your contraption in a small video for us to enjoy your boat. Good luck. Alex

Jun 11, 2008. 8:28 AM [REPLY](#)





**cmrc** says:

Jun 6, 2008. 11:33 AM [REPLY](#)

Awesome sail, would thick contractor type garbage bag or plastic drop cloth be good for this sort of sail? I have rescued tons from the dumpster at the storage facility, and I am looking for ideas. I have made some kites for local kids so I know they will catch wind, but I am not sure if they would hold up to the rigors of sailing.



**GorillazMiko** says:

Jun 1, 2008. 2:58 PM [REPLY](#)

Come sail away,  
Come sail away  
Come sail away with me...  
Come sail away,  
Come sail away  
Come sail away with me...

+5/5 stars.



**tercero** says:

Jun 1, 2008. 8:48 AM [REPLY](#)

Wow. Looks like the sails on the boats of the Nile I saw at Aswan.



**carpespasm** says:

Jun 1, 2008. 7:35 AM [REPLY](#)

Dear Tim,  
How does one become as awesome and well-versed in the ways of the junkpile as you?

-Carpespasm



**Wade Tarzia** says:

May 30, 2008. 10:12 PM [REPLY](#)

Nice sail. I liked the sprit rig for its easy brailing, as well. Is that the Alaska canoe now in monohull mode?



**TimAnderson** says:

May 31, 2008. 6:21 AM [REPLY](#)

Yep, I lived in it for a few months in Florida swamps. I made roof hoops to hold up a tarp and bug nets. I slept in a folding recliner inside the little hut.



**firemanfu** says:

May 31, 2008. 5:37 AM [REPLY](#)

i keep asking my dad to let me get a trolling motor for our canoe but i'll try to build a sail like this instead.



**thewoodcarver** says:

May 31, 2008. 3:13 AM [REPLY](#)

Nice work can you do a close up of the mast step ? I think I understand what you have done for it but a pic is worth 1000 words or some such ....about how fast is really fast?



**ll.13** says:

May 30, 2008. 11:46 PM [REPLY](#)

*It's called the "boom" because of the noise it makes when it hits your passenger in the head.*

Ah! I've learnt at least one thing today. =)



**keng** says:

May 30, 2008. 7:12 PM [REPLY](#)

could have come in handy for the canoe race on the Missouri from KC to St Louis....but I will have to dock you points due to the lack of an Altoids tin....sorry.



**LinuxH4x0r** says:

May 30, 2008. 4:05 PM [REPLY](#)

Awesome! I miss my canoe. Maybe I'll go when I'm in MN this week



**Brennn10** says:

May 30, 2008. 2:34 PM [REPLY](#)

I just showed this to my dad who is an avid sailor. He absolutely loved it. Thanks again Tim!



**joejoerowley** says:

May 30, 2008. 2:23 PM [REPLY](#)

Very, very Cool! Great Instructable! I would love to see it sometime (in a video or real life) :)  
Thanks  
Joe