

# STUDY PLAN NOTES



## SPECIFICATIONS

LOA	8'-2 3/4"	2.50 m
Width	5'-3 1/2"	1.61 m
Height Expanded	6'-3"	1.91 m
Height Collapsed	4'-3 1/4"	1.30 m
Weight	650 lbs.	300 kg.
Building Method	Stitch and Glue	

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## DESCRIPTION

This collapsing trailer design grew from a desire to have a bit more comfort than a tent. When arriving at a campsite and it's raining – hopping into your dry and comfy trailer is a lot nicer than setting up a tent. You can cook inside if it's cold or wet outside or move the stove to a picnic table when the weather is nice. Even if it rains, the roof overhangs the door, so you can leave the door open. Just pick up the tongue of the trailer and rotate the trailer to face into the wind.



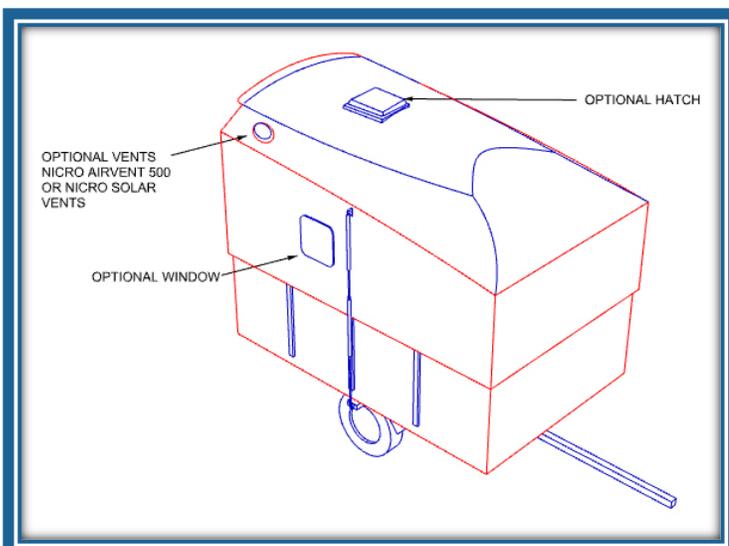
This trailer collapses vertically. Common teardrop type trailers have limited headroom. So, you crawl inside and you're sitting on the bed. With minimal extra complexity, this trailer raises up 24" / 610mm (with gas springs to help) and gives standing headroom at the back end. It's much roomier inside, but when it's time to trailer, the lower profile gives a very good aerodynamic shape. It's much better than the flat or blunt profiles of some small teardrop trailers.

There is a small table that can be raised for use and lowered to form the bed. A small portable toilet can be fit in one corner, and there is a small counter opposite that can be the inside kitchen. The bed is a full queen size mattress! The bed is raised so that there is ample dry storage under for food, clothing and other camping gear.

When the weather is nice, sit outside and cook at a picnic table in the campground. But if it turns cold and rainy you can sit inside and prepare and eat meals at the table in comfort - instead of standing outside with the rain as most teardrop trailer kitchens are outside.



## OPTIONS



Options include roof racks for kayaks, bikes or a small boat, additional windows, vents, and hatches for improved ventilation. A simple electrical system may be installed, or you can rely on battery powered LED lights and a portable speaker + a smartphone for your music.

## TOWING

Because of the light weight of the camper (about 650 lbs / 300 kg total with epoxy & paint coatings but no options), any small car that can be fitted with a trailer hitch can tow it. It does not need trailer brakes and a very small and inexpensive trailer can be used as the undercarriage.

## BILL OF MATERIALS

Plywood, standard sheets 4x8' (122 x 244 cm)

- 6 mm (1/4") 6
- 9 mm (3/8") 4
- 18mm (3/4") 2

Fiberglass

- 6 oz. 4" wide tape 80 yards (75 m)  
(100mmx200gm/m<sup>2</sup>)

Resin:

<b>MarinEpoxy</b>		<b>SilverTip</b>	
Epoxy total	4.5 gallons (16 liters)	Epoxy total	3 gallons (11 liters)
Woodflour	1 lbs. (2.27 kg)	EZ Fillet	1.5 quarts (1.42 liters)
Blended Filler	8 oz (0.23 kg)	Quick Fair	1.5 quarts (1.42 liters)
		Gelmagic	1.5 quarts (1.42 liters)

Lumber

- 1x2 (19x38mm) 76' (23m)
- 1x1 (19x19mm) 18' (5.5m)

Not included:

- ☞ Trailer, Electrical, Furniture, Paint, etc.

## FAQ'S

**Note:** The drawings have been drafted with an amateur in mind. It is not essential that you have built a stitch and glue boat or done any fiberglassing. But read [BoatBuilderCentral's](#) many online tutorials for the basics of laying out the shapes of panels, filleting and taping seams, and covering with fiberglass.

- 1. Can you build it bigger?** I'm sure this will be asked so I'm answering it ahead of time. This camper is a complex structure, with many interdependent parts. No, you can't scale it up to 8.6' or 9' because lots of parts, which just fit on a sheet of plywood, will be too short. <Joke> There is a 48 hour "cooling off period" before asking forum questions after receiving the plans. Take the time to read plans and the instructions and your question may be answered by yourself.
- 2. Questions?** Please read all the plan sheets over several times before asking questions at the [forum](#). No doubt there will be ambiguities, omissions, and even small errors in the plans but there is a good chance something is just shown somewhere else on the drawings. Experienced builders can study the plans and try to mentally construct the camper in their head. They will visualize each step in the building process and check that the information for that step is shown.
- 3. Plywood:** Good quality exterior grade plywood could be used for the construction. However, fir or pine plywood is not as smooth as tropical hardwood marine ply and absorbs more epoxy to coat, protect, and finish it. So, the cost savings may be less than you think. The thicker bottom panel can be made of the more inexpensive exterior plywood because you're not seeing it as much and these thick panels are quite costly in marine plywood. Tropical marine plywood gives a much nicer exterior and interior finish if you leave it unpainted and just cover with epoxy and varnish. Varnishing of Exterior grade plywood is not recommended, only painting. Nominal plywood thickness 1/4" = 5 or 6mm. 3/8" = 9 or 10mm. 3/4" = 19 or 20mm.
- 4. Weight:** The basic camper body will weigh about 500 lbs / 230 kg depending on plywood weights. Meranti BS-6566 is assumed for the shell and Exterior grade Douglas fir for the bottom panel. The trailer is a variable of course, from a light 150 lb small Harbor Freight utility trailer to an old heavier recycled steel model. But a reasonable minimum of 650 lbs / 300 kg total is a good assumption.
- 5. "Bonding window":** If more than 72 hours (48 hours in hot climates) have elapsed since a part is installed against another part that has a previously cured epoxy coating, then the builder should prepare the previously coated surface for bonding by sanding the surface with 80 grit sandpaper and wiping the surface clean. People don't always do this, and their boats seldom fall apart, but it's good practice.
- 6. Amine blush:** in some circumstances, an amine blush may form on the surface of epoxy coated parts. This coating will feel greasy and may appear cloudy. Washing the surface with warm water and abrading with a nylon scouring pad will remove it.
- 7. Seal** all exposed plywood edges and coat all wood with minimum 2 coats epoxy. Seal drilled holes for fasteners with the "drill and fill technique" as shown on sheet 1 to prevent plywood rot.