

# MiniCampingTrailer.com



## Building Instructions

**Disclaimer and Usage Agreement:** Since this is a project that you are about to build, you must take full responsibility for the project you build. Children should be supervised while using this trailer. Use caution when operating tools and follow all the manufacturer's safety and operating instructions. We reserve the right to make changes to these plans as we see fit with or without notice. These plans permit you to build one of these camping trailers, you do not have rights to build more than one or to sell these trailers or these plans. We are not responsible or liable for any damages that might arise from the use or misuse of these trailer plans.

-Mike and Brad Flickinger

# Tools Needed

Circular Saw  
Jig Saw  
Drill  
Clamps  
Carpenter's Square

# Supplies Needed

5	3/8" Plywood (good on one side)	\$22.59	\$112.95
20	1 x 2 x 8 Fir	\$1.19	\$23.80
3	Pounds of 1" Gold Screws	\$2.89	\$8.67
2	4' Piano Hinges	\$14.95	\$29.90
2	Quarts of Cherry Stain	\$8.39	\$8.39
2	Quarts of Polyurethane	\$13.99	\$27.98
1	Tube of Silicon (Bathroom Clear)	\$4.49	\$4.49
1	Set of "Take-A-Part" Hinges	\$17.99	\$17.99
1	Tube of Waterproof Wood Glue	\$8.99	\$8.99
1	Coleman Cooler	\$16.99	\$16.99
1	Sink 12 x 14-3/4 x 6 Plastic	\$18.29	\$18.29
1	10 Gal. Water Tank 17 x 14 x 10	\$36.29	\$36.29
1	Telescoping Water Fill	\$5.79	\$5.79
1	Hand Pump Faucet	\$30.29	\$30.29
1	Shower Curtain	\$6.49	\$6.49
1	Solar Shower	\$7.99	\$7.99
1	2 Burner Range Top	\$120.00	\$120.00
1	Cover for Range Top	\$34.69	\$34.69
1	Utility Trailer 40 x 48 bed	\$219.99	\$219.99
1	Propane Tank	\$47.00	\$47.00
1	12V Power Supply Unit	\$63.00	\$63.00
1	Port-a-Potti	\$59.95	\$59.95
2	12V Inside Lights	\$8.99	\$17.98
1	12V Porch Light	\$9.99	\$9.99
1	Misc. Plumbing	\$25.00	\$25.00
1	Misc. Bolts, Hardware and Screws	\$25.00	\$25.00
	Total		\$987.89

# Making The Panels



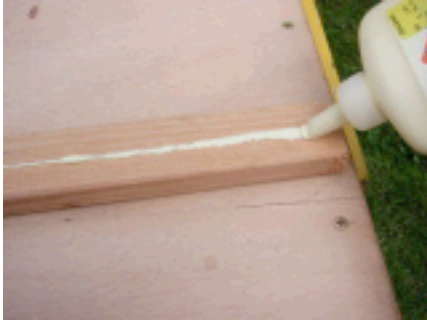
**Building with Plywood Lesson:** YOU CAN NEVER SCREW INTO THE EDGE OF A PIECE OF PLYWOOD. To join two pieces of plywood, you must use a piece of solid wood, that is why you have 20 of those 1 x 2's.



All Screws are pre drilled first or the 1 x 2 will crack!



Use Clamps to hold the 1 x 2's in place.



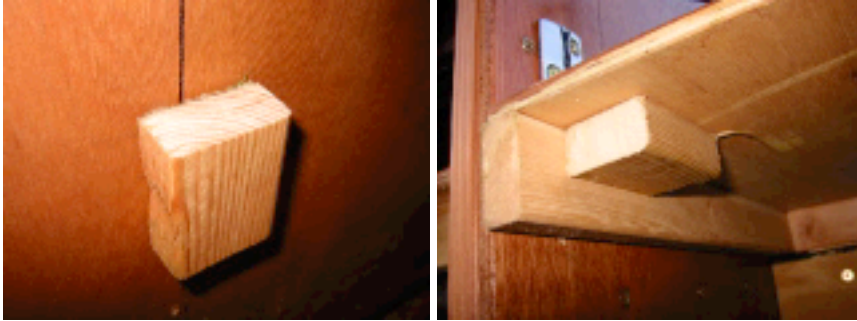
Glue all 1 x 2 to the plywood when you screw them together, you must use waterproof glue, normal wood glue will not work.



For a great look, perfectly space all your screws a part.



Use scrap wood to check your measurements to make sure everything will fit together right.



When you need to put a screw into the plywood unless an item is really light (like the telescoping water fill), use blocking on the opposite side for the screws to fasten to. You will do this when you add the hinges and other hardware.



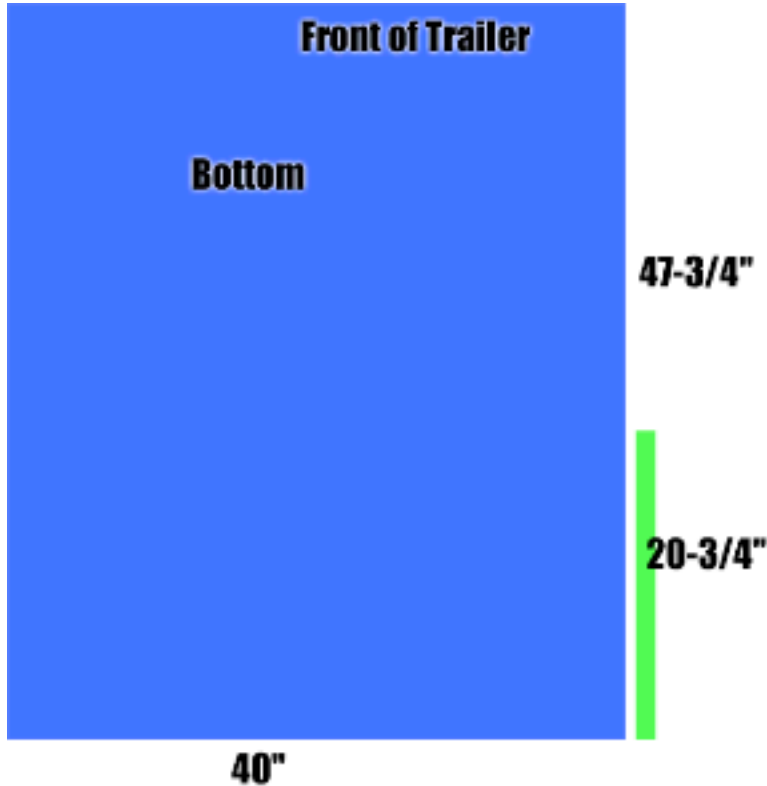
Important.

1) Keep the directions right, always mark which side points up and which side is the front. I use the same directions as if the trailer is connected to the car, so the front of the trailer would be the side facing forward and is closest to the car.

## **At the Lumber Yard:**

I get all my plywood cut right in half so I have 10 4 x 4 sheets of plywood, it makes it easier to handle when I make the panels. Since they only charge about a dollar per cut, you could get all your panels cut at the lumber yard if you wanted.

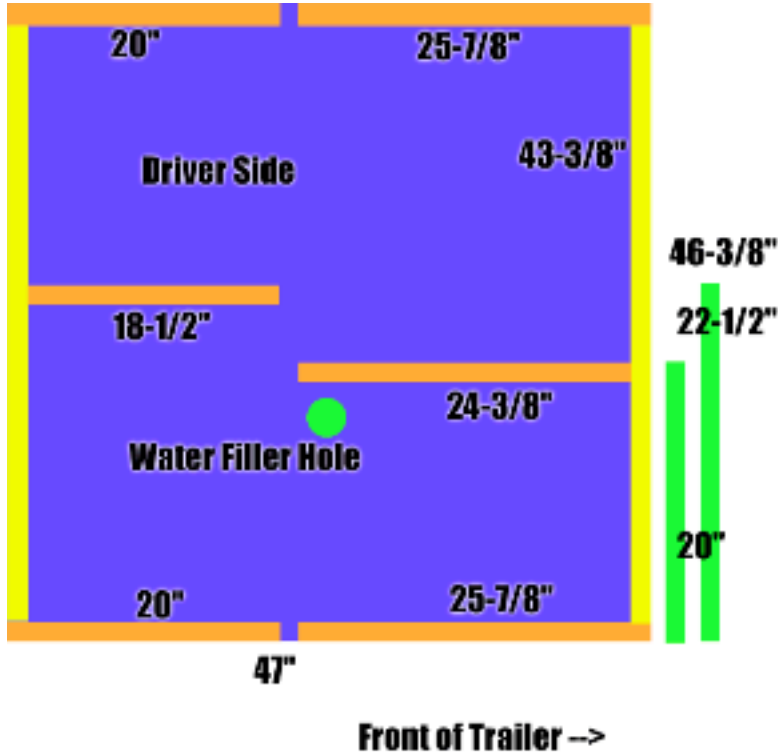
# Bottom Panel



**Things to know about the bottom panel:** since there is a good and a bad side to the plywood, you will want the good side facing into the trailer.

- 1) Turn the Bottom Panel over so you are marking on the bad side of the plywood.
- 2) Mark a line across the panel measured 20-3/4 " from the back edge.
- 3) Mark the screw holes around the entire parameter of the panel that are spaced 3" apart and 3/4" from the edge.
- 4) Mark the screw holes across the line you drew in step 2 that are spaced every 3" apart.

# Driver Side Panel

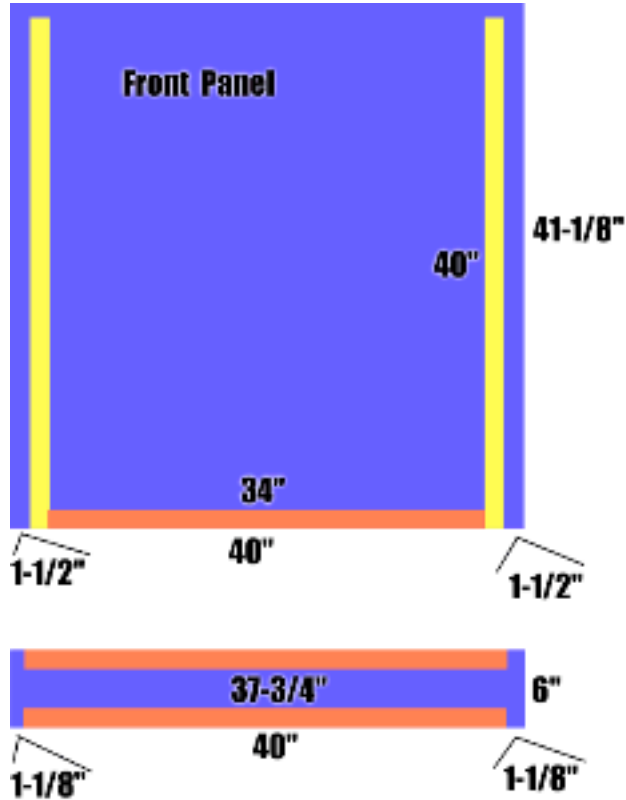


**Things to know about the Driver panel:** the passenger and driver panels are just mirror images of each other, the only difference in that the driver panel will have the water fill hole. The gap you see down the middle is where the middle panel will go.

- 1) All of the 1 x 2's will be on the bad side of the plywood and the screws will come through the good side. They are flush to the edge of the plywood.
- 2) Mark the entire parameter of the panel for screws that are 3" a part and 3/4" inch from the edge.
- 3) Pre-drill and glue all the 1 x 2's as you see measured above.
- 4) The two 1 x 2's in the middle are supports for the shelves to rest on. Use the measurements on the green line to measure from the bottom to where they should be positioned.
- 5) The hole for the telescoping water fill will be cut later.



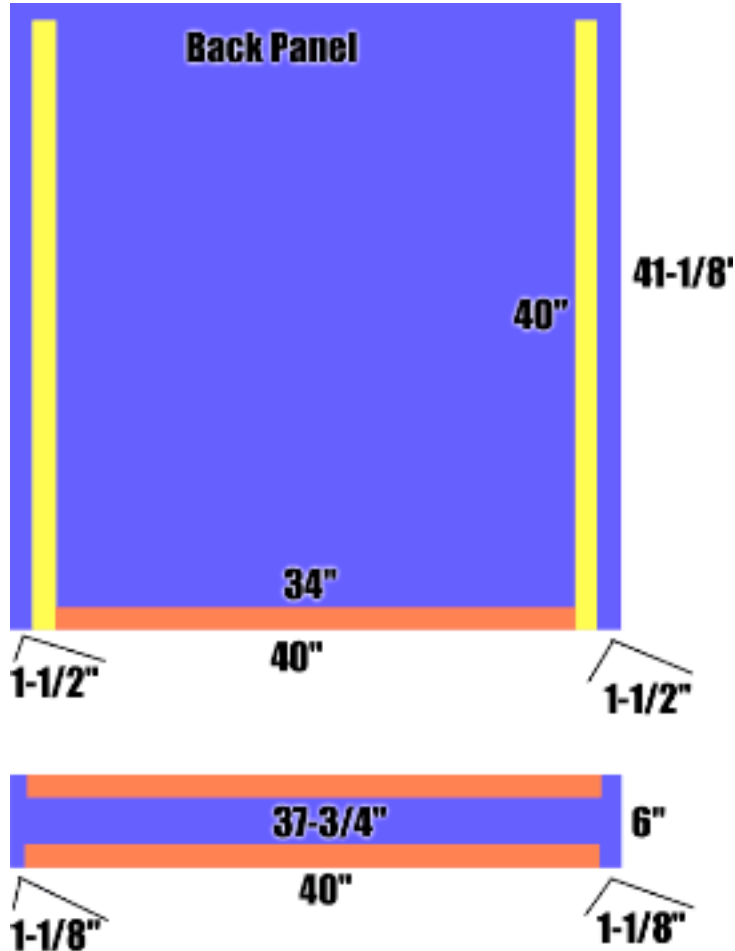
# Front Panel



**Things to know about the front panel:** the front panel is in two parts, one is the part that will be hinged together with the top panel and the other goes on the bottom.

- 1) All of the 1 x 2's will be on the bad side of the plywood and the screws will come through the good side. They are set back 1-1/2" from the edge of the plywood on the larger piece and set back 1-1/8" from the edge of the plywood on the smaller piece. The other sides are flush to the edge.
- 2) Pre-drill and glue all the 1 x 2's as you see measured above.
- 3) The screws on the larger piece are set 2-1/4" from the edge and are 6 inches a part.

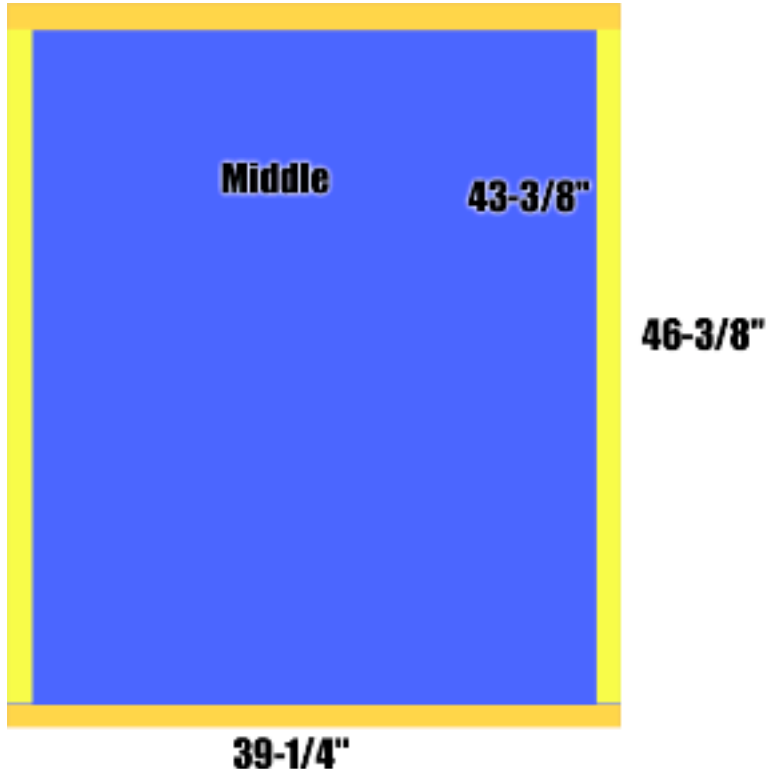
# Back Panel



**Things to know about the back panel:** the back panel is in two parts, one is the part that will be hinged together with the top panel and the other goes on the bottom.

- 1) All of the 1 x 2's will be on the bad side of the plywood and the screws will come through the good side. They are set back 1-1/2" from the edge of the plywood on the larger piece and set back 1-1/8" from the edge of the plywood on the smaller piece. The other sides are flush to the edge.
- 2) Pre-drill and glue all the 1 x 2's as you see measured above.
- 3) The screws on the larger piece are set 2-1/4" from the edge and are 6 inches a part.

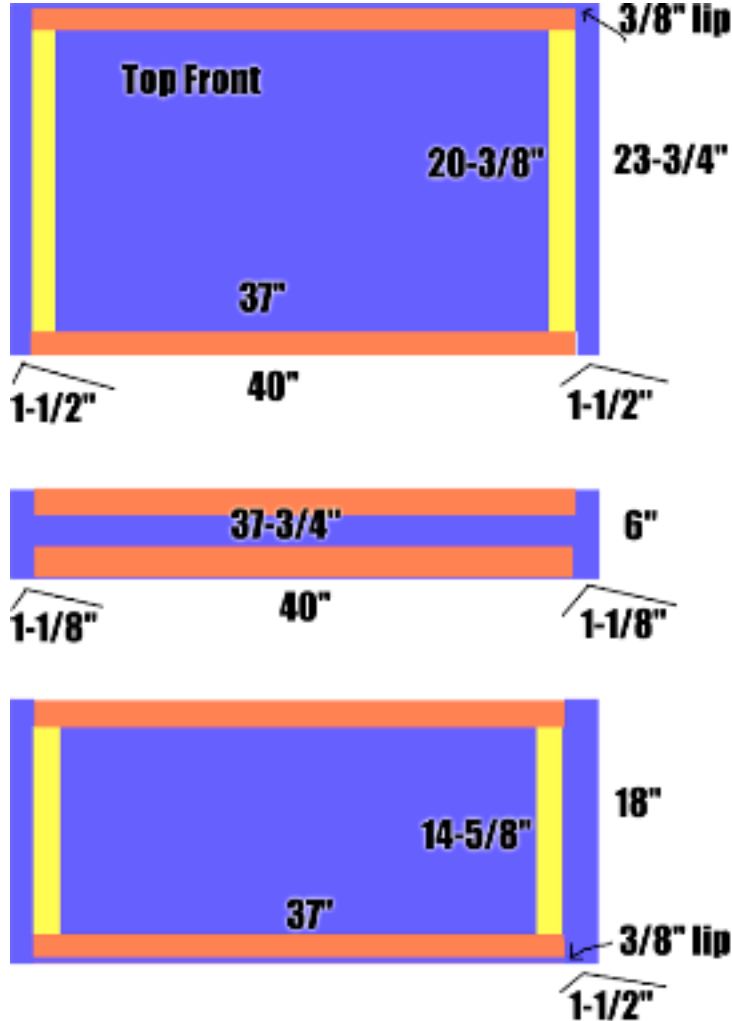
## Middle Panel



**Things to know about the middle panel:** the middle panel is really easy because all of the pieces are flush to the edge.

- 1) All of the 1 x 2's will be on the bad side of the plywood and the screws will come through the good side. They are flush to the edge of the plywood.
- 2) Mark the entire parameter of the panel for screws that are 6" apart and  $3/4"$  inch from the edge.
- 3) Pre-drill and glue all the 1 x 2's as you see measured above.

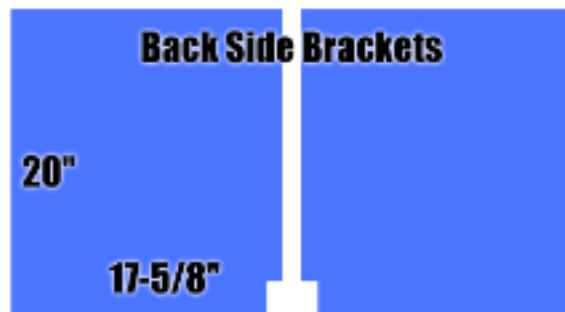
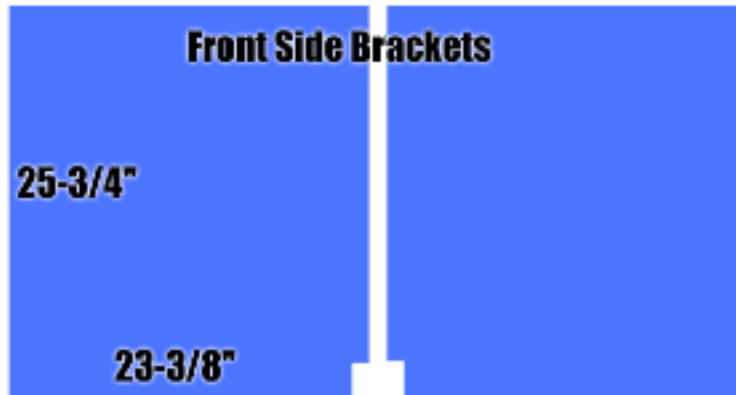
## Top Panel



**Things to know about the top panel:** the top panel is in three pieces. You'll need to keep all the parts in order, make sure the front and back are on the right sides.

- 1) All of the 1 x 2's will be on the bad side of the plywood and the screws will come through the good side. They are flush to the edge of the plywood.
- 2) Mark the entire parameter of the panel for screws that are 3" apart.
- 3) Pre-drill and glue all the 1 x 2's as you see measured above.
- 4) Keep an eye on that 3/8" lip on the front and back edges.
- 5) On the edges that have the hinges on them, you will only need a few screws to hold the 1 x 2's in place before you put all the screws to hold the hinges on. The screws on the hinges will pass through the plywood and into the 1 x 2's. You add the hinges later, so for this step just put a few screws along these edges.

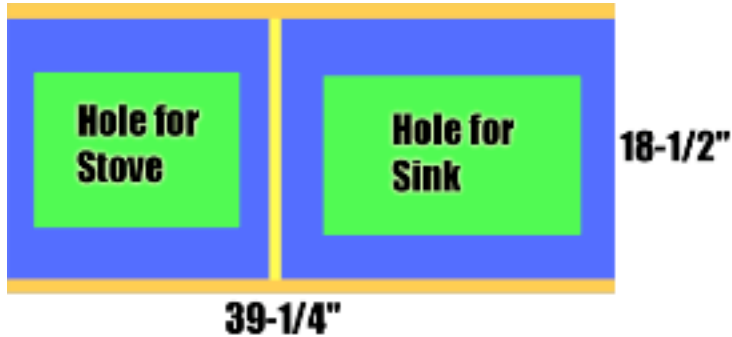
# Side Brackets



**Things to know about the side brackets:** these side panels have a few different functions, they hold up the lid as the roof when the doors are open, they are how you keep the doors open, they offer privacy and wind protection as well, and they keep the whole trailer straight and aligned.

- 1) Cut the pieces as you see measured.
- 2) Cut out the notches that will allow the doors to close, the notch is about  $3/4\text{'}$  by  $2\text{-}3/8\text{'}$ .

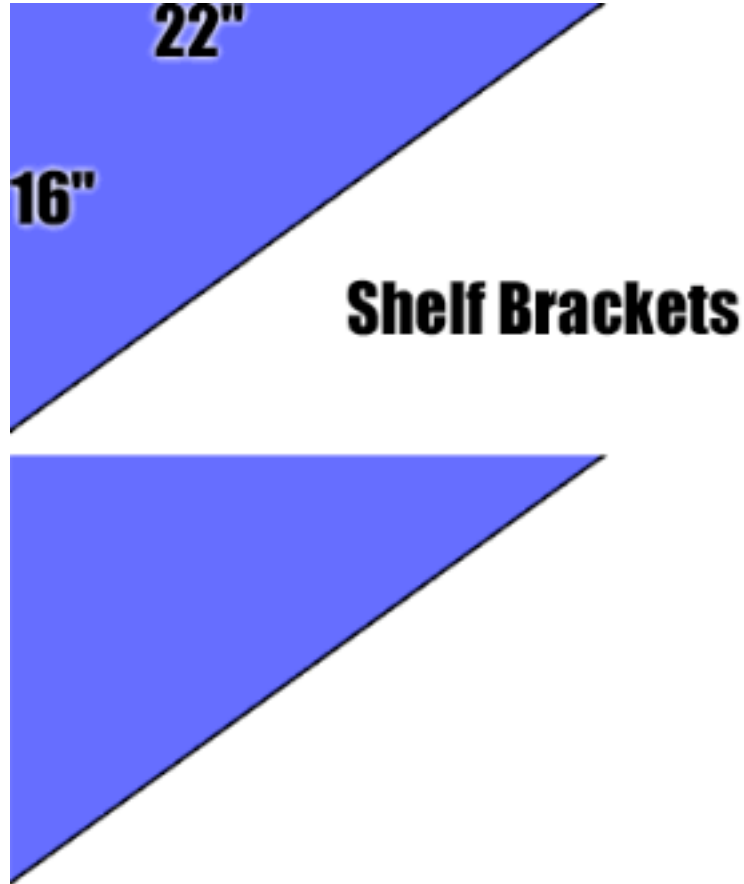
# Shelves



**Things to know about the shelves:** these two shelves go in each end of the trailer, the shelf for the kitchen side will need the holes for the sink and stove and the bathroom shelf doubles as the outside shelf that attaches to the outside of the trailer. In the picture above, you are looking at the underside of the shelves.

- 1) Cut the wood as you see measured.
- 2) Add the 1 x 2's on the narrow edge to give the shelves strength.
- 3) Depending out where your sink and stove go will tell you where the cross beam will go on the kitchen shelf.
- 4) The cross beams on the bathroom shelf are set in about 10" from the sides.

## Shelf Brackets



**Things to know about the shelf bracket:** this shelf bracket goes under the shelf that goes in the bathroom, these brackets are what gives the shelf strength when it is attached to the outside of the trailer. Without these brackets the hinges would pull out of the wood.

- 1) Cut the wood to the measurements
- 2) Attach a 1 x 2 along the edge of the 22" side, so the hinge has wood to screw into.
- 3) On the 22" side attach a 8" hinge.

The bracket will be attached to the shelf later in the project.

# Assembly Instructions

All Panels should be already stained or painted before you put them together, or you can wait until the project is done to apply paint or stain.

## Attaching the Bottom



- 1) Take the Passenger, and Middle Panels and turn them both upside down (we are going to put the bottom on first so, they need to be upside down). Using a square as a guide attach the Middle Panel to the Passenger Panel. Use glue and screws 3" a part.



- 2) Attach the Driver Panel. Use Glue and Screws 3" a part.



- 3) Attach the Front and Back Kick Plates (the bottom pieces that are only 6" wide). Use Glue and Screws 3" a part.



- 4) Attach the Bottom Panel. Use Glue and Screws 3" a part, don't forget put screws into the middle panel.



- 5) Turn the trailer right side up.

#### Attaching the Top



- 1) Lay all the Top Panels together on the top of the project, make sure the front is on the right side and that there is a 3/8" lip on the front and back, put a pencil mark on both sides of the Top-Middle Panel, this will help you keep things lined up. Attach the Top-Middle Panel to the Passenger, Driver and Middle Panels with glue and screws 3" a part.



- 2) Attach the Piano Hinges to join the Top-Front and Top-Back Panels to the Top-Middle Panel. You can remove these later to paint or stain.



- 3) Attach the Support Sides to both the Top-Front and Top-Back Panels with glue and screws 3" a part.

### Attaching the Front and Back



- 1) Attach the Front and Back Panels to the Top Panels with glue and screws 3" part. Attach the Front and Back Panels to the Support Sides with glue and screws 3" a part.

You are now done the basic structure of the Mini Camping Trailer. You should now check to make sure the box is square and the doors open and close nicely. There will always need to be a few adjustments by sanding to make things fit nicely.

# HardWare



1) Attach the Handles.



2) Attach the Hasps and Locks. This one uses Carriage Bolts with nuts and washers on the other side. This will allow you to lock your Mini Camping Trailer.



3) Drill holes for bolts that will hold the two sides open. I just use a simple bolt with a wing-nut to hold open each side.

# Sealing



- 1) Apply a bead of Silicon Sealer to all the inside edges on both the front and back areas of the trailer.



- 2) Apply the Weather Stripping inside of the hinges on both the front and back of the trailer.



- 3) Apply a bead of Silicon Sealer around the edge of the sink/range shelf.

# Plumbing



1) Drill the hole for the Telescoping Water Fill.



2) Attach the Telescoping Water Fill with four screws.



3) Attach Blocks on the bottom to hold the water tank. So you will need a block on the side and on the end of the tank so it does not move at all. The last thing you need is a 10 gallon tank moving when you slam on the brakes.



4) Drill the hole for the tube to go to the sink.



5) Install the Water Tank, connect all the hoses.



6) Install the sink and faucet. Use Silicon and two screws to hold into place. I use the weight of the saw to hold the sink down tight while the silicon dries.



7) Install all drain fixtures under the sink to go to 10' garden hose.



- 8) Attach the waterline to the faucet.



- 9) Drill some drain holes in the bottom of both sides, so that the shower will drain on the ground under the trailer and if there is any rain water on either side, it will just drain out.

# Cook Top/Range



1) Install the insert Cook Top. This one is held in place by four screws.



2) Attach Propane hose.



3) Attach a block of wood on the middle wall for the Propane Tank holding strap to screw into.



- 4) Lock the Propane Tank into place with some strapping and a bolt and attach hose.



- 5) Install the cook top cover.

# Electrical



- 1) The battery will go under the sink so have about an extra 16" of wire under the sink to attach to the battery. I use a power supply that has a cigarette lighter socket.
- 2) Run the wire from under the sink to the light above the sink.



- 3) Drill a hole that will be behind the kitchen light to pass the wire through to the bathroom side.



- 4) Drill a hole on the Passenger Panel for the outside Porch Light.



- 5) Attach all the lights, black wires to black wires, white wires to white wires.



- 6) Attach wires to battery and test. In this case to a cigarette lighter plug.

# Outside Shelf



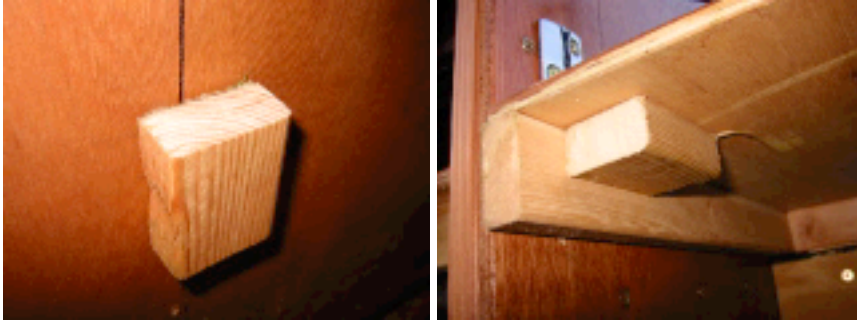
This shelf is for storage on the bathroom side of the trailer, but once you are at your campsite the shelf is removed and used as a kitchen shelf.



1) Attach half of the “take-a-part” hinge to the shelf.



2) Attach the other half of the hinge to the Passenger Panel at the same height of the kitchen self. (See photo at the first of this section).



- 3) You will have to use blocking behind each set of screws to make the hinges secure.



- 4) Under the shelf, install a simple bracket that is on a hinge so it will fold flat when it is used as a storage shelf

## Shower Curtain



- 1) Attach the shower curtain to the inside edge of the 1 x 2 of the bathroom lid.



- 2) Use a small length of rope to hold the shower curtain up when you want to close the lid.

## Installing Portable Toilet



- 1) I find you get the most room by having the portable toilet on a slight angle. You use the clamps that come with it so it won't move around as you go down the road.

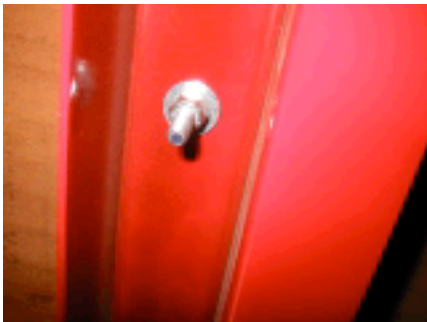
# Attaching to the Trailer



Build the trailer as per the instructions that come with it. I use a utility trailer that has a 40 x 48 inch bed from Harbor Freight Tools. Get the one with 12 inch tires, it can go normal highway speeds.



- 1) Use six bolts to attach the box to the trailer frame. Use four in each corners and two in the middle. Use a block of wood and a washer to add strength to the connection.



- 2) Use locking washers and locking bolts to insure that everything stays put.

## Packing the trailer



Use plastic boxes that will seal out any rain that might get inside the box.

## Storage of the trailer

When your trailer is not in use, cover it with a good tarp to keep all the rain out. If you take the box off the trailer, do not put it directly on the ground, that will cause the bottom to rot out. Instead, put it up on some blocks. Since the trailer has drains in the bottom of each side, if any rain does get in, it will just drain out.