

D.I.Y. Cheep High Quality Low To The Ground Motorcycle Trailer

How To Build A Motorcycle Trailer Out Of A Boat Trailer.

Before you start any project plan your objectives.

In my case I wanted:

1. A light weight inexpensive trailer.
2. Maneuverable and one axle only (I already have a tandem 3 bike trailer [6K Lbs Cap.] trailer).
3. Hold up to 2 full dressed Harley Davidson's.
4. Hold one long (12' +) chopper.
5. A short distance trailer for picking up broken or newly purchased/sold bikes.
6. Low height for easy loading.

I am in the Marine Business for many years in S. Florida. There are many neglected boat trailers to be had for either nothing or next to nothing. Start by viewing the local Trading Times, Classifieds, boat yards, et. Al.

I believe the wider the better for more stability so choose wisely.

Step One ~ Planning:

1. What do you want it to do? Figure up the weights of the bikes you plan on hauling.
2. Hitch, for a 2/3 bike trailer a 2" is just fine.
3. Width of rails. Consider 2 bikes side by side, no less than 36" center to center. Use no less than 12-gauge galvanized steel. 85 in. overall length, rail width is 8-1/2 Northern Tools for \$65.00.
4. An axle kit may be chosen for the trailer if the existing axle is too far gone. The weight capacity and height must be considered.
5. Slipper Spring slider Kit. I use these to control the tongue weight by sliding the axle assembly forward or to the rear to achieve an ideal 50 pound/5 % tongue weight
6. Pick your wheels/tires. The larger the diameter usually the more load capacity. Always use trailer tires as they are built differently than automotive tires. The larger the tires the higher up the trailer rail.



How I did it:

I picked up this trailer (before photo not available as I did not think that far ahead) for free. Just get it out of here I was told by the former owner.

- I previously had a rail to work with and started cutting the trailer down to size with a 7" metal friction blade on a 4 1/2" angle grinder as it was over 20' long and had a tandem axle set up. I mounted the rail using angle steel and welded 1/2" X 13 nuts under the angle for rail removal. I incorporated in a front rail mounting system at the same time. I cut off the old tongue "hitch" and installed a new one. I also welded on a new 1000 Lb. Swing-Back Trailer Jack w/wheel. I cleaned up the trailer and removed all unnecessary brackets and tabs that were no longer needed.



- I turned my attention onto the suspension. I bought new wheel bearings & grease seals. I sand blasted the hubs and axle. I inspected the axle spindles for damage. I bought new springs as salt water kills them and they are cheap. I made a pair of slipper sliders and welded fender brackets on to them. I bought new wheels and tires. When all was completed I painted it with 2 coats of Rust-Oleum Rusty Metal Primer and 2 coats of gloss black Protective Enamel. Be prepared to use at least 1 quart of each.



- I mounted the suspension and checked the trailer for a level rail while on the average tow vehicle. I also measured the final ramp height. I already had four H.F Steel loading ramps (6 ft. long, 9" wide but use caution, they only have a load capacity of 500 lbs each. A pair of steel reinforcement strips are going to be bolted to the inside of one of the ramps for added strength "think" dresser. The plastic fenders were installed and brackets were added to strengthen the steps on top of the fenders. The total height to top of rail to ground is 16". Be very liberal in



welding many strap mounts. You can never have too many choices in where to mount you straps!

- I installed the steel walkway planks which doubled as a kick-stand platform. I used angle and welded it to both the plank and trailer frame.
- I was finally able to put my bike up onto the secured ramp



- Check the tongue weight at this point with a bathroom scale. You may need to move the slipper rails to adjust the weight.
- The axle has to be centered with the frame, and this is a very critical point that cannot be ignored. It has to be in line with the center line of the frame. To make sure that the tracking is straight, the distance between the wheels to the hitch has to be equal. The axle needs to be square and centered on the frame, and for this the tongue has to be square and centered to the frame.
- At this point I discovered I needed to revise my plan as mounting the rail on top of the trailer frame caused the rail to be too high. I then went to plan 2. I welded an extension on to the trailer and extended the center rail with a temporary steel plate to allow for a longer bike.
- I addressed the second rail and welded mounting angle in the same manor as the center rail.





- Please view the importance of providing for a kickstand platform while loading a bike by yourself.
- I welded nuts under the planks to mount a pair of ramps if needed. I use these T-Handle bolts to secure these ramps to eliminate the use of tools

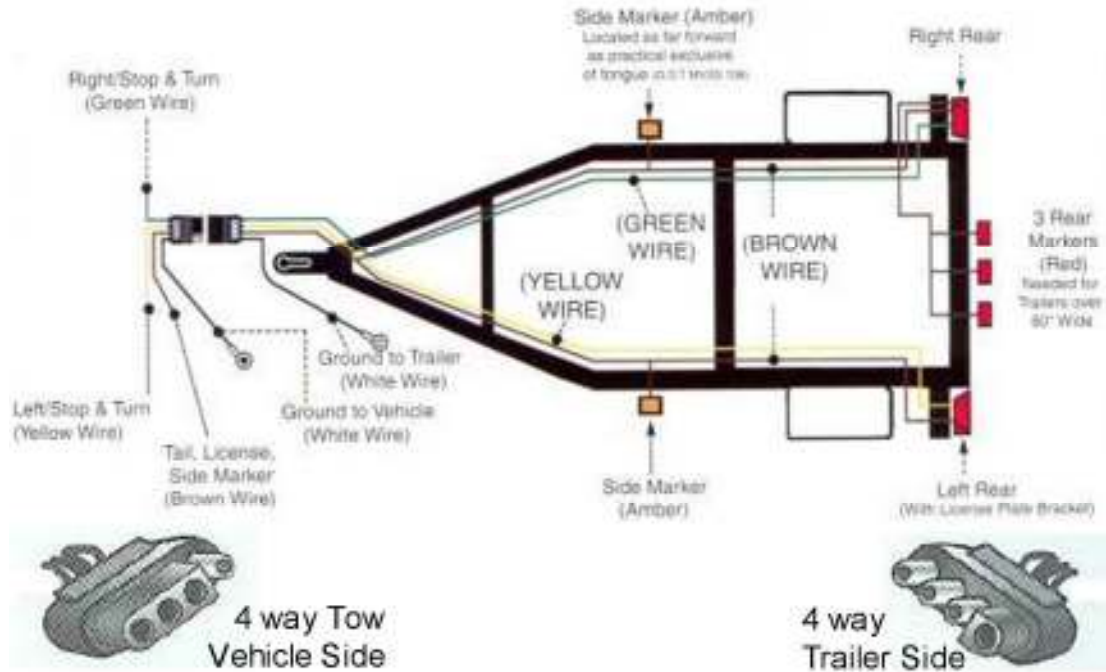


- I welded strap mount bars up front and a pair of pedestrian warning shafts on the end topped with a pair of plastic balls from a front lawn lamp. I also added rotational light stanchions and stop/running lights & license plate mount to allow easy loading of the outside bikes..
- I welded on a H.F. spare tire mount and will add another one as my car carries only a small donut spare. The second will be for my tow vehicle.
- There you have it. For the future I will fill in the rear and sides with aluminum diamond plate and do away with the center ramp plate. I will have an adjustable front wheel caulk for the center rail. This way one can adjust the center bike as you see fit to adjust the tongue weight.

How to wire a trailer:

4 Way Systems

4 way flat molded connectors allow basic hookup for three lighting functions; right turn signal / stop light (green), left turn signal / stop light (yellow), taillight / license / side marker (brown) and a ground (white).



Motorcyclemetal.com Inc.

5490 S.W. 42nd St.

Davie, FL 33314

1-866-899-5962 Toll free

1-954-449-6173 Local

Enjoy!

Sincerely,

Howard G. Messner President