

# Small Cheating Camel Cycle Trailer

## Kitset Instructions

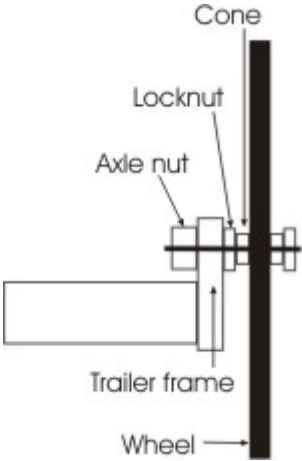
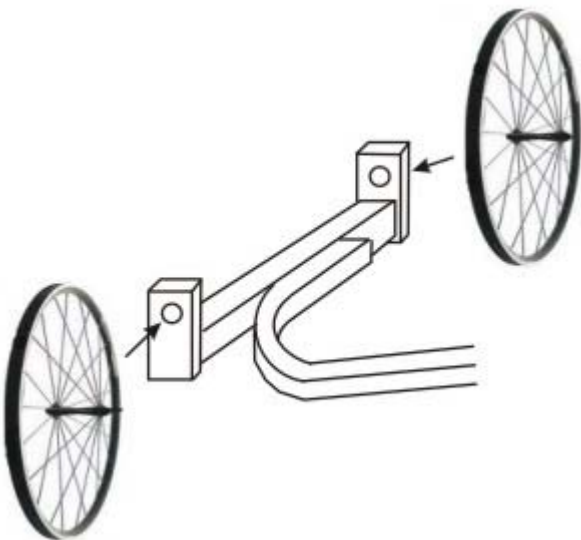
Steven Muir

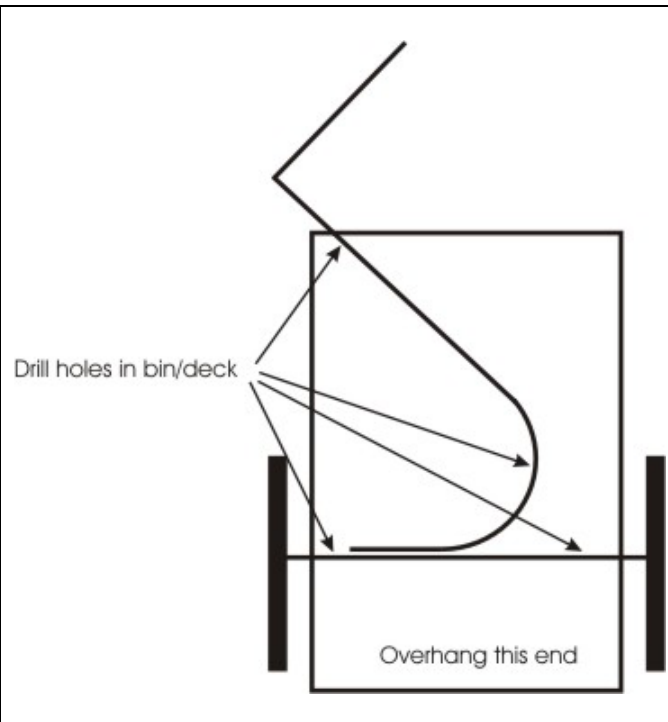
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Follow the instructions below. Please note you are responsible for the safety of the finished trailer. While I endeavour to provide parts of good quality that should perform well for many years, you are the one to put it together and make sure it operates in a safe manner.

 <p>A technical diagram showing the assembly of a wheel onto a trailer frame. A vertical axle passes through a rectangular trailer frame. On the right side, a wheel is mounted. A cone is placed on the axle to the right of the wheel. An axle nut is positioned on the axle to the left of the cone. A locknut is positioned on the axle to the left of the axle nut. Labels with arrows point to the Cone, Locknut, Axle nut, Trailer frame, and Wheel.</p>	<p><b>Step 1.</b></p> <p>Find a set of two 12", 16" or 20" wheels off a kid's bike. Anything larger is too prone to rolling the trailer.</p> <p>Depending on your wheel axle length, the cones and locknuts may need to be offset to one side of the axle to provide enough thread on one end to do up the nut. A thin cone spanner is required for this, so if you do not have one available you may need to visit a bike shop to get this done.</p>
 <p>A diagram showing a trailer frame with two wheels attached. The trailer frame is a long, thin metal bar with two mounting brackets. Two wheels are shown, one on each side of the frame, with arrows pointing to the mounting brackets. The wheels are shown from a side-on perspective, highlighting the spokes and the tire.</p>	<p><b>Step 2.</b></p> <p>Attach your wheels to the axle. Ensure the nuts are tight with a spanner tightening on both sides of the trailer frame.</p>

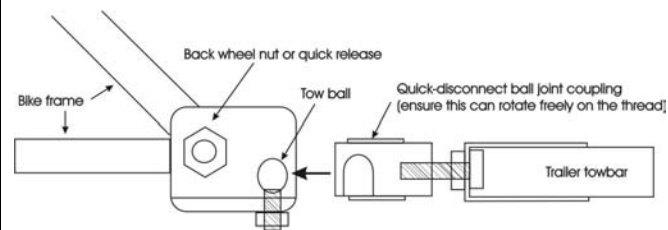


### Step 3.

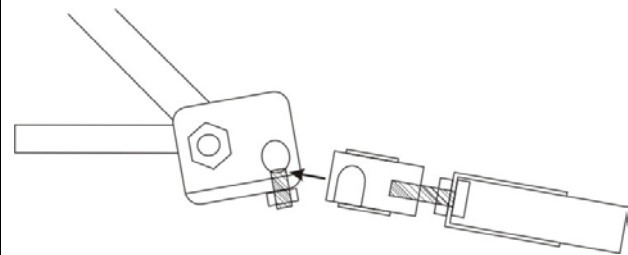
Find a bin to use around 600 x 400 mm. Stowers, Bunnings, and Mitre 10 have sturdy crates.

Drill 4.5 mm holes in the deck or bin at four points shown. Drill 3.5 mm hole into the aluminium tube of the trailer frame, being careful to align the holes with the centre of the tube.

Insert the self tapping screws into the holes to fix the bin/deck into place. Rivets can be used if preferred. If the bin is not flat on the bottom you may need spacers to fill in the gaps.



Correctly fitted Hitch base – nicely aligned with the towbar.



Incorrectly fitted hitch base – the angle does not allow enough movement for bumps

### Step 3.

Attach the hitch base to your bike underneath the rear wheel nut or quick release lever (left hand side). It stays on your bike all the time. It is important to align the tow ball with the tow bar and quick disconnect ball joint coupling to allow up/down movement over bumps. If there is a permanent angle on the tow ball there may not be enough play and the ball joint may bend or break.

It is also important to make sure the quick disconnect ball joint coupling can rotate at least 90° on the bolt thread in both directions. It would pay to get in the habit of checking this every time you connect the trailer on as it can tighten up over time and will damage the ball joint if it cannot rotate freely.

### Safety Information

- A flag, reflector, reflective tape and rear lights are very good additions to make the trailer more visible.
- Every time you connect the trailer make sure the hitch can rotate freely in either direction on the thread.
- Be careful on sharp right hand turns as the tow bar can rub against the back wheel of the bike putting a huge strain on the tow ball. Most corners are fine but do any U-turns to the left.
- Don't overload the trailer. 30 kg is about the limit.
- Don't use the trailer on a bike with disc brakes without thoroughly testing the towbar doesn't bend the disc under all turning/falling over movements. This is usually only an issue with extra large discs.
- Check the screws every few months to make sure they are all tight.
- Be careful when going up curbs particularly with an unloaded trailer. If you get a wheel hitting the square edge of the curb they will flip very easily.
- If your bike is in the habit of falling over regularly this will burr the edges of the ball joint socket and can (over time) result in the ball slipping out. Check the ball joint socket occasionally to make sure the edges are not damaged and replace the ball joint if necessary.