

# One Trike Rack v6.1

## Parts List

Item	Tk1Rg1 v6.0 Qty	Item	Tk1Rg1 v6.0 Qty
Baggie 6 x 6, 4ml	1	Tilt-Up – 2" square black tube 20" long	1
Box 5 Panel -Tk1 36 3/4" x 5 1/2" x 2 7/8"	1	Tilt Sides – Black 5" x 6 5/8" with 5 holes	2
Hex Head Armor 1/2-13 x 1"	3	Tilt Insert - 1.25" or 2" square black tube 16.5" long	1
Lock Washer 1/2 Yellow Zinc	3	Shims - Unpainted .3/8" x 2" x 5" for Tilt Sides <b>(Only if it is a 1.25" rack)</b>	2
Channel Nut 1/2 Thread 3/8 thk	3	Trike Strut – 1.25" square black tube 36" long for Tadpole or 47" long for Delta	1
Flg Head Grade 8 3/8-16 x 1"	4	Black channel 1' x 1 5/8", 36" long for non-heavy duty or black channel 1 5/8" x 1 5/8", 36" long for Heavy Duty	2 2
Flg Head Grade 8 3/8-16 x 2"	4	Corner Brackets – Silver L-Shaped	2
Clevis Pin with Hair Pin 3/8-16 x 3"	1	Cam Buckle Strap 18"	4
Flg Head Grade 8 3/8-16 x 3"	5	U-Clamp1" for non-heavy duty <b>or</b> U-Clamp 1" for heavy duty U-Clamp 1 5/8" for heavy duty	2 1 1
Lock Washer 3/8 Armor Coat	4	L-Bracket - Silver	2
Flat Washer 3/8 Armor Coat	9		
Nut 3/8-16 SS Self-Lock	9		
Channel Nut 3/8 Thread, 3/8 thk	4		
Square Nut	1		

# **CycleSimplex Bike Rack Assembly Instructions**

## **One Trike Rack V6.1**

## **Precautionary and Maintenance Information:**

All straps must be used at all times.

When you are not carrying trike(s)/bike(s), you can either leave the straps attached through the slots or remove them. If you leave the straps on the rack, they should be connected just as they would with the trike or bike on the rack, otherwise they may be lost.

There is always some flex in metal. Because of this you should check and tighten bolts before each use.

You should check the straps for wear before each use and replace if they show any wear.

This trike or bike rack will extend quite a distance behind your vehicle. Caution must be used not to “bottom out” on sharp dips or rises in your path. Your rack or trike(s)/bike(s) may also extend beyond the sides of your vehicle so caution is required not to hit the rack or your trike(s)/bike(s) on other objects.

## **Liability Information**

CycleSimplex, LLC’s liability from all causes is limited to the purchase price of the trike or bike rack.

## **Warranty Information**

This trike or bike rack may be returned unused for any reason by the purchaser to CycleSimplex, LLC within 15 days of its receipt by the purchaser. For full refund, returns must be packaged so that no damage occurs to the rack in shipment and the trike or bike rack is received by CycleSimplex in like new condition...

CycleSimplex, LLC warrants the trike or bike rack from defects in material or workmanship for 90 days from the date the purchaser receives the product. During that 90 day period, CycleSimplex, LLC will at its sole discretion either replace defective components or refund the full purchase price of the trike or bike rack upon return of the trike or bike rack in like new condition

# Material List One Trike Rack v6.1

Task	Clevis/Hex Head Bolts	Flange Head Bolts	Round Silver Washer	Lock Washer	Square Nut	Self Lock Nuts	Channel Nuts
Attach corner Brackets to Trike Wheel Extension		4 – 3/8" x 1"		4			4
Attach Trike Strut Square Tube to Tilt-Up using U-Clamp		2 – 3/8" x 3"	2		1	2	
Attach Wheel Extension to Trike Strut Square Tube		2 – 3/8" x 2"	2			2	
Attach 36" Crossbar to Trike Strut-Square Tube using the U-Clamp		2 – 3/8" x 2"	2			2	
Attach Tilt Mechanism Sides to Tilt Up	Clevis Pin 1 – 3/8" x 3"	1 – 3/8" x 3"	1			1 9	
Attach Tilt Mechanism Sides to Tilt Insert		2 – 3/8" x 3"	2			2	
<b>3/8" Totals</b>			<b>9</b>	<b>4</b>	<b>1</b>	<b>9</b>	<b>4</b>
Attach (2) L-Brackets to Trike Crossbar		2 – 1/2" x 1"		2			2
Attach 36" Crossbar to Trike Strut-Square Tube using the U-Clamp		1 – 1/2" x 1"		1			1
<b>1/2" Totals</b>				<b>3</b>			<b>3</b>

Component	Qty	Component	Qty
Tilt Up (2 inches square by 20 inches long)	1	Cam Buckel Straps 16"	4
Tilt Mechanism Sides	2	U-Clamp 1" for non-heavy duty <b>Or for heavy duty</b> U-Clamp 1" U-Clamp 1 5/8"	2 1 1
Trike Strut – Square Tube Delta is 1.25" x 1.25" x 47" Tadpole is 1.25" x 1.25" x 36"	1		
Trike Crossbar 1" x 1 5/8" x 36" Slotted for non-heavy duty <b>or</b> 1 5/8" x 1 5/8" x 36" Slotted for heavy duty. <b>It will be only one</b>	1		
Trike Wheel Extension 1" x 1 5/8" x 36" Slotted for non-heavy duty <b>or</b> 1 5/8" x 1 5/8" x 36" Slotted for heavy duty. <b>It will be only one</b>	1		
Tilt Insert (1.25" or 2" inches square by 16 1/2 inches long)	1		
Shims (2" x 5" with 2 holes) – <b>Only used with 1.25" rack</b>	2		

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Trike Strut – Square Tube (The Delta Is 47” Long and the Tadpole Is 36” Long)



Trike Crossbar is 36” long, Wheel Extension 36” long



Tilt Up for One Trike Rack



L-Bracket



Tilt Mechanism Sides



Tilt Insert



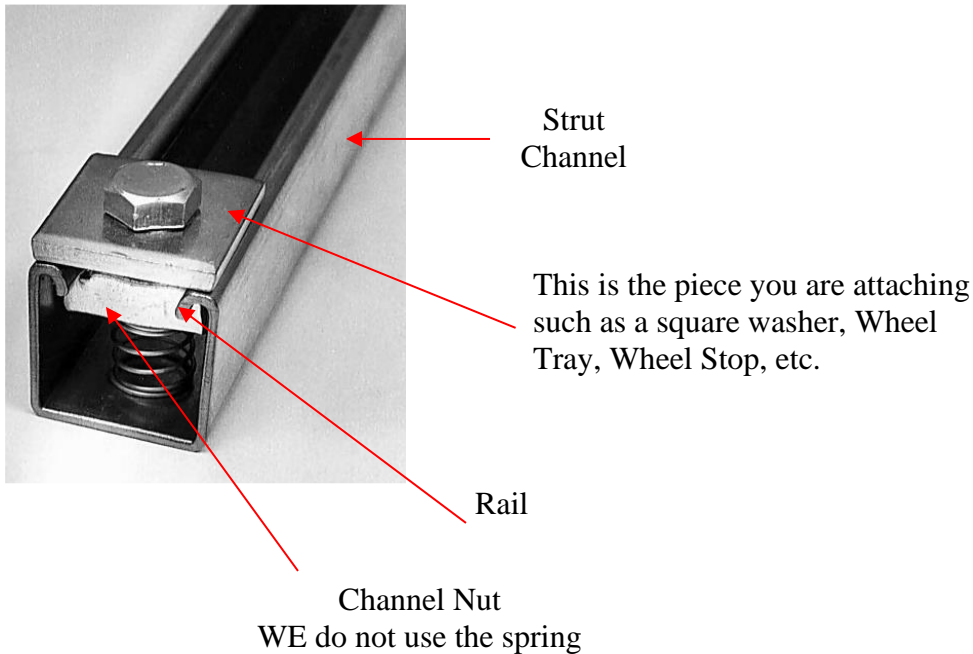
Corner Bracket

**You may not use all of these**

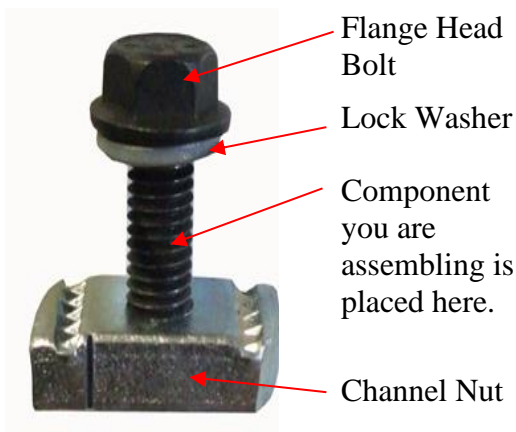


**Figure 1:** The strut channel comes in various sizes. When we describe something as strut channel, it will look like the following with 3” long slots in the bottom:

When attaching components to strut channel, it is critical that all Channel Nut Assemblies must be tightened with the channel nut under the rail as shown below. The grooves in the channel nut must be up and under the rail of the strut channel. Your channel nut will not have a spring under it.

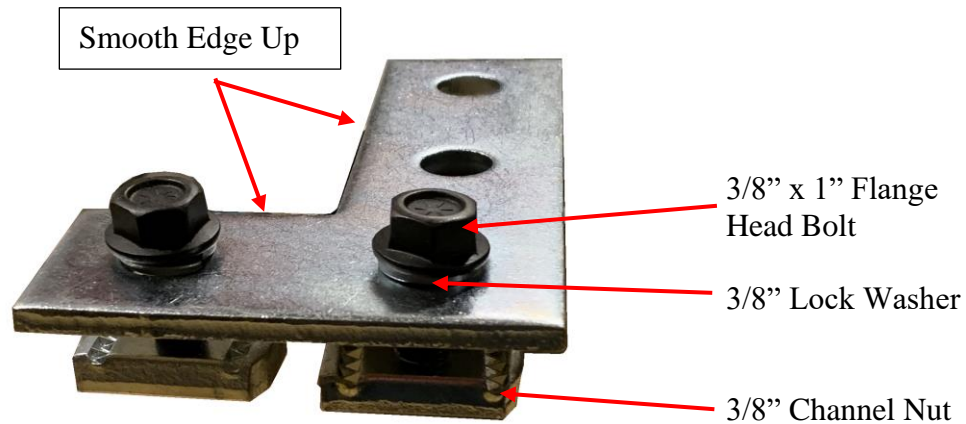


**Figure 2:** All Bolts requiring a Channel nut must be assembled in the following fashion. This is a Bolt and Channel Assembly. This does not come as an assembled part. You have to assemble each as required in the instructions.



**Step 1: Create 2 Corner Bracket Assemblies.**

**IT IS IMPORTANT THAT THE SMOOTH EDGE OF THE CORNER BRACKET IS UP SO AS NOT TO WEAR THE TIRE**



**Step 2: Assemble Tilt Mechanism Sides, Tilt Up and Tilt Insert as shown in the picture below**

**If you have a 1.25\" rack, do Step 2A. If you have a 2\" rack, you will not use the Shims.**

**Step 2A**

Place the two Shims on each side of the Tilt Insert so that they are over the two holes in the Tilt Insert. Pass the two 3/8\" x 3\" black Flange Head bolts through the two holes C and D in the bottom of the Tilt Sides, then the Shim, the Tilt Insert, the other Shim and the other Tilt Side (the shorter distance from Hole B to Hole C should be toward the bottom of the Tilt Sides). Place a 3/8\" round silver washer and 3/8\" self-locking nut on the end of the two bolts. Finger tighten. Do not tighten all the way yet.

Pass a 3/8\" x 3\" black flange head bolt through the Tilt Sides and the Tilt Up in Hole A. Place a 3/8\" round silver washer and 3/8\" self-locking nut on the end of this bolt. Finger tighten the nut

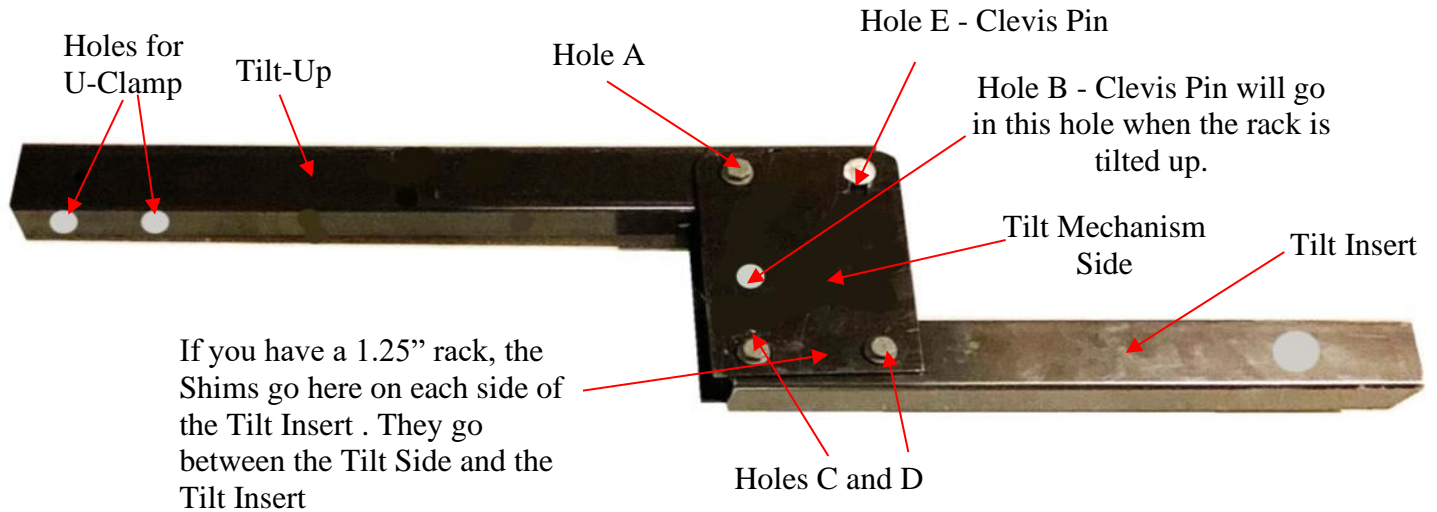
Pass the Clevis Pin through Hole E. Insert the Hair Pin into the hole in the end of the Clevis Pin.

Tighten all nuts

If you want to tilt the rack up, remove the Clevis Pin from Hole C, tilt the Tilt-Up up and place the Clevis Pin in Hole B.



The Tilt Mechanism Sides, Tilt Up and Tilt Insert from the previous step will look like the picture below



### Step 3A: Place the Trike Strut - Square Tube on the Tilt-Up using the U-Clamp

Find the middle of the Trike Strut – Square Tube and balance it on the end of the Tilt-Up between the two holes. Place the 1" deep U-Clamp over the Trike Strut – Square Tube.

As shown in the second picture below you are going to place the U-Clamp over the Trike Strut – Square Tube and attach the U-Clamp to the Tilt-Up using the two 3/8" x 3" flange head bolts. The U-Clamp will not be snug against the Trike Strut- Square Tube so you will have to put a Square Nut inside the U-Clamp as shown below. For now just tighten the nuts enough to keep the Trike Strut Square Tube from tipping or tilting but still allowing it to slide under the U-Clamp because it will be positioned after you attach the Wheel Extension.

### Step 3B: Place the 36" long Wheel Extension on the end of the Trike Strut – Square Tube

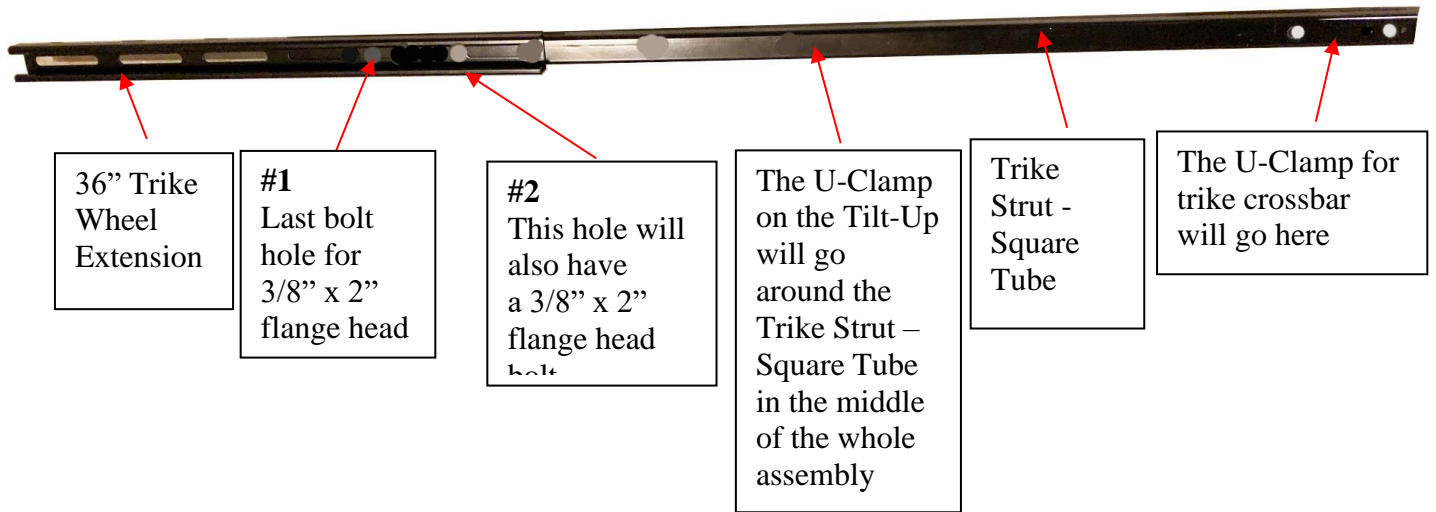
**If you have a delta rack** the total length of the Trike Strut – Square Tube and the Wheel Extension will be the distance between your axels (the wheelbase) plus the diameter of your front wheel

**If you have a tadpole rack** the total length of the Trike Strut – Square Tube and the Wheel Extension will be the distance between your axels (the wheelbase) plus the diameter of your rear wheel

**For either type trike do the following:** Fasten the 36" long Wheel Extension on top of the Trike Strut – Square Tube. Pass a 3/8" x 2" flange head bolt through a slot in the Wheel Extension that maintains the overall length of the Wheel Extension and the last hole to the left in the Trike Strut – Square Tube. Place a flat washer and then a self-lock nut on the bolt and finger tighten, This will be depicted in "#1" below.

Now use another 3/8" x 2" flange head bolt, flat washer and self-lock nut to attach the Wheel Extension at "#2" below.

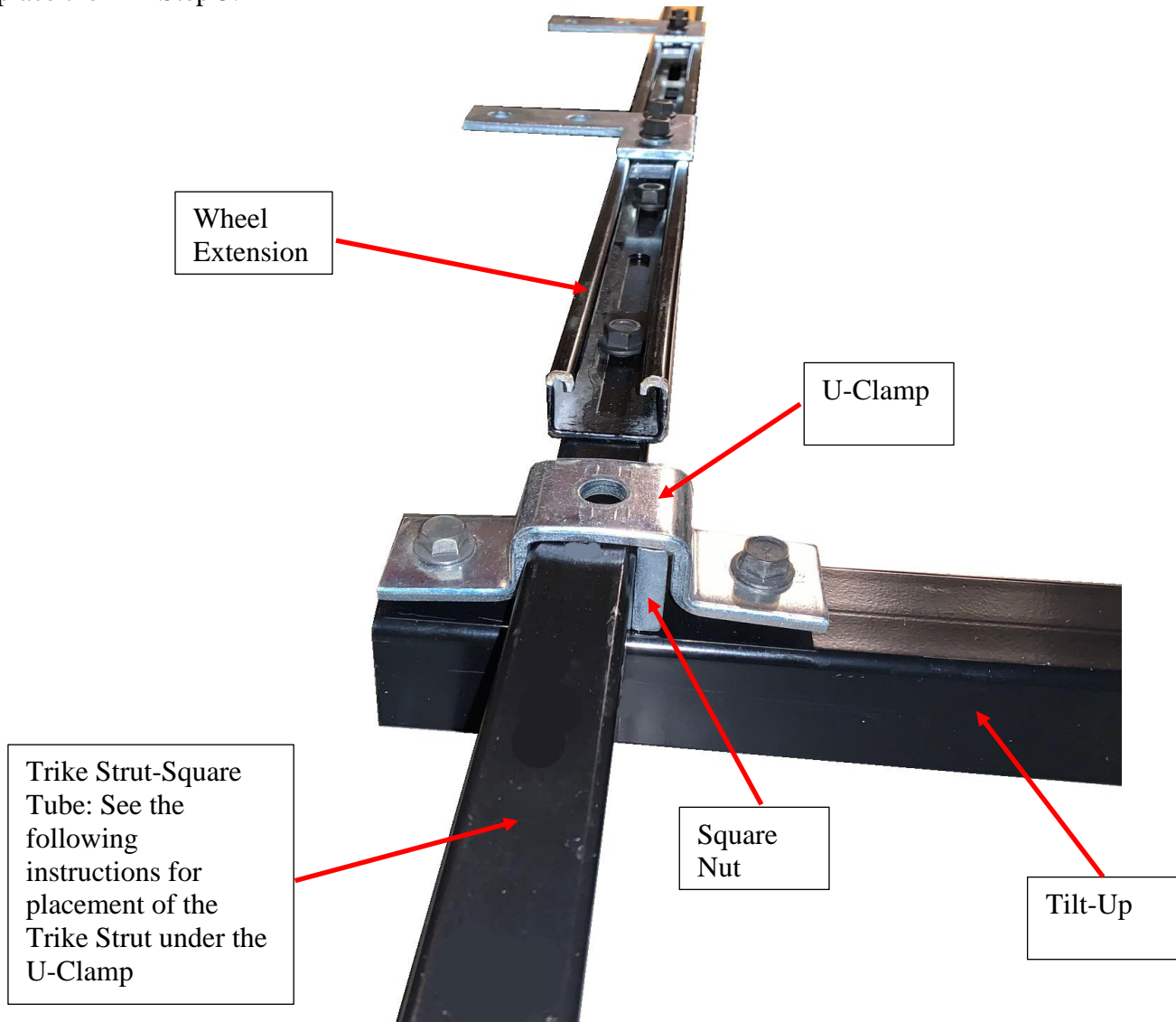
**This is a picture of Step 3B above: The Trike Strut – Square Tube and Wheel Extension will look like the picture below.**



**The full assembly for the Trike Strut – Square Tube and Wheel Extension will look like the picture below.**

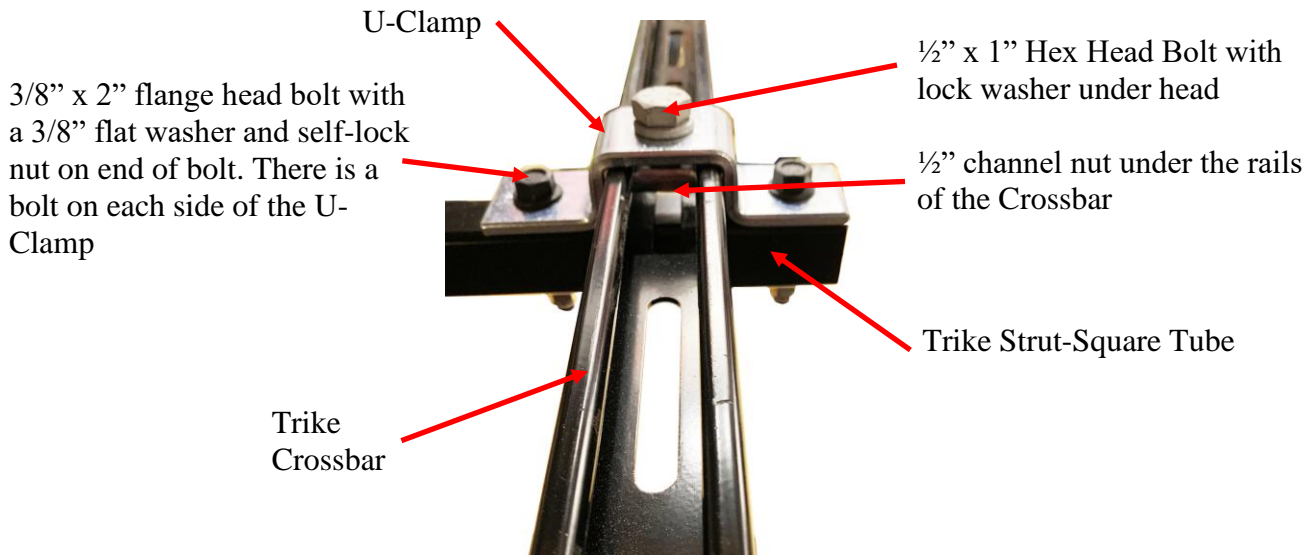
## This is a picture of Step 3A Above: Trike Strut – Square Tube and Wheel Extension Assembly

This picture shows the assembly with the Corner Brackets/Wheel Holders in place. You will learn how to place them in Step 5.



**Step 4 – Assemble the Trike Crossbar to the Trike Strut – Square Tube. The Trike Crossbar with its U-Clamp will be placed on the right end of the Trike Strut – Square Tube indicated below**

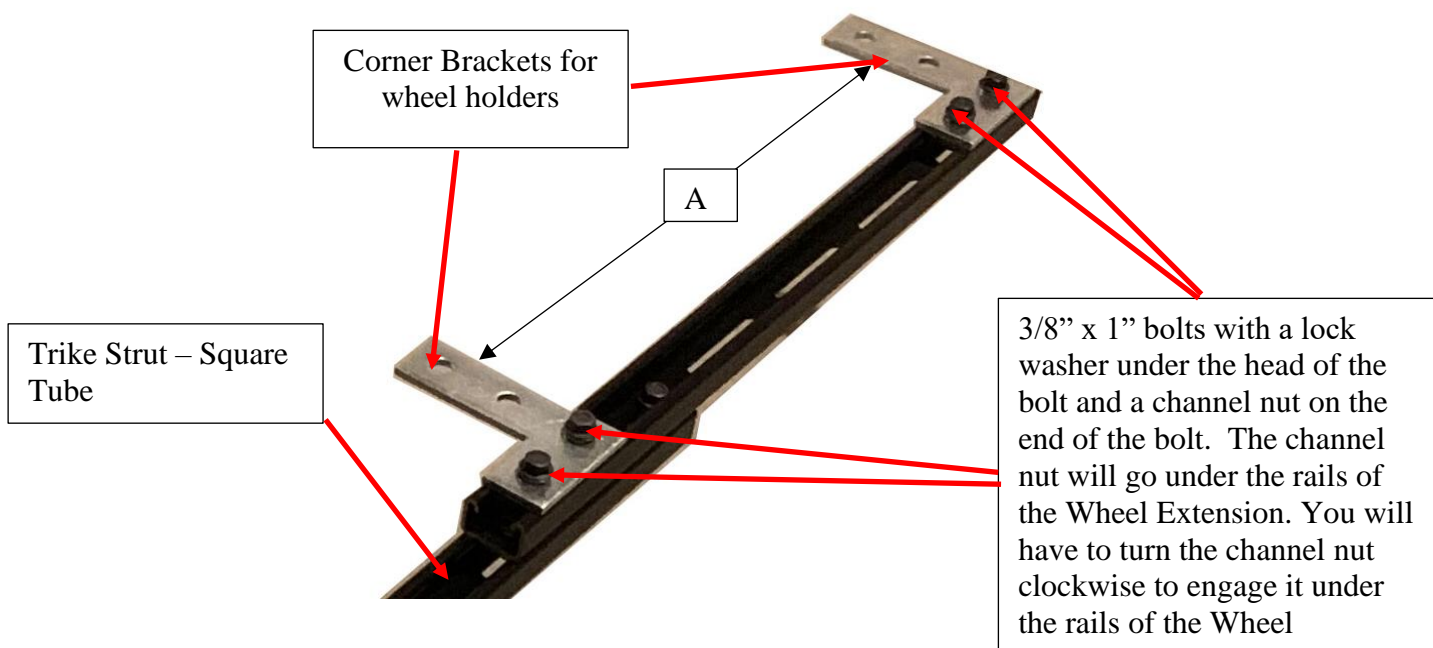
The U-Clamp will attach the Crossbar to the Trike Strut as shown below. If you have a non-heavy duty rack the U-Clamp will be 1" in depth. If you have a heavy duty rack, the U-Clamp will be 1 5/8" in depth. Since the single wheel of the trike, which sits between the Corner Brackets, is off the side of the Trike Strut and Wheel Extension, the Crossbar needs to be an equidistance off side.



**Step 5** – Attach the Corner Brackets to the Trike Wheel Extension that is attached to the Trike Strut – Square Tube. These Corner Brackets will hold your tadpole rear or delta front wheel in place

The distance for ‘A’ in the picture below will depend on your wheel diameter. The chart of wheel diameters and the distance of A are as follows:

'A' Distance	Diameter of Wheel
12 ½"	16" Diameter Wheel
14 ¼"	20" Diameter Wheel
16 ½"	26" Diameter wheel
17 ½"	29" Diameter Wheel



**Step 6: Attach the (2) L-Brackets to the Trike Crossbar:** Measure the distance from the outside of one of the tadpole front wheels or delta rear wheels to the outside of the other wheel. This will be the distance between the L-Brackets. Place a ½” lock washer under the head of each ½” hex head bolt and place the bolts through each L-Bracket.

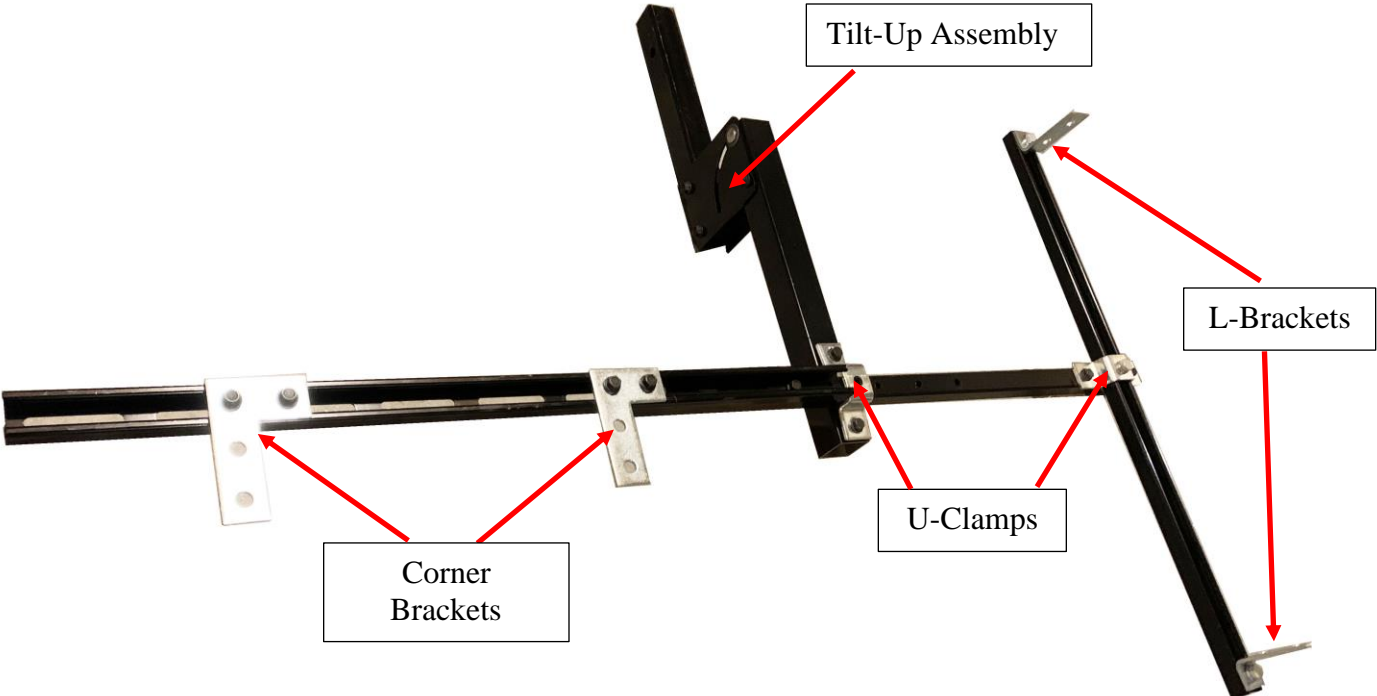
Place a channel nut on the end of the bolts. Slide the channel nuts inside the Trike Crossbar so that the channel nuts are on the rails of the Crossbar and tighten so that the L-Brackets are on the outside of each wheel.

If your trike is too wide, the L-Brackets can go on the inside of the wheels.



½” hex head bolt  
with lock washer  
under the head and  
channel nut on the  
end

# Finished Rack





The straps holding the front wheels of the tadpole trike or the rear wheels of the delta trike will be like straps in the picture below.





The straps holding the rear wheel on a tadpole trike or the front wheel on a delta trike will be as shown in the picture below.

