

## How to Build a Low Cost Base-Plate to Flat-Tow a Miata

Before going forward I need to issue a warning: Mazda does not recommend to flat-tow the Miata. Damage to the transmission may occur unless certain precautions are taken. There is a great deal of discussion on the web about this subject.

I built this base plate to flat-tow my Miata within short distance (less than 20 miles), using a Reese Tow Bar (Ref #74943) that I purchased for less than US\$80 at a discount retailer.

This is the end result.



## List of Materials

- 1 Reese Tow Bar (Ref# 74943) or equivalent with complete hardware
- 1 2" x 2" x 1/8" L-shape Steel Beam (I bought mine at a nearby hardware store)
- 2 Rubber bushings (I used PCV valve grummets for a Chevy truck)
- 2 1 1/4" x 1/2" steel washers
- 2 1/2" x 1 1/2" bolts and nuts

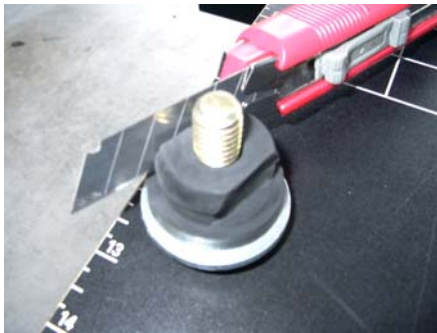
## List of Tools

Reciprocating saw  
Electric drill and 1/2" titanium bit or equivalent  
Knife  
Wrenches

## Construction



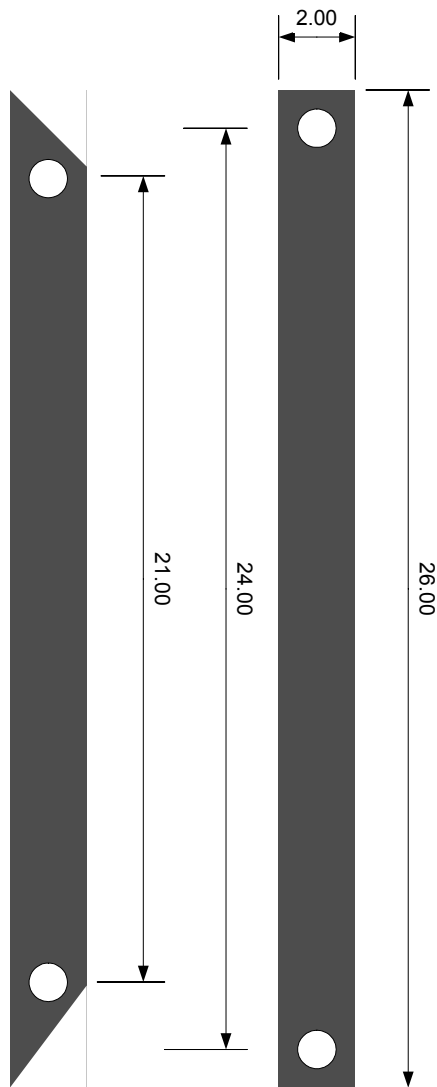
Place one of the bolts and washers through the rubber bushings.



Then cut the secants of rubber bushing with a knife.....



to allow them to fit through the front lashing hooks of the Miata.



Measure the distance between the center of the two bolts. Let's call this distance  $D$ . In my Miata  $D$  is exactly 24".

Cut the L-beam two inches longer than  $D$ .

To provide better access to the lashing hooks of the Miata while attaching the base-plate, cut both ends of the front plate of the L-beam at a 45% angle.

Drill two 1/2" holes in one of the plates of the L-beam.

Drill two 1/2" holes on the other plate. The distance will depend on the tow-bar spread. For the Reese 74943 this is exactly 21" (although the Installation Instructions indicate 24").



Screw the U-shape bracket and bold plate included with the tow-bar to the front part of the L-beam, as per manufacturers instructions.



Place the bar in place and tight the nuts until the top of the L-beam makes full contact with the lashing hooks of the Miata.



This is the final appearance before painting.

**Recommendations**

- Connect safety chains from the lashing-hooks of the Miata directly to the receiver hooks of the towing vehicle, as per DOT standards and in accordance to the recommendations of the tow-bar manufacturer.
- Install proper light signaling in the back of the Miata.
- Remove the entire base-plate when not in use. Do not drive the car with the base-plate installed. Overheating may occur.
- Disconnect the negative cable from the battery when installing the base-plate and while towing the car. This will prevent the Air-Bag mechanism from triggering as a result of a sudden stop or excessive vibration reaching the bumper sensor.
- Do not flat-tow your Miata for long distances. Damage to the transmission may occur.