

**ATTENTION DEALERS:** PLEASE PASS THIS MANUAL ON TO THE CUSTOMER AFTER INSTALLATION



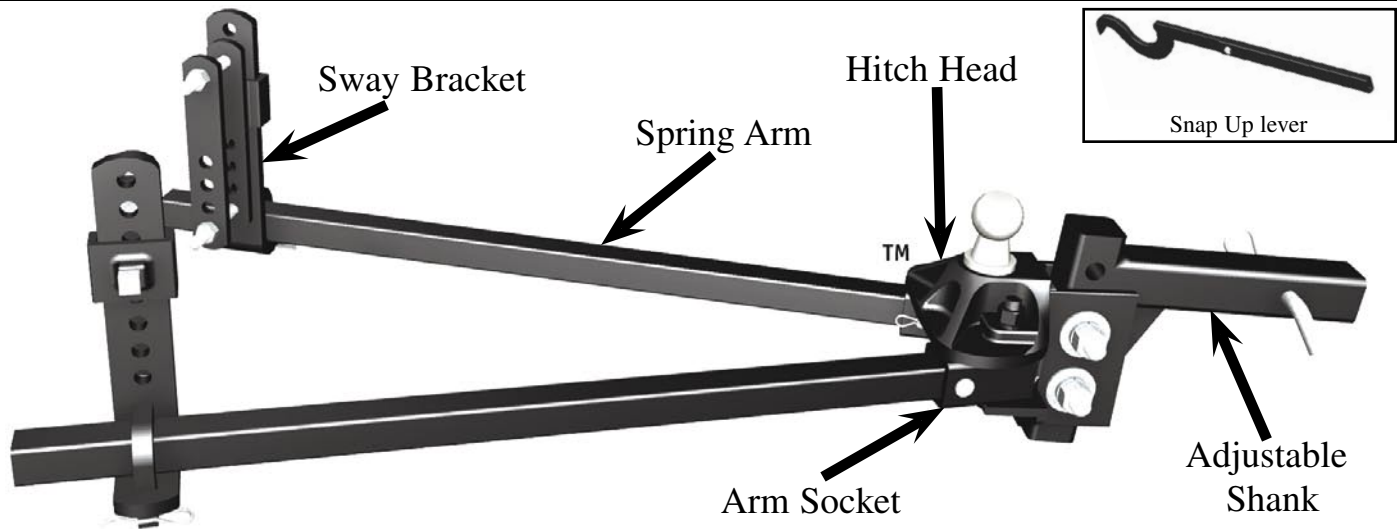
# Installation Instructions

## Bolt Style - Adjustable Hitch

For Part #'s: 90-00-1200 = 1200# hitch  
 90-00-1000 = 1000# hitch  
 90-00-0600 = 600# hitch

Thank you for purchasing The Original Equal-i-zer Sway Control Hitch. Following a correct installation, the Equal-i-zer will provide you superior control for a safe towing experience. Basic hitch adjustments may be necessary over time or when changing tow vehicles and trailer load. Please refer to these instructions for any adjustment questions. For additional information please refer to [WWW.EQUALIZERHITCH.COM](http://WWW.EQUALIZERHITCH.COM)

## General Hitch Description



## Installation Steps

### INSTALL THE HITCH BALL (not Included)

Select a hitch ball with a diameter that matches the size of the trailer coupler socket. Make sure the hitch ball rating exceeds the trailer weight. The Equal-i-zer hitch head accepts 1 1/4" (diameter) x 2 1/4" (length) ball shanks. Follow the trailer ball manufacturer's specifications for ball installation. Ball shanks smaller than 1 1/4" are not recommended.

**To Begin:** On a flat and level surface, line up tow vehicle and trailer. Secure trailer tires to prevent trailer from rolling. Unhitch trailer from tow vehicle and pull forward a few feet to allow work room. Park and secure the tow vehicle from rolling.

### 1. RECORD BASELINE MEASUREMENTS

Choose reference points for front and rear of the tow vehicle. (top of wheel wells, license plate frame, etc.). Measure and record height from pavement to reference point. Record initial heights on line [A] of the **Reference Height Table**.

### 2. DETERMINE TRAILER COUPLER HEIGHT

Use trailer tongue jack to parallel the trailer to the ground. Measure and record the number of inches from the parking surface to the inside top of the trailer coupler.(figure I) Record trailer coupler height on line [C] of the **Adjusted Trailer Height Table** on the next page.

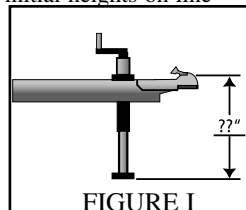


FIGURE I

**NOTE:** References to (items) are referring to the assembly break down diagrams on page 4. References to (parts) are Equal-i-zer parts available through your dealer.

	Front	Rear
Initial Height [A]	___	___
Installed Height [B]	___	___
Difference [A-B=]	___	___
The difference is the amount of suspension compression and is an indicator of hitch adjustment.		
<b>EXAMPLE:</b>		
Initial Height [A]	18	22
Adjusted Height[B]	16.5	20
Difference [ A - B = ]	1.5	2

### 3. DETERMINE TRAILER HEIGHT ADJUSTMENT

To compensate for normal compression of the tow vehicle's rear suspension, height must be added to the hitch ball. The Adjusted Trailer Height will allow trailer and tow vehicle to ride normally when coupled together. For every 100 pounds of trailer tongue weight add the following for your respective suspension. Vehicles with:

- stiff suspension (1 ton trucks, ...)
  - add 1/8" to the hitch height for each 100 pounds of trailer tongue weight.
- average suspension (3/4 ton trucks, ...)
  - add 3/16" to the hitch height for each 100 pounds of trailer tongue weight.
- light suspension (1/2 ton Trucks, ...)
  - add 1/4" to the hitch height for each 100 pounds of trailer tongue weight

**Record height adjustment on line [D] of the Adjusted Trailer Height table.**

The sum of lines [C] and [D] is your adjusted trailer height and will be used in step 5.

<b>Adjusted Trailer Height Table</b>		
<small>Record measurements from step #2 and #3 here.</small>		
Trailer Hitch Height	[C]	_____
Height Adjustment	[D]	_____
Adjusted Height	[C+D=]	_____

### 4. INSTALL HITCH SHANK

a) Insert adjustable hitch shank into the tow vehicle receiver. To obtain proper ball height the hitch shank may be placed pointing up or down. (figure II) If used facing downward, check for adequate ground clearance.

b) Secure the shank in the receiver tube with the receiver pin and clip.

NOTE: If needed, hitch shanks with greater height/drop and length are available from your Equal-i-zer dealer.

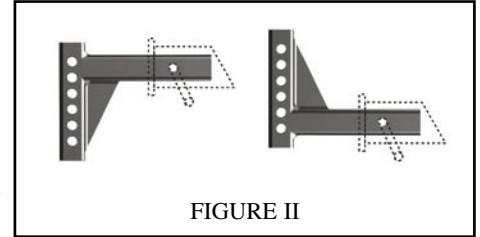


FIGURE II

### 5. INSTALL HITCH HEAD (Hitch ball must be installed before this step)

a) Place spacer rivet with five (5) spacer washers (item #3) into the 1/2" hole located at the inside top of the hitch head channel. (figure III)

b) Position the hitch head on the hitch shank. Place the top of the hitch ball at the Adjusted Trailer Height found in step 3.

c) Slide the hitch head up or down to the **nearest** bolt hole.

d) Insert the 3/4" bolts (item #1) through 3/4" flat washer and hole in the hitch head channel and shank. Install 3/4" flat washer, lock washer and nut.

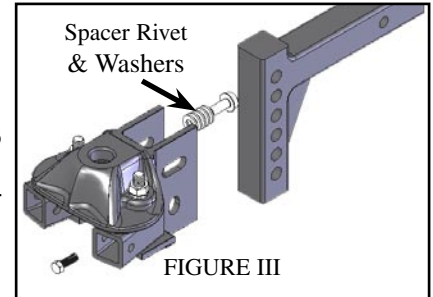


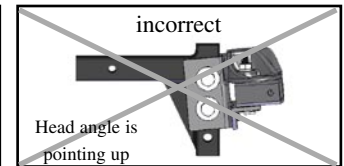
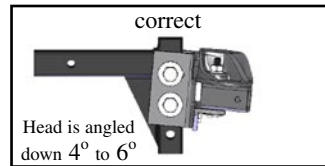
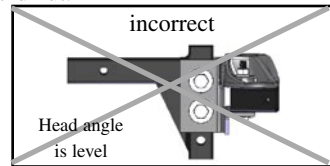
FIGURE III

### IMPORTANT:

**Only hand tighten 3/4" bolts at this time.** Tighten Angle Set Bolt (item #9) located at bottom of hitch head channel until the spacer rivet and washers are slightly snug against shank.

(The 3/4" bolts and the Angle Set Bolt (item #9) and will be fully tightened in a later step)

NOTE: The spacer washers are used to angle the hitch head approximately 4 to 6 degrees downward. If the tow vehicle's receiver is not level, more or less washers may be needed to compensate for the uneven receiver.



### 7. INSTALL LINK PLATES ON TRAILER FRAME (Repeat for each side of trailer)

Measure and mark 32" from the center of the ball coupler back along both sides of the A-frame. (29" to 32" is acceptable.) (figure IV)

a) Insert 1/2" x 4" bolt (item #13) through the single hole of the outside link plate (item #12) and through same hole in the inside link plate (item #11). Thread the 1/2" nut (item #10) on bolt.

b) Hang the assembly over the frame rail with the 1/2" bolt at the 32" mark.

c) Insert the 2nd 1/2" x 4" bolt through the hole in the outside link plate that is nearest the bottom of the trailer frame.

d) Alternately tighten the 1/2" nuts evenly so that the outside link plate and inside link plate have even contact with the frame.

**CAUTION:** Never place the sway brackets farther than 32" from the hitch ball. Doing so may result in damage to your sway brackets.

NOTE: Standard link plates will fit up to a 6" trailer frame. Link plates that will accommodate up to an 8" or 10" trailer frame are available through your Equal-i-zer dealer.

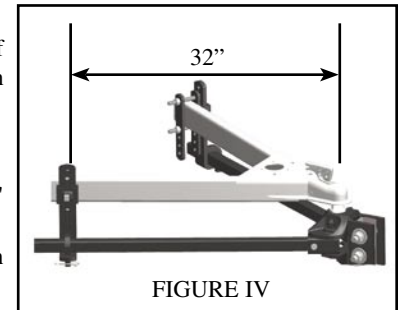


FIGURE IV

### 8. INSTALLING THE L-BRACKET (figure V)

a) Start the 5/8" set screw (item #14) into the threaded nut on the outside link plate.

b) Insert the L-Bracket (item #15) up through the rectangular tube of the outside link plate. Tighten the 5/8" set screw into the 5th hole from the top.

NOTE: The set screw does not go completely through the holes in the L-Bracket. The beveled end of the set screw enters the hole and pins the L-Bracket to the back side of the assembly.

### 9. INSTALL SPRING ARMS

a) Insert the notched end of the spring arm into the arm socket of the hitch head.

b) Pin arms in place. Using 3/8" socket pin (item #7) and socket clip (item #9)

c) Move arms away from trailer frame. NOTE: Arms will resist movement until after the hitch is broken in.



FIGURE V

## 10. COUPLE TRAILER HITCH BALL

- Reposition vehicle so hitch ball is under the trailer coupler.
  - Lower trailer coupler onto hitch ball and secure the coupler latch.
  - Using the tongue jack, raise front of trailer and rear of the tow vehicle 5-8 inches.
- NOTE: A stable jack platform may be used under the trailer jack to allow greater height.

## 11. ATTACH SPRING ARMS TO TRAILER BRACKETS

Once the spring arms are elevated swing them inward toward trailer frame and L-Bracket.

- Lift the arms onto the L-Brackets. If brackets are too high to receive arm:
  - Extend the tongue jack or raise the trailer frame to lift the arms higher.
  - Use the Snap Up Lever to lift the spring arm onto the L-Bracket. (figure VI)
- Secure arm in place with L-Pin (item #16) and L-Pin Clip. (item #17)
- Slowly lower the trailer jack until hitch is carrying the full trailer tongue weight.

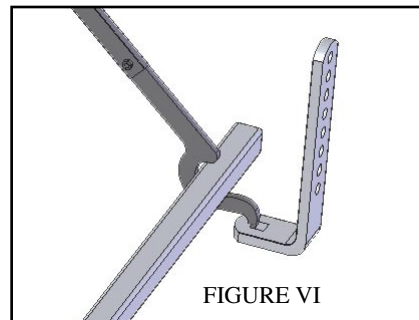


FIGURE VI

## 12. RE MEASURE REFERENCE POINTS - ADJUST IF NECESSARY

- Re measure from the ground to your original reference points and record them on **Reference Height Table**(page 1) as Installed Height [B].
- Subtract your new measurement [B] from your initial measurement [A].  
*This new number indicates compression of the tow vehicles suspension.*

### ADJUST THE HITCH AS NEEDED

An ideal set up will have equal compression front to back. As a general rule, to be within 1" difference of compression between the front and rear of the tow vehicle is acceptable. Individualized adjustments can be made to achieve driver preference. (see adjustment info)

NOTE: In most cases, spring arms will be level or angle up slightly. However, it is more important for the truck and trailer settle properly, than for the spring arms to be level or parallel with the trailer frame.

### ADJUSTMENT INFO

To increase weight transfer or lower the Front End of the tow vehicle, you can either:

**Raise the L-Brackets or Add Spacer Washers**

To reduce weight transfer or lower the Rear End of the tow vehicle, you can either:

**Lower the L-Brackets or Subtract Spacer Washers**

**CAUTION:** Before changing L-Bracket height remove spring arms from L-Brackets as described in Section 15.

**CAUTION:** Before attempting to adjust head angle unhook trailer from the hitch as described in section 15.

## 13. WHEN DESIRED WEIGHT DISTRIBUTION HAS BEEN ACHIEVED

With the trailer still attached to the tow Vehicle:

- Tighten angle set screw. (item #8) It should be tight against the shank, and no gap present in the washer stack. (item #3)
- Tighten 3/4" bolts (items #1 and #6) to a maximum of 200 ft. lbs.

## 14. CHECK ALL CONNECTIONS BEFORE EACH TOWING SESSION

- Receiver pin and clip
- L-Pins and clips
- Electrical connections
- Angle set screw (over time this may loosen and need retightening)
- Inspect receiver, hitch, hitch ball, and other assemblies for any signs of wear or fatigue.
- Head bolts
- Socket Pins and Clips
- L-Bracket Set Screw
- Ball and ball nut
- Spacer Rivet
- Sway control bracket bolts
- General trailering items

## 15. UNHITCHING

Make sure the tow vehicle is in park and the trailer is secured from rolling. Using the trailer tongue jack, raise the front of the trailer and rear of the tow vehicle until tension is removed from the spring bars.

- Remove the L-Pins and clips
- Swing spring arms off and away from L-Brackets.
- Lower tongue jack until coupler can be safely unlatched from hitch ball.
- Raise front of trailer off hitch ball.
- Remove spring arms from hitch before removing hitch from receiver.

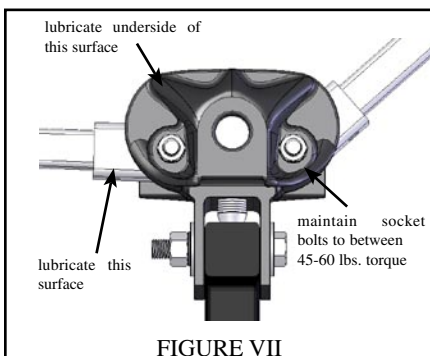


FIGURE VII

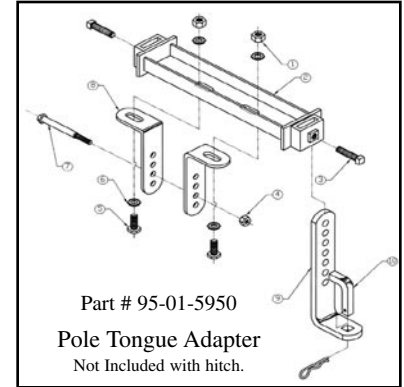
### MAINTENANCE (figure VII)

- Lubricate top outside surface of arm socket and bottom surface of hitch head with Equal-i-zer Socket Lube (part # 91-00-4200) Keep this area clean and lubricated. Some wear is normal as sockets 'seat in'. Irregular wear in this area may indicate overload or inadequate lubrication.
- Lubrication between the L-Bracket (item #15) and the spring arm is optional. Lubrication of this area will not diminish the sway control capabilities of the hitch, and may quiet the hitch when turning.
- Maintain the socket bolts tight to at least 45 lbs torque. (figure VII)
- Keep the hitch clean and free of dirt and road grit.
- Paint as needed to prevent rust.

# Considerations

**POLE TONGUE TRAILERS:** For trailers with straight or pole style tongue:

- Eliminate the inside link plate (item #11) and bolt the two outside link plates (item #12) together around the pole tongue frame.  
(Jam or half nuts (not Included) are needed for this option to allow L-Bracket to clear the nut)
- Use the optional Pole Tongue Adapter (not Included)(Part # 95-01-5950) to hold the L-Brackets and arms, simulating an A-frame style trailer. The link plates are not used with this option.



**SURGE BRAKES:** Equal-i-zer allows the forward and back movement required by most surge brake mechanisms. In applications with heavy tongue weights, lubricating the L-Brackets where the spring arm slides will allow less restricted forward and back movement.

**AUTO-LEVELING AND AIRBAG SYSTEMS:** For vehicles with air shocks or automatic leveling systems, check vehicle owner's manual or product literature for specific instructions. In some cases using the Adjusted Hitch Height may not be necessary with auto leveling systems. (step #3)

- Unless otherwise indicated, auto-leveling systems should be turned off before/during assembly and adjusting the Equal-i-zer hitch.
- Unless otherwise indicated, air shocks should be deflated to their minimum recommended pressure before assembling and adjusting the Equal-i-zer hitch.

## !!WARNING!!

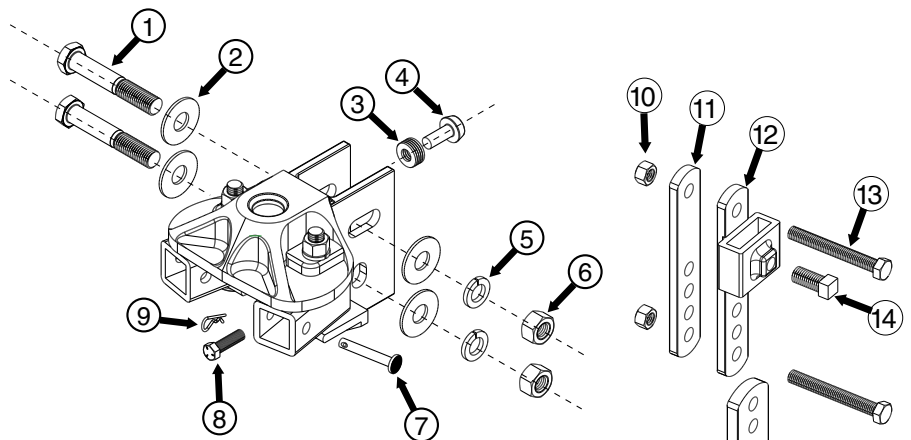
**Weight Distribution Hitches, when in use, present a large amount of force. Never loosen or remove any fastening hardware or pieces of the hitch while it is attached to the trailer. L-Pins and Clips are acceptable to remove while unhitching. Exercise caution when hitching and unhitching, and while loading or unloading the spring arms. Keep hands and feet away from pinch points and paths of travel during work on or operation of the hitch.**

# Assembly Break Down

\*bracket assemblies and shanks are universal between all Equal-i-zer hitch models. Head and spring arm parts are model specific.

## Hitch Head Assembly

Item#	Part #	Description
1	90-04-9130	3/4" x 41/2" Bolt
2	90-04-9115	3/4" Washer
3	90-04-9110	1/2" Hardened Washer
4	90-03-9105	Spacer Rivet
5	90-04-9120	3/4" Lock Washer
6	90-04-9215	3/4" Nut
7	90-03-9212	Socket Pin
8	90-04-9240	Angle Set Bolt
9	90-04-9216	Socket Pin Clip



## Sway Bracket Assembly

Item#	Part #	Description
10-17	95-01-5500	Sway Bracket Kit (entire kit as shown)
10	90-04-9228	1/2" Nut
11	90-02-5200	Inside Link Plate
12	90-02-5300	Outside Link Plate
13	90-04-9232	1/2" x 4" Bolt
14	90-04-9236	5/8" Set Screw
15	90-02-5100	L-Bracket
16	90-03-9204	L-Pin
17	90-04-9208	L-Pin Clip



Crafted with pride in the U.S.A.

THE ORIGINAL  
**Equal-i-zer**  
SWAY CONTROL HITCH

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