

## MINI MANIA PRECISION STEERING AMPLIFIER INSTALLATION INSTRUCTIONS P/N NMS6000

Mini Mania's Precision Steering Amplifier (PSA) modifies the suspension geometry to provide:

- Improved turn-in response.
- Better traction in corners.
- Flatter tire contact patch when turning.
- More even front tire wear.

The PSA fits all Generation I MINIs including 2002-2006 R50 MINI Cooper and R52 MINI Cooper S, and the 2005-2008 R52 MINI Convertibles.

The PSA lowers the front control arm and stabilizes the car's camber during steering inputs. Improves steering response in MINIs with stock suspension and especially effective in MINIs with modified suspensions including lowering springs, coilovers, or camber plates.

The Precision Steering Amplifier includes:

- Instructions
- PSA modules (x2)
- Longer Bolts (x4)
- New Lock Washers (x4)



### IMPORTANT:

**Working under the car can be dangerous – take all necessary precautions to ensure a safe working environment.**

**Read through the entire Instructions BEFORE you begin the installation – there is some important information towards the end.**

**A Front End Alignment is recommended following installation.**

### TOOLS

- 17mm Socket
- 16mm Socket
- 13mm Socket
- Emery Cloth
- Loctite
- Torque Wrench
- Floor Jack
- Two Jack Stands

### GAINING ACCESS

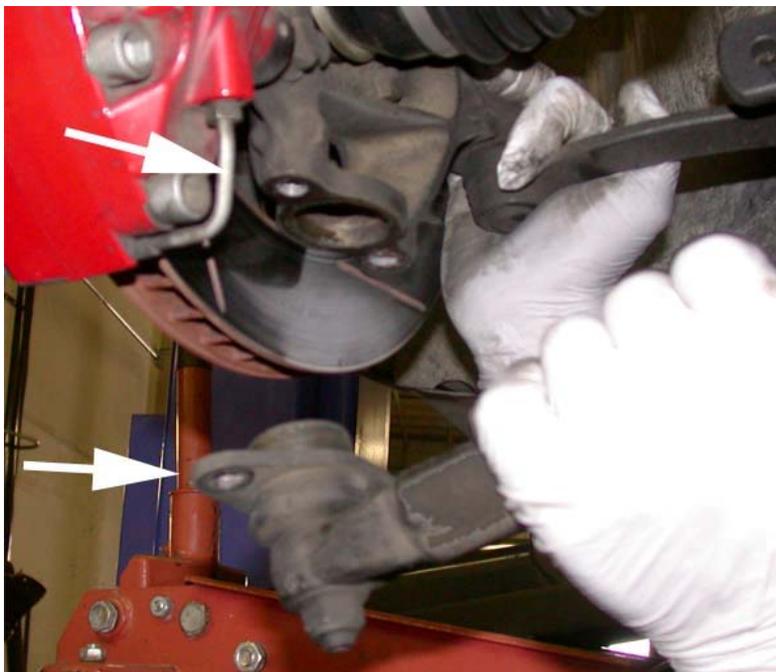
1. Lift the car using a lift or jack stands to lift the entire front end. Make sure the car is secure before you start. You will need access to the front suspension.
2. Remove the Front wheels with the 17mm socket.

## INSTALLATION

3. Locate the junction of the Front Lower Control Arm Ball Joint and the front suspension carrier.



4. Remove the two bolts holding the ball joint to the suspension carrier.
5. Separate the ball joint from suspension carrier.



6. Clean the mating surfaces with emery cloth to remove any rust.



7. Insert the PSA with the flange side up so that it fits snugly into the steering knuckle.





8. Put some Locktite on the bolt threads and secure the PSA with the 16 mm socket.
9. Torque the bolts to 50 ft/lbs.



10. Replace the front wheel and torque the lug bolts to 90 ft-lbs in a criss-cross pattern.

**IMPORTANT! – Once the wheel is installed, the clearance between the ball joint and the inside surface of the wheel needs to be checked under several conditions:**

- **Unweighted before lowering the car - Rotate the wheel to make sure there is clearance especially if you have wheel weights attached to the wheel surface under the ball joint.**
- **Weighted on the ground – roll the car to make sure nothing rubs.**
- **With suspension movement – drive thru a driveway dip or over a speed bump to make sure nothing rubs.**

**If you have 16” wheels, you may need to grind down the end of the ball joint for adequate clearance.**

11. Repeat Steps 3 - 10 on the other side.

#### **FINAL CHECK**

12. After the car is fully reassembled and on the ground, re-check the lug bolts for proper torque.
13. Drive the car at low speeds to confirm clearance. Find a speed bump or driveway dip to force suspension travel. If all appears well, check the inside of the wheel to make sure there are no marks from the ball joint end.
14. Now you are ready for a test drive!

**We recommend you have your front end aligned following installation.**