



## UNIVERSAL HOT ROD ELECTRA-STEER KIT 8052160 & 8052360

Full refund will NOT be granted to any kits that are damaged, scratched, or altered in any fashion.

### ELECTRA-STEER



### **BEFORE YOU START PLEASE READ!**

Designing steering systems requires an understanding of steering function and design. If you are inexperienced it is recommended that you seek professional help before beginning a steering project.

- The Unit is intended for normal highway use in vehicles not exceeding 4500 lbs (2000 kg)
- The motor MUST be firmly anchored. All Torque required to steer the vehicle will be transferred through the motor mount.
- The unit CANNOT be mounted near a heat source, exposed to excessive moisture/water or submerged under water.
- All Steering, Shafts, Joints, U-Joints and Connectors must be designed to withstand the full load of the steering system to which the electric motor is being installed.
- The Wiring, Module and Motor must not be tampered with. Any modification to the Module or Motor will void any existing or implied warranties, if so offered.
- FAILURE TO ADHERE TO THE ABOVE WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH. Maval Manufacturing IS NOT RESPONSIBLE FOR IMPROPERLY INSTALLED ELECTRIC STEERING SYSTEMS.
- NOTICE: YOU MUST SECURE YOUR STEERING COLUMN AT FIREWALL AND DASHBOARD DROP. INJURY MAY RESULT FROM IMPROPER INSTALLATION.

## KIT CONTENTS:



## MOUNTING YOUR ELECTRA-STEER:

1. The square plate attached to the motor should be used as a platform in the mounting process. You will have to determine how the unit is mounted to your frame.
2. The mounting holes on the square plate can be used as a template if you intend to design your own mounting plate or bracket. **Remember all rotational torque of the motor will be transmitted through your mount.**
3. The shaft on the mount side of the motor is the **INPUT SHAFT** (This goes to your steering wheel).
4. The other shaft is your **OUTPUT SHAFT** (This goes to your steering gear or steering box).
5. The Splines on the **OUTPUT & INPUT SHAFTS** are **UNIQUE** to Unisteer Performance Products and we offer a wide range of U-Joint & Coupling combinations to match the shafts that you are using. Call for applications & availability. **DRILLING, WELDING, OR ALTERING THE INPUT AND/OR OUTPUT SHAFTS WILL VOID YOUR WARRANTY.**

# WIRING YOUR ELECTRA-STEER KIT:

1. The heavy red wire needs to go to a constant positive 12 volts. We normally go to the battery but any constant source will work.

**Note:** The 30 amp slow blow fuse needs to be installed in line with this wire to prevent damage or fire. **\*Failure to do so may result in a short circuit or malfunction.**

2. The heavy black wire needs to go to a constant ground. Again we prefer the battery but a good and clean ground is fine.

***\*It is strongly suggested that all connections made be soldered & taped to insure integrity. Shrink tube is also supplied to seal your connections.***

3. The white wire gets a single spade connector put on it and is used for diagnostic purposes, so it needs to stay in an accessible spot.

4. The dark purple wire gets a single spade connector put on it and is used for diagnostic purposes and also needs to stay in an accessible spot.

**Note:** *the White & Dark Purple wires are used for trouble code reading and clearing. They need to be located in an accessible place. They do not get connected to anything.*

5. The orange wire goes to one of the sides of the LED light.

6. The small red wire is connected to a key on power source usually we use the ignition switch lead. The other side of the LED also goes to this wire and may be spliced in anywhere in this wire.

7. Be sure to leave the orange wire and the small red wire long enough to go through a hole in the dash where you want the light located.

8. Make sure your connections are good and your hardware is tightened to spec and there is no binding in your steering linkage.

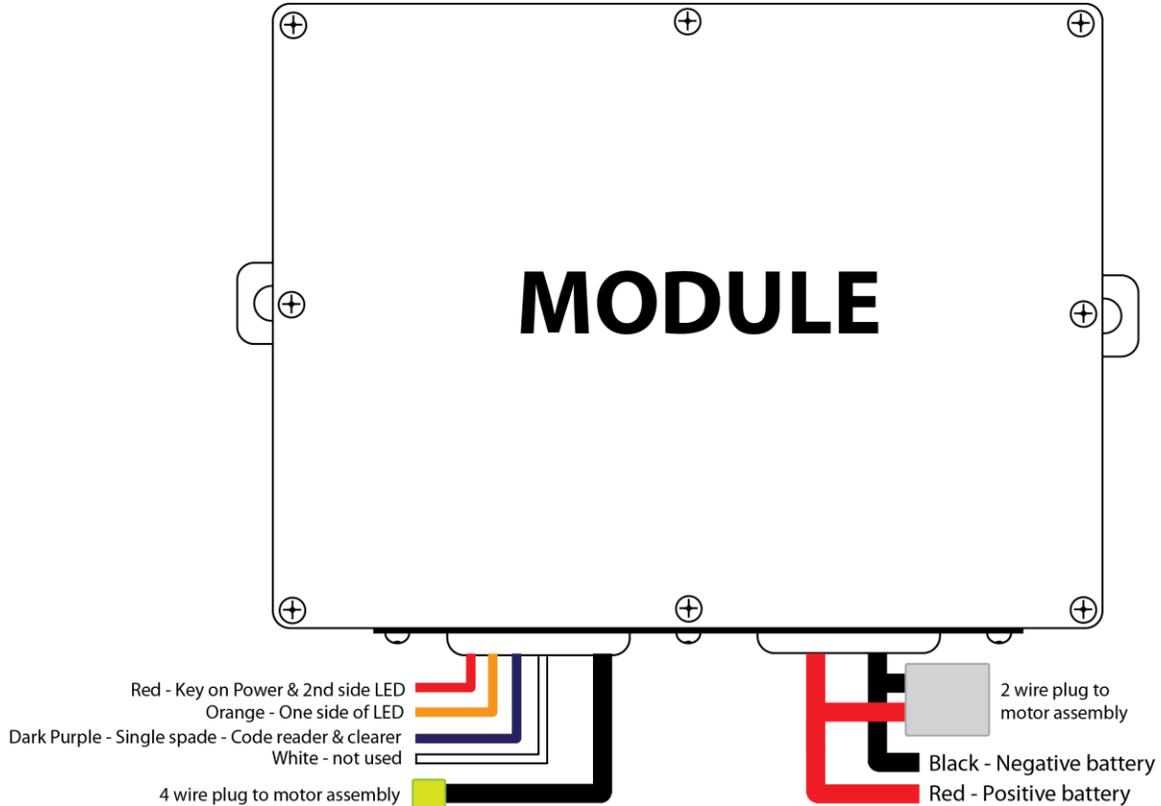
9. Drill a ½ inch hole where you want the LED to be. Run your orange and small red wires through the hole and wire in your light. After your connection is made simply push the LED into the hole until it snaps in place.

10. Install your steering wheel & be sure your wheels are straight and that you install your steering wheel straight.

11. When you are done, you can turn the ignition key to the on position. The LED will light for about 5 seconds. This is a normal function. When the light goes out your steering should work. Verify that nothing is binding and there is no trouble light. Each time the key is cycled the LED will light for the 5 seconds, this is a prove out, and is normal.

The ELECTRA-STEER unit is designed to “shut down” if it becomes overheated reverting the vehicles manual steering capabilities.

If the unit ceases operation after extensive use or in an extreme environment it will automatically resume its normal function once it has cooled.



The Electra-Steer Power Steering Assist Unit is intended to be used in accordance with all safety recommendations of the original manufacturer of the vehicle as specified in the Owners Manual. This product is intended for normal operation of the vehicle as specified by the original manufacturer. Maval Manufacturing Inc., Unisteer Performance Products, and Wicked Bilt recommend that this product should not be used in extreme environmental conditions or in competitive activities. Maval Manufacturing Inc., Unisteer Performance Products, and Wicked Bilt do not accept liability for any malfunction, damage, or injury incurred as a result of use of this product in extreme environmental conditions or in competitive activities.

## Electra Steer Diagnosis Trouble Code Reading and Code Clearing

1. Verify that your trouble code light is on steady.
2. Next, take your dark purple wire and hold it to a good clean ground. You will have to make sure it is a solid ground to get the LED to blink or flicker and you may have to use a jumper wire to extend the wire's length. Once you see the LED flicker or blink wait for LED to start blinking a code.
3. The light will flash in a sequence like 1 and then 123. This code flash would be interpreted as a code 13. The code will repeat itself 3 times and then go to the next code if there is one in the system. You need to wait until all the codes are read and recorded.
4. Turn off the unit and turn back on. Once light is lit and staying on, touch the dark purple wire 6 times in a row to a ground. After the 6 times turn unit off and turn back on. Codes should be cleared with the unit working properly. If not continue to step 5.
5. Double check the codes using steps 1 through 3. Once you know what the codes are you can use this chart to tell where or what the problem may be.
6. Once you have determined what the problem is and make the necessary repairs the unit should work normally. If the light is still on after the repair you will need to clear the codes using step 4.

Trouble Code	Problem	Diagnosis
41-42-43-44-45-51	Electric motor Malfunction	Replace Motor Assembly
11-13-14-15	Torque Sensor	Replace Motor Assembly
52-54-55	ECU Malfunction	Change Computer
22	No Engine Input	Change Computer
21-23-24	No Speed Signal	Change Computer
12	Wiring or Electrical	Verify 12 volts at small red wire. Verify good ground. Soldier all connections. Check for bad connections or broken wires.

We welcome your suggestions & comments to make this or any of our installations better! If you have any questions/problems regarding this product please contact us at:

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