

# MOBILE INSTALLATION, ATLAS RADIO PLUG-IN MOUNTING KIT

- This kit includes: (a) Black anodized housing. (b) Two 9 in. and two 12 in. cadmium plated steel mounting bars. (c) 3 in. wide rear bracket. (d) 6½ ft. of 12 gauge 2 conductor power cable. (e) 25 amp. circuit breaker. (f) Package of screws and terminal lugs.

**NOTICE 1:** The Atlas transceivers operate only with negative ground systems, which has been the standard for all automobiles for several years. If there is any doubt, be sure to check. A protective diode is built into the mobile mount, and will trip the circuit breaker if wrong polarity is ever applied.

- Refer to the illustrations for typical transmission hump and under dash mounting arrangements.

**STEP 1** The rear bracket(s) should be angled as straight back as possible in order to give good support for pushing and pulling the transceiver in and out of mount.

**STEP 2** The mounting brackets must be cut and bent to suit the installation, each case being unique. Try different positions and select the one for best ease of operation, and least interference with automotive controls. Then carefully measure and cut each bracket. Bend as required. After bending the brackets, they may be painted with flat black to match the anodized aluminum parts if desired.

**STEP 3** Remove the acorn nut and hex nut. Slip bracket over screw and replace only the acorn nut.

**STEP 4** Secure brackets to car with No. 14 sheet metal screws. Use shakeproof washers under screw heads. Tighten all screws and nuts securely. No. 10 screws are also furnished in case the No. 14 screws are too large.

**STEP 5** Connect the 52 ohm antenna coax. as illustrated.

**STEP 6** A separate speaker may be connected as follows: Locate the speaker plug on the back of the mobile mount, just above the Mic. plug. Clip out the wire jumper going from the tip lug to the ring lug. This will disconnect the internal speaker. Connect the external speaker from the tip lug to the ground lug. Impedance should be 4 ohms.

**NOTICE 2:** Black anodizing provides a very durable finish, much better than paint. However, the anodized surface is an electrical insulation. In order to ensure electrical bonding between the transceiver and the car chassis, shakeproof washers must be used under all screw heads. They will cut through the anodizing. Scraping the anodizing off around the junction points on the rear bracket(s) is also recommended.

Poor grounding may lead to transmitter instability, which will cause a regenerative or self oscillating condition. If there is any

question of adequate grounding, connect a copper braid or strap from the antenna bracket on the mobile mount to the nearest chassis ground, either the bulkhead or transmission hump.

**NOTICE 3:** When inserting the transceiver into the mobile mount, push it firmly all the way in to make certain that the connectors seat properly. If the mic. button will not key the transmitter, it is quite likely that the rig is not pushed in far enough.

## • INSTALLING THE D. C. POWER CABLE:

The power cable should be run from the mobile mount through the bulkhead into the engine compartment. It should then be connected to positive and negative terminals as close to the battery as possible. The best way to connect directly to the battery terminal posts is by drilling and tapping for a 10-32 or 10-24 machine screw. The red lead goes to the positive terminal, and brown to negative. (Or white is positive and black is negative).

The advantage of connecting directly to the battery posts is that loose battery clamps will then not affect the transceiver connections, and the danger of intermittent voltage spikes is reduced.

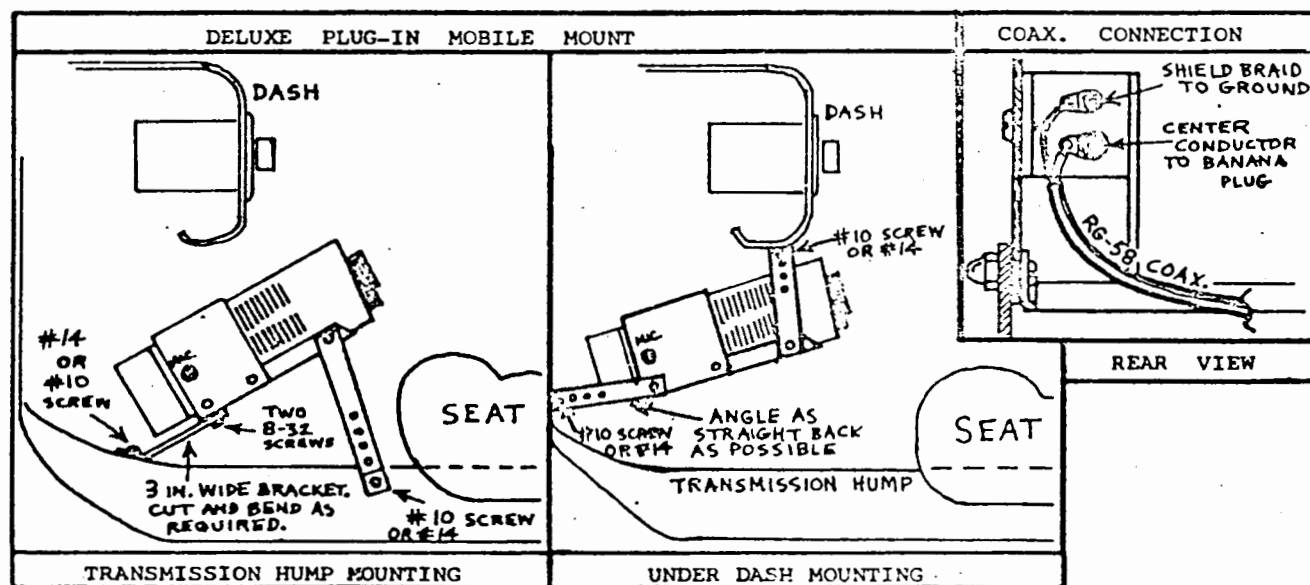
If drilling and tapping the battery posts is not practical, then connect the leads to the engine end of the heavy battery cables. The negative cable will usually be found going to a grounding bolt on the engine block, and the positive cable usually goes to a bolt on the starter solenoid. Use proper terminal lugs at these points for connecting the leads.

Battery clamps and terminals should be cleaned and tightened periodically. Anti-corrosion grease is a good recommendation. All other electrical connections under the hood: alternator, regulator, ignition coil, etc. should also be checked and tightened.

## • INSTALLATION OF 25 AMP. CIRCUIT BREAKER:

The 25 ampere circuit breaker supplied with the kit should be installed in series with the positive lead. It is best to mount it close to the battery end of the cable, at some convenient place on the side of a metal panel or bracket. Sheet metal screws are supplied for this purpose. It is not important that the metal case of the circuit breaker be grounded, since there are no connections made to the case. Cut the positive red power lead, install No. 10 terminal lugs, and secure firmly to the circuit breaker with washers and nuts. Solder the terminal lugs.

• **SUPPRESSION OF IGNITION, ALTERNATOR AND REGULATOR NOISE:** Refer to the Handbooks for data on this subject.



On Cables with Black and White Conductors.

Black is Negative (Ground).

White is Positive.

On Cables with Red and Brown Conductors.

Red is Positive.

Brown is Negative (Ground).

Circuit Breaker Installation: Recommended location is near the battery end of the cable. Connect in series with Positive Conductor. Secure the circuit breaker with sheet metal mounting screws. The case may be grounded or ungrounded, Not Important.

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### MOBILE NOISE SUPPRESSION

Bonding--Each one of these 15 items play an important part in the reduction of ignition noise in your vehicle. Be sure to use inside-outside lock washers above and below bonding straps at each bonding point.

1. Bond motor to frame both front sides.
2. Bond fender to fender skirt to frame both sides in motor compartment.
3. Bond across both hood hinges to fenders or firewall.
4. Bond radiator shell to fenders on both sides.
5. Bond cover plate over power brake fluid compartment.  
On late model cars this is a large dish type cover.
6. Bond cover plate over heater and air conditioning motor compartment.  
If cover plate is plastic, install copper screen shield over it and bond to firewall. Copper screening is available at any lumber yard or hardware store.
7. Bond air cleaner.
8. Bond coil bracket to coil case by inserting inside-outside lock washer between mounting bracket and coil case.
9. Bond firewall to fenders both sides.
10. Bond co-ax feed line at antenna base to firewall.
11. Bond rear body both sides to frame.
12. Bond gas tank flange both ends to frame.
13. Bond tail pipes at center section to frame.
14. Bond coax line to frame 1/2 way between antenna base and transceiver.

Capacitors--Install capacitors per information contained in the Champion Booklet, except, install .002 ceramic capacitor in series with 6 ohm resistor from field connection of regulator to ground.

Ignition Cables--Remove ignition cables supplied by manufacturer with the vehicle and install Whitaker solid wire cables. These cables have the suppression unit built into the rubber head that plugs on the spark plug. These cables will give you much better ignition life and better noise suppression. These cables are available at most auto supply houses. If you have trouble locating the cables, contact Ernest Scroggin, WØSJE, you will be supplied with the nearest dealer.

Noise suppression falls into three categories. Bonding is the most important factor with ignition suppression cables of the proper type as the second phase. Any further noise can be reduced by the proper capacitor filtering as outlined in the Champion Booklet. Copies of "Giving Two-Way Radio Its Voice," published by Champion Spark Plug Company are available through WØSJE.