

Extended Range Keyless Entry Antenna

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The range of the stock crew cab keyless entry system can be very disappointing. This modification will extend that range significantly.

You need the following:

- 4ft. length of 28 gauge wire. (I used a speaker wire. Pull it apart carefully and use one wire of the pair.)
- Drill with a bit that's the same size, or just larger than the wire. 3/32" worked for me.
- Soldering gun or iron & solder.
- Candle and method of lighting it.
- Small knife.
- 9/32 or equivalent metric socket and driver.
- Small phillips screwdriver.

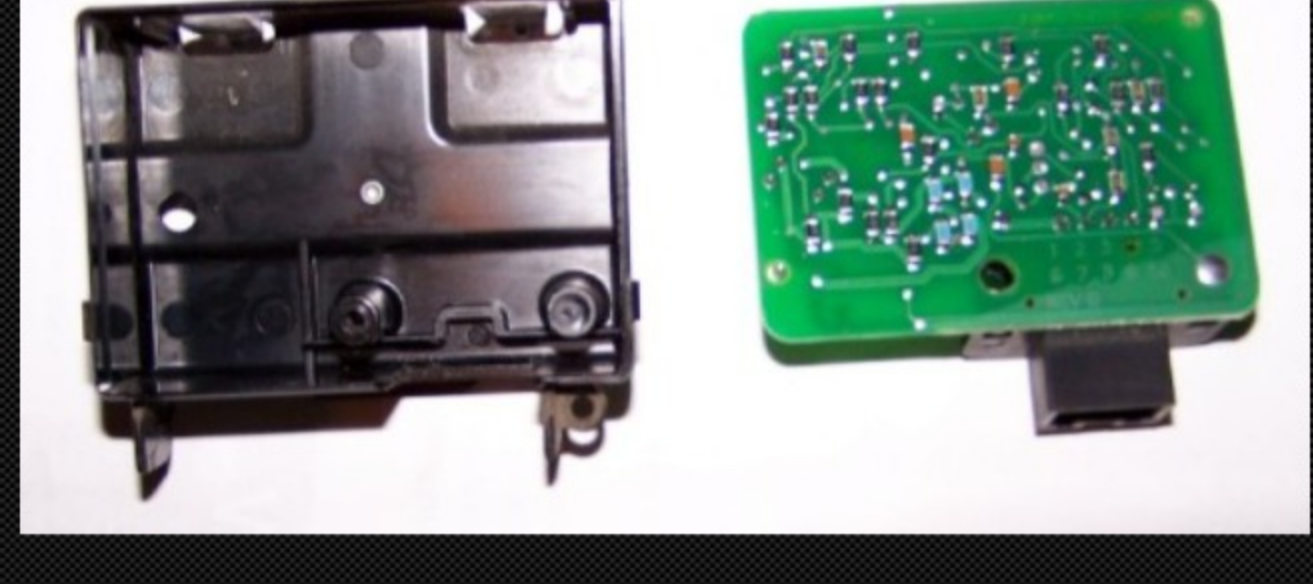
The vehicle must be off. Set the emergency brake and observe all precautions for working on the vehicles electrical system.

- Under the dash on the drivers side, remove the black plastic panel where the OBDII connector is mounted. Removing the center and outside screws from the front of this panel is enough room for access. Lower the panel and look just forward of the OBDII connector. You will see a square black box, this is the Remote Keyless Entry module. There are two clips on the side facing you that hold the module in place. Release these clips and lift the module out. Unplug the RKE module electrical connector and remove.



Now take this box to a comfortable place for the modifications.

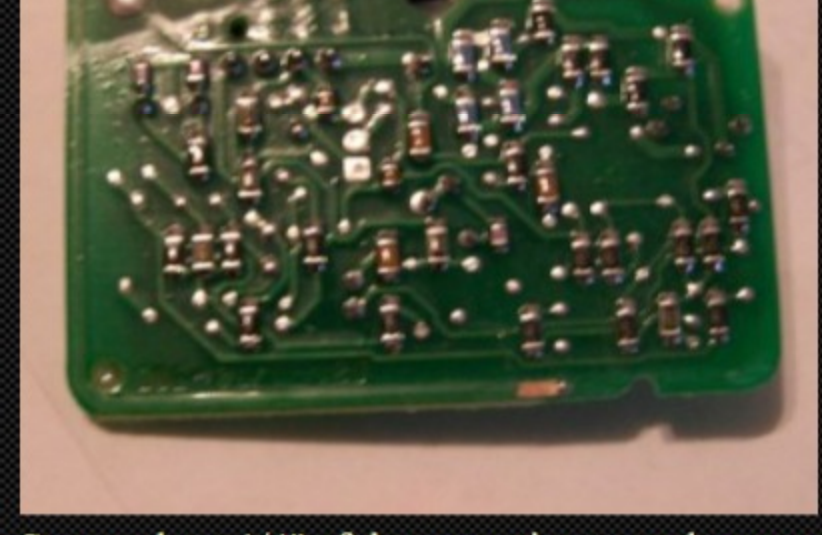
- You will find one screw holding the cover and circuit board in place. Remove this screw using the phillips screwdriver. There are two clips on either side of the module cover, CAREFULLY unclip the cover and remove the circuit board from the housing.



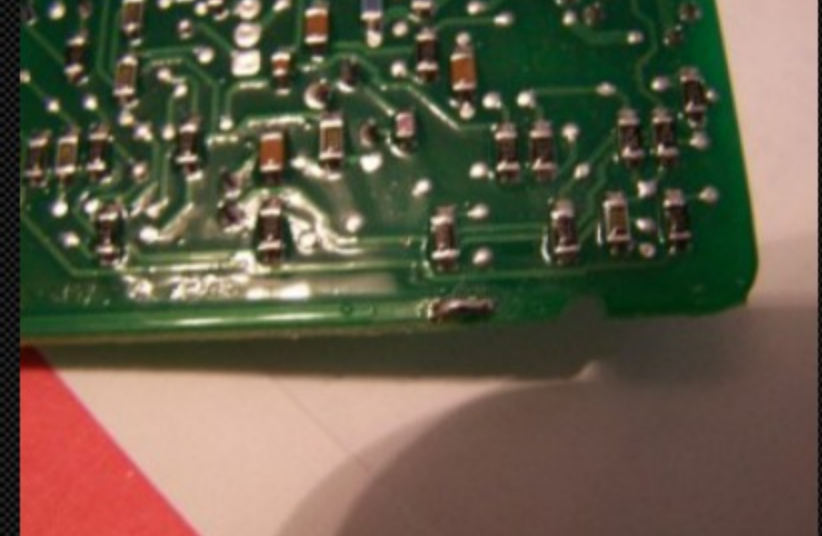
Turn the board over, with the connector facing you.



- On the upper right hand corner, you'll see four (4) black surface mount transistors. Above the third one you will make a notch in the edge of the board, approx. 1/16 of an inch. **DO NOT GO NEAR THE CIRCUITS!** This notch is to give the wire room to fit between the board and the housing. A small jewelers round file would work great. The knife can be used to make a notch, or the drill bit can be used to file a notch in the side of the circuit board.
- Turn the board over, one the outer perimeter of the board, you will find a circuit that ends about 1/4" from the edge of the board, with a small solder stop at the end...just short of where you made the notch.



Scrape about 1/4" of the protective green layer away from the end of that circuit. Now "tin" the exposed copper trace.



Strip 3/16" of the insulation from your wire and "tin" it. Tie a knot in the wire about 1 1/2" from the end. This will act as a stress relief and prevent the wire from being pulled from the circuit board.



Solder the wire to this trace. Make sure that the knotted end of the wire is the end that is attached to the board.



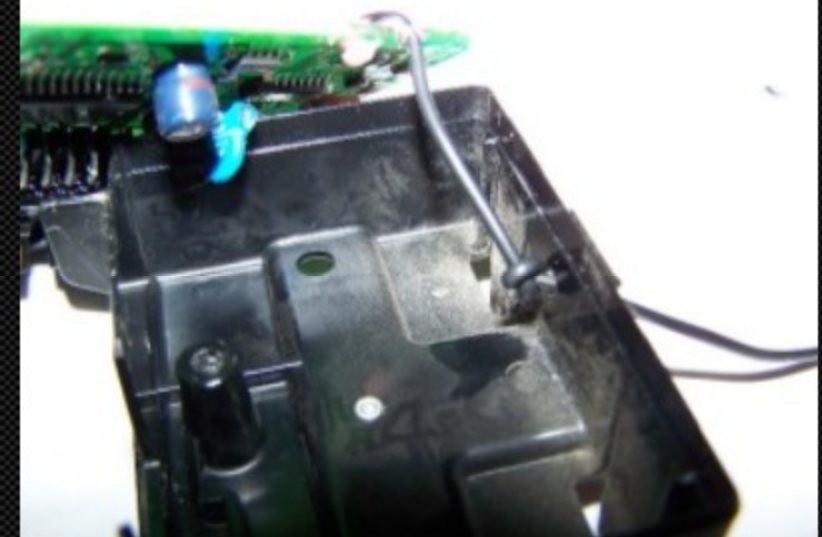
Cover the exposed solder connection with melted candle wax to protect it.



Drill a hole for the wire to exit the box. Center it opposite the side with the retention screw and low enough to clear the circuit board.



Feed the wire through the hole from the inside.



Put the circuit board back in the box as you gently pull the wire through the hole until the knot seats against the inside of the box. Re-install the cover and the screw.

- Re-install the RKE module on to the panel under the dash and feed the new wire antenna out to the drivers side of the dash near the fuse panel.



This wire can be run up the A-pillar by inserting it just under the outside lip, or remove the cover and tape it in place underneath.

DONE.