2006-2011 Yaris
Hatch Popper with Scion IQ Hatch Handle DIY

Introduction:

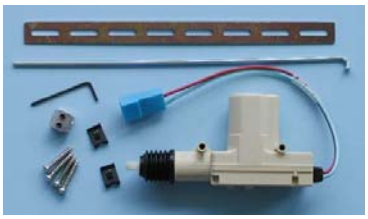
This guide covers the conversion of the Yaris hatch from manual operation to electronic operation by replacing the mechanical hatch handle with the Scion IQ's electronic one. Converting the hatch opening this way also facilitates popping the hatch via an alarm or remote starter's trunk pop output and/or via a switch inside the car.

Materials Required:

1. Scion IQ Hatch Handle (69209-74010-xx)
xx determines the color (where only a couple match Yaris colors): (A0=070, B0=1F7, B1=1G3, C0=209, D0=3P0, E0=4T3, E1=4R8, J0=8R3, J1=8T7 and K0=9AH)



2. Automotive Door Actuator x 1



3. Hatch Popper Module (to disable the IQ Hatch Switch when the doors are locked) x 1



4. Electric Life - Door Thrusters (http://www.summitracing.com/parts/ELI-99500/) x 2
5. 4" x 6" Piece of Aluminum or Sheet Metal x 1
6. #8-32 Screw, Nut, Lock Washer, and Fender Washer x 2 sets
7. 18 AWG Wire – Approximately 10 feet each of 2 colors
8. 22 to 18 AWG Tap Splices x 2
9. 22 to 18 AWG Butt Splices x 10
10. 22 to 18 AWG x ¼" Crimp Ring Terminal x 1
11. 12 AWG x 14" Female Spade Terminal x 1

12. Inline fuse holder with 10A fuse x 1
13. Spring or heavy duty cable tie (for connecting the actuator to the latch).

Tools Required:
1. #2 Phillips screwdriver
2. Wire Strippers
3. Pliers for squeezing tap splices
4. Drill
5. Ratchet and 10mm socket
6. Flat blade screwdriver
7. Sheet metal shears

Installation:

1. If the IQ switch color doesn't match your car, paint it to match (automotivetouchup.com sells spray cans of OEM color matched paint). You can remove the small Phillips screw on the back of the IQ switch and disassemble it for painting.
2. Remove the hatch cover by removing clip that is part of the inside handle. Unlatch the clip with a flat blade screwdriver by sliding it up until the bottom is free and then rotating it to remove it. Pull the cover off to release the molding clips. The clip positions are shown below.



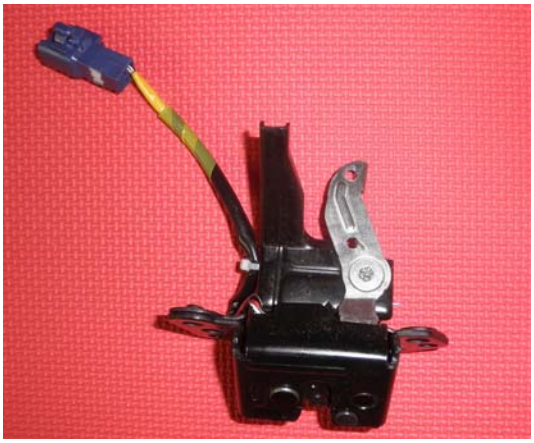


3. Remove the two 10mm bolts that mount the lock actuator bracket, and remove the bracket and actuator. Unplug the actuator connector. Remove the 10mm bolt from the key lock assembly and pull the key lock out from the inside of the hatch. Slide the plastic hatch knob down and then pull it out from the outside of the hatch.

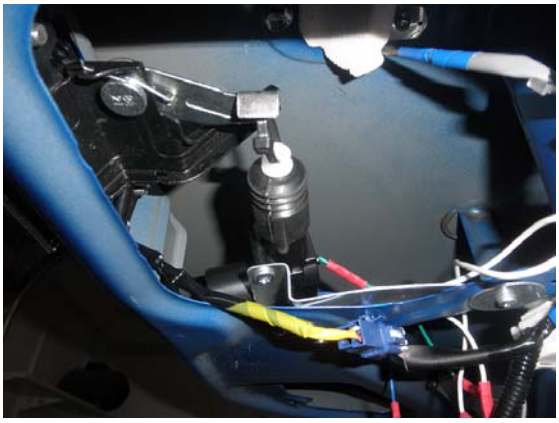


4. Remove the latch mechanism by removing the 3 10mm bolts. Drill a hole near the top of the latch arm. Re-install the latch.





5. Make the bracket for the actuator out of aluminum or sheet metal using the template at the back of this document. Drill the 4 holes and bend the bracket up at the center line and then back at the outer line. Mount the bracket the actuator to the bracket as shown below and line up the holes in the bracket with the holes for the lock actuator bracket. Using the #8-32 screws, mount the bracket. Connect the actuator to the latch using a spring or a heavy duty cable tie. The connecting device must be flexible to prevent binding of the actuator.



6. Insert the IQ hatch handle into the outside of the hatch and slide it up into position. Install the 10mm bolt on the inside to secure it. Clip its connector off of the wires, as close to the connector as possible.

7. Pop the rear edge of the C-Pillar cover from its clips to access the connector behind it.



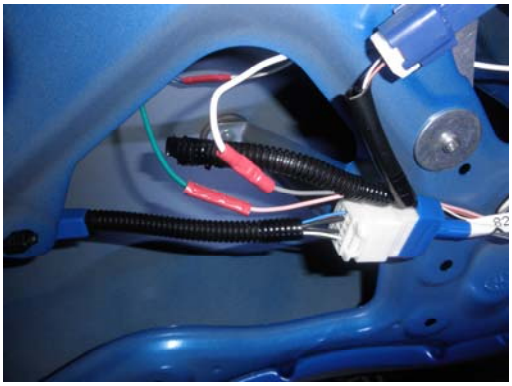
8. Disconnect the connector and pull it out from behind the pillar cover. Clip and cap the outer black wire on the connector side. Connect the wire for the actuator (red in the photo below) to the other end of the cut wire using a butt splice. Clip and cap the inner black wire on the connector side. Connect the wire for the IQ switch (white in the photo below) to the other end of the cut wire using a butt splice.

Connect the wires that you will run up to the dash to the other end of the two wires.

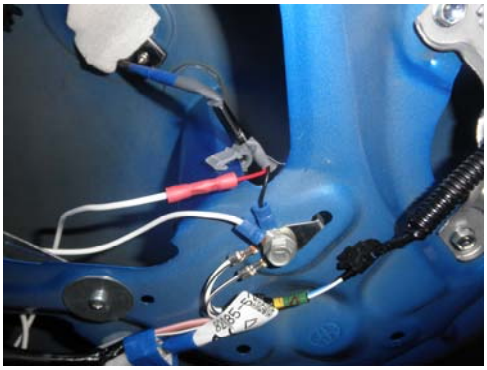


9. Plug the connector back in and feed the wires under the C Pillar cover and down to where the floor meets the plastic trim by the side of the rear seat. Tuck it up under the plastic and work your way to the door sill plate(s). Pop the sill plate(s) and feed the wires up to the floor of the driver's seat. Leave it there for now and go back to the hatch wiring.

10. Clip the lock actuator connector off (which you unplugged when removing the lock actuator). Connect the grey wire to the red wire of the Scion IQ switch (you will need to splice another piece of wire for the two to reach). Connect the pink wire to the green wire of the actuator.



11. Connect the IQ switch black wire and the actuator's blue wire to ground using a ring terminal.

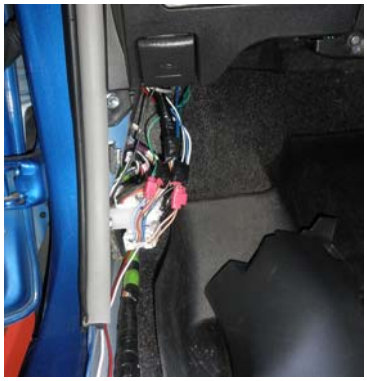


12. Remove the adhesive from the back of the door thrusters. With a pair of sheet metal shears, cut the open end of the bottom so that it comes to a point. Using two pairs of pliers, curl the open end of the top down and in towards the U of the thruster to prevent it from getting stuck against the base of the hatch hinge during closing. Optionally, you may wish to cover the top portion of the thrusters with shrink tubing to prevent paint rubbing.

13. On one side of the hatch at a time, loosen the two 12 mm bolts approximately ¼" and slip the pointed base of the thruster between the hinge and the hatch, so that the point sits between the bolts. Tighten the 12 mm bolts before repeating on the other side. Gently close the hatch to verify that the thrusters do not interfere with it closing. If they do, curl the top of the thrusters in more. After closing the hatch you will need to open it from inside the car, by pushing the latch lever towards the actuator.

14. To complete the wiring under the dash, remove the storage cup to the lower left of the steering wheel to gain access to the under dash fuse panel. Also remove the driver's side kick panel. To remove it, first remove the door sill plate, then pull the kick panel away from the side, and then pull it back towards you.

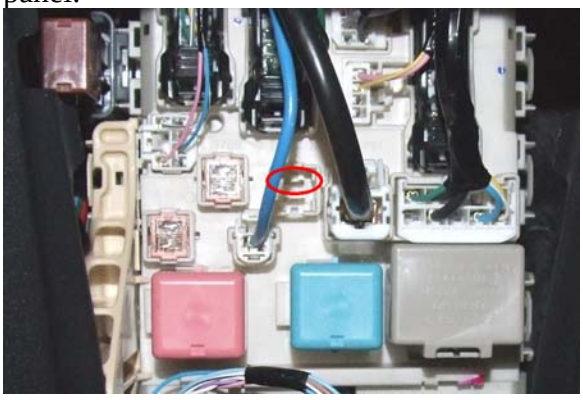




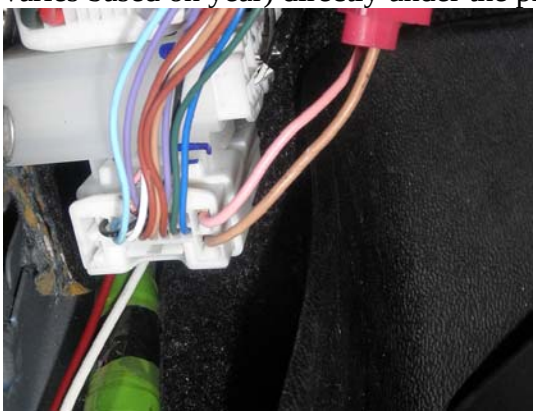
15. The Hatch Popper Interface Module connections are:
Yellow – Constant 12 V power through the inline fuse
Red - Actuator via the wire run to the C-pillar connector
White – IQ Hatch Handle Switch via the wire run to the C-pillar connector
Pink – Door Unlock wire under driver's kick panel
Brown – Door Lock wire under driver's kick panel
Violet – Alarm/Remote Starter Trunk Pop Output and/or in cabin switch

16. Using a butt splice, crimp the interface module's white wire to the IQ Hatch Handle Switch wire, which you ran from the C-pillar connector to the dash. Using a butt splice, crimp the interface module's red wire to the actuator's wire, which you ran from the C-pillar connector to the dash.

17. Crimp the ¼" female spade terminal to the inline fuse holder and then using a butt splice, connect the other end of the inline fuse holder to the interface module's yellow wire. Plug the ¼" female spade terminal into the male terminal circled below on the under-dash fuse panel.



18. Locate the connector shown below, which is under the driver's side kick panel. Using tap splices, connect the interface module's pink wire to the pink wire on the right side of the connector and the interface module's brown wire to the brown or orange (wire color varies based on year) directly under the pink wire.



19. Optional – To allow remote popping of the hatch, connect the interface module's violet wire to your alarm or remote starter's trunk pop output wire.

20. Optional – To allow popping of the hatch from inside of the car, connect the interface module's violet wire to one side of a normally open (N.O.) switch and connect the other side of the switch to a ground point.

