

**2007-Current Jeep Wrangler 360° System for
Factory Display Radios
(Kit # AVMS-3701v2)**

Please read thoroughly before starting installation and check that kit contents are complete.

Items Included in the Kit:

Factory display radio interface
Interface Video/Power harness
360° camera module
Key box power/image buttons
Rear camera and Front camera
Front lower bumper mount and harness
Rear spare tire adjustable camera mount
2 side mount cameras w/pods and harnesses
2 video output RCA cables
Power/camera input harness
2 side camera templates
Mounting screws and gaskets
These instructions

Tools & Supplies Needed:

Wire strippers
Wire cutters
Electrical tape
Zip ties
Plastic panel removal tools
Digital Volt Meter / BCM safe test light
Screwdriver
Socket set
Wrench
Uni Bit / Step Bit
Drill

Safety Precautions:

- Work in well ventilated area that is clear of obstructions.
- Secure vehicle with tire chucks in both front and rear of tires.
- Turn vehicle accessories OFF and ensure ignition key is in OFF position.
- Wear safety goggles and snug fitting clothes.
- Use tools only for their intended purpose and which are in good repair.
- Only perform this task if confidence, skill, and physical ability permit.



**DUE TO THE COMPLEXITY OF THIS KIT
PROFESSIONAL INSTALLATION IS REQUIRED
CALIBRATION KIT IS REQUIRED FOR FINAL PROGRAMMING**

NOTE: We strive to provide accurate and up-to-date installation instructions. For the latest full color instructions, as well as an installation video, please visit www.brandmotion.com

REAR CAMERA INSTALL

1. Remove the spare tire off of the carrier. (Use caution when removing tire.)



2. Open rear gate and remove trim from inside of gate by using plastic panel removal tool.





3. Mount the bracket on the rear tire mount, after bracket is on, slide on the 3 push nuts over the studs.



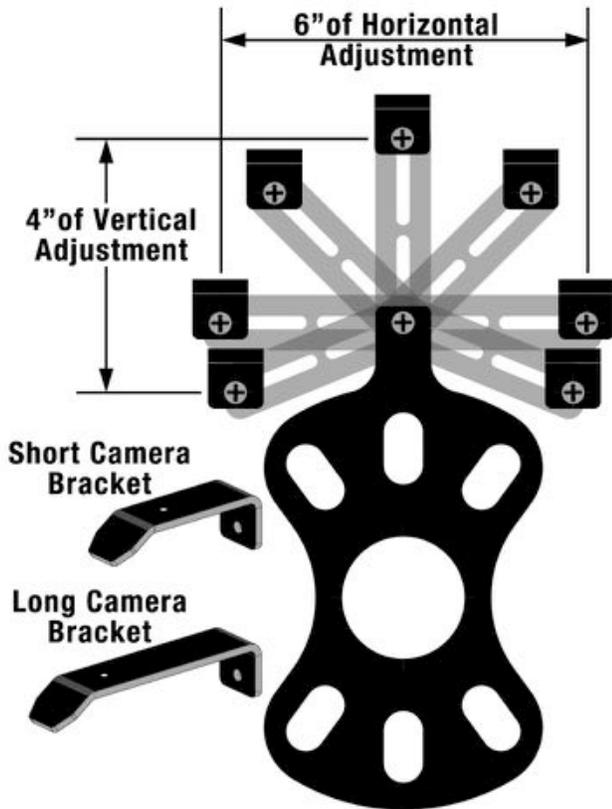
4. Run the harness into the rear gate through the factory grommet.



5. Run rear camera harness through top hole of tire carrier.



Adjustment Bracket for Camera Clearance using Phillips Screwdriver and 3/8" Wrench or Socket Drive



Note: Short Bracket has been designed for Factory offset wheels. Use the Long Bracket for wheels with larger offsets.

6. Remount spare tire on carrier. (MAKE SURE NOT TO PINCH THE CAMERA HARNESS.)



7. Use a T20 Torx bit to remove subwoofer box. (If equipped with subwoofer box.)



8. Using a plastic trim removal tool, pry off rear seat belt closeout.



9. Using a plastic trim removal tool, remove rear access panel to expose 10mm bolt, and remove bolt.



10. Run the rear camera harness along the factory harness. Use zip ties to secure to the factory harness.



11. Run the camera harness through the factory cloth door boot, use a long zip tie or a fish tape.





12. Finish running the harness to the front glove box area on the passenger side of the vehicle. Coil any excess harness and place in passenger kick panel area.
13. Remove the glove box to gain access to the back side by pressing the side of the inter glove box towards the center to release the side stops. Then open the glove box all the way to the floor and lift up and out.



SIDE CAMERA INSTALL

1. Place template stickers under the side mirrors. The arrow should be perpendicular to the vehicle body, pointing away for the vehicle.(Or use the plastic guides for the correct mounting postions.)



2. Repeat for other side mirror as well.

3. Remove the door panel from the vehicle, remove trim behind door handle and remove the torx screw.



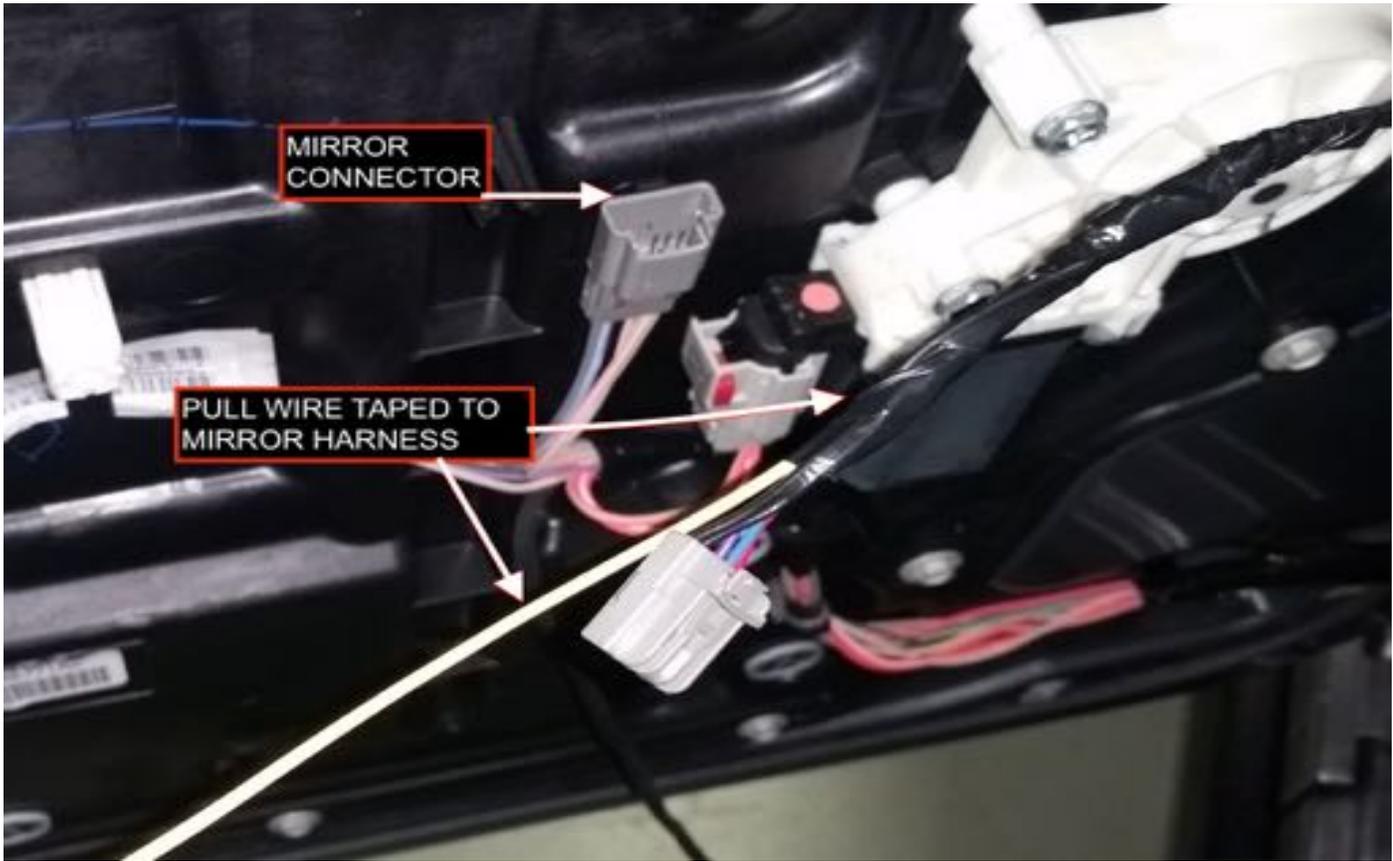
4. Remove the inter trim on the pull handle to gain access to the two screws behind the trim.



5. Remove the (2) Torx in the lower front of the door.



6. With the door panel removed, unplug the mirror harness and connect a pull wire to be able to pull the harness back through the door.



7. Remove (2) Torx bolts on the inner door frame to remove mirror. (When the bolts are taken out, the mirror might fall, hold on to the mirror while doing this.)



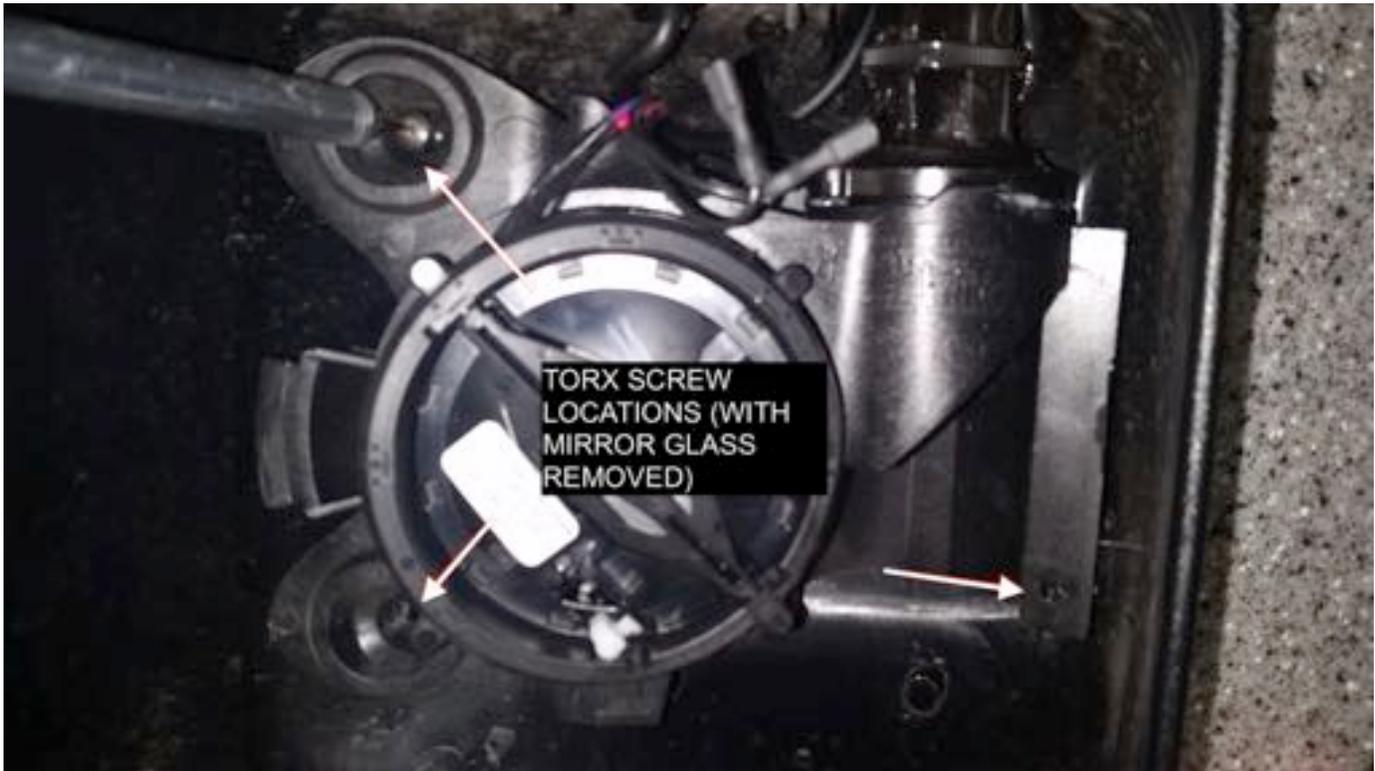
8. Remove the mirror and pull harness through the door.



9. Repeat for the other side.
10. Compare the mirrors to see if the templates are in the same place and same angle on both.



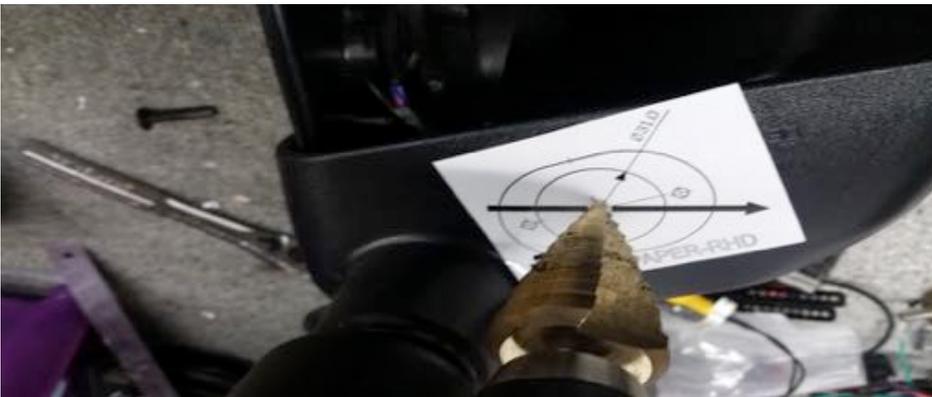
11. Remove the (3) Torx screws from inside the mirror. You can fairly easy get behind the mirror glass to do this. (The picture show the glass already removed to show location of the screws).



12. Remove the mirror glass by gently lifting on the plastic tabs holding the glass to the mirror motor.



13. Drill the hole in the template for the camera and the (2) mounting screws.



14. Mount the left camera (the camera metal bracket will have a LH stamped on it) in the side mirror pod marked.



LH – Driver's side camera



RH- Passenger side camera

15. Stick the foam gasket to the flat side of the mirror pod then mount the pod to the mirror using supplied screws.



16. Tape the terminals to a zip tie to help guide the wire through the back of the mirror and mounting arm. Run the camera harness through the back of the mirror where the factory power harness passes through and out the bottom of the mirror arm.



17. Following the factory harness run the camera harness through the mounting base and pull the rest of the camera harness through.

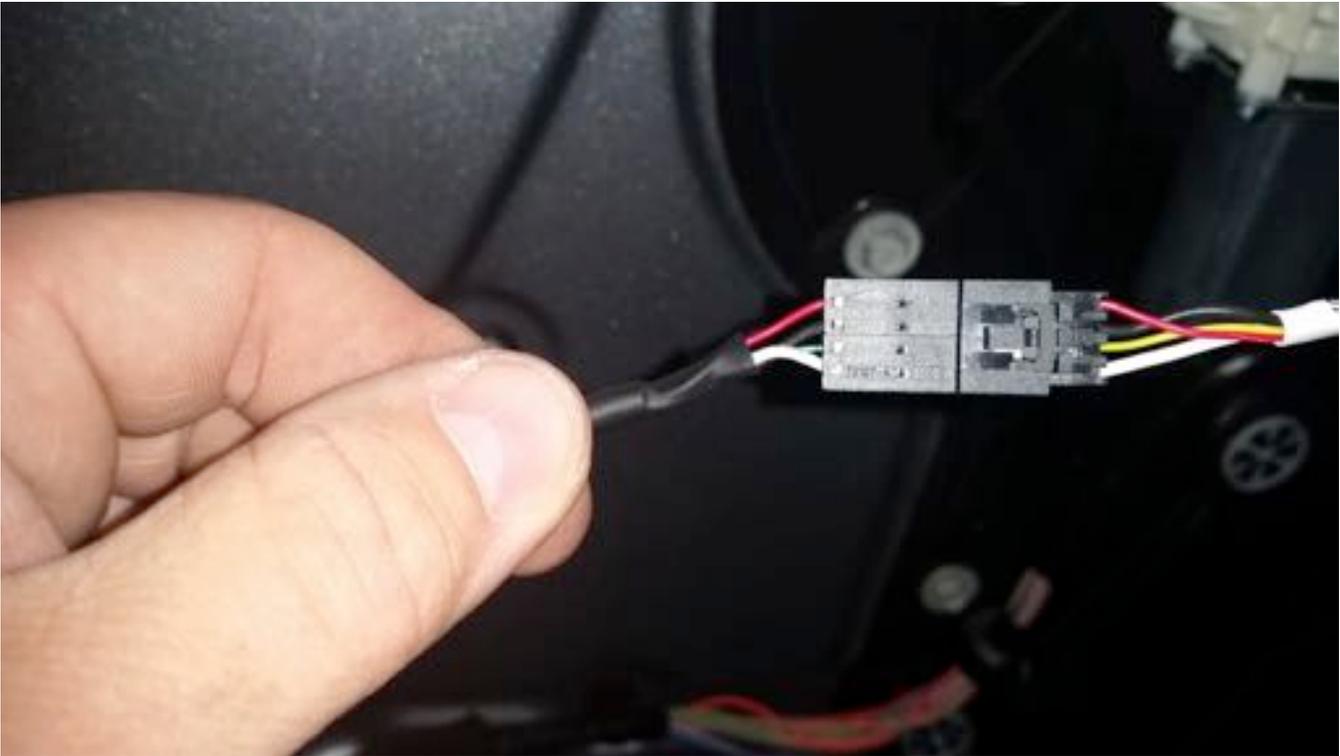


18. Attach the camera harness and the factory mirror harness to the pull wire that was already run through the door and pull the harnesses to the inside of the vehicle.



19. Notch the grommet to allow room for the camera harness.
20. Remount the mirror to the vehicle with the (2) Torx bolts.
21. Insert the camera pins into the connector for the camera.





22. Reconnect the mirror harness in the door.

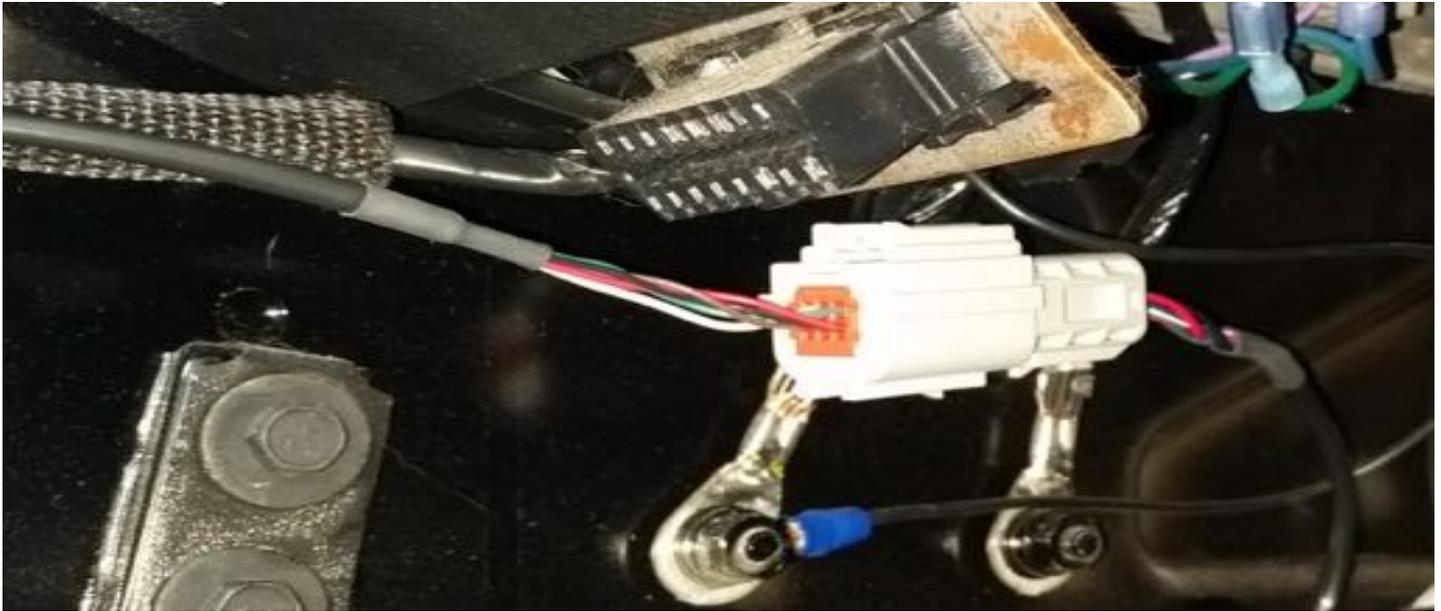
23. Run the camera harness along the factory harness in the door.



24. Run the camera wire through the factory door sleeve. Use a long zip tie or a fish tape.



25. Secure the harness in the kick panel so that the door removal connector is located in the same location as the factory door connector.



26. Run the camera wire to behind glove box area to connect to the 360° main control module. (Passenger side camera harness may have excess length, coil excess and zip tie behind passenger kick panel.)
27. Reinstall door panel and mirror glass. (Press the mirror glass from the center and be careful not to break the glass.)
28. Repeat for other side.

FRONT CAMERA INSTALL

1. Front camera will mount under the front bumper on the metal bumper.



2. Mark location of the camera on the metal bumper. These next steps will vary due to the different types of factory and aftermarket bumpers available for the Jeep Wrangler.





3. The camera needs to have a clear view of the road below and out in front of the vehicle.
4. You can use the plastic mount provided for the front camera. Or make your own.
5. The white sticker on the camera is up.
6. Route the camera harness into the vehicles interior through the factory grommet in the firewall on the driver's side. Run the harness behind the cluster over to the glove box area.

2 BUTTON KEYPAD INSTALL LOCATION

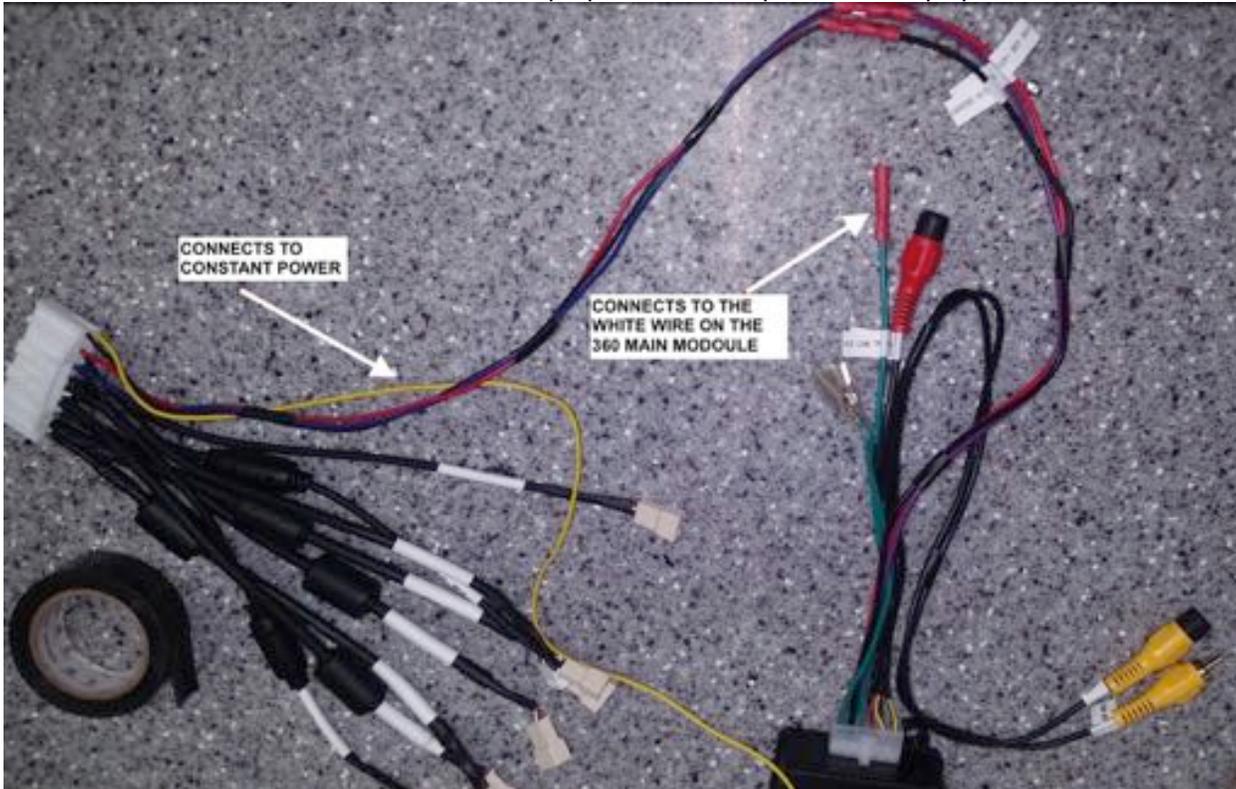
1. Place the keypad on the dash in an easy to reach location such as in front of the center console.



2. Run the keypad harness to the glove box area.
3. For factory display radios, the power button on the keypad turns on the system and the interface to show the image on the factory display below 7 MPH.

WIRING UP THE 360° CONTROL MODULE and FACTORY DISPLAY INTERFACE

1. The yellow wire will be connected to vehicle constant power. Constant power can be found behind the radio on the 22—pin gray plug pin 1- YELLOW/RED.
2. The red wire will be connected to accessory power. Accessory power is supplied from the interface. Connect the red from the 360° main control module to the red accessory output wire on the display interface.
3. The blue wire will be connected to reverse. Reverse is supplied from the interface. Connect the blue wire from the 360° main control module to the purple reverse output on the display interface.



4. The white wire will be connected to Aux trigger input. Aux trigger input is supplied from the display interface. Connect the white wire from the 360° main control module harness to the green aux trigger input wire on the display interface.
5. Connect the RCA from the 360° main control module labeled CVBS to the display interface RCA labeled AUX.
6. Connect the RCA from the 360° main control module labeled CVBS RV to the display interface RCA labeled REAR CAMERA input.
7. On the back of the radio unplug the factory gray harness and plug in the gray T-harness in to the back of the radio where the factory harness was just unplugged. Plug the factory gray plug into the other end of the T-harness.
8. Plug the white 22—pin plug into the open connector on the back of the radio. (There is no plug in this location from the factory.)
9. Check the system, by turning on the ignition and shifting into reverse.

10. You should see the backup camera image on the factory screen. (There will be a WARNING message on the screen over the 360° image until unit is calibrated.)



11. Shift back into park. Press the power button on the 2 button keypad once to see if the 360° image comes up on the screen. To shut off the system press the power button 3 times in 1 second.
12. Calibrate the system. Using calibration kit AVMS-3698 or AVMS-3699. Follow the instructions included in that kit.

Mounting the 360° main control module

1. Mount the 360° main control module behind the glove box, on the ridged plastic duct. Mount the module long ways with the connector facing up. Use Velco or double sided tape to mount the box in place.



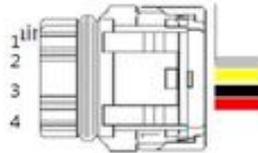
2. Zip tie up wire harness to keep out of way of metal heater lines behind glove box area.



Wiring schematics and pin outs

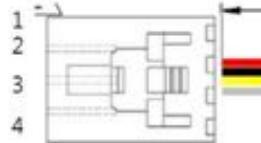
1.2.2 Front Camera Connector pin map

Pin No.	Description
1	V-GND(White & Drain)
2	Video(Yellow)
3	Power_GND(Black)
4	Power(Red)



1.2.3 Rear Camera Connector pin map

Pin No.	Description
1	Power(Red)
2	Power_GND(Black)
3	Video(Yellow)
4	V-GND(White & Drain)



1.2.4 Side Camera Connector

Pin No.	Description
1	Power(Red)
2	Power_GND(Black)
3	Video(Yellow)
4	V-GND(White & Drain)



