# "RY(0M0T0" Turn Signal / Horn Kit PN 7216 by RY(0 M0T0RSPORTS iN(.

2009-2014 full size Polaris Ranger and crew STOP - THIS KIT IS DESIGNED SPECIFICALLY FOR 2009 THROUGH 2014 POLARIS FULL SIZE RANGERS INCLUDING CREW AND 6X6. IF YOUR MACHINE IS NOT ONE OF THESE MODELS. DO NOT PROCEED. Contact Ryco Motorsports or your local dealer.

Where do I start?

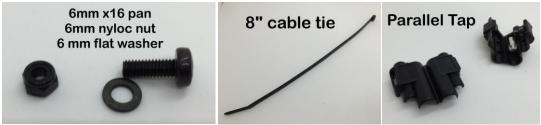
Step 1 – Read the instructions. If you are a guy and like most of us feel you can install this without taking the time to read the instructions then you should ask your wife or significant other to read them to you. I went to a lot of effort to create the instructions and I feel bad when no one reads them. Answers to all your questions should be covered in the installation instructions. We've included a lot of photo's for those of you who are visual and don't enjoy words.

What's in the box?

Let's become familiar with the items you will be installing on your machine.



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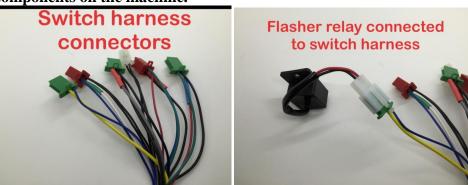


What tools do I need? Tools needed: 10 mm or 5/16" socket/nut driver or flat blade screwdriver, Phillips screwdriver, 10 mm wrench, center punch, drill motor, 3/4" diameter drill (stepped bit works well). and pliers.



Let's get started. We'll show you how most of the items go together, then we'll show you where they go and how best to install the hardware.

Let's start at the switch. The switch harness connector interfaces with the various components. Notice the color coding on the most of the switch harness connector cables. Match the colors of the heat shrink on the cables when you install the components on the machine.



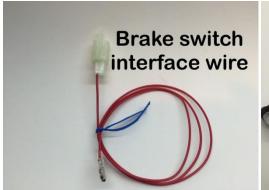
The flasher relay interface is the only 3 pin connector with no color coding. Only 2 of the 3 positions are used.



The horn/power (fuse holder) and ground wires interface is a 4 pin connector with green color coding.

The rear turn signal harness interface is a 3 pin connector with red color coding.

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The brake light module is the only 2 pin connector and has no color coding. The front turn signal harness interface is a 4 pin connector with red color coding.





NOTE: The Polaris instrument cluster turn signal indicator wire harness is used on 2011 and newer machines. The dash mounted turn signal indicators (3PINDI) is used on 2009 and 2010 machines.

The Polaris instrument cluster turn signal indicator wire harness interface is a 3 pin connector with blue color coding.

The dash mounted turn signal indicators interface is a 3 pin connector with **blue** color coding.

NOTE: Where possible run new cables alongside the existing wires and use existing cable tie / anchors where practical. Ensure the wiring and installed hardware does not contact moving components or hot surfaces.

NOTE: The switch should NOT have any of the cables or components installed on the harness until after the switch is installed and the switch harness is routed behind the dash.

CAUTION: Insure the collar is securely tightened and does not interfere with the steering wheel function.

NOTE: Insure the wiring and installed hardware does not contact moving components or hot surfaces.

1. Install the turn signal / horn switch on the steering column utilizing the screw clamp over the aluminum split clamp. Decorative sleeve slips over screw clamp.

2. Route the turn signal switch wiring through the opening near the steering column towards the center of the vehicle.







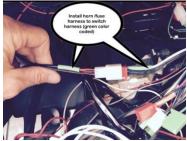


3. Install the flasher relay, horn and power (fuse) / ground harness, turn signal indicator harness and brake light module harness to the switch harness.

NOTE: Ensure the color coding is correct. (Colored heat shrink on the cables NOT the color of the connectors nor the color of the wires).

NOTE: Do not connect the front and rear turn signal harnesses to the switch harness at this time.







4. Secure the switch harness to a cross member using a cable tie. The flasher relay and can be bundled and secured with a cables tie to the switch harness.

CAUTION: Ensure the ignition key switch is in the "OFF" position and the key is removed prior to installation of the wiring harnesses to prevent short circuiting the vehicle wiring.

NOTE: Center orange wire on the outlet is 12 Volt DC and brown wire is ground. The auxiliary power outlet is active only when the ignition key is in the "ON" position.

- 5. Remove the battery to provide access to the auxiliary power outlet. (you don't have to disconnect the battery cables, simply remove the tie downs and tilt the battery forward)
- 6. Locate the orange and brown wires leading to the back side of the auxiliary power outlet and unplug them from the auxiliary power plug. Either top or bottom plug works equally well.

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Power steering models - Trace the power and ground wires from the auxiliary power plug, separate the cover and expose the orange and brown wires.

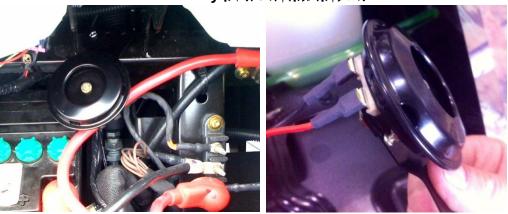




NOTE: Check orientation of parallel tap connectors to insure access for the male connectors on the power and ground wires when the wires are reconnected to the auxiliary power outlet terminals prior to seating the terminal with pliers.

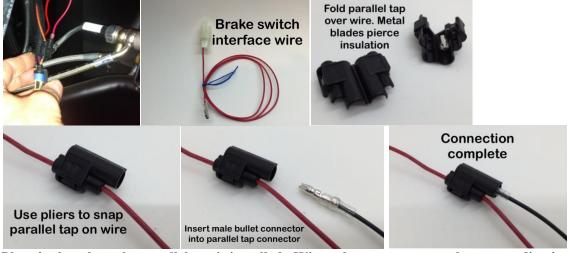
- 7. Install a parallel tap connector on the brown wire and one on the orange wire as shown.
- 8. Connect the new power and ground wires to the parallel tap connectors on the auxiliary power outlet wires. Black <u>fused</u> wire with red sleeve to the orange wire. (12VDC). Black ground wire harness wire to the brown wire. (Ground)
- 9. Reconnect the orange and brown wires to the auxiliary power outlet terminals.
- 10. Install the horn utilizing an existing hole on the structural cross member under the hood using the provided fastener.
- 11. Install the screw into the center position on the horn bracket and then install plastic spacer on the screw. Insert the screw through the existing hole on the structural cross member under the hood located on the driver's side as shown. Secure using the provided fastener and lock nut.

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12. Route the horn cable from the switch harness to the horn through the firewall and install the two flat spade connectors to the horn terminals. Either connector can be installed on either horn terminal.

NOTE: Use a 10mm wrench and 10mm socket to secure the horn. DO NOT ATTEMPT TO ADJUST THE HORN OR REMOVE THE CENTER MOUNTING BOLT THAT ATTACHES THE HORN TO THE HORN MOUNTING BRACKET.



Photo's show how the parallel tap is installed. Wire colors may not match your application.

- 13. Locate the hydraulic brake switch on the front drivers side.
- 14. Note the ORANGE wire coming from the brake switch connector as shown.
- 15. Disconnect the 2 pin connector on the factory brake switch wire harness. This will allow easier access to install the parallel tap connector on the orange wire.
- 16. Install the parallel tap connecter. Reconnect the 2 pin connector.
- 17. Route the brake interface wire from the switch harness and plug the single red wire into the parallel tap connector on the orange wire.
- 18. 2011 2014 Disconnect the multi-pin connector from the back of the speedometer assembly OR INTERACTIVE DISPLAY by depressing the single locking tap on the connector and pull the connector away from the mating part.

CAUTION: DO NOT USE A METAL OBJECT TO REMOVE THE TWO PLASTIC PLUGS COVERING POSITIONS 6 & 7

19. Open the connector cover, remove and discard the two plastic plugs in positions 6 & 7. Use your fingernail to easily remove the plastic plugs.

20. This is important! Remove the clear pin cover on the front side of the connector by depressing the tabs on the sides of the connector. (Install the red PY() harness pin/wire in position 6 and the green harness pin/wire in position 7. (pins must be seated completely. Verify the new pins match the installation depth of



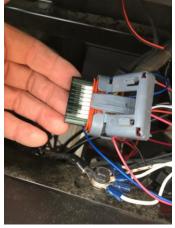




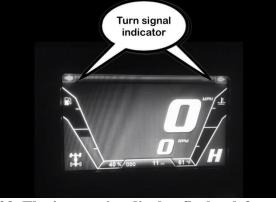
21. Reinstall the clear pin cover and route the two new wires adjacent to the existing wires and close the back cover.







22. Reinstall the connector to the speedometer OR interactive display.





23. The interactive display flashes left and right. The standard instrument cluster turn signal indicator double arrow flashes regardless of direction of the switch. NOTE: On some machines the indicator does not flash. Please contact us and we will send you a diode module to correct the problem.

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- 24. 2009 and 2010 Machines Mark the desired locations for the two LED dash mounted indicator lights, taking into account the length of the LED wires and the location of the connectors on switch harness where the LED interface.
- 25. Drill two 9/32" mounting holes in the dash for the indicator LED's.

NOTE: Carefully insert the LEDs into the grommet to prevent damage to the wires and resistor. A little moisture or lubricant can be helpful when installing the LED's/grommets.

26. Seat the rubber grommet into the hole, then push the LED into the holder from the rear until it is slightly protruding.



- 27. Locate the front LED's as desired. 1-1/2" spacing between holes works well.
- 28. Mark the locations using a center punch.
- 29. NOTE: Use of a step drill is recommended.
- 30. Drill six 3/4" diameter holes as shown.



31. From the front side of the firewall route the front turn signal harness 4 pin connector and cables through the grommet in the firewall and connect it to the 4 pin connector on the switch harness with the RED heat shrink match marking.

Note: Tags on the front turn signal harness. "L" is the driver's side and "R" is the passenger side.

- 32. Route the front turn signal harness triple LED's to the front corners of the vehicle.
- 33. Slide the rubber flange gaskets that are on the LED's back onto the wires.

34. Slip the LED's thru the hole, fold the flange gasket and push it thru the hole. Install the flange gasket into the hole with the flange of the gasket towards the front of the vehicle. Insert the LED into the flange gasket with a gentle pulling and rocking motion, seat the LED into the gasket.

Note: A little warmth and moisture helps to slip everything together.

- 35. Rotate the LED's within the gasket as necessary to orient them in the same relative position.
- 36. From the front side of the firewall route the rear turn signal harness 3 pin connector and cables through the grommet in the firewall and connect it to the 3 pin connector on the switch harness with the RED heat shrink match marking.

37. Remove the floorboard access panel and seats and route the rear cable assembly to the rear of the vehicle along side the existing cabling.



- 38. Locate the rear taillight wire harness. At the point where the cable assembly splits in the two taillights expose the two orange wires.
- 39. CUT the two wires approximately 4-6" forward of the tee. Strip approx. 1/8" of insulation from each orange wire on the taillight side.
- 40. Remove the end cap from the red crimpless connector and slip it over the prepared orange wire and screw the crimpless connector back together.
- 41. The red wire is attached to the left taillight and the right taillight wire to the black wire.
- 42. The other ends of the orange wires are abandoned and can be tucked back into the factory wire harness sleeve.
- 43. Install the license plate holder on the rear of the vehicle. Removing the tailgate allows easy access to the license plate mounting holes.
- 44. The plate light may be installed and used as one of the 4 plate holder fasteners or mounted separately utilizing one of the provided 2 hole tabs. Use the bright flange nut provided with the license plate light





Options for mounting plate light

#### DO NOT use a black lock nut. DO NOT over tighten the nut.

45. Locate the brown (ground) and red/white (12 volt DC) wires leading to the rear taillight assembly and install a parallel tap connector on each wire and connect the red wire from the plate LED to the red/white wire and <u>black</u> to brown.

LED voltage conditioner LED

LED plate light

Red wire with yellow or white stripe wires going to rear taillight assy Brown wire



NOTE: The LED's and flasher relay are polarity sensitive. The fused wire MUST be connected to the 12 volt DC (positive side) and the black ground wire must be connected to the ground wire. If this is not done correctly the horn will work, but the turn signals will not function. (Damage to the flasher relay may occur if power and ground wires are installed backwards.)

- 46. Once the cabling is in place, double check the routing and secure with wire ties. Bundle any extra wire and secure with the wire ties.
- 47. NOTE: Double check all connectors prior to turning ON the ignition
- 48. Turn ON the ignition and verify the horn, turn signals and rear license plate light functions, pull the hazard switch and verify that feature functions correctly.

#### RY(O MOTORSPORTS INC.

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