

2017+ BRONCO 3 Pair Fog Kit Install instructions

Rigid, Baja Designs, Diode Dynamics & Others

STOP

Refer to Bracket installation instructions for mounting the brackets & lights. Refer to wire harness instructions (Last Page) to Preassemble your wire harness unless you purchased our Plug n Play Custom Harness. If you have Radiance/Scene/360 lights, our custom harness is INCLUDED with connectors for your lights. It is easier to put the connectors on the lights first and you can see the procedure on the 2nd to last page. Then return here. All others, continue..

Step 1:

Once you have your Harness assembled, or your custom harness, you need to lay it in place. First, starting from the DRIVER side, under and behind the front bumper, take the LONG side of the wire harness that goes to the passenger side lights, and feed it through to the driver side from BEHIND the bumper ABOVE the skid plate (Fig 1-2) or above the frame behind the bumper. There are several pockets. Some are easier or more difficult to feed wire through. It's all in how clean or hidden you want it. The most important thing is to be sure you secure the harness away from anything that will rub it. Anything that moves. Or anything that it touches it that might be hot, such as the radiator, intercooler, coolant hoses or engine components. See figures 1-2.

Figure 1:



Figure 2:



Step 2:

Once you have your long harness end pulled across to the other side, behind the bumper or over the skid plate. You can then pull the other end up into the engine bay behind where the headlight is, then behind the driver side front fender. You can do this very easily by first removing the wheel flare. It detaches by just sliding the levers as seen in figure 4, and it is removed in figure 5. Then partially detach the front half of the inner wheel liner. There are small screw like plastic push pins (Fig 6). Look for all of them in the front half. Then there are also a couple small bolts that go through sheet metal clips where the actual painted fender meets the liner. They are just up under the edge. So you will need to get down and look up at the edge to see them.

Figure 4:



Figure 5:

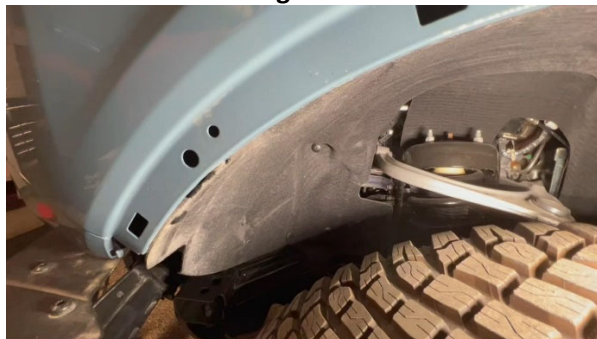


Figure 6:



Once you have the clips loose, you can pull the liner down (Fig 7) and feed the harness behind it toward the fire wall where the switch wires are (Fig 8).

Figure 7:



Figure 8:



You should now be able to see the harness by looking in the engine bay by the switch wires on the fire wall. You can then pull the end through that has the connectors as shown in figure 9. You will notice the switch wires in figure 10 and also notice there are several ground bolts in that area that can be used for the ground loop on the harness.

Figure 9:

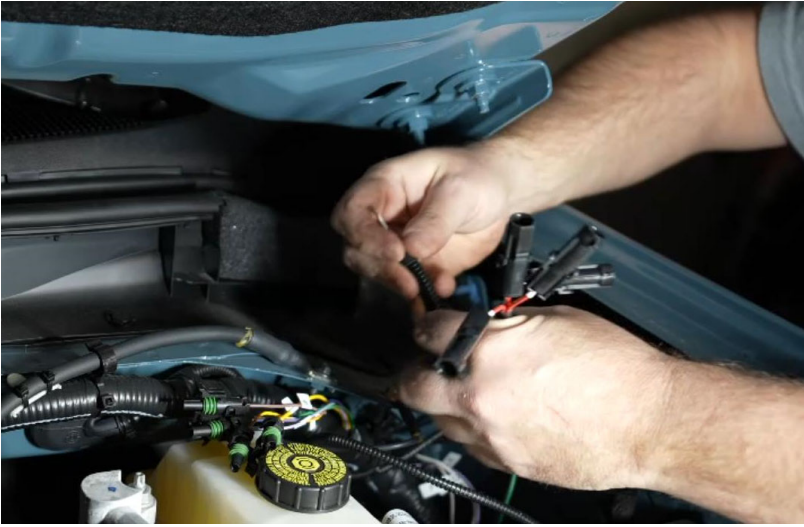
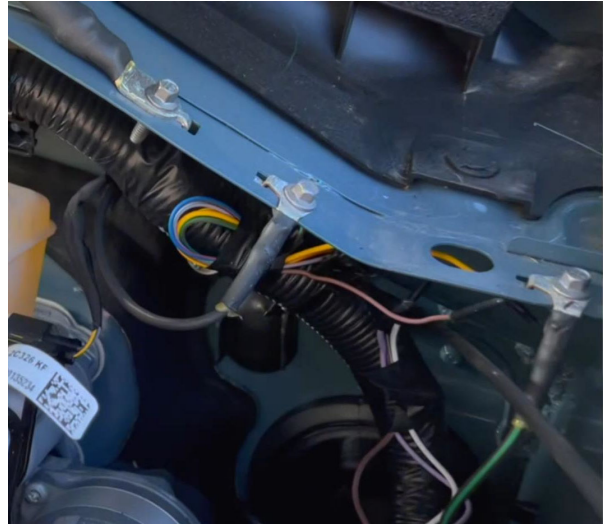


Figure 10:



If you do have one of our harnesses, you will want to add the included connectors to your existing switch wires (fig 11). Follow the directions for that on the second to last page. Be sure to pay close attention. You will notice in figure 1 the harness through the bumper pocket. You should see it is zip tied down to a bar. It is away from the tire. Always be sure your harnesses are clear of where the tires may rub them.

Figure 11:

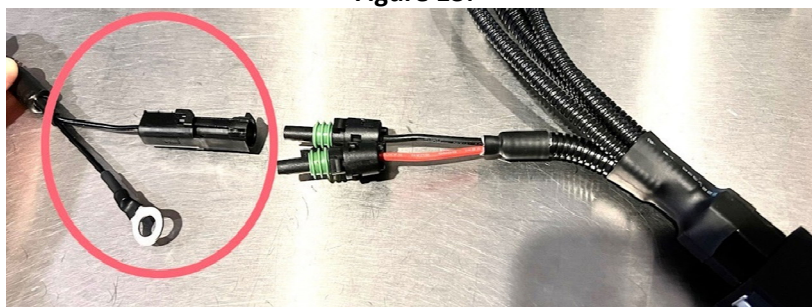


Figure 12:



If you are using our custom Plug n Play harness, notice In figure 13 that there are 2 connections for the ground on most of our harnesses. This is the SAME ground. There are just 2 different ways to connect it. The ring is the most common and normal way. However, in the event you need higher amperage than your built in switches/fuses can handle. You can plug the harness into one of our relay adapters (also shown to the right in figure 13) where the ground and power run through the relay. So if you don't have a plug in relay, (most cases) just ignore the connector.

Figure 13:



On the new Ford vehicles (21+) they eliminated the owners manual. Instead, the owners manual is built into your vehicles center dash screen. 22+ may be different colors so you may or may not need to reference your trucks screen.

NOTE:

Bronco Upfitters - Switches 1 use 30 amp fuses. Switches 2 uses 15 amp fuses. Switches 3-6 use 10 amp fuses.

Always be sure your amp maximum on your switch can handle the amp draw of your light, or you will blow your fuse. Generally, any single pair of fog/pod lights will work fine on the 15 or 10 amp switches. However, if you combine 2 or 3 pairs to one switch, you need to be sure you don't exceed the power max.

Remember. With our harnesses, we have lots of options though for plug n play customization. If you want to put lights onto a switch that exceed its rating. You can simply add one of our plug n play relay adapters (Fig 8). This will give you up to 30 amp capacity. Again, most of the time that isn't needed. However, if you want to use 3 lights on one switch or even the low power 5 amp switches, that will allow it. Our harnesses have pairs labeled so you can match to your lights.

Connectors/Adapters

If you do have one of our plug n play harnesses, you will want to install the included connectors on the bare switch wires. This will allow you to just plug in your harness and also allow you to use any of our adapters, splitters, relays, etc.

If you have Radiance/Scene or 360 Lights, there are no connectors on your lights. Just bare wires. Your harness kit includes a matching connector kit. You will simply install the pins and connectors on your lights as shown on the second to last page. They then just plug in. This was mentioned on the first page.

If you have Baja Designs, Rigid Pro Series or Diode Dynamics AND you selected our custom plug n play harness, you will get adapters (fig 14 & 15) that will plug into our harness and the lights. If you are using the standard harnesses that came with the lights, they will have the corresponding connectors already. You can cut up and customize those harnesses in the instructions on the last page. You can also use our 2 or 3 way splitters to combine pairs of lights to ONE switch, or split an end for 2 pairs of lights with our harnesses. (figures 16-18) (Sold Separately for customization)

Fig 14:



Fig 15:

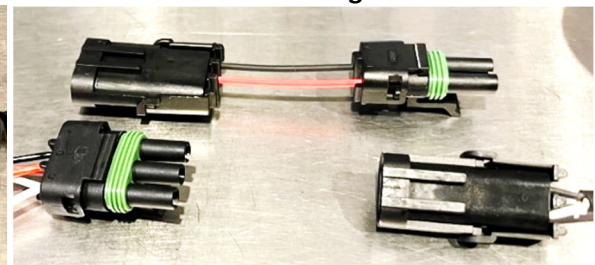


Fig 16:

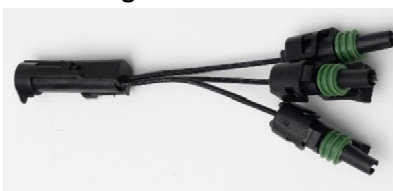
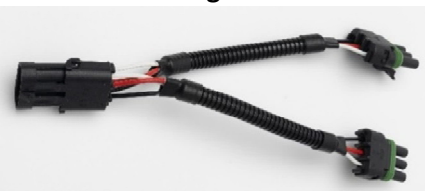


Fig 17:



Fig 18:



Backlight Wiring- (For Radiance/Scene, 360 Series and others with backlighting) **EVERYONE! See Fig 19!!**

Figure 19 shows the white wire connection that comes out by the switch wires if you have our custom harness. **If you have lights that DON'T have amber backlights, you will NOT connect that wire to anything.** If you DO have lights with backlights and you have REAR lights with our tail light adapter installed, you can connect the 2 harnesses white wires TOGETHER with a coupler as shown in figure 21. The front harness backlights then are also powered from the tail light adapter. Otherwise, there are 2 other ways to power your backlights. You can use one of our marker adapters and just plug it into the white wire connection (fig 20). Both the tail light adapter and marker adapter are powered from the

parking lights. So if you connect to either of those, when you unlock the doors, the amber will flash (if equipt) and be on with the headlights. Or, you can simply connect the backlight connection (the white wire circled in fig 19) to another switch and turn them on and off manually. The marker adapter plugs into the passenger side headlight and runs under the plastic cover on the grille to the driver side, then up toward the switches. There are just push pins on top to remove the grille. If you didn't purchase the Headlight/Marker adapter, and want one. Visit SPVparts.com

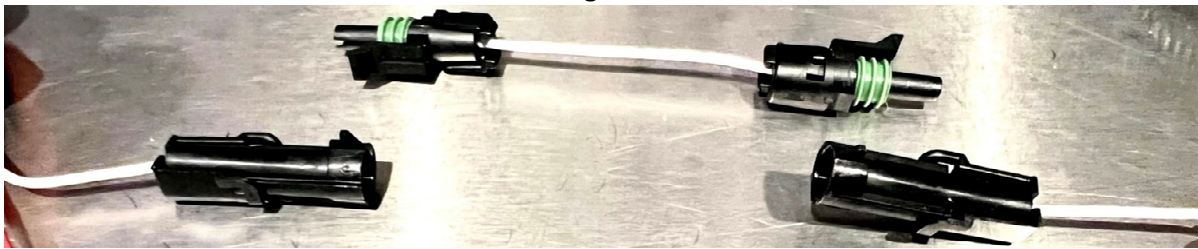
Fig 19:



Fig 20:



Fig 21:



To install the Headlight/Marker adapter, remove the air box lid by removing the push pin in the front (fig 22) and 4 screws on top and the one hlding the box to the wall (fig 23). Then you can disconnect the sensor connector for some more room and just lift or wiggle it. You can push it out of the way enough to have room for your hands. The adapter plugs into the headlight and the OEM connector plugs into it. (Fig 24)

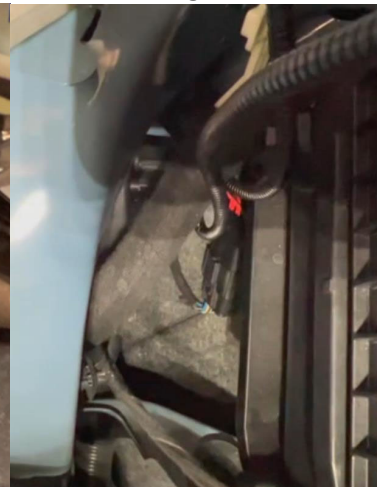
Fig 22:



Fig 23:



Fig 24:

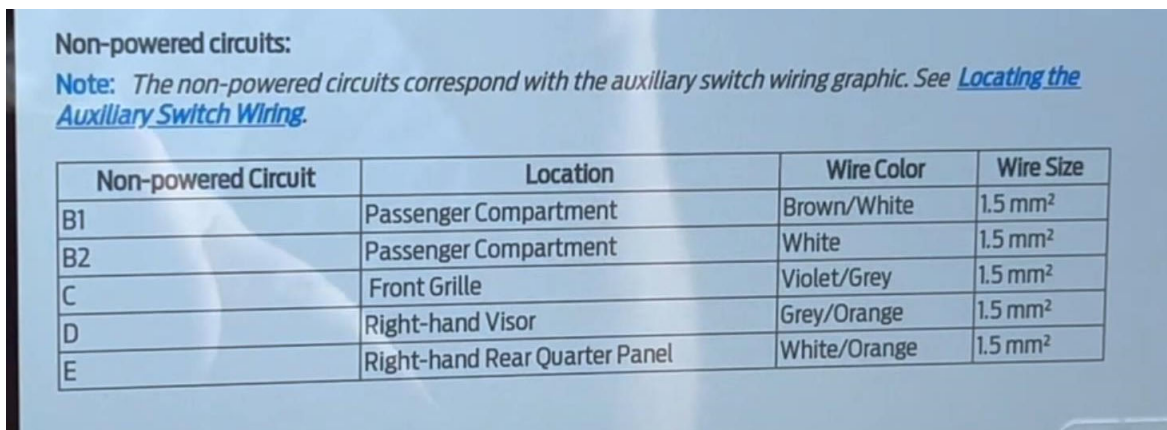
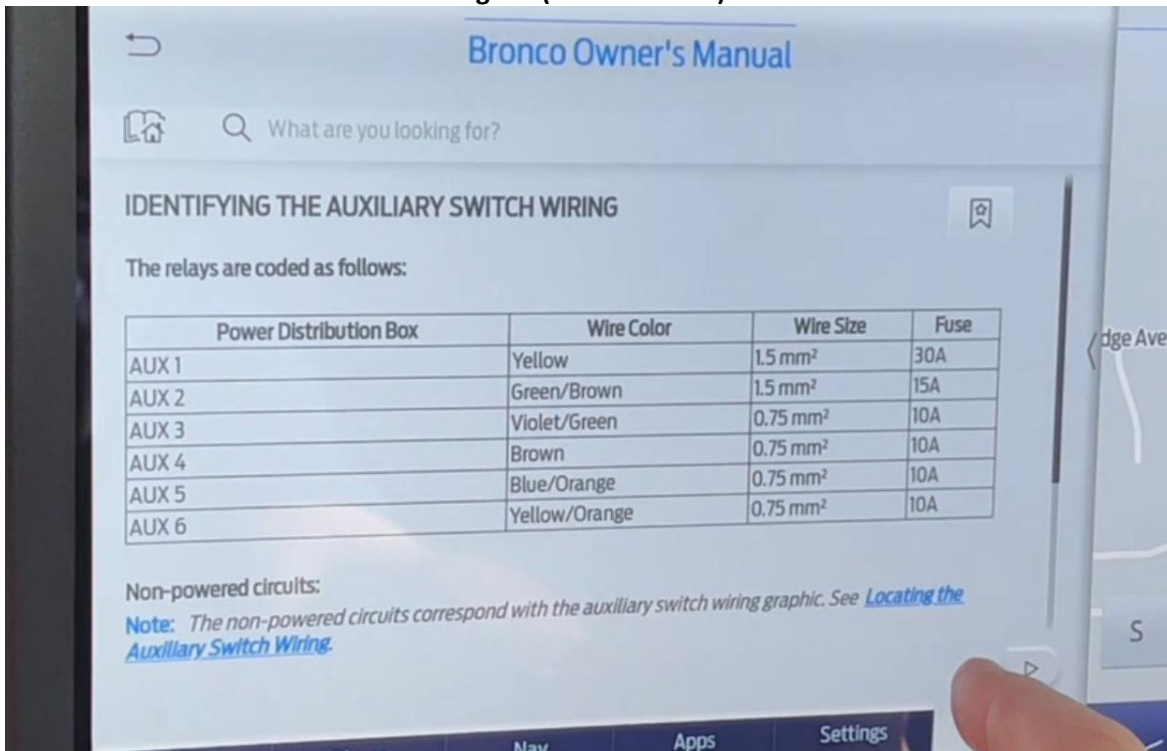


AGAIN... Once your lights are connected to your switches, secure your lower harness under the bumper area wherever you can. Use zip ties and you can tie them off on existing harnesses, the frame, other brackets, etc. Make sure it isn't loose or sloppy. If it is, it could vibrate and wear a hole in the insulation or get caught on something driving down the road.

Finally, make sure to secure the rest of your wire harness! You don't want it to get caught in the engine or belt. That would be a mess. Zip tie the slack out of the way using zip ties to existing harnesses and factory locations.

Wire Harness Colors/Amp Rating based on Ford Manuals

Fig 22: (2021+ Bronco)



Finally! – If you need any additional add on components, adapters, splitters, etc. that you may have missed, or you purchased through a 3rd party site, You can get them at SPVparts.com

YOU'RE DONE!!!

*For liability purposes, these instructions are intended to help you install your lights. However, SPV cannot be held responsible for faulty installation issues done by the consumer.

Installing connectors on your switch wires

PAY VERY CLOSE ATTENTION TO THESE DIRECTIONS! The pins are SPECIFIC for each connector.

These connectors and pins go on the **LIGHTS** bare wires.
(You won't use these for lights that have adapters)

Pointed Pins on these!!!



These go on the **SWITCH WIRES**, on the truck.
(You will use these in any case)

Tubular open end pins on these!!!



INSTALLATION OF TERMINALS AND PINS.

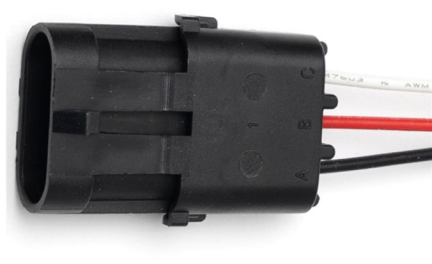
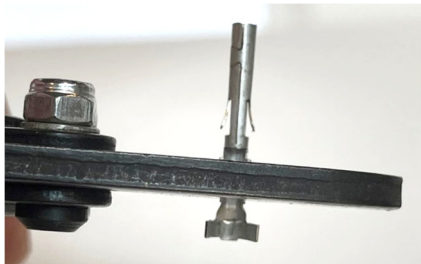
Use Crimping Pliers to crimp pins on wires (Don't use generic pliers). Be sure to strip off insulation on wire so you crimp OVER the wire, not the insulation. In the below left/middle photo, you crimp over the BARE WIRE in the center where the tabs are. You slide the rubber seal (Shown below) on the wire before crimping the pin on the wire. Then crimp the outer wings over it. **DO NOT INSERT THE BARE WIRE INTO THE PIN TUBE!** The Wings on the PIN are to be crimped on bare wire like a staple. It won't get connection if you put the wire in the tube and crimp on the insulation



IMPORTANT! Pay attention to where the different color wires are inserted!

BEFORE you slide the pins into the connectors on the switch end, make sure the proper colors line up in the right holes with the harness colors in the connector. If you use the adapters, this is already done. You just connect and plug them in.

Black Wire to A, Red Wire to B, White Wire to C



If you need crimpers and don't know what to get, here is a QR Code for a cheap set on Amazon **(Right QR Code)**



If you mess up.

You will need a PIN RELEASE TOOL. To the **left is a QR Code** for a CHEAP set on Amazon. These are only examples for your convenience.

We have no affiliation with these in any way.



If you are unfamiliar with how to use these QR codes, you simply open the camera on your phone like you are going to take a photo. Aim it at the code and focus. A window will pop up with a link. You touch it, it will take you there.

Make Your Own Raptor Harness (Using Generic Light Harnesses)... (SUPPLEMENT)

If you want to make your own custom harness and get rid of the bulk from the long generic harnesses, you can follow these instructions and cut yours down. Be sure you have enough wire. Measure it all out so you cut the long sections from the right areas. You will have some sections you need to get your longer wire from. The relays and fuses are NOT needed. Just the gray connectors. You will need to get some LOOM though at an auto parts store for a clean harness.

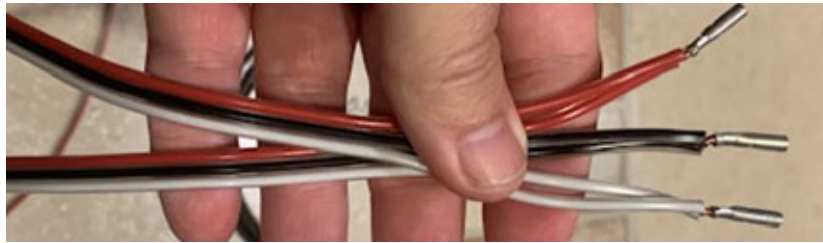
You will need to cut **3** sections 55" long

You will need to cut **3** sections 63" long (With the gray connector attached)

You will need to cut **3** sections 13" long (With the Gray Connector Attached)

Now, the first group you want to combine are the LONGEST 63" with connector, and the SHORTEST 13" with connector. (You will combine them SIDE BY SIDE using a butt connector and heat shrink)

Line them up SIDE BY SIDE, twist them together and insert them in a butt (crimp) connector as seen in the pic below and crimp it down TIGHT. Again, notice that these 2 groups are SIDE BY SIDE, not end on end. That leaves the other end OPEN for the last wire group. You will connect all 3 colors like this for ONE harness for ONE pair of lights. So you will need to do this 3 TIMES in all... (Disregard the white wire if you have the pro kit. That is used for RADIANCE version)



Now you can crimp down your 63" Wire. Then slide the heat shrink over the exposed connectors and wire so that it is completely covered. Then use a small touch or electric heat gun to shrink it over the wires. If you use a torch, be careful. You can melt both the wire insulation, and the heat shrink tubing if you just HOLD the flame in one spot. You want to wave the flame around close to it. Don't touch the flame to the material. Keep it back a little. If you use an electric gun like on the right, it is easier to control and hard to burn or melt the material.



You connect one of each section together for ONE pair of lights. When you make all 3, you can loom them all together for ease and protection. At the very end, you will need to crimp a ring connector to the black wires for your ground. You can cut one off the generic harnesses and use it.

