

HOW TO BUILD A RELAY BOX SO AN APPLIANCE LINE CAN OPERATE A SMALL LOAD



This is what you need; a 120VAC relay, 3 conductor lamp wire, outlet, plug and a box. I purchased the 3 conductor lamp wire, Hubbell plug and the 3/8" rubber grommet from Home Depot. The 3 conductor lamp wire is used for hanging lamps. I bought the relay, box and outlet from Newark. The Link to the parts are on the last page. Newark parts numbers are as follows:

120VAC relay - 389FXAXC-120A

outlet - HBL5358

box - 1554F2GY



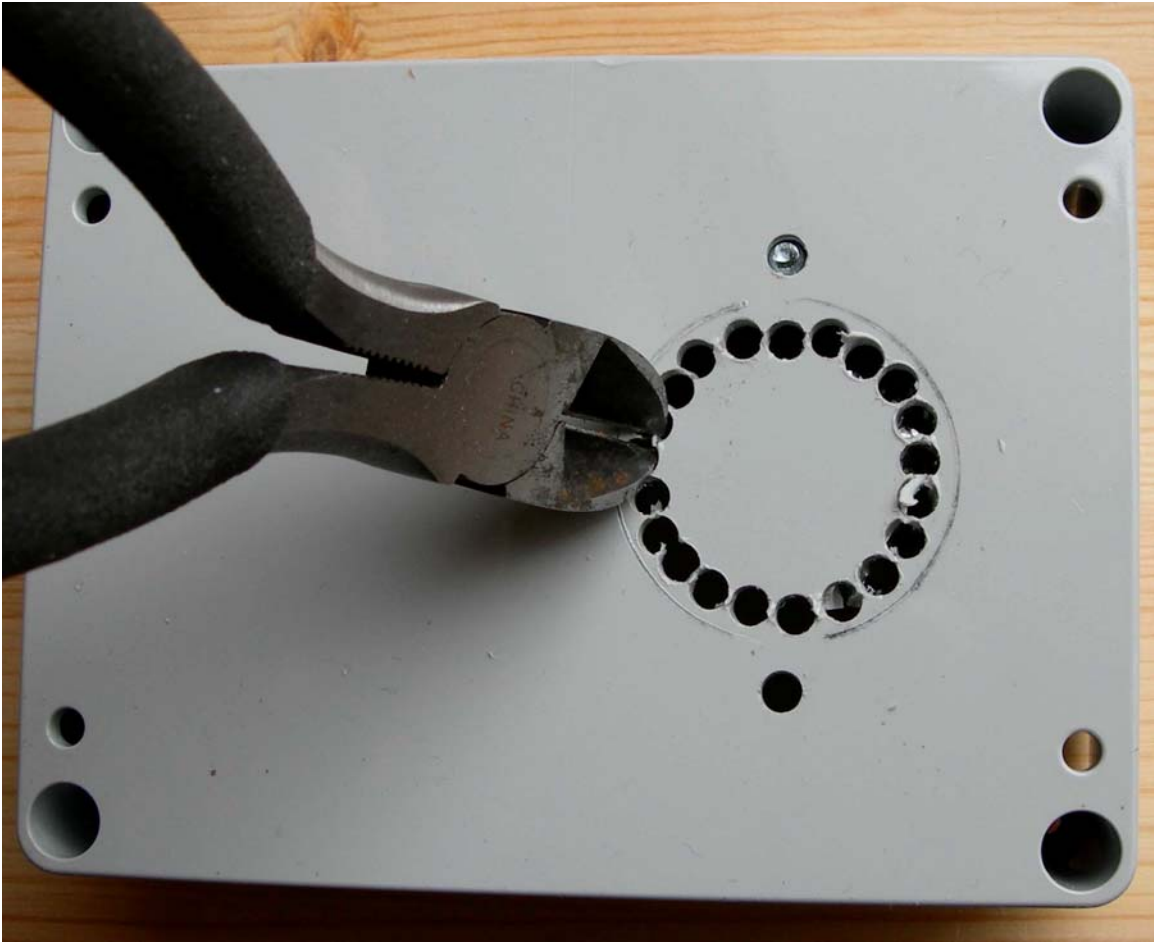
The first step is to mark the holes for the outlet mounting screws. I drilled the two holes then mounted the outlet on the outside of the box to make it easy to scribe the outlet hole for cutting



With the outlet mounted use a scribe to make the size of the hole. Run a pencil around the mark left by the scribe to make it more visible.



You can use any method you like but I used the drilling method to make the hole for the outlet.



I used wire snips to cut the plastic between the holes that remained after drilling.



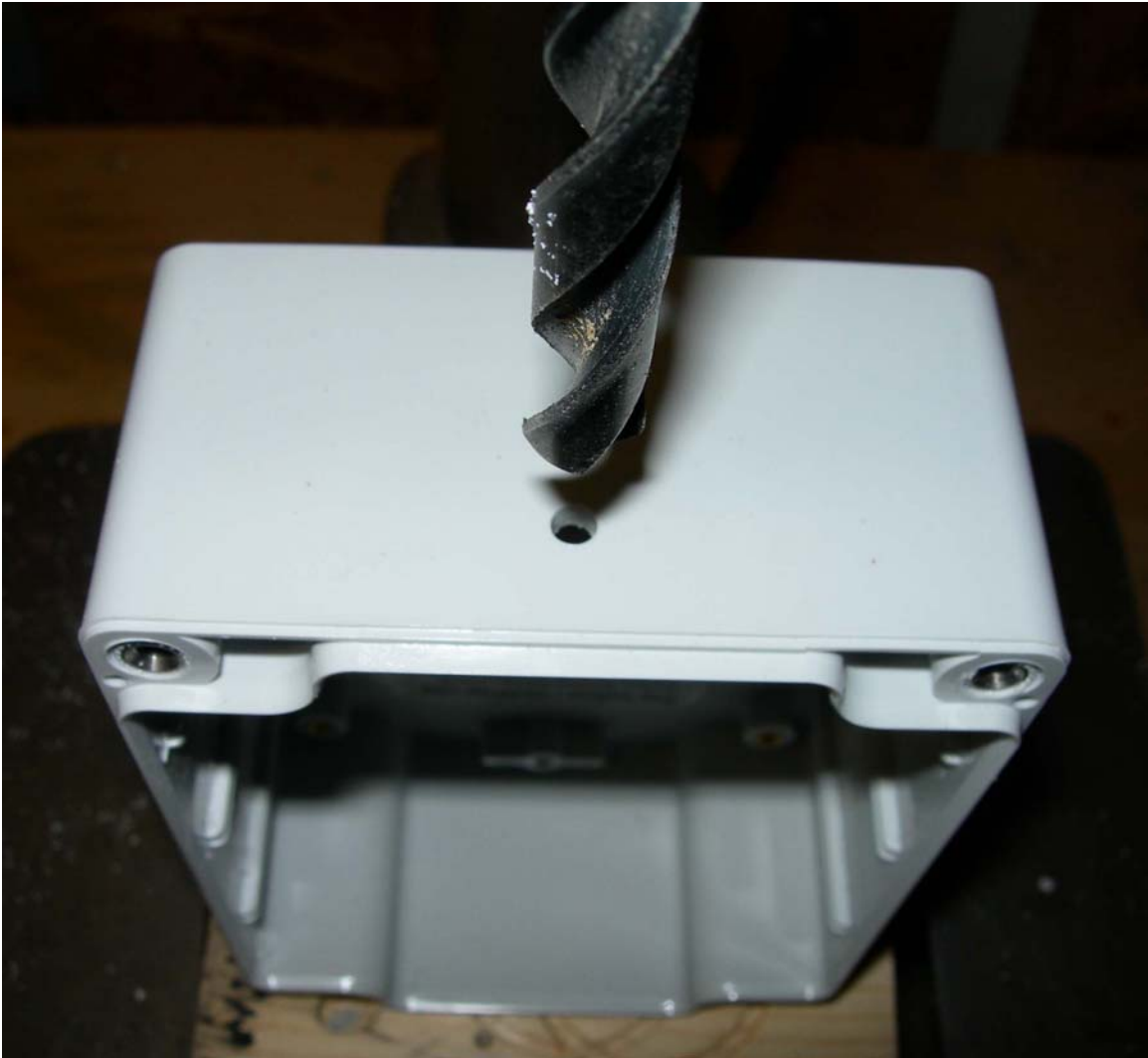
Once the plastic has been snipped between the holes then knock out the center.



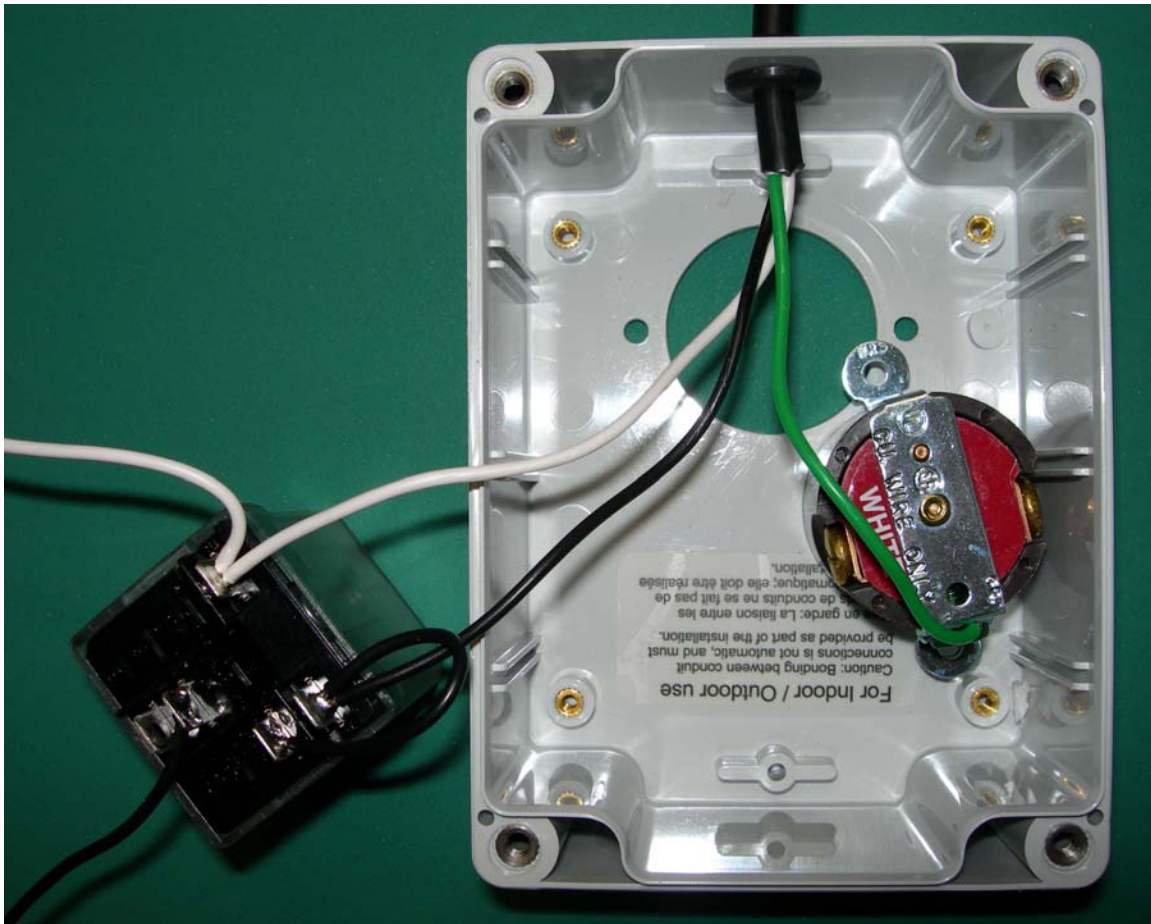
Grind out the hole to the edge of the scribed mark then grind to give the outlet a snug fit. You can use a Dremel tool, a file, course sandpaper, whatever method is available to you.



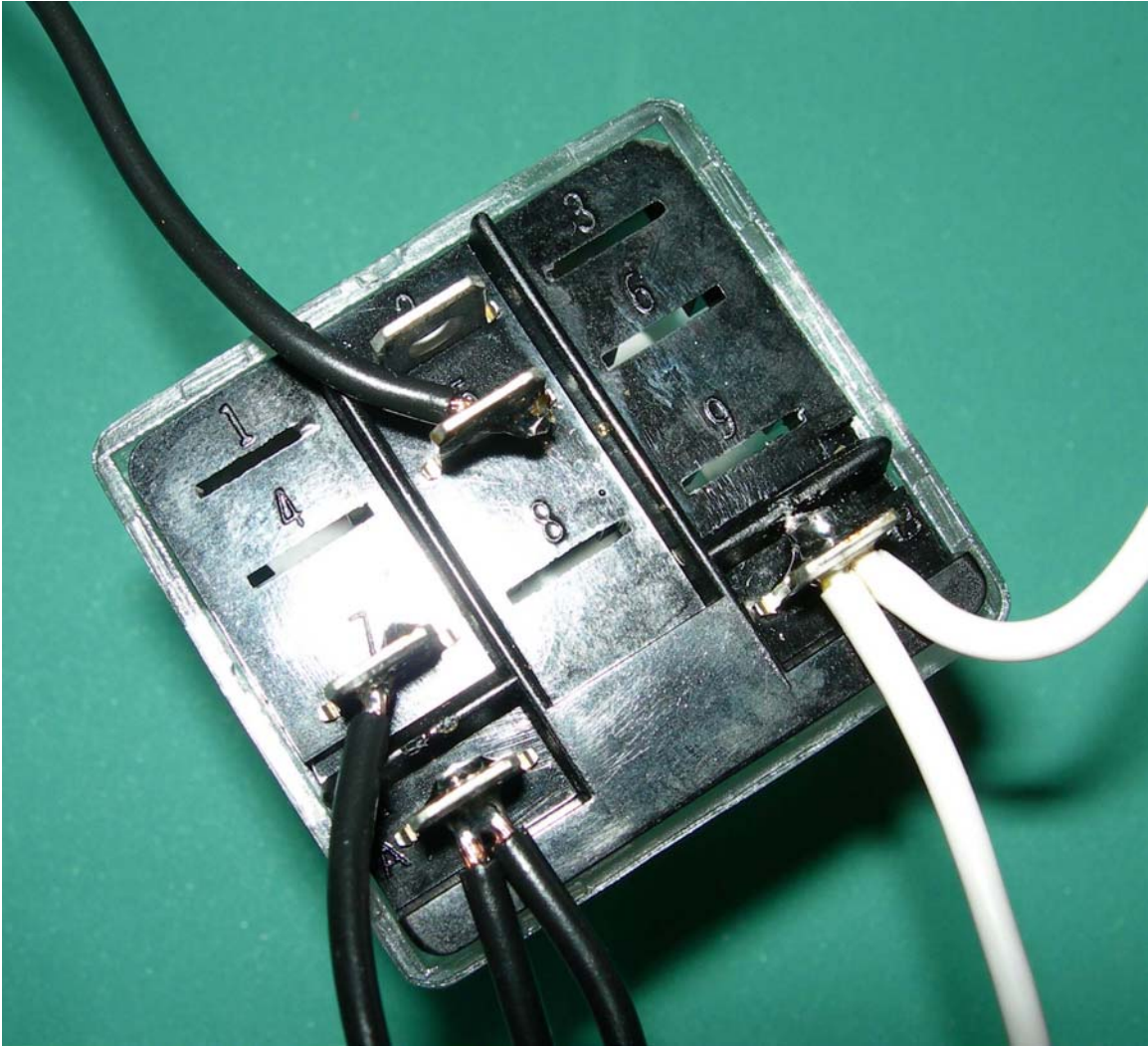
I used a fine sandpaper to smooth out the rough edges after grinding.



Drill a 3/8" hole at the end closest to the outlet hole for the rubber grommet. You can just pass the mains wiring through the hole if you like and skip the grommet. It's up to you.



Here we start to assemble. The white and black wire, to the left of the relay, go to the outlet. The neutral or white wire screw connection is marked clearly on the outlet. You can also see the grommet installed. It isn't shown but I used a ty-wrap around the cable near the grommet as a cable restraint.



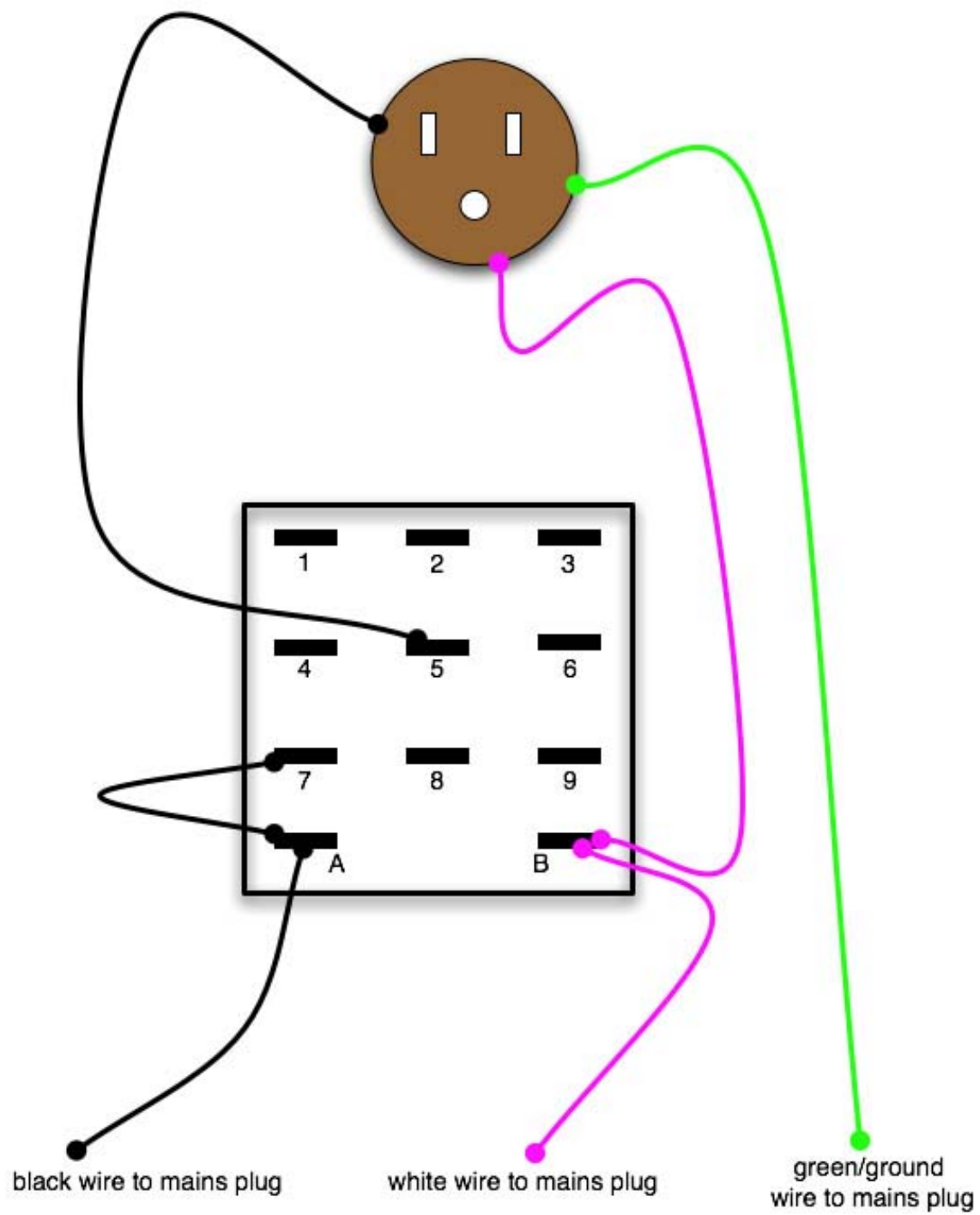
Here is a picture of the relay wiring. You can use the diagram on page 14 to do the wiring.



I used a piece of self-adhesive rubber to mount the relay on the box base to reduce the sound of the relay click. I used double-sided carpet tape to mount the relay to the rubber.



The final product. You can now use an ApplianceLinc to operate LED lights or any devices that have too small a load for the ApplianceLinc to operate.



Wiring diagram for the relay box.

Relay link:

http://canada.newark.com/magnecraft/389fxaxc-120a/power-relay/dp/35M3528?_requestid=220358

Box link:

http://canada.newark.com/jsp/search/browse.jsp?N=0&Ntk=gensearch_001&Ntt=1554F2GY&Ntx=&suggestions=false&_requestid=220684

Outlet link:

http://canada.newark.com/hubbell-wiring-devices/hbl5358/electrical-outlet-connector/dp/35B718?_requestid=220787