

Cowlacious Designs How-To



http://www.cowlacious.com/SupportDocs/Motion%20Detector%20How-To.pdf

Motion detector modification for use as a triggering device for the PET series.

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Picture of a common motion detector.

The one shown in this picture was purchased from Lowes for around \$13. It is a Regent Motion Activated Security Floodlight unit. Model MS35 Bronze.

Home Depot and Lowes carry different products depending on where you live, so you will have to check around. Also, different manufactures may use the same motion detection unit, so you really have to open the box up and look at the label on the motion detector. It should be the same as the one shown below to work for this How-To.

This Regent model uses a motion detector made by COOPER LIGHTING. The model of the Cooper unit is MS35 Raintight. If it says that on your motion detector, then you should be good to go!

Locate the back of the motion detector unit near where the mount is attached.



Place a small screwdriver in-between the case and the lid and pry back a little. There is a little catch that needs to be released.

Also, unscrew the Phillips screw that is in the hole at the bottom of the detector.

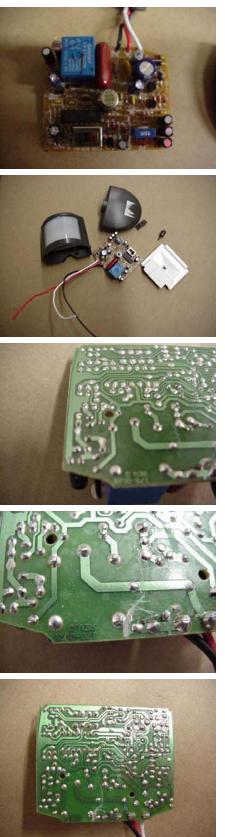
Do the same to the side of the unit and pull the cap away from the body. You will need to do the same thing on other side of the unit to loosen the two catches on the other side.

Picture with the lid off the unit.

Rotate the sensitivity switch all the way to the '-' symbol.

Using your fingers or a screwdriver, remove the sensitivity switch by pulling/prying it up.

Also, carefully pry up and remove the slider for the TEST/4MIN/12MIN switch.



Carefully pull on the wires and the white plastic to remove the circuit board from the unit.

You should end up with the pieces shown at the left.

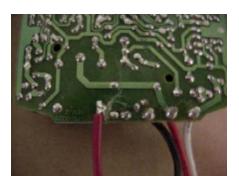
The big blue square box (it may not always be blue) is the relay that needs its connections modified.

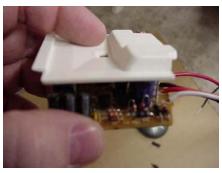
Turn the circuit board over.

With a utility or Exacto knife, cut away (scrape away) the trace between the pads as shown in the picture at the left.

This disconnects the 120 volts from the relay

Overview shot of the circuit board with the trace cut.





Solder a wire to connection on the left of where the circuit board trace was scraped away. This can be a very small wire as very little current will ever flow through it when connected to one of the PET's.

I used some 18 gauge wire in this case since it was handy, but you could use as small as 28 gauge wire with no problems.

Place the white plastic onto the circular unit in the middle of the circuit board.

Notice that the shelf part of the white plastic is facing toward the wires.

Carefully slide the unit back into its container.

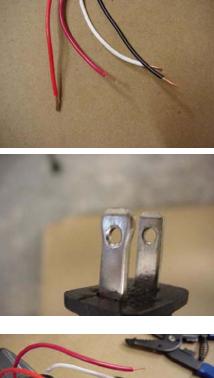




Snap the lid back on the container.

Push the Sensitivity knob back in, making sure to align the knob with its tab toward the '-' symbol.

Push the TEST/4MIN/12MIN back on the switch.









Strip the wires back about 1/2 inch.

Find an extension cord with a polarized plug. (The picture at the left shows a polarized plug. Note that the one prong is wider that the other prong. The wide prong is the neutral or if it helps you to remember, think Wide = White, since the wire that connects to the wide prong will be connected to the white wire from the motion detector).

Cut off the end of the extension cord that you would normally plug other devices into.

Strip back the wires from the extension cord and attach the wire from the wide prong to the white wire of the motion detector. Attach the other wire to the black wire from the motion detector.

Screw on wire nuts to keep the connection together and to prevent anyone from touching the wires and accidentally getting shocked.

Place the unit in TEST mode and plug it in. Remember, it may take almost 45 seconds for the unit to initialize when it is first powered up.

Always use the unit in TEST mode when used as a trigger device for the PET's.

The red wires can now be attached to a PET to use a triggering device. One of them will connect with the batteries (or wall-wart) negative lead and be placed in terminal 3 of the PET. The other would be placed in terminal 4 of the PET. It doesn't matter which one you use for which terminal.



Overview picture of the attachments.

The wires from the motion detector could be much longer allowing it to be placed long distance away from the PET and the prop that it is activating.

Black electrical tape can be place over part of the white plastic screen on the front of the motion detector to limit its field of vision. You would place the tape in vertical bands on both sides.

The smaller the center band becomes, the narrower the field of vision becomes.

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