



<http://www.deathlord.net/MotionTrigger/motion.htm>

Motion TRiGGER



Difficulty Rating:

There are few things in the unusual world of haunting that are more illusive than the automated portion of operating a spooky event. Sure, you can find how-to's on making jumping, pounding, flapping, flailing, dropping and hacking creeps galore, but when it comes to making these things go off by themselves at the right time, the search gets pretty grim. And if you can find it, just try giving it a voice. I have personally found how difficult it is to get a TOT to step on a section of carpet in my haunt because they figure it will trigger the coffin it is laying in front of. And of course they are right. So how do you trigger your leaping loafer and have him scream without advertising where the trigger is short of carpeting your entire haunt? Take a look inside.

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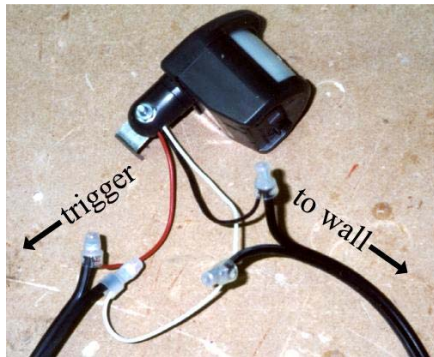
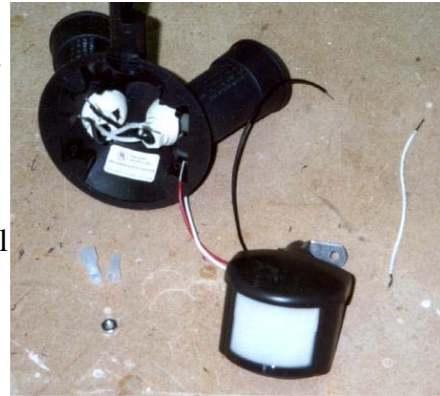


When making a motion detector for your 110 V animated event you can start with just a motion detector component like you see in the above picture shown hanging below and between the two flood lights. Or, you can buy the whole motion activated flood light assembly as shown above. The reason I use the assembly is for some unknown reason the separate component costs nearly twice as much as the whole set.

It is a very important point to make here that not all motion activated flood light sets can be made into the motion detector we are planning to make here. The reason for this is that some assemblies have additional circuitry attached to the inside of the mount for the flood lights that are required for the detector to work. And you sure don't want to have to solder these wires all back up together after tearing them out and then assembling them somehow to the side of the detector component. That's why you should look for the same brand as shown above if you can find it (It doesn't actually HAVE to be packaged in Spanish to work does it?). This was purchased from OSH and costs about \$10. It is the least expensive that I can find in my area.

First thing is to disconnect the detector from the rest of the assembly as shown here. There is an extra length of wire that is used in the attachment to the light sockets that you will want to save for the next step.

On close inspection of the photo you can just make out two wire couplers on the lower left. One is for coupling two small electrical wires and the other is one size larger that accepts three wires. You will need two of each.



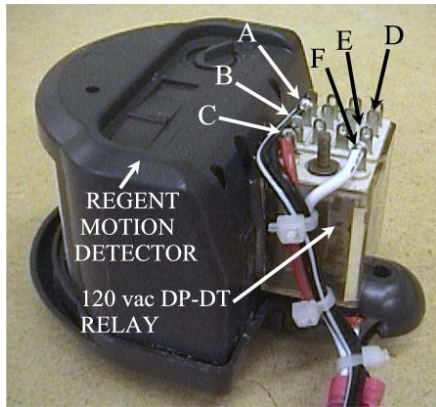
Now we will connect our leads to the detector. I use about 15' of cord going out to the trigger and about 5' going back to the wall socket. You can use standard zip cord and add your own ends to this arrangement, or you can simply purchase one 20' extension cord and cut it 5' from the male end and be done with it. Not only does this take 10 minutes less work, but it costs about 1/3rd as much as using separate components.



I already had the cord for my project so I assembled the one shown here in this how to. If you are assembling yours from scratch be sure to put a female plug on the TRIGGER side of your detector and the male on the WALL side.

To attach to the detector clamp the BLACK wire to either leg of the extension cord that will be going to the wall. Twist one end of the short section of white wire that came from the flood light assembly to the WHITE wire on the detector and then clamp both to the other leg of the cord going to the wall. Now clamp the RED wire to either leg of the cord going to the event or trigger (the female cord end). Now clamp the short WHITE jumper wire to the remaining leg of the trigger cord. Next we see how this actually makes your oversized dolly barf green chunky water.

Obtained from
Omarshaintedtrail.com



While this little goodie shown here was not used on this particular how-to showing how to set up a fully automated sound and trigger system, I wanted to add this section here so you could see how you can solder up your own relay in a very small, compact package that has the capacity to totally isolate trigger signals.

Once you have your detector wired up so it will send out a 110V signal, you will cut the output leads short and solder them to the C and F terminals of Shown is a 120V, 4 Pole, Double Throw, KH style or "Ice Cube" relay. [120VAC D.P.D.T. Relay.](#)

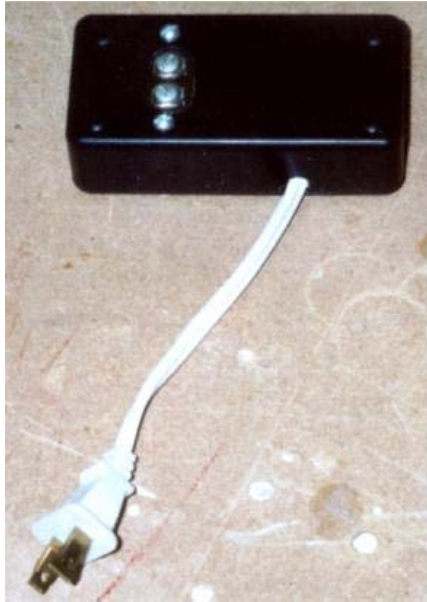
When power is then triggered to the relay, there are little solenoid-driven points that are magnetically pulled together, closing the circuit to some of the other terminals and opening the others. The A and B arrows and the E and F arrows shows you where to connect up to two separately triggered circuits. This is important, as on some props you may have to isolate two circuits in order to eliminate "ghost" triggering of playback devices, as we learned on our [Lynching](#). Once you have soldered leads to the A and B terminals for instance, you will then run these to your timer to signal it to make your animatronic go through it's cycle and then resets 20 seconds later. Then you will solder to the E and F another set of leads that will then signal another timer to tell the Mimic Machine when to turn on and then the timer will keep it from triggering again for 20 seconds until the first timer resets through it's cycle. For an expanded look at using the ice cube relay as shown here, visit the [Relay Trigger](#) how-to.

Here is the actual relay assembly we used here in this set of photos for the how-to. Jim Kadel of [Haunt Master Products](#) sells a little pre-made package that makes your detector actually trigger two points that is very affordable and easy to use. He calls this an [Interface](#) and when your detector fires it sends a 110V signal down the female cord which then triggers the relay inside this little plastic box which then simply closes two point, like the points described in the last section above.



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The way the Interface comes from the manufacturer is as shown on the left. Since this is a stand-alone device, I wanted mine in a tougher package so I purchased a small project box shown on the right from Radio Shack to put the Interface inside of.



I just cut a slot out of one side of the box, drilled two holes and mounted the attachment board facing out. I also had to grove a hole out from between both top and bottom sections to get the power cord out. Now we are ready to put this to use.

The goodie you see here is an [Event Control Timer](#), also made by Haunt Master Products. This is at least the most important part of my haunt. It has the ability to turn your Jumping Jezebel on, leave it on for exactly 3 seconds, turn it off and then keep it from being able to be triggered again

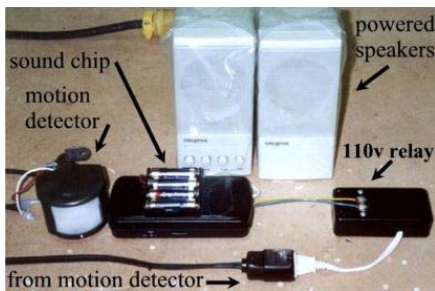


for, say, 20 seconds. If you run two wires from your solenoid, or Interface, to the side attachments on this ECT it will detect the circuit closure and send 110V power out of the power outlet on the right side of your picture and to your Jezebel.



The playback device I use for my projects anymore is the [Mimic Machine](#) which records 8 seconds of sound. This unit has red LED eyes on on and extension wire, built in mic & built in light / motion activation and at about \$16 is the best deal I have ever found.

You can order these from the Halloween Club in Santa Fe Springs, Ca. over the phone at (562)-407-3284. For patching the sound out of this device you need to open up the case and solder external speaker wires to the two terminals on the speaker itself then solder to the other end a phone jack to plug into the powered speakers. This how-to doesn't show the Mimic in use, but a home-made unit that does basically the same thing.



Here you will see a nearly complete assembly of motion detection, circuit opening and a sound chip (digital voice recorder) box to produce a sound signal that is then fed into the powered speakers so we can hear the voice of the monster. I sometimes use the powered speakers similar to the above, and sometimes I use the much louder karaoke machine to relay the sound. The solenoid, or Interface, can have just this hooked up to it or can go to an animated prop to trigger that, or both. What is not shown in the photo above is the ECT (shown below) hooked up.

You will need two more wires coming from the 110v relay that will be attached to the side mounted screw attachments on the ECT.

The FORMULA to hooking this together is this;

Plug ECT into 110v wall socket.

Plug 110v power line to event into the female 110v out of the ECT.

Plug motion detector into 110v wall socket.

Plug 110v relay into female out of the motion detector.

Attach the two wires from the out of the 110v relay to both the trigger to the digital sound chip and to the side attachments of the ECT.

Hook speaker out wires from the digital sound chip to the line in of the powered speakers.

It might seem like a hell of a long way to go to give your animatronic a voice and become animated, but so far this is the simplest system I have ever found to achieve everything we have just achieved here in this combination. This is the same system I use for my [Coffin Coronary](#), [Aerial Executioner](#), [Crypt Keeper](#), a static werewolf, [Trash Can Trauma](#) the [Exorcist](#) and the new [Lynching](#). Hopefully your next haunt will become even more animated than ever with the help of our Floodlight Motion Detector!

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