



<http://www.vilethings.com/id44.html>

Switches



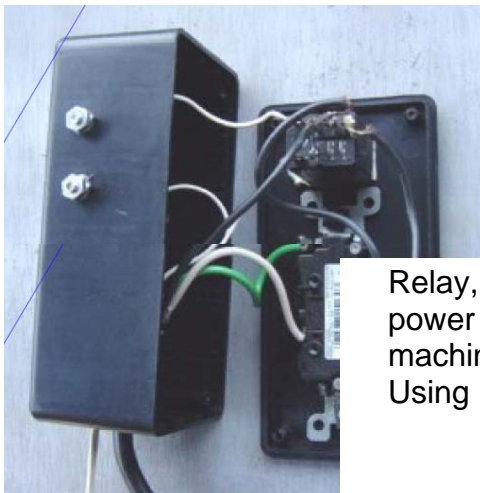
In the Hinton Haunted House, 2001, I needed a way to switch some lights and sound effects for the Scrim Box effect.

I listed my options as:

1. Manually switch the sound and lights.
2. Use a motion detector - type switch.
3. Use 12 volt current to switch 120 volt supply.

I like the idea of manually switching effects, the timing is nearly perfect. However, I couldn't be with the prop constantly. I needed something automatic.

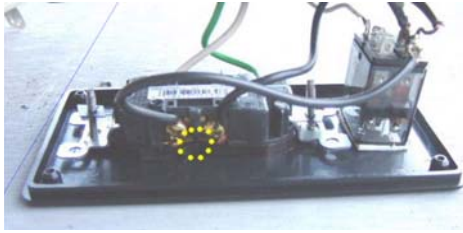
Motion Detectors are great, but the sensitivity adjustments aren't very precise. Also, the "run time" is limited to whatever the Motion detector offers, typically 5 seconds or 1 minute. (Not a lot of options here...)



12 volt electromechanical relay. This low - tech approach to prop control worked fairly well for me.

The picture here shows my 2001 switching device. This is nothing more than a wall receptacle, a twelve volt Electro Mechanical Relay, a twelve volt power supply ("wall wart"), a 120 volt power source (extension Switches cord), Two #10 - 32 machine screws (Switch contacts), and a project box. Using 12 volts DC is a safer method of switching AC current.

Obtained from
Omarshauntedtrail.com



The photo here, although a bit over - exposed, shows how I was able to use each side of the receptacle independently.

The connecting tab on the "hot" side (copper - colored side) was broken off, leaving me with two separate outlets.

One side is wired to the "Normally Closed" circuit of the relay. I used this for the room lights. The second outlet is wired to the "Normally Open" circuit of the relay. This is used for the effects (sound and lights).

Wiring the switch this way guaranteed that the Scrim effect would work, since that effect is a lighting - based illusion.

One outlet is always hot, typically wired as the "Normally Closed" side. The second outlet only activates when the switch is "pressed," and in this case, it is a momentary switch - if you were to jump up and down on the (mat) switch, the lights would switch back and fourth.

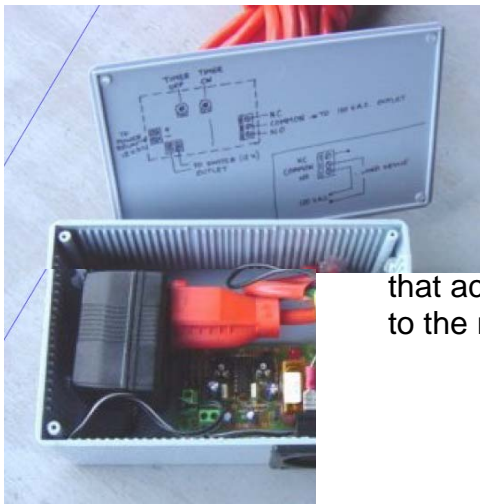
That was my biggest complaint. I had no control over how long the effect cycle would run. I have seen several "Event Control Timers" at different Haunted House Supply sites on the Internet. At around \$50.00, the price is good, especially considering some of the flexible features. I built two different Event Control Timers for the 2002 Haunt.



The design is very similar to our 2001 timer.

This unit has only one cord exiting the box. The switch is wired to the spring - type speaker terminal cup on the side.

A timer module was added to the circuit, and this gives us the control we were lacking in 2001.



I cut the extension cord close to the female end.

I used the female end to power the 12 volt "wall wart" that powers the timer module.

The speaker terminal cup replaces the switch that activates the timer module. The wall receptacle is wired to the module's output relay. This timer has two "pots,"

The first adjusts the amount of delay. (when the effect is initially triggered, there will be a delay before the output relay is energized.) The second pot adjusts the length of time the effect runs.



I sketched a wiring diagram on the inside cover of the project box.

I'm not very good at electronics, and this diagram may come in handy should I ever need to adjust or replace anything in the future.

Above is a better view of the inside of my "delay timer."

My 2001 relay switch was built from parts purchased at Radio Shack and Home Depot. The hardest part of the construction was cutting the shape of the wall receptacle with a Dremel tool. I estimate the total cost of the 2001 Relay Switch to be about \$25.00 . I'm sure it could have been built for MUCH less shopping elsewhere, but I was in a hurry...

The 2002 Event Control Timers were built from parts purchased from MCM Electronics (with the exception of the extension cords and wall receptacle).

Following is a list of parts (including part numbers)

# 28-4750	On Delay Timer Module (1 - 180 sec.)	\$19.95
# 50-010	Spring Terminal Cup	\$.89
# 28-3075	12 volt DC adapter (500 mA)	\$3.99
# 28-6465	Fuse Block (1/4" x 1 1/4")	\$.99 (X 2)
# 313.600	6/10 amp slo blo fuse pkg.	\$3.89 / 5pcs.
# 313005	5 amp slo blo fuse pkg	\$2.89 / 5pcs.
# 28-975	Project Box (4 5/16" x 7 1/16" x 2 3/8")	\$4.39
# 108-300	Female crimp terminal (16-14 ga. /1/4")	\$6.74 / 50pcs
	Wire Nuts (10 / 18 ga. yellow)	\$4.00 /25pcs
	25 foot 14/3 extension cord	\$4.00
	Wall Receptacle	\$.89

MCM Electronics also sells different (Cebek brand) timer modules:

Sequential Relay Module (4 or 8 relays in sequence)

- Flip - Flop Relay Module
- Single Event Timer Module
- Sequential Dual Timer Module
- Repeat Cycle Timer Module

Most of these modules are also available in different timed lengths (1-180 sec., 2-45 min., 20-150 min.)

As I mentioned earlier, I'm not well versed in electronics, but I was able to incorporate these timer modules into my boxes Switches <http://www.vilethings.com/id44.htm>