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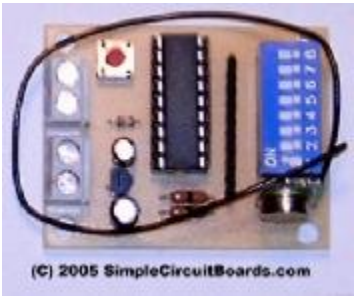
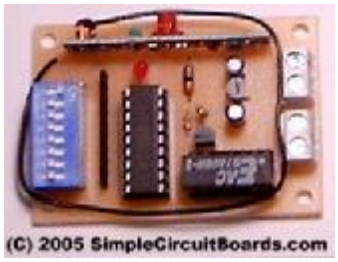
Remote (RF) Trigger Board





Here are boards designed to allow you to remotely trigger a device that requires a dry contact switch closure (normally open contact). These two boards use RF technology which eliminates wire connection between your trigger (PIR, mat, etc.) and works at distances of at least 50 feet – even through walls. The boards are addressable, meaning that they will not interfere with other RF devices. This means that you can have many of these trigger boards operating at once. They are small in size allowing them to be squirreled away out of view.

There is also a version of the transmitter that operates with normally closed contacts, too.

Great for activating Halloween effects in a haunted house!

Details:

As mentioned above, these boards use RF technology (434 mHz) to allow you to activate a remote device when the trigger source (PIR, pressure mat, etc.) is tripped. There are 2 boards that comprise this setup – a transmitter and a receiver. The transmitter is attached to the device that is tripped (e.g., PIR) and the receiver is attached to the device that you want to activate (e.g., talking skull). The transmitter requires a dry contact closure (that is normally open until it is tripped). The receiver will provide a dry contact closure to the device that you want to activate. On both boards, there is an 8-position DIP switch. These DIP switches set the addresses of the boards. The address for the transmitter must be the same as the address on the receiver for the boards to talk. For example, if switch 1 on the DIP switch on the transmitter is set to "on" and all the others are set to "off", then it must be exactly the same for the receiver for them to communicate. There are eight switches on each DIP switch which means that you can have up to 256 different addresses. Therefore, you can have up to 256 pairs of transmitters and receivers operating at once. For testing your address setting, there is a LED on the receiver board that will light up when it receives a valid transmission from a transmitter with the same address. The transmitter has a small pushbutton on the board that acts as the trigger event when pressed allowing you to set and test addresses before deploying them. Another nice feature is that you can have several receivers that all have the same address as a single transmitter. When the transmitter is activated, all receivers with that address will activate. So now when someone steps on a mat, several effects can all start at once – all done without any wires!

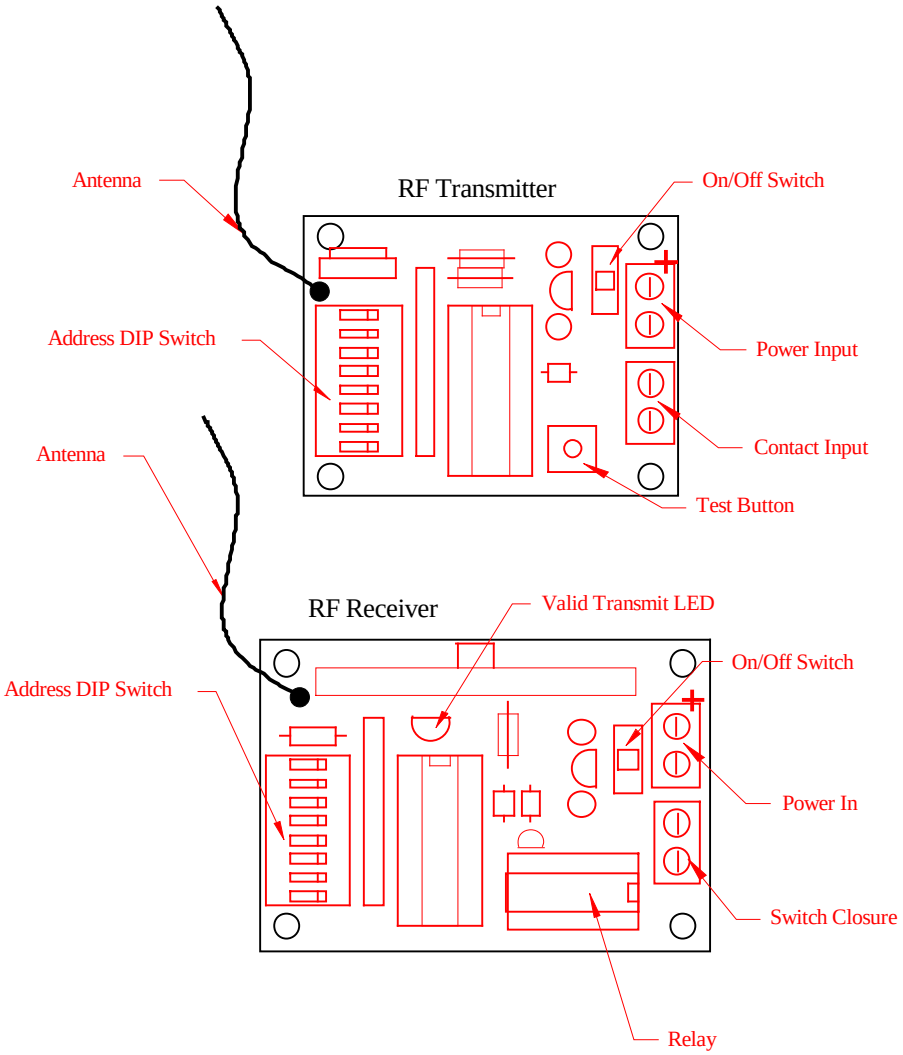
Operational Notes:

The board has a voltage regulator that allows you to power it with DC voltages of between 7.5 V and 24V. This allows it to be battery powered or operate off of the associated device's DC power source.

The boards draw very little power while waiting for communication. There is a 6" antenna wire that should be exposed for maximum distance. It can be looped and stuffed away for short distances. On the receiver, there is a small relay that provides the contact closure for the device to be triggered. This relay can handle up to 500 mA if you want to pass DC voltage through it to power something (like a low wattage light bulb). This relay is only activated as long as the transmitter sends its signal (as indicated by the LED on the receiver board).

NOTE: A version of the transmitter that is triggered by a contact opening (as opposed to closing, as mentioned above) is available. Some PIR devices have normally closed contacts that open when the PIR is triggered. This new version will work with these PIRs.

Board Layout:
Below is a diagram showing component placement.



Specifications:

- Input Power: 7.5 – 24 VDC
- Board Dimensions: 2.0 x 1.5 inches (Transmitter)
  2.4 x 1.7 inches (Receiver)

Disclaimer:
These boards are designed for educational use only. In no circumstances should these circuit boards be used in critical situations where failure could mean injury or property damage.

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- Motor Control Boards
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