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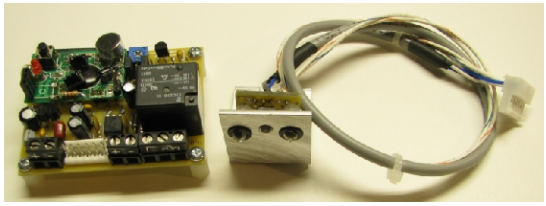
Target Board with counter & sound module



Selectable counter will count each hit then set a relay when that count is reached. With each hit an output is provided that has the power switched with an adjustable time from 5 - 15 seconds.

CONNECTIONS:

POWER - can be a 6 cell battery pack (7.2 volt) or other supply up to a 12 volt DC source.

SMOKE - can power a smoke unit, DC motor or similar device. The time on is adjustable by the potentiometer from about 5 seconds to 15.

RELAY - When the selected count is reached the relay will turn on. The counter will either stop counting and the relay will remain on or will continue to count with the next hit (refer to LATCH).

LATCH - Remove jumper and relay will remain set when the count is reached. With the jumper in place the relay will follow the "SMOKE" output, set for the duration it is adjusted for and will continue to activate with each additional hit after the count is reached.

OPERATION:

The detector will respond to most infrared signals (Tamiya, FOV, Vs). It is important to keep in mind when mounting it. Ambient light or sunlight (even reflected light) can set it off. It's best mounted inside a target building, vehicle or other structure. A small opening in the structure to allow the infrared from the tank or other shooting vehicle should be made. This protects the detector from false triggering and makes the target more of a challenge to hit (more of an issue outdoors in bright sunlight).

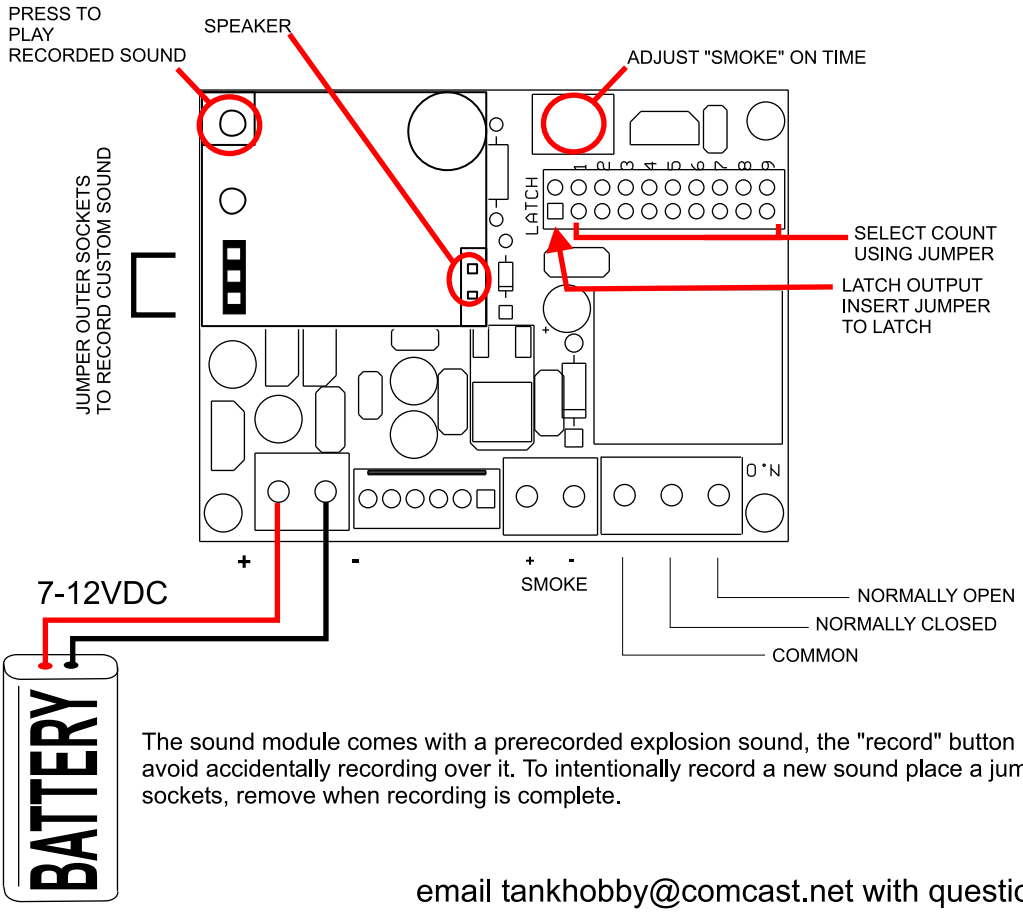
When attaching devices keep in mind the power restrictions and battery drain of the device powering it (unit can be powered by a separate power supply, provided it's DC and between 7-12 volts).

If using a battery the use of a BEC is recommended for Lipo, NiMH & NiCAD types to avoid battery damage from excessive discharge. Use a BEC appropriate for the battery type being used.

Best sound from the sound module is obtained when the speaker (not included) is mounted in an enclosure. The better quality the speaker the better the sound. An eight ohm speaker at 0.5 watts or more is recommended, although lower wattage can be used.

The relay connections are "normally closed" and "normally open". The normally closed contacts are shorted until the relay is set, then the contacts are open (disconnected). The normally open contacts are disconnected and when the relay is set the contacts are shorted.

To remove the detector board from the aluminum bracket simply push the two LEDs in from the front, the assembly will pop out from the back. The black LED housings secure the assembly to the bracket.



IMPORTANT!

- DO NOT make any connections with power applied. Ensure power is disconnected before mounting or making any connections or handling board.
- DO NOT attach any other devices except to the speaker, SMOKE & RELAY connections.
- Connect power source only to the POWER connection. Do not daisy chain power from this device to other devices.
- The "-" connection on the SMOKE terminal block is not a ground connection. It's intended for the negative wire from the attached device.
- DO NOT allow board or detector assembly to get wet.

The sound module comes with a prerecorded explosion sound, the "record" button has been replaced with a header strip to avoid accidentally recording over it. To intentionally record a new sound place a jumper between the two outer header sockets, remove when recording is complete.

email tankhobby@comcast.net with questions

NOTES:

- When using HenLong smoke unit connect a 10 ohm 1 watt resistor in series with the motor. This will help prevent noise from the motor interfering with the circuitry.
- The MicroMark smoker works best with a 12 volt DC supply. Lower voltages will not generate as much smoke.

more to come . . .