

REPULSAR IV ANTIBURGLARY DEVICE INSTALLATION AND OPERATING INSTRUCTIONS

WARNING

1. For safe and reliable operation read all instructions fully before installing.
2. Do not install the Repulsar IV in areas where infants or physically handicapped people are normally present.
3. Do not install in buildings where multiple tenants share a common ventilation system.
4. Do not install in aircraft or in passenger compartments of trucks or autos.

APPLICATIONS

The Repulsar IV is ideal for use in the following areas:

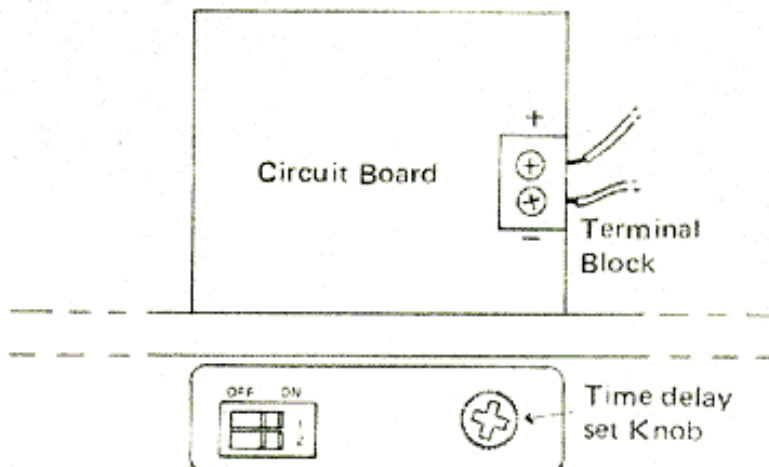
Residences	Retail Shops	Barns
Summer Homes	Hunting Lodges	Warehouses
Business Offices	Storage Sheds	Garages

The Repulsar IV is intended for indoor use only. Operation may be impaired by rain or moisture.

DESCRIPTION OF OPERATION

The Repulsar IV is based on the use of four 6 ounce aerosol cans equipped with total release actuators. When this actuator is depressed it locks in the spray position allowing total release of the contents. The cans are suspended in guide tubes by a wire trigger latch. When the trigger is pulled by the solenoid the can drops down the guide tube until the actuator tab strikes the impactor, thus releasing the OC which sprays downward. The OC then spreads quickly throughout the room causing the intruder to flee within a matter of seconds.

The solenoids are controlled by a time delay circuit and electronic sequencer with a time setting control and two switches. When the control knob is fully counter clockwise the time delay setting is near zero. When the knob is fully clockwise the time delay is 35 to 40 seconds. See Figure 1.



The upper switch (1) is used for time setting the unit while loaded. In the OFF position this switch disables the solenoids so the cans will not drop when power is applied. In the ON position the Repulsar IV will operate normally. The lower switch (2) is used to set the Repulsar IV for single or multiple can firing. In the OFF position the Repulsar IV, when energized with 12 volt DC, will fire one can at the expiration of the time delay and then stop. When power is removed and reapplied, the Repulsar IV will wait for the time delay, fire the next can and then stop. This feature is most useful when the Repulsar IV is coupled to an alarm system with automatic reset. In this way the security system can respond with OC to multiple break-in attempts occurring over a long period of time. This capability is especially valuable for remote warehouses and vacation homes. With switch 2 in the ON position, the Repulsar IV will fire each can consecutively with the preset time delay between each firing or until power is removed whichever occurs first. This mode of operation is ideal for applications requiring a larger volume of OC. With a time delay setting of 40 seconds the Repulsar IV will provide a relatively continuous blast of successive cans for nearly three minutes.

The Repulsar IV operates on 12 volt DC supplied externally from an alarm system. This power source must be filtered with a current capability of 3/4 amp. For a typical installation the Repulsar IV would be wired to the terminals of a 12 volt alarm system that are normally connected to a siren or bell. If you do not have a suitable alarm system and do not wish to get one, then the Repulsar IV can still be made operational with only a few items as indicated in Figure 2.

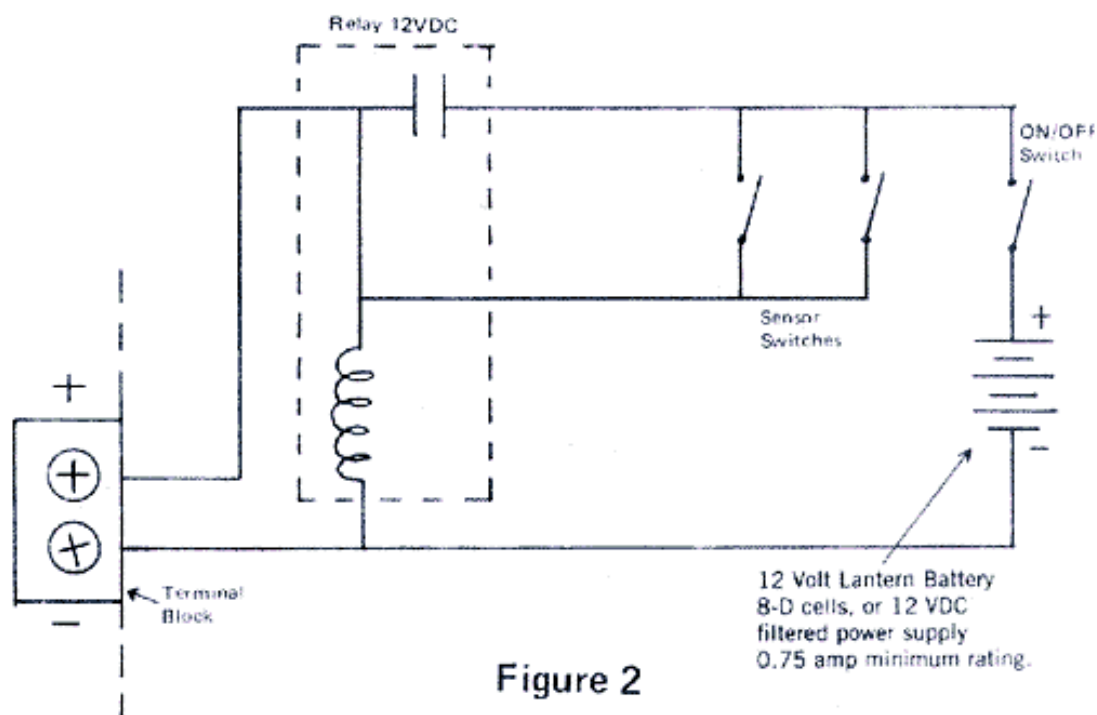


Figure 2

INSTALLATION

The Repulsar IV is intended for ceiling mounting only. Screws are provided that are suitable for mounting to a wooden or other solid surface. These screws are not suitable for plaster or dry wall which require the

use of molly bolts of proper length, or other appropriate anchoring devices. In order to install the Repulsar IV a cutout in the ceiling is necessary. Cut out the template provided on the second sheet and use this to draw the cut out pattern on the ceiling. Be sure the cutout falls between the overhead rafters to allow clearance for the guide tubes. The Repulsar IV will fit any ceiling framed with 2 x 8"s or larger.

The Repulsar IV can be mounted in a suspended ceiling by using a backing board of 3/4" plywood. The backing board in this case should be at least 18 inches wide by 2 feet long so that it spans the ceiling panel from track to track. Use No. 8 wood screws of appropriate length to provide at least 1/2" penetration into the backing board.

A pair of wires (22 ga. min.) must be routed to the ceiling opening and connected to the terminal block on the circuit board before fastening the Repulsar to the ceiling. Observe proper polarity as shown in Figure 1. The other end of the pair should be connected to the 12 volt output terminals of the alarm system (normally used for a bell or siren) or to a separate power supply triggered by an alarm contact closure.

TESTING

Note: Do not insert the aerosol cans until all preliminary testing is completed.

With the Repulsar IV properly wired to your alarm components you are ready for testing. First set the time setting control knob to a mid point setting and move switch (1) to ON and switch (2) to OFF. Refer to Figure 1. Turn on the alarm system. The Repulsar should remain silent. Trigger the alarm system by operating one of the sensor switches. The Repulsar warning horn should sound for approximately 20 seconds and then stop. At the moment the warning horn stops you should be able to hear a click coming from one of the solenoids. Adjust the time setting control knob and repeat the test until the desired time delay is achieved.

The next test is functional testing and includes the aerosol cans. THIS TESTING IS PERFORMED WITH THE AEROSOL CAN SHIPPING CAPS ON. Turn the cans upside down and place the disc shaped lead weights in the bottom of each can. Turn off the alarm system. Insert the aerosol cans into the guide tubes upside down (shipping cap pointing downward). Push the cans with lead weights up into the guide tubes until the cans lock into position. Rotate the impactor into the set position as shown in Figure 3. Repeat the test as done in the previous paragraph. This time a can should drop and the shipping cap should strike the impactor. Repeat the test three more times to see that every can drops. Push the cans back to their lock position and move switch (2) to ON. Repeat the test and note that all four cans drop consecutively on a single alarm activation. These tests may be repeated several times to assure proper operation. Upon completion of the tests rotate the impactor to remove the aerosol cans.

***CAUTION:** When adjusting the can orientation and impactor position during the following step it is wise to keep a finger partially inserted into the guide tube so that if the can should accidentally drop you do not get hit on the head with it or get sprayed in the face.

Remove the shipping cap from each of the four cans. During this next step be careful not to push on the actuator tab on the aerosol can. Carefully insert each aerosol can with lead weight into each guide tube until it locks in position. Rotate the can and the impactor until they are properly aligned as shown in Figure 3. Your Repulsar IV is now operational.

If in the future you wish to change the time setting it is not necessary to remove the cans. Just move the upper switch (1) to off. This disables the solenoids. As a further precaution you may wish to rotate the impactor part way out of position. The new time delay setting can now be checked by noting the duration of the warning horn. When resetting is complete slide the upper switch to on and rotate the impactor to its alignment position as shown in Figure 3.

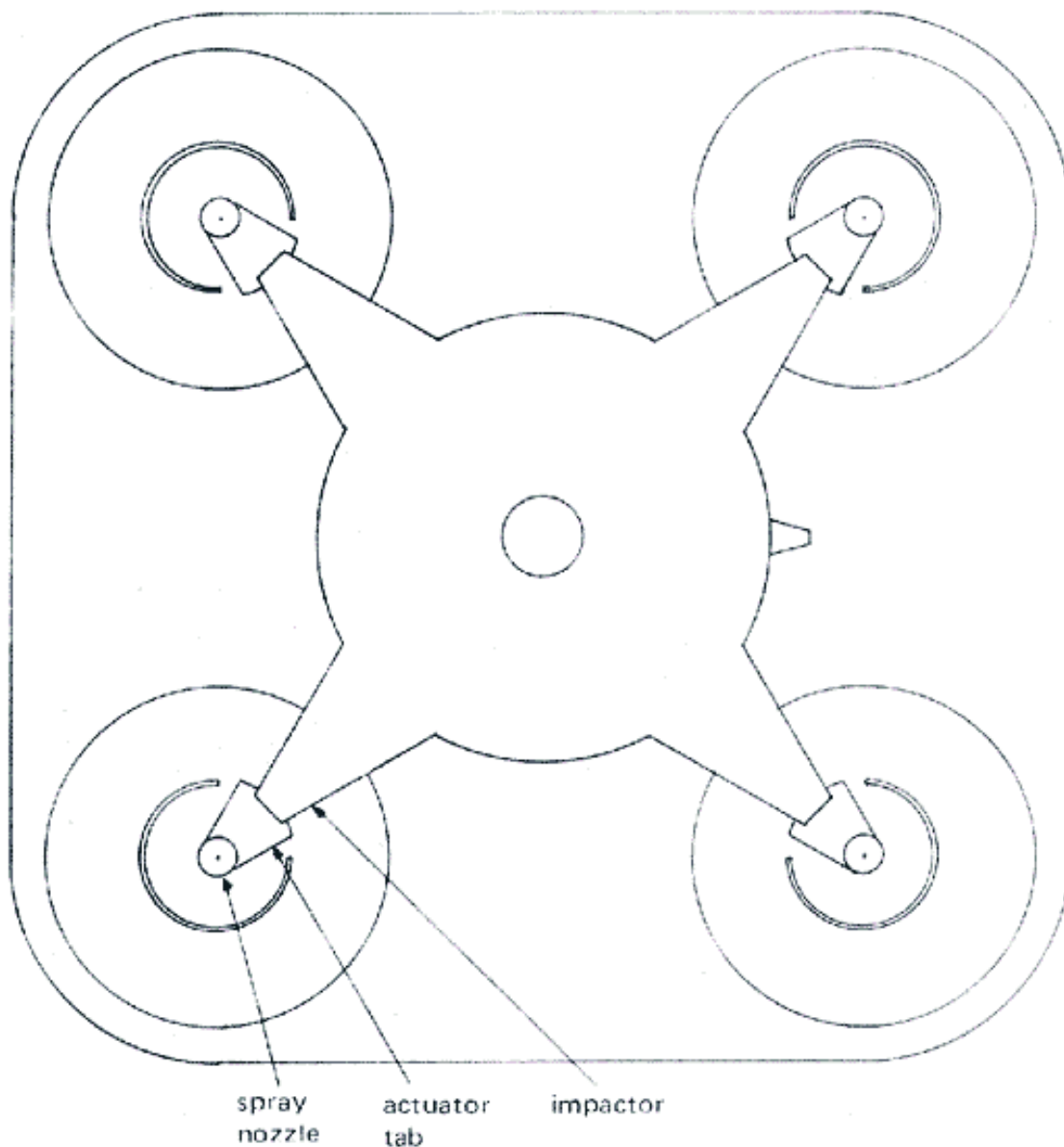


Figure 3

RESETTING

When a Repulsar has been discharged the aerosol can must be replaced before the unit can be reused. Replacement cans are available from REVEL TECHNOLOGY and include instructions for replacement. Do not use anything other than a REVEL TECHNOLOGY replacement can since poor performance and damage to furnishings could result.

ABOUT OC PEPPER

Oleoresin capsicum (OC) is a natural nontoxic food additive derived from hot peppers. It is also an inflammatory agent. In aerosol form, even in light concentrations, it will cause uncontrollable coughing. In higher concentrations the coughing is worse accompanied by a choking feeling and nausea. Other effects are a burning sensation in the eyes and excessive tearing. Heavy exposure may also cause a burning sensation on exposed skin. It is nearly impossible to accomplish any task in the presence of this material and a person's primary concern is to get away.

CLEARING OC AFTER DISCHARGE

The aerosol in the exposed room will typically dissipate in 3 to 4 hours. Residue will usually be unnoticeable but may be removed if desired by normal household cleaning procedures. Ventilation will speed the airing out process.

TREATMENT FOR EXPOSURE

For light to indirect exposure simply move to an unaffected location. The effects should subside and disappear within 30 to 45 minutes.

If you are sprayed directly, flush the affected area with cool, clear water. Do not rub. Remove any saturated clothing. Do not apply salves or creams to the affected area since this would only trap the OC against the skin surface. If symptoms persist see a physician. When using water flushing on a person who wears contact lenses, be certain to remove the contact lenses before flushing the eyes.

Note: Allergy sufferers may have extra sensitivity.

LIMITED WARRANTY

This warranty is exclusive and in lieu of all other warranties whether expressed, implied or statutory. Revel Technology, Inc. hereafter referred to as Revel, warrants its products for 90 days from the date of shipment.

Revel, in these instructions and all advertising and descriptive literature, has attempted in good faith to accurately convey the operation, capabilities, and limitations of its products to the purchaser. Judgment concerning suitability and safety for use of its products in any particular application rests solely with the purchaser.

Revel's liability, arising out of the supplying of such products, or their use, whether on warranties, due to negligence or otherwise, shall not in

any case exceed the cost of correcting such defects, or replacing such defective product with the same, or similar, product of equal or greater value which is being manufactured at the time replacement is made.

This limited warranty shall not apply to any part of any product which shall have been abused or misused physically or electrically, or whose appearance has been modified. In no event shall Revel be liable for consequential damages nor for any amount in excess of the net price of the products found defective or not in conformance with applicable specifications.

With respect to products found to be defective or not in conformity with applicable specifications, the product will be repaired or replaced and shipped back at Revel's expense.

IN CASE OF DIFFICULTY

Symptom

Possible Causes

- | | |
|---|---|
| 1. Warning horn does not sound | a. Input polarity is reversed.
b. Power is not reaching the Repulsar.
c. Time delay control knob is fully counter clockwise. |
| 2. Aerosol can does not drop | a. Insufficient voltage or current capability from the alarm power supply.
b. Test/operate switch (1) is in off position.
c. Bent trigger wire. |
| 3. Aerosol can will not lock in up position | a. Lead weight is upside down
b. Bent trigger wire |

If difficulties persist, call or write for assistance.

REVEL TECHNOLOGY

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