

MarineGuard Network

Presents
THE

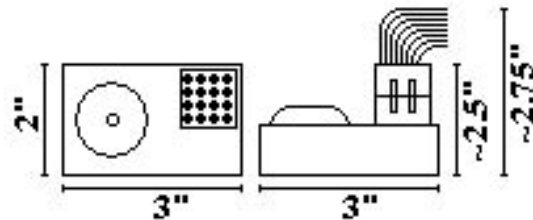
CG1

The Ideal System for Small Boats



CycleGuard's CG1 is a compact, false-alarm free security system designed specifically for the protection of boats. However, it is also ideal for use on motorcycles, cars, RV's, and small aircraft. It is simple to use, easy to install, reliable and convenient. The CG1 is not based on a tilt switch or shock/vibration detector. Utilizing the unique and invisible *Pulsor*, this system is monitoring the stress on the boats deck. The system provides a circuit for lights, a circuit for a horn/siren, and for an audible pre-alert.

For **The ultimate system**, add GPS monitoring and know exactly where the boat is located should it be moved.



The CG1 can accept all Normally Open security devices. These devices will immediately trigger an armed system. Alarm condition will last for two minutes. During this time the horn/siren will sound and the lights will activate. The system will then reset and wait for another violation. A low current draw (10 mA) allows for extended operation without taxing the battery.



System Components

Control Panel
System Status L.E.D
Siren
Deck Sensors

System Accessories (Purchased separately)

- * Contacts w/ Magnet
- * Alternate / Auxilliary Siren
- * Wire
- * Crimps
- * Wireless Arm/Disarm package

The Basics of Installation

Plan the system before beginning installation:

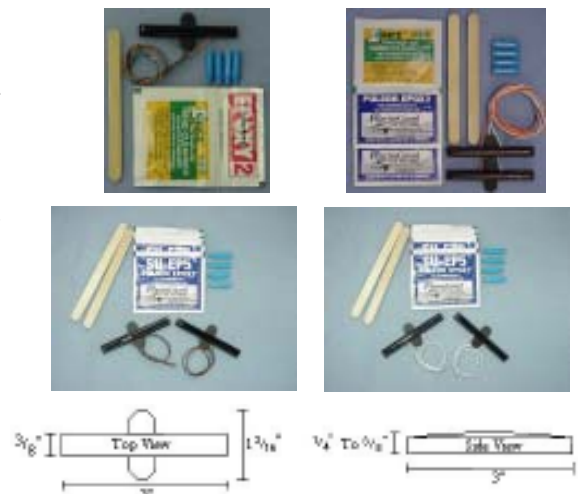
1. Determine locations of Deck Sensors
2. Determine location of siren
3. Determine if you will be connectng to 12 Volt lights
4. Determine if you will be using magnetic contacts
5. Determine how wiring is to be accomplished. (Recommended: 18-20 AWM)

Recommended Sequence of Installation

1. Mount Deck Sensors and any accessories
2. Run Wire
3. Attach wires to control panel
4. Mount control panel
5. Power system
6. Test system

The Pulsor (Deck Sensor)

The Pulsor (deck sensor) is the basis of the system. It is the most stable and versatile motion detector available. Environmentally sealed and utilizing marine grade wire leads, Pulsors are ideal for indoor and outdoor applications. The Pulsor is completely invisible because it is epoxied under the deck where it can not be seen. It is then hard-wired (home-run) back to the control panel. They are not affected by birds, sunlight, wind, noise, or normal vibration. The sensing element is a high-tech crystal that stretches and compresses when the deck bends. This is interpreted by the internal processor which triggers the alarm. Pulsors have been time tested for nearly 30 years. Year after year, indoors and outdoors, the Pulsor will outperform any other motion detector. On boats, an even number of sensors must be used.



Daily Operation

Status L.E.D

The Status L.E.D is a visual indicator of what state the security system is in at any given time. The L.E.D is normally placed in a high visibility area. One Red status L.E.D is supplied with the system. Fit L.E.D to a 5/16" mounting hole.

Off = System is disarmed

or

There is no power to the system.

Slow Flash (1 @ 5 Sec.) = System is Armed

Fast Flash (1 @ 1/2 Sec.) = System is in 15 second arming cycle

or

System is in 15 second pre-alarm cycle

On = System is in or has been in alarm condition

Arming and Disarming

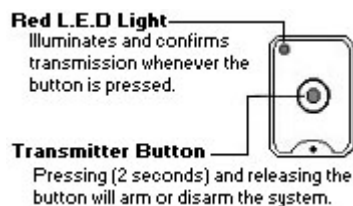
The primary means of arming and disarming the CG1 are:

Option 1: Wireless keyfarb (Requires Wireless control package)

or

Option 2: Keyswitch (must be Normally Open switch)

When the keyfarb button is pressed or the keyswitch is momentarily activated, the L.E.D will begin a fast flash indicating a 15 second countdown. After 15 seconds the L.E.D will begin a slow flash indicating the system is fully armed. If a zone is in fault condition when the countdown completes, the L.E.D will turn off completely indicating the system has entered "Sleep" Mode. * Any zone in alarm condition will prevent system arming.



Pre-Alert

The CG1 is equipped with Ground (0V @ 50mA) output for a Pre-Alert sounder. If the system is armed and a violation is detected, the system will enter a 15 second alarm delay. During this time, the pre-alert will sound offering time for the system to be disarmed. The L.E.D will flash fast during pre-alarm. If the system is not disarmed within 15 seconds, full alarm condition will occur as indicated by a steady L.E.D and Light/Siren activation.

Alarm Condition

Alarm condition will last for two minutes if the system is not disarmed. After two minutes, the system will reset and wait for another violation. During alarm condition, the light will be illuminated and the horn/siren will sound. The L.E.D will be on steady during alarm condition. Alarm condition will latch the L.E.D on until the system is disarmed. This will be the only indication that alarm condition has taken place.

* An alarm after Manual (keyfarb/momentary switch) arming will result in the lights and horn/siren being steady during alarm condition

Placing the Pulsors

The Pulsors (Deck Sensors) are epoxied directly to the hatches near the hinge. They should be placed in locations that will flex when someone lifts the hatch. The sensor will come with all necessary equipment for installation (epoxy, crimps, mixing sticks, and hand cleaner).



Installing the Pulsor

Note: Install the Pulsors first. This gives the epoxy time to cure while you complete the remainder of the installation.

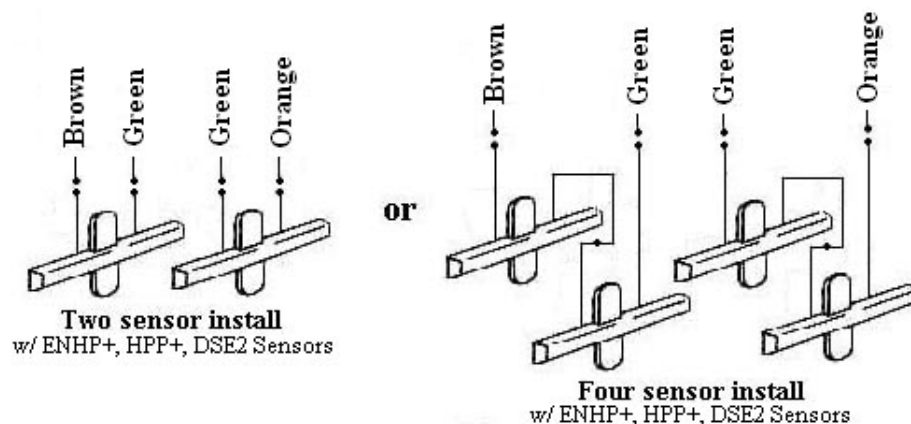
- ✓ The area the Pulsor is to be mounted should be clean of any dirt or oil. You want to epoxy to clean, solid material.
- ✓ Warm and thoroughly mix the epoxy. The epoxy should be approximately 70 degrees F., and should be mixed for around 15 seconds.

TIP: Many people find it convenient to place the epoxy packets in their pocket while they determine how they want to lay out the system.

- ✓ Use one package of epoxy per sensor. Place a generous layer of epoxy onto the substrate of the sensor and touch the sensor into place. Hold the sensor in place with 3-inch tape while the epoxy sets. (*Do not clamp the sensor too tightly. You do not want to squeeze out all the epoxy*). The tape can later be left or removed with no consequence to system operation.

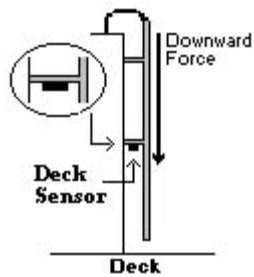
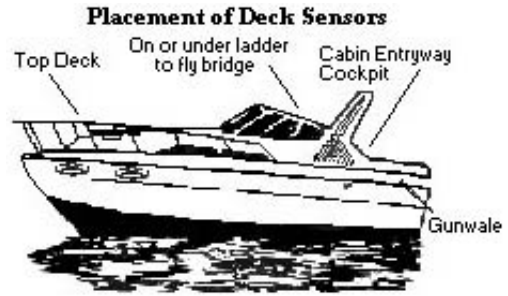
The epoxy has a five-minute work time before it sets. It then will cure for up to 24 hours. When fully cured the epoxy should be rock hard. After approximately four hours it will be hard enough for you to test.

Wiring the Pulsor

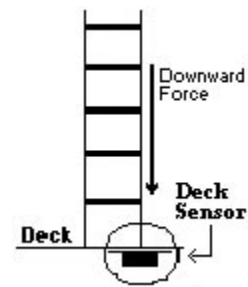


Placing the Pulsors (For Boats)

Each Pulsor can be compared to a miniature land mine. They should then be placed in areas where traffic is most likely to pass. When an intruder steps into the sensing area the alarm will trigger. Gunwales, cockpits, and cabin entryways are effective and popular traps depending on the type of boat.

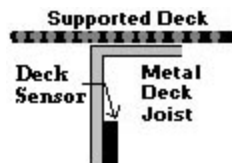


If you have a ladder that is not bolted to the lower deck, but instead, is supported by angle irons, then the sensors should be epoxied to the bottom of the supporting angle iron.



If your ladder is bolted to the lower deck, you should epoxy the sensors beneath the point the ladder meets the deck.

The size of the protected area will vary depending on the construction of the boat and the placement of the Pulsor. If you are mounting the sensor on a support joist, the area of detection will be larger than if the sensor is mounted directly to the deck plate.



When mounted to a support joist, the average oval of detection is roughly an oval that is 4 to 5 feet *along* the joist and 2 to 3 feet *across* the joist.



When mounted directly to the deck, the area of detection will be closer to a circle with a 2-3 foot diameter. This provides ideal spot protection (cabin entry, ladders, gunwales, etc.).