

## Virtual Lifeline “wireless lanyard” Engine Shut Off System (Patented)



### MADE IN THE USA

Introduced in 2005, Virtual Lifeline was the very first “wireless lanyard” system, designed to help protect *everyone* onboard from a falls overboard event. Soon thereafter, Virtual Lifeline received several national and international awards including the National Marine Manufacture’s Association’s coveted “Innovation of The Year Award” for safety.

Originally designed for the recreational boater and passengers, the Virtual Lifeline is easy to install and use. Once the control module is installed, each person wears a small, durable, reusable sensor allowing freedom to move about the boat. Once the ignition is turned ON Virtual Lifeline is activated providing protection to all onboard. No “pairing” of sensors to the receiver, no delays of any kind. Simply start the motor and go!



Only upon submersion the sensor immediately activates – sending a signal to the onboard control module, which sounds an audible and visual alarm and shuts off the motor(s). Someone remaining onboard may quickly activate Rescue Mode (bypass), restart the motor and safely retrieve the person in the water. It’s that simple!

Virtual Lifeline soon became popular among law enforcement, first responders and other government and commercial agencies alike. Our company responded to the “**industrial**” market success by adding new features to the “Helm Mount” system. These features are specific to the “**on-the-job**” demands of our government and commercial customers.... and include:



- Unlimited amount of sensors can be utilized at one time
- No “pairing” of sensors to receivers prior to launching
- Instant protection as soon as the ignition is turned on
- On the fly system bypass and reactivation capabilities
- All units are pre-coded to a specific government code, separate from recreational units, thus allowing personnel to move from boat-to-boat while maintaining personal protection
- No time delay of any kind – just turn the key and GO!

We believe our law enforcement and government customers are always seconds away from responding to an emergency situation. Time is EVERYTHING! You can’t afford delays!

### FAQs

**Q.** How many sensors can be used with Virtual Lifeline?

**A.** There is no limit to the number of sensors you may use with Virtual Lifeline.

**Q.** Can the sensor be reused after activation?

**A.** Yes, sensors may be reused as many times as battery life allows. (approximately 4 years).



**Q.** How does the sensor work?

**A.** Inside is a wafer thin circuit board that “senses” when it’s submerged. This accumulation of water activates the circuitry and immediately sends a signal to the control module which responds accordingly.

**Q.** Does Virtual Lifeline work in salt and fresh water?

**A.** Yes.

**Q.** Does Virtual Lifeline compromise the existing kill switch in any way?

**A.** No, Being ABYC A-33 compliant, Virtual Lifeline does not “piggy back” onto the existing kill switch, nor do you take the kill switch out of service. Virtual Lifeline simply integrates into the ignition system (in series or parallel) as is the current kill switch.

**Q.** Why is this important?

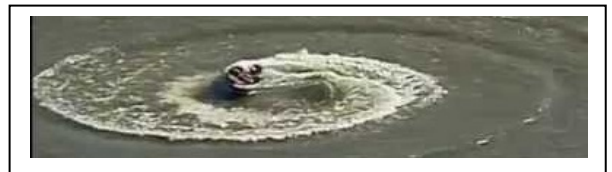
**A.** If you take a device and “piggy back” onto another, you’ve increased the potential to compromise both devices. If one is damaged or fails, both devices will become inoperable. By properly integrating into the ignition system, you maintain system independence. Both the current kill switch and Virtual Lifeline can function as designed, shutting off the motor when activated. This also provides the operator with a redundant (or back up) safety system and maintains the standards by which the boat was built.

**Q.** Why did Propeller Guard Technologies choose “submersion” over “proximity” based technology?

**A.** Actually, years prior to introducing Virtual Lifeline, we tried proximity based technology as a means to shut off a boat’s motor(s). The outcome of our engineering and accident reconstruction reports found “proximity” inconsistent with the normal and safe operation of a boat. To help clarify this, you should know how “proximity” works.

**Proximity** is based on a continuous signal being sent by a transmitter to a receiver. Loss of that signal will cause the receiver to respond according to its design. This is always associated with distance and/or line of sight. We found this acceptable for alarming purposes only, not as a means to shut off a boat’s motor(s). On a boat, loss of a signal could be achieved in many other ways non-conducive to a motor being shut off, such as low batteries or simply compromising line of sight by (i.e. doors, walls, towels, people etc.). These scenarios caused numerous false activations.

One other concern was the outcome to our “circle of death” evaluations. Simulating a person in the water, we put a boat into the “circle of death” pattern. Due to the boat remaining close to the victim, signal strength was maintained. Thus, the motor did not shut down placing the victim in a hazardous position.



**Q.** What about false activations with Virtual Lifeline?

**A.** Virtual Lifeline has been designed to eliminate false activations. Virtual Lifeline will only activate if you simulate a submersion. Only then will the motor be shut down. Simulating a submersion may cause an **inadvertent** activation, but definitely not a **false** one. However, you can restart the motor(s) very quickly. Simply go to neutral, press the Rescue Mode (by-pass) switch and start the motor. It’s that quick.

**Q.** What is Rescue Mode (by-pass)?

**A.** Rescue Mode (by-pass) deactivates the motor shut down circuitry of VL enabling the quick restarting of the engine regardless of the situation.

These are just a few of the reasons Propeller Guard Technologies chose **NOT** to develop a “wireless lanyard” using “proximity” based technology during emergency conditions.

**Q.** What types of motors work with Virtual Lifeline?

**A.** Virtual Lifeline may be used with any type of propulsion system, whether you have one or several motors.

**Q.** Are there any other options available for Virtual Lifeline?

**A.** Yes, Virtual Lifeline can be customized for many uses. Below are just a few options our customers have requested: Activation of exterior audible and/or visual alarms, activation of man overboard circuitry on some chart plotters, activation of man/officer in distress radio frequencies and alarm only for land based operations.

## Recreational – Surface Mount Systems



Virtual Lifeline shown with four sensors.



CAST is the “angler” version of Virtual Lifeline

## Professional - Helm Mount System



Shown with four sensors

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