

# Advanced Instructions

## Detailed wiring and installation instructions

### **Monitor Battery #1 (and power the device)**

Connect the long red (positive) and black (negative) leads to the main battery. Many vehicles and vessels will have optional places to access 12 volts or 24 volts from a battery or a set of house batteries.

You can connect your device to any battery or battery bank that you choose. Whichever you connect your main red and black leads to will become the source of voltage that you will monitor as battery #1.

Be sure to make sure the device connection is un-switched. In other words, when you turn off the power to the vehicle or vessel, you want the device to remain connected to battery power. See the bottom of this document for a wiring reference.

### **Monitor Battery #2**

To hook up the device to a second battery (or bank of batteries), connect the pink wire to the positive side of that battery. Normally there is no need for a ground because the device is already grounded.

If battery #2 in your vehicle or vessel does not share a ground with battery #1, then connect the ground from battery #2 to the device harness's black wire (pin #1). See the bottom of this document for a wiring reference.

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### **Shore power sensor (requires optional hardware)**

To utilize shore power monitoring, you need an optional Shore Power DC Adapter. We offer a certified adapter at our online store.

1. Connect the red lead from the Shore Power DC Adapter to the white wire from your device harness.
2. Connect the black wire from the Shore Power DC Adapter to the black wire (pin 16) from your device harness.
3. Before proceeding, make sure the shore power is disconnected.
4. Now it's time to attach the Shore Power DC Adapter to your vehicle or vessel's shore power.

#### *Tips*

*If your vehicle or vessel has an AC outlet connected to shore power, simply plug in the Shore Power DC Adapter*

*One good place to attach to your vehicle or vessel's shore power is where it goes into the AC charging system on your vehicle or vessel. To do this, cut off the 110v plug on the Shore Power DC Adapter and attach the two wires your shore power inlet. Be sure to use a qualified electrician for any high voltage wiring.*

*You can test the shore power monitoring by turning on shore power to your vehicle or vessel and checking the website. There will normally be about a 60 second delay.*

### **Temperature sensor (requires optional hardware)**

Temperature monitoring can be added to your product by using an optional Temperature Sensor. We offer a certified temperature sensor at our online store.

Attach the wires as follows:

- Temperature Sensor red wire to device harness's orange wire (pin 9)
- Temperature Sensor yellow wire to device harness's white/blue wire
- Temperature Sensor black wire to device harness's black wire (pin 19)

Your inside temperature sensor should register within the next 4 hours.

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### **Door switch and motion sensor alerts**

This product will work with alarm switches and equipment that can be set to a normally open condition. Attach one lead from your alarm equipment to the vehicle or vessel's ground. The other lead should be attached to the device harness's violet wire.

See the bottom of this document for a wiring reference.

### **Controls (requires additional hardware)**

With this product you can control up to three relays (or solenoids) that can turn on and off equipment on your vehicle or vessel.

- Use the device harness's green wire for Control #1
- Use the device harness's brown wire for Control #2
- Use the device harness's yellow wire for Control #3

These outputs provide a high-current, open-collector driver that can sink up to 150 mA each. In other words, they act as a 150 mA ground for the relay coil.

#### *Wiring example for controls*

- Attach 12v (or 24v) DC to one side of the relay coil.
- Attach the device harness's green wire to the other side of the relay coil.
- Attach 12v (or 24v) DC to one side of the relay contacts.
- Attach a light to the other side of the relay contacts.

This will provide DC power to the light when the sink is energized by the device.

See the bottom of this document for a wiring reference.

### **Monitor Bilge Pump Activity (Marine Vessels only)**

Many boat owners find it useful to keep track of bilge pump activity. Boat Command can keep track of the frequency and duration of bilge pump operation on your boat.

To hook up the device to your bilge pump, simply connect the blue wire from your harness to the positive lead on your bilge pump. When your bilge pump cycles on, Boat Command will detect voltage and log the activity.

You can test this by turning on your bilge pump and then checking your Boat Command website. There will normally be about a 60 second delay.

To monitor a second bilge pump, hook up the gray wire to the second bilge pump as described above. See the bottom of this document for a wiring reference.

**High water alarm (marine vessels only)**














To hook up the device to a high water alarm, you can tie into your boat's existing high water alarm switches. If your boat does not have a high water alarm switch, you can add one by placing a float switch at a level a 2 inches (typically) above your bilge pump switch.

Attach one lead from the high water alarm float switch to the device harness orange wire (pin 12). The other lead from the high water float switch should be attached to the boat's ground.

See the bottom of this document for a wiring reference.

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## Boat Command Wiring Reference

Purpose	Description	PIN	Color	
Battery #2	To battery #2 (positive)	5	Pink	
Bilge counter	To positive side of bilge pump	3	Blue	
Bilge counter #2	To positive side bilge pump #2	7	Gray	
High water	High water switch (to gnd.)	12	Orange	
Entry alert	To door or motion sensor (NO)	6	Violet	
Shore power (requires optional DC adapter)	To dc adapter positive lead	8	White	
	To dc adapter negative lead	16	Black	
Temperature (requires optional temperature sensor)	To temp. sensor: black	19	Black	
	To temp. sensor: yellow	17	White/Blue	
	To temp. sensor: red	9	White/Orange	
Control 1	Relay coil sink (150ma)	2	Green	
Control 2	Relay coil sink (150ma)	10	Brown	
Control 3	Relay coil sink (150ma)	11	Yellow	

## RV Command Wiring Reference

Purpose	Description	PIN	Color	
Battery #2	To battery #2 (positive)	5	Pink	
Bilge counter	To positive side of bilge pump	3	Blue	
Entry alert #1	To door or motion sensor (NO)	12	Orange	
Entry alert #2	To door or motion sensor (NO)	6	Violet	
Shore power (requires optional DC adapter)	To dc adapter positive lead	8	White	
	To dc adapter negative lead	16	Black	
Temperature (requires optional temperature sensor)	To temp. sensor: black	19	Black	
	To temp. sensor: yellow	17	White/Blue	
	To temp. sensor: red	9	White/Orange	
Control 1	Relay coil sink (150ma)	2	Green	
Control 2	Relay coil sink (150ma)	10	Brown	
Control 3	Relay coil sink (150ma)	11	Yellow	

## Advanced Installation and Wiring Instructions

### Need help?

Contact us

- 918-824-1400 between 9am-5pm CST
- [support@rv-command.com](mailto:support@rv-command.com)

