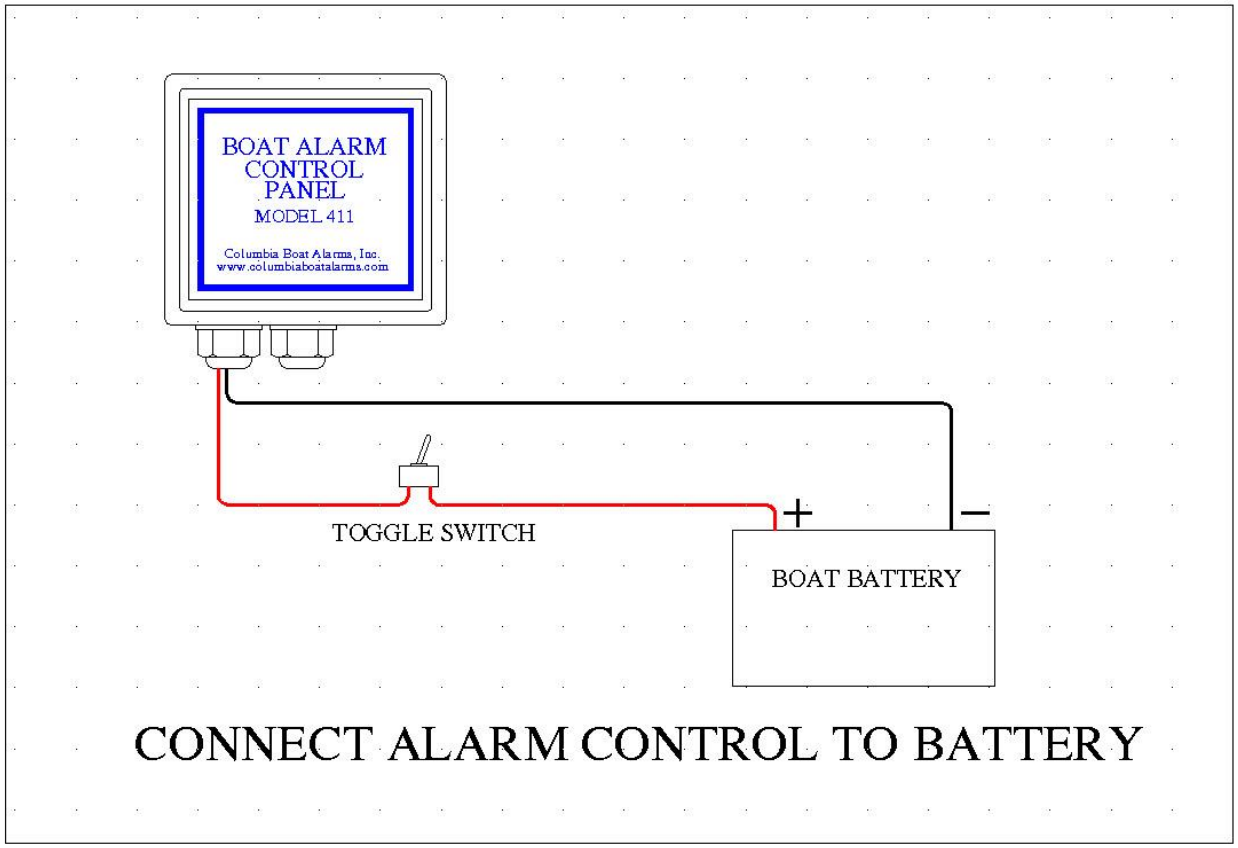
Columbia Boat Alarms, Inc.
Recommended Wiring Procedure

The following procedure for the Model 411 Columbia Boat Alarm is suggested because it will reveal wiring problems as they occur during the wiring process.

First mount the alarm control, the siren and the flashing LED on the boat in the locations you have selected.

Begin by wiring the alarm control to the boat's house battery.

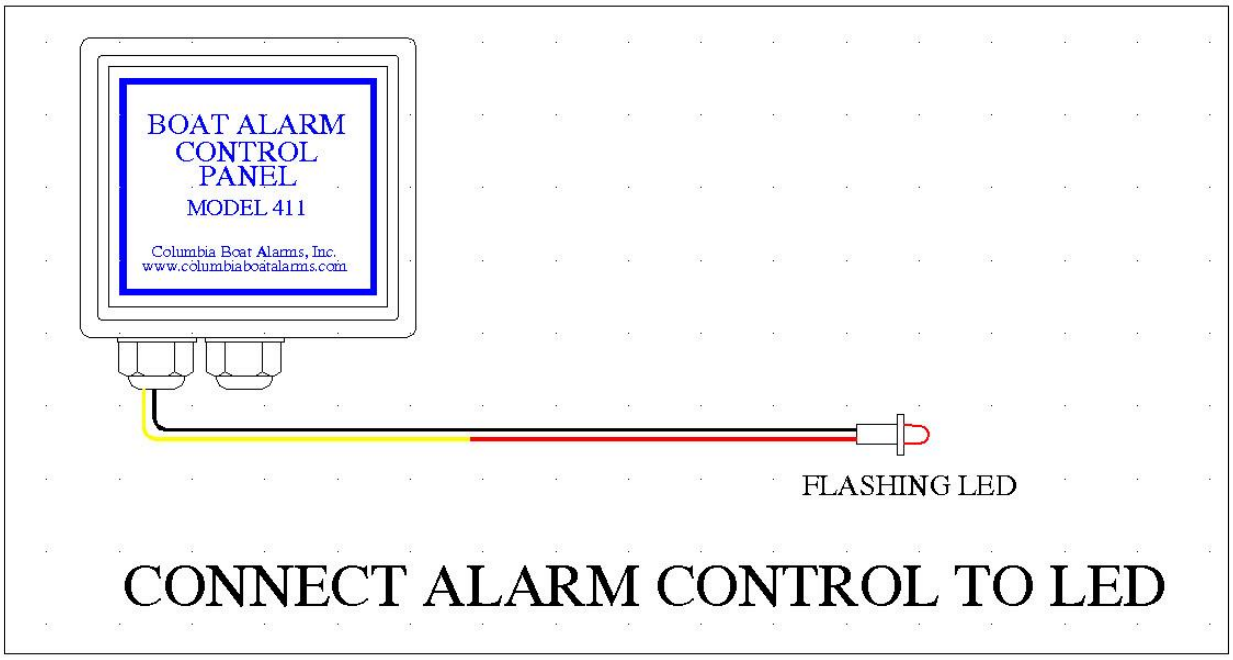


The red wire on the alarm control is connected to the toggle switch. Continue on from the toggle switch to the battery positive. Connect one of the black wires on the alarm control to the battery negative. Any black wire on the alarm control is ok.

Before continuing be sure the power toggle switch is off.

Next connect the alarm control to the flashing LED.

When it can be observed from outside the boat, the flashing LED has two purposes. First, it tells the operator that that boat alarm is on. Second it indicates to a would-be intruder that this boat is protected by an alarm system. We want to discourage an intruder before he attempts to board your boat.



The yellow wire on the alarm control is connected to red wire on the LED. The black wire on the alarm control is connected to the black wire on the LED.

Now test the flashing LED.

1. Move the toggle switch to the ON position.
2. Use the key-fob remote control lock button to start the Model 411 alarm control.

The LED will start flashing. Move the toggle switch to the OFF position and connect the siren.

IF THE LED DOES NOT START FLASHING

1. Is the battery charged?
2. Is the toggle switch on?

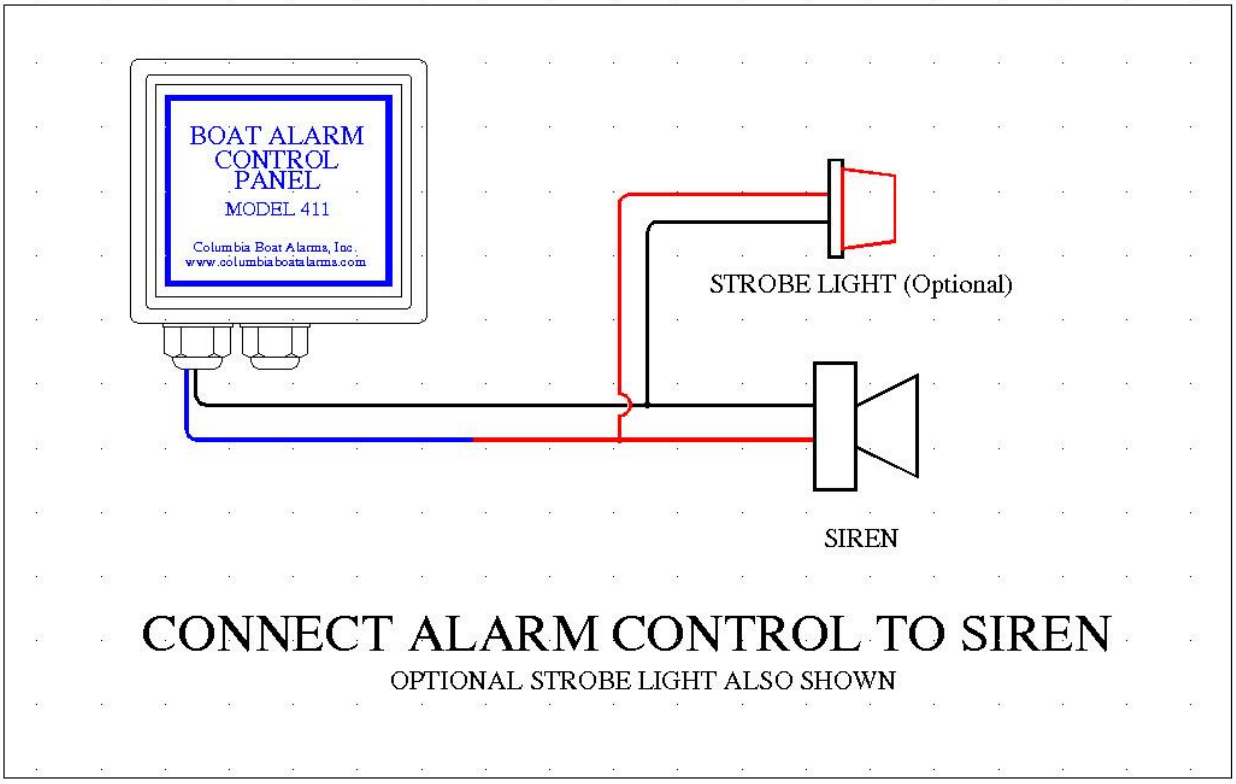
DID THE LED BEGIN FLASHING WHEN THE TOGGLE SWITCH WAS SWITCHED ON? (This is not common.)

1. The alarm control is not set for key-fob remote control. Open the alarm control enclosure and move the slide switch to the other position to enable key-fob remote control.

Next connect the alarm control to the Siren.

Before continuing be sure the toggle switch is off.

The following schematic shows an optional strobe light wired in parallel with the siren. The strobe will flash while the siren is sounding.



Connect the blue alarm control wire to red wire on the siren. Then connect the remaining black wire on the alarm control to the black wire on the siren.

(For the optional strobe light connect the red strobe wire to the red siren wire. Then connect the black strobe wire to the black siren wire.)

Siren wiring is complete.

Test the Siren.

Move the toggle switch to the ON position to apply power to the alarm control. Start the alarm using the key-fob remote control lock button. The flashing LED will begin. Wait for one minute for the alarm to become active. As soon as the alarm becomes active the siren will howl for two minutes. The optional strobe will also flash while the siren is on. Use the unlock button on the key-fob to shut the alarm off to stop the siren.

Model 411 alarm zones.

The Model 411 alarm control has 3 zones.

1. Zone 1 (The two white wires on the alarm control.) will sound the siren on alert one time for two minutes. Then zone 1 becomes inactive. Zone one is only for normally-closed sensors.

2. Zone 2 (The two green wires on the alarm control.) will first sound the siren on alert for two minutes. Then it will pause one minute before it resets. Zone 2 is then active again. If a zone 2 sensor is again opened the siren will sound for two minutes. The alarm control will reset and provide protection a third time. After the siren has howled the third time zone 2 will become inactive. *It should be noted that there are some Model 411 alarms that have been modified to reset many more times.* Zone 2 is only for normally-closed sensors.

3. Zone 3 (The two purple wires on the alarm control.) is like zone 2, it zone 3 will first sound the siren on alert for two minutes. Then it will pause one minute before it resets. Zone 3 is then active again. If a zone 3 sensor is again closed the siren will sound for two minutes. The alarm control will reset and provide protection a third time. After the siren has howled the third time zone 3 will become inactive. *It should be noted that there are some Model 411 alarms that have been modified to reset many more times.* Zone 3 uses normally-open sensors.

Verify that all three zones are working.

First temporarily connect the two green wires on the alarm control. Then start the alarm with the key-fob. After one minute the siren will howl for two minutes and the alarm will be quiet. This indicates Zone 1 is working correctly.

Disconnect the two green wires and connect the two white wires. Start the alarm. After one minute the siren will howl for two minutes. After the siren quits, allow the alarm to remain on for another minute. The alarm will reset and the siren will sound again. The alarm will reset twice. This is normal operation for Zone 2.

Disconnect the white wires and connect the two purple wires. Start the alarm. After one minute the siren will sound. The siren behavior for Zone three is the same as Zone 2.

The zones are independent. If Zone 1 becomes inactive Zones 2 and 3 are still active. The siren can be only be stopped by shutting off the alarm.

Following are some wiring diagrams for the alarm sensors.

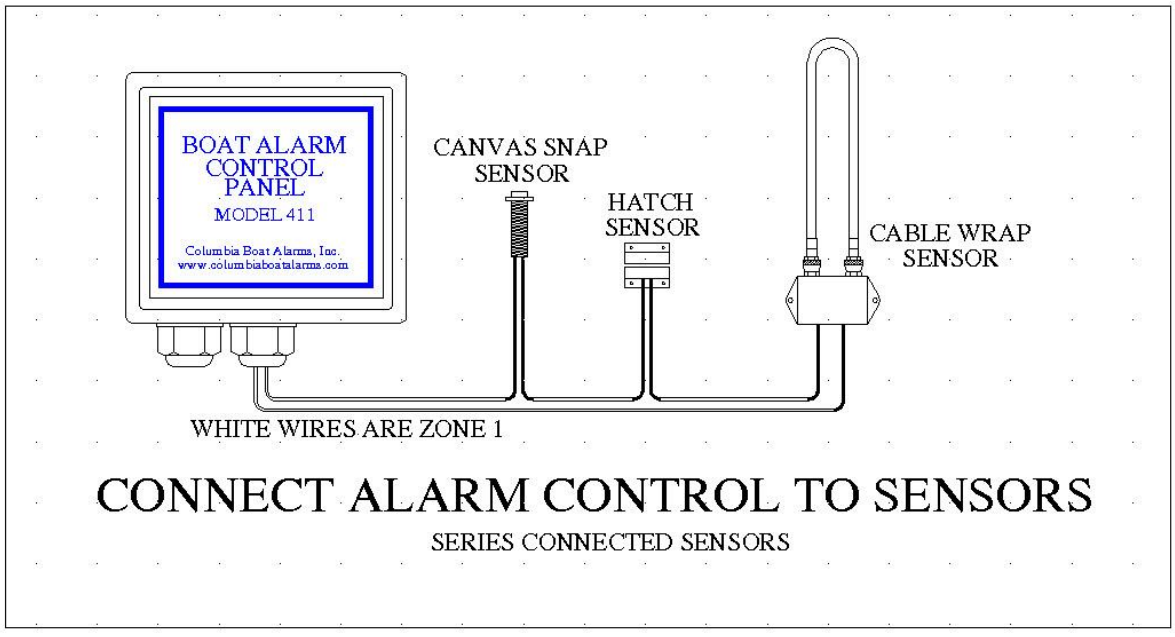
Zone 1

An intruder will not re-snap the canvas, reconnect the cable wrap or close the hatch lid when the siren sounds. He will most likely leave the area. If any of the sensors are open the alarm control will continue to sense an intrusion. Alarm zone 1 will not reset after the siren has been triggered.

Connect the following alarm sensors to zone 1.

- Canvas snap sensors
- Cable wrap sensors
- Hatch/door sensors on hatch covers or doors that do not close when released.

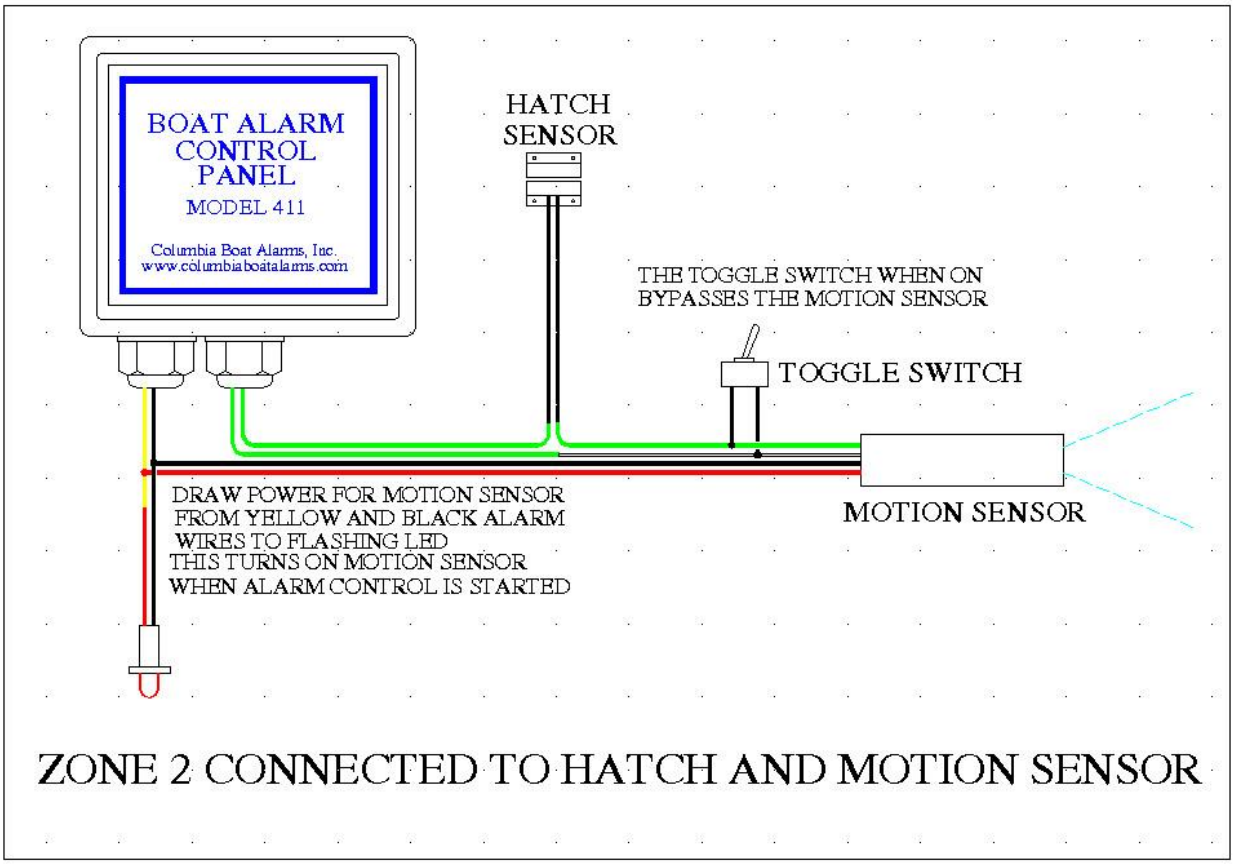
Any number of the above sensors can be wired to zone 1. They can be mixed to suit the protection plan for your boat. Note the following wire diagram.



Zone 2

Alarm sensors that are usually wired to Zone 2 are:

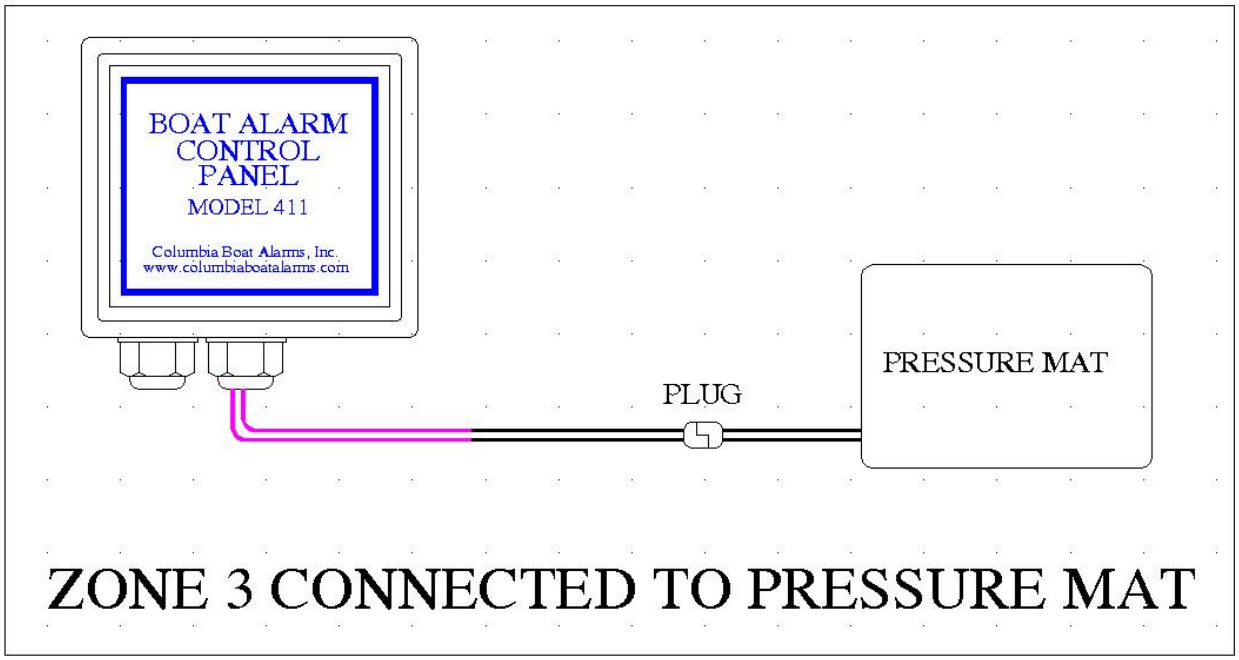
- Motion sensors
- Hatch sensors on hatch covers or doors that close themselves.



Note that power to the motion sensor is taken from the yellow and black wires on the alarm control. The motion sensor is connected in series with the hatch sensor to zone 2. This wiring scheme allows warmup time for the motion sensor.

Zone 3

Connect a pressure mat sensor to zone 3.



The two purple wires are used to connect the pressure pad to Zone 3. A two wire flat plug is inserted near the pressure mat. This plug provides an easy way to disconnect and stow the pressure mat. Be certain to carefully hide wires to the pressure pad. If these wires are cut the alarm siren will not sound when the pressure mat is stepped upon.