



RadioShack®

User's Guide

2760347

PIR Sensor



*Thank you for purchasing your PIR Sensor from **RadioShack**. Please read this user's guide before setting up and using your new sensor.*

Attention: *Observe precautions for handling Electrostatic Sensitive Devices (ESD).*

Package Contents

- PIR Sensor
- User's Guide

Features

- Built-in selectable trigger mode
- Three-Pin SIP header

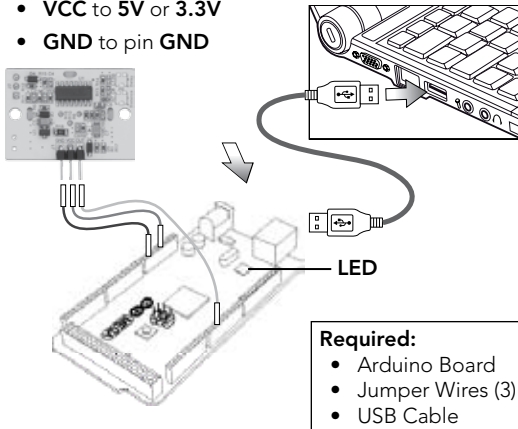
Specifications

Detection Angle	120°
Detecting Range.....	up to 29.5 ft (9 m)
Supply Voltage.....	3.3 or 5V
Current.....	3.3V – 500μA; 5V – 800μA
Infrared Wavelength.....	7 – 14 μm
Minimum Speed for Detection.....	1 m/s
Operating Temp. Range	32 – 104°F (0 – 40°C)

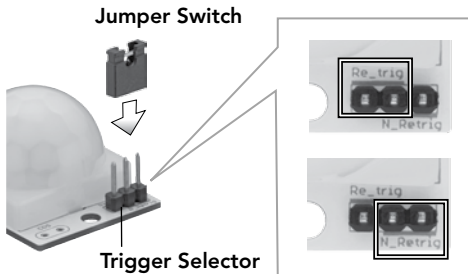
Specifications are subject to change and improvement without notice. Actual product may vary from the images found in this document.

Connecting the Sensor

1. Connect the PIR Sensor to your Arduino board using 3 jumper wires (not included) as follows:
 - **OUT** to digital pin **2**
 - **VCC** to **5V** or **3.3V**
 - **GND** to pin **GND**



2. To select a trigger mode, remove the jumper switch, and then, replace it over one of two positions (**Re-trig** or **N-Retrig**) as shown below.



Motion detection for each mode operates at two-second intervals:

- **Re-trig** sends a continuous signal when movement is detected.
- **N-Retrig** pulses a signal of approximately 4 seconds when movement is detected.

Programming the Sensor

1. Use a USB cable (not included) to connect your Arduino board to your computer.
2. Go to shack.net/sensor0347. At the end of the blog post, click **RadioShack PIR Sensor Support Files**, and extract the contents of the folder onto your computer.
3. Open **PIRSensor.ino** in the Arduino programming environment. Verify and upload the program. When the sensor detects movement, the LED on the Arduino board lights up.



Notes:

- The sensor best detects objects larger than 1 ft^2 (0.1 m^2) at maximum range. The sensor's sensitivity and detection rate increase as the object moves closer.
- If the speed of the object in the sensor's range is less than 3.28 ft/s (1 m/s), the sensor will not be activated.

FCC Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct

the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If you cannot eliminate the interference, the FCC requires that you stop using your equipment.

IMPORTANT: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Limited Warranty

RadioShack warrants this product against defects in materials and workmanship under normal use by the original purchaser for **ninety (90) days** after the date of purchase from a **RadioShack**-owned store or an authorized **RadioShack** franchisee or dealer. **RADIOSHACK MAKES NO OTHER EXPRESS WARRANTIES.**

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Should a problem occur that is covered by this warranty, take the product and the **RadioShack** sales receipt as proof of purchase date to any **RadioShack** store in the U.S. **RadioShack** will, at its option, unless otherwise provided by law: (a) repair the product without charge for parts and labor; (b) replace the product with the same or a comparable

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RadioShack Customer Relations
300 RadioShack Circle
Fort Worth, TX
76102

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