

## Basic Theory of Operation AMS Module

The Activity Monitoring System (AMS) is a piece of hardware that detects the direction of movement of a warm body – i.e. a person passing by. To this end, it uses a couple of narrow field PIR sensors that are aligned with the path of movement being tracked. Depending on the triggering sequence of the PIR sensors the AMS can detect the “Entry” or “Exit” of a person from a designated area.

The AMS Module is responsible for:

- Detecting the direction of movement of people passing by
- Reporting all “Entry” or “Exit” events to the nearest gateway

### AMS Technical Data

- Batteries: C x 3
- Nominal Voltage: 4.5V
- Communication Interfaces:
  - AMS to Gateway: **BLE (Outbound)**

### Stand-alone operation

The following table illustrates the relationship between the orientation of the AMS and the expected LED output depending on the direction of movement used to trigger the device. Use this table as reference to trigger a response from the device.

Activity	Illustration
A person passing in front of the Activity Counter in the direction shown here is entering a room or an area (green light).	
A person passing in front of the Activity Counter in the direction shown here is exiting a room or an area (red light or blue light depending on sku).	

To confirm that an AMS device provides visual feedback (LED Lights) to indicate the direction of movement of the object triggering the device (i.e. waving hand):

Procedure:

1. Turn the AMS test device ON



2. Wait a few seconds until the device is “ready” – The green and blue LEDs will flash in an alternating pattern.
3. Use your hand to wave at the device from left to right (→) according to the table below. Confirm that the “green” LED turns on.



4. Use your hand to wave at the device from right to left (←) according to the table below. Confirm that the “blue” LED turns on.



## FCC Caution

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.

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

Note: 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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.