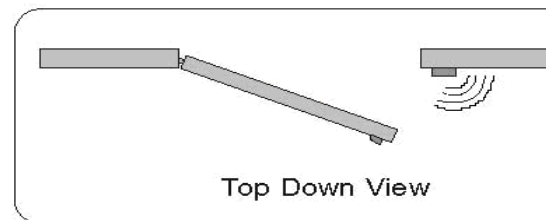
 Living Independently Group, Inc. <small>Caring. Value. Independence.</small>		PRODUCT MANUAL	
TITLE:	ZIGBEE DOOR QC101500		
REVISION:	1.0	DATE:	3/17/08

Product Description

The Zigbee Door Sensor is a magnetic contact sensor. The Door/Window Sensor uses a magnet to enable you to monitor the opening or closing of a door, window, cabinet, or whatever else needs to be checked for movement.

How It Works

The sensor monitors the status of the magnetic contact. When a change is detected with an opening or closing of a monitored door or window because the magnet is too far away or close by, the sensor sends a notice of the event via Zigbee. The sensor can detect the magnet on the left, right, or top side.



Installation

- Please familiarize yourself with the concepts of Zigbee Networking with the “Understanding Sensor Networking” paper.
- The network Coordinator and any Routers must be set up before setting up this sensor.
- Open the battery compartment and pull out the battery activation tab. The blue LED should flash briefly indicating successful power up. Close up the unit.

Sensor Mounting

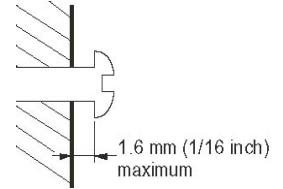
Please consider the following points when mounting the sensor:

- The Door/Window Sensor is constructed of UV resistant ABS plastic allowing for indoor or outdoor use.
- The Door/Window Sensor is constructed of UV-resistant ABS plastic. If installing the Wireless Door/Window Sensor outside, it should be shielded from the elements, such as underneath a porch roof. Do not install the sensor where it is subjected directly to the elements.
- Typically, the sensor's wireless reception is good to up to 250 feet from the closest Zigbee Router, depending on indoor or outdoor use and the number of obstacles. These can include metal framing, thick walls, etc. It is recommended that different positions be tried for optimal results.

The spacing between the sensor and the contact should be between 1/10 inch and 1/2 inch (.25 cm to 1.27 cm).

Mount Your Door/Window Sensor

1. Mount Your Door/Window Sensor . The easiest way is to use the double sided foam tape supplied with the sensor. Make sure the contact area is clean and dry and apply pressure on the tape for at least 30 seconds.



You can also mount the sensor more securely using the screws in the hardware kit. Using the drilling template found later in this guide, drill two pilot holes for the screws. Affix the screws to one side of the object (typically the "stationary" side) leaving 1/16" (1.6 mm) space between the screw head and the object. Mount the sensor onto the screws and slide down to lock into place.

2. Using the holes on the drilling template, mark the position of the holes to be drilled. For drywall or other composite surfaces use a 7/ 32" drill bit. Drill a hole for each of the mounting screws and insert a plastic wall anchor into each hole. For other solid surfaces use a 1/16" drill bit. Drill a pilot hole for each of the mounting screws.

Warning, when mounting near a window, drilling too close to the glass could break the glass and possibly cause it to shatter. The window extends deeper into the frame than can be seen; therefore, ensure your screw is beyond the glass before drilling.

3. The magnetic contact should now be placed on the other side of the object.

Install the Magnetic Contact

1. Either peel the paper strip from the double-sided tape located on the back of the contact, or you can more securely attach it using screws in the hardware kit. Remove the cover from the contact and insert the screws through the holes on the top and bottom of the contact. Use the Wall Mounting Drilling template at the end of this guide to assist you.
2. Make sure the magnetic contact aligns with the top of the sensor on either the left or right side, or centered with the top of the sensor.

Commissioning

- Once powered up the sensor will automatically join the Zigbee network.

Operation

In normal operation the user need not interact with the occupancy detector, as it is normally controlled remotely via Zigbee and automatically calibrates itself.

Changing batteries

The device uses standard AAA alkaline batteries. Always replace both batteries at the same time. Always use fresh new batteries of the same brand. The battery compartment is exposed by twisting a quarter in the slot at the end of the case, and then pulling apart. Make note of the polarity markings in the battery enclosure.

Technical Specs

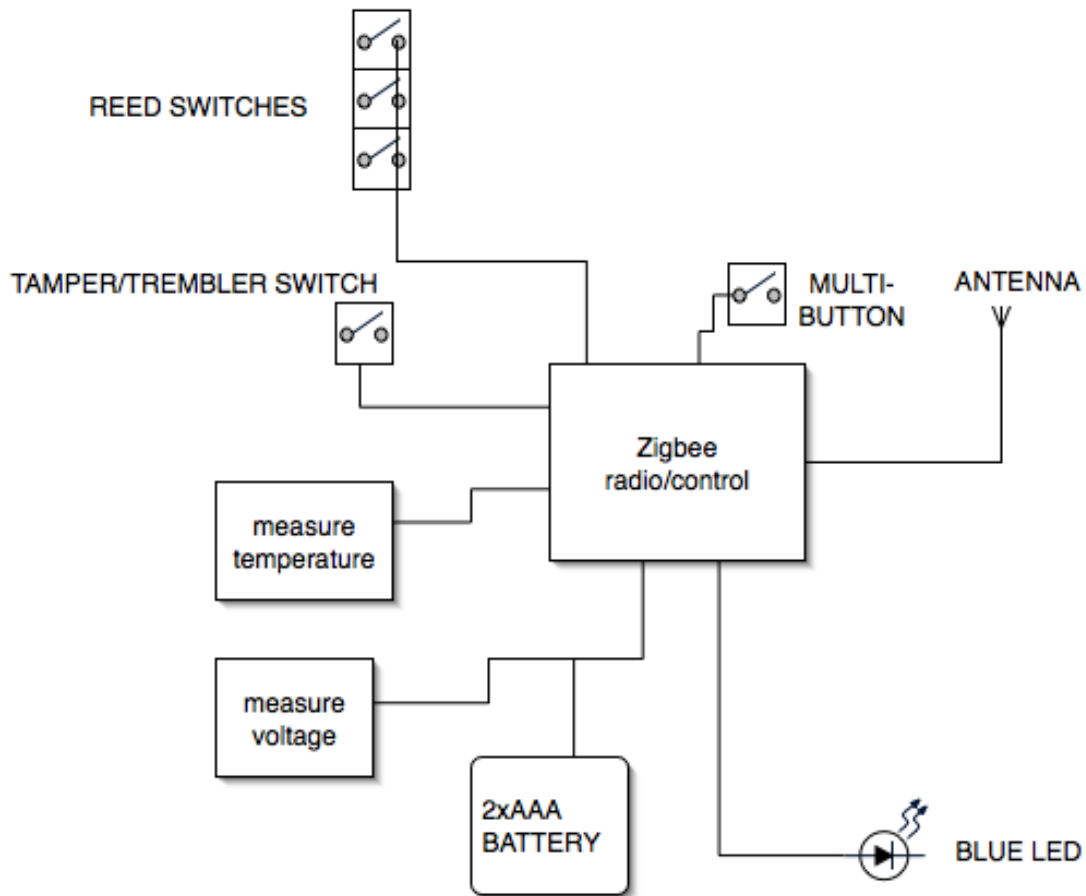
Voltage	2xAAA 1.5V alkaline battery
Temperature range	-10°C to 40°C
Enclosure	High impact ABS plastic
Communication	IEEE 802.15.4 Zigbee, 2.4GHz ISM band, +0dBi max output
Typical range indoor	30 feet (10m)
Typical range outdoor	300 feet (100m)
Zigbee profile	HA (Home Automation) OS (occupancy sensor)

Zigbee Profile

sample profile for a ZigbeeDoor device:

```
<ZigbeeDevice>
  freq bits: 0x8
  caps bits: 0x0
  repeatFilter: 1
  mfg code: 0x1038
  xfersiz: 0x0
  bufsiz: 0x50
  powersource: 0x4
  user descr: QC101500 v0.1
  last LQI: 117
  avg LQI: 116.886977
  powersources: 0x4
  APS flags: 0x0
  powerlevel: 0xc
  IEEE addr: 0x1d400000400000
  user desc. avail: 0x1
  registered: 0
  servermask bits: 0x0
  type bits: 0x2
  complex desc. avail: 0x1
  missed pkts: 7
  powermode: 0x1
  short addr: 0x7976
  last contact: 2008-03-17 18:03:14.329647
  attributes: {'LIVS tamper period': 0, 'LIVS quiet': False, 'temperature':
25.75, 'LIVS tempcal': -5.71, 'LIVS tamper count': 0, 'battery voltage':
3.1000000000000001, 'LIVS tamper sensitivity': 0, 'occupiedAccum': 12,
'occupied': False}
  endpoints: {200:
<ZigbeeDescriptor>
  profile: 0xc003
  device: 0x1
  version: 0x0
  inClusters: [1]
  outClusters: []
  flags: 0x0
</ZigbeeDescriptor>
, 2:
<ZigbeeDescriptor>
  profile: 0x104
  device: 0x107
  version: 0x0
  inClusters: [0, 3]
  outClusters: [1, 6, 1026, 1030]
  flags: 0x0
</ZigbeeDescriptor>
, 3:
<ZigbeeDescriptor>
  profile: 0xc20c
  device: 0x1
  version: 0x0
  inClusters: [1, 2, 32, 34]
  outClusters: [33]
  flags: 0x0
</ZigbeeDescriptor>
}
</ZigbeeDevice>
```

Block diagram



Approvals

FCC ID OU4-QC101500 / IC: 4576A-QC101500

INSTRUCTIONS TO THE USER:

The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

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 interferences 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.

CE directive 93/68/EEC, EMC directive 89/336/EEC, LV directive 73/23/EEC

This class B digital apparatus complies with Canadian ICES-003

The term "IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC NOTE:

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.