



Installation Manual

DBRF 15-01 Wireless Sensors



Wireless Sensors (DBRF 15-01)

Important: Sensors must be installed so that the beam is at 54 inches from the ground.

Step 1: Turning the sensors ON

- Both the receiver and the transmitter come with a holder or holster. To remove the actual unit from the holster you need to remove the set screw with a screw driver. The set screw prevents the sensor from being removed from the holster. Remember to replace the set screw to lock the sensor into the holster. To remove the sensor from the holster, remove the set screw, then hold the unit in one hand and press on the top release pad to release the unit, and then remove the sensor from the holster.



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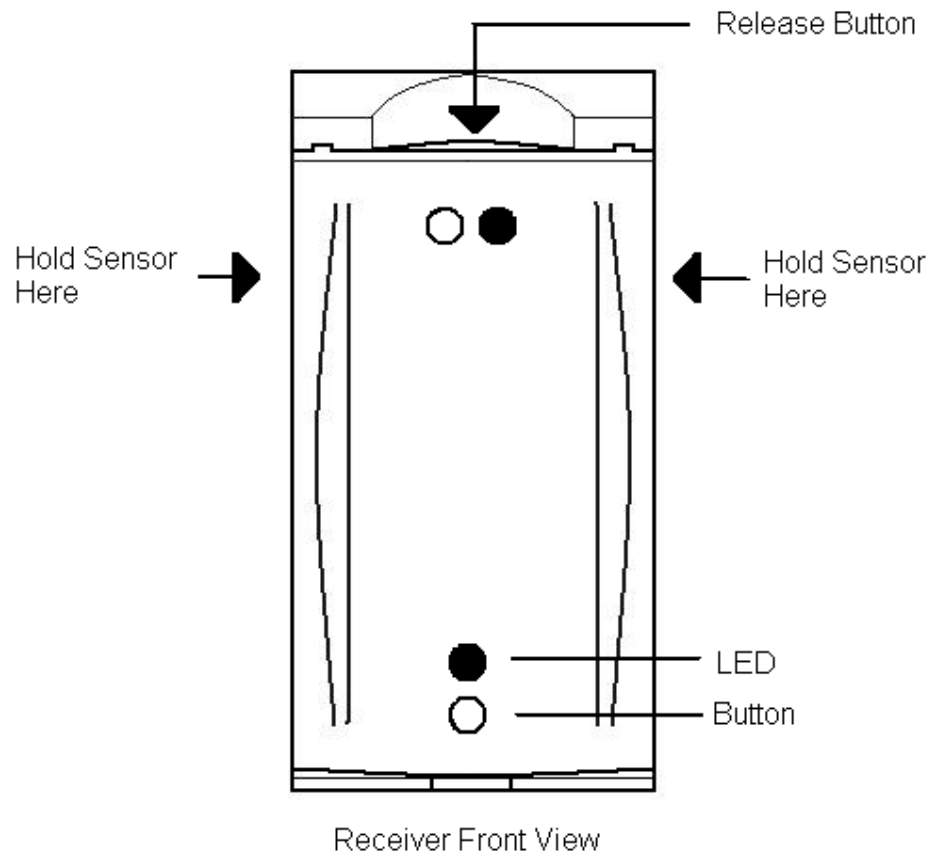


701 Salaberry, Chambly, Quebec J3L 1R2 Canada
Phone: (450) 658-5148 Fax: (450) 658-7764
E-mail: sales@storetraffic.com Web: www.storetraffic.com



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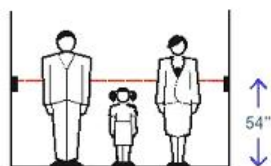
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Step 2: Setting the Sensors to Front or Side Firing

Front Firing

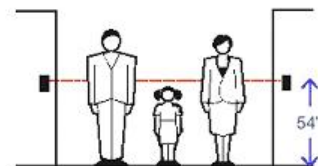


(dia. 1)



(dia.3)

Side Firing



(dia.2)



(dia.4)



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Identify front or side firing configuration

- Sensors can be configured to be either front or side firing. This is important and allows you the flexibility to install the sensors. If you need to align the sensors so they face each other, this is front firing, and front firing is usual if installed on the inside of a door frame (dia.1) (dia.3) (dia.5) (dia.6) or side firing if placed on outside of the door frame (dia.2) (dia.4) (dia.7) (dia.8).
- Each set of sensors consists of a receiver and a transmitter. The receiver is the one with the LCD screen, which register the counts and communicates with the STC. The transmitter is the one projecting the Infra-red beam.



dia.5



dia.6

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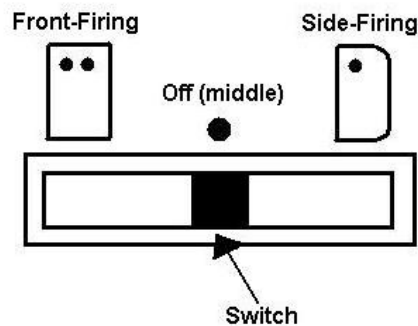


dia. 7



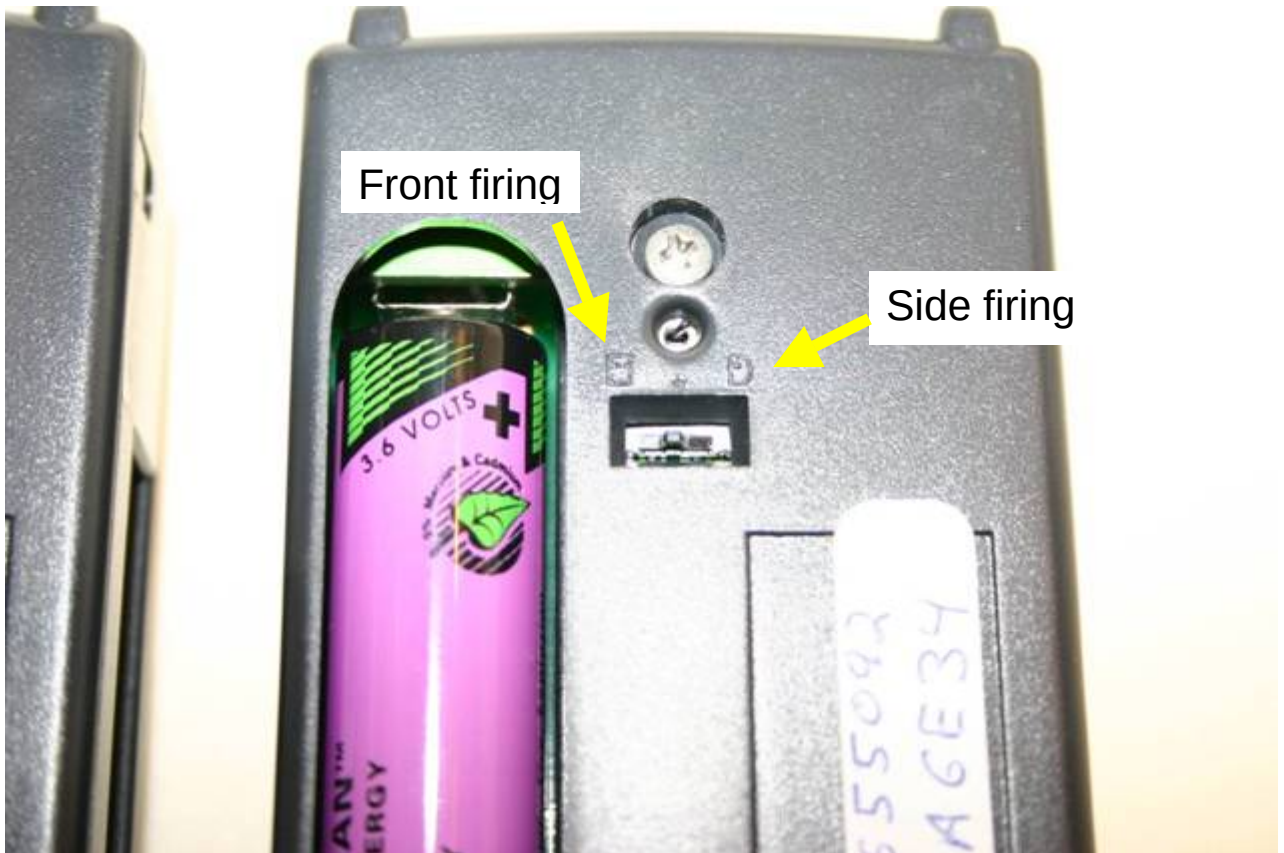
dia. 8

- As seen in the pictures above, the sensors can be installed in front firing or side firing configuration. A switch in the back of each sensor (allows it to be configured accordingly). When changing the firing configuration please move the switch gently to the middle, and then move it in the desired direction. Both switches must be set to either front or side firing position to be on. If the switch is left in the middle, the sensors are off and are not operating.



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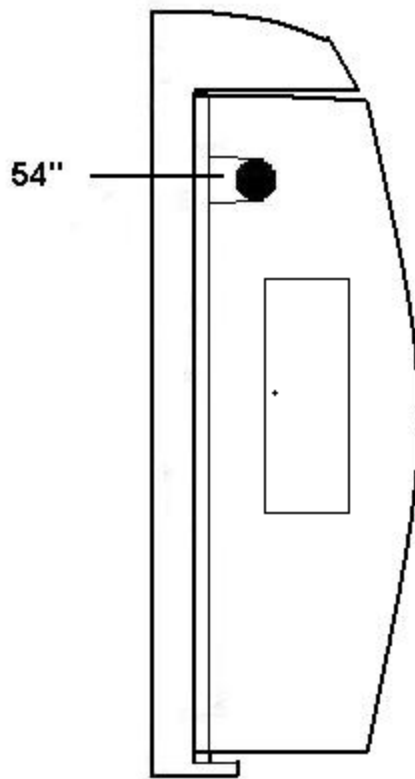


(dia. 9)

- In a side firing configuration, the receiver's LCD screen must not be pointing in the direction of the other sensor. The transmitter has a rectangle cutout in the transmitter. This side needs to be pointing in the direction of the receiver. Please refer to the following drawing.

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Transmitter Side-View

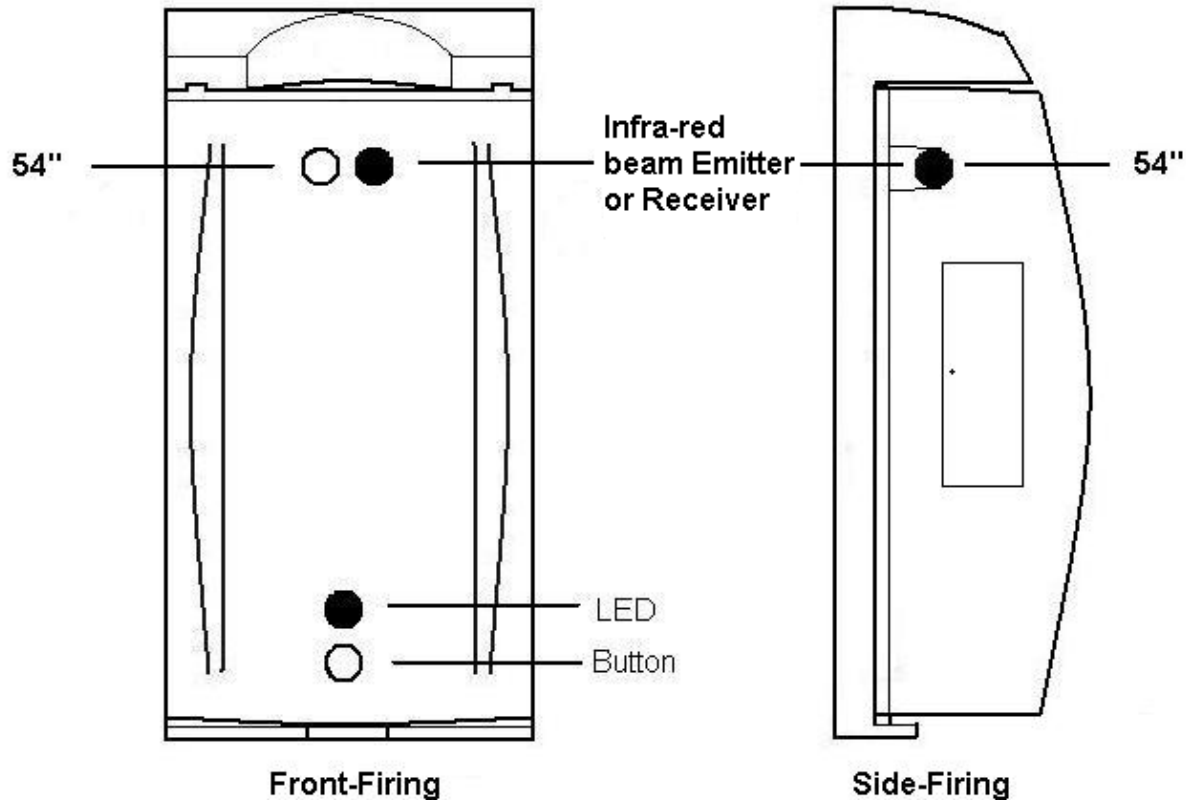
In side-firing configuration, this side points towards the receiver. This is the side you should see when looking at the transmitter from the receiver

- Wireless equipment is sensible to strong interference sources such as a breaker box, transformers, computer screen. Please install the STC as far away from these sources as possible.

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Step 3: Pre-installation instructions



- The sensors should be installed in a way to allow the IR beam to be at 54 inches from the ground, as shown in the picture above. This is to avoid counting strollers, carts and children under 54 inches.
- The sensors can either be screwed to the wall or mounted using double-sided tape. Please contact SMS for information on double-sided tape. Peel-off tape mounting plate can be provided by SMS.
- In side firing configuration, the receiver LCD screen must not be pointing in the direction of the other sensor. The transmitter has rectangle cutout in the transmitter. This side needs to be pointing in the direction of the receiver. Please refer to the picture at the top-right of the page.



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- The sensor should not be more than 15 feet apart.
- Ensure that the doors open out only and do not cross the infrared beam when they open.
- Ensure that the door handle is not blocking the RF sensor's infrared beam.
- Ensure the back part of the door, where the hinges are generally mounted, are not blocking the RF sensor's infrared beam.
- Make sure that there is no merchandiser, posters, stands, greeter or security person standing blocking the beam.



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Step 4: Installation:

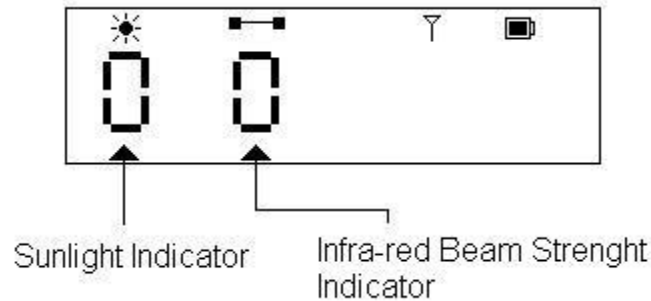
- Install the holster for the transmitter so that the infra-red beam is at 54 inches from the ground.
- Put the sensor back in its holster.
- Press the button once and the LED will glow green. This means the sensors are on.
- The receiver has an installation mode, which helps you align the beams correctly. To access this mode you need to press twice on the button, with one second delay between each press. The LED will glow orange. This means you are in set up mode.



- You will get the following display from the display screen:

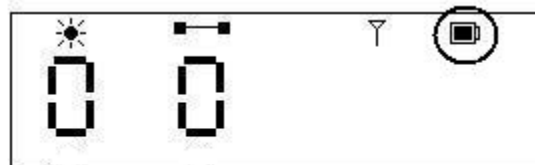
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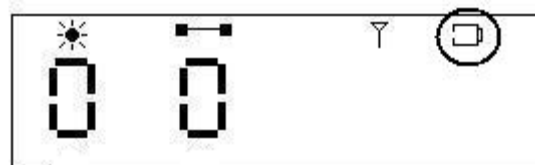


Ideally, when the sensors are correctly aligned, the strength indicator should be at .7 is the highest signal strength measured. Depending on the distance between the receiver and transmitter, this will vary. Obtain the high possible number; ensure the indicator does not go below 3. While in installation mode, the sensor LED indicator should stay solid yellow when the sensor is correctly aligned. It will blink when it is not.

- Make sure the Sunlight indicator is at 0. If you get any indicator of Sun light interference, invert the transmitter and receiver. Simply, remove the transmitter from the holster and place it in the holster of the receiver and place the receiver in the holster of the transmitter. What you have done, is changed the sensors so the sunlight does not shine onto the transmitter. There is no effect if sun light shines on the receiver.
- Make sure the battery indicator is full, if not; please report this to your installation company so that they can provide new batteries.



Strong battery



Weak battery



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- Position the sensor on the door frame and try to obtain the best signal strength. When you do, make a **temporary** mark on the door frame at the bottom and at the top of the sensor.
- Remove the receiver from the holster and install the holster (using screws or double sided tape) between the 2 marks you've made.
- Put the sensor back in the holster.
- Remove any trace of the mark on the door frame.
- Press and hold the button on the receiver for 10 seconds. This will reset the counter to 0.



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Step 5: Verification and checkout

Sensor Verification

- On the receiver press once on the button to turn on and read the display. The counter should be at 0. Make sure the count goes up every time you break the beam.
- Stand by the sensors for 3 minutes. Make sure the counts are only going up when someone breaks the beam. If you see the count go up when no one is breaking the beam, there might be a small misalignment. Try to adjust the receiver to correct it.
- If these last tests are successful, contact the person in charge of the installation at the head office level (Head Office of the store, Installation company or SMS), to validate the functionality.
- If you have any problem, refer to the troubleshooting section.

Step 6: How to view your traffic data

Traffic data can be viewed on the detector's LCD screen at the end of each day. To view the counts press down the button (refer to picture in step 3) on the detector with the LCD for 1 second.

The number on the screen represents the total amount of traffic that has entered AND left the store during the day. This number must therefore be divided by two before entering it in the form. (Refer to following pages)

To reset the detector to "0", press down the button on the detector with the LCD for 10 seconds or until you see the LCD counter reset to 0, then release.



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Troubleshooting

Problem	Solution
The screen or LED is not responding when I press on the button.	• The sensor's battery may be dead, switch the batteries between the 2 sensors and verify if the problem move. If so call your installation company and have them send a new battery. If the problem does not move, you have a dead sensor; request a replacement part to your installation company.
Sensors are installed but I get no counts on the receiver LCD screen.	• Make sure the switch (side or front firing) is set correctly. Refer to page 7 for how to do so. • Make sure the batteries are correctly inserted in the sensors. • Make sure the sensors are correctly aligned. • If you can't get them to work, remove the sensor from their holder and put them flat on a table 2 feet apart, and create counts with your hand by blocking the beam. If you still can't get them to work in this situation, call your installation company for more support.
Counts seems too low	• Make sure the sensors are correctly aligned. • Make sure no object is blocking the sensor either partially or completely. This includes any items that could move and create blockage from time to time.
Counts seems too high	• Make sure the sensors are correctly aligned. • Look at the LCD screen on the receiver for 5 minutes and make sure the counts only go up when someone goes through. If it does not, the sensor is not correctly aligned. • Make sure no displays or mannequin is making people break the beam more often then when they go in or out. If so please ask the manager to move the display at a safe distance from the sensor's infra-red beam line.



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Spoil the Customer Program

What is the Spoil the Customer Program?

Spoil the Customer is a 5 week store-level conversion rate and sales improvement program designed for store managers with traffic counting detectors.

The manager collects 1 week (Base Week) of daily traffic, sales, and staff data. At the end of the first week, the manager chooses 2 days based on sales, on service levels (c/sthr ratio), or some other factor and with the store's sales team focuses on providing superior customer service – Spoil the Customer -- during these key selling days for each of the subsequent 4 weeks.

Spoil the Customer Program Objectives

The objective of the Spoil the Customer Program is to improve the store's conversion rate, and therefore sales, using improved customer service during the key selling days.

How the Program Works

Each day, the store manager or designate records traffic, sales, and staff data on the forms provided in this workbook (or use the Excel spreadsheet, TrafficForm.xls, that calculates all your totals and ratios automatically). Each day/week, calculate totals and ratios.

After you have collected one full week of data, choose 2 key selling days, based on sales volume or level of service or some other factor, and improve service quantity and/or service quality during these days for 4 consecutive weeks.

At the end of 4 weeks, the conversion rate should be higher in these 2 key days than it was during the first week of the program.



Spoil the Customer **Program Worksheet**

Base Week						Date:		
Day	Traffic	Trans	Sales	# Staff	% Sold	Avg. \$	Tr/StHr	C/StHr
Sunday								
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Week								

Observations:

701 Salaberry, Chambly, Quebec J3L 1R2 Canada
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Spoil the Customer **Program Worksheet**

Week 1						Date:		
Day	Traffic	Trans	Sales	# Staff	% Sold	Avg. \$	Tr/StHr	C/StHr
Sunday								
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Week								

Observations:

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Spoil the Customer Program Worksheet

Week 2						Date:		
Day	Traffic	Trans	Sales	# Staff	% Sold	Avg. \$	Tr/StHr	C/StHr
Sunday								
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Week								

Observations:

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Spoil the Customer Program Worksheet

Week 3						Date:		
Day	Traffic	Trans	Sales	# Staff	% Sold	Avg. \$	Tr/StHr	C/StHr
Sunday								
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Week								

Observations:

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Spoil the Customer Program Worksheet

Week 4						Date:		
Day	Traffic	Trans	Sales	# Staff	% Sold	Avg. \$	Tr/StHr	C/StHr
Sunday								
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Week								

Observations:

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Spoil the Customer Program Worksheet

4 Week Average Compared to Base Week						Date:		
Day	Traffic	Trans	Sales	# Staff	% Sold	Avg. \$	Tr/StHr	C/StHr
Sunday								
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Week								

Observations:

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Appendix A

Definitions and Ratio Formulas

Glossary

Terms	Description
Cu/StH	Customers per Staff Hour
Tr/StH	Transactions per Staff Hour
AvgSale	Average Sale
%Sold	Percentage Sold
Terms	Formula
Cu/StH	Traffic / Staff Hour
Tr/StH	Transaction / Staff Hour
AvgSale	Sales / Transaction
% Sold	Transaction / Traffic



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Disclaimer & Revisions

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."

Changes or modifications to this device not explicitly approved by SMS will void the user's authority to operate this device.

Operation of this equipment in a residential area may cause interference with other electronic equipment.

The information in this guide may change without notice. The manufacturer assumes no responsibility for any errors that may appear in this guide.



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Product Specifications:

Protocols Supported	Red Deer Wireless Protocol
Devices Supported	Stand-alone or STC-W200
Frequency of operation (wireless)	2.431 Ghz
Traffic Indicator Range	6 Digits
Status Indicators	Dual Color LCD indicates: • Battery Life • Signal Strenght
Physical Dimensions	11.43cm (H) x 5.08cm (W) x 3.81cm (D)
Power Requirements	3.6V Lithium Battery
Expected Battery Life	1 year
Operating Temperature	0 to 40°C
Storage Temperature	-20 to 85°C
Warranty	90-day limited warranty