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Before starting the initial installation process, you should read the entire instruction manual and understand the importance of following the recommended installation instructions. There are important safety and operating information guidelines to insure proper performance of your device. Failure to do so could be hazardous and result in damage to your device, voiding your warranty.

After reading the entire instruction manual and before actually installing, SCT Wireless, Inc.<sup>™</sup> strongly recommends that you visualize where each component will be placed. This will avoid unnecessary problems with your installation (i.e. nail holes, reinstalling a component, re-wiring etc), and create a pleasant and successful experience with this device.

**\*NOTE:** All SCT Wireless, Inc.<sup>™</sup> devices are manufactured to provide you with a pleasant experience, by following the simple instructions within in this manual you will be assured not to cause adverse effects on any cellular network.

## 1-Year Warranty

SCT Wireless, Inc.<sup>™</sup> warrants for a period of one (1) year this product is free from any defects in material or workmanship. If a defect is found by SCT Wireless, Inc.<sup>™</sup>, SCT Wireless, Inc. agrees to repair or replace the product at its own discretion EXCLUDING ALL SHIPPING CHARGES. This product must have been registered with SCT Wireless, Inc. within 30-days of purchase and you are the original owner. To return a product, an RMA number must be obtained by contacting customer support. SCT Wireless, Inc.<sup>™</sup> will not accept returns unless all parts, packaging, and accessories along with dated proof of purchase with original receipt (copies not permitted) from where you purchased your product must be included with your return. Failure to return all product, parts, packaging, and accessories will result in only the product returned being replaced. If the product has been modified, abused or tampered with in any manner, SCT Wireless, Inc. will consider the warranty void. Any use of non SCT Wireless, Inc.<sup>™</sup> antennas, cables or other accessories will void your warranty.

Disclaimer: All information included in this document by SCT Wireless, Inc.<sup>™</sup> is believed to be complete and accurate. SCT Wireless, Inc.<sup>™</sup> assumes no responsibility or liability for any business or personal losses arising from its use, or for any infringements of patents or other rights of third parties that may result from its use.

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Phone: 888.728.6330 Local: 707.200.2506 Fax: 888.728.6322

### Technical Specifications

FCC ID: XZZ-WB-198	<b>Dual-Band Wireless 800/1900 MHz Specifications</b>
IC	9222A-SPTR
<b>Model</b>	Sphere
Antenna connectors	TNC Female
Antenna impedance	50 ohms
Dimensions	3.5 x 3.5 x 1 inch (8.8 x 8.8 x 2.5 cm)
Weight	0.3 lbs (0.14 kg)
Frequency	824-894 MHz / 1850-1990 MHz
<b>Passband Gain</b>	55 dB



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Wireless Modems  
Antennas • Accessories**

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# Sphere™

Inner Structure Wireless  
Dual Band Signal Box

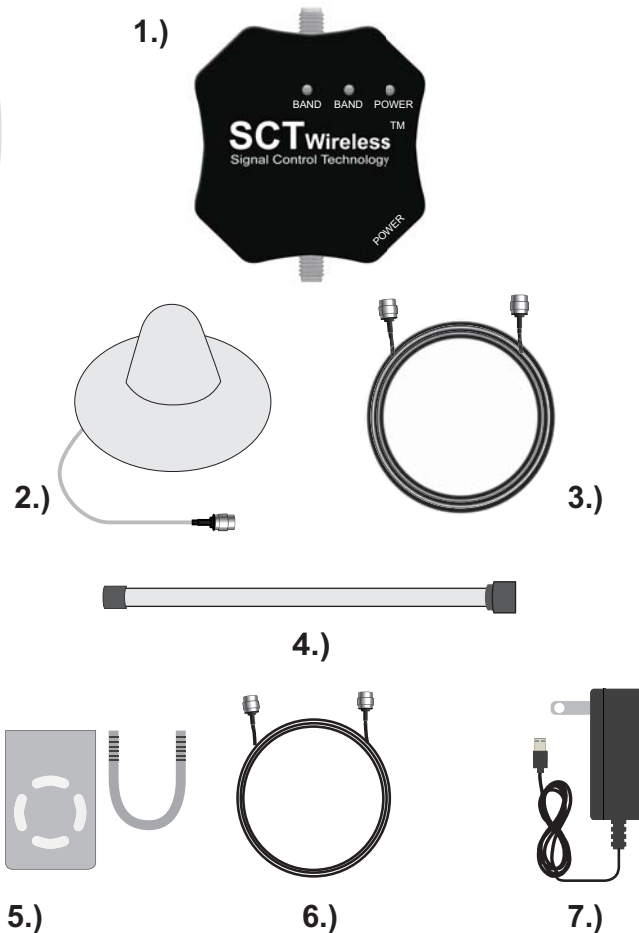


**User Guide**  
**EXPERIENCE SATISFACTION™**



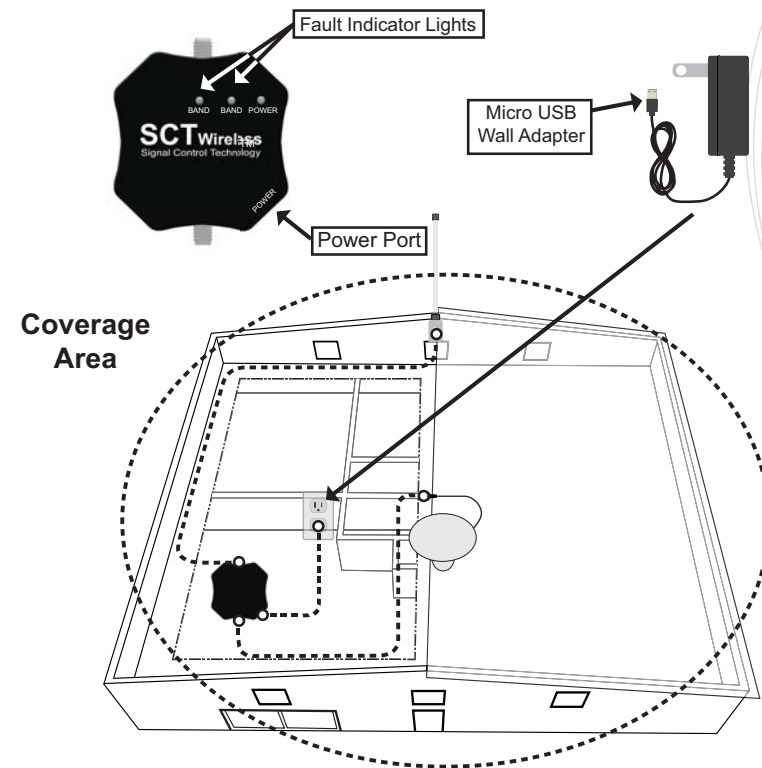
Contact SCT Technical support at 888-728-6330 or e-mail us at [techsupport@sctwireless.com](mailto:techsupport@sctwireless.com)

## Package Contents



- 1.) Inner Structure Wireless Signal Box
- 2.) Interior Antenna
- 3.) Interior (25ft.) Antenna Cable
- 4.) Exterior 360° Antenna
- 5.) Dual use mounting bracket
- 6.) Exterior (25ft.) Antenna Cable
- 7.) Wall Power Adapter

## 4.) Powering your Inner Structure Signal Box



Plug the Micro USB connector of the Wall Power Adapter into the device labeled "power".

Plug the Wall Power Adapter cable into your 120v electrical outlet. The blue LED light indicates your Sphere Wireless Signal Box has power and is operational. If after powering up your device a red LED light appears, this is an indication that your antennas are likely incorrectly placed. In the unlikely situation that this error occurs, immediately unplug your power supply cable from the electrical 120V outlet immediately, and increase the separation between the exterior glass antenna and the front area patch antenna. Then re-connect the power supply cable into your 120v power source. The blue LED light indicates your Sphere Wireless Signal Box has power and is operational.

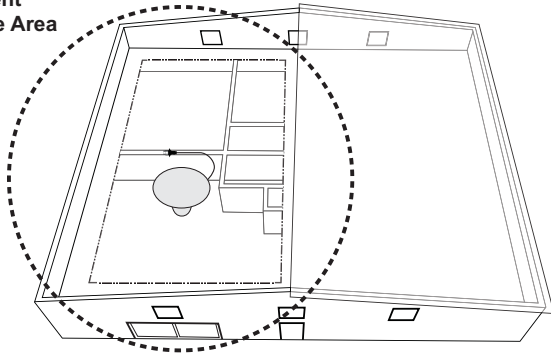


## Do You Need More Coverage Area?

Your recently purchased SCT Inner Structure Signal Box that is designed to cover an area up to 2500 sq. ft. In some cases the following conditions may require the use of a SCT Expander Kit.

- Structure larger than 2500 sq. ft.
- Multi-level Structures
- Interior Wall Material (i.e. concrete, metal, brick, etc.)

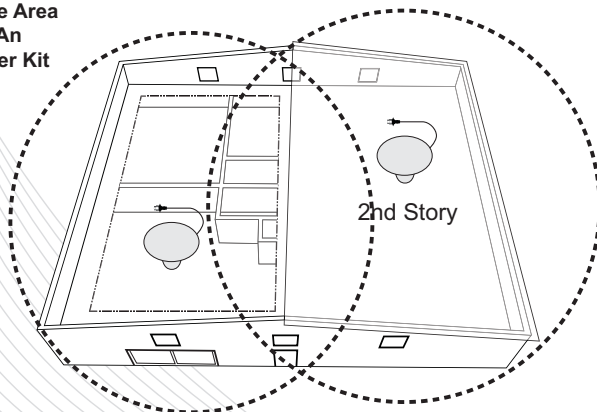
Current Coverage Area



Structure Larger Than 2500 Sq. Ft.

By adding an optional SCT Wireless Expander Kit to your device setup, you can increase your inner structure coverage by adding one (1) supplied Interior Antenna, up to a total of four (4) Interior Antennas.

Coverage Area With An Expander Kit



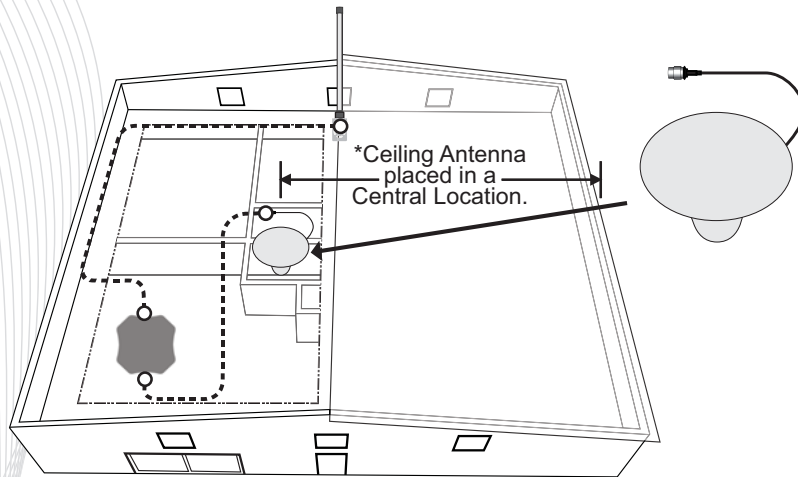
## Warnings

- ⚠ You are cautioned that changes or modifications not expressly approved by SCT Wireless Inc. could void your authority to operate the equipment.
- ⚠ 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.
- ⚠ FCC regulations require that antennas connected to this device can not exceed the maximum allowable dbi rating regardless of whether the antennas are installed inside or outside a structure. Doing so will violate SCT Wireless Inc. and Federal guidelines and regulations which the user will be liable for, and will result in your warranty being voided.
- ⚠ The Exterior antenna with this device may not have gain that exceeds 15dBi and may not be located within thirty-nine (39") inches of any person.
- ⚠ The internal antenna may not gain exceeds 15 dBi and may not be located within eight (8") inches of any person.
- ⚠ Do not plug the Sphere Wireless Signal Box into an AC power supply until all Antennas are installed and connected correctly.
- ⚠ The use of any power supply other than the one supplied by SCT may damage your device and will void your warranty.
- ⚠ Verify the electrical outlet you have chosen can support this device.
- ⚠ Select a location to install this device, making sure there is adequate ventilation and no moisture present.
- ⚠ Always check with your local governing body or homeowner association for rules and regulation regarding the installation of

### FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

### 3.) Installing the Interior Antenna



Install the Interior Ceiling Antenna using the supplied bracket. Make sure to anchor it securely to the ceiling. The Interior Ceiling Antenna should be placed in a central location within the structure. Doing so, will result in maximum coverage within your structure.

**\*NOTE:** This device utilizes antennas that requires a horizontal separation of a minimum of Fifteen (15ft.) feet and a minimum vertical separation of Ten (10ft) feet. The Interior Ceiling Antenna must be installed no further than Twenty-Five (25ft.) feet from the device. Extending the cable with a coupler and/or additional cable may reduce the performance of the device.

Hand tighten the Interior Antenna Cable Twenty-Five (25ft.) feet to the Interior Ceiling Antenna connector.

**\*NOTE:** Over tightening the connector on the cable to the antenna connector, may damage the coupling connection thus voiding your warranty. Exercise caution when attaching the cable to the device or antenna making certain the center pin on the cable does not bend.

Run the Interior Antenna Cable Twenty-Five (25ft.) feet to the device.

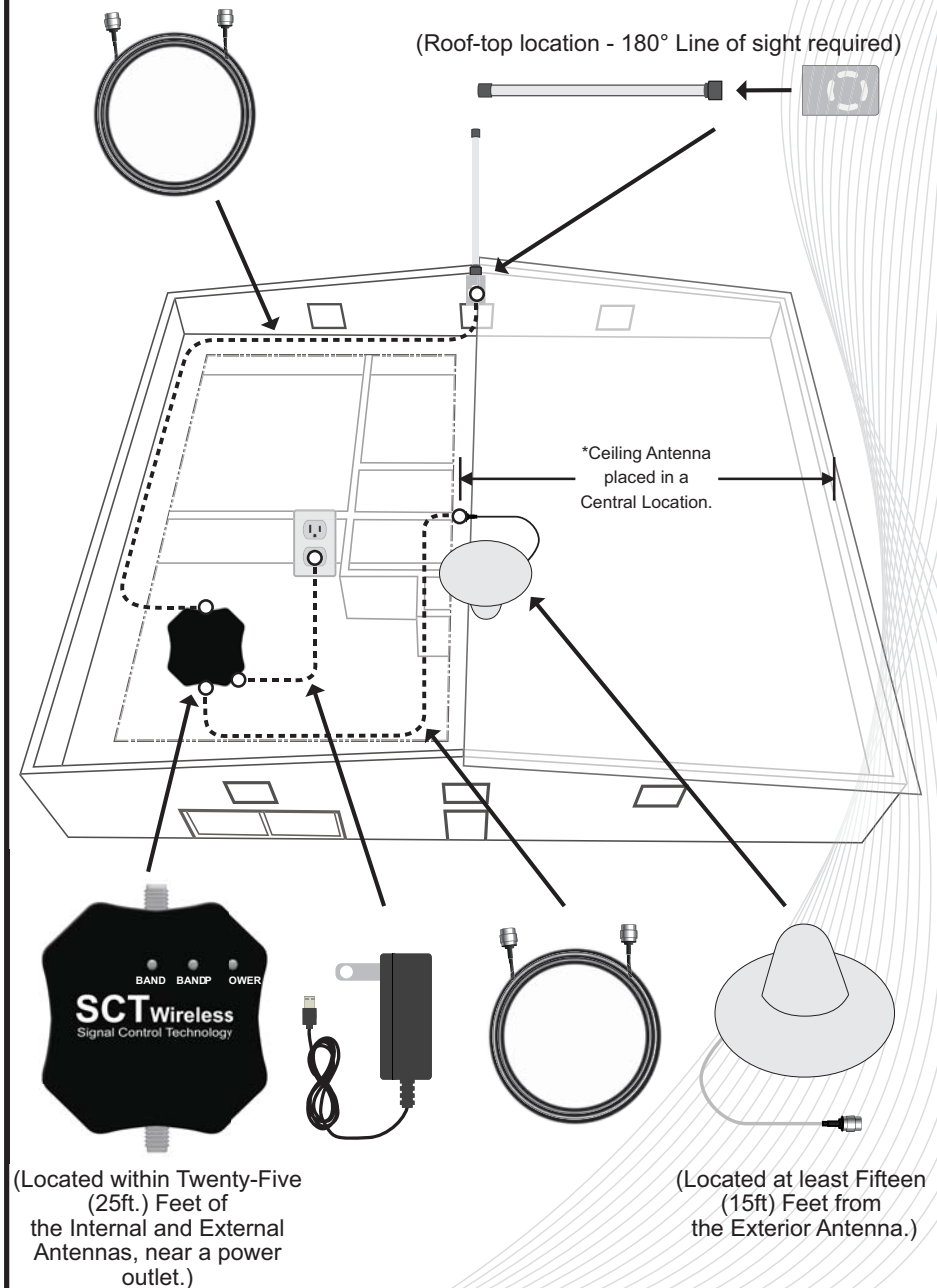
**\*NOTE:** When using staples or nails to secure the Interior cable exercise extreme caution not to puncture the cable lining as it may cause the device

Hand tighten the Interior Antenna Cable Twenty-Five (25ft.) feet to the device at the connector labeled Interior.

**\*NOTE:** Over tightening the connector on the cable to the device may damage the device thus voiding your warranty.

### Quick Start Guide

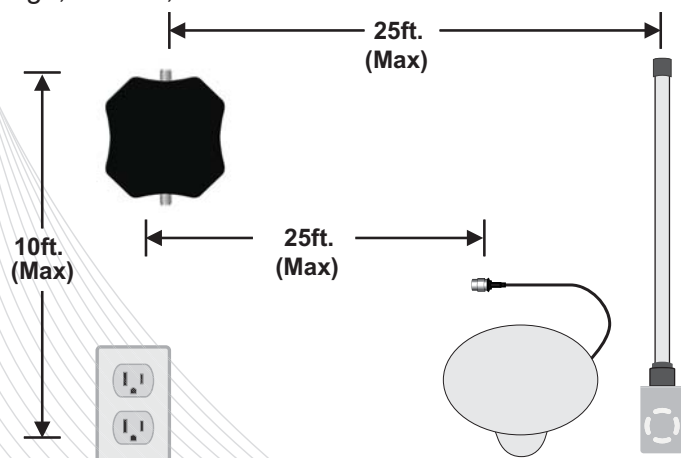
\*Setup Scenario Example



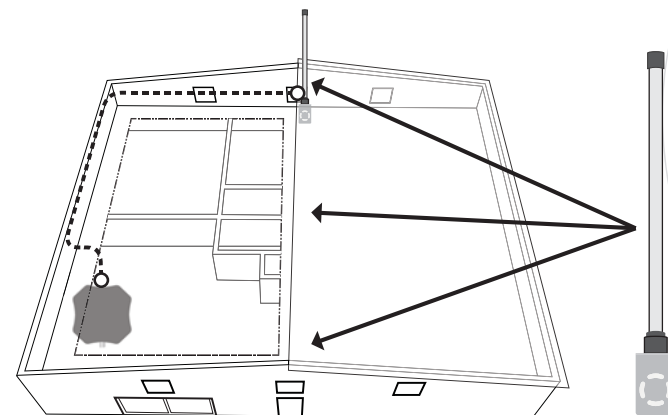
## 1.) Choosing A Location To Install Your Signal Box



There are several important factors that determine the final placement of your SCT Wireless Inc. Inner Structure Signal Box during the installation process. Be sure to choose a convenient, accessible location in your home or small office structure for your device to be placed. The device should be located within Ten (10ft.) feet of an electrical outlet. The device must be placed no further than Twenty-Five (25ft.) feet from where the internal and external antennas will be located. Some common, recommended locations are: An attic, closet, garage, cabinet, or shelf.



## 2.) Installing the Exterior Antenna



Install the Exterior 360° Antenna using the supplied bracket attachment. Make sure to anchor it securely to the structure.

**\*NOTE:** This device utilizes antennas that requires a horizontal separation of a minimum of Fifteen (15ft.) feet and a minimum vertical separation of Ten (10ft.) feet. The Exterior 360° Antenna **MUST** have a minimum of 180° degree line of sight, with a minimum of Sixteen (16") inches above any roofline, building, or other obstructions. The Exterior 360° Antenna must be installed no further than Twenty-Five (25ft.) feet of the device. Extending cable with a coupler and/or additional cable may reduce the performance of

Hand tighten the Exterior Antenna Cable Twenty-Five (25ft.) feet connector to the connector on the bottom of the Exterior 360° Antenna. **\*NOTE:** Over tightening the connector on the cable to the antenna may damage the antenna thus voiding your warranty. Exercise caution when attaching the cable to the device or antenna making certain the center pin on the cable does not bend.

Run the Exterior Antenna Cable Twenty-Five (25ft.) feet to the Sphere Wireless Signal Box. **\*NOTE:** When using staples or nails to secure the exterior cable exercise extreme caution not to puncture the cable lining as it may cause the device to cease functioning properly.

Hand tighten the Exterior Cable Twenty-Five (25ft.) feet to the device at the connector labeled exterior. **\*NOTE:** Over tightening the connector on the cable to the antenna may damage the antenna thus voiding your warranty. Exercise caution when attaching the cable to the device or antenna making certain the center pin on the cable does not bend.