RoamAlert Controller
Exciter Antenna
Installation Guide
Warranty

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Important Recommendation

Stanley Healthcare Solutions’ systems are designed to assist staff in providing a high degree of safety for people and assets and therefore should be used as a component of a comprehensive security program of policies, procedures, and processes. As with every security system, Stanley Healthcare Solutions highly recommends regular system operational checks to verify functional integrity.
Introduction

Included in this Package

<table>
<thead>
<tr>
<th>QTY</th>
<th>PART #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>804A3001</td>
<td>RoamAlert Controller Exciter Antenna (CEA)</td>
</tr>
<tr>
<td>1</td>
<td>N/A</td>
<td>25' (7.6m) coaxial cable with BNC connectors</td>
</tr>
<tr>
<td>1</td>
<td>981-804002-000</td>
<td>Surface mounting template</td>
</tr>
<tr>
<td>1</td>
<td>981-000360-000</td>
<td>This document</td>
</tr>
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RoamAlert Controller Exciter Antenna Overview

This Exciter Antenna replaces both the AR2SE01-0PK SRA Exciter Antenna and the AR2SE01-LPK SRA-E Surface Mount Antenna. The 804A3001 Exciter Antenna may be installed either within a wall cavity or surface-mounted on walls or in elevator cars. The exciter produces a 307.2 kHz electromagnetic field that is approximately spherical in shape. This field activates RoamAlert tags that enter it. The activated tag emits an identifying signal that is picked up by the controller to which the exciter antenna is attached. The controller can be programmed to perform a variety of actions when the tag signal is received, such as engaging a magnetic lock, or sounding a local or remote alarm.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>Operating Frequency</td>
<td>307.2 kHz</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>15 V Peak to Peak (Maximum)</td>
</tr>
<tr>
<td>Input Current</td>
<td>7mA (typical)</td>
</tr>
<tr>
<td>Operating/Storage Temp</td>
<td>32° F to 120° F (0° C to 49° C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>0-85% RH @ 70° F (21° C) non-condensing</td>
</tr>
<tr>
<td>Dimensions</td>
<td>13” L x 2.5” W x 1.5” H (33 x 6.3 x 3.8 cm)</td>
</tr>
<tr>
<td></td>
<td>Height with surface mount cover: 1.7” (4.5cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>14.5 oz (412g) / 18.2 oz (510g) with cover</td>
</tr>
</tbody>
</table>
**Installation**

Refer to the RoamAlert Installation Manual (document 981-000043-000), Chapter 2, System Design and Chapter 3, Hardware Installation for complete details on door and elevator controller system layout, component installation and for tuning and testing procedures.

**General Installation Tips**

**Exciter Antenna Orientation**

- Orient exciter antennas correctly.
  The cable ends of both exciter antennas in an elevator car or two exciter antennas at the same exit must be pointed in the same direction to prevent the fields from cancelling each other out.

![Detection Fields Add](image)

- **Detection Fields Add**
- **Detection Fields Cancel**

**Installation at Exits or Zone Boundaries**

- The exciter antenna may be placed in different positions, depending on the environment:
  - inside a wall cavity, 4 feet (1.2m) above the floor,
  - above the doorway in a single-floor facility (where there are no protected exits directly above or below), laid flat on the dropped ceiling tile (non foil-backed),
  - securely fastened under the floor of the doorway, or
  - surface-mounted on the sidewall along the hallway, 4 feet (1.2m) above the floor.

- The exciter antenna field must not extend into areas that are regularly occupied by tags.
  These tags could keep a controller in the pre-alarm state, preventing the door from opening if maglocks are in use.
• Tags should detect the exciter antenna field at least 6 feet (1.8m) from the door to allow sufficient time for a maglock to energize.

• If the exciter antenna is being dropped inside a wall cavity, follow these guidelines:
  • To prevent damage to the connector, do not let the exciter antenna hang by the cable. Loop the cable and secure it with tie-wrap, or use an appropriate method for your application. Two typical tie-wrap applications are shown here; on the left, when using the cover, and on the right without the cover.
  • Do not let the exciter antenna hang low enough to touch the bottom steel plate.
  • Mark the correct height on the cable before dropping the exciter antenna into the cavity, then secure the cable when it is hanging in position.

• **Two exciter antennas may be connected to a single controller.**
  In an installation with very wide or double doors, two exciter antennas may be required to provide adequate tag detection.

• **For surface mount applications, test before drilling holes.**
  Mount exciter antennas temporarily and test tag detection before drilling mounting and cable holes. Refer to the RoamAlert Installation Manual (document 981-000043-000), Chapter 3, Hardware Installation, Door Controller and Exciter Installation Procedure section, Step 9 for exciter antenna testing and tuning details.

Where the cable connector at the end of the exciter antenna must be used, remove the cutout using appropriate tools, making sure that the edges are smooth and cannot harm the cable.
RoamAlert Controller Exciter Antenna Installation Guide

Suitable for Single-Floor Installations Only

To RS-485 Network

Door Controller
To Power Supply

Exciter Antenna

Detection Field

Maglock*
Door Contact

Keypad

Suitable for Multi-Floor Installations

To RS-485 Network

Door Controller
To Power Supply

Exciter Antenna

Keypad

Detection Field
Installation in Elevator Cars

- **Use the supplied template.**
  The template allows accurate positioning of holes for the exciter antenna cable and mounting hardware.

- **Orient the exciter antennas correctly.**
  The cable ends of both exciter antennas must be pointed in the same direction to prevent the fields from cancelling each other out.

- **Tune the exciter antenna fields carefully.**
  Tags must be detected anywhere inside the car, without being detected in the elevator lobby. As well, exciter antenna fields in adjacent cars must not intersect. Tune the fields until you achieve the absolute minimum field that will always detect a tag in the car.

- **Carefully test elevator bank installations.**
  If exciter antenna fields in adjacent cars in an elevator bank intersect, tags may not be reliably detected. Make sure each car is carefully tuned before testing the bank. If you still cannot reliably detect tags, please contact Stanley Healthcare Solutions technical support for assistance.

Mounting the Exciter Antennas in Elevator Cars

Follow these steps to permanently mount each exciter antenna:

1. **Center the mounting template (supplied with each exciter antenna) horizontally on one side wall at least 1” below the handrail (or at the location discovered during testing), and mark the screw and co-axial cable entry holes.**

2. **Making sure to orient the template in the same direction,** center the template on the other side wall at the same height and mark the screw and co-axial cable entry holes.

3. Drill suitable holes for the mounting screws and cable, and place grommets into the cable holes to protect the cable from damage.

4. Connect the exciter antenna cables to **SRA #1** and **SRA #2** on the controller front panel, and feed the cables from the controller cabinet down into the car walls, and out through the grommeted cable holes.

5. Attach the cables and mount the exciter antennas to the walls using the supplied screws, or other mounting hardware as required by the specific installation.

6. **Snap the exciter antenna covers into place.**

In some cases, the facility may not want the exciter antenna to be exposed. In this situation, you must ensure that the exciter antenna is not mounted behind metal.

Refer to the RoamAlert Installation Manual (document 981-000043-000), Chapter 3, Hardware Installation for complete details on tuning and testing procedures.