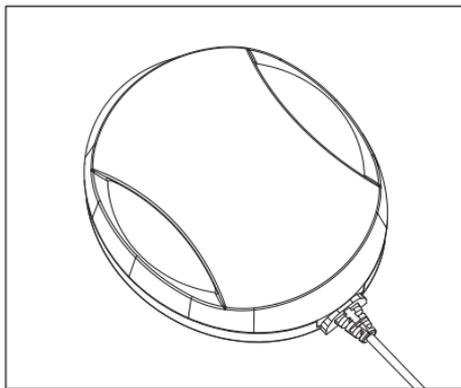


# Clarion<sup>®</sup> SA200

---

## INSTALLATION GUIDE



### *Introduction*

The Clarion SA200, a Sirius Satellite Radio approved antenna, has been designed and engineered to receive signal transmissions for Sirius' three satellites and network of ground-based repeaters. This is a finely tuned antenna intended to receive satellite signals throughout North America under diverse conditions. It is imperative to read and understand the "Installation Guide" to ensure optimum performance of the satellite antenna.

## Installation Requirements

Due to the complexity of vehicle electronics and assembly, it is essential to possess the necessary skills and knowledge prior to attempting this installation. If you do not have the confidence to attempt this installation, contact a local installation facility in your area.

## Mounting Location

The SA200 should be mounted horizontally onto a metal surface measuring at least 18" x 18", preferably at the highest point of the vehicle. The roof is the ideal location, but a trunk lid is an alternative location for convertibles and some sedans. If the antenna is mounted on the trunk lid, make sure it is at least 6 inches away from the bottom of the rear window. It is important for the satellite antenna to have an unobstructed view of the satellites and ground-based repeaters (i.e. clear of roof racks, rear window, sunroofs, and other antennas).

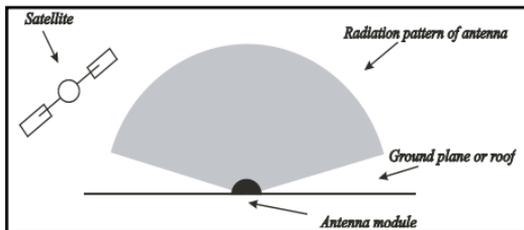


Fig. 1  
Ideal reception pattern

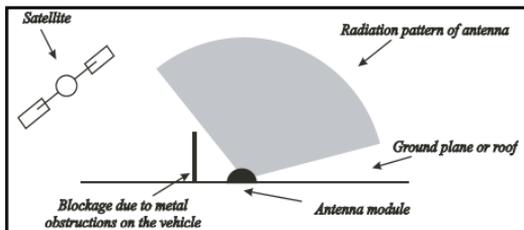


Fig. 2  
Effect of obstruction on  
reception pattern

## *Installation Temperature*

To achieve the best adhesion, a heat gun can be used to warm up the double-sided tape on the SA200 and surface of the vehicle. With these surfaces warmed up, the adhesion of the antenna to the vehicle will be more secure. The heat gun can also be used to warm up the rubber moldings surrounding the rear window, allowing the routing of the antenna cable to be easier. Be careful not to damage the paint or melting the rubber molding.

## *Sedan Vehicle Installation*

The SA200 should be located along the centerline of the roof, at least 4 inches from the rear window. The antenna cable can be tucked and routed underneath the rubber molding around the rear window and into the trunk.

1. Clean the general area where the antenna is going to be mounted and the rubber molding.
2. Identify and mark the precise location where the antenna is going to be mounted.
3. Peel off the protective cover from the double-sided tape.
4. Set the tail end of the antenna at the predetermined location, and work back toward the antenna head applying pressure throughout the application. (Maximum adhesion occurs within 72 hours of application, during which time the vehicle should not be washed and contact with the antenna should be avoided.)
5. Carefully tuck the antenna cable under the rubber molding, working from the tail of the antenna around the window. (Using a flat-tip dental pick or plastic knife insulated with black tape can be used to lift the rubber molding and tuck in the antenna cable.)

**It is important that the coaxial cable is not damaged or kinked during the installation procedure.**

6. Route the cable from the lowest point of the rear window into the trunk area. Try to use any existing cable channel or wiring conduit. (It might be necessary to remove the plastic housing from the antenna connector in order to feed the cables through narrow openings.)
7. Route the cable through the interior trim to where the receiver is located.

## *Convertible Vehicle Installations*

On convertible vehicles (and some sedans that don't have sufficient space under the window moldings) the antenna module should be mounted on the center of the trunk lid approximately 6 inches away from the rear window.

1. Follow Step 1-4 of Sedan Vehicle Installation.
2. Route the cable from the antenna along the edge of the trunk lid underneath the lid. (Cable clamps maybe necessary to hold the antenna cable in place when access holes on the trunk lid aren't available.)
3. Wire tie or run the antenna cable through an existing wiring loom leading from the trunk lid to the interior of the trunk. (It might be necessary to remove the plastic housing from the antenna connector in order to feed the cables through narrow openings.)
4. Route the cable through the interior trim to where the receiver is located.

**It is important that the coaxial cable is not damaged or kinked during the installation procedure.**

## *SUV/Minivan/5-Door Vehicle Installations*

The antenna module should be mounted on the centerline of the roof, not less than 4 inches away from the gap between the roof and tailgate. If the vehicle is equipped with a roof rack, the crossbar should be placed at least 6 inches away from the antenna module. In certain instances, it maybe necessary to mount the antenna left or right of center to avoid "skid ribs" or the brake light.

1. Follow Step 1-4 of Sedan Vehicle Installation.
2. Route the cable from the antenna between the roof and tailgate to the inside of the vehicle. Take advantage of any existing cable channels or wiring conduit.
3. Route the cable between the headliner and sheet metal by lifting up and/or removing the rubber molding and going through the small opening between the sheet metal and headliner.
4. Route the cable through the interior trim to where the receiver is located.

**It is important that the coaxial cable is not damaged or kinked during the installation procedure.**

## *Pick-Up Truck Installation*

The antenna module should be mounted on the centerline of the roof approximately 4 inches from the rear of the cab.

1. Follow Step 1-4 of Sedan Vehicle Installation.
  - If the molding for the brake light is made out of rigid plastic, it might be necessary to drill a small hole or slot to route the cable. Seal the hole with silicone compound after the installation.
2. Route the cable through the interior trim to where the receiver is located.

**It is important that the coaxial cable is not damaged or kinked during the installation procedure.**

## Specifications

### Electrical Data:

Antenna Passive Gain (SAT)	
$25^{\circ} \leq \phi \leq 50^{\circ}$ .....	0 dBic
$50^{\circ} \leq \phi \leq 70^{\circ}$ .....	4.5 dBic
$70^{\circ} \leq \phi \leq 90^{\circ}$ .....	2 dBic
Antenna Passive Gain (Terr.)	
$70^{\circ} \leq \phi \leq 90^{\circ}$ .....	-4 dBic
LNA Noise Figure .....	0.7 dB
LNA Gain .....	36.5 dB

### Mechanical Data:

Dimensions .....	74x64x20 (mm)
Weight .....	5.11oz.

### Environmental Data:

Operating Temperature .....	-40 to +105 (degC)
Storage Temperature.....	-45 to +120 (degC)

*Notes:*

**clarion**

---

661 W. Redondo Beach Blvd.  
Gardena, CA. 90247  
[www.clarion.com](http://www.clarion.com)

SA200.2.04  
REV.1