

# SMART ANTENNA SELECTOR

Never lose the signal again...

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## The Idea

C.N.Sat has more than fifteen years of experience in satellite TV antenna installations on boats of every kind and size. The company sells and installs different brands as each company has its peculiarities and solutions in order to solve satellite reception problems whilst on board. One of the most frequent problems is that of blind angles created by vertical constructions built nearby (such as masts, other antennas and so on). Some brands/models offer already integrated solutions to balance the presence of two or more antennas on board, while others do not offer this kind of feature. As this was lacking commercially, C.N.Sat considered developing internally a product able to fill the gap. In the same period, while installing a twin KVH antennas system on a 45 m M/Y, C.N.Sat was requested to provide a system able to use the second antenna as a back-up for the first one; in case the latter could not perceive the satellite. But there was a second request: the capability of also using the two antennas pointed on different satellites with two different distributions.

The development started and we produced our first Smart Antenna Selector. The SAS.

## The Development

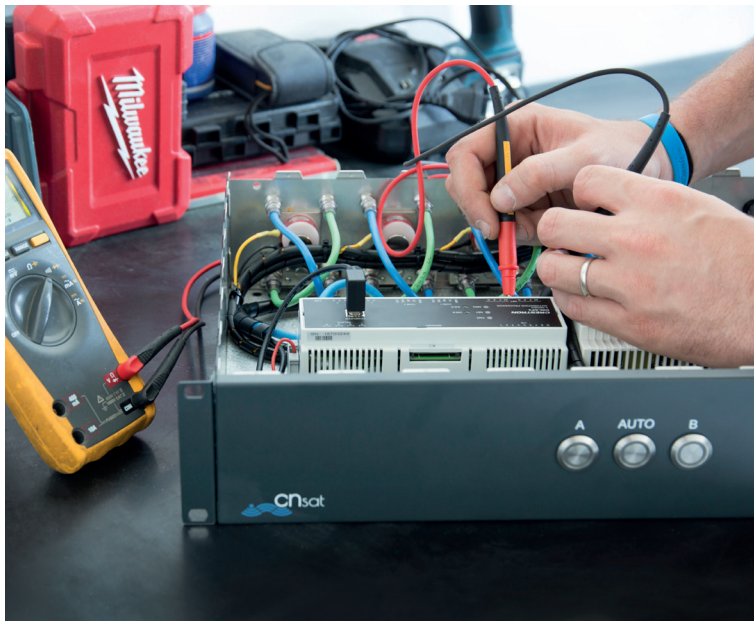
Since the first beta version, SAS was based on a Crestron processor, pioneers of automation even today.

The processor makes queries to both antennas and chooses the best one to be connected to the signal distribution. The algorithm is based on signal strength, on the antenna's state and the proximity of blind angles.

The development purpose was obtaining a system able to work independently, with transparent interaction both for final users and the audio/video system manager on board. The first beta version offered the AUTO mode, able to minimize the interaction with the device during its usage.

### SAS Standard



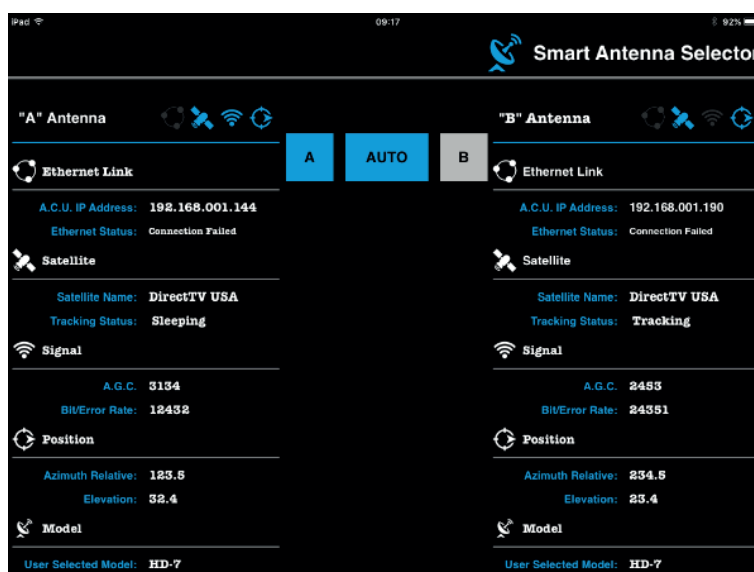


SAS Light



Crestron

Then, the SAS software and hardware were developed to provide other working modes, simple to activate and at the same time extremely useful: just by pressing a button on the device's front panel, the use of one antenna instead of the other one can be forced, for example if the boat is moored and an obstruction blinds the right antenna. During the development of the first SAS prototypes, the developers noticed that it's not always possible on vessels to access the audio/video electronics racks swiftly and comfortably: here stems the necessity to provide a network remote interface that replicates all the actions available on the front panel and is able to provide a series of useful information about the antennas' state, relative position and signal strength.



Crestron automation and control solutions for yachts let people control entire environments with the push of a button or the touch of a display, integrating systems such as A/V, lighting, shading, and security to provide greater comfort, convenience, and security. Enabling the customer to monitor, manage and control everything on the ship.



SAS control app is available for Apple iPad and Windows.

## Production Years

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Once the first official SAS version was consolidated, the product was sold, receiving good feedback from all kinds of vessels. From this feedback, the necessity arose to design a simplified version of the device, skipping some unnecessary functions for small boats provided with a single signal distribution: SAS light came to life, smaller (only two rack units instead of three rack units for the SAS Standard), less expensive and perfect for smaller sized boats. SAS light does not lose its functional independence and its remote interface but only a single distribution is available.

## The Future

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Many units of the SAS are being sold at the moment, both standard and light versions, but our research and development won't stop there. New features will be available soon, such as a web user interface and remote assistance.

## The Company

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C.N. Sat, founded in 2001, operates in the field of telecommunication, entertainment and information technology for the maritime market, providing solutions and technical assistance to boats of every size, from the leisure yacht up to the large cruise ship. Its offices are located in the port of Genoa. Since 2007 C.N. Sat has been part of the GMG group, a leader in the ship building and servicing industry. All services can be "all inclusive", as our company can provide consultancy regarding all accessory services to our installations, such as crane, shipyard and dry dock rental, and even specialized carpentry. Plus, relating daily with boats and people on board, C.N. Sat can provide consultancy to shipyards and marinas regarding the supply of Sat TV, wired or wireless telephone services, or wireless Internet access.

### Graphic User Interface

Windows PC: Without installing anything the system status could be viewed and managed with an intuitive interface. The interface works with windows 7,8 and 10.



Apple iPad: Thanks to the Crestron mobile app, that can be downloaded from the app store, you can access to the user interface and manage it from your Ipad.

