

Index:

- Chapter 1 - Introduction
- Chapter 2 - Windows PC Application
 - 2.1 – First Access
 - 2.2 – Configuration
 - 2.3 – Smart Antenna Selector Page
- Chapter 3 - Ipad Crestron App

Chapter 1 - Introduction

The Smart Antenna Selector is equipped with a pre-installed graphical user interface, designed to add lot of fuctions compared to the rack unit front panel.

There are two installed GUIs. One is designed for Windows PC and allow the user to make changes on basic configuration and manage the Smart Antenna Selector functions. The other one is designed for Apple Ipad and allow the user to manage only the Smart Antenna Selector funtions, no configuration can be changed from this GUI.

In both GUIs the user can find the same “buttons” of the rack unit front panel, plus some informations about the antenna status. The values which can be viewed from both GUIs are:

- Antennas A.C.U. ethernet link status, with visible IP address. ¹
- Antennas tracking status: with visible tracking satellite and status. ²
- Antenna signal level: with visible AGC and S/N Ratio (for HD11, and TV Series) or BER (for HD7 antennas).³
- Antenna position: with visible azimuth relative and elevation
- Antenna model: selected from user.

In the following chapters there's a guide of how to use both kind of GUIs.

¹ The Smart Antenna Selector can take values from antenna control unit only via TCP/IP link, so the ethernet link status in one of the most important parameters to observe.

² The values of the tracking status are the same of the antenna web interface or A.C.U. display.

³ The model is a user selection only via Windows PC GUI. By selecting the model the system react automatically to have the current informations shown. (S/N Ratio or BER).

Chapter 2 - Windows PC Application

2.1 – First Access

This GUI is the most complete way to manage and/or use the functions of the Smart Antenna Selector.

The “brain” behind all the processes is a Crestron DIN-AP3 automation processor which carry onboard a GUI made by the Crestron Xpanel technology.

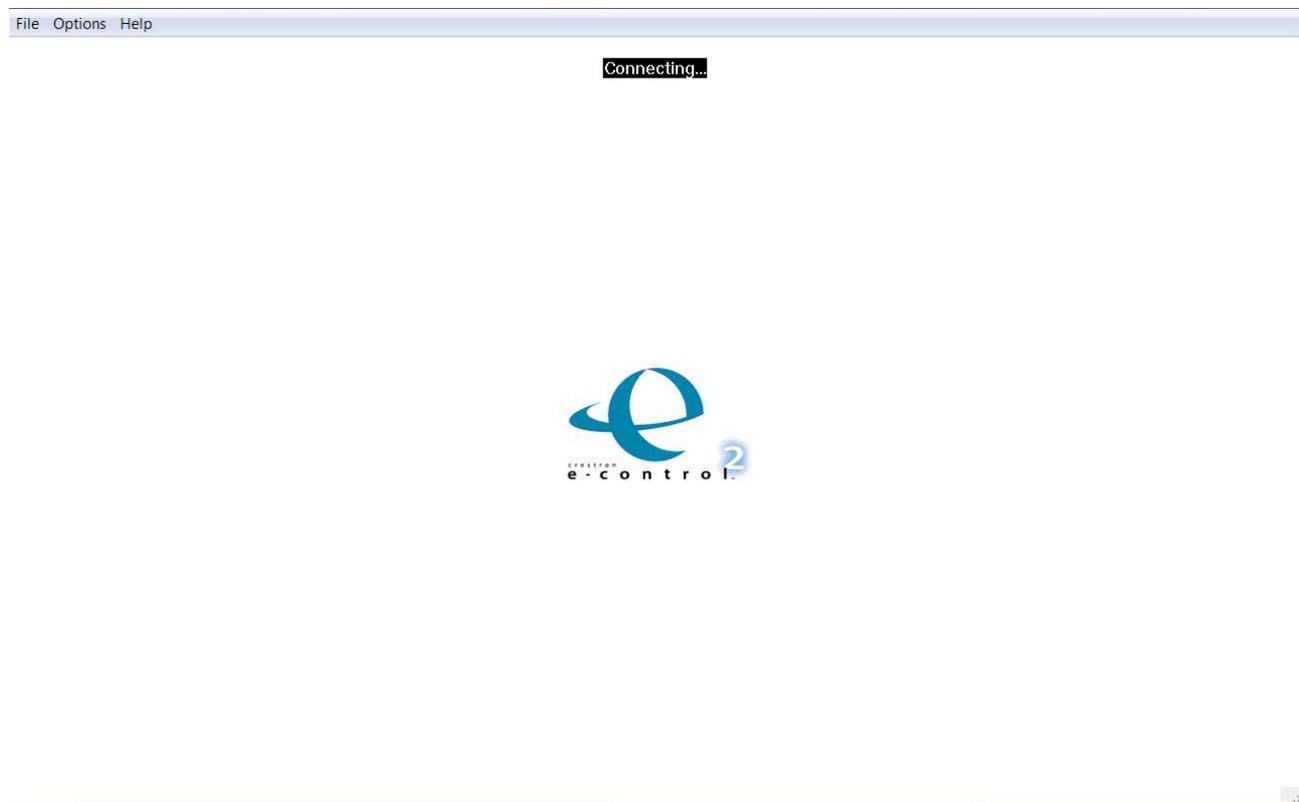
This GUI allow you to:

- Select the target IP addresses of both antennas ACU/TV Hub, to allow the processor to link them and decode the data stream incoming.⁴
- Configure the azimuth limits of both antennas, or better to set the “blind” sector.
- Select the antennas models.⁵
- Configure the IP address, netmask and default gateway of the S.A.S. itself
- Select the operation mode, or better manual or automatic

The first installation is quite simple.

The S.A.S. is configured to have a default IP address of: 192.168.1.100

Open the folder with the Windows PC application inside (is an .exe file). The following page will appear:



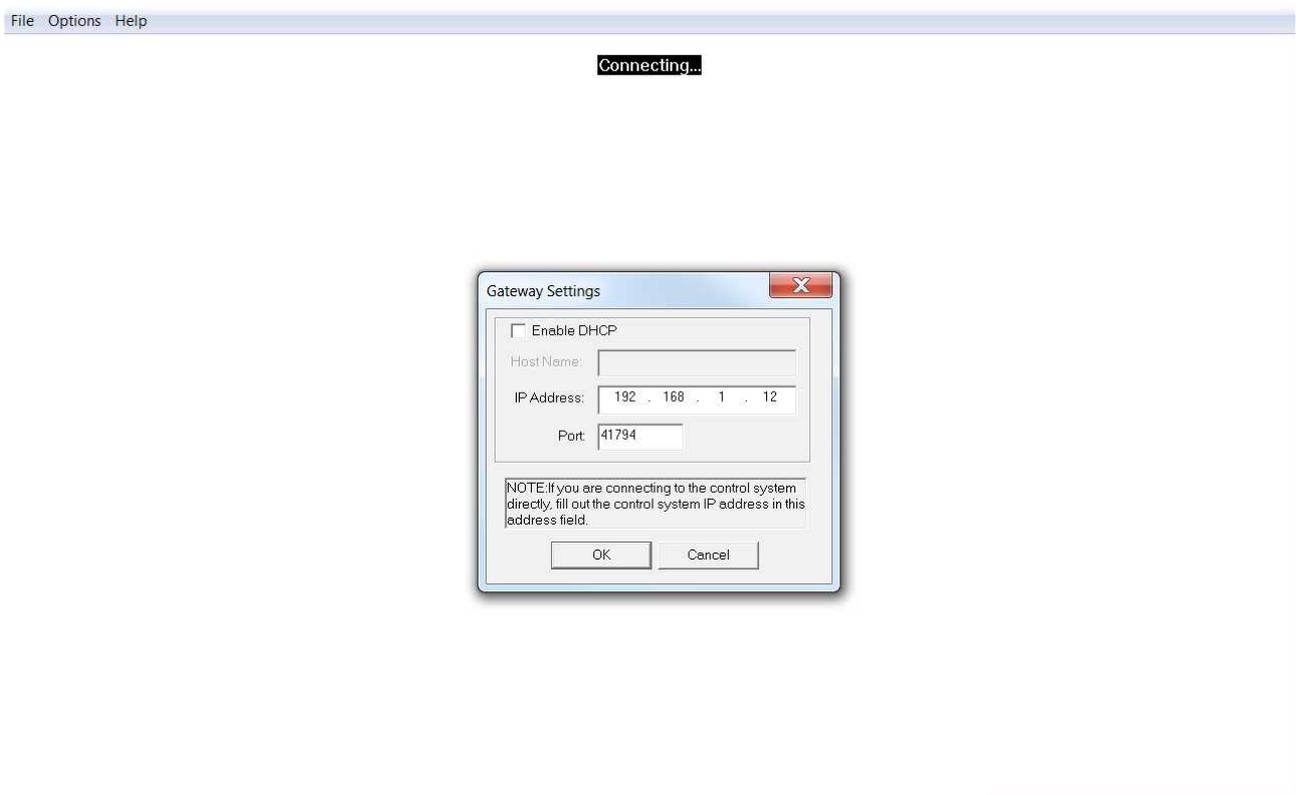
⁴ This means that the IP address of both ACUs/TV Hub has to be set before configuring the Smart Antenna Selector target IP addresses.

⁵ The Smart Antenna Selector is available only for antennas with TCP/IP link, so the G and M series cannot be linked

In the upper menu you have to select “Options” and then “Settings”:



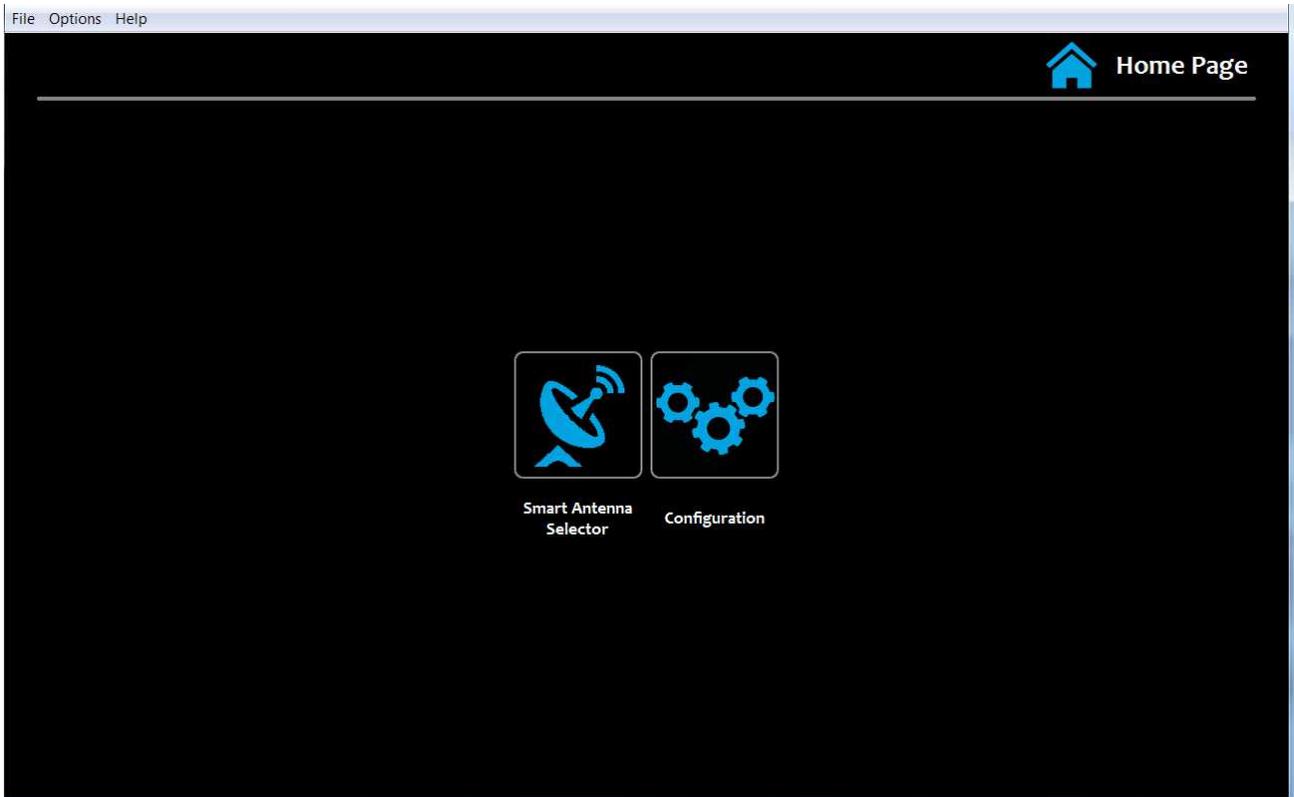
Now you have to digit the IP address of the S.A.S.



If is the default one just digit 192.168.1.100, otherwise use the current IP address.

2.2 – Configuration

If the S.A.S. Is correctly connected to a network (through a ethernet switch and/or router) and you set the correct IP address the following page will appear:



This is the “Home Page” where you can access the configuration page or the operational page. If you click on “Configuration” the following page will appear:



In this case the “A Antenna” page is shown, the default one is empty, so you have to select one of the options of the upper menu (green circle).

If you click on the home icon (red circle) you will be back to the Home Page.

The “A Antenna” and “B Antenna” are the same pages, with of course, different values. You have to associate the “A” antenna and “B” antenna with the ones installed and remember this decision. In fact when you have to configure the azimuth limits you need to know the position of the antenna (stb or ptb side, or sometimes, fwd or aft) to set the correct angles. Same for the IP address of the ACU.

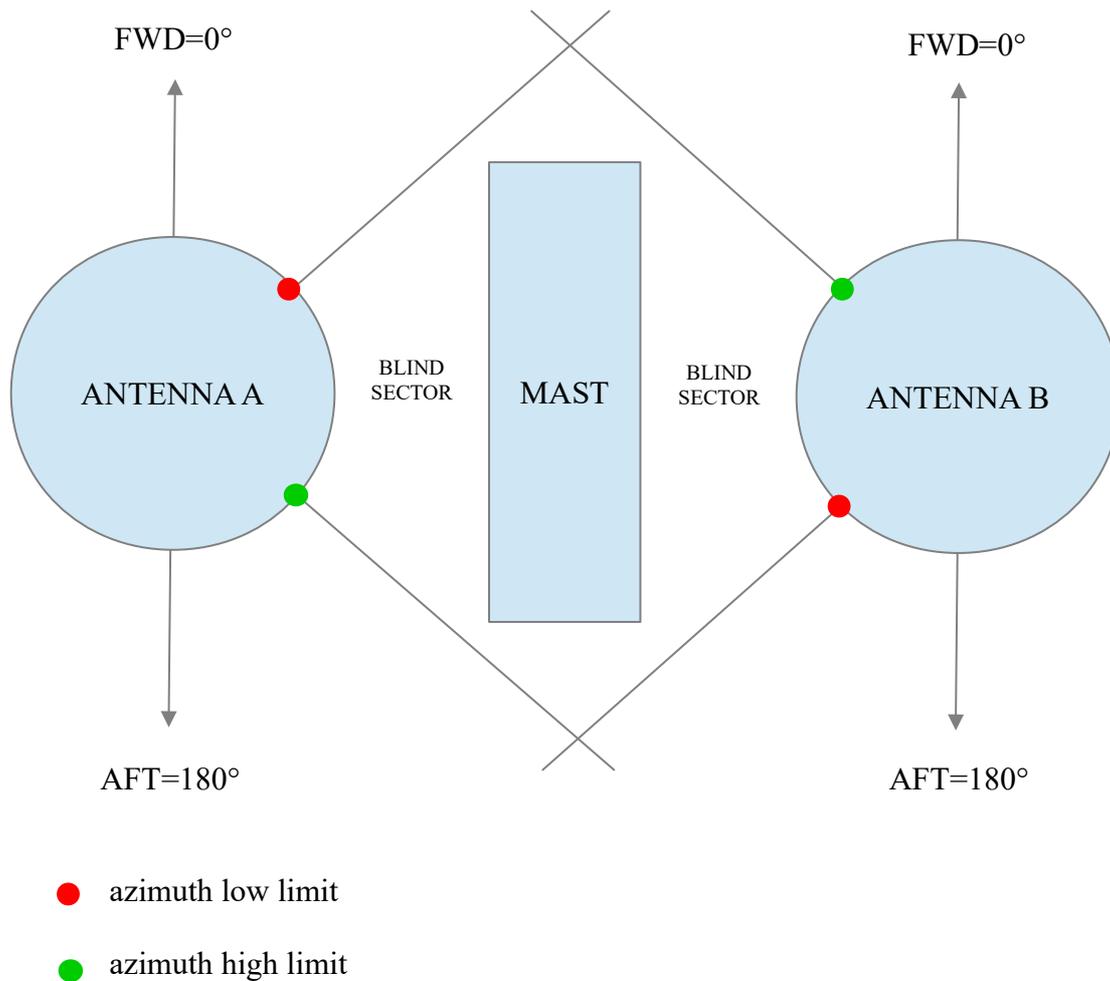
If you want to change some values just click on “New” buttons (yellow circle) and use the cursors to make your changes:



Once you set the value you want just click on “Submit” button (yellow circle).

In the “Model” section just click on the model button (green circle) to select the installed antenna model.

Setting the azimuth limits values is very simple. Below you can find a simple schematic:



In this case both antennas are installed facing the FWD. In some cases one of the antennas is installed facing the AFT. In this case adjust the angles following this consideration.

Just to give an example, in the previous schematic the values for Antenna A are around:

- low limit : 30°
- up limit : 150°

For Antenna B:

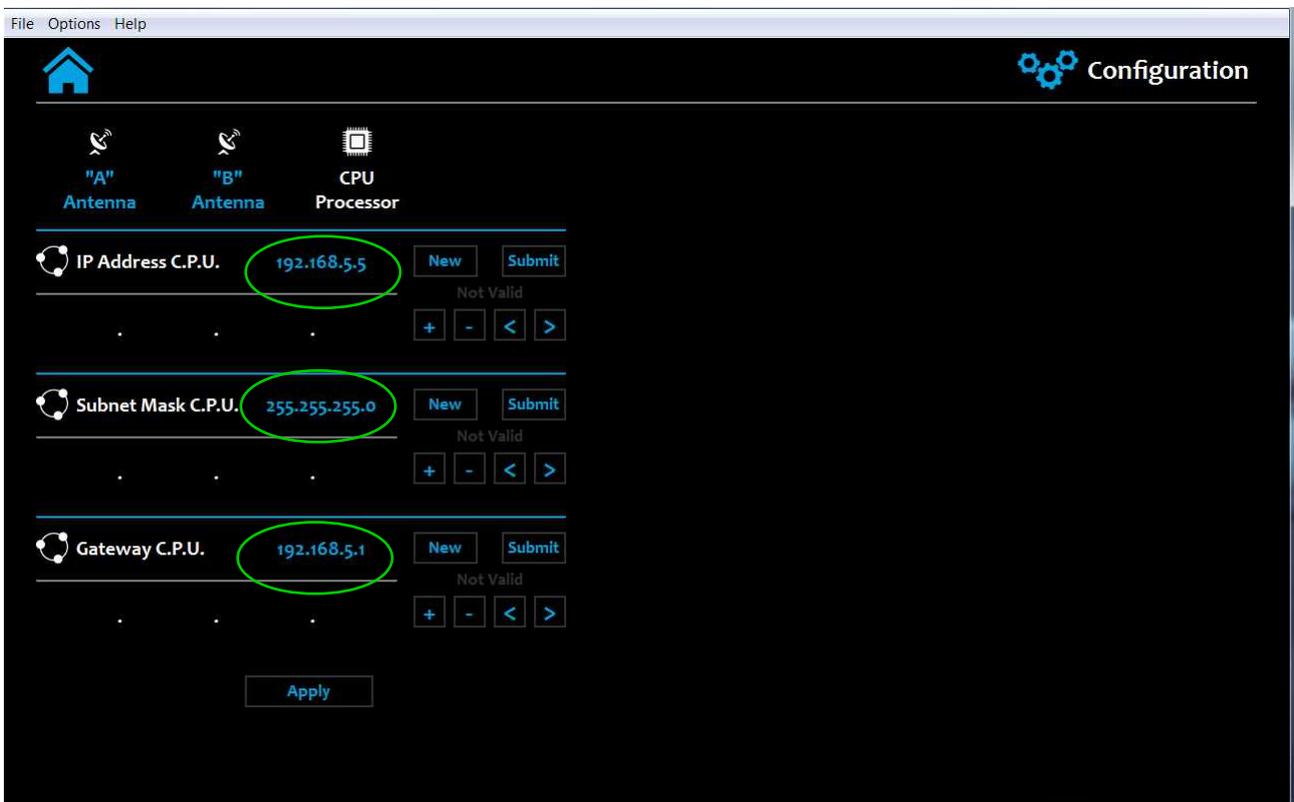
- low limit : 210°
- up limit : 330°

The values that you can insert are filtered by the logic and if you change something with a not correct value the system will activate the flag “not valid” which can be found below the buttons “New” and “Submit”. For example the azimuth limits are limited to 0° to 359° and the IP address cannot go over 255.255.255.255. Inside the green circle you can find the Not Valid flag active and the reason of the activation.

In this case a not valid IP address was been inserted (392.xxx.xxx.xxx).



Concerning the CPU Processor IP configuration is necessary to introduce something more. If you click on “CPU Processor” page you will see the following subpage:



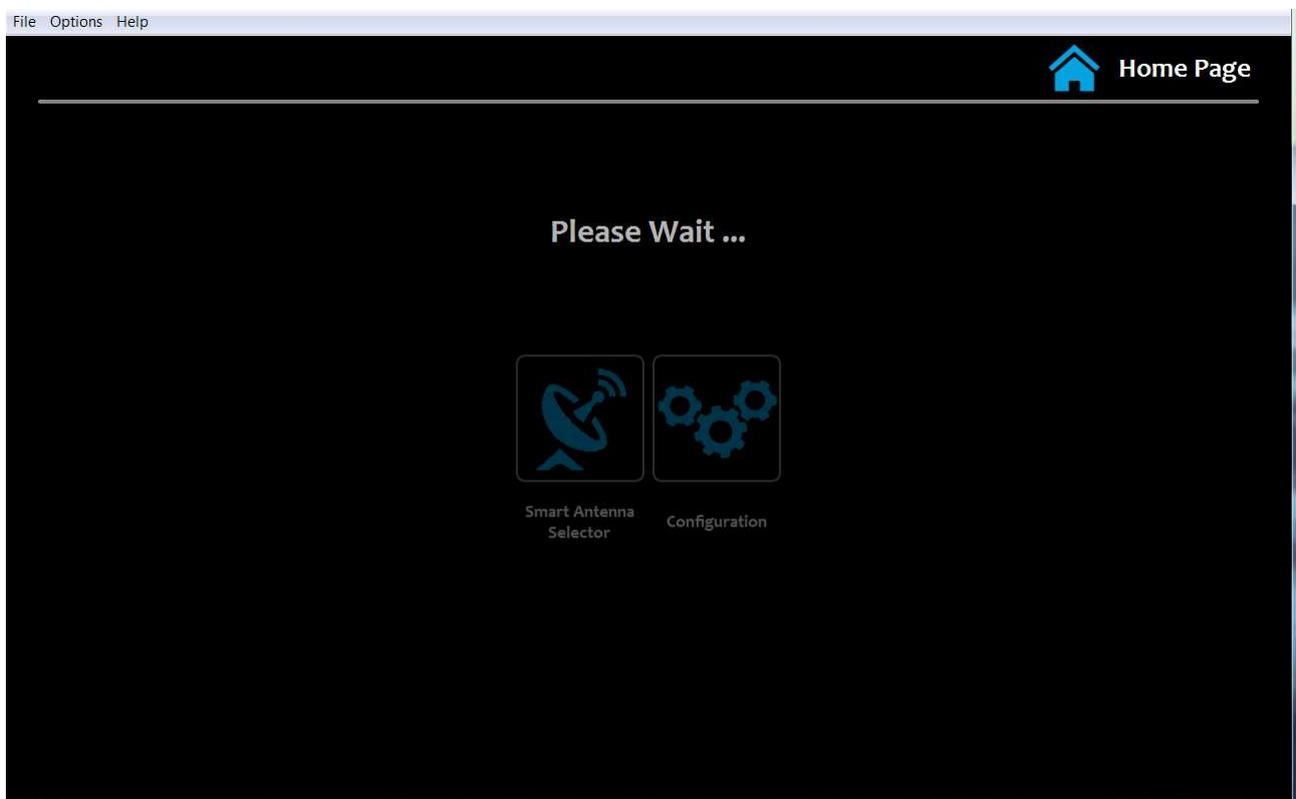
As you can see the addresses fields are empty. You can see only the current IP config (green circle). This is due to the fact that if there's “something” on one of that strings, the CPU will set that values to its ethernet board after a reboot.

So, if you need to change the IP address of the CPU (of course is the IP address of the S.A.S. Itself), you have to be sure about the parameters to insert. If you set something wrong or an IP which is no more reachable from your network, the only way to come back is to use the USB interface and Crestron Toolbox.

To set new values for CPU, just click on “New” button of one of the fields and wait until you can see the blue cursor on the first number. After that use the cursor to change the values and at the end click on “Submit” button. After clicking submit be absolutely sure that the values are correct and cycle power for 30 seconds.

After that time, open again the .exe file of the Windows PC GUI and replace the old IP address with the one you set before. If you did everything correct you will see again the GUI. If not you need to check your network and if you cannot find the S.A.S. you need support from a Crestron Technician to restore a factory configuration.

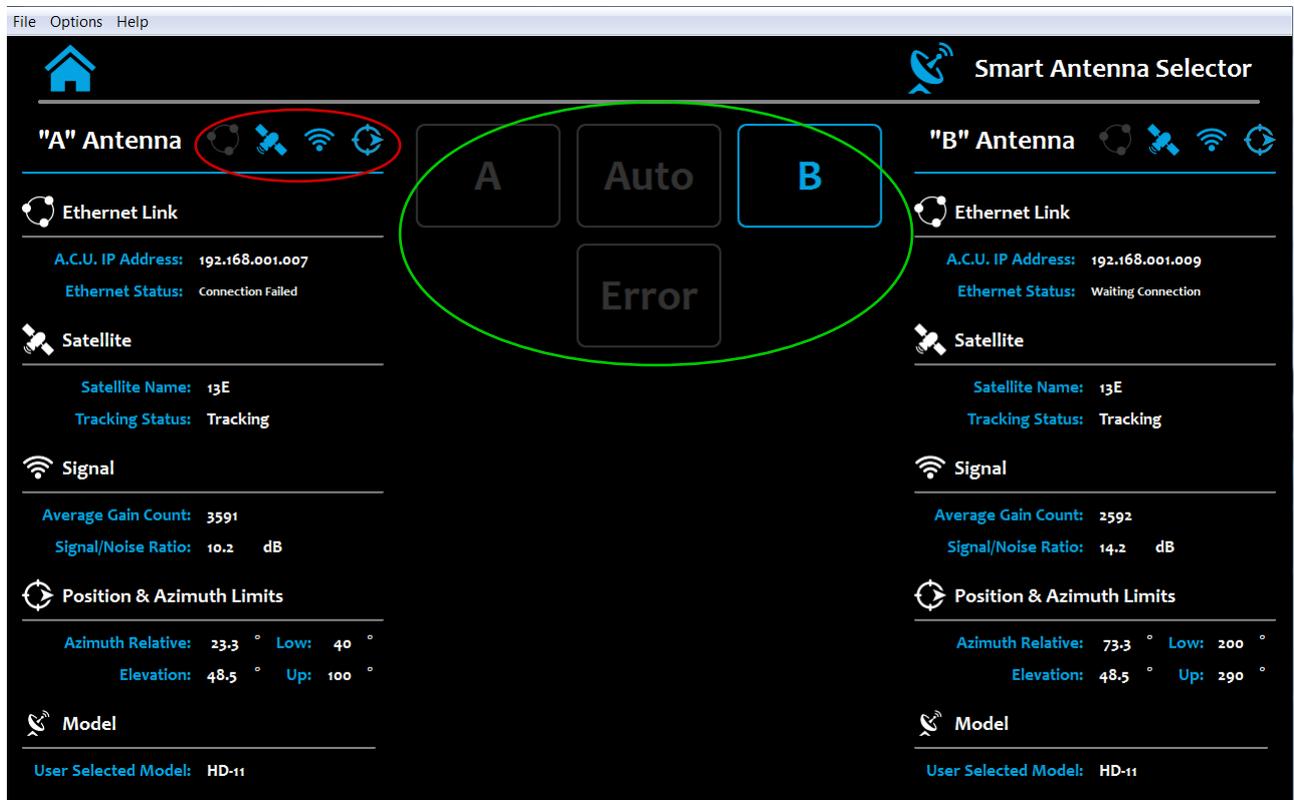
Once you open again the Windows PC GUI and the processor is still initializing you can see this page:



After the wait time, which is around one minute you can access again the GUI.

2.3 – Smart Antenna Selector Page

In the following section you can find a guide of the Smart Antenna Selector operational behaviour. If you click on “Smart Antenna Selector” button from the Home Page the following page will appear:



Inside the green circle you can find a “copy” of the rack unit front panel. Following a resuming of the buttons actions:

1. Manual Mode: pressing “A” or “B” buttons the system will configure itself as manual selector, so the user choose manually which antenna will be distributed to output.
2. Auto Mode: in this case the system act as automatic best antenna selector, or better, it distribute the best antenna signal to output. You can use Auto mode to allow the system to calculate which is the best antenna, taking in consideration the following parameters listed in priority order:
 - tracking status: “Tracking” or “Sleeping” enable the system to consider the antenna as available. Other status like “Searching” or “Idle” put the antenna outside the availability. If both antennas are not available (both in Searching for example), the system goes automatically on “A” antenna.
 - azimuth position: if the antenna is inside the blind azimuth sector the system consider it as not available, and select automatically the other antenna, if available. If not the system goes automatically on “A” antenna.

You can see both antennas status observing the icons next to the antenna title (red circle).

- The first icon (Ethernet Link) indicate that the ACU is connected or not to the SAS. If is dark grey the ACU cannot be reached from SAS and therefore check the connection and/or network parameters.

- The second icon (Satellite) indicate that the antenna is tracking the below listed satellite. If is dark grey means that the antenna is not tracking the satellite and of course is not available.
- The third icon (Signal) indicate that the antenna has the best signal compared to the other one. If is blue means that that antenna has the best AGC level, if is dark gray the opposite. If both antennas has this icons dark grey means that they have a similar AGC level.
- The fourth icon (Position & Azimuth Limits) indicate that the antenna is inside/outside the blind sector. If is dark grey the antenna azimuth is inside the blind sector, if is blue the antenna is outside the blind sector and of course available.

In any cases you can check the values observing the list, and if you want you can force the system to select one of the antennas in a stable way. The manual selection is useful when the boat is docked in a stable position and one (or both) antennas can see clearly the satellite. In this case the Auto mode could be not very useful.

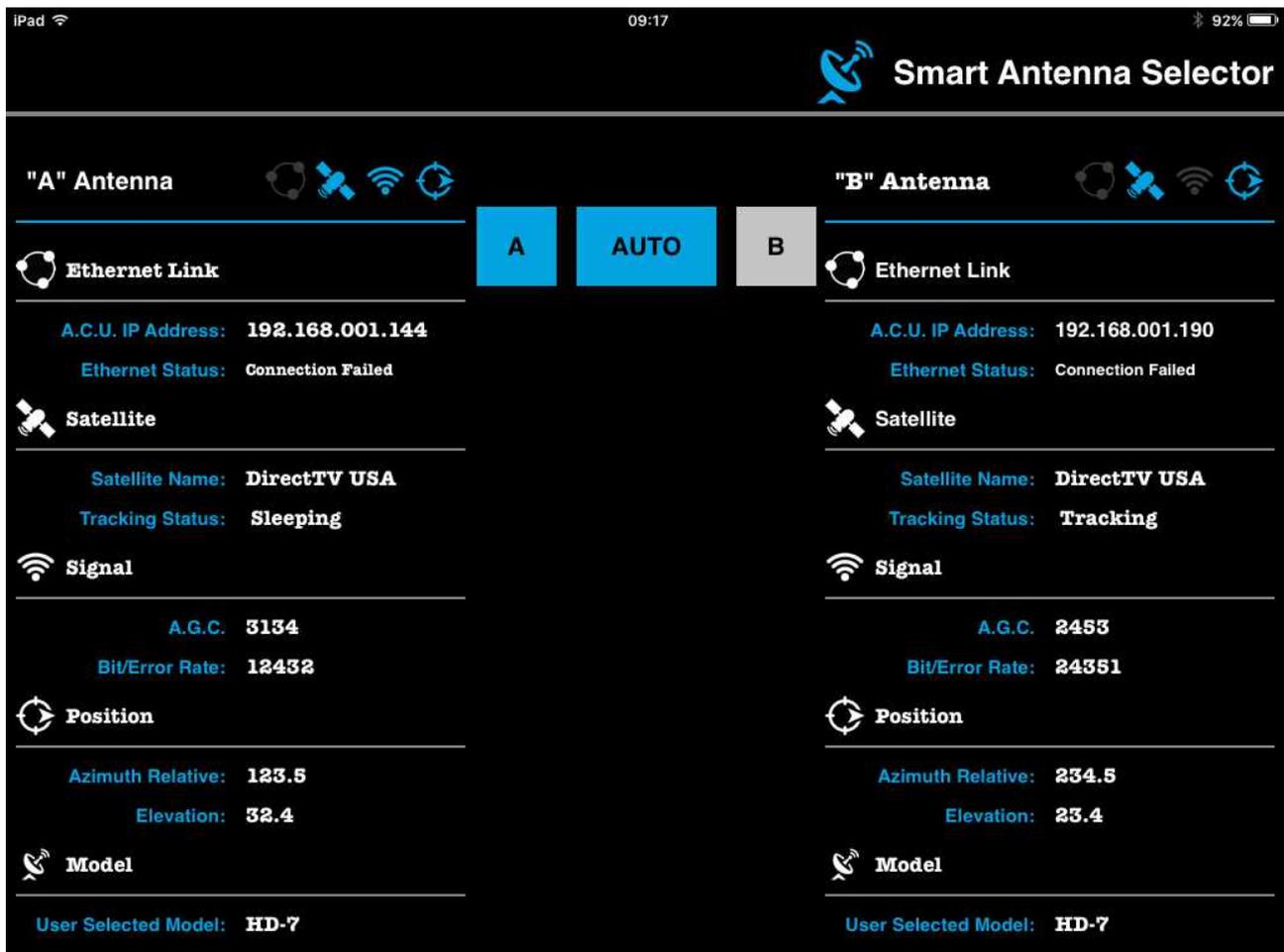
Chapter 3 – Ipad Crestron App

A simple Graphical User Interface made for Apple Ipad is also embedded inside Crestron control processor. To use it you need to download from App Store the “Crestron Mobile” App (the free one).

After installation you need to configure the App to connect to processor. The parameters are the following:

- Friendly Name/Location: no matter but we suggest to type “Smart Antenna Selector”
- Use Local File: NO
- Host Name or IP Address: type the S.A.S. Processor IP address configured before
- HTTP Port: leave 80
- Port A: 60001
- Port B: leave blank
- Passcode: 1234

After this configuration click on save and the App go back to main page. Now select the “Smart Antenna Selector” button and tap on connect. After few seconds you will see the following page:



As you can see is equal to the Smart Antenna Selector page of the Windows PC application. You can only manage the working mode from here, but not the configuration.

An important note is that of course the Ipad must be under a WiFi which has the same network class of the cable network used for the S.A.S.

