



Antenna Genius
Instruction Manual
v1.2.1

OVERVIEW AND SPECIFICATION



Antenna Genius

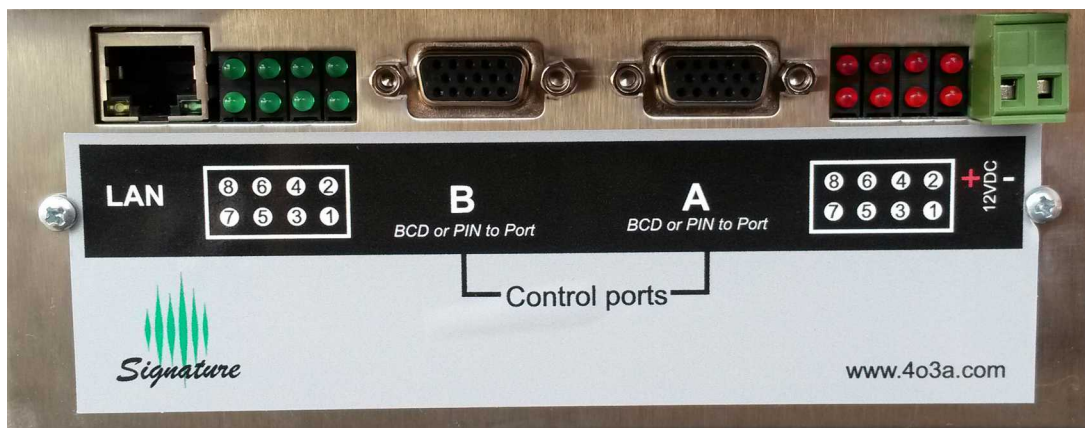
Antenna Genius is a smart, network (TCP/IP) controlled, high isolation antenna switcher. Features 8 antenna inputs and 2 radio outputs. Designed to provide the highest level of automation, making switching, replacing and repairing much faster and easier.

Guaranteed reliable usage, unless you overdue it's technical limitations.

Specification:

Connectors	N or PL (per request)
Rated CW power	3000W
Isolation between ports	Minimum of 70dB
Unused ports	Grounded
Dimensions	21 x 17 x 6 cm
Weight	Approx. 2kg
Control signal	12V
Control connectors	2x DE15, 1x RJ-45, LED indication

BOTTOM PANEL



Antenna Genius bottom panel

Features:

LAN CONNECTOR A fast ethernet port. Designed to be plugged directly into a switch. IP can be discovered, and configured by our Panel application.

Default factory IP settings: DHCP

LED INDICATORS of active antennas, on both ports, in two different colors. Red for Port A, Green for Port B.

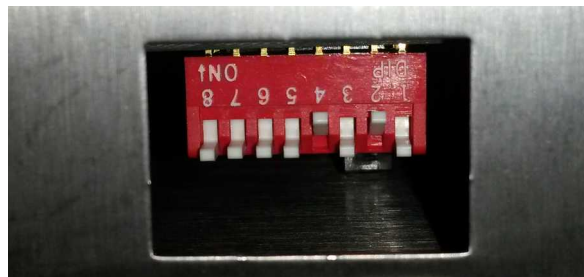
CONTROL PORTS for collecting band data from **BCD** and **Pin to Port**, as well as control ports for antennas.

12-14 VDC POWER CONNECTOR for power.

SIDE PANEL

The side panel features 8 DIP switches for the work mode configuration. It can be controlled in four different ways:

DIP1	DIP2	PORT A Control:
OFF	OFF	LAN controlled.
OFF	ON	BCD controlled.
ON	OFF	Pin to Port controlled
ON	ON	Interface Genius controlled.
DIP3	DIP4	PORT B Control:
OFF	OFF	LAN controlled.
OFF	ON	BCD controlled.
ON	OFF	Pin to Port controlled
ON	ON	Interface Genius controlled.



Antenna Genius side panel DIP switches

If you have more than one Antenna Genius device in your setup, you need to use the next set of switches to set a unique ID

to each one.

DIP 5, 6 and 7 form a unique ID number for each device.

All switches set as **OFF** form an ID of **0**.

Setting a switch **ON** adds a number to that 0, corresponding to the table below.

DIP5	DIP6	DIP7	
ON	OFF	OFF	+ 1 to the ID.
OFF	ON	OFF	+ 2 to the ID.
OFF	OFF	ON	+ 4 to the ID.

DIP8 is used in case something goes horribly wrong with the device, for a configuration reset.

It sets **DHCP IP settings**, obtaining IP settings from your network router.

It makes a new, **empty configuration**.

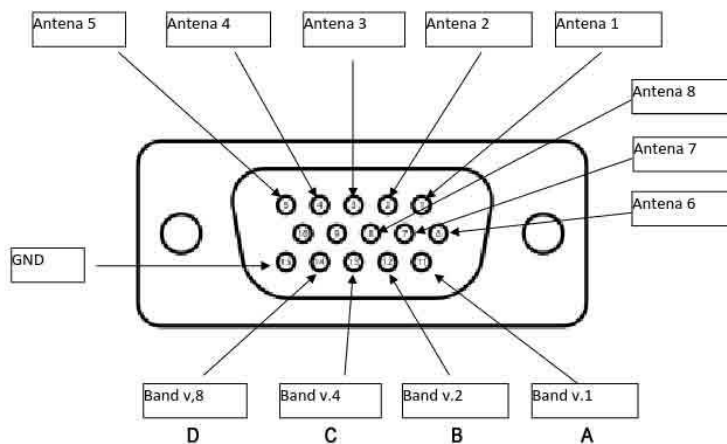
DIP8

ON	Restore factory settings on next powerup.
OFF	Normal user settings.

The switch needs to be down when resetting or starting the device, it has no effect on the device when in normal working mode.

After a successful configuration reset, make sure to set the DIP8 switch OFF, otherwise you will reset your configuration on every powerup!

PIN TO PORT PINOUT



Pin to port pinout

Band		160m	80m	40m	30m	20m	17m	15m	12m	10m	6m	None
Frequency		1.8	3.5	7	10	14	18	21	24	28	50	NA
Yaesu	Band A	H	L	H	L	H	L	H	L	H	L	L
	Band B	L	H	H	L	L	H	H	L	L	H	L
	Band C	L	L	L	H	H	H	H	L	L	L	L
	Band D	L	L	L	L	L	L	L	H	H	H	L
HEX Code		1	2	3	4	5	6	7	8	9	A	0

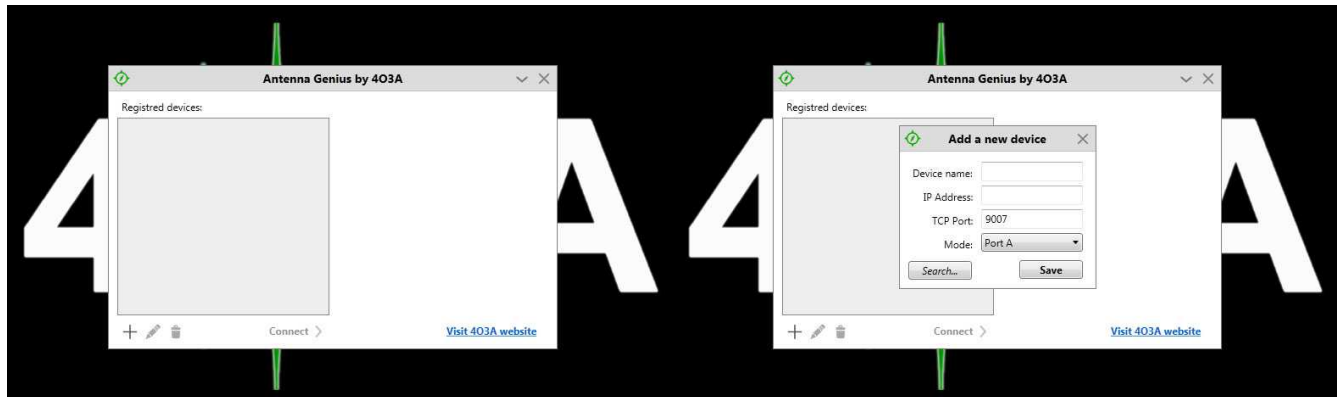
CONTROL SOFTWARE

Download and install the latest Panel and firmware software from <http://4o3a.com/index.php/downloads>
At the time of writing, the version is **1.1.7** If there's a new version out, it is likely that a new manual is as well. It is on the same link.

The Panel software is made for Windows 7, 8 and 10.

The setup is straight forward, it will install all the drivers and dependencies it requires. Antenna Genius icon should appear on your desktop.

Overview of settings:



Device selection

Add device

You first need to find and register your device.
Press the **+** button to add it.
The next two buttons edit and delete your registered devices.

You can manually type your IP settings or you can use the search option that does so automatically.
You can choose between using **only Porta A**, **only Port B** or **both - SO2R mode**.



Device Discovery

Connect

Double click the discovered device.

You can now name it. We also chose **SO2R** in this example.
Click **Save**.



Connect

The AG Panel

Your device is now in the Registered devices list. Select it and click **Connect**. This is how your empty Panel should look like.

If you chose only Mode A or Mode B then you will not have the A and B buttons on sides.



Configure Device Menu

Device Configuration Window

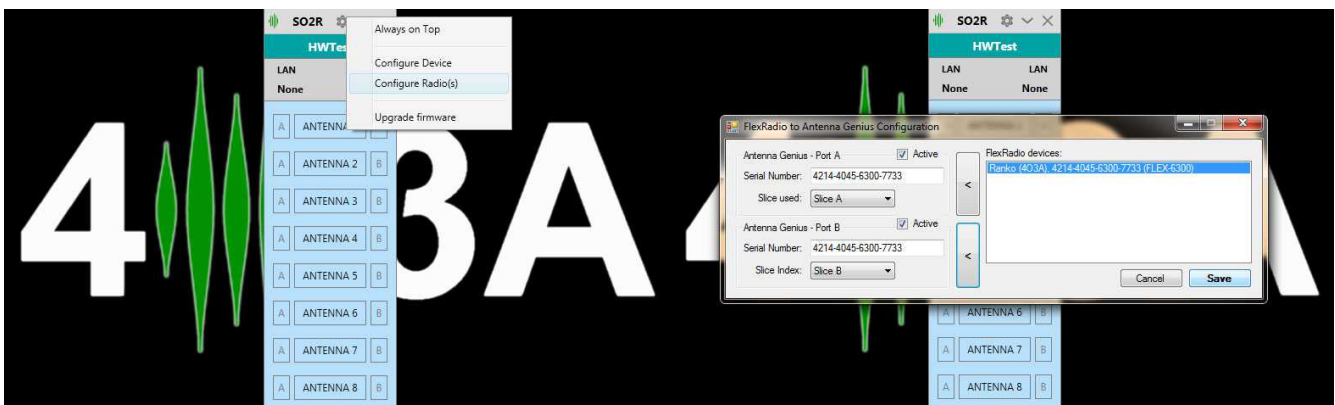
Click the **Settings** menu item, and choose **Configure Device**. Here you can configure your:

- Antenna Outputs
- IP Settings
- Interface Genius IP settings
- Device Name

The antenna configuration we made here will enable us to toggle trough all antenna outputs on A and B, verifying the device logic works as expected.

It is recommended to do this the first time you power your device.

Press **Save and Reset** when done. The device will reboot and will be online in a few seconds.



Configure Radio Menu

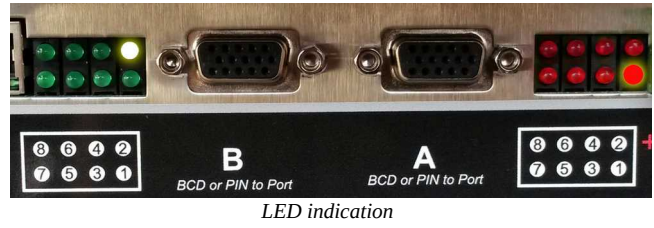
We will now proceed to add a FLEX 6300 radio by choosing the **Configure Radio(s)** item in the menu.

Configure Radio(s)

We will add **Slice A** and **Slice B**, from the same radio and **Save**.



Configured Panel



This is how your device should look like with the configuration, when FLEX 6300 its **Slice A** is on **160m** and **Slice B** on **80m**.

Notice the stickers bellow LEDs. As you cycle trough all the positions each antenna should correspond to its number.

This is how your configured panel should look like. You can now toggle trough all the outputs by clicking on **A** or **B** buttons on the sides.

Thank you for purchasing our product and supporting the 4O3A community. You are a part of a small, but very special family now.

Please email your suggestions, comments, reviews, wishes and anything else at support@4o3a.com

We would love to hear what you have to say. :)