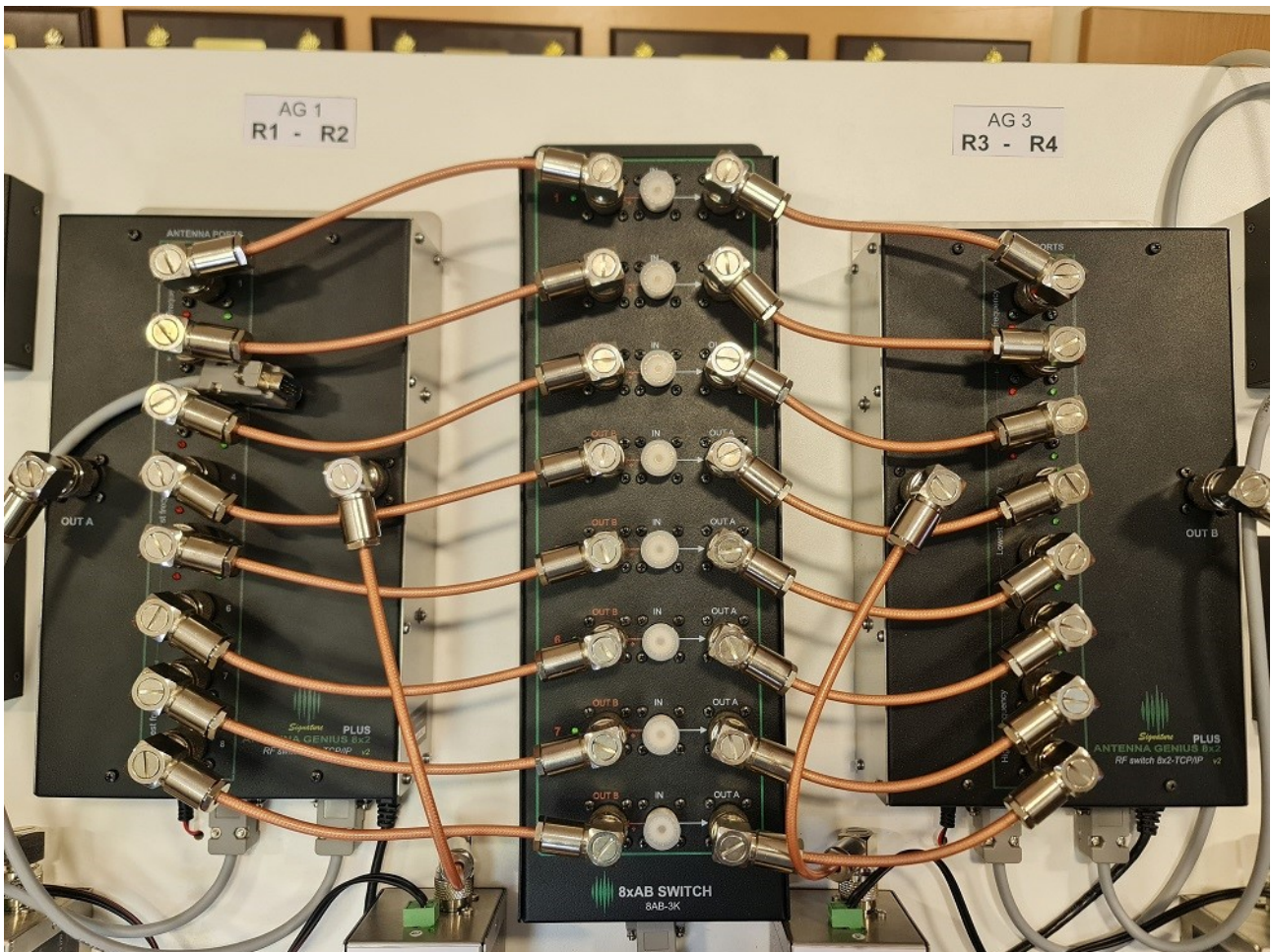


## Configuring 8 x 4 antenna matrix with two Antenna Geniuses and 8xAB switch

In order to create an 8x4 (8 antennas to 4 radios) system you will need:

1. **Two Antenna Genius 8x2**
2. **8xAB Switch**
3. **OM Module**
4. **DB9 Cable**
5. **RF Cables**

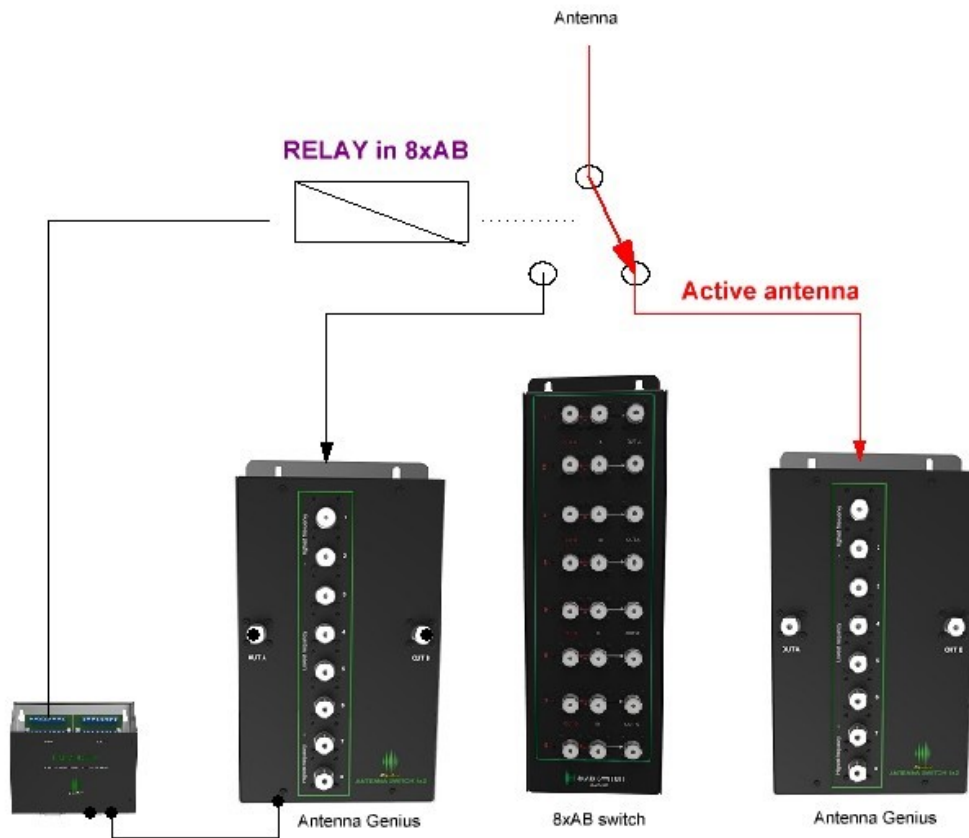
You have to make RF jumpers and to connect RF ports. Ports 1, 2, 3...etc from AG are connected to the corresponding ports 1, 2,3...etc on the 8xAB switch. See photo.



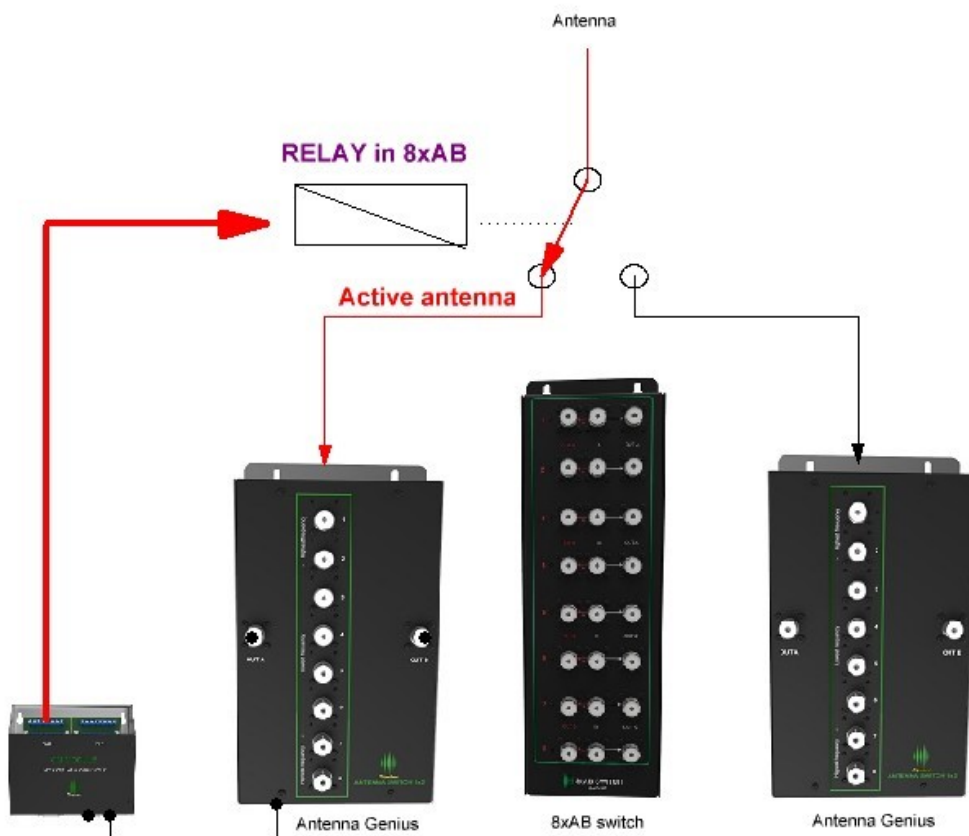
The right hand side of the 8xAB switch is normally closed so the AG connected to the right hand side has the antennas available at start.

The left hand side of the 8xAB switch is normally open so the AG connected to the left side has to use the OM module to switch the corresponding 8xAB port and route the antennas to it.

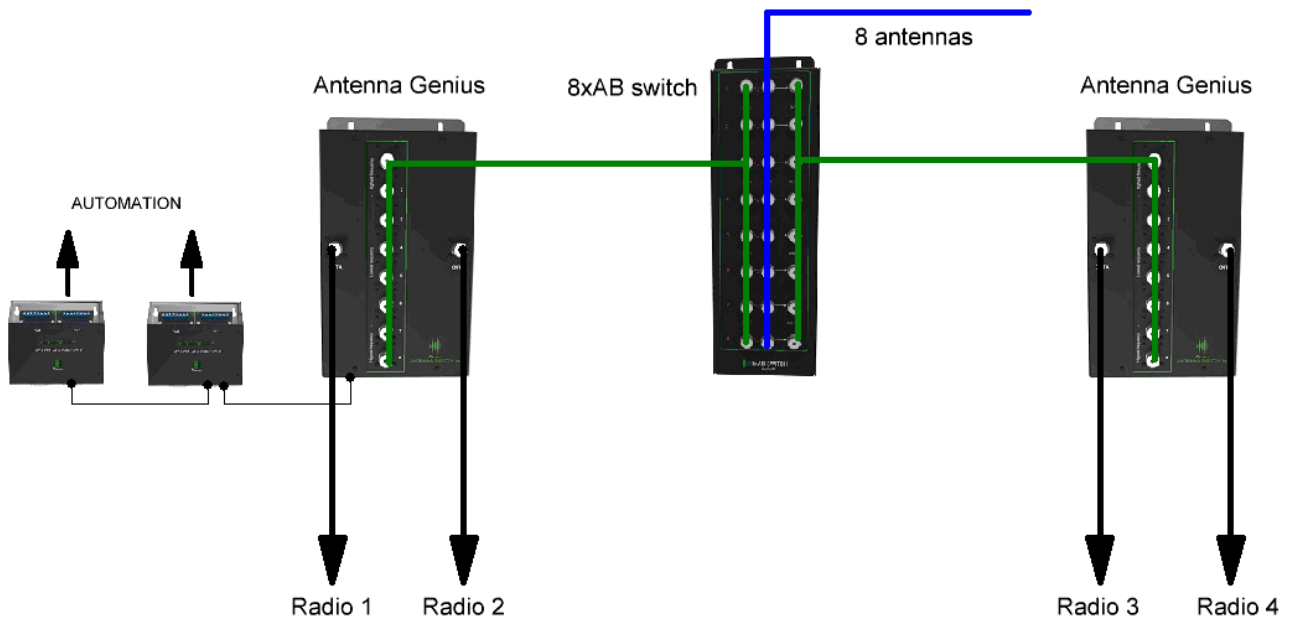
## OM module output non active



## OM module output active



In order to achieve the switching, the left AG needs to have the relay outputs configured for automatic switching when the appropriate band is selected.



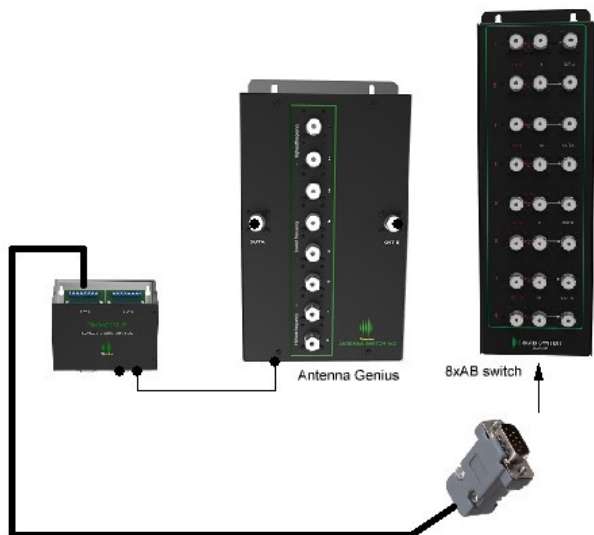
**Warning:** Since there is no verification of status in this system be careful when taking over antennas with the left AG to avoid taking over antennas that are currently in use by the right AG.

In case this happens high SWR will be generated on the open port on right AG's port but the isolation over the system is sufficient to avoid damage in most cases.

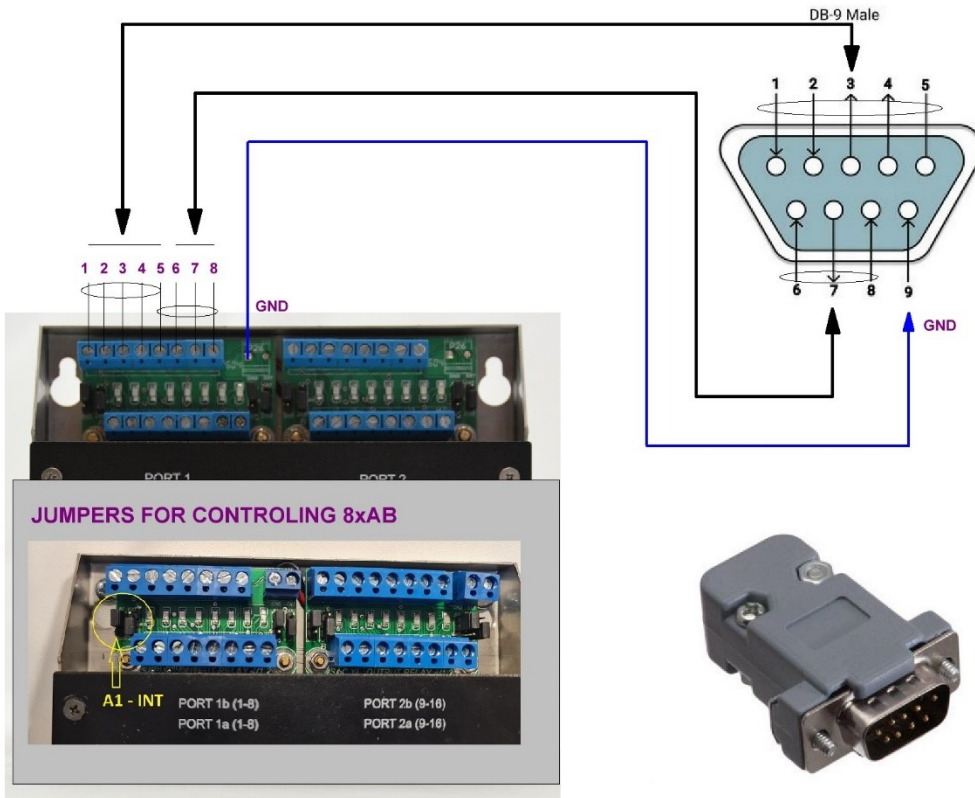
This system is used in multi-multi contests where the coordination between the users needs to be on a high level.

### The DB9 cable pinout

You have to make cable to connect 8 outputs from OM module to DB9 female connector, to be connected on the 8xAB switch

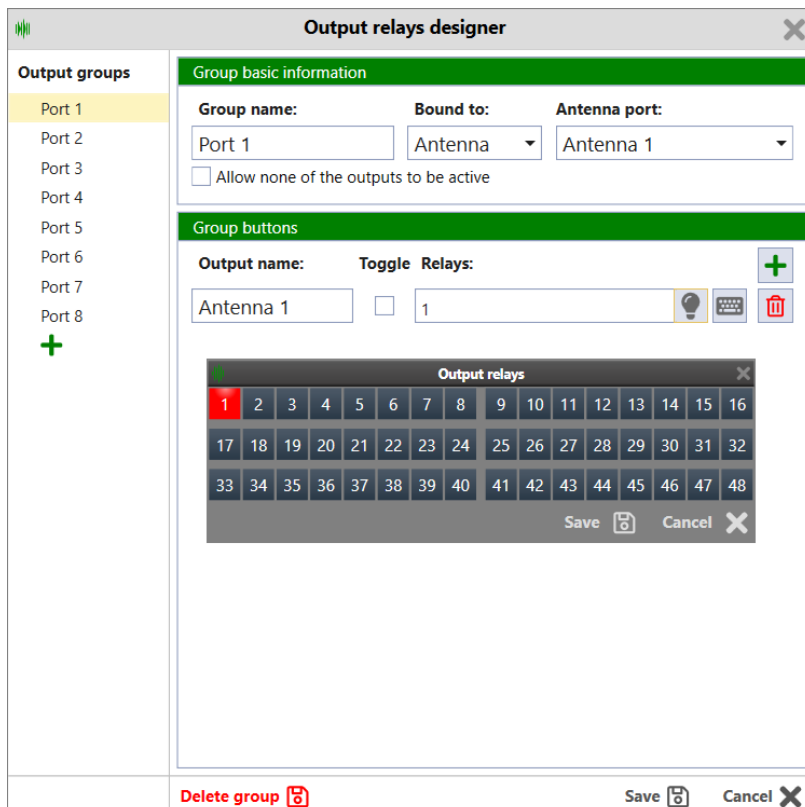


The recommended pinout for the DB9 is to match the output port to the equivalent antenna port (1 to 1, 2 to 2 etc.).



### The example configuration

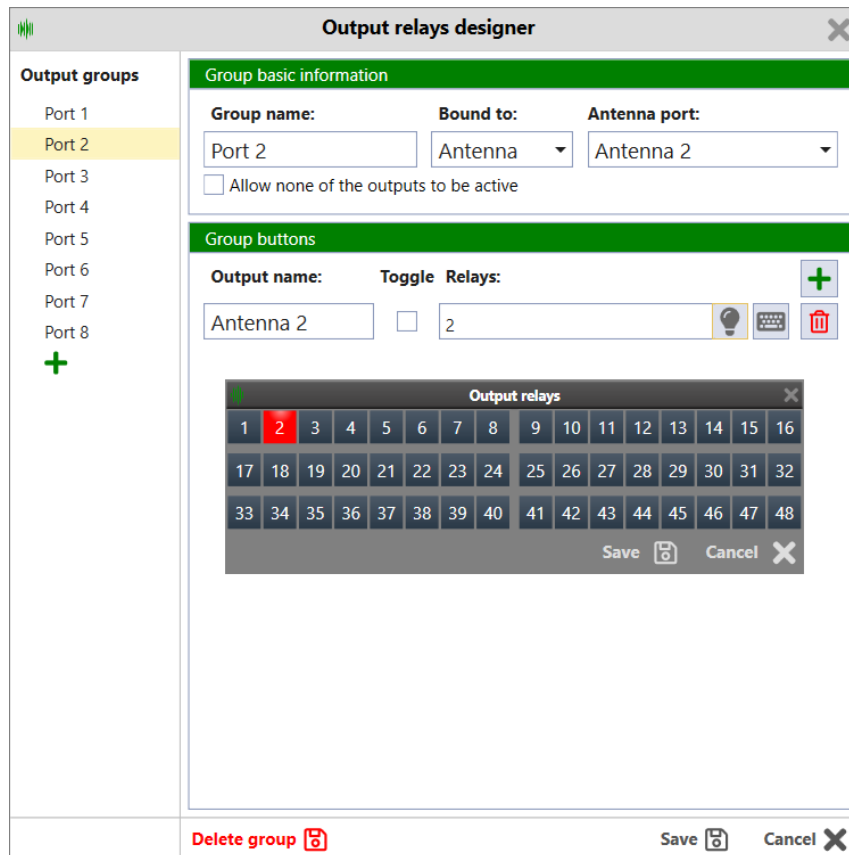
Besides your basic configuration, on the left AG you need to do is setup the outputs from your OM modules to match the corresponding Antenna Ports.



Go to **Configuration, Relay Outputs** and set up the ports as following:

One group is created for each antenna port. Make sure to select **Bound to: Antenna**

Also make sure to de-select **Allow none of the outputs to be active** since you want to



take over the antenna as soon as you select the port.

Repeat this process for each of the 8 ports:

- Up to port 8.

The rest of your configuration can be anything you like, based on the bands your automatic switching will work as per usual but now any time you come to a specific port, the OM module will close a relay and select the antenna on the 8xAB, taking it over from the right AG.

Once you save configuration for controlling 8xAB switch, check first if corresponding output on OM relay module is activated, when change ports on Antenna Genius.

## NOTE

- *Do not forget to disable function "Allow none of the outputs to be active" on each port group you created*

Once you are sure that all is working as needed, connect DB9 male cable from OM relay module to 8xAB.

Now import configuration you created on your left AG with OM relay module to right AG. And enjoy in new 8x4 antenna matrix