User Manual DxAG Bridge
Version 1.0

1. Utility Overview

The Bridge application provides a seamless communication link between the DXLog or N1MM contest logging software and the Antenna Genius system.

It monitors and relays frequency and radio control data, ensuring that the antenna switching system automatically follows the active band and radio assignments.

The Bridge operates transparently in the background, automatically reconnecting if the connection to Antenna Genius is interrupted.

Status indicators (LEDs) provide real-time feedback for Radio 1 and Radio 2 activity, making it easy to verify data flow without requiring a scrolling log or debug window.

2. Key Features

- Compatible with **DXLog** and **N1MM** logging software
- Automatic detection of radio messages from both loggers
- Real-time LED indication for Radio 1 and Radio 2 activity
- Persistent configuration stored in a **JSON** file
- Auto-reconnect mechanism in case of lost connection
- Lightweight, clean interface with no scrolling log
- Separate **Setup** window for configuration

3. System Requirements

- Operating System: Windows 7 or later (Windows 10 recommended)
- .NET Framework 4.8 or newer
- Active network connection to Antenna Genius
- DXLog or N1MM running with UDP radio broadcast information enabled

4. Installation

- Extract the Bridge files to a folder of your choice.
- Run **DXaG_BRIDGE.exe -** No installation is required.
- The first time you launch the application, a default configuration file (config.json) will be created in the same folder (one is shipped with the application already – a new one is going to be created automatically in case it gets accidentally deleted)
- Use the **Settings** button to open the configuration window and adjust parameters as needed.

5. Configuration

The Bridge configuration is handled through a dedicated **Settings form**, allowing you to define and store all operational parameters.

Typical configuration parameters include:

- **UDP Listen IP** – the IP of the computer on which the bridge utility is running on – usually is a good idea to listen on all available interfaces – this is going to be the IP at which logger software DxLog or N1MM will send UDP radio data information.
- **UDP Port** – the UDP port on which the bridge utility is going to listen to – this is going to be the port at which logger software DxLog or N1MM will send UDP radio data information.
- **AG IP (Antenna Genius)** – the IP address at which the Antenna Genius (1x8 or 2x8) is going to be available – as a general good practice is advisable that Antenna Genius should be set with a static IP address, either through DHCP reservation or assign it directly to the Antenna Genius equipment, so you would ensure that the same IP address is going to be used every time.
- **AG Port (Antenna Genius)** – The TCP port on which Antenna Genius is listening for commands (always **9007** at least for the current available versions)
- **Max Log Lines** – The maximum number of log lines that are going to be stored in the logging window (only the last MAX LOG LINES are going to be available in the logging window)
- **Use IP info for Radio 1 and Radio 2** – this feature would allow two different stations (two different instances of DXLog or N1MM) to access the Antenna Genius – you can assign an ip address for the computer on which Radio 1 is running (RUN station) and an ip address on which Radio 2 is running (for example MULT station) – this feature was implemented on request of AC6ZM (Juan) – the reason for this, is a lack of information of radio number in the UDP datagram when a RUN and a MULT station is running on different computers – in case of N1MM both radios are reported as RADIO 1, so a filtering based on ip address was needed to be able to differentiate between the two radios – in this case both computers running DXLog or N1MM will have to send radio info to the bridge. All other features and settings remains unchanged.

Once configured, the Bridge runs continuously and maintains communication between the logging software and Antenna Genius.

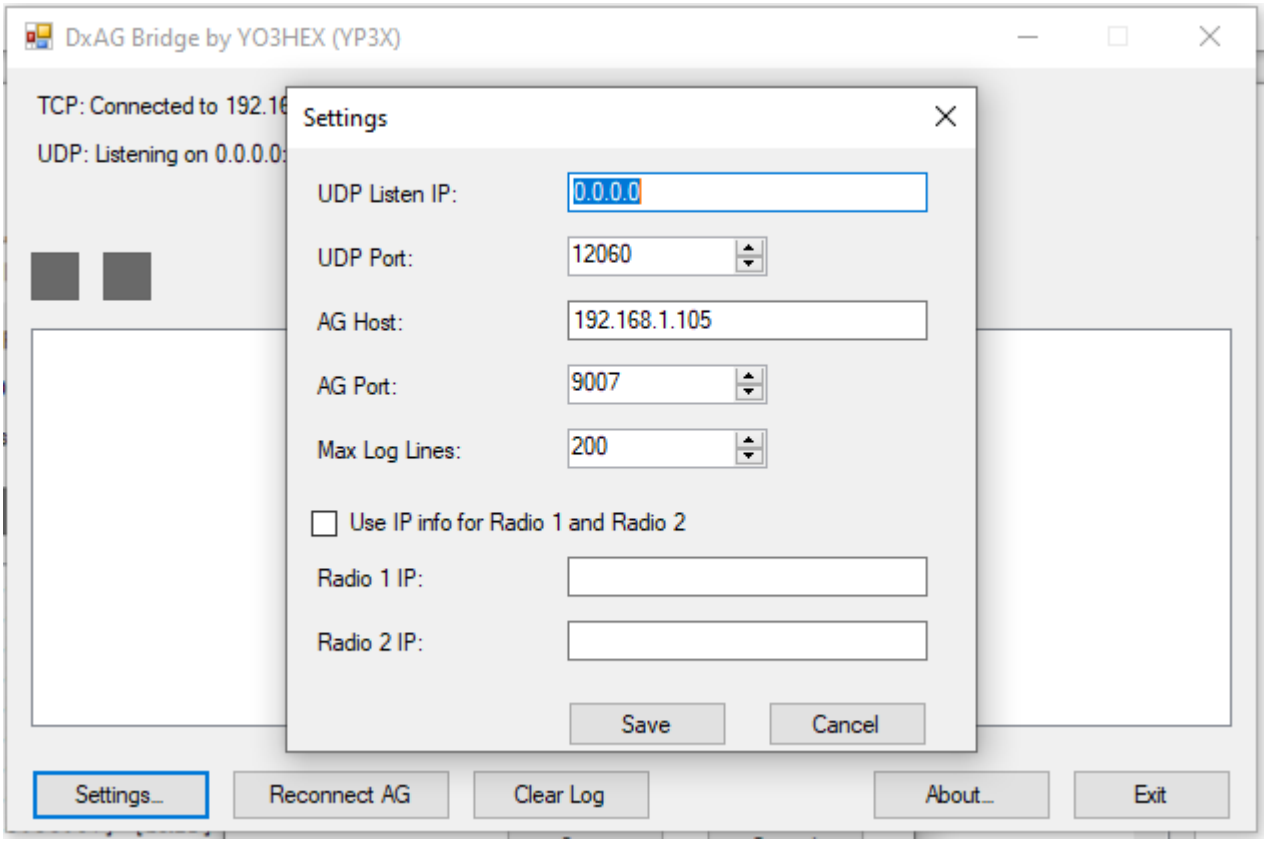
Indicators:

- **Radio 1 LED** – flashes when a message is received for Radio 1.
- **Radio 2 LED** – flashes when a message is received for Radio 2.
  Both LEDs return to idle after aprox. 300ms of inactivity.

Connection Status:

The Bridge continuously monitors the link to Antenna Genius:

- If the connection is lost, the Bridge will automatically attempt to reconnect.
- Once reconnected, normal operation resumes without user intervention.



6. Troubleshooting

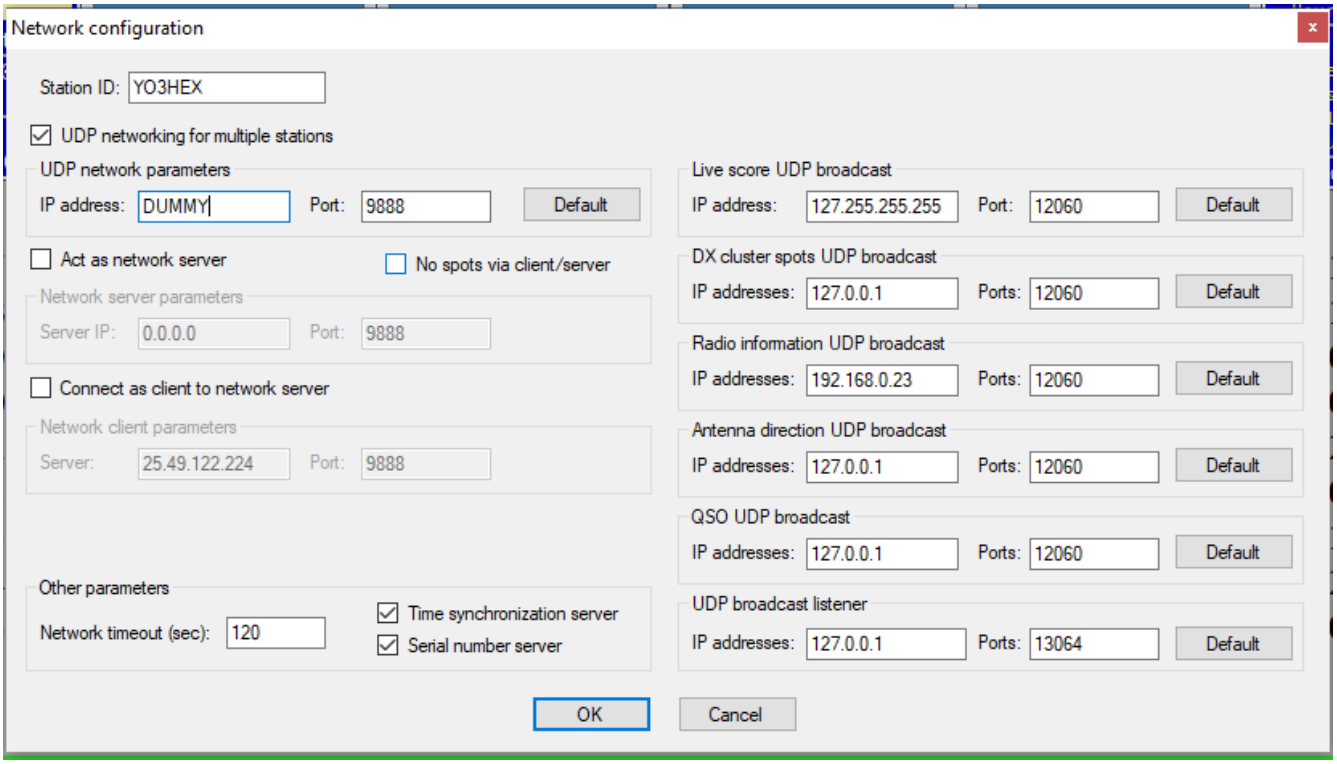
Symptom	Possible Cause	Suggested Action
No LED activity	Logger not sending data	Check that DXLog/N1MM UDP output is enabled and IP/port are correct
Bridge cannot connect to Antenna Genius	Wrong IP or port	Verify Antenna Genius IP and port number in Setup
Config file not saved	Permission issue	Ensure write access to the Bridge folder
Connection drops frequently	Network instability	Check cable, router, or switch connections

7. Disclaimer

This software is provided 'as is' without warranty of any kind. The author assumes no responsibility for damage to equipment, software, or data resulting from its use. Users should verify proper operation in their own station environment before relying on automatic switching during live operation.

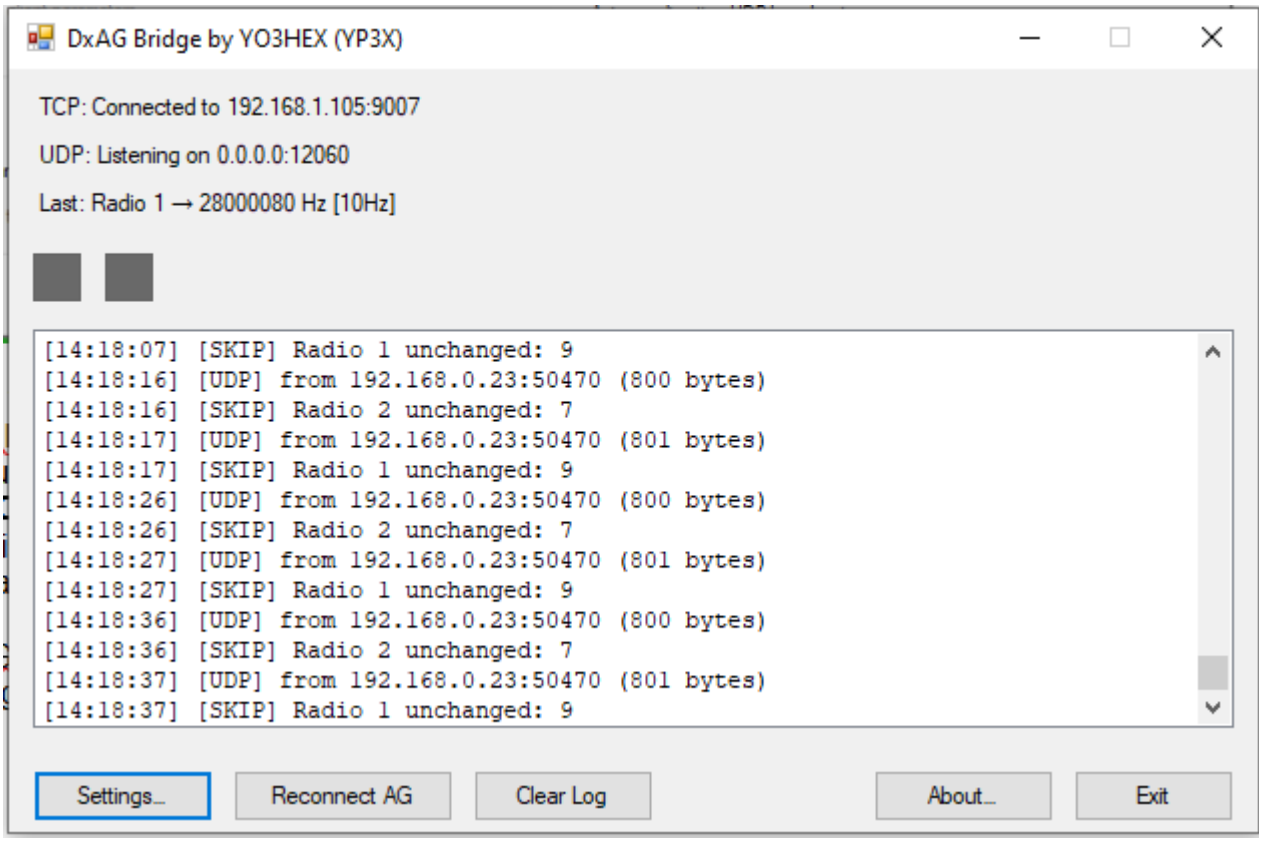
8. DXLog Setup

Open DXLog software and navigate to *Options* → *Configure Network*



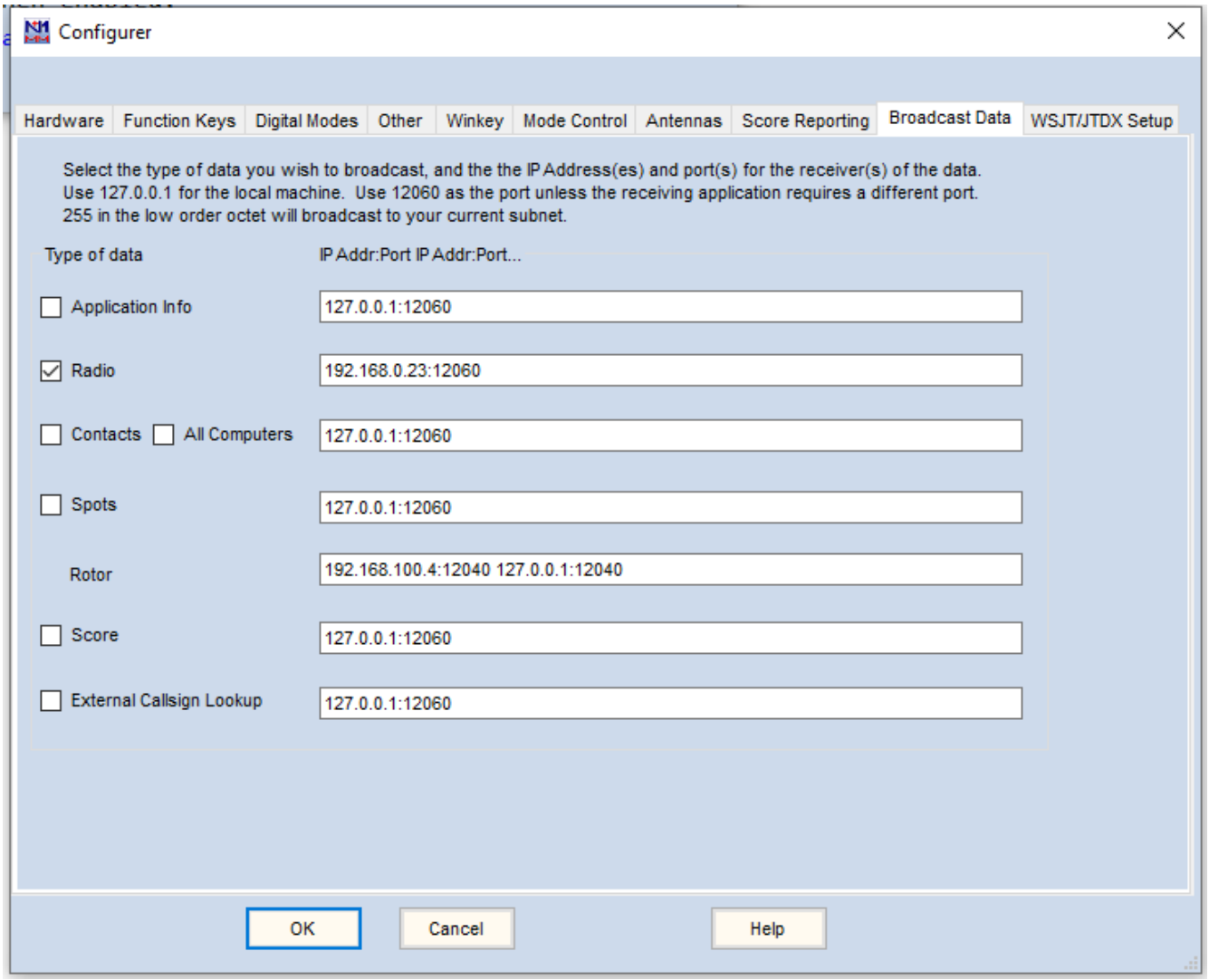
Locate the “Radio information UDP broadcast” and set the IP address and PORT on which the UDP service of the DxaG_Bridge is running (**UDP Listen IP** and **UDP Port** configured previously should match with the information entered)
Press **OK** and then navigate to *Options* → *Broadcast* and make sure the *Radio Information* option is checked (make sure that the option is checked – in case is not checked the radio information will not be broadcast to the bridge utility)

If DxaG_BRIDGE is started and configured you should already see broadcast messages in the logging window that are flowing from DXLog



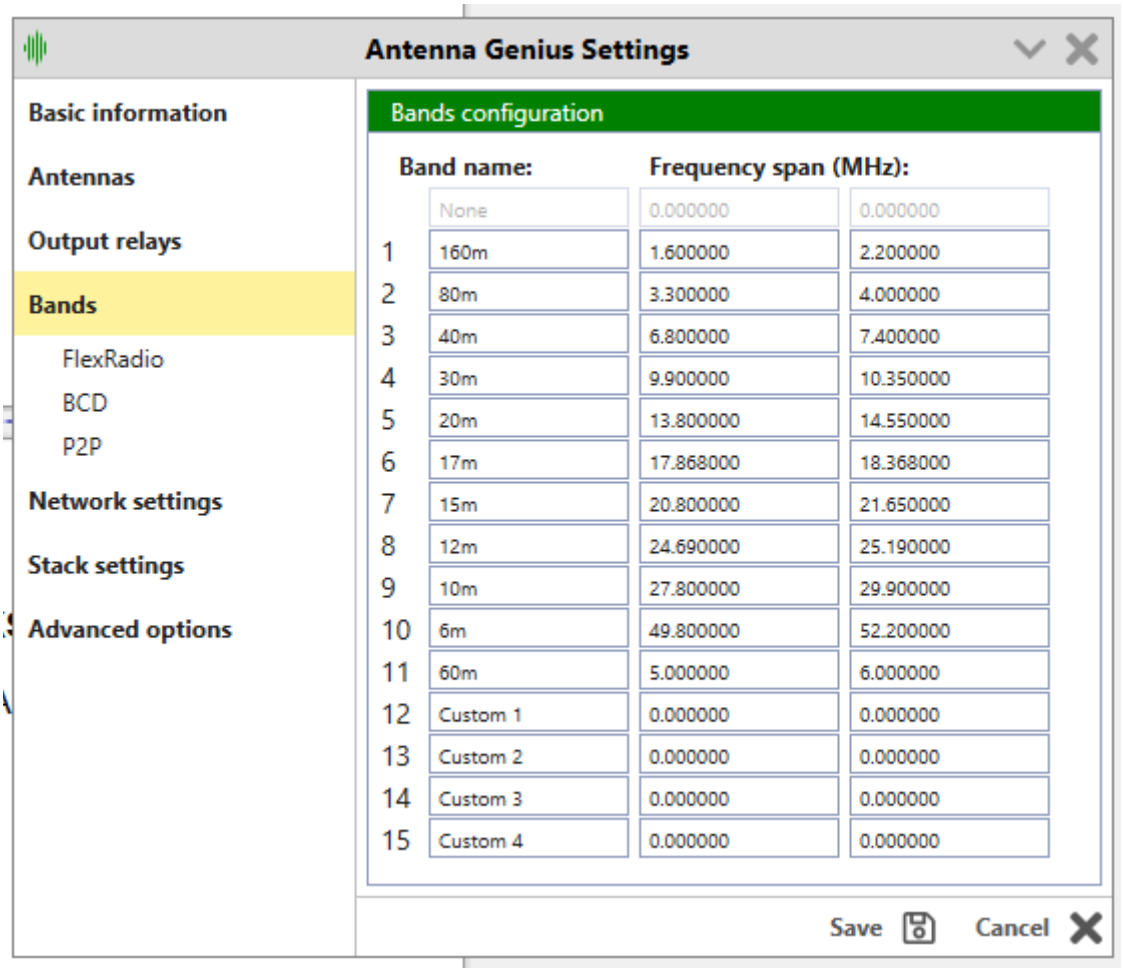
9. N1MM+ Setup

Open N1MM+ software and navigate to Config → *Configure Ports, Mode Control* in the newly opened window choose *Broadcast Data* tab, check *Radio* and put in the IP and PORT on which the UDP utility listens in format *IP_ADDRESS:PORT* (do not forget about the : between IP and PORT)
Click OK – in the Bridge Utility you should see the radio info messages flowing to the log window of the utility.

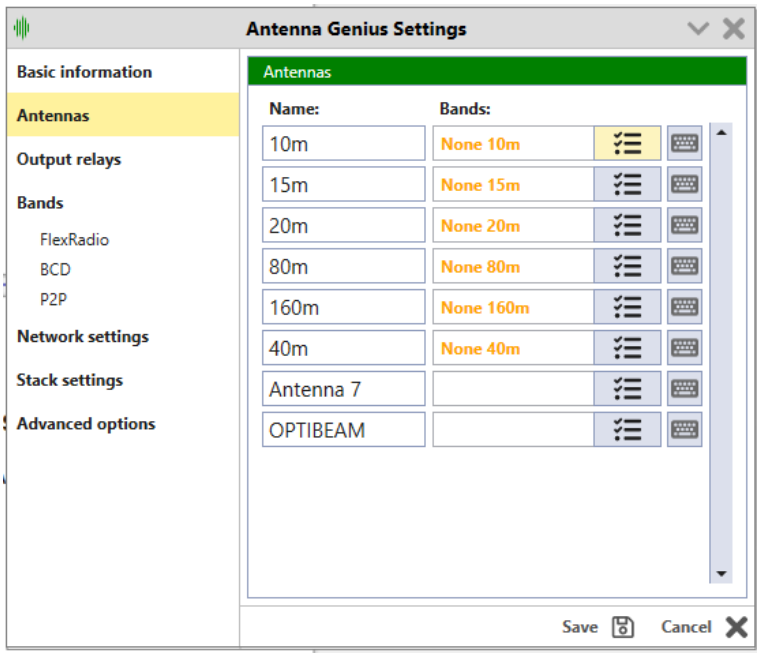


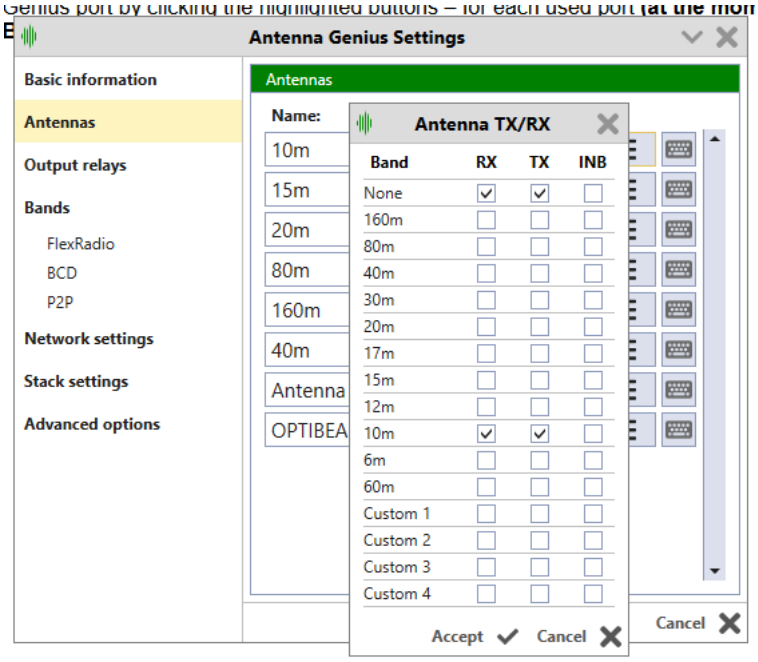
10. Antenna Genius Configuration and checks

Open the Antenna Genius Utility provided by 4O3A on the product site. And navigate to *Device Settings* → *Bands* and make sure that the bands configuration are looking as in the picture (please note that this is the DEFAULT configuration and if not previously changed there is no modification needed)



Navigate to *Antennas* and assign the correct band for both RX and TX to the correct Antenna Genius port by clicking the highlighted buttons – for each used port **(at the moment the Bridge Utility is supporting the contest bands 160 80 40 20 15 and 10)**





For each used BAND and PORT this operation will have to be performed – clock *Accept* and continue to the other BANDS settings.

After the above settings are performed – your Antenna Genius switch will be able to communicate with DXLog and will be able to change the antennas according to the selected band (either from transceiver or from one of the supported logging software)

Please note that the Antenna Genius Utility is not required to be started – the required applications are the Bridge Utility and your favorite supported logging software (DXLog or N1MM+)

For support please contact me at the following email address **yo3hex@gmail.com** I will try to answer in a max 2h time-frame if the time permits.