ART-NET PROTOCOL CONFIGURATION

V1.0

This document presents what is an Art Net protocol and how to use it with our lighting control software.

INTRODUCTION

Art-Net is a communications protocol for transmitting the DMX512-A lighting control protocol and Remote Device management (RDM) protocol over the User Datagram Protocol (UDP) of the Internet Protocol suite. It allows to communicate between "nodes" (e.g., intelligent lighting instruments) and a "server" (a lighting desk or computer running lighting control software).

This protocol is particularly appreciated for the live control of scenic fixtures (fog machines, moving heads, lasers, etc.

CONFIGURATION

Art-Net protocol usually requires subnet mask 255.0.0.0 with an IP address of the following types : 2.x.x.x. As a result, fixtures compatible with Art-Net protocol shall always have a default IP address of 2.x.x.x.

In reality, default address may sometimes differ ; that is why our software allows to send Art-Net frames with any network configuration. However, it is paramount to check the compatibility between the configuration of your Art Net fixtures and your computer. Be careful to apply the same subnet mask with common class for each fixtures on the network.

Exemples :

- If you are using an **Art-Net** fixture with the IP address 2.0.0.4. and a subnet mask of 255.0.0.0, your computer shall have a subnet mask of 255.0.0.0 with an IP address 2.x.x.x (2.0.0.5 for example).

- If you are using an Art-Net fixture with the IP address 192.168.0.4 and a subnet mask of 255.255.255.0, your computer shall have a subnet mask of 255.255.255.0 with an IP address 192.168.0.x (192.168.0.5 for instance).
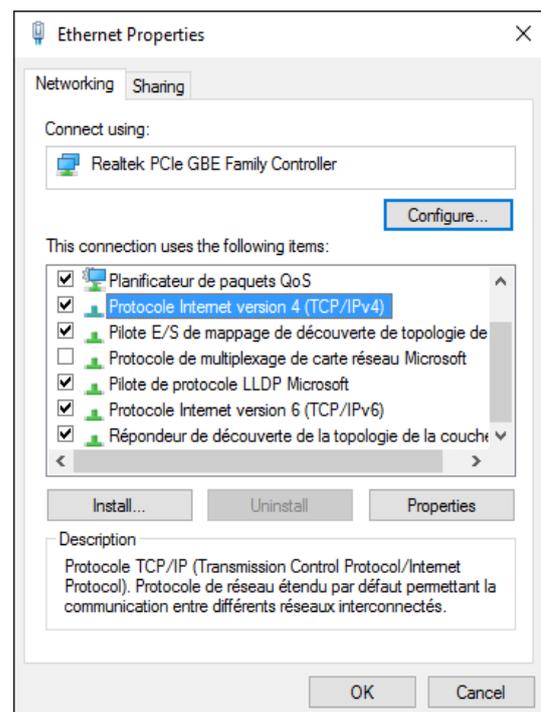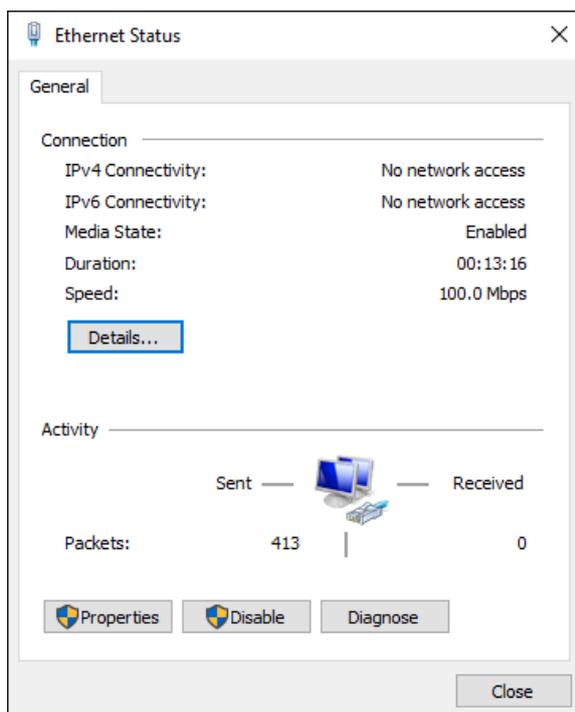
Follow the steps below to configurate your network interface with Windows.

Open the **Network and sharing center** and click on the **Ethernet** link (you must have connected a device to the Ethernet port of your computer to allow the Ethernet network to shown)
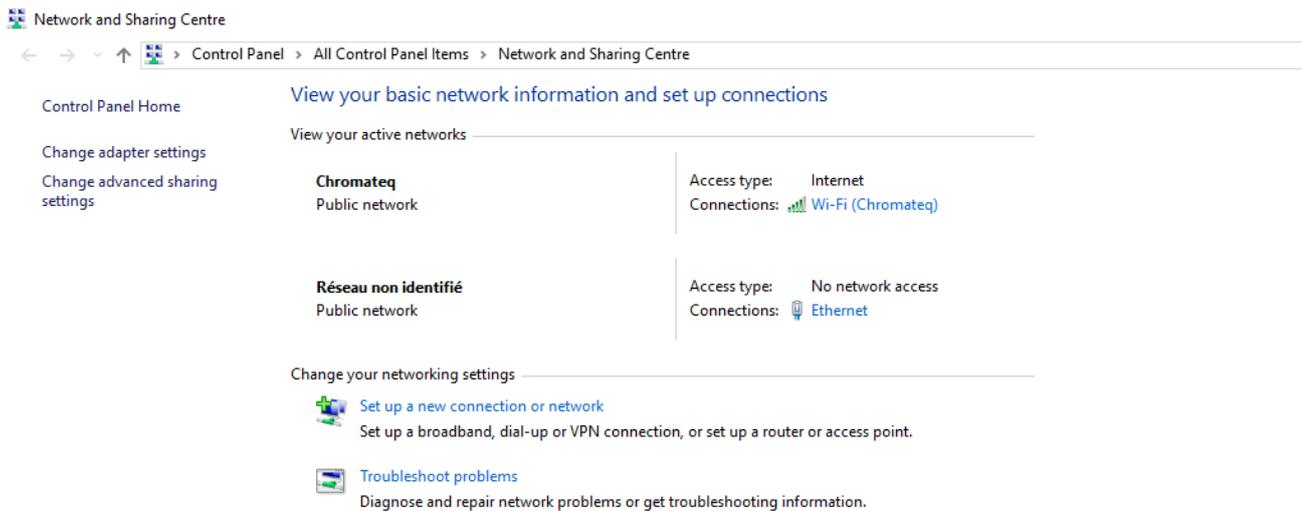
In the following windows, click on **Properties** then **Protocole Internet version 4 (TCP/IPv4)** :

Finally, select **Next IP** and enter your IP address as well as the subnet mask corresponding :
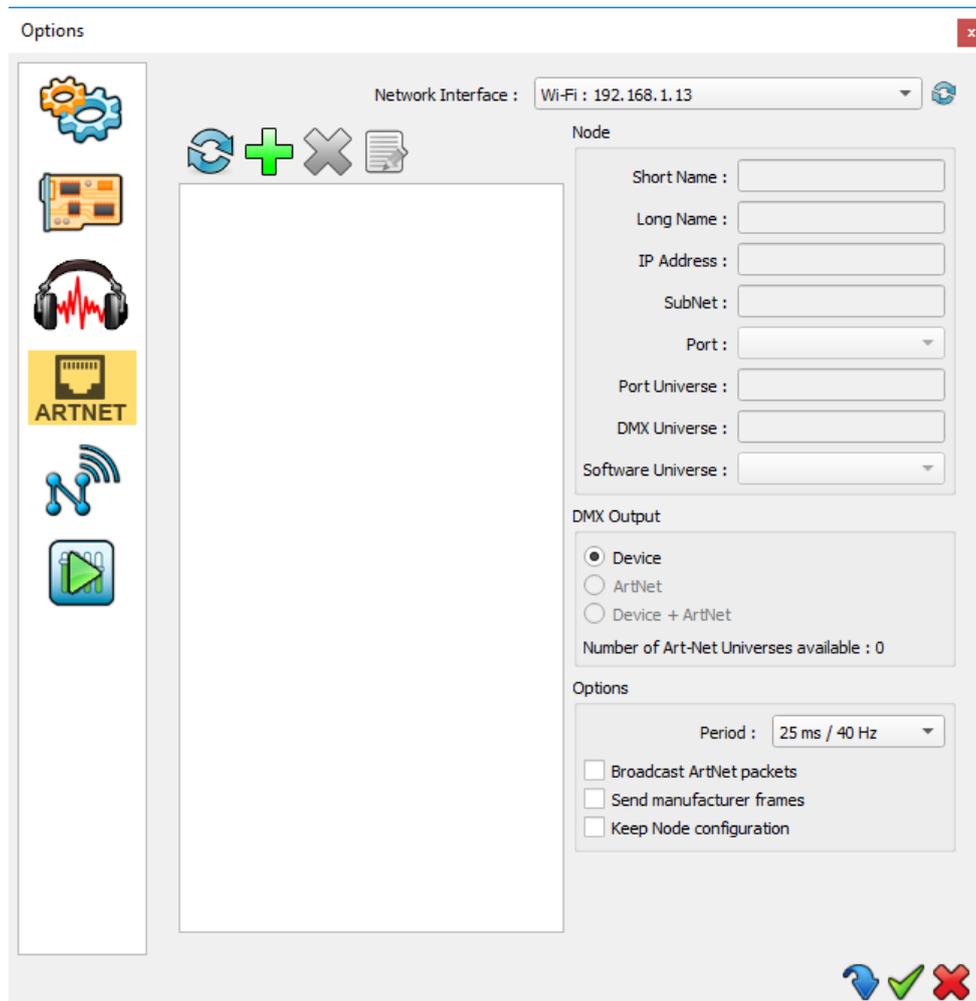

Your computer is now configurated and you can use our software to communicate with Art Net devices.

From the Tool/Options menu, select the **Art-Net** section.

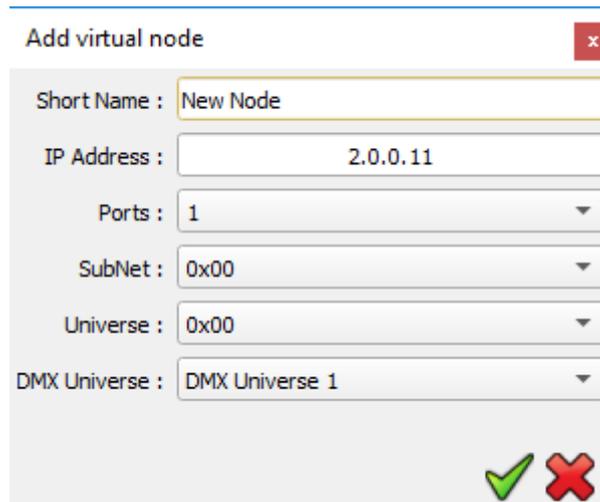To detect the devices on the network, click « refresh».

An **Art-Net** device is represented by a node which contains 1 to 4 ports, each ports can receive 1 DMX univers. A simple **Art-Net** fixture shall be shown as a single port while an Art-Net convertor/ DMX with 4 DMX outputs shall be shown as a 4 ports.

Warning : If an Art-Net/DMX convertor contains more than 4 DMX outputs (8 for example) it shall act as several distinct nodes (2 nodes of 4 ports each for instance).

Art Net configuration   5

ADD A VIRTUAL NODE

In addition, it might happen that depending on the equipment used, an Art-Net/DMX only recognizes the very first node within the network (refers to the manufacturer notice). In this case, user must manually add a virtual node from the software.

To manually add a virtual node from the software, you must specify which IP address is used by your fixture, its sub network, its Art-Net univers and the nomber of ports used (Univers DMX).

NB : The principle of the Art-Net protocol is that a fixture with several ports shall use consecutive universes for each of its ports. That is why it is needed to inform one universe only (the one which belongs to the device, same as for the SubNet). However, it is possible to send any software universe to each used ports.

DMX UNIVERS

For each fixture, you can choose the DMX univers/universes you wish to send.

Select the relevent node in the list, choose for each port, which software universe should be applied.