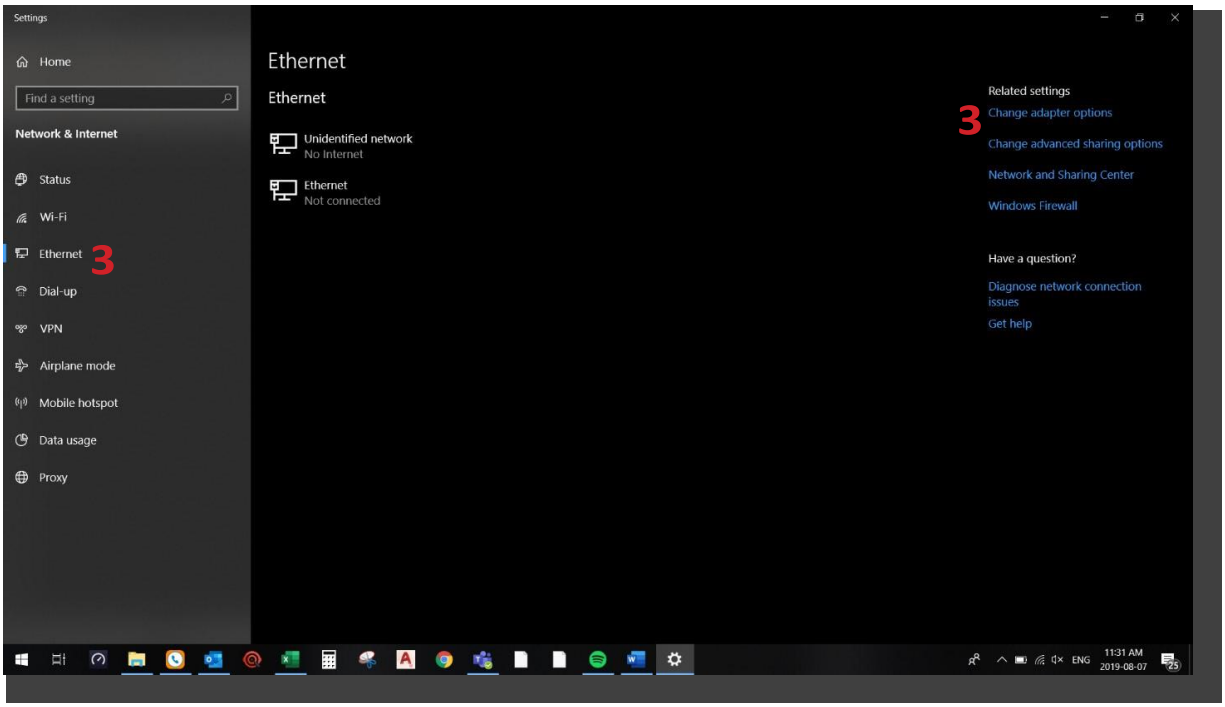
1. MX96 Configuration Overview

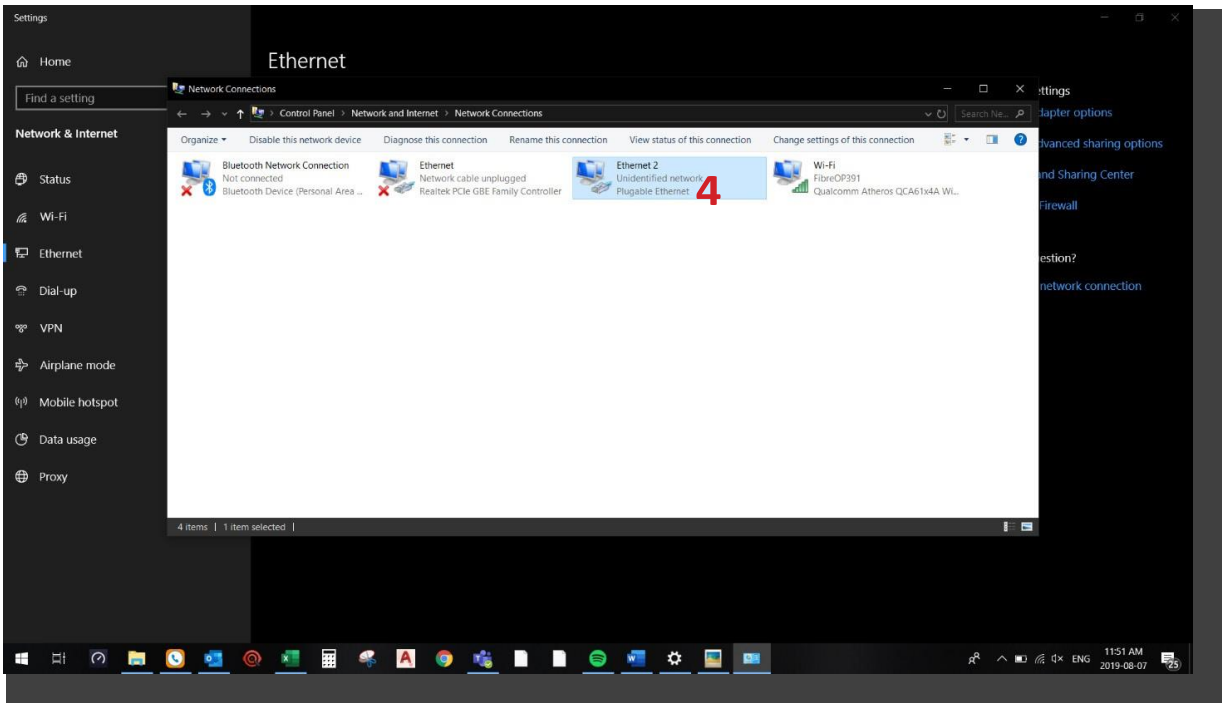
Here are steps to set up the LED CTRL MX96 / SX with the LED CTRL software:

1. Connect the MX96 Data In port to the computer through RJ45 cable.
2. Open the Network & Internet settings

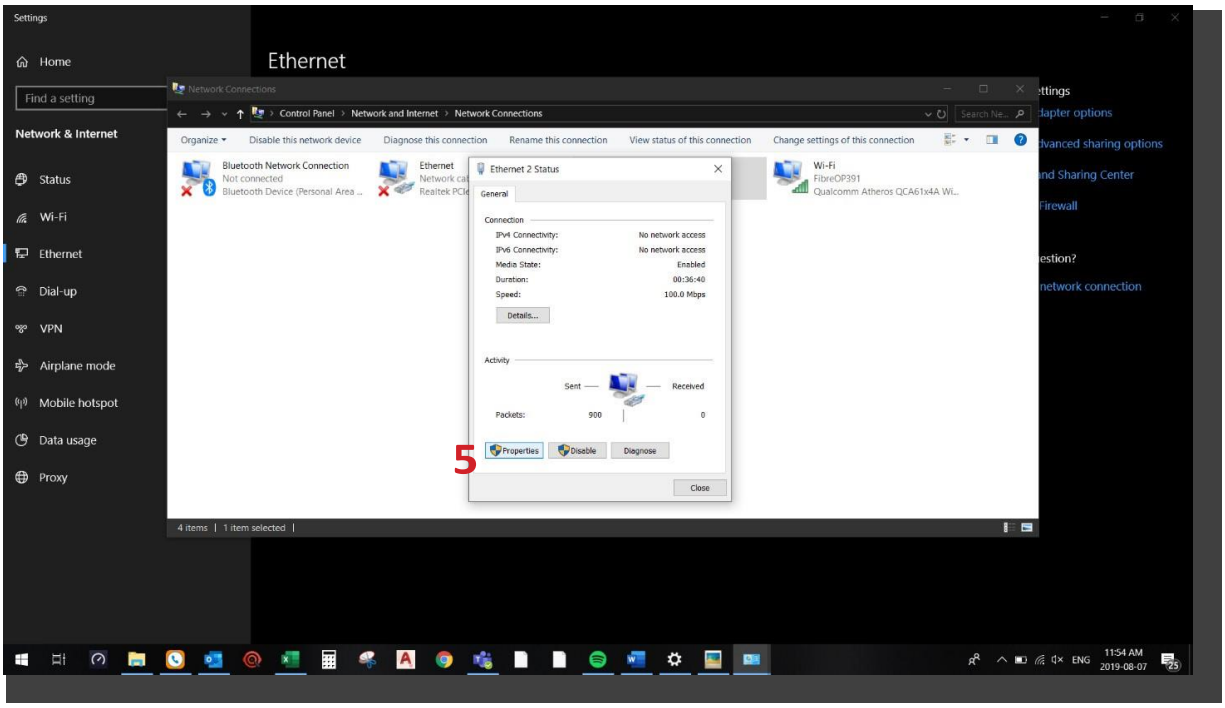
3. Click on Ethernet to open and then click on Change adapter options.



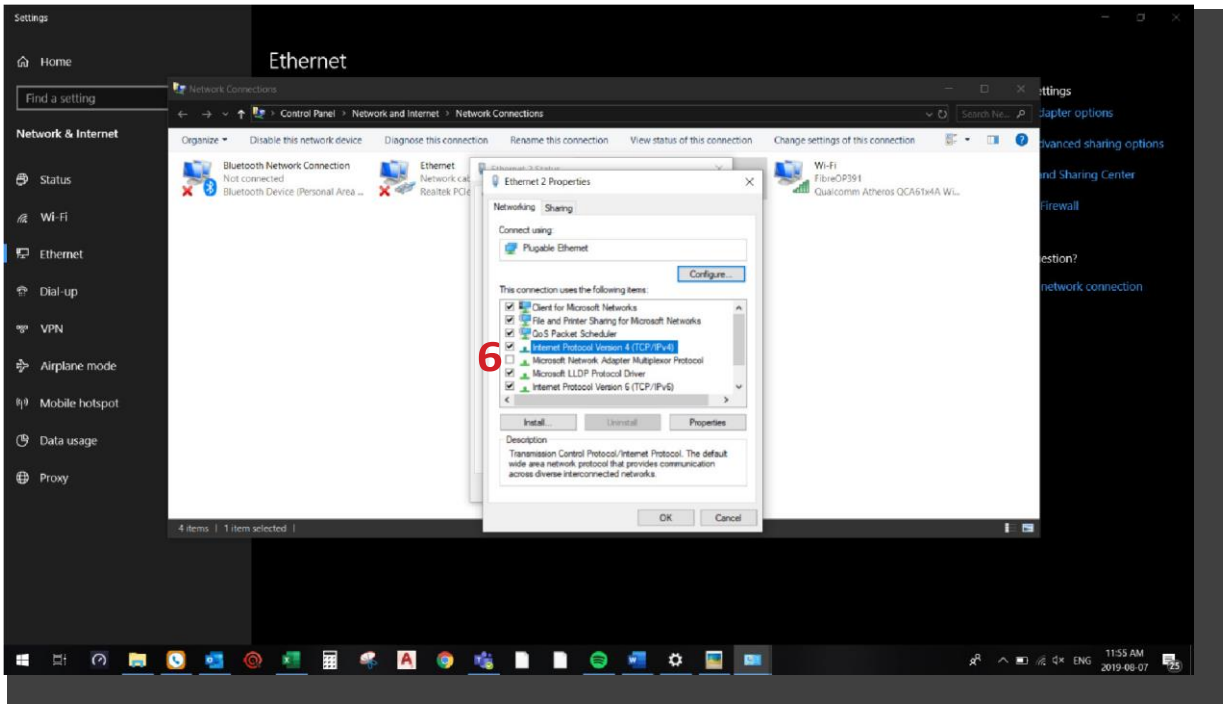
4. Double click on Ethernet/ Ethernet 2 (Ethernet representing the connection to the MX96 model) to open its status



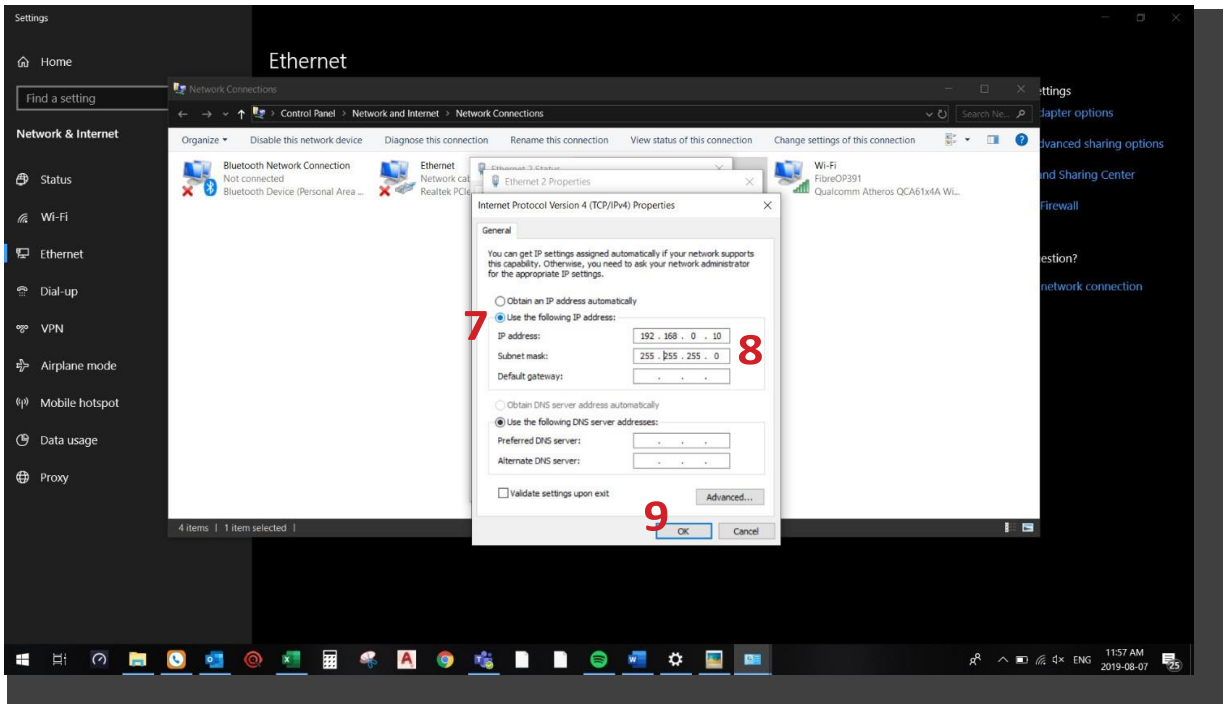
5. Click on Properties.



6. In the list of items, search for Internet Protocol Version 4 (TCP/IPv4) and double click on it to open its properties.



7. Tick the circle box Use the following IP address.
8. For the IP address, enter the IP address 2.0.40.xxx where xxx can be any number from 1 to 254, except 50. The Subnet mask should be set to 255.255.255.0.
9. Click OK.



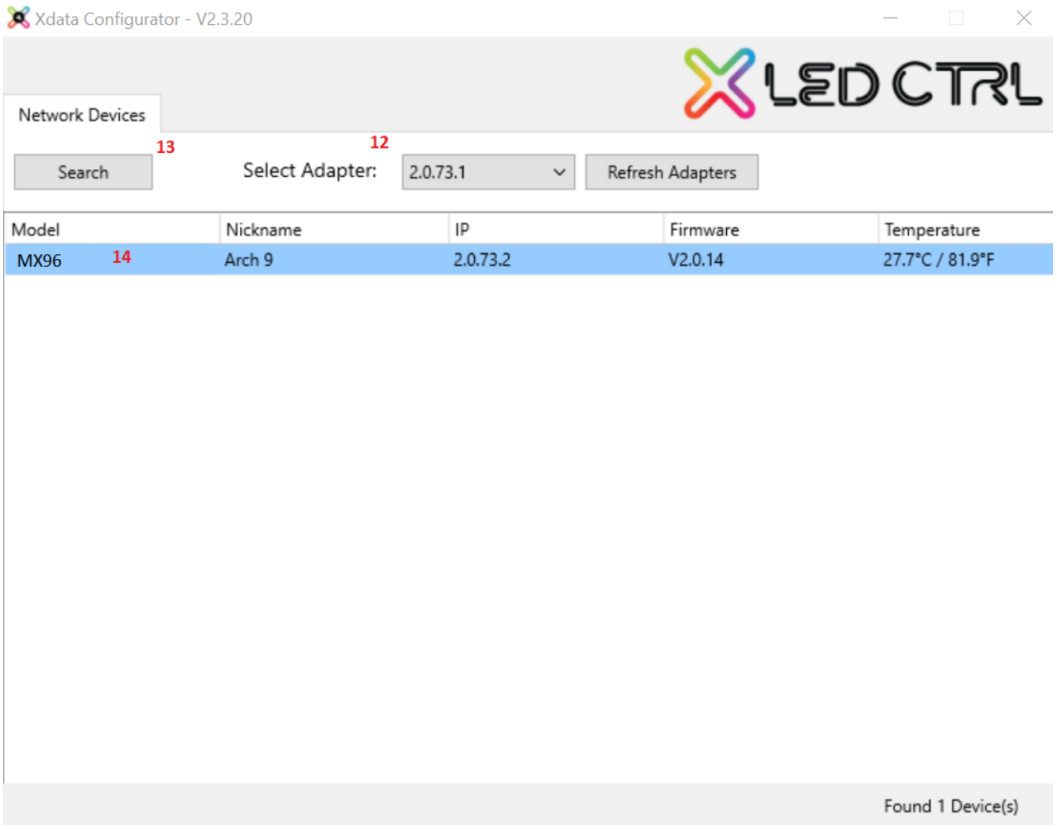
10. Close all the network tabs and download LED CTRL XData Configurator software on this link.

11. After downloading the software, open the software.

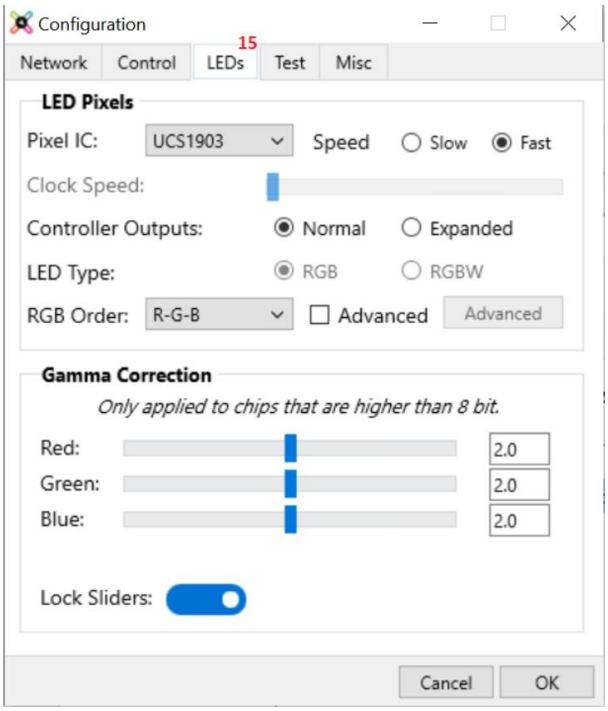
12. On the line Select Adapter, choose the IP address that you have entered before in step 8.

13. Click Search.

14. Double-click on the MX96 line



15. The Xdata Configuration box will appear. Click on LEDs tab.



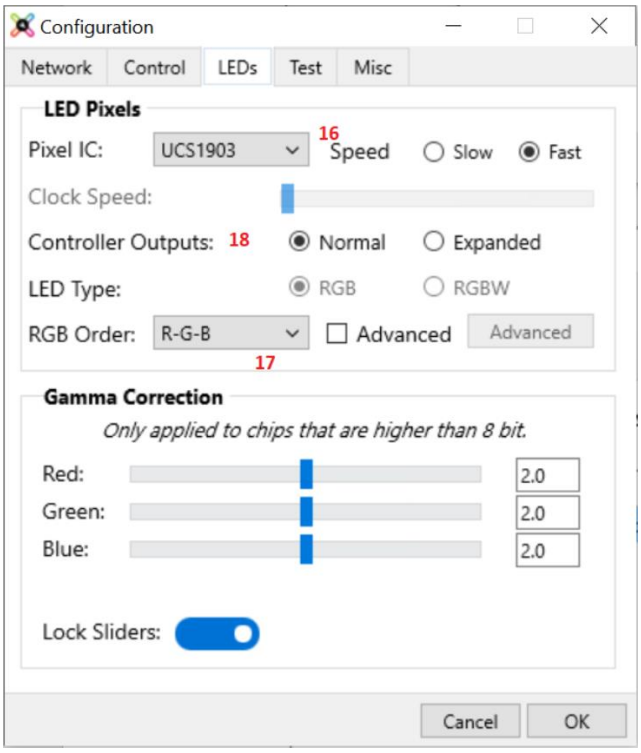
16. Under this tab, the appropriate chip and LED types will be configured. On the line Pixel IC, choose the appropriate IC that matches with the IC used in the light fixtures that you are using. For UCS2903, if you cannot find it in the list, the alternate IC compatible with it is WS2812 or UCS1903.

17. On the line RGB Order, it is set at R-G-B at default. This setting can be changed based on the LEDs type that you are using. For the Advanced settings, you can set up the RGB order for different outputs but it is just optional.

18. On the line Controller Outputs, there are two modes for the SX Receiver:

Normal mode: There are two ports on the SX2 Receiver output to the light fixtures. Each port is fused by one 7.5A fuse. In future this can be configured with 2 * 15A fuses such that in this mode, longer pixel fixtures are allowed. Consequently, 1 Receiver can control 2 longer pixel fixtures.

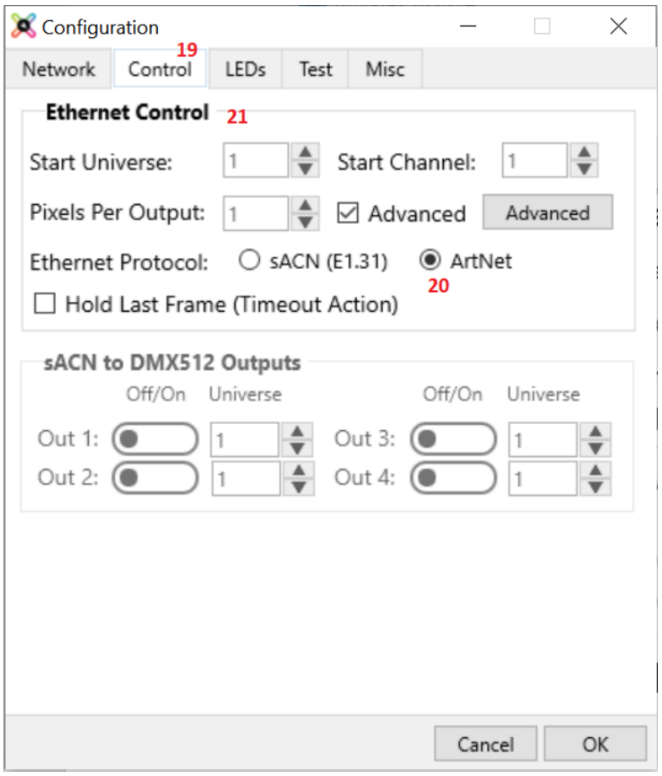
Expanded mode: The two ports mentioned in the Normal mode are divided into four smaller ports. Each port now again fused with one 7.5A fuse. This will reduce the allowed length of pixel fixtures but double the numbers of pixel fixtures for one Receiver. In other words, one Receiver can control up to 4 shorter pixel fixtures. Depending on the applications, which of these two modes would have to be considered.



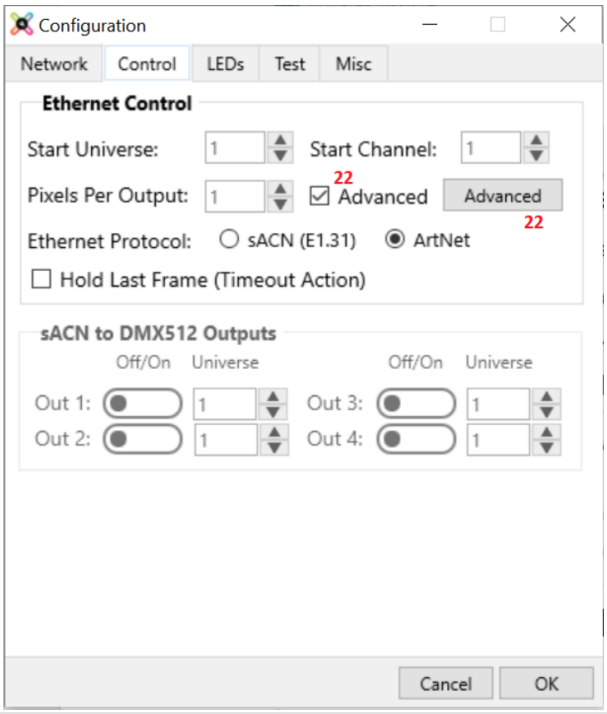
19. After the settings under LEDs tab is complete, click on the Control tab.

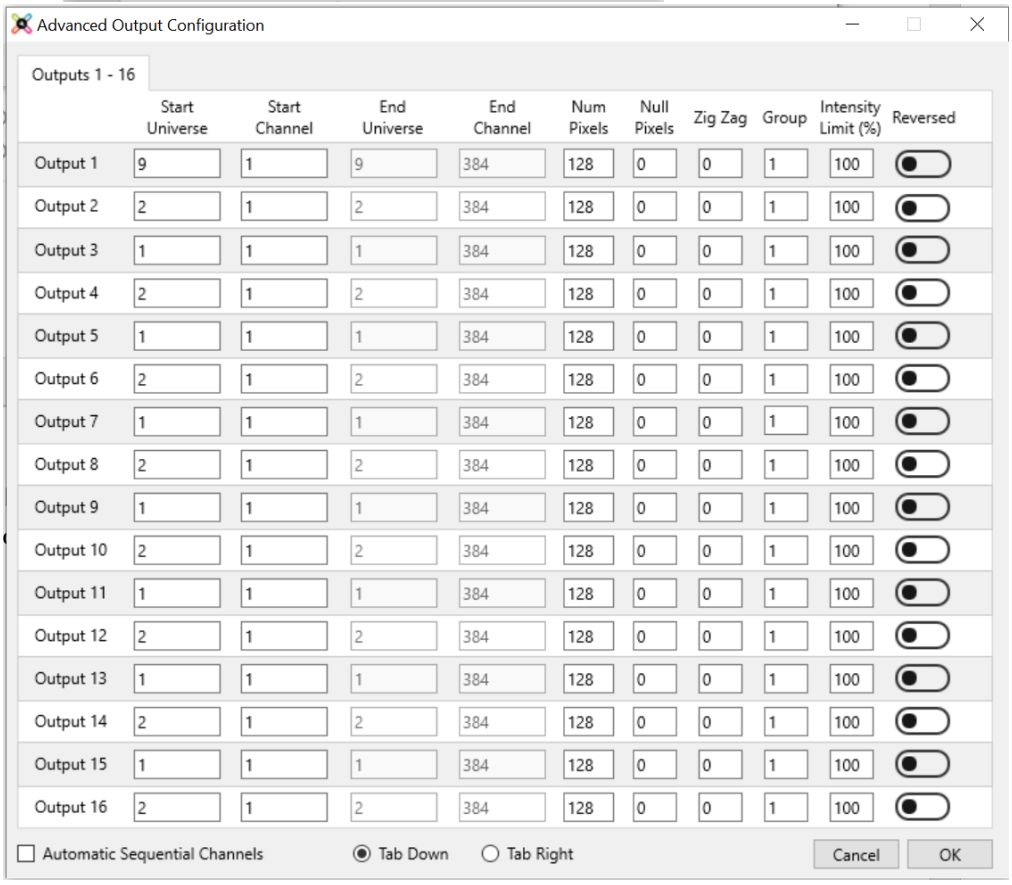
20. As we are all using Artnet signal, tick the box ArtNet.

21. Under the Ethernet Control section, the default settings will appear as the image below. This default settings are used when the number of pixels at every port of the Receiver are all the same.



22. However, if you tick the box Advanced and click on Advanced, this is where the ArtNet address and pixels address on each port of all SX Receivers can be controlled and matched.



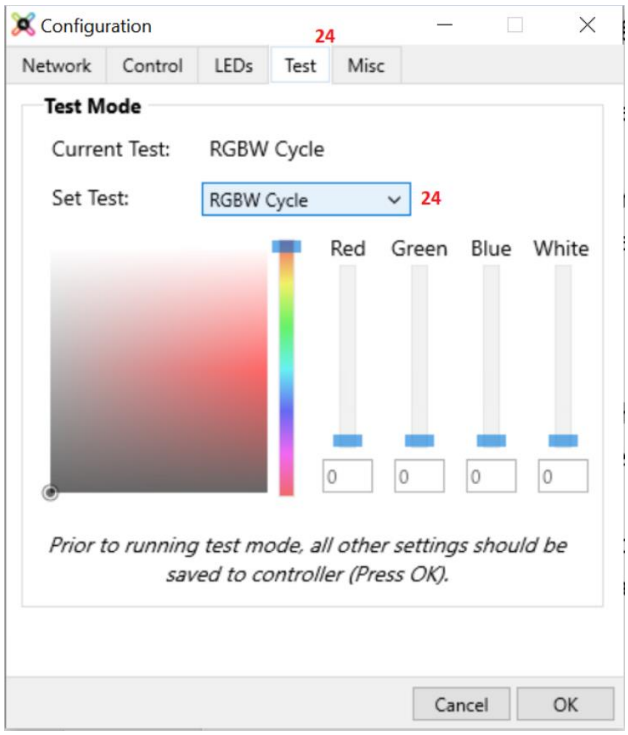


23. There are multiple columns for you to address the port with the ArtNet address. Under the column Num Pixels, you are required to know how many pixels are controlled for each port. After that,

if you tick the box Automatic Sequential Channels at the bottom-left corner, the ArtNet address will be automatically assigned for each port (Output) of the SX Receivers.

Once you are done, click OK.

24. Before going to the software section, you can actually test the connection between pixels fixtures and all the hardware section under the Test. To do this select the Test tab and then select the RGBW Cycle option from the Set Test drop down. Remember to set it back to None (Live Data) once you are happy that the lights are working.



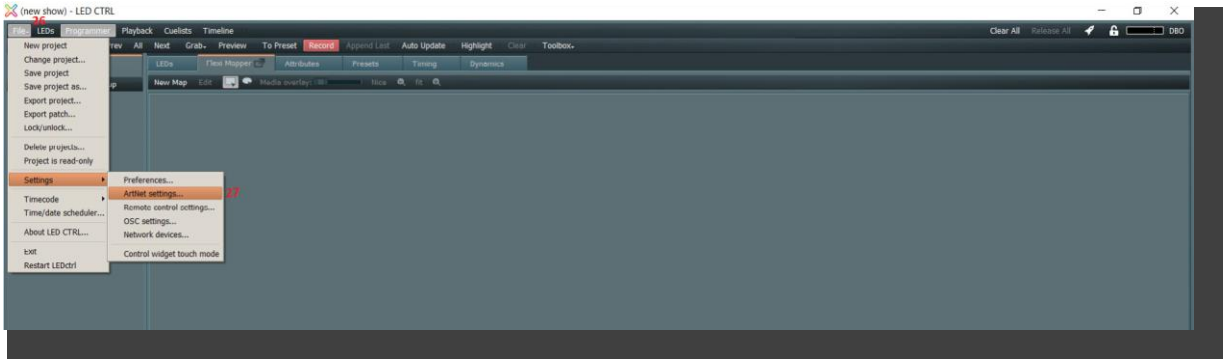
Click OK to close the Configuration when all the settings are done. You can close the LED CTRL XData Configurator software now.

25. From this point, you complete the settings between pixel fixtures and hardware. Open up the LED CTRL software. **Note if LED CTRL is already running – please restart it to ensure latest network settings are detected.

Choose New Project.

26. Under the File tab, choose Settings.

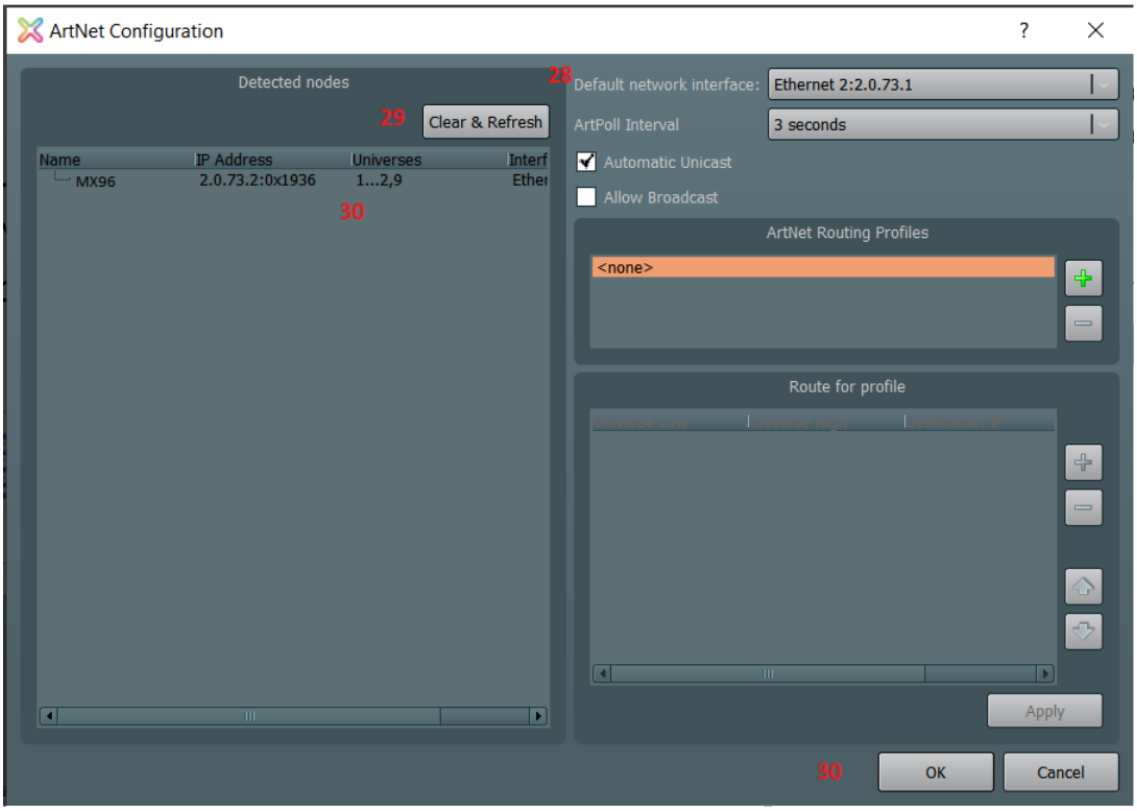
27. Under Settings, choose ArtNet settings.



28. The ArtNet Configuration dialog box appears. On the right, on the line Default network interface, choose the IP address that you have entered in step 8.

29. Wait until an interface representing MX96 appears on the left. If it takes too long, click on Clear & Refresh.

30. After the MX96 node appears, click OK.



31. If you reach this step, the link between LED CTRL MX96 hardware and LED CTRL software has been established.

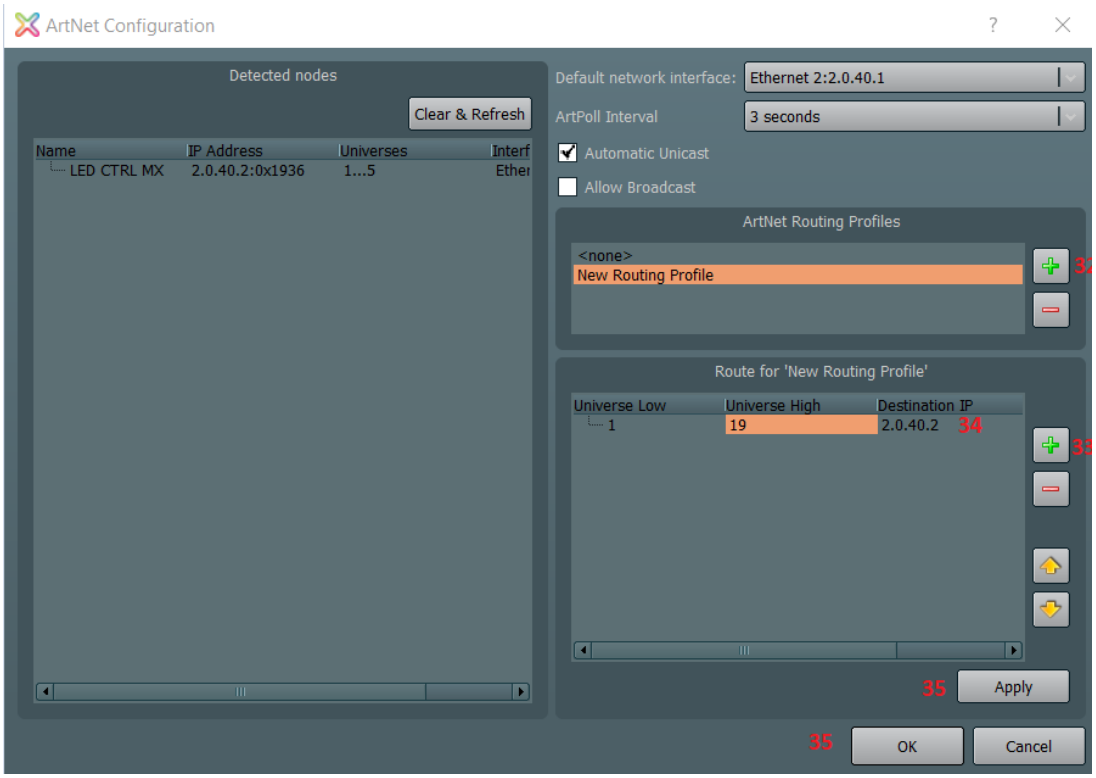
32. Add a new Artnet Routing Profile, using the + in the ArtNet Routing Profile section.

33. Add the ArtNet addressing route using the + in the Route for 'New Routing Profile' section.

34. Type in the low and high universe as well as the destination IP for each MX96.

35. Select Apply and OK.

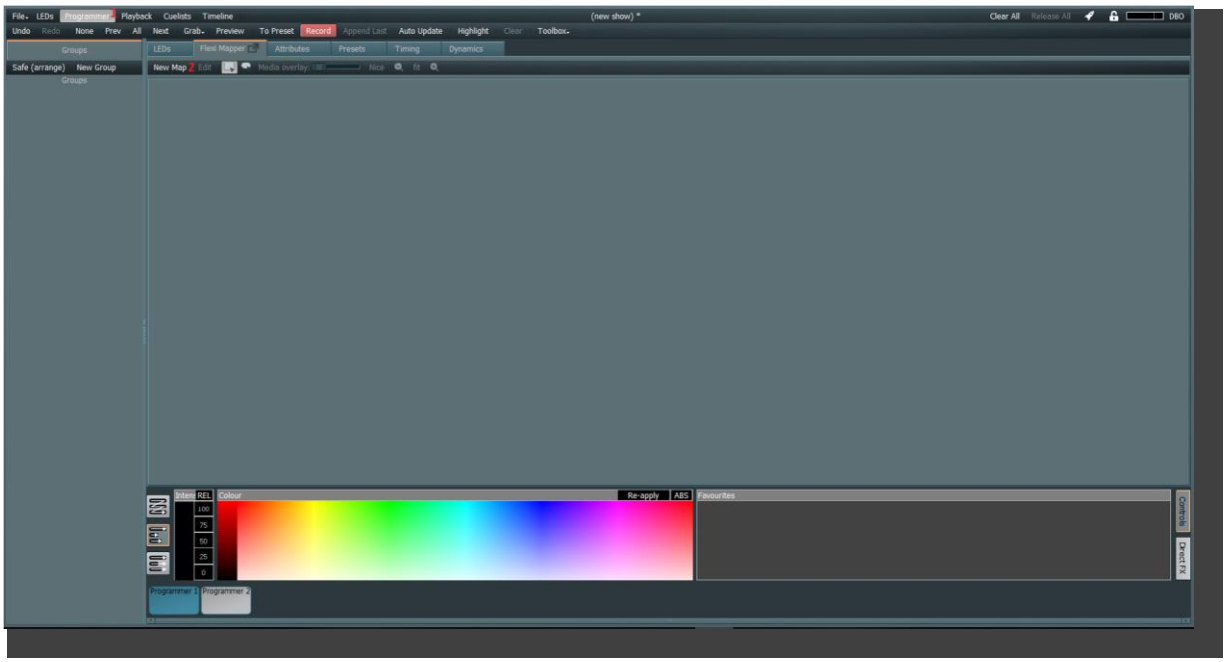
NOTES: PLEASE MAKE SURE LEDCTRL KEY BE PLUGGED INTO YOUR COMPUTER SO THAT LEDS CAN BE LIVE-CONTROLLED.



2. Basic programming guidance

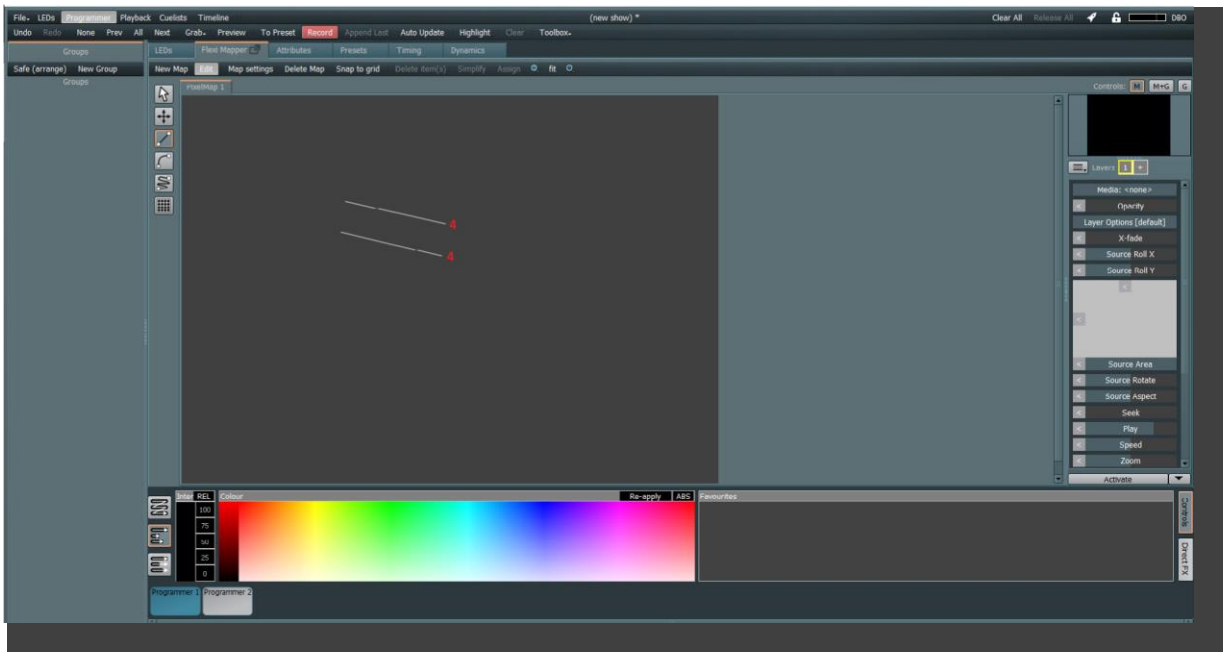
The next section is that I will give you some further steps to test our LEDs with the software to see the actual setup working.

1. Make sure you are in Programmer tab.
2. Click on New Map to open the FlexiMap Settings.

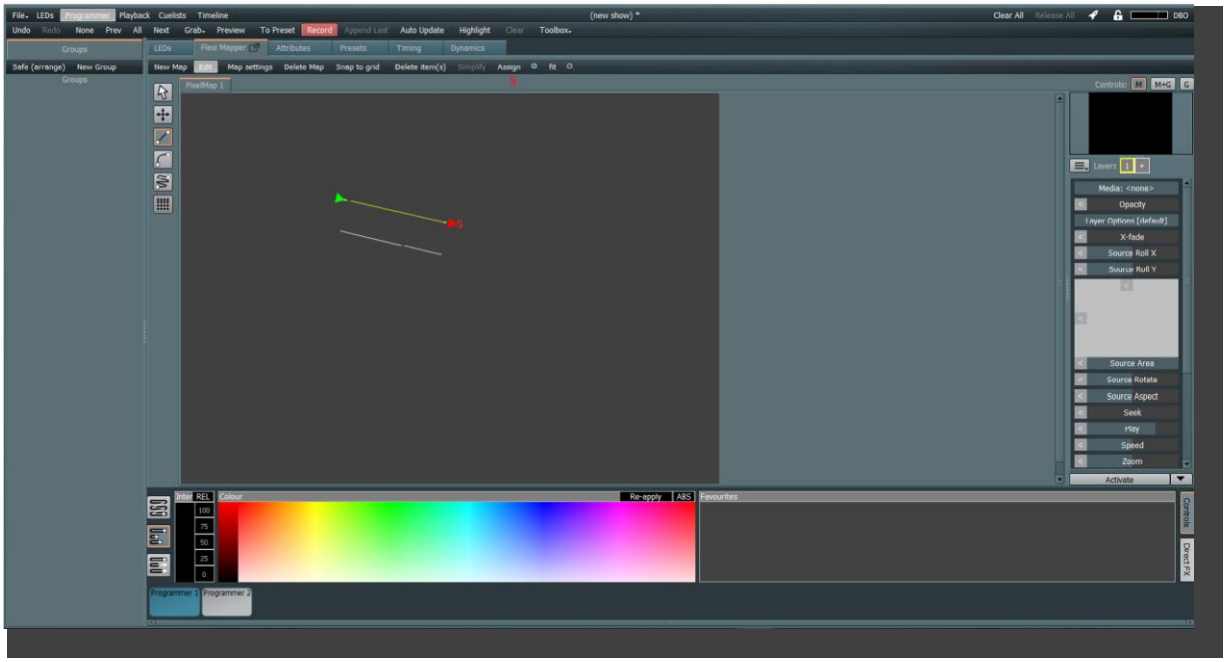


3. As this is just for testing so click OK.

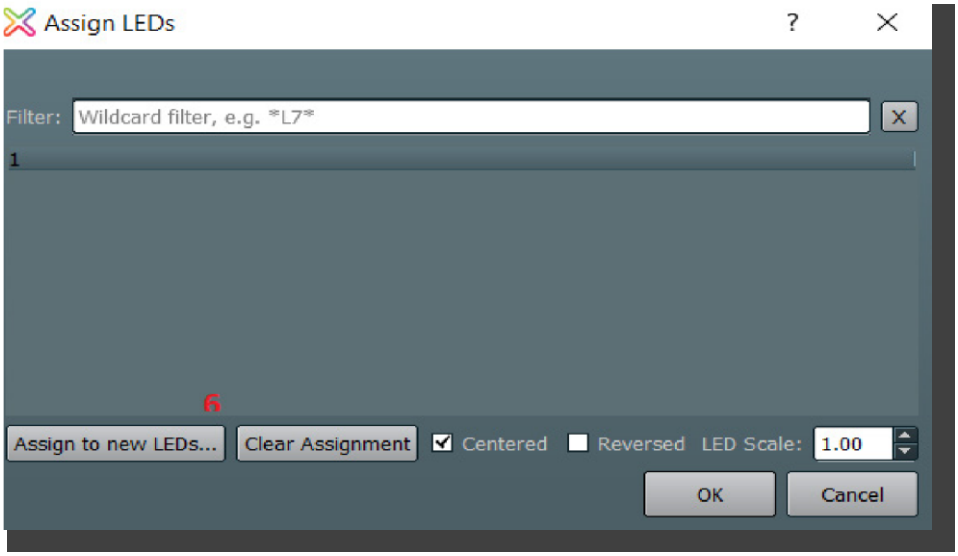
4. You can start draw a line, it can be straight or curve. Then you draw the second one to test on the ArtNet address that has been already set up previously working.



5. Click on one of the lines, and click on Assign to assign LEDs.



6. Click on Assign to new LEDs…

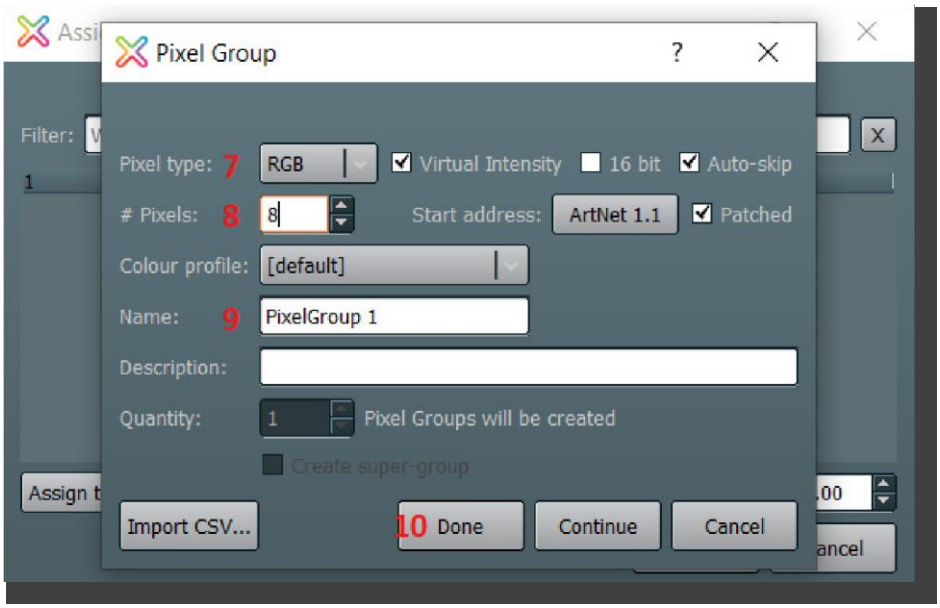


7. The Pixel Group box appears. On the line Pixel type:, you would choose the appropriate pixel type that matches with the LEDs you are using.

8. On the line # Pixels: you would need to enter the number of pixels of the light fixtures that you want to assign.

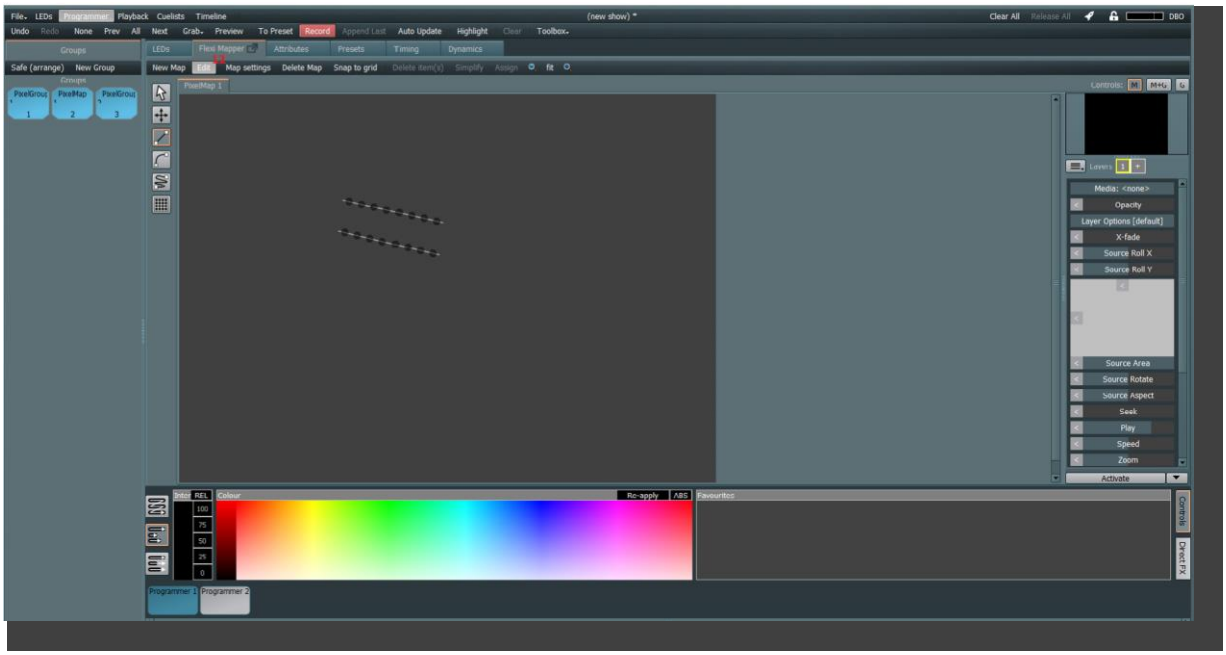
9. You can change how you would call for the light fixture you are assigning by changing on Name.

10. Click Done.

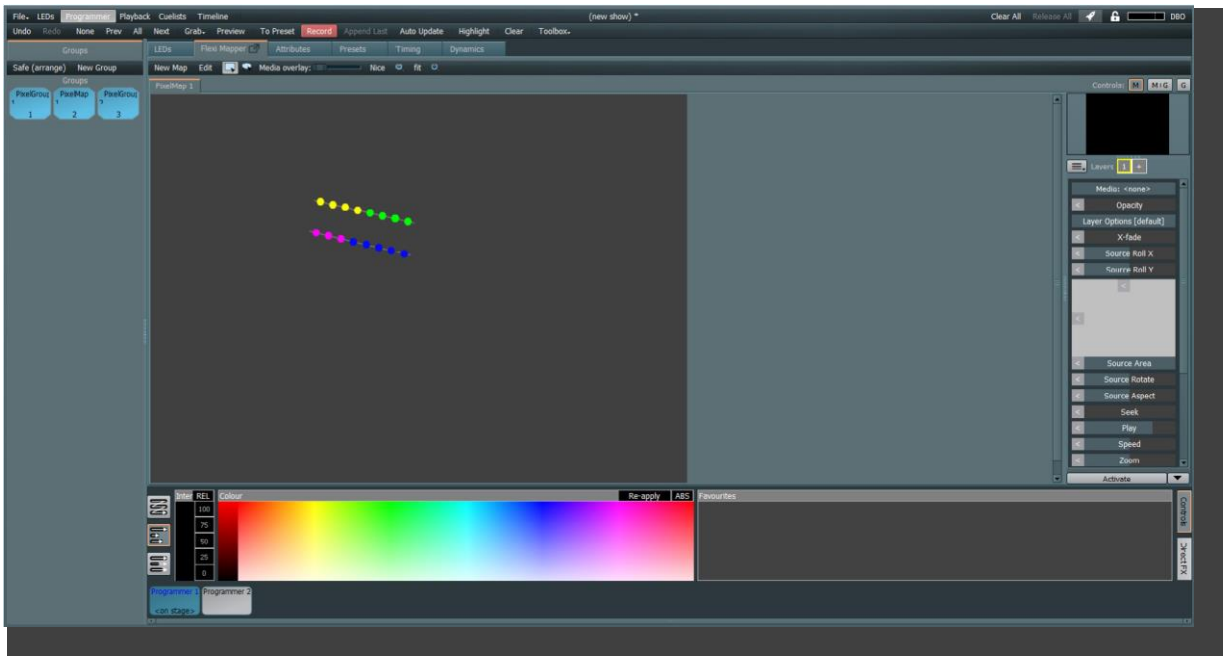


11. Repeat steps above to assign your next LEDs. Please notice that the ArtNet address should be concerned, which is on the line Start Address.

12. Once you are done assigning LEDs, click on Edit to go to the programming section.



13. At this point, each dot on the lines represents one pixel. You can click on the dots to choose the colour for your pixels. At the bottom, there are a chart of colours for you to set up the colour. Once you choose your colour, the light fixtures assigned with the line on the screen will be controlled as your line. From now on, you can start to control your lights with the software.

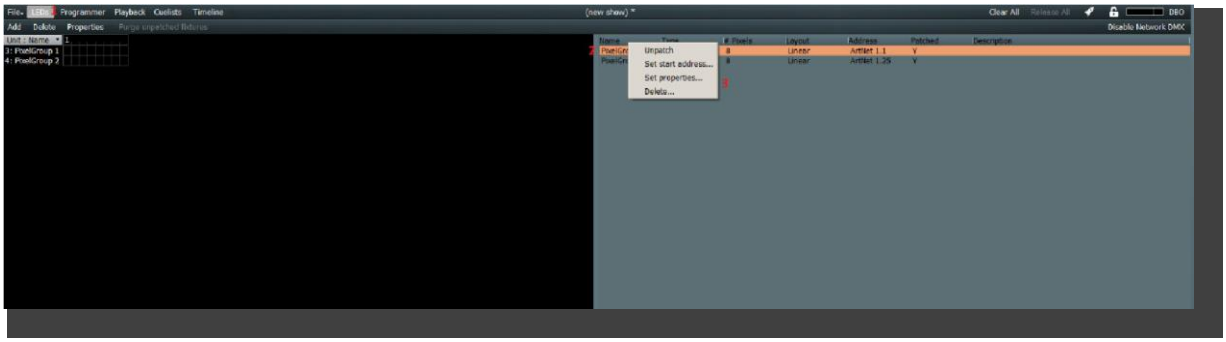


If you want to re-assign your LEDs, you can follow these steps:

1. Click the LEDs tab

2. Choose the LEDs on the right that you want to re-assign.

3. Right-click and then click Set properties or click Delete to re-assign the whole LEDs.



NOTES:

1. When you have drawn LEDs under the PixelMap and you start to assign your LEDs, make sure the right sequence of ArtNet address is followed that you have already made when setting up with LED CTRL XData Configurator software. Normally, the sequence of LED assigning will be followed correctly at default settings when you are assigning LEDs.