

RTI Driver documentation for the **CINETIX DMX-512 GENERATOR** 1.0



Thanks for your interest in our DMX driver software.
With this 2-Way driver you will be able to control a full DMX-512 universe using
a TCP-Connection.

Beside of just controlling normal lights this driver includes everything you need to
control up to five independent RGB(W) devices in a so called sequencer for smooth
color fading.

Each sequencer has multiple user changeable options.
Also you can create groups of light and store light scenes into the XP-Controller.

Without licence key you can test all functionality of the driver for about 1 hour.

If you like our driver you can get your personal key on our website

www.paddimedia.de

Please read this manual before you start.

Hardware Setup

You can buy the Ethernet DMX-Generator from:

<http://www.cinetix.de>

If you live in a non EU-country please contact us (info@paddimedia.de)



Arrangement of the 8-pin array of clamp terminals:

Terminal	Function
1	- DMX OUT
2	DMX OUT Signal Ground
3	+DMX OUT
4	*RS-232 TxD (serial transmitter OUT)
5	*RS-232 Signal Ground
6	*RS-232 RxD (serial transmitter IN)
Power -	power supply Minus (= device ground)
Power +	power supply Plus



* RS-232 port is currently not supported by the driver.

Before you can use the DMX Generator it is necessary to configure the Network settings. This can be easily done via Ethernet using a telnet terminal software.

You can use “putty” for example, the download is available from: <http://www.putty.org/>
Any other telnet capable software will work, just follow these simple steps.

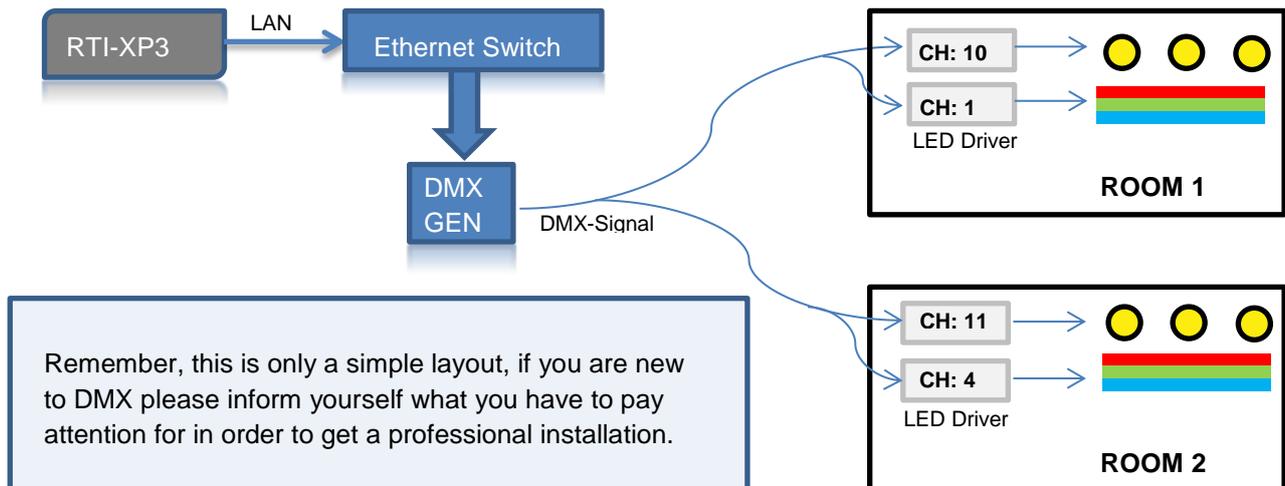
1. To enter the configuration mode locate the rotary switch on the DMX Generator and set it to 0 (Zero).
2. Configure your PC to be in the same IP-Range as the DMX Generator (Factory setting is: 192.168.0.240, Port 23)
3. Connect the DMX-Generator to your PC using a standard LAN-Cable and power up the device.
4. Launch the telnet client software and enter the IP of the DMX Generator and connect to. Now you have to enter the desired network-settings, (G)ateway, (I)p, (M)ask-Subnet and (P)ort-TCP. After entering a command –G,I,M,P you can type the settings and confirm with ENTER “Carriage Return”. Example: G192.168.178.1 (Enter) will set a new Gateway-Address. All settings are stored permanently inside the Ethernet / DMX Generator.
5. If configuration is finished set the rotary switch to 2 (two) for normal operation mode.

A more detailed instruction can be found in the device-manual.

Demo Setup

In order to get a better understanding of the drivers functionality let us create a practical scenario:

We have two identical rooms, both with dimmable LED lights in the ceiling and also LED RGB-Stripes as ambient light.



In this example we want to:

- Dim all the lights and be able to store / load light scenes
- Create a custom color-fade for room 1 (Master)
- Be able to get synchronized fading of both RGB lights
- Create a simple “comfort-dimmer” using only a single button/switch to control the light.



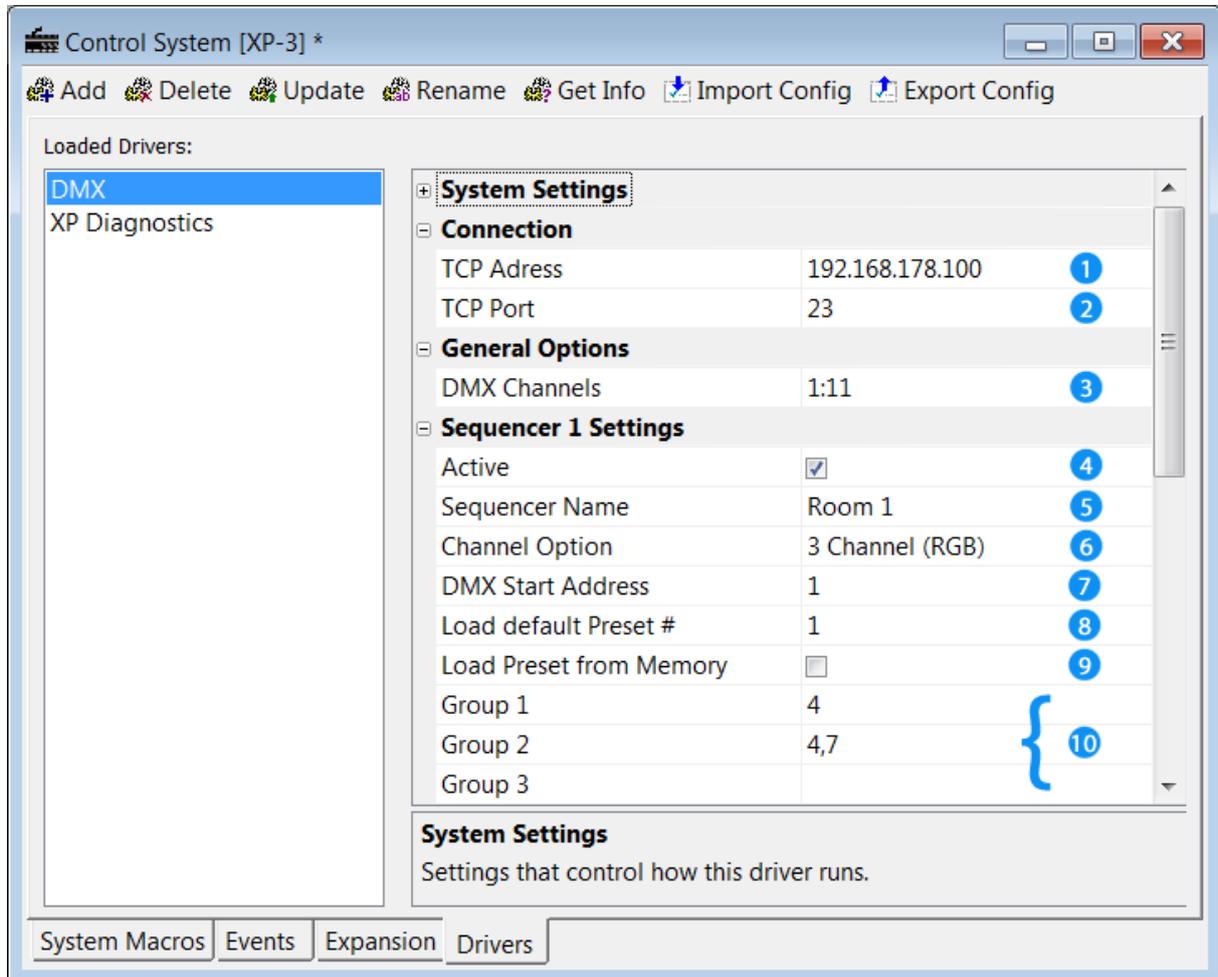
WARNING



It is prohibited to use our DMX-Driver to control any life threatening objects like pyro, truss motion control or switchpacks etc. which may cause any injure on failure.

Driver Setup

Open the RTI-Demo file which comes with the driver and move to the driver settings page.



- 1 Here you have to enter the IP-Address you have configured just before in the DMX Generator setup options.
- 2 The default TCP port of the DMX Generator is 23.
- 3 This is a list of all DMX Channels you want to use in your project. You can either enter a comma-separated list of channels or a range of channels using "x:y" like in this case. Since channel 7,8 and 9 are unused in this example you can also type "1,2,3,4,5,6,10,11" or "1:6,10,11". This helps you to get a better overview because channels you do not need are hidden in the ID interface.
- 4 Open the sequencer 1 settings and enable it by checking the box since we want to use it for Room 1.
- 5 Here you can enter a name of the sequencer which just helps you to refer to the lights this sequencer is controlling.

- 6 You have to select “3 Channel (RGB)” because our LED Stripes in this demo only consists of the 3 colors Red/Green and Blue.
- 7 This is the Start Address for the RGB color control. In this case the LED driver in room 1 is set to channel (CH) 1. Because we have chosen the 3 Channel Option the driver will control the light using Channel 1,2 and 3.
- 8 There are overall 10 color presets which can be loaded into the sequencer by default. Presets are treated later in this manual.
- 9 This is only a future option and does not affect the current driver functionality.
- 10 Each sequencer can have up to three groups. These groups can contain a list of DMX start addresses of other RGB lighting. In this case we want to be able to sync the RGB-Light of room2 with room1. Therefore the start address of the second RGB controller in room 2 (channel CH 4) is entered here.



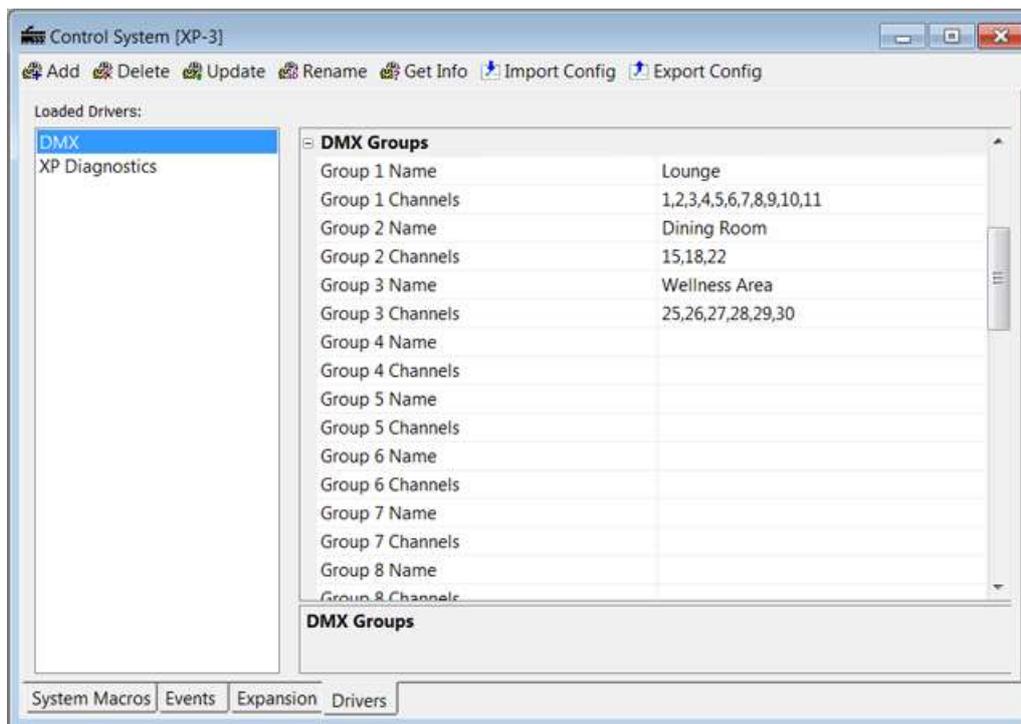
Sending all 512 channels in a packet will take about 23ms.

Try to use lower DMX-Channels in your project (Do not start with CH 500) because the driver will automatically adapt the number of channels to send in a packet to gain higher refresh rates.

DMX Groups

You have the ability to define a group of multiple channels, which is a nice thing if you want to handle a complete room. This is used for easy storing or loading light scenes.

Unlike the groups in the sequencer settings this is a single channel list only. You cannot enter range of channels in this case. Don't forget to give a group a useful name.



You can define up to 20 fixed groups of channels with this driver. The driver commands for storing or loading light scenes let you choose whether you want to store a group or a manual entered list of channels. You can even mix both and extend a predefined group manually.

Be aware to let the channel list get too long – otherwise the operation for storing into the XP-Controller may take several seconds to finish.

For our demo it may be useful to create the following groups:

Group 1 (All lights) : 1,2,3,4,5,6,10,11

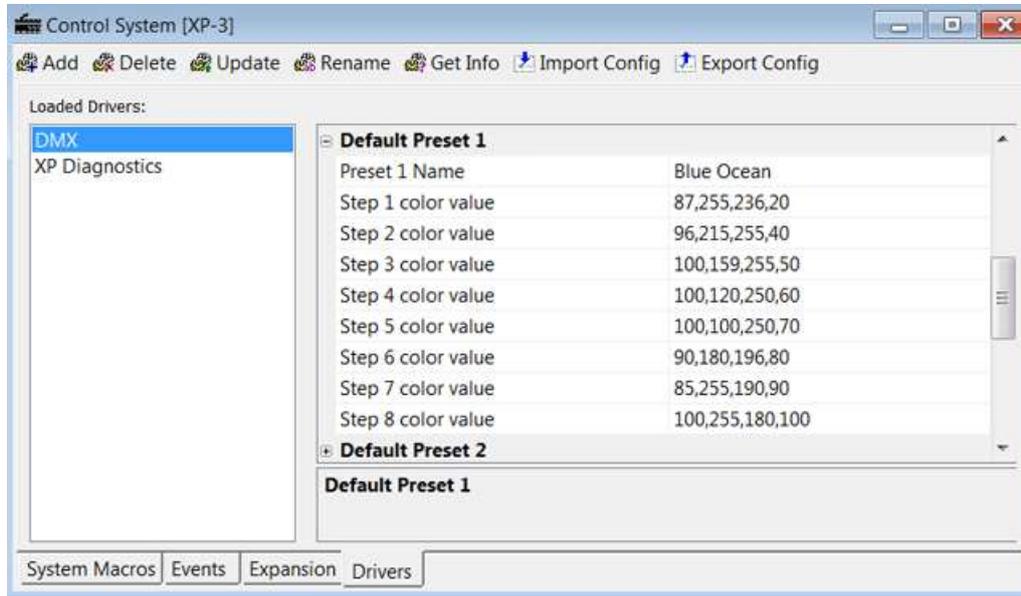
Group 2 (Room 1): 1,2,3,10

Group 3 (Room 2): 4,5,6,11

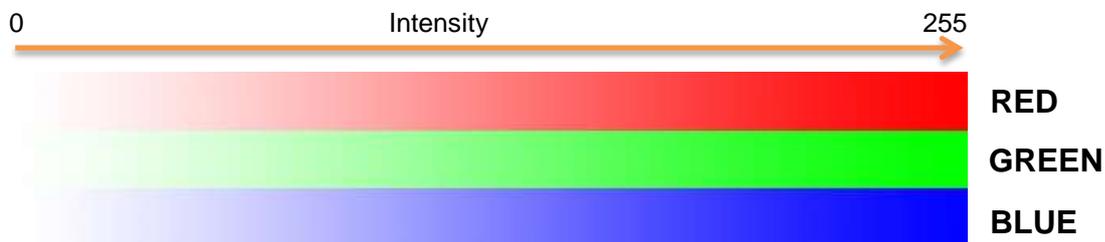
Group 1 could be used to load a global scenario or to turn everything off in a single step.

DMX Presets (Sequencer)

A color-fade sequence is made up of eight different colors which can be defined in the **Default Presets** options.



For each sequencer step you can input color intensity values which consist of the colors Red, Green and Blue. (White is optional if RGB+W is selected).



We use simple additive color mixing in this case.

Sample:

0,0,255 = Blue
 255,255,0 = Yellow
 0,255,255 = Cyan

The sequencer (if running) with this preset loaded will fade through all of those eight colors.



Depending on your Hardware it is not always a good idea to fade too "Hard" which means when you fade between 100% Red and 100% Blue there can be some variations of the overall brightness because 50% Red + Blue has often not the same intensity as 100% of a single color.

Congratulations! you have completed the driver setup, now let us have a look into our DEMO GUI and learn how we meet the requirements we made at the beginning.

The screenshot shows the 'Demo - RTI Virtual Panel' interface for 'Sequencer 1'. It features a top bar with 'DMX v. 1.0 Beta' and 'www.paddimedia.de'. The main area includes a 'Master Fader' and 'Bright' slider, a 'Live Color' preview, and a 'Sequencer 1' section with 8 steps, each with a color preview and a red digital display showing '5'. Below this are 11 channels (CH 1 to CH 11) with individual faders and status indicators. On the right, there are 'Store 1', 'Store 2', 'Recall 1', and 'Recall 2' buttons. At the bottom, there are 'Group 1', 'Group 2', 'Group 3', and 'Clear' buttons. Callout boxes provide detailed explanations for these elements.

Color preview step 1/8

Master Fader can be used to reduce overall brightness (evening)

RTI-Controller is connected to DMX

This is the calculated live color of Sequencer 1. In this case Channels 1-3 are decisive since we have selected CH1 as start address. Real color may vary.

Play controls (Play/Stop, Skip and Blackout)

Loads a different Preset

Click on Group 1 to join channels 4,5 and 6 to the sequencer in this case. Both rooms are synced now. Click on Clear to remove Group

Store or recall light scenes

Open this macro to see how the comfort-dim function is realized. You can also use the "button test" in standalone mode but this is not provided on VP.

Control Brightness of CH 8

Status of CH 11 (ON/OFF)

Fade Speed

Current Step

Enable or disable a single step

0	Sequencer will STOP until skip command is executed
1	30 seconds
2	26 seconds
3	22 seconds
4	18 seconds
5	14 seconds
6	10 seconds
7	6 seconds
8	4 seconds
9	2 seconds