READ THE MANUAL BEFORE USE THE PRODUCT!

User manual

Lumikit PRO X4 interface

Lumikit PRO X4 RACK interface

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Important considerations, read before using the product:

Before starting it is important to have some knowledge in computer network and network addressing, see the following topics in the internet:

- http://pt.wikipedia.org/wiki/Endereço_IP
- http://pt.wikipedia.org/wiki/Comutador_(redes)

The difference between the Lumikit PRO X4 and Lumikit PRO X4 RACK interface is the cabinet and the power supply, as the power supply is different from one model to another, the isolation is also different, see more information in chapter 1 and chapter 10.

⚠ The network cable supplied with the interface is a straight one, if the interface is connected directly in older computers, it might be necessary to use a crossover network cable.

⚠ The GROUND pin from the power supply connector is connected to the interface housing (on the RACK version).

⚠ We recommend the use of a terminator resistor in the last DMX device of the line, the terminator resistor consists in a 120 ohms resistor and 1/2W or 1W (different values can be tested) connected between the pin 2 and 3 of the DMX connector connected in the output of the last DMX device.

⚠ The USB port of this interface was designed only for Pen Drives usage, CONNECTING ANY OTHER DEVICE THAT IS NOT A PEN DRIVE IN THIS PORT WILL DAMAGE THE INTERFACE, THESE DAMAGES WILL NOT BE COVERED BY THE WARRANTY, more information on chapter 14, referring to product warranty.

⚠ Depending on the Pen Drive model, the interface might reset or freeze for a few instants as soon as the Pen Drive is connected to the interface, this is normal, therefore it is recommended to connect the Pen Drive with the interface switched off.

⚠ Not every Pen Drive models are compatible with the recording, see chapter 6 for the compatible models.

Watch the initial configuration video of the Lumikit PRO X4 and Lumikit PRO X4 RACK: http://www.lumikit.com.br/videos

SUMMARY

1. Introduction

The Lumikit PRO X4 and Lumikit PRO X4 RACK interface stands out for the numerous configuration possibilities, 4 DMX outputs with isolation, high speed (up to 44 FPS in all DMX outputs) and the possibility to record the scenes on a Pen Drive for later reproduction.

It is compatible with the Art-Net protocol used by most all lighting software and many controllers.

The interface configuration is made through the software Lumikit SHOW, Lumikit LED, Lumikit Art-Net Config or any other software that sends the appropriate Art-Net setting packages.

Since it uses a network cable, the interface can be a long distance away from the computer, it is also possible to connect the interface to a wireless router, this way it will work without cables connecting the interface to the computer. A typical setting would be in a band, for example, where the interface is on the stage, connected to the lighting and a wireless router. On the opposite side, the notebook controls the lighting through the software, this way a signal cable between the control and the stage is not necessary.

It is also possible to connect multiple interfaces in the same network. For example, to illuminate an avenue, passing DMX signal through long distances is an issue, a solution would be to spread interfaces and pass a network cabling as the network signal is less susceptible to interference, or even build a wireless network between points. The use of buffers or splitters is not necessary.

As the Art-Net universe of each DMX output can be configured, it is possible to assign all the outputs to the same Art-Net universe, this way, the interface can work as a buffer or splitter.

The lightener can also configure the DMX 0 output to be used by Lumikit SHOW software and the DMX 1, 2 and 3 outputs to be used by Lumikit LED, only by configuring the Art-Net universes inside the software or any other combination that is more suitable.

Lumikit PRO X4 and Lumikit PRO X4 RACK specifications:

- 44 FPS with 512 DMX channels in each output;
- 10/100Mbps network (Fast Ethernet);
- Simplified configuration through Lumikit software;
- Can be used with wireless routers;
- Allows multiple interfaces connected to the network;
- Can be used as DMX buffer;
- It is possible to use part of the outputs with Lumikit SHOW software and the other part with Lumikit LED software simultaneously , or control different outputs with different computers;
- Automatic bivolt (110/220V) power supply;
- 4 DMX outputs RS485 standard;
- Art-Net version 14;
- Compatible with Net-Art packages: ArtDMX, ArtPool, ArtIpProg, ArtIpProgReply, ArtAddress;

Lumikit PRO X4 specific features:

- 1500Vms isolation between the net input and the logic circuit, 2500Vms between the logic circuit and the outputs and 1000Vms between the outputs 0 and 1 with the outputs 2 and 3;
- Dimensions (HxWxL): 4,7x17x12 cm;
- Weight: 375g (700g with cables and package);
- Plastic box with plugs for power supply cables connection, DMX signal and Ethernet network;


Lumikit PRO X4 RACK specific features:

- 1500Vrms insulation between the network input and the logic circuit, 2500Vrms between the logic circuit and the outputs and 1000Vrms between output 0,1, 2 and 3 (individual supply for each DMX output);
- Dimensions (HxWxL): 4,2x48,3x11,2 cm (1 RACK unit);
- Weight: 1.370g (1.650g with cables and package);
- 1 RACK UNIT (RACK 19) metallic box with plugs for power supply cables connection, DMX signal and Ethernet network;

2. Connectors, LEDs e buttons

Lumikit PRO X4
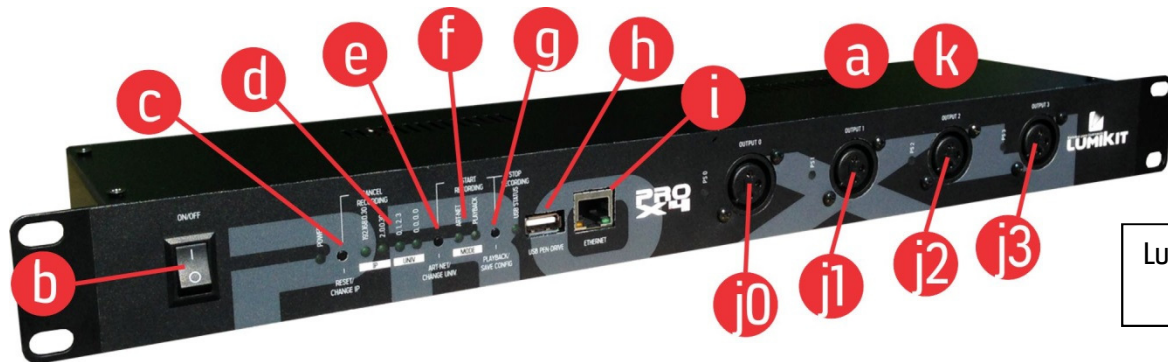
Lumikit PRO X4 RACK

- a: fuse;
    - o Lumikit PRO X4 interface: 250V / 1A;
    - o Lumikit PRO X4 interface: 250V / 3A (located in back panel);
- b: ON/OFF key and LED on the right indicates if it is on;
- c: "RESET/CHANGE IP" button for resetting, see chapter 5;
- d: Indicator LEDs of the current configuration, if the LEDs are out, the interface is using other IP or other Art-Net universes;
- e: "ART-NET/CHANGE UNIV" button, sets the interface on Art-Net mode and if pressed together with the "PLAYBACK/SAVE CONFIG" button, starts the record on Pen Drive;
- f: "PLAYBACK/SAVE CONFIG" button, sets the interface in playback mode (reproduces programs recorded in the Pen Drive), but only if valid programs are found in the Pen Drive;
- g: "USB STATUS" LED, indicates if the connected Pen Drive is valid, if there are programs in the Pen Drive, see chapter 6 for further details;
- h: USB port to connect Pen Drives, see chapter 6 for further details;
- i: Fast Ethernet network connector;
- j0, j1, j2, j3: connectors with DMX signal, outputs 0, 1, 2 and 3, respectively, in RACK version there is a LED next to each connector, denoting the functioning of related power supply;
- k: Power connector, the interface power supply is BIVOLT (110 or 220V), in RACK model the connector is located in the back part of the device;

3. Configuring Lumikit PRO X4 interface

It's possible to configure the Art-Net universes that will be used in each of the 4 connectors and the interface network settings, that's why during the installation the necessary settings must be verified.

The interface comes with the following original factory settings:

- IP Address: 192.168.0.30 – Netmask: 255.255.255,0; (this IP is compatible with all Lumikit's software);
- DMX Output 0=Art-Net Universe 0;Output 1=Art-Net Univ. 1; Output 2= Art-Net Univ. 2; Output 3= Art-Net Univ. 4;

These settings can be easily changed as follows:

- Resetting the interface, at this moment other options can be chosen (see chapter 4);
- By Lumikit SHOW software, LUMIKIT LED or LUMIKIT Art-Net setting (shown below);

3.1 Change the interface IP address and universe via software

⚠️ Warning: in most of installations no change in interface setting is necessary.

On Lumikit's software, within the interface configuration (usually called by the button "Interfaces"), click the button "Configure Art-Net interfaces" or directly in Lumikit Art-Net Config software, available in http://www.lumikit.com.br/downloads/ArtNetConfig.zip, and this window will be shown:
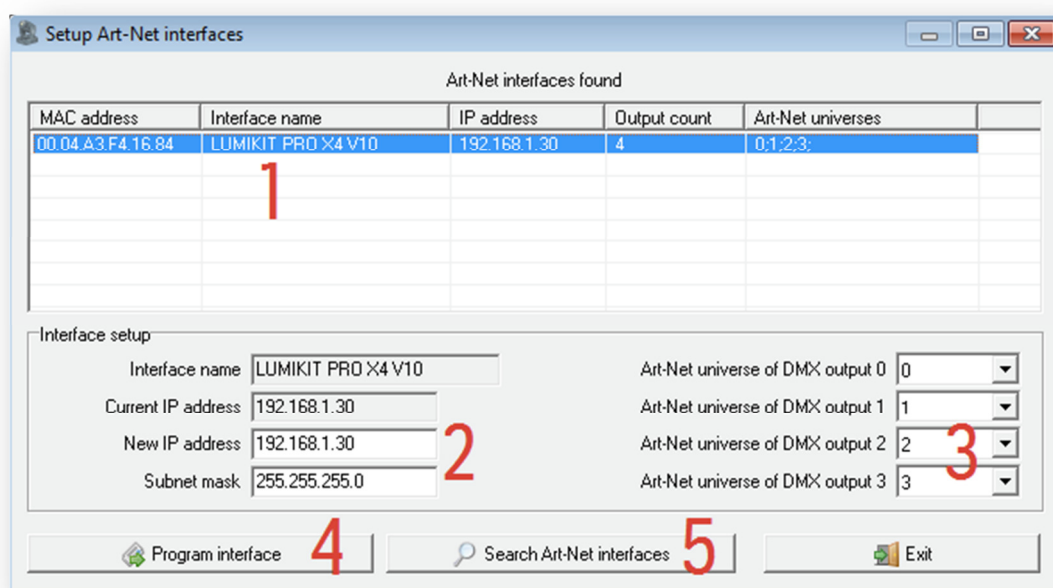
On the list (1) will be shown the interfaces found on the network, If none appears, check the possible communication problems (see the end of this manual) and then click "Search for interfaces on the network" (5)

In this list will be shown:

- MAC address from the interface, this value cannot be changed;

- Name of the interface, this value cannot be changed;
- IP address, it is the address which identifies the interface and allows the communication with the computer. By default it is 192.168.0.30 for the first interface, in case more interfaces are used in the same network, use 192.168.0.31, 192.168.0.32 and so on. It is important to remind that not all lightning software allow the use of IP addresses that do not start with 2 (ex: 2.0.0.100) or with 10 (ex: 10.0.0.100). In this case set the compatible IP addresses with the lightning software;
- Number of universes, represent the number of DMX outputs in the interface;
- Art-Net universes, show in sequence which Art-Net universes will be used by the DMX outputs;

When selecting an interface on the list (1), the subnet mask (http://pt.wikipedia.org/wiki/Subrede) will be shown on the edit fields, use the mask according to the class from the used IP address, example: IP: 2.0.0.XXX, mask: 255.0.0.0; IP 192.168.0.XXX, mask: 255.255.255.0;

In these fields it is possible to set a new IP and a new subnet mask (2) besides defining which Art-Net universes will be used by the DMX outputs (3);

After making the necessary changes, click "Reprogram interface" (4) and follow the given instructions:
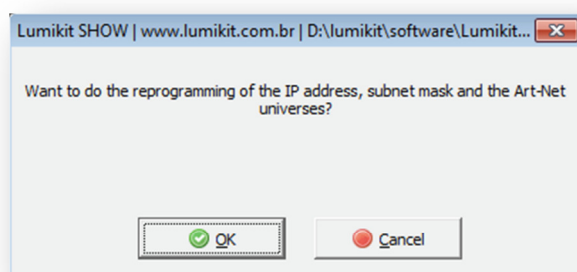
With this procedure the reprogramming will be complete.

In case the interface does not be shown in the interface list enable the option "Use the software in BROADCAST mode", this way it will be sent a reprogramming package for the entire network, in this case, make sure that only the interface you want to reprogram is connected to the network.

3.2 Configure the interface in software

⚠️In this manual will be shown how to configure the interface with the Lumikit SHOW software (same procedure for Lumikit LED), the interface is compatible with other software and drivers since these are also

compatible with the Art-Net Protocol, if the customer wants to configure the interface with other software or controller and do not know how to make the settings, should contact the manufacturer to check how to do the required settings to enable Art-Net.

Before you begin the configuration make sure there is a connection with network cable between the network card of the computer and the interface. Can also be used ethernet switches allowing more interfaces connected to the same computer and/or access points/routers for wireless communication with the interface.

If you do not know which IP address is configured on the interface do the RESET of the interface (Chapter 5), this procedure allows quick configuration of the IP address of the interface. By default the interface comes standard with the IP 192.168.0.30, which is the IP compatible with all software from Lumikit.

There are two ways of configure the interface inside your software or controller:

• **BROADCAST Mode**, indicated if there is only one interface in the network, or if all interfaces use the same DMX universe, this mode is recommended for most of the installations. The BROADCAST mode will send the Art-Net packages to all equipment connected in the network, because the destination IP used is not interface IP, but 255.255.255.255 address;
• **UNICAST Mode**, indicated if the installation will have more than one interface in the same network and those interfaces use different universes. In the UNICAST mode the Art-Net packages are sent individually to the informed IP. This way the interfaces that will not use certain Art-Net package (because they are for another DMX universe) don't waste time processing unused packages.

3.2.1 BROADCAST mode

In Lumikit SHOW (ou Lumikit LED) software, do the following procedure:

a) Click in button "Interfaces" , in the top right-side;
b) In case there is any interface in the list, click in "Remove all";
c) In displayed window "Interface Configuration", click in "Add";
d) In displayed menu select "Art-Net Controller (Server)":
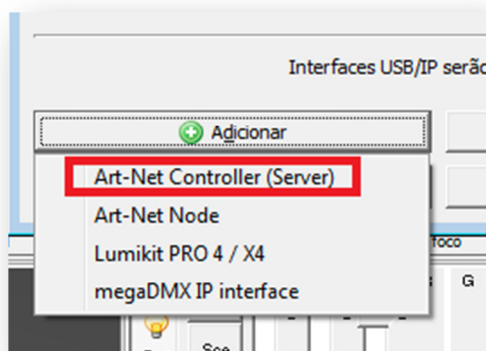
e) In new window, "Add interfaces", let the "Local address" filled with 0.0.0.0 e the "destination IP" with 255.255.255.255, this IP address send theArt-Net data package to all interfaces connected in the

network:

f) In field "number of universes", select 4, because the PRO X4 interface has 4 universes, if other setting is used, for example, if interface is configured for only 1 universe, fill 1 in this field;

g) In field "DMX Universe", fill 0,unless another initial DMX universe is used, anyway it also can be adjusted again in window "Interface settings";

h) At this time the following setting can be viewed, when clicking "Confirm" and retuning to Lumikit SHOW or Lumikit LED main window the interface Art-Net LED must be on without blink, with this the configuration is finished:
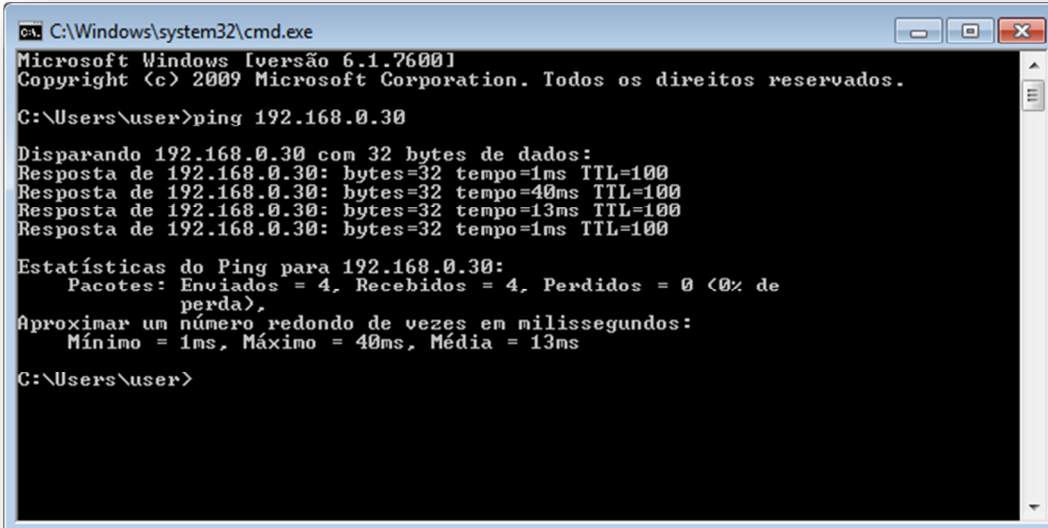
If the DMX update rate is low, it's possible to increase the value in the field "Hardware update rate", most of the systems Works well with 30 fps (frames per second). The ideal is to test in practice, checking if the lighting stops responding at some point, in this case it is better to use lower values.

3.2.2 UNICAST Mode

⚠️ Before starting any configuration, to use the UNICAST mode check if the IP number of your board is in the same network class as the IP number configured in the interface, for example: if the interface IP is 192.168.0.30, your network card used to communicate with the interface must have an IP 192.168.0.??? ranging from 1 until 254 (except 30). Otherwise the communication with the interface will not be possible.

The interface and the network card must have the same subnet mask number. Check the final chapters in the manual to know the procedures of IP changing in your computer.

To check if the communication with the interface is working, simply enter, in the command prompt, the command ping 192.168.0.30 (or the IP address configured in the interface, if it was changed):

To use the UNICAST mode it's importante that there is na answer from each network interface PING,in case this is not possible, must be checked the settings of the network, routers (access point/ switches, as a last resort try with another router model), interfaces the computer itself (probably the firewall or any antivirus is blocking the communication). Remembering that if only 1 interface is used in the network, or if all interfaces use the same Art-Net universe the BROADCAST mode may be used (chapter 3.2.1).

In case the net is properly configured and the PING answering, the setting of the interfaces inside the software is simple, in software Lumikit SHOW (or Lumikit LED), do the following procedure:

a) Click in the button "Interfaces", at the top right side;
b) In case there is any interface in the list, click in "Remove All";
c) In displayed window "Interface settings", click "Auto" (2) and after a few seconds the interfaces must be automatically located:

Configuração das interfaces

Interfaces

Tipo de interface	Universo DMX	Porta	Destino	Universo Art-Net	Entrada	
Art-Net Server (OUTPUT)	0	0.0.0.0	192.168.0.30	0		
Art-Net Server (OUTPUT)	1	0.0.0.0	192.168.0.30	1		
Art-Net Server (OUTPUT)	2	0.0.0.0	192.168.0.30	2		
Art-Net Server (OUTPUT)	3	0.0.0.0	192.168.0.30	3		

Universo DMX ☐   Universo Art-Net ☐   Entrada   Remover   Ping

Taxa de atualização do hardware (reinicie o software para ter efeito) 30 fps

Interfaces USB/IP serão adicionadas automaticamente pelo botão "Auto".

Adicionar   Remover tudo   Configurar interfaces Art-Net

Auto   Confirmar

d) For each universe an Art-Net server will be created, see in the example above the list (1), when clicking "OK" and returning to Lumikit SHOW or Lumikit LED main window the interface Art-Net LED must be on without blink, with this the configuration is finished.

If the DMX update rate is low, may be suggested the increase of speed only use this if the network support higher speed, the ideal is to test in practice, checking if the lighting stops responding at some point, in this case it is better to use lower values:

Lumikit SHOW | www.lumikit.com.br | D:\lumikit\softw...

Foi encontrada uma interface de alta velocidade, deseja utilizar uma taxa de atualização do harware de 30 fps?

Confirmar   Cancelar
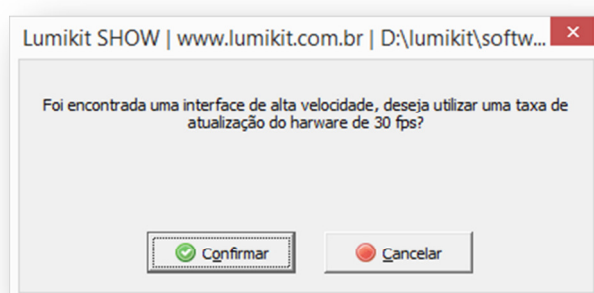
3.3 Network speed (10Mpbs/100Mbps (Fast Ethernet))

The interface hardware is compatible with 10 and 100Mbps networks, however there are 2 kinds of standard for 100Mbps networks, which can cause incompatibility among network equipment from different manufacturers. Lumikit chose to initiate the most common mode, but the customer can already have equipment that are not compatible.

For that reason, from firmware version 1.1 (11) on, was created an option to force 10Mbps speed (compatible with all network equipment) or 100Mbps. By default the interface Is configured to force 10Mbps speed, in case

that speed is not enough for the customer we recommend to change the configuration to 100Mbps, in this case the customer should make sure that the communication will work among all equipment.

To change between the settings keep the "ART-NET/CHANGE UNIV" button pressed while the interface is connected, in this moment check the IP and UNIV LEDs:

- In case the IP and UNIV LEDs blink 5 times, the interface will work in 100Mpbs or 10Mpbs;
- In case the interface connect normally without the IP and UNIV LEDs blink, the interface will force 10Mbps speed in network communication.

4. Interface reset

To restore the default settings, it can be done the interface resetting, to do this press and hold the "RESET/CHANGE IP" button for at least 15 seconds when turning the interface on:
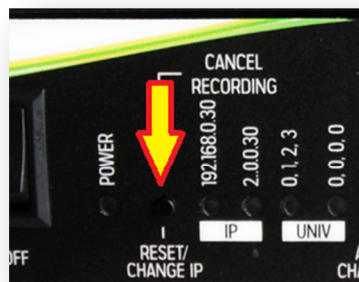
When in reset mode, it is possible to easily choose between the following IP addresses, by pressing the "RESET/CHANGE IP" button:

- IP address: 192.168.0.30 - Netmask: 255.255.255.0; (This IP is compatible with all software produced by Lumikit);
- IP address: 2.0.0.30 - Netmask: 255.0.0.0; (This IP is compatible with the majority of the software produced by third parties);

And the following Art-Net universes in the DMX outputs, by pressing the "ART-NET/CHANGE UNIV." button:

- DMX output 0=Art-Net Universe 0; Output1=Art-Net Univ. 1; Output 2=Art-Net Univ.2; Output 3=Art-Net Univ.4;
- DMX output 0=Art-Net Universe 0; Output1=Art-Net Univ. 0; Output 2=Art-Net Univ.0; Output 3=Art-Net Univ.0; (Using this setting, DMX outputs will be in the first DMX universe, this way it will work as a DMX splitter or buffer);

After finished the desired configuration press the "PLAYBACK/SAVE CONFIG." button.

To choose other settings see chapter 3.

5. Interface connection

The Lumikit PRO X4 and Lumikit PRO X4 RACK interface connection is simple:

- The DMX outputs can be connected directly to the lighting devices which will be controlled, it can also be used as a splitter or buffer for the DMX signal in case more than 32 lighting devices are connected in a DMX output;
- The power comes through a socket, the power supply works with 110 or 220V, it is not necessary to select the tension, the power supply is automatic;
- The Ethernet connection:
  - can be connected directly to the network card from the computer through a cable;
  - can be connected to a Ethernet switch in case of more interfaces or other devices in the same network;
  - can be connected to an access point or router (wireless) allowing wireless communication;

To connect more than one interface on the same network, the IPs must be changed, below there is an example of a connection of 2 or more interfaces on the same network:
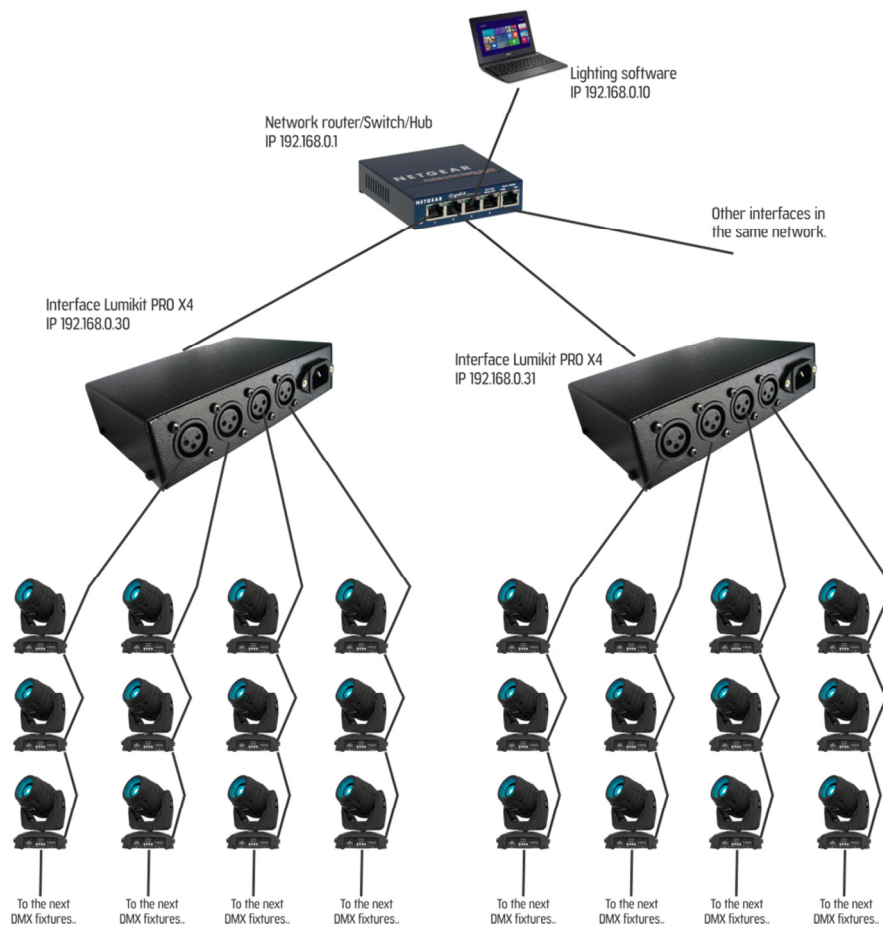
Note that the second interface has a different IP address than the first interface, always use different IP addresses.The computer is in the same network class as the interfaces (class C – 192.168.XXX.XXX).

6.Program recording in the Pen Drive

In the Lumikit PRO X4 interface it is possible to connect a Pen Drive in the USB port, this Pen Drive can be used to record up to 20 programs, each program can have at most 30 minutes of Art-Net signal at 25 FPS.

The interface has a "PEN DRIVE LED STATUS", depending on the Pen Drive situation the LED can blink in different ways:

- Off: no Pen Drive connected;
- On: Pen Drive ready for recording or playback;
- 1x : No program found: ready for recording;
- 2x : Pen Drive filled with valid program: cannot write more programs;
- 3x : Pen Drive full and no program found: cannot record or play;
- 4x : Invalid Pen Drive or invalid file format, format the Pen Drive using FAT or FAT32 file system;

6.1 Considerations on Pen Drivers

⚠️ Depending on your Pen Drive model, the interface might reset or freeze for a few instants as soon as the Pen Drive is connected to the interface, this is normal, therefore it is recommended to connect the Pen Drive when the interface is switched off.

In some cases the Pen Drive might not be compatible with the interface, some minimum requirements for the Pen Drive to work correctly:

- The Pen Drive must be in the FAT or FAT32 format, other formats are not compatible;
- To use the Pen Drive for recording, it must have high transfer rate. Low speed Pen Drives will freeze the interface during the recording process. To measure the speed of the Pen Drive, an specific software such as the USBFlashSpeed can be used (available on http://www.lumikit.com.br/downloads/USBTest.zip), the minimum recommended is 6MB/s with 4KB blocks:
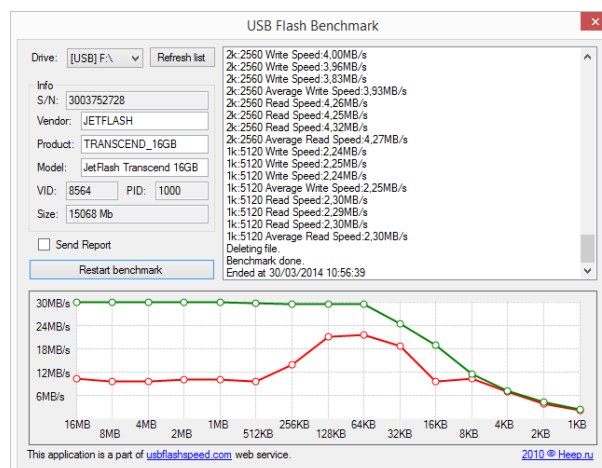
Examples of Pen Drive models that have a great performance: JetFlash Transcend, Corsair Slider.

Even though the quoted models being from USB 3.0 format, and the interface works with USB 2.0 format, USB 3.0 models can be used normally.

6.2 File structure inside a Pen Drive

When connecting a Pen Drive to the interface, it will be checked if the file system is valid (FAT or FAT32), after the verification and if the folder does not already exists, a new folder named LUMIKIT will be created. In this folder all the programs recorded by the interface will be stored.

The folder can store up to 20 files, this files will be named with one character indicating the corresponding program, the names are: : "0", "1", "2", "3", "4", "5", "6", "7", "8", "9", "A", "B", "C", "D", "E", "F", "G", "H", "I" e "J". File "0" corresponds to the first program, file "1" to the second and so on, until file "J", which corresponds to the twentieth program

This Pen Drive can also be opened in Windows Explorer or in MAC's Finder:
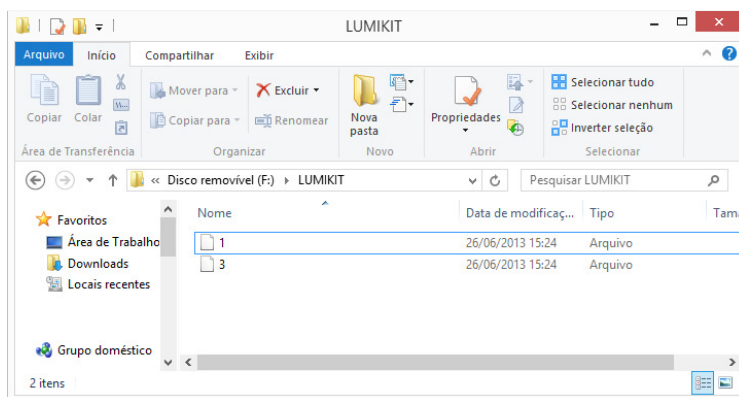

In the example above, the Pen Drive has 2 programs; the file "1" corresponds to the program in position "2" and the program "3" corresponds to the program "4".

It is possible to copy the programs to another Pen Drive and also delete the programs.

Every minute of recording corresponds to approximately 3MB of data. The maximum recording time is 30 minutes, in this case the file will have approximately 90MB. Since the interface supports up to 20 programs, a 2GB Pen Drive is enough to store all programs.

6.3 Recording a program in the Pen Drive

If the Pen Drive connected is valid, has enough storage space, less than 20 programs and the interface is receiving Art-Net signal, it is possible to record a new program, to do this, press the button "ART-NET/CHANGE UNIV." and the button "PLAYBACK/SAVE CONFIG." at the same time:
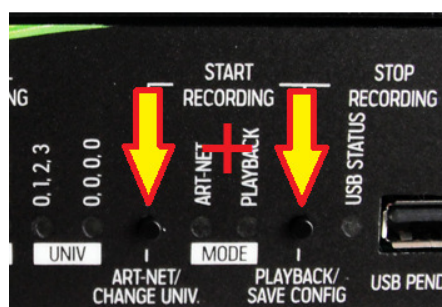
After the beginning of the recording, it is possible to end it through the button "PLAYBACK/SAVE CONFIG", in this case the program will be recorded in the Pen Drive or the recording can be canceled through the button "RESET/CHANGE IP", in this case the program will not be recorded in the Pen Drive. The maximum recording time is 30 minutes, after that the process will be automatically ended.

The recording can also be made through the interface's remote control app, check the next chapters of this manual.

6.4 Reproducing programs from the Pen Drive

If the connected Pen Drive is valid and has valid programs, it is possible to make the reproduction of these programs by pressing the button "PLAYBACK/SAVE CONFIG", if there is more than one program inside the Pen Drive, the next program will be reproduced by pressing the button "PLAYBACK/SAVE CONFIG" again.

The program reproduction can be also be made through the remote control app, check the next chapters of this manual.

6.5 Deleting programs from the Pen Drive

It is not possible to delete a program directly through the interface, only by using the remote control app or by disconnecting the Pen Drive from the interface e connecting to a computer; the program can be deleted through Windows Explorer or MAC's Finder directly from the LUMIKIT folder inside the Pen Drive.
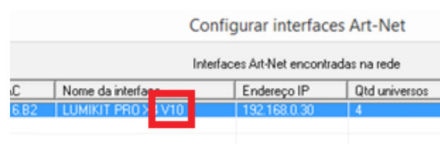
7. Firmware update

Using a Pen Drive connected to the USB port of the interface, the firmware update can be made.

The latest firmware version of the Lumikit PRO X4 interface can be found in the site:

http://www.lumikit.com.br/interface-dmx-lumikit-pro-x4 or directly through this link
http://www.lumikit.com.br/firmware/interface-lumikit-pro-x4/, where all versions are available.

To do the update:

- copy the file named lkprox4.cry to the main folder (\) of the Pen Drive, keep in mind that the Pen Drive must be on the FAT or FAT32 format;
- turn off the interface, connect the Pen Drive to the interface;
- press and hold the "PLAYBACK/SAVE CONFIG" button, turn on the interface;
- if the lkprox4.cry file is found on the Pen Drive, the "USB STATUS" LED will be on for approximately 10 to 20 seconds, which is the needed time for updating the firmware;
- after the update, confirm the firmware version on Lumikit's software, the version is shown after the interface identification, in the example, LUMIKIT PRO X4 version 10 (V10):


⚠ Do not attempt to change the lkprox4.cry file, do not use files from other suppliers under the risk of "bricking" the interface, this issue will not be covered by the warranty.

8. Remote control for Android and iOS

Through the Lumikit PRO X4 RC app, available on the App Store (for iOS 8 or superior) and Google Play (for Android 4.0 or superior) it is possible to control remotely the Lumikit PRO X4 interface, as long as the interface and the cellphone or tablet are connected to the same Wi-Fi network as the interface. Tap over the "PRO X4" logo in the upper corner the available interfaces on the network will be shown:
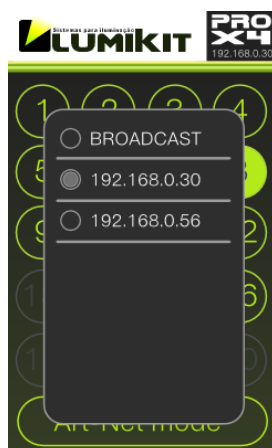
When selecting the interface, options are shown according to the selected mode and available functions:

If there is no Pen Drive connected, or the Pen Drive has some issue (invalid format) only the Art-Net mode may be used:
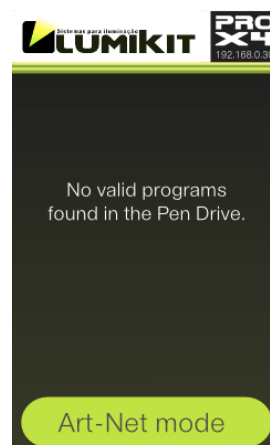
In case there is a valid Pen Drive connected to the interface, the programs in the Pen Drive will be shown, at the upper corner it is possible to see the option to delete programs (⨯) from the Pen Drive and an option to make a new recording (●).
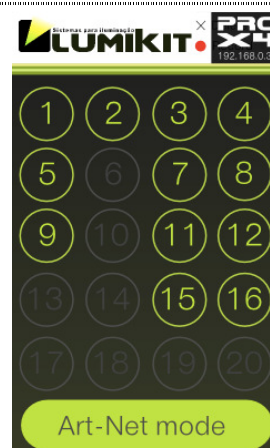
When selecting the recording option, total recording time will be shown, keep in mind that it is possible to cancel the recording process, in this case nothing will be recorded or stop the recording, this way what was recorded will be in the Pen Drive. The recording ends automatically in 30 minutes.

When selecting the option to delete a program, all programs that can be deleted from the Pen Drive will be shown, when selecting a program, it will be deleted permanently from the Pen Drive.
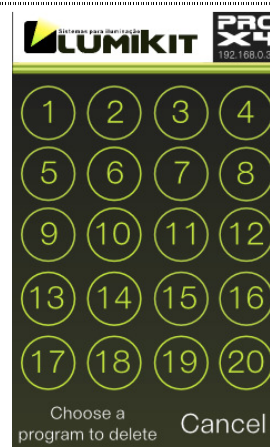
If the interface does not appear on the list, check the end of this manual for possible network problems, it is more likely that the cellphone or tablet is in a different network than the interface.
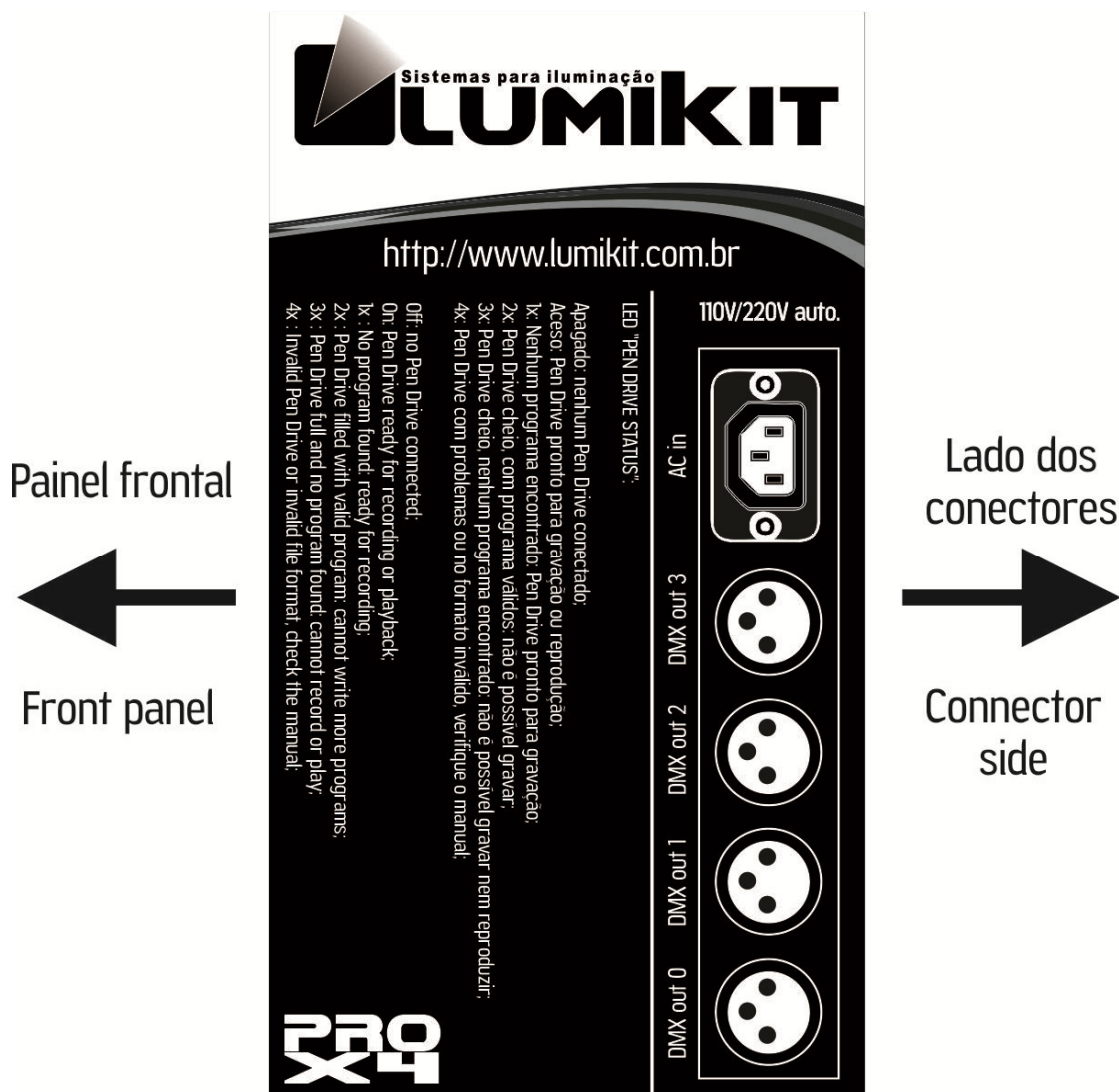
Even if the interface is not shown in the list it is possible to use the BROADCAST mode, this mode send the commands to all network. In BROADCAST mode, it is not possible to record or delete programs in the Pen Drive.

9.Identification label

The interface comes with an identification label, below is a copy in case the label is illegible or has worn off.

9.1 Lumikit PRO X4

9.2 Lumikit PRO X4 RACK

LED "USB STATUS":

Apagado: nenhum Pen Drive conectado;
Aceso: Pen Drive pronto para gravação ou reprodução;
1x: Nenhum programa encontrado: Pen Drive pronto para gravação;
2x: Pen Drive cheio, com programas válidos: não é possível gravar;
3x: Pen Drive cheio, nenhum programa encontrado: não é possível gravar nem reproduzir;
4x: Pen Drive com problemas ou no formato inválido, verifique o manual;

Off: no Pen Drive connected;
On: Pen Drive ready for recording or playback;
1x : No program found: ready for recording;
2x : Pen Drive filled with valid program: cannot write more programs;
3x : Pen Drive full and no program found: cannot record or play;
4x : Invalid Pen Drive or invalid file format, check the manual;

AC in: 110V/220V auto / Fuse: 250V/3A

http://www.lumikit.com.br

10. Interface isolation

⚠ All Lumikit interfaces have isolation with an opto-coupler in the logic circuit output.

10.1 Lumikit PRO X4

The interface has an isolation of 1500 Vrms with the network cable, according to standards, this isolation is made through the transformer within the RJ45 connector.

Each output has an opto-coupler with the logic circuit, 2500 Vrms.

The DMX outputs have a galvanic isolation of 1000 Vrms (pin 1 from connector 0 and 1 is isolated from DMX outputs 2 and 3).
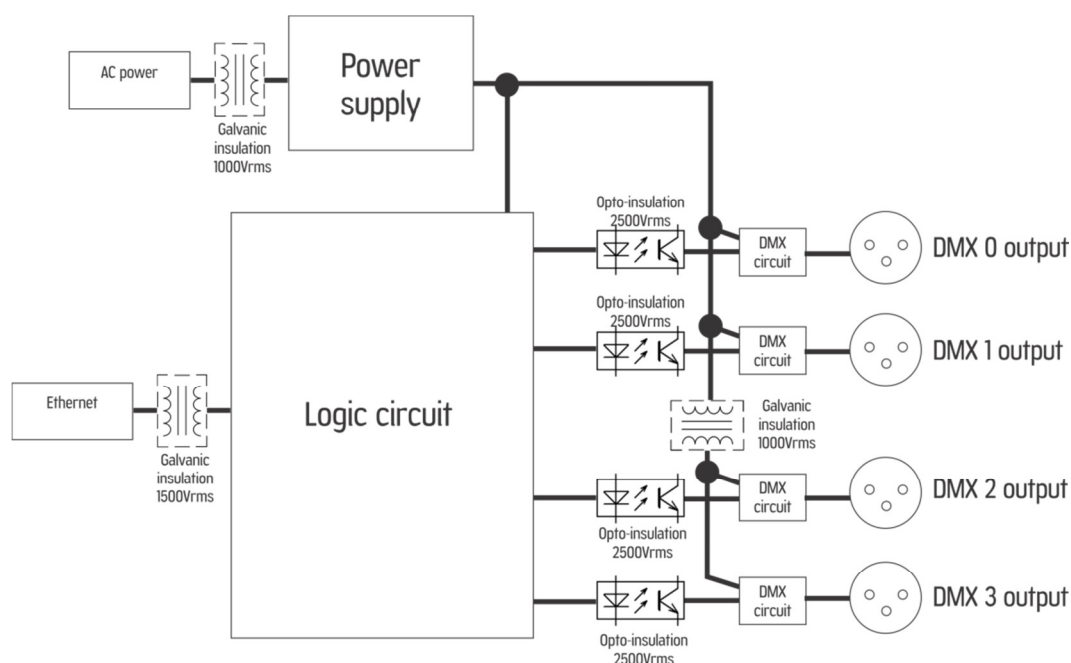
10.2 Lumikit PRO X4 RACK

The interface has an isolation of 1500 Vrms with the network cable, according to standards, this isolation is made through the transformer within the RJ45 connector. Each output has an opto-coupler with the logic circuit, 2500 Vrms.
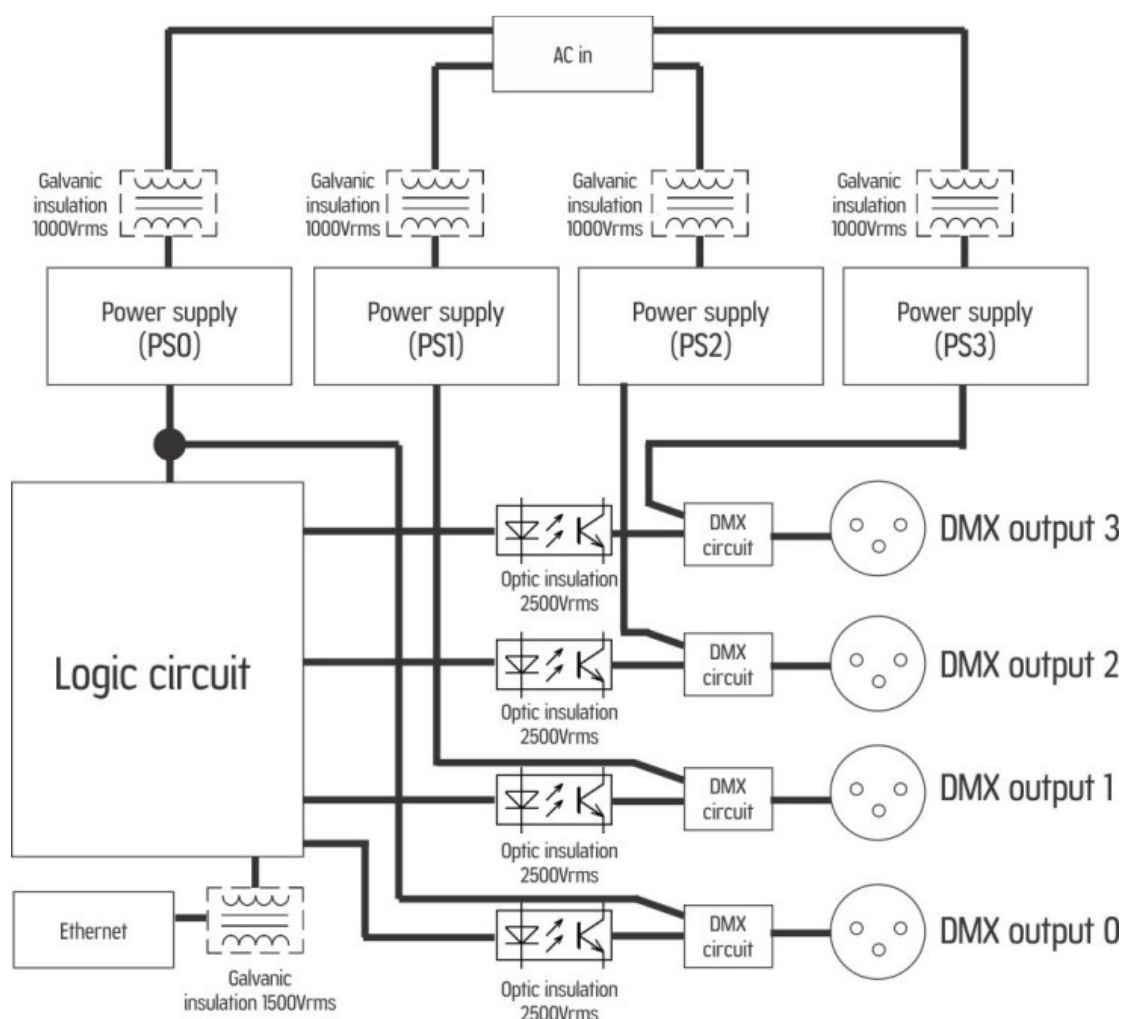
The DMX outputs have a galvanic insulation of 1000 Vrms (pin 1 from connector 0 and 1 is insulated from DMX outputs 2 and 3).

10.3 Grounding

It is recommended to use installations with grounding.

⚠ **The GROUND pin of the power supply connector is connected to the interface housing.**

Problems that might be caused by the lack of grounding:

- interface disconnects randomly;
- devices can receive random DMX signals;
- LOW SECURITY TO THE OPERATOR: RISK OF ELETRIC SHOCK!

See more about grounding on the internet: http://pt.wikipedia.org/wiki/Terra_(eletricidade)

11.Contents of the packaging

- Lumikit PRO X4 or Lumikit PRO X4 RACK interface;
- Power supply cable;
- Straight network cable;
- Instruction booklet;

12. Maintenance

There are no internal components that can be replaced by the client. Only the DMX outputs' CIs can be replaced by technician. In case there is a problem, we recommend getting in touch with Lumikit for the maintenance procedures.

⚠ The components are extremely sensitive to electrostatic energy. Use proper protection.

13. Cleaning

When cleaning the interface, remember to disconnect it from the DMX line, the computer and the electric network.

The interface can be cleaned with a cloth slightly moistened.

⚠ Wait until is completely dry to connect the cables again.

14. Warranty

The Lumikit PRO X4 and PRO X4 RACK interface has a 12 month warranty. The network cable and the integrated output circuits are not covered by the warranty, since they depend on client's installation. An overload on the electrical system (lightning, short-circuits and other issues) that may damage the interface is not covered by the warranty as well.

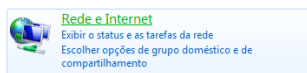Attention to further consideration on the warranty:

⚠ The USB port in this interface was projected only for Pen Drivers usage, CONNECTING ANY OTHER DEVICE IN THIS PORT THAT IS NOT A PEN DRIVE WILL DAMAGE THE INTERFACE, THIS DAMAGES WILL NOT BE COVERED BY THE WARRANTY, more information in chapter 6.

⚠ Do not attempt to change the lkprox4.cry file, do not use files from other suppliers under the risk of "bricking" the interface, THIS ISSUE WILL NOT BE COVERED BY THE WARRANTY, more information in chapter 7.
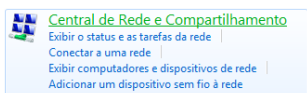
15. Changing the IP address / Windows 7 e 8

To establish the initial communication with the interface, configure your computer's network adapter to the IP 192.168.0.30, because this IP is from the same class as the default manufacture IP 192.168.0.30, below there is a step by step tutorial on how to make the IP configuration on Windows 7 e 8:
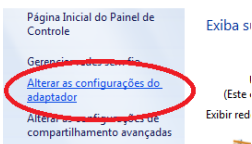
In Windows 7, click on start [icon] or in Windows 8 on the home screen, search for "Control Panel"; Click "Network and Internet":
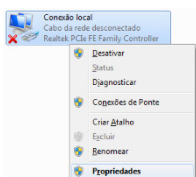
Rede e Internet
Exibir o status e as tarefas da rede
Escolher opções de grupo doméstico e de
compartilhamento

Click "Network and Sharing Center":

Central de Rede e Compartilhamento
Exibir o status e as tarefas da rede
Conectar a uma rede
Exibir computadores e dispositivos de rede
Adicionar um dispositivo sem fio à rede

On the left side, click "Change adapter settings":

Página Inicial do Painel de Controle   Exiba s...
Gerenciador de sem fio
Alterar as configurações do adaptador
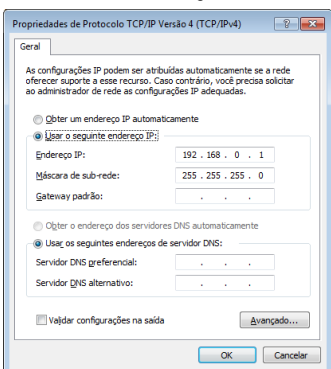Alterar as configurações de compartilhamento avançadas

Search for "Local Area Connection", click with the right mouse button and select "Properties":

Select "Internet Protocol Version 4 (TCP/IPv4)", e click in properties:
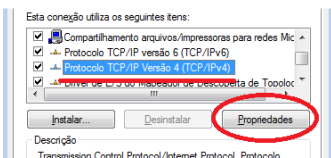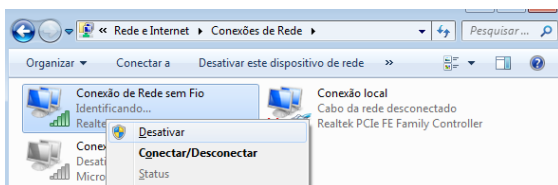
Select "Use the following IP address:"; Complete the field "IP address:" with "192.168.0.1"; Complete the field "Subnet mask:" with "255.255.255.0":

Confirm all with the "OK" button;

When in "Network Connection", deactivate all the other connections so the software does not try to connect through another door the interface is not physically connected to.

In case you need to use another network adapter with the interface, report within the software in which network card the connection should be made, by informing the adapter's IP.

16. Changing the IP address / MACOSX

To establish the initial communication with the interface, configure your computer's network adapter to the IP 192.168.0.30, because this IP is from the same class as the default manufacture IP 192.168.0.30, below there is a step by step tutorial on how to make the IP configuration on MACOSX:

Access the "System Preferences" ;

Click in "Network":

Select "Ethernet"; complete the field "IP Address:" with "192.168.0.1" and "Subnet mask:" with "255.255.255.0":
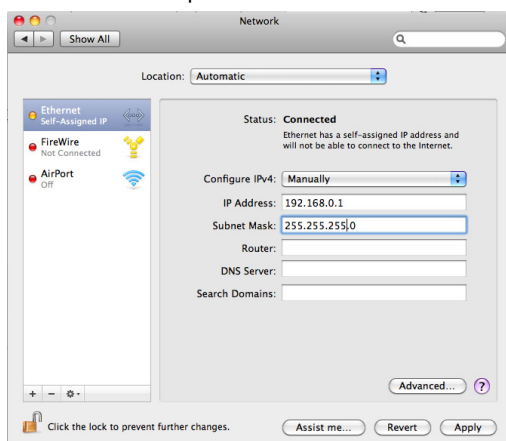
Type "ping 192.168.0.30" in the Terminal to check if the communication is working,

Turn off the Air-Port if a communication with the interface is not established.

17. Problems and solutions

Below, a list of problems and possible solutions:

Q: When I click "Auto" on the interface configuration on Lumikit software, the interface does not appear, the interface is on.
A: Check if the Lumikit PRO X4 / RACK interface is responding, by doing a PING to the interface's IP. If the interface does not respond to the ping, it will not be recognized by the software as well. This problem might be caused by the following factors:

- The network cable is incompatible, in this case, none of the LED's from the interface's network connector will be on or blinking: a straight network cable is provided, if your computer is older, you will need a crossover cable, it can be found in informatics store;

- The computer or interface is using incompatible IP addresses? In case you do not have lots of experience with computer network, use the IP 192.168.0.1 on the computer and the IP 192.168.0.30 on the interface or ask for help from someone with more experience on the subject;

- Use fixed IP, even when using a router with DHCP server, sometimes the computer cannot receive the return package from the interface, in this case use a fixed IP.

- Turn off other network adapters;

- If using WINDOWS check the firewall, initially turn the firewall off completely, if it works, create a rule for Lumikit software.

Q: The interface does not turn on.
A: In case the interface does not turn on, check the fuse, it should be a 250V / 1A fuse for Lumikit PRO X4 and 250V / 3A for Lumikit PRO X4 RACK, disconnect the interface from the electric network to avoid electric shocks while the fuse is being verified. Check if the interface is connected in wrong tension, also check the power supply.

Q: One or more DMX outputs are not working.
A: Check if the DMX-Art-net universes are configured correctly, if they are, check your DMX cables, the DMX output circuit might have burned, get in touch with support for more information about maintenance.

Q: The DMX devices receive random signal.
A: Check your DMX cables, their length, avoid piling up the cables, you will get interference, also check the DMX devices in your DMX line. Use a terminator resistor on the last DMX device, this resistor has 1/2W and 120 ohms, it must be connected between the pin 2 and 3 from the XLR – Canon connector.

Q: The interface is found by the "Auto" button, but does not receive Art-Net packages from the software.
A: The interface is probably in another network class, different from the network class from the network adapter. Always use the same network class between the interface and the computer. Use a fixed IP on the computer.

Check the FAQ in the site, there are always updated tips: http://www.lumikit.com.br/faq