PX914 Modular Advanced Dimmer

PC application manual



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Manufacturer reserves the right to make modifications in order to improve program operation.

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1 Description

The PX914-PC application is used to communicate with the Modular Advanced Dimmer cabinet. From the program level you can:

- display all channels along with their level of control,
- · configure individual channels,
- create scenes and one program,
- change the network, Art-Net and sACN settings.

The program is free and comes with the PX914 device.

2 Network settings

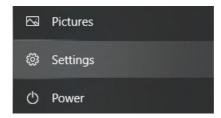
The device allows to set an IP address in any subnet. The default IP address of the device is set according to the Art-Net standard in the subnet 2.0.0.0/8.

2.1 Change of the computer network configuration

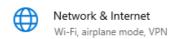
The procedure for changing the computer network configuration varies depending on the operating system. Windows® 10 system is an example here.

Change of the computer network configuration in the Windows® 10 operating system in done in the following:

- 1. Click [Start]
- 2. Select [Settings] tab

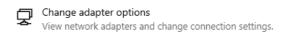


3. Go to [Network & Internet] tab



4. Select [Advanced network settings]

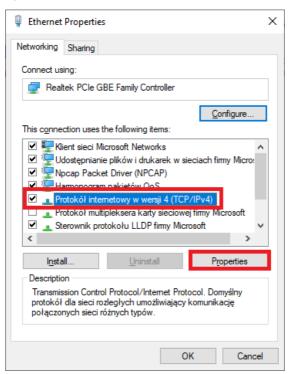
Advanced network settings



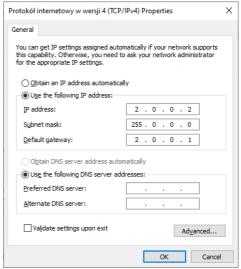
5. Right-click on the appropriate connection, for example it could be **[Ethernet]** and select **[Properties]**



In the new window that appears, select [Internet Protocol Version 4
 (TCP/IPv4)] and then press properties



7. In the next window, select [Use the following IP address:] To connect directly (computer – driver) with a controller that has a default configuration, use the sample settings:



IP address: 2.0.0.2

Subnet mask: 255.0.0.0

Default gateway: 2.0.0.1

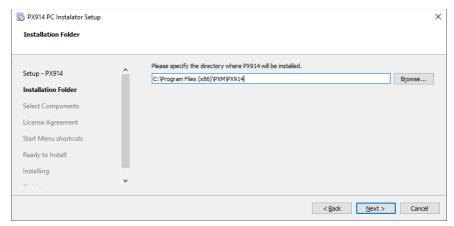
3 Installation

The software can be installed on Windows® 7 or later. The installation procedure may differ depending on your computer's operating system. Windows® 10 is shown as an example.

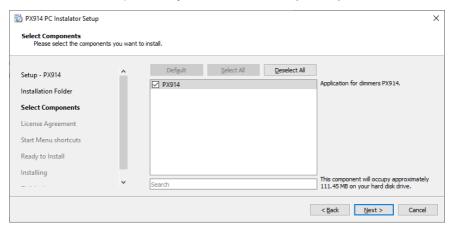
1. Open the PX914 application installation file. Click the **[Next]** button to proceed to the software installation.



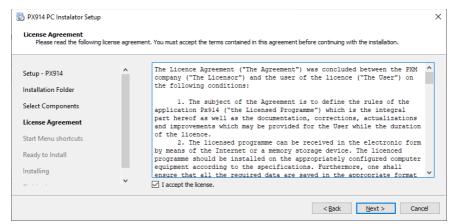
2. Select the directory where the software will be installed, and then confirm by clicking [Next].



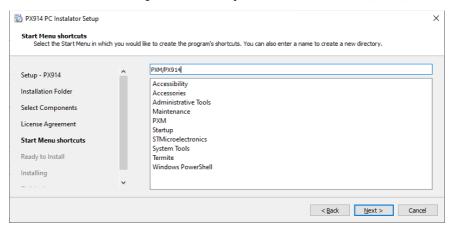
3. Select the components you want to install (PX914), then click [Next].



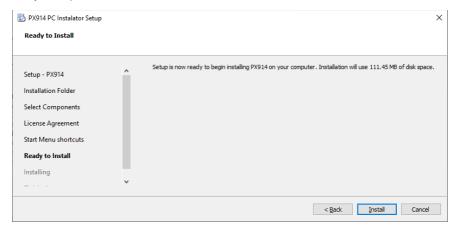
4. Read the license agreement, if you agree to the terms of the agreement, select [Accept the license.] and click [Next].



5. Select the start menu where you want to create a program shortcut. You can also change the directory name, then click the **[Next]** button.



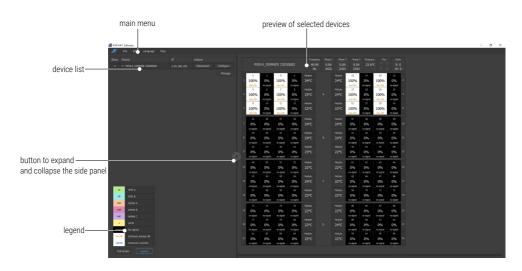
6. The installer will ask if you want to install the software, click **[Install]** if you agree.



7. When the installation completion window appears on the screen, press [Finish] to exit the installation wizard.



4 The structure and functionality of the application window



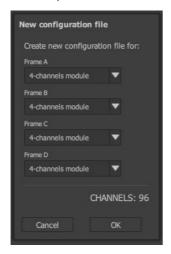
4.1 Main menu

The application menu bar consists of 4 categories:



[File]:

New – creates a new empty offline configuration file and proceeds to
edit it. In the configuration file creation window, the user can define the
number of channels in individual frames from A to D (4- or 2-channel
module).

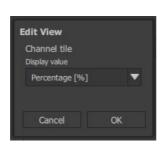


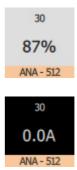
- Open opens the configuration file saved on the local disk and edits it,
- Save as option active only in the configuration window. Saves the currently open configuration to the selected file.
- Load from PX914 option active only in the configuration window when connected to the device. Forces configuration re-download.

 Upload to PX914 – option active only in the configuration window when connected to the device. Sends configuration to PX914.

[Edit]:

- Log files opens the directory where application logs are saved,
- View / Preferences a tool that allows you to define what is to be displayed on the channel tiles (values in percent or amperes),

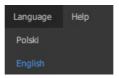




• Channel report – generating a channel settings report. Option available only in the device configuration window. Creates a *.pdf or *.html file.

[Language]:

- Polski change the language to Polish,
- English change the language to English.



NOTE! The currently selected language is highlighted in **blue**.

[Help]:

 About – opens a window with information about the application and the PXM company, here you can check available updates and open the manual for the device.



- Manual opens a PDF with the application manual,
- About Qt opens a window with information about Qt,
- Licence displays the application license text,
- Check for updates checking for an available program update.

4.2 Device list

The list of devices contains basic information about the device to which the application is connected. To display the IP address and Actions, expand this window by selecting the collapse menu button.



- Show selecting this option will display the device preview on the right side,
- Device device name,
- IP IP address.
- Actions
 - Connect / Disconnect causes displaying the connection window with the dimmer or disconnection,
 - Configure this option allows you to edit advanced PX914 settings – available only when the application is connected to a dimmer,
- Manage opens the device manager window.

In the *Device* column, before the name of the dimmer, there is an indicator that may have the following color:

- blue the device is connected to the application and there are no errors on it,
- red the device is connected and there are any errors or warnings on it.
- gray the device is not connected to the application,
- graying out the entire row the device is not available.

4.3 Legend

The legend is information about the colors of the individual signal sources displayed on the preview.

- DMX A (DA)
- DMX B (DB)
- ArtNet A (ANA)
- ArtNet B (ANB)
- ArtNet C (ANC)
- sACN (S)
- No signal
- Always ON (alw. ON) via the application / screen,
- Hardware override (override) activated by a physical switch in the module.



You can show or hide the legend by clicking the *Legend* button. In addition, the preview window can be displayed in full screen mode by clicking *Full screen* or the *F11* key on the keyboard.

4.4 Device preview

By selecting *Show*, you can display information about the selected device – it is possible to display more than one device in the preview.

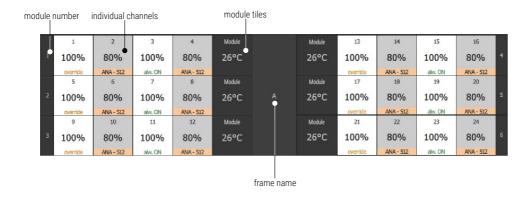
110 F. F. (110 F.	Frequency	Phase 1	Phase 2	Phase 3	Temperature	Fan	State
PX914_DIMMER	50.00 Hz	0.5A 229V	2.0A 225V	0.2A 229V	25.8°C		E: 4 W: 0

- dimmer name,
- frequency,
- current consumption and voltage on each of the three phases,
- cabinet temperature,
- information about the four main fans:

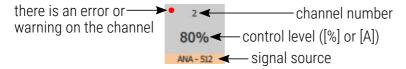
 - • Incorrect operation of the fan,
- state **E** errors / **W** warnings.

All errors and warnings occurring in PX914 are displayed as follows.





4.4.1 Channels tiles



Left-clicking on the tile of the selected channel will open a window where the user can turn on the *Always ON* mode. In the newly opened window, there will also be any errors described on the channel.



Channel errors and warnings:

- Fuse missing,
- Triac shorted.
- · Open circuit,
- Overload.

4.4.2 Module tiles

Module tiles can have the following states:

 If the slot is empty, the tile is gray and no information is displayed.



 If the slot is occupied and the module and its channels do not report any errors – the tile is displayed in a standard gray color and gives the current temperature.



• If a module or channels report a warning (but do not report an error) – the tile is displayed in orange and information about the number of warnings is given at the bottom.



• If the module or its channels report an error, the tile is highlighted in red and information about errors or errors and warnings is provided at the bottom.



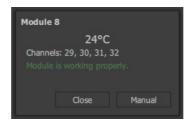
 If the module reports a temperature sensor error, the tile is highlighted in red, but the temperature is not displayed.



Errors and warnings in modules:

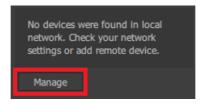
- No DMX signal,
- Module memory error,
- Temperature limit exceeded,
- Thermistor error,
- Module fan error.

Additionally, clicking on a module tile displays a pop-up window with detailed information.



5 Device manager

To connect to the device, after starting the application, select the *Manage* button on the device list.



After pressing this button, the device manager will be displayed, where you can search for devices in the local network (*Search*), add a remote device (*Add remote*) or return to the main window (*Close*).



If the device is located in the local network, select the *Search* button. <u>The application will automatically add devices found on the network to the table, which, in addition to the description, also displays such data as:</u>

- serial number,
- IP address,
- mask,
- gate,
- MAC address,
- FW firmware version,
- BL bootloader version,
- Actions moving devices up

 and down

 in the list and removing them from the table

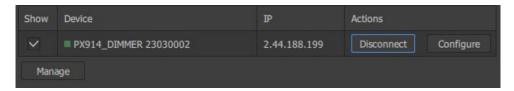
 ...



Then return to the main window by clicking the *Close* button. The available devices will be displayed in the device list. By clicking on the selected *Connect* device, a login window will open, where you must select a user and enter a password. Optionally, you can select to remember the password in the application and automatically log in.



After connecting to the device, to view channel information, select ✓ next to the selected device.



You can disconnect from the device by clicking the *Disconnect* button.

5.1 Remote device

If the device is outside the local network and the application does not search for it, it is possible to add a remote device by selecting the *Add remote* button.



A window will appear in which you must enter the *IP* address and *Port 1*. By default, *Port 1* is set to 50002.



If the remote connection is successful, the device is added to the table. In the table, a device added as a remote device is marked with an icon mext to its IP address.

Editing the remote connection is possible by clicking . The user can change the IP address and Ports 1 and 2.



The connection is made in the same way as described in point 5. Device manager.

5.2 Users

The device has three users with different access rights. User passwords can be edited.

	USER	TECHNICIAN	ADMIN
default password	no password	1234	serial number
password requirements	0 - 16 characters	4 - 16 characters	4 - 16 characters
displaying the device in the preview	V	V	V
change "Always ON" for a channel	V	V	V
channel configuration	X	V	V
scene configuration	X	V	V
configuration settings	X	X	V

6 Configure

The user can proceed to device configuration by clicking the *Configure* button next to the device they want to edit.



NOTE! This option is only available when the application is connected to the dimmer with a Technician or Administrator account

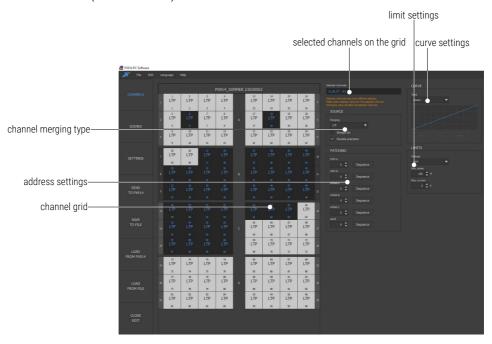
After clicking the *Configuration* button, a window will appear in the application with the following options:

- CHANNELS editing individual channels (6.1. Channels),
- SCENES scenes editing (6.2. Scenes),
- **SETTINGS** changing PX914 dimmer settings (6.3. Settings),
- SEND TO PX914 sends configuration to the device,
- SAVE TO FILE saves the file locally on the computer in the specified location,
- LOAD FROM PX914 downloading and loading configuration from the device,
- LOAD FROM FILE loads the configuration from a file (when loading the file, an error may occur when the configuration is not compatible with the device),
- CLOSE EDIT return to the main window.

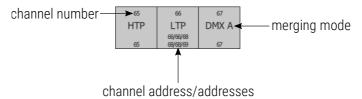
6.1 Channels

In this tab, the user can change the settings:

- merging (6.1.1. Merging (Source)),
- channels address (6.1.2. Patching),
- curves (6.1.3. Curves),
- preheat (6.1.4. Limits),
- limits (6.1.4. Limits).



Channel tile description:



In the above case, channel 66 is addressed as follows:

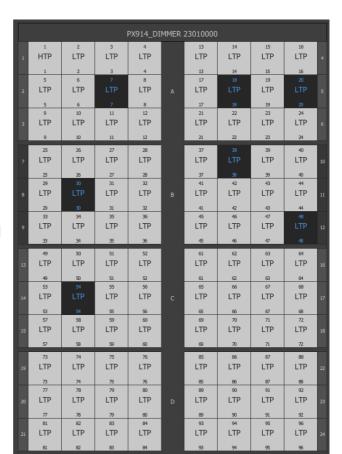
- address 66 DMX A / B,
- address 68 ArtNet A / B / C,
- address 69 sACN.

NOTE! If the channel address is common to all input signals, then only one address is displayed.

Channels can be selected on the grid in the following way (selected channels are marked in a dark color):

Г	PX914_DIMMER 23010000									
	1	2	3	4		13	14	15	16	
	HTP	LTP	LTP	LTP		LTP	LTP	LTP	LTP	
1	IIIIF	LIF	LIF	LIF		LIF	LIF	LIF	LIF	4
	1	2	3	4		13	14	15	16	
	5	6		8		17	18	19	20	
2	LTP	LTP	LTP	LTP	Α	LTP	LTP	LTP	LTP	5
	5	6		8		17	18	19	20	
	9	10	11	12		21	22	23	24	
3	LTP	LTP	LTP	LTP		LTP	LTP	LTP	LTP	6
	9	10	11	12		21	22	23	24	
	2F	26	27	20			20		40	
	25 LTP	LTP	LTP	LTP		37 LTP	38 LTP	39 LTP	40 LTP	
7	LIP	LIP	LIP	LIP		LIP	LIP	LIP	LIP	10
	25	26	27	28		37	38	39	40	
	29	30	31	32		41	42	43	44	
8	LTP	LTP	LTP	LTP	В	LTP	LTP	LTP	LTP	11
	29	30	31	32		41	42	43	44	
	33	34	35	36		45	46	47	48	
9	LTP	LTP	LTP	LTP		LTP	LTP	LTP	LTP	12
"										I
	22	24	25	26		AE	AG.	47	40	
Ш	33	34	35	36		45	46	47	48	L
	49	50	51	5 2		61	62	63	64	H
13										16
13	49 LTP	50 LTP	51 LTP	52 LTP		61 LTP	62 LTP	63 LTP	64 LTP	16
13	49	50	51	5 2		61	62	63	64	16
	49 LTP 49	50 LTP 50	51 LTP 51	LTP 52	c	61 LTP 61	62 LTP	G LTP	64 LTP 64	
13	49 LTP 49 53 LTP	50 LTP 50 54 LTP	51 LTP 51 55 LTP	LTP 52 52 55 LTP	C	61 LTP 61 65 LTP	62 LTP 62 66 LTP	63 LTP 63 67 LTP	64 LTP 64 68 LTP	16
	49 LTP 49 53 LTP	50 LTP 50 54 LTP	51 LTP 51 55 LTP	52 LTP 55 LTP 56	С	61 LTP 61 65 LTP	62 LTP 62 66 LTP	63 LTP 63 67 LTP	64 LTP 64 68 LTP	
14	49 LTP 49 53 LTP 53	50 LTP 50 54 LTP 54 58	51 LTP 51 55 LTP 55	52 LTP 56 LTP 56 60	С	61 LTP 61 65 LTP 65	62 LTP 62 66 LTP 66 70	63 LTP 63 67 LTP 67	64 LTP 64 68 LTP 68 72	17
	49 LTP 49 53 LTP	50 LTP 50 54 LTP	51 LTP 51 55 LTP	52 LTP 55 LTP 56	С	61 LTP 61 65 LTP	62 LTP 62 66 LTP	63 LTP 63 67 LTP	64 LTP 64 68 LTP	
14	49 LTP 49 53 LTP 53	50 LTP 50 54 LTP 54 58	51 LTP 51 55 LTP 55	52 LTP 56 LTP 56 60	С	61 LTP 61 65 LTP 65	62 LTP 62 66 LTP 66 70	63 LTP 63 67 LTP 67	64 LTP 64 68 LTP 68 72	17
14	49 LTP 49 53 LTP 53 57 LTP	50 LTP 50 54 LTP 54 58 LTP	51 LTP 51 55 LTP 55 LTP	52 LTP 56 LTP 56 00 LTP	С	61 LTP 61 65 LTP 65 69 LTP	62 LTP 62 66 LTP 66 70 LTP	63 LTP 63 67 LTP 67 71 LTP	64 LTP 64 68 LTP 68 72 LTP	17
14	49 LTP 49 53 LTP 53 57 LTP	50 LTP 50 54 LTP 54 58 LTP 58	51 LTP 51 55 LTP 55 LTP 59 LTP	52 LTP 56 LTP 56 60 LTP 60	С	61 LTP 61 65 LTP 65 69 LTP	62 LTP 62 66 LTP 66 70 LTP	63 LTP 63 67 LTP 67 71 LTP	64 LTP 64 68 LTP 68 72 LTP 72	17
14	49 LTP 49 53 LTP 57 LTP 57	50 LTP 50 54 LTP 54 58 LTP 58 LTP	51 LTP 51 55 LTP 55 99 LTP 99	52 LTP 55 LTP 56 60 LTP 60	С	61 LTP 61 65 LTP 65 69 LTP 69	62 LTP 62 66 LTP 66 70 LTP 70	63 LTP 63 67 LTP 67 71 LTP 71	64 LTP 64 68 LTP 68 72 LTP 72 LTP	17
14	49 LTP 49 53 LTP 53 57 LTP 57	50 LTP 50 54 LTP 54 58 LTP 58	51 LTP 51 55 LTP 55 59 LTP 59	52 LTP 52 56 LTP 56 60 LTP 60	С	61 LTP 61 65 LTP 65 69 LTP 69	62 LTP 62 66 LTP 66 70 LTP 70	63 LTP 63 67 LTP 67 71 LTP 71	64 LTP 64 68 LTP 68 72 LTP 72	17
14	49 LTP 49 53 LTP 57 LTP 57 27 LTP	50 LTP 50 54 LTP 58 LTP 58 74 LTP	51 LTP 55 LTP 59 LTP 99	52 LTP 56 LTP 56 0 LTP 60 T6 LTP	С	61 LTP 61 65 LTP 65 69 LTP 69	62 LTP 62 66 LTP 66 70 LTP 70 LTP 86 LTP	63 LTP 63 67 LTP 67 71 LTP 71 87 LTP	64 LTP 64 68 LTP 68 72 LTP 72 LTP 88 LTP	17
14	49 LTP 49 53 LTP 57 LTP 57 27 27 LTP 73 LTP	50 LTP 50 54 LTP 58 LTP 58 LTP 58 74 LTP 74 78 LTP	51 LTP 51 55 LTP 59 LTP 59 LTP 75 LTP	\$2 LTP \$5 LTP \$6 60 LTP 60 ***********************************		61 LTP 61 65 LTP 65 69 LTP 69 LTP 85 LTP	62 LTP 62 66 LTP 66 70 LTP 70 86 LTP	63 LTP 63 67 LTP 67 71 LTP 71 LTP 87 LTP 87	64 LTP 64 68 LTP 68 72 LTP 72 88 LTP 88	17
14	49 LTP 49 53 LTP 53 57 LTP 57 LTP 73 LTP	50 LTP 50 54 LTP 58 LTP 58 LTP 58 74 LTP 74 LTP	51 LTP 51 55 LTP 55 99 LTP 99 75 LTP 79 LTP	\$2 LTP \$5 LTP \$6 60 LTP 60 76 LTP 76 LTP		61 LTP 61 65 LTP 65 69 LTP 69 LTP 85 LTP 85	62 LTP 66 LTP 66 70 LTP 70 LTP 86 LTP 86	63 LTP 63 67 LTP 67 71 LTP 71 S7 LTP 87 LTP	64 LTP 64 68 LTP 68 72 LTP 72 LTP 72 88 LTP 88 92 LTP	17
14	49 LTP 49 53 LTP 57 LTP 57 73 LTP 77 LTP	50 LTP 50 54 LTP 58 LTP 58 LTP 58 LTP 74 LTP 78 LTP	51 LTP 51 55 LTP 55 99 LTP 99 75 LTP 79 LTP 79	52 LTP 55 LTP 56 60 LTP 60 76 LTP 78 80 LTP		61 LTP 61 65 LTP 65 69 LTP 99 85 LTP 85 89 LTP	62 LTP 62 66 LTP 66 70 LTP 70 85 LTP 86 90 LTP	63 LTP 63 67 LTP 67 71 LTP 72 87 LTP 87 LTP 91	64 LTP 64 68 LTP 68 72 LTP 72 88 LTP 88 92 LTP	17

singly

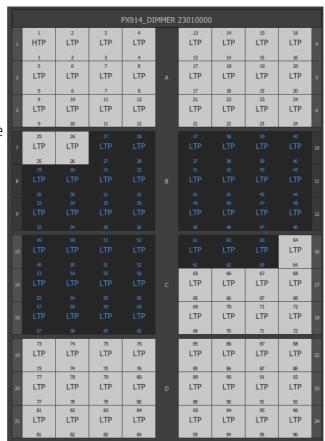


group with Ctrl pressed

group with *Shift* pressed

– all channels between
the currently selected one
and the one pressed with
the *Shift* button will be
selected

In the example, channel no. 27 was selected first, and then channel no. 60 with the *Shift* button pressed.



NOTE! The key combination *Ctrl + A* will select all channels.

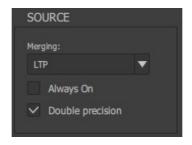
Selected channels are also displayed on the right side of the channel grid.



6.1.1 Merging (Source)

Merging – a method of combining control signals. <u>Modes available:</u>

- HTP highest value,
- LTP last value,
- DMX A value from the DMX A input,
- DMX B value from the DMX B input,
- ArtNet A value from the Art-Net A input,
- ArtNet B value from the Art-Net B input,
- ArtNet C value from the Art-Net C input,
- **sACN** value from the sACN input,



Priority:

- DMX A > DMX B value from the DMX A input, if there is a signal on it, if there is not - DMX B input,
- DMX B > DMX A value from the DMX B input, if there is a signal on it, if there is not - DMX A input,
- DMX A > ArtNet A value from the DMX A input, if there is a signal
 on it, if there is not Art-Net A input,
- ArtNet A > DMX A value from the Art-Net A input, if there is a signal on it, if there is not - DMX A input,



NOTE! When selecting signal combining in the *Priority* mode, the user can additionally select the *Smooth* option, thanks to which the transitions between inputs will be smoothed.

Additionally, the user can select the following options:

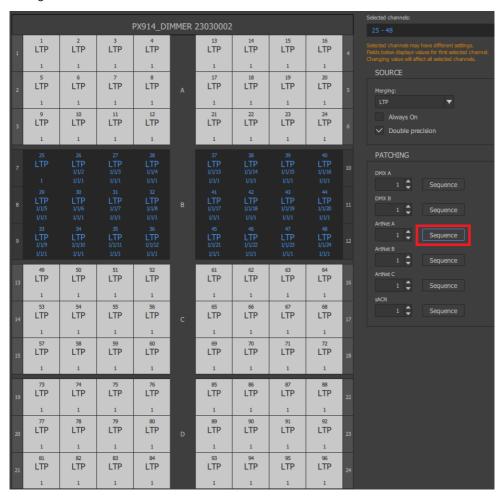
- Always On hardware activation of the channel at 100%,
- Double precision the channel is controlled with double precision (using two DMX channels).

NOTE! The changes introduced apply only to the marked (selected) channels on the grid.

6.1.2 Patching

Defining start addresses for selected channels. In addition to entering the address, the user can select the *Sequence* button, which will set subsequent addresses on subsequent selected channels.

In the example, address 1 was set on all channels. Then channels 25 - 48 were selected and the *Sequence* button at the *ArtNet A* address was pressed. The grid looks like this.

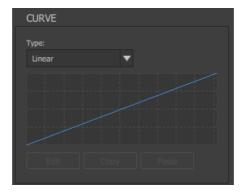


NOTE! The changes introduced apply only to the marked (selected) channels on the grid.

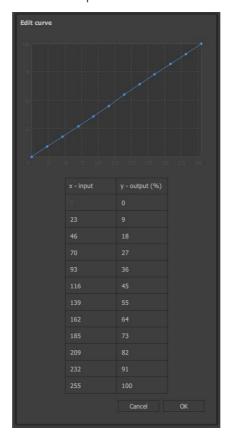
6.1.3 Curves

The device has 10 curves available – <u>5 factory and 5 user-defined:</u>

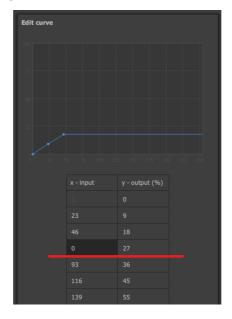
- Linear,
- Logarithmic,
- Exponential,
- On Off,
- Reversed,
- User1 User5.



Selecting the *User n* curve displays a window with 12 points for which you can enter values. The curve will be drawn between the designated points. The curve can be created from 2 to 12 points.



Only points for which the values on the x-axis are given cumulatively are taken into account, e.g.:



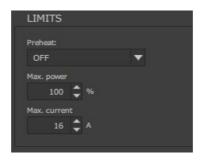
6.1.4 Limits

Here the user can set the preheat:

- OFF,
- Level 1 Level 9.

The user can also limit the output power using:

- Max. power power limitation percentage in the range of 0 100%,
- Max. current output current limitation in the range 0 16A.



NOTE! The changes introduced apply only to the marked (selected) channels on the grid.

6.2 Scenes

It is possible to program 8 scenes that can be used as a static scene in the *No Signal* mode (6.3.5. No signal). Selecting channels is described in point (6.1. Channels).

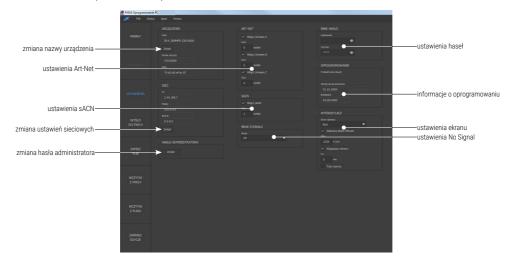


NOTE! The changes introduced apply only to the marked (selected) channels on the grid. The time settings apply to the entire scene.

6.3 Settings

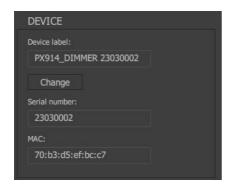
In this tab, the user can change the settings:

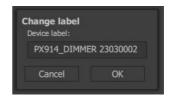
- device description (6.3.1. Device),
- network settings (6.3.2. Network),
- administrator password (6.3.3. Admin password),
- Art-Net and sACN inputs (6.3.4. Art-Net / sACN),
- reaction to the loss of the control signal (6.3.5. No signal),
- other users' passwords (6.3.6. Other password),
- check the software and bootloader version (6.3.7. Firmware),
- LCD (6.3.8. LCD).



6.3.1 Device

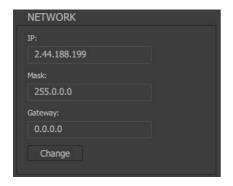
In this tab, the user can edit the device name and read the serial number and MAC address. By selecting the *Change* button, a dialog box will appear allowing you to change the device name.





6.3.2 Network

By selecting the *Change* button, a dialog box will appear where the user can change the IP address, Mask and Gateway.





6.3.3 Admin password

By selecting the *Change* button, a dialog box will appear where the user can change the administrator password. Enter the current password, then the new password twice and select the *OK* button.



6.3.4 Art-Net / sACN

In the Art-Net and sACN settings you can enable and disable individual inputs and change their ports.



6.3.5 No signal

Behavior in the event of signal loss, available options are:

- Off all channels will be turned off,
- Slow Turn Off all channels will slowly fade out,
- Hold the last value of the control signal before its disappearance will remain on the channels,
- Scene the selected scene will be displayed.



6.3.6 Other password

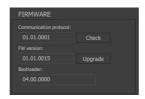
Here it is possible to set a password for the *User* and the *Technician*.



NOTE! The *Technician* password cannot be shorter than 4 characters.

6.3.7 Firmware

It is possible to read the PX914 software version and update the device – the update can be downloaded from the manufacturer's website.



6.3.8 LCD

The screen saver and PIN lock (four digits) settings are available in the display menu. You can specify whether the screen saver should be activated, if so, after how long of inactivity, and which screens should be visible after "waking up". Additionally, you can turn off the LEDs in the modules by activating the *Dark Mode* option.



Available start screens:

- Info,
- Login,
- Menu,
- Programming,
- Settings,
- Start.