

PX143

Settings Controller

INSTRUCTION
MANUAL



CONTENTS

1. General description.....	1
2. Safety conditions.....	1
3. Controller description.....	1
3.1. Front panel.....	1
3.2. Rear panel.....	1
4. Turning the device on.....	2
5. Lamp's DMX address setting.....	2
6. Colours setting modes.....	3
6.1. <i>RGBW</i> mode.....	3
6.2. <i>Mono</i> mode.....	3
6.3. <i>Bri-Col</i> mode.....	3
6.4. <i>RGB</i> mode.....	4
7. <i>Settings</i> menu.....	4
7.1. <i>No DMX</i> settings.....	4
7.1.1. <i>No DMX On and Off settings</i>	4
7.1.2. <i>No DMX Program settings</i>	5
7.1.3. <i>No DMX Dimm settings</i>	5
7.1.4. <i>No DMX Hold settings</i>	5
7.1.5. <i>No DMX Scene settings</i>	6
7.2. <i>Master</i> mode.....	6
7.3. Special features for the <i>Mono</i> mode.....	6
7.3.1. <i>Preheat</i> feature.....	6
7.3.2. <i>Curves</i> feature.....	7
7.3.2.1. <i>Linear</i>	7
7.3.2.2. <i>Switchable On-Off</i>	7
7.3.2.3. <i>Inverted linear</i>	8
7.3.2.4. <i>Logarithmic</i>	8
7.3.2.5. <i>Exponential</i>	8
8. Scenes and programs defining.....	9
8.1. Scenes defining.....	9
8.2. Programs defining.....	9
8.2.1. <i>Time</i> defining.....	10
8.2.2. <i>Xfade</i> defining.....	10
8.2.3. <i>Last step</i> defining.....	10
8.3. Colours and brightness defining.....	10

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

PXM s.c.	tel.: (+48 12) 626 46 92
ul. Przemysłowa 12	fax: (+48 12) 626 46 94
30-701 Kraków	E-mail: info@pxm.pl
POLAND	Internet: www.pxm.pl

9. Controller operation mode.....	
9.1. Reading mode.....	11
9.2. Writing mode.....	12
9.3. Verification mode.....	12
9.4. Saving mode.....	12
10. Dimensions.....	12
11. Technical specification.....	13
12. Declaration of conformity.....	13
	14

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

<i>PXM s.c.</i>	<i>tel.: (+48 12) 626 46 92</i>
<i>ul. Przemysłowa 12</i>	<i>fax: (+48 12) 626 46 94</i>
<i>30-701 Kraków</i>	<i>E-mail: info@pxm.pl</i>
<i>POLAND</i>	<i>Internet: www.pxm.pl</i>

1. GENERAL DESCRIPTION

PX143 controller serves for setting the lamps produced by Proxima. It can configure both 3- and 4-channel LEDs and the incandescent lamps. The device allows to set the lamp's DMX address, choose the control mode (monochrome, brightness / colour, 3-byte RGB and 4-byte RGBW), define the lamp's reaction to DMX signal interruption, set the selected lamp in a *Master* mode (when the DMX signal disappears, one lamp can become a DMX signal transmitter), define a scene and a 16-step (maximum) program. Moreover, it has two additional features for the incandescent lamps only - by dint of the *Preheat* and *Curves* options, you can warm up the bulbs filaments and choose the dimming characteristics.

The PX143 controller can operate in four modes: *Read* - reads the settings from a lamp, *Write* - sends the selected configuration and saves it in a lamp's memory, *Verify* - compares the lamp's settings with the controllers' and *Save* - saves the settings in controller's internal memory.

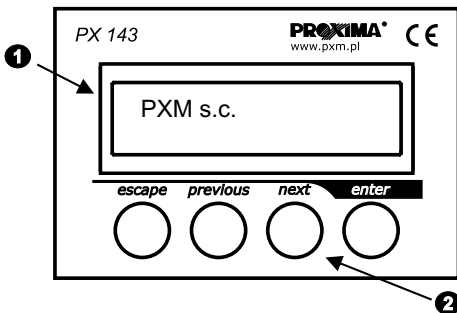
2. SAFETY CONDITIONS

During its installation and use of the PX143 Settings Controller the following rules must be strictly observed:

1. The device connection should be performed according to the description in the manual.
2. All the conductors should be protected against mechanical and thermal damage.
3. In the event of damaging any conductor, it should be replaced with a conductor of the same technical data and attestations.
4. The device is for indoor use only.
5. PX143 should be strictly protected against contact with water and other liquids.
6. All sudden shocks, particularly dropping, should be avoided.
7. The device cannot be turned on in places with humidity exceeding 90%.
8. The device cannot be used in places with temperature lower than 2°C or higher than 40°C.
9. Clean with damp duster only.

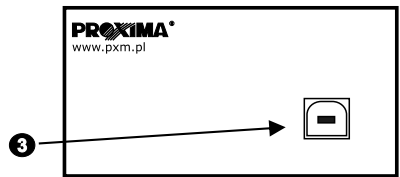
3. CONTROLLER DESCRIPTION

3.1. FRONT PANEL



- ❶ Liquid crystal display
- ❷ Control keys

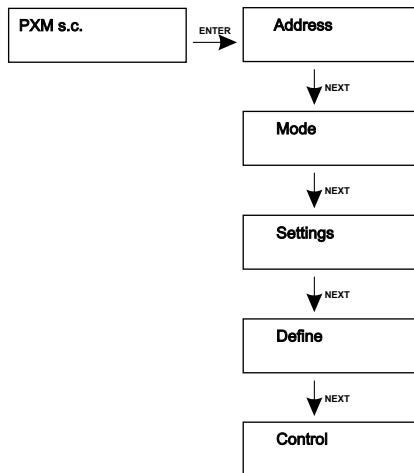
3.2. REAR PANEL



- ❸ Port for lamp connection

4. TURNING THE DEVICE ON

When the controller is activated its name and the software version appear on the display. By pressing any key you can enter the controller's main menu. It is divided into five sections: *Address*, *Mode*, *Settings*, *Define* and *Control*. With the *Address* feature you can set the lamp's DMX address. The *Mode* feature allows to set the required colour mode. You may choose from four options: 1) *RGBW*, 2) *Mono*, 3) *Bri-Col*, 4) *RGB*. In the *Settings* menu you can set such parameters, as the lamp's reaction to DMX signal interruption (*No DMX*) and the *Master* mode. Moreover, if the controller operates in the monochrome colour mode, you can adjust such parameters, as *Preheat* and *Curves*. The *Define* feature allows to define a scene (*Scene*) and a program (*Prgm*). For the program you can also adjust the duration time for each step (*Time* option) and fader (*Xfade*). The last menu section is *Control*, where you can set the controller in a parameters' reading, writing, verification and saving mode.



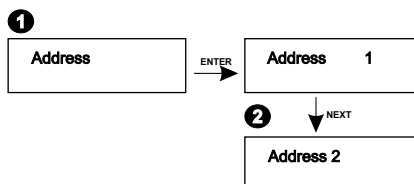
The PX143 controller main menu scheme

5. LAMP'S DMX ADDRESS SETTING

Each lamp connected to the PX143 controller can be ascribed a different DMX address. Depending on the colour mode, these numbers differ slightly. For the *RGBW* mode it is a range from 1 to 508, for the *Mono* mode from 1 to 511, for *Bri-Col* mode from 1 to 510 and for the *RGB* mode from 1 to 509.

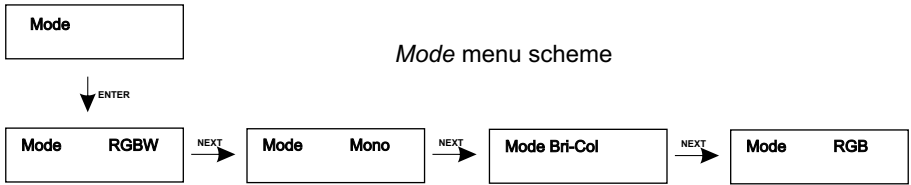
To set the DMX address:

1. Enter the *Address* submenu.
2. With "next" or "previous" keys set the required value. Press "enter" to confirm your settings.



6. COLOURS SETTING MODES

PX143 controller allows to configure the lamp in 4 modes: *RGBW*, *Mono*, *Bri-Col* and *RGB*.

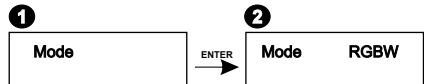


6.1. *RGBW* MODE

The *RGBW* mode allows to configure the lamp in a 4-channel mode: R (red), G (green), B (blue) and W (white). In the *RGBW* mode when the lamp is controlled at 100%, the R, G and B LEDs go out and the W (white colour) LED lights up.

To set the *RGBW* mode:

1. Enter the *Mode* submenu.
2. With "next" or "previous" key select the *Mode RGBW* option. Confirm your settings by pressing the "enter" key.

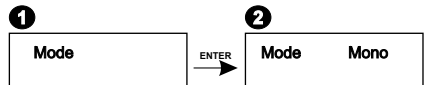


6.2. *Mono* MODE

The *Mono* mode is for incandescent lamps configuring. In the *Mono* mode you can adjust the brightness only.

To set the *Mono* mode:

1. Enter the *Mode* submenu.
2. With "next" or "previous" key select the *Mode Mono* option. Confirm your settings by pressing the "enter" key.

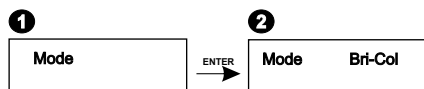


6.3. *Bri-Col* MODE

In the *Bri-Col* (brightness / colour) mode the lamp operates in a 2-channel mode. It allows to set one of the factory-defined colours and adjust the brightness.

To set the *Bri-Col* (brightness / colour) mode:

1. Enter the *Mode* submenu.
2. With "next" or "previous" key select the *Mode Bri-Col* option. Confirm your settings by pressing the "enter" key.

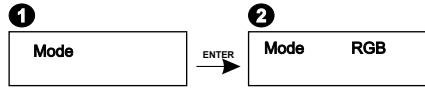


6.4. RGB MODE

The *RGB* mode allows to configure the lamp to operate in a 3-channel mode: R (red), G (green) and B (blue).

To set the *RGB* mode:

1. Enter the *Mode* submenu.
2. With the "next" or "previous" key set the *Mode RGB* option. Confirm your settings by pressing the "enter" key.

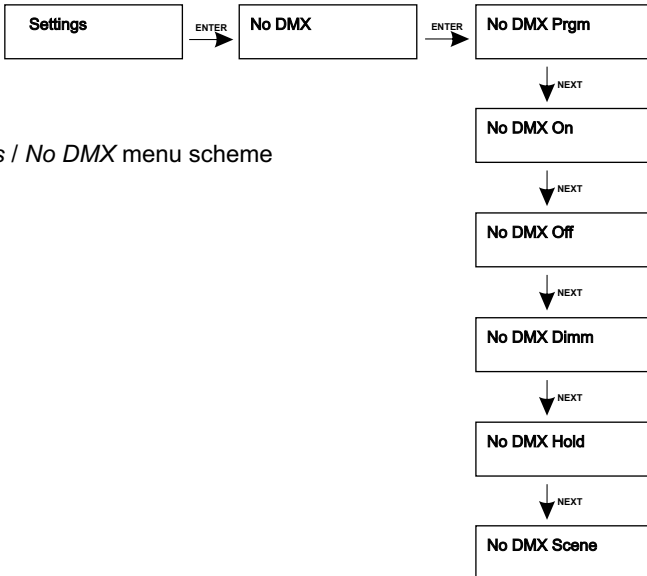


7. Settings MENU

With the *Settings* feature you can define such parameters, as *No DMX* and *Master* mode. What is more, if the lamp operates in *Mono* mode, you can set the *Preheat* and *Curves* features as well.

7.1. No DMX SETTINGS

With this feature you can define the lamps' reaction to DMX signal absence or interruption.



The *Settings / No DMX* menu scheme

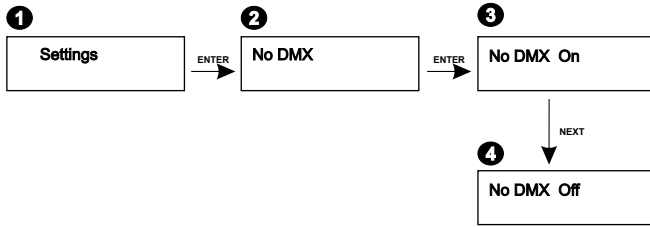
7.1.1. No DMX On and Off SETTINGS

The *No DMX On* option makes the lamp shine with full brightness in case of the DMX signal interruption. On the contrary, The *No DMX Off* option turns the lamp off.

To set the *No DMX On* or *Off* feature:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *No DMX* option. Press the "enter" key.
3. With "next" or "previous" key select the *No DMX On* or *No DMX Off* option. Confirm your settings by pressing the "enter" key.

- To activate the *No DMX Off* feature, with "next" or "previous" key select the *No DMX Off* option. Confirm your settings by pressing the "enter" key.

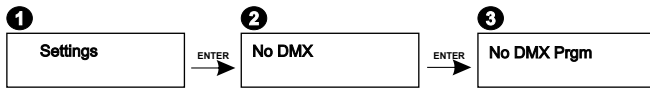


7.1.2. *No DMX Program SETTINGS*

By dint of this feature, when the DMX signal is absent, you can configure the lamp to render the previously defined program.

To set the program launched automatically at DMX signal interruption:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *No DMX option*. Press the "enter" key.
3. With "next" or "previous" key select the *No DMX Prgm* option. Confirm your settings by pressing the "enter" key.



7.1.3. *No DMX Dimm SETTINGS*

With the *No DMX Dimm* settings you can configure the lamp to dimm, when the DMX signal is absent.

To activate the *No DMX Dimm* settings:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *No DMX* option. Press the "enter" key.
3. With "next" or "previous" key select the *No DMX Dimm* option. Confirm your settings by pressing the "enter" key.

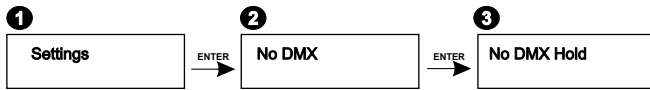


7.1.4. *No DMX Hold SETTINGS*

The *No DMX Hold* settings allow to maintain the last LEDs brightness, before the DMX signal has been interrupted.

To activate the *No DMX Hold* settings:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *No DMX* option. Press the "enter" key.
3. With "next" or "previous" key select the *No DMX Hold* option. Confirm your settings by pressing the "enter" key.



7.1.5. No DMX Scene SETTINGS

The *No DMX Scene* settings allow to program the lamp to launch the scene as a reaction to DMX signal interruption.

To switch the *No DMX Scene* settings on:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *No DMX* option. Press the "enter" key.
3. With "next" or "previous" key select the *No DMX Scene* parameter. Confirm your settings by pressing the "enter" key.



7.2. Master MODE

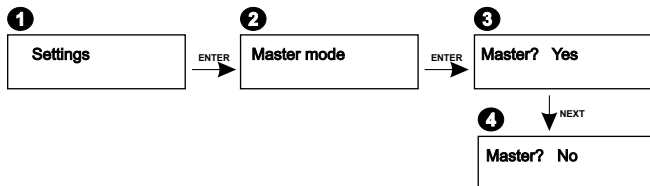
The *Master* feature allows to configure a lamp in such way, as when the DMX signal is not present the lamp becomes a transmitter of a DMX signal, instead of being the receiver. All the lamps configured as *Slave* execute all these functions that the *Master* lamp does. You must remember to set one lamp only as a *Master*.

To activate the *Master* option:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Master mode* option. Press the "enter" key.
3. With "next" or "previous" key select the *Master? Yes option*. Confirm your settings by pressing the "enter" key.

To turn the *Master* mode off:

4. With "next" or "previous" key select the *Master? No option*. Confirm your settings by pressing the "enter" key.



7.3. SPECIAL FEATURES FOR THE Mono MODE

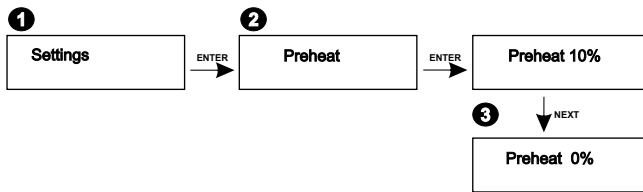
In the *Mono* colour operation mode the additional *Preheat* and *Curves* features are available.

7.3.1. Preheat FEATURE

Preheat allows to preliminary warm up the bulbs filaments. By dint of this feature the bulbs vivacity lengthens significantly.

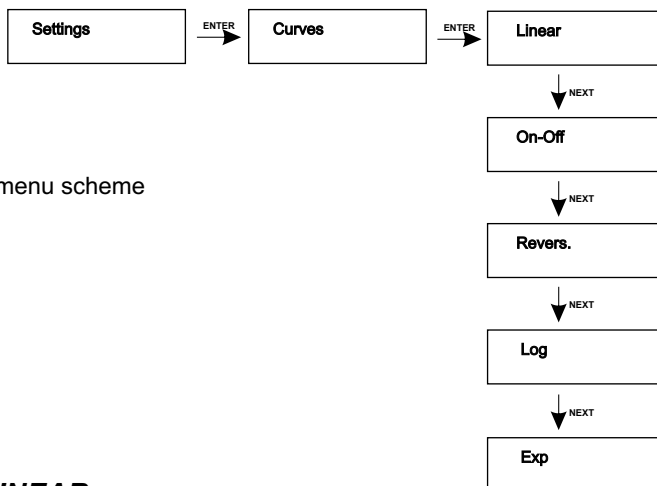
To set the Preheat option:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Preheat* option. Press the "enter" key.
3. With "next" or "previous" key set the required value (in a 0 - 10% range). Confirm your settings by pressing the "enter" key.



7.3.2. Curves FEATURE

Curves defines the dimming characteristics.



Curves submenu scheme

7.3.2.1. LINEAR

When the dimming characteristics is set as linear, the brightening is monotonous and constant.

To set the *Linear* option:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Curves* option. Press "enter" key.
3. With "next" or "previous" key select the *Linear* characteristics. Confirm your settings by pressing the "enter" key.

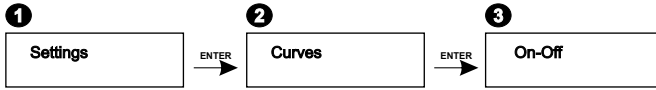


7.3.2.2. SWITCHABLE On-Off

The switchable (on / off) characteristics when controlled in a range 1 to 50 turns the lamp off, when controlled in a range 51 to 100 lights the lamp up with full brightness.

To set the *On-Off* option:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Curves* option. Press "enter" key.
3. With "next" or "previous" key choose the *On-Off* characteristics. Press "enter" again.



7.3.2.3. **INVERTED LINEAR**

The inverted linear characteristics works similarly to the linear one, the only difference is when the lamp is controlled at 0 it lights with full brightness, when controlled at 100 the lamp is turned off.

To set the *Inverted linear* option:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Curves* option. Press "enter" key.
3. With "next" or "previous" key select the *Revers* option. Confirm your settings by pressing the "enter" key.



7.3.2.4. **LOGARITHMIC**

The logarithmic characteristics causes the slow increment of brightness at the beginning, its dynamics rises with the lamp's control level.

To set the *Logarithmic* option:

1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Curves* option. Press "enter" key.
3. With "next" or "previous" key select the *Log* characteristics. Confirm your settings by pressing the "enter" key.



7.3.2.5. **EXPONENTIAL**

The exponential characteristics is inverse to the logarithmic - a rapid brightness increment at the beginning diminishes with the increasing lamp control value.

To set the *Exponential* option:

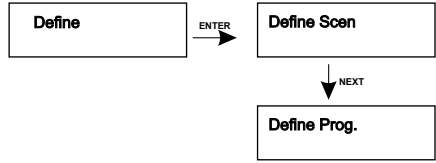
1. Enter the *Settings* submenu.
2. With "next" or "previous" key select the *Curves* option. Press "enter" key.
3. With "next" or "previous" key select the *Exp* characteristics. Confirm your settings by pressing the "enter" key.



8. SCENES AND PROGRAMS DEFINING

The PX143 controller allows to define one scene and a 16-step program.

Scenes and programs defining submenu scheme (*Define*).

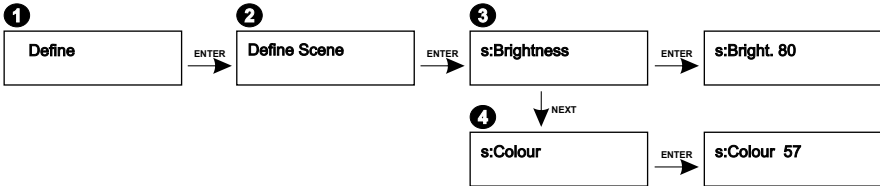


8.1. SCENES DEFINING

Scene is a static light show.

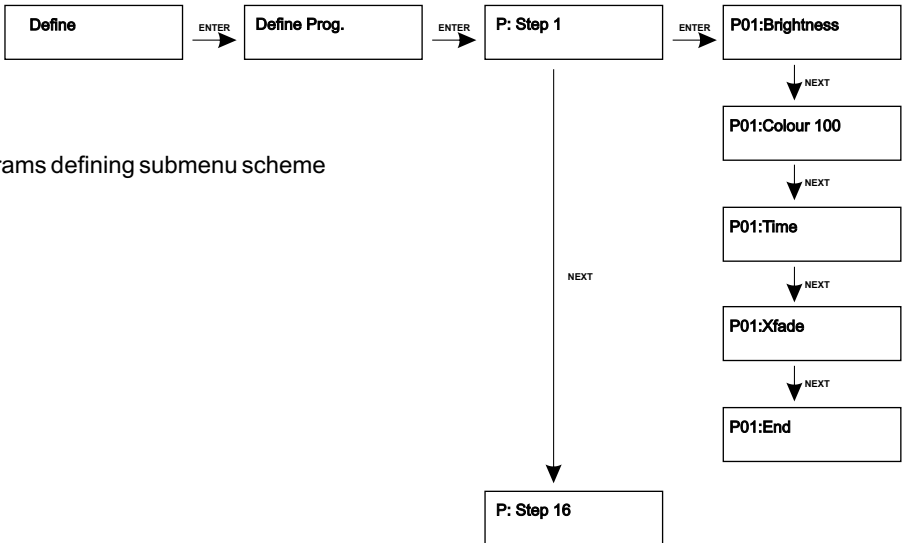
To define a scene:

1. Enter the *Define* submenu.
2. With "next" or "previous" key select the *Define Scene* option. Press "enter" key.
- 3, 4. Set the required brightness and colour (refer to p. 8.3 of the present manual).



8.2. PROGRAMS DEFINING

Program is a set of scenes, that follow each other. In the program you can set such options, as the duration time of each step, the step-to-step colour and brightness fading smoothness and the last step (defines on which step the program finishes).



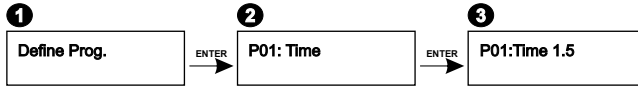
Programs defining submenu scheme

8.2.1. TIME DEFINING

This parameter defines the step exposition time during the program rendering.

To set the duration time:

1. Enter the *Define Prog* submenu.
2. With "next" or "previous" key select the required step. Press "enter" key.
3. With "next" or "previous" key adjust the required exposition time for the edited step. Press "enter" to confirm your settings.

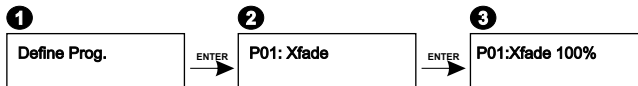


8.2.2. Xfade DEFINING

The *Xfade* parameter defines the smoothness of colour and brightness appearance during programs rendering. The higher value set, the smoother the steps fade. The maximal value is 100%, minimal 0%. When the parameter is set to 0, the step-to-step change is instant.

To set the *Xfade*:

1. Enter the *Define Prog* submenu.
2. With "next" or "previous" key choose the program step, where you want to adjust the *Xfade*.
3. With "next" or "previous" key adjust the required *Xfade* value.

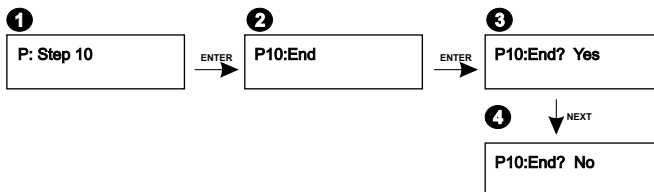


8.2.3. LAST STEP DEFINING

The last step defines, on which step the program finishes rendering. The maximal number of steps in one program is 16.

To set the last step in the program:

1. Enter the step, where you want to set the *End* marker.
2. With "next" or "previous" key select the *End* option. Press "enter" key.
3. With "next" or "previous" key choose the Yes option. Confirm your settings by pressing the "enter" key.

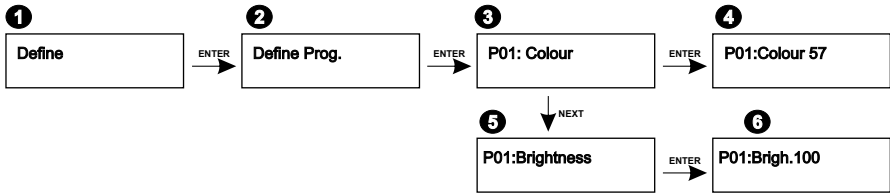


8.3. COLOURS AND BRIGHTNESS DEFINING

To set the program brightness and colour:

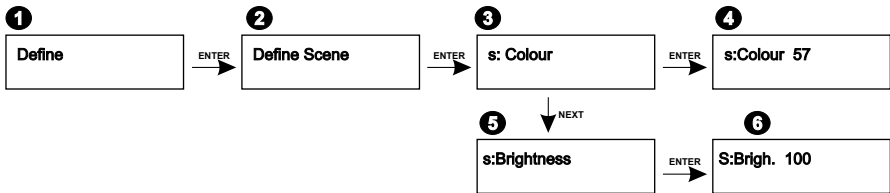
1. Set the *Define* feature.
2. With "next" or "previous" keys select the *Define Prog* feature.

3. With "next" or "previous" key choose the program step, where you want to adjust the colour.
 4. With "next" or "previous" key adjust the required colour. Press "enter" key to confirm.
- To set the brightness:
5. With "next" or "previous" key choose the step, where you want to adjust the brightness.
 6. With "next" or "previous" key adjust the brightness. Press "enter" key to confirm.



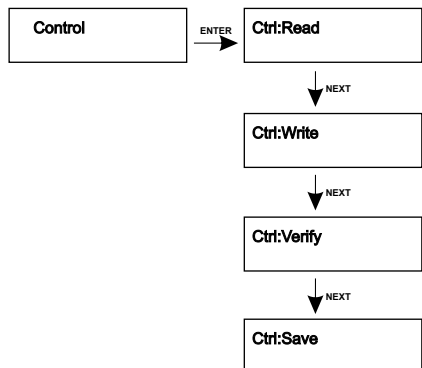
To set the scene colour and brightness:

1. Enter the *Define* submenu.
 2. With "next" or "previous" key select the *Define Scene* option. Press "enter" key.
 3. With "next" or "previous" key select the *s:Colour* option. Press "enter" key.
 4. With "next" or "previous" key adjust the required colour. Press "enter" key to confirm.
- To set the brightness:
5. With "next" or "previous" key select the *s: Brightness* option. Press "enter" key.
 6. With "next" or "previous" key adjust the brightness. Press "enter" key to confirm.



9. CONTROLLER OPERATION MODE

The PX143 controller can operate in 4 modes: *Read* (settings reading mode), *Write* (writing mode), *Verify* (verification mode) and *Save* (settings saving mode).



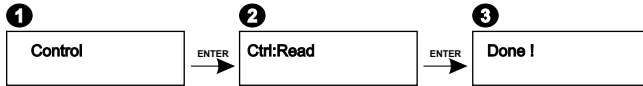
Control menu scheme

9.1. READING MODE

The *Control: Read* feature allows to read the present lamp settings.

To set the PX143 in a reading mode:

1. Enter the *Control* submenu.
2. With "next" or "previous" key select the *Ctrl:Read* option. Confirm your settings by pressing the "enter" key.
3. Once the adjustments has been read the *Done!* inscription is displayed.

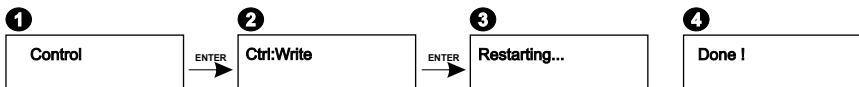


9.2. WRITING MODE

The writing mode allows to send the settings from the controller to the lamp.

To set the PX143 controller in the writing mode:

1. Enter the *Control* menu.
2. With "next" or "previous" key select the *Ctrl:Write* option. To confirm your settings press the "enter" key.
3. The *Restarting . . . Wait...* inscription will be displayed on the screen. This is the moment, when settings are being sent to the lamp.
4. After the settings were sent, the lamp would start working with the new parameters, and the *Done!* inscription would be displayed on the controller display.

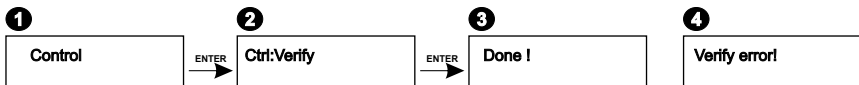


9.3. VERIFICATION MODE

The *Verify* option allows to compare the lamp's adjustments with the controller's settings.

To set the PX143 controller in the verification mode:

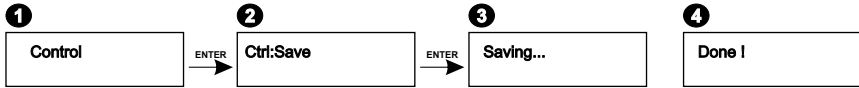
1. Enter the *Control* submenu.
2. With "next" or "previous" key select the *Ctrl:Verify* option. Confirm your settings by pressing the "enter" key.
- 3, 4. If the lamp's settings are the same as the controllers', the *Done!* inscription will be displayed. If the settings differ, the *Verify error!* announcement will be shown on a display.



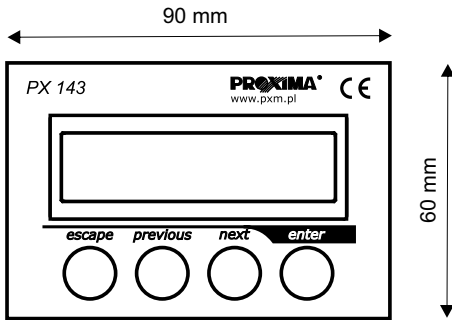
9.4. SAVING MODE

If there is a necessity of setting several lamps with the same parameters, you can save those settings in the PX143 Settings Controller memory and send them successively to each lamp. There is no need to set all the parameters again then.

1. Enter the *Control* submenu.
2. With "next" or "previous" key select the *Ctrl:Save* option. Confirm your settings by pressing the "enter" key.
3. During settings saving in the controller memory the *Saving . . . Wait...* inscription is displayed on the screen.
4. When saving is finished, *Done!* inscription will appear.



10. DIMENSIONS



11. TECHNICAL SPECIFICATION

- power supply from the lamp (eg. PX134)
- *Master mode* yes
- dimensions:
 - width 90 mm
 - height 60 mm
 - depth 28 mm





ul. Przemysłowa 12
30-701 Kraków, Poland

tel: +48 12 626 46 92
fax: +48 12 626 46 94

e-mail: info@pxm.pl
http://www.pxm.pl

DECLARATION OF CONFORMITY according to guide lines 89/336/EWG

Name of producer: PXM s.c.

Address of producer: ul. Przemysłowa 12
30-701 Kraków

declares that the product:

Name of product: **Settings Controller**

Type: **PX143**

answers the following product specifications:

EMC: **PN-EN 55103-1**
PN-EN 55103-2

Additional informations:

The DMX-512 output must be shielded and the shielding must be connected to the ground responding to the DMX connectors.

Kraków, 01.06.2006

PXM S.C.
Danuta i Marek Żupnik
30-701 Kraków, ul. Przemysłowa 12
NIP 677-002-54-53

Marek Żupnik M.Sc.