

# PxMini

User manual



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

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# 1 Description

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The PxMini program is used to communicate with PX333, PX340, PX345 and PX710 controllers. From within the application, the user can:

- turn on and off scenes and programs
- trigger events
- display statuses
- modify master value

To be able to communicate with the controller from the level of the program, user accounts should be created in advance with the appropriate access rights and appropriate configuration via the PxDesigner application (description of creating the configuration was placed in the PxDesigner manual available on the manufacturer's website).

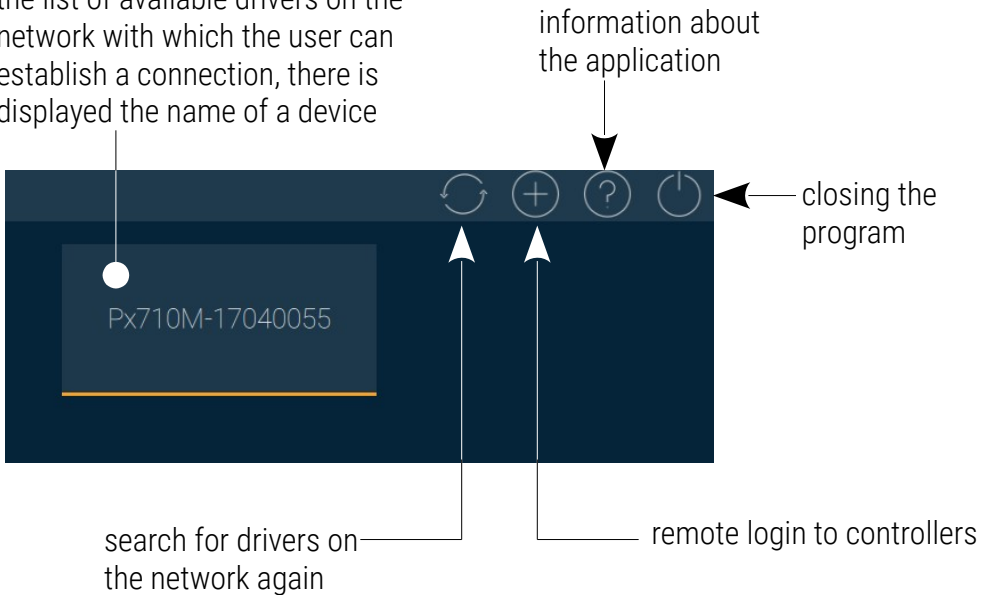
The PxMini program is free and can be downloaded from the manufacturer's website ([pxm.pl](http://pxm.pl)) in the *Download* section.

## 2 Start of operation

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After installing and launching the program, the screen will appear:

the list of available drivers on the network with which the user can establish a connection, there is displayed the name of a device



The colors on the device tiles in the list of available devices determine the connection status:

- **red** – the device is in the program's memory, but the application cannot establish a connection
- **yellow** – the device is on the network and has been detected by PxMini, but the user is not logged in and the configuration has not been downloaded
- **blue** – the user is logged in to the controller and the configuration has been downloaded from the driver to the application



**NOTE:** If a user is logged in to the controller, e.g Admin, to log in to another account, right-click on the selected driver, it will display the username and password entry window.

The F11 button opens the window in full screen mode. Reopening the application will launch it in the last opened mode (windowed / full screen).

## 2.1 Logging in to the local network

Clicking on the selected device on the same local network will display the login window. The ADMIN account is always available for the controller and it has the highest level of authorization.

The default password for the ADMIN user is the device serial number. It is recommended to change the default password and create user accounts with certain level of authorization.

← Px340-18230000 ✓

User ADMIN

Password 18230000

Remember ☒

## 2.2 Remote logging (external network)

The PxMini application allows you to log in to device from an external network via the internet, for this purpose it should be:

- have an external IP address on the router assigned by the internet provider and be able to establish connections from outside (incoming packets are not blocked by the provider's and router's firewall)
- redirect port 50002 TCP/UDP to the IP address of the controller working in the local network (so-called forwarding port)
- unblock selected port in the router's firewall
- the address of the driver / drivers in the local network can not change (the driver must have a static IP address set or the DHCP server must assign the same addresses to the same devices each time)

Most routers available on the market usually have several parameters in port forwarding options:

- forwarding number
- port or port range for redirection
- the IP address of device to be redirected to
- protocol type (TCP / UDP or both)
- attach / delete diversion

If there are two drivers in the network, the first one should be forwarded to the port 50002 and the second to 60002 (port 60002 must be redirected to port 50002 in the internal network – screen below).

A virtual server defines the mapping from the WAN service port to the LAN server. All requests from the Internet to the designated service port will be redirected to the device specified by the server IP Address.

<input type="checkbox"/>	Service Port	IP Address	Internal Port	Protocol	Status	
<input type="checkbox"/>	50002	192.168.1.10	50002	TCP or UDP	Enabled	
<input type="checkbox"/>	60002	192.168.1.11	50002	TCP or UDP	Enabled	

Add New

Enable Selected

Disable Selected

Delete Selected

Refresh

## Example:

The controller works in the local network with the following settings:

- external IP address: 66.77.88.99 (example address)
- IP address: 192.168.1.10
- mask: 255.255.255.0
- target device port: 50002
- protocol: TCP or TCP/UDP (in this case option “Both”)

Below is the screen of the example setting in the router:

Port range forwarding sets up public services on your network, such as web servers, ftp servers, e-mail servers, and other specialized Internet applications. When you have set up one service, then the communication requests from the Internet to your router's WAN port will be converted to the specified LAN IP address.

NO.	Start port-End port	LAN IP	Protocol	Enable	Delete
1.	50002-50002	192.168.1.10	Both ▼	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="text"/> - <input type="text"/>	192.168.1. <input type="text"/>	TCP ▼	<input type="checkbox"/>	<input type="checkbox"/>

Well-known service ports:

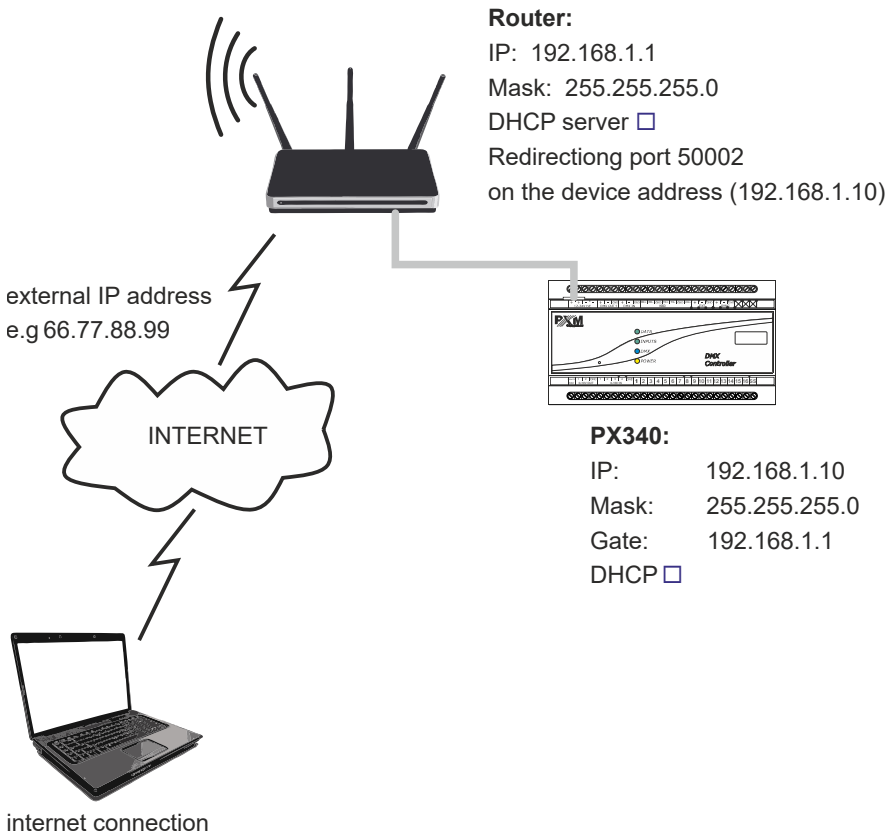


If there is no option to set one port forwarding in the router, create a range (from 50002 to 50002).

If everything is correctly configured to connect to the controller from the (external) internet network, select the *Remote login* (⊕) in the application and then enter the *User* and *Password* of the user and *IP* address (assigned by the internet provider, in this case 66.77.88.99), in the *Port* field enter the port number (50002).

The screenshot shows a mobile application interface with a dark blue background. At the top, there is a navigation bar with a back arrow on the left and a checkmark on the right. Below the navigation bar, there is a central form area with a light blue background. The form contains the following fields and controls:

- Choose controller:** A dropdown menu with the text "PX340" and a downward arrow.
- IP:** A text input field containing "66.77.88.99".
- Port:** A text input field containing "50002".
- User:** A text input field containing "ADMIN".
- Password:** A text input field containing "17040056".
- Remember:** A toggle switch that is currently turned on (white circle on the left).



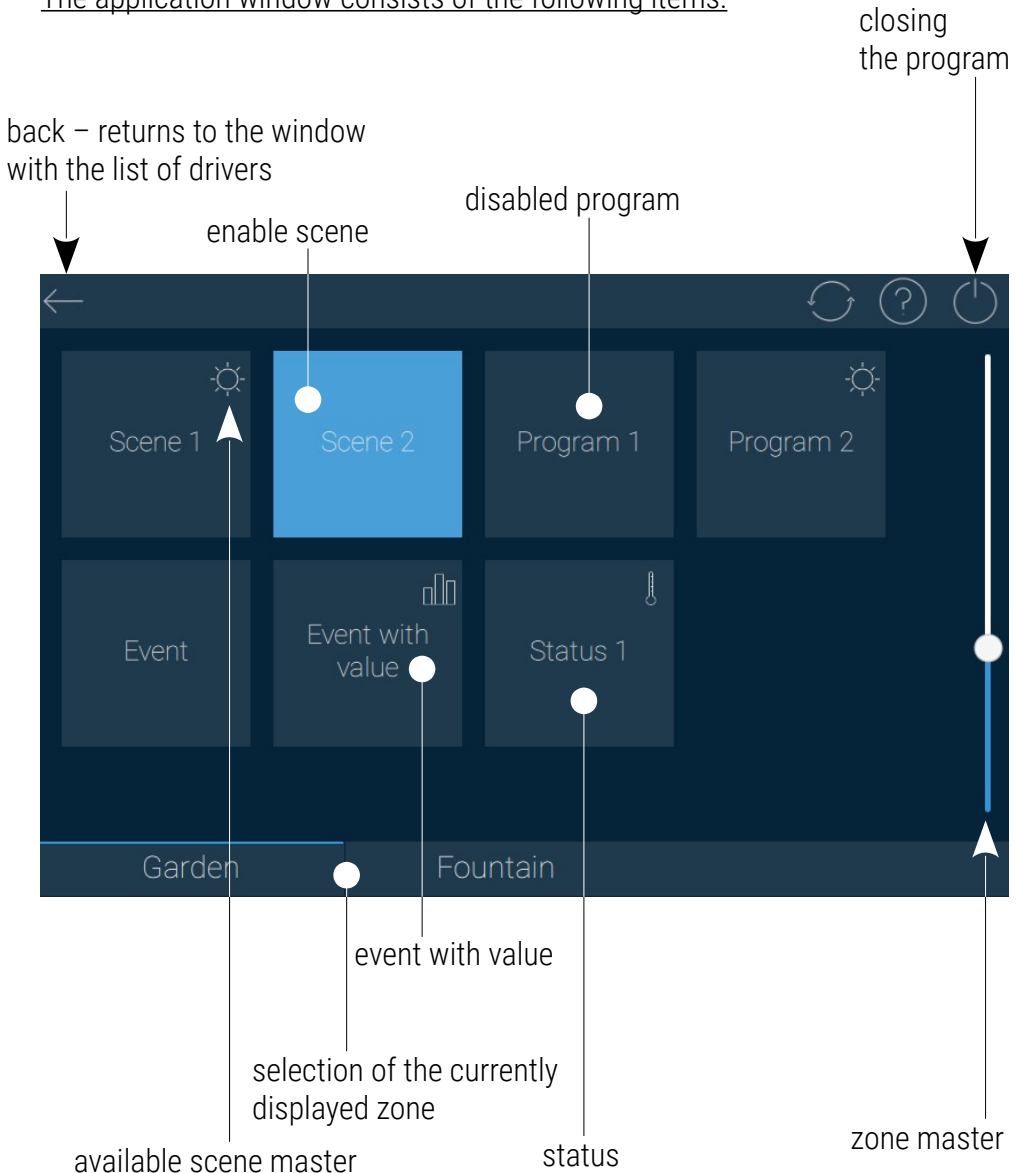
**NOTE:** In most routers available on the market, you can set a static IP address by the DHCP server based on the MAC address of the device. For example, for a device with the MAC address 70:B3:D5:EF:B1:60 the IP address 192.168.1.15 will always be assigned by the DHCP server (example below).

Static assignment			
IP Address	192.168.1.	15	
MAC address	70	b3	d5 ef b1 60
			Add
NO.	IP Address	MAC address	Delete
1	192.168.1.15	70:B3:D5:EF:B1:60	Delete

### 3 Structure of the application window

After logging in, the application goes to the control screen.

The application window consists of the following items:



## 4 Configuration

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Configuration sent to the user consists of zones (displayed in the program as separate desktops) to which the user has access. After logging in to the controller, PxMini downloads the configuration prepared for the selected user. The following items are assigned to each:

- scenes
- programs
- events
- statuses

Each item is displayed as a tile. Scenes, programs and statuses have two states – enabled (blue) and disabled. Event tiles have no state.

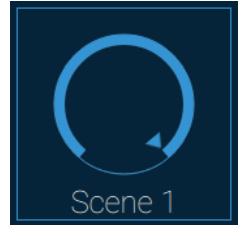
The zone master button allows for controlling the brightness of all currently enabled items in the zone. To move between zones, select a different zone at the bottom of the program window. Clicking the left mouse button tile will start / stop the element. On the other hand, clicking right mouse button on a tile that is masterable changes it into a slider and gives the possibility to change the values of the stage, program or event with value.

## 5 Scene

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Scene can be masterable – you can modify its master when the symbol ☀ is displayed in the upper right corner.

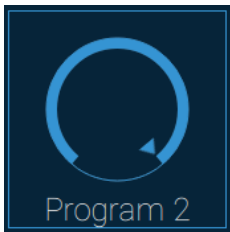
Short-click the scenes to change its state. The tile colour indicates the currently state of the scene (navy blue when it is disabled and blue when it is enabled). The scene that is masterable is marked with the symbol ☀. Clicking on it with the right mouse button changes the tile into a slider.



## 6 Program

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Program can be masterable ☀. Short-click the program changes its state (on / off). The tile colour indicates the currently state of the scene (navy blue when it is disabled and blue when it is enabled). Clicking on it with the right mouse button changes the tile into a slider.

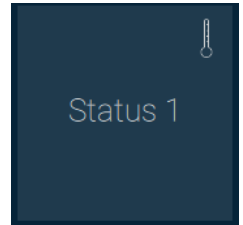


## 7 Status

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The application displays only a tile which cannot be clicked. The tile colour indicates the current state of the selected status of the controller:

- navy blue, when it is disabled
- blue, when it is enabled



## 8 Events

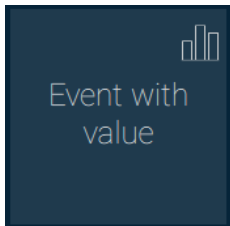
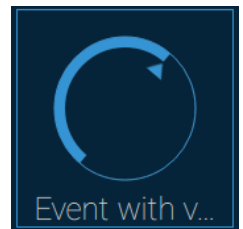
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Event with no value:

Tile which sends an appropriate event to the controller every time it is pressed on. The tile does not change its colour, there is only a signal that it was pressed

Event with value:

Short-click the tile to display the slider used to select the value which will be sent to the device.



**NOTE:** The sent value to the device in case of an event with a value as opposed to mastering the scene and program is sent after selecting the slider of the desired value and releasing it – it is not smooth.