



DPX-620 III 6 Ch. Dimmer  
Inst.

dimmer pack

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# 1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under [www.thomann.de](http://www.thomann.de).

### 1.1 Further information

On our website ([www.thomann.de](http://www.thomann.de)) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

## 1.2 Notational conventions

This manual uses the following notational conventions:

### Letterings

The letterings for connectors and controls are marked by square brackets and italics.

**Examples:** *[VOLUME]* control, *[Mono]* button.

### Displays

Texts and values displayed on the device are marked by quotation marks and italics.

**Examples:** *'24ch'*, *'OFF'*.

### Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.



#### Example:

1. ▶ Switch on the device.
2. ▶ Press *[Auto]*.
  - ⇒ Automatic operation is started.
3. ▶ Switch off the device.

## 1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.



Signal word	Meaning
<b>DANGER!</b>	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
<b>NOTICE!</b>	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

## 2 Safety instructions

### **Intended use**

This appliance is designed for professional use only and is intended to be used to control the brightness of connected spotlights. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

**Safety****DANGER!****Danger for children**

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

**DANGER!****Electric shock caused by high voltages inside**

Within the device there are areas where high voltages may be present.

Completely disconnect the device from the power supply before you open or remove covers. Mount all covers and attach them firmly before connecting the device again.

Do not use the device if covers, protectors or optical components are missing or damaged.



**DANGER!**

**Electric shock caused by short-circuit**

Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.



**DANGER!**

**Hazardous voltage**

Hazardous voltage may be present at cable ends and screw terminals.

The connection of screw terminals as well as all maintenance and repair work on the electrical installation of the device must only be performed by qualified electrical personnel in volt-free condition. Failure to do so may result in electric shock and risk of fire and loss of life.

By all means you have to observe all electrical safety instructions applicable at the place of operation.



**NOTICE!**

**Risk of fire**

Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.



**NOTICE!**

**Operating conditions**

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.



### **NOTICE!**

#### **Power supply**

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

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## 3 Features

- Six dimmer channels
- Output: Screw terminals
- Digital control system
- Control via DMX 512
- Single channel fuse (each 16 A)
- Phase correction for linear dimming
- Individually adjustable dimmer curve
- Power supply via 5-pin mains connection cable for CEE plug

## 4 Installation and starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.



**DANGER!****Hazardous voltage**

Hazardous voltage may be present at cable ends and screw terminals.

The connection of screw terminals as well as all maintenance and repair work on the electrical installation of the device must only be performed by qualified electrical personnel in volt-free condition. Failure to do so may result in electric shock and risk of fire and loss of life.

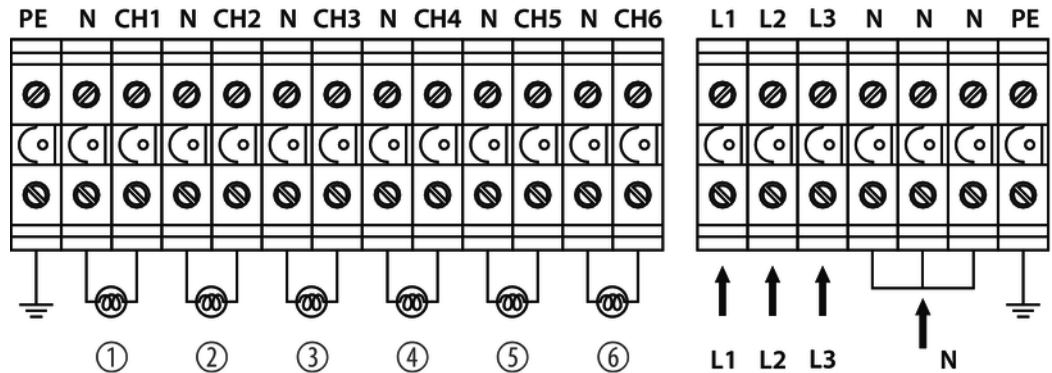
By all means you have to observe all electrical safety instructions applicable at the place of operation.

The device is designed for mounting in 19" racks, it occupies two rack units (RU).

**Electrical connection**

- 1.** ▶ On the back of the device, open the required cable glands for the connecting cables to the loads. Unused cable glands should remain closed for safety reasons.
- 2.** ▶ Feed the connecting cables through the cable glands.
- 3.** ▶ Connect the loads to the screw terminals according to the diagram below.

4. ➤ If necessary, install a CEE plug on the power cord of the unit.
5. ➤ Establish the DMX link to the controller.
6. ➤ Finally, connect the CEE plug of the device to a CEE socket.

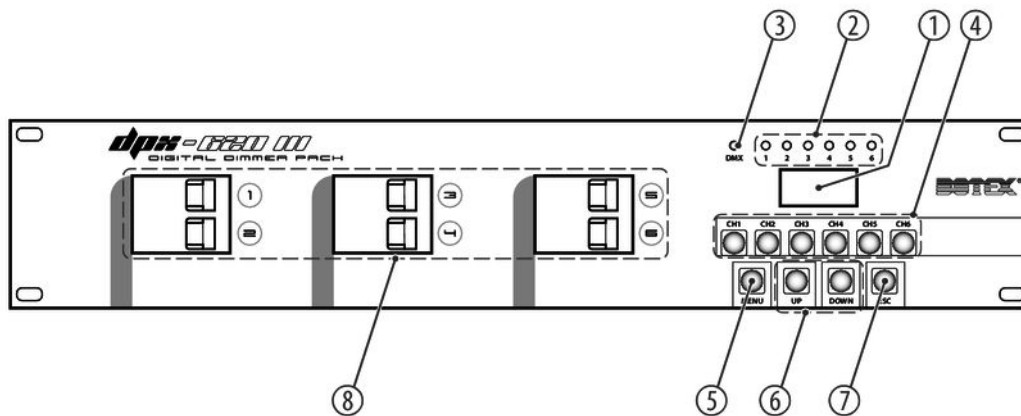


**Connections in 'DMX' mode**

Connect the DMX input of the device to the DMX output of a DMX controller or other DMX device. Connect the output of the first DMX device to the input of the second one and so on, to form a series connection. Make sure that the output of the last DMX device in the chain is terminated by a resistor (110  $\Omega$ , 1/4 W).

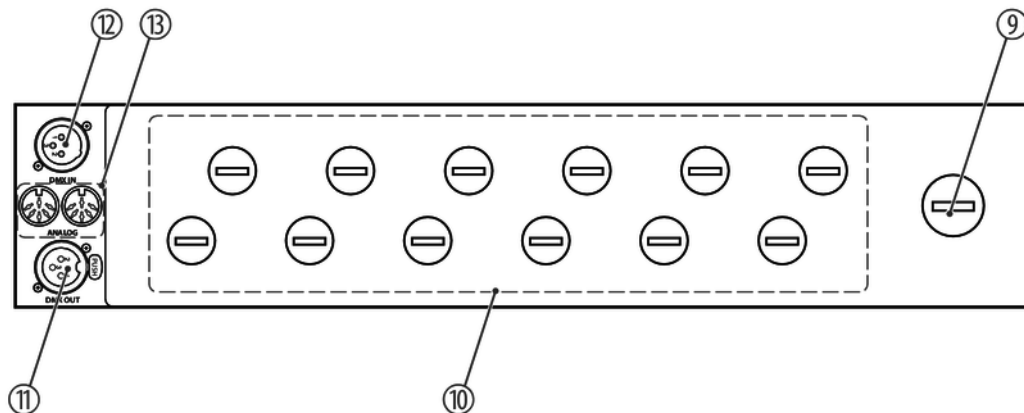
## 5 Connections and controls

### Front panel



1	Display
2	<i>[1]...[6]</i> Voltage indicators of channels 1...6. The LEDs of active channels light solid green during operation.
3	<i>[DMX]</i> The control LED lights when a DMX signal is received.
4	<i>[CH 1] ... [CH 6]</i> Buttons for direct control of channels 1...6.
5	<i>[MENU]</i> : Opens the main menu.
6	<i>[UP]</i> / <i>[DOWN]</i> : Navigates within a menu, increases or decreases the displayed value.
7	<i>[ESC]</i> : Closes an opened menu.
8	<i>[1]...[6]</i> Circuit breakers for channels 1...6, arranged in three blocks. With the circuit breakers, the desired channels are being activated ( <i>[I - ON]</i> ) or deactivated ( <i>[O - OFF]</i> ).

Rear panel



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9	Cable gland for the power cord, designated for 5-pin CEE plug (32 A / phase, 3 × 230 V)
10	Cable glands for the connecting cables to the loads
11	<i>[DMX OUT]</i> DMX output
12	<i>[DMX IN]</i> DMX input.
13	<i>[ANALOG]</i> Connections to control the device by a voltage in the range 0 V ... 10 V

## 6 Operating

### Turning on and off

As soon as you connect the device to the voltage supply, the display shows the current software version, then a bar graph with the brightness set for each channel.

Turn on the required channels via the associated circuit breakers (LEDs of active channels light up green).

Disconnect the device from the power supply to turn it off.



#### **DANGER!**

#### **Hazardous voltage**

Hazardous voltage may be present at cable ends and screw terminals.

The connection of screw terminals as well as all maintenance and repair work on the electrical installation of the device must only be performed by qualified electrical personnel in volt-free condition. Failure to do so may result in electric shock and risk of fire and loss of life.

By all means you have to observe all electrical safety instructions applicable at the place of operation.



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**Adjusting the brightness of an individual channel**

Press one of the channel buttons *[CH 1]* ... *[CH 6]* to change the brightness. Pressing briefly results in changes with small increments, press longer for changes with larger increments. Press *[ESC]* to reverse the direction of change.

**Setting the brightness for all channels**

Press one of the channel buttons *[UP]* or *[DOWN]* to increase or decrease the brightness of all channels together. Pressing briefly results in changes with small increments, press longer for changes with larger increments.

### Assigning a DMX address (patching)

Proceed as follows to assign DMX addresses to the dimmer channels:

1. ▶ Press *[MENU]* to open the main menu. Press *[UP]* or *[DOWN]* to select the 'Patching' menu.
2. ▶ Confirm with *[MENU]*.  
⇒ The display shows 'Patching Start'.
3. ▶ Use *[UP]* or *[DOWN]* to select between assignment mode 'Start' (channels are automatically addressed consecutively) and 'Independent' (DMX addresses are independent of each other).  
Confirm with *[MENU]*.
4. ▶ In 'Start' mode: Use *[UP]* or *[DOWN]* to select the DMX address of channel 1 in a range 1 ... 512.  
Confirm with *[MENU]*.
5. ▶ In 'Independent' mode: Use *[UP]* or *[DOWN]* to select between 'All' (all channels get the same DMX address) and 'Single' (each channel can get an individual DMX address).  
In 'Independent – All' mode: Use *[UP]* or *[DOWN]* to select the DMX address for all channels in a range 1 ... 512. Confirm with *[MENU]*.

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In '*Independent – Single*' mode: Use *[UP]* or *[DOWN]* to first select the channel whose DMX address is to be set. Confirm with '*MENU*'. Then select the DMX address for this channel from a range 1 ... 512. Confirm with *[MENU]* and repeat the procedure for all channels.

6.  Press *[ESC]* to return to the main menu.

### Device behaviour on missing DMX signal.

Proceed as follows to specify how the unit behaves when the DMX signal is missing.

1. ➤ Press *[MENU]* to open the main menu. Press *[UP]* or *[DOWN]* to select the 'DMX Fail' menu.
2. ➤ Confirm with *[MENU]*.  
⇒ The display shows 'Dmx fail'.
3. ➤ Use *[UP]* or *[DOWN]* to select between options
  - 'LastHold': Last setting is retained
  - 'Analog': The analogue control signal (input *[ANALOG]*) is analysed
  - 'Progr:01-12': The built-in automatic programmes are executedConfirm with *[MENU]*.
4. ➤ In 'Progr:01-12' mode: Use *[UP]* or *[DOWN]* to select the duration of each step (and thus the programme speed) in the range 0.005 s ... 30.0 s.
5. ➤ Press *[ESC]* to return to the main menu.

## Setting maximum brightness

Proceed as follows to set the maximum brightness for the dimmer channels:

1. ➤ Press *[MENU]* to open the main menu. Press *[UP]* or *[DOWN]* to select the 'MaxLevel' menu.
2. ➤ Confirm with *[MENU]*.  
⇒ The display shows 'MaxLevel'.
3. ➤ Use *[UP]* or *[DOWN]* to select between 'All' (all channels get the same maximum brightness) and 'Single' (each channel can get an individual maximum brightness).  
Confirm with *[MENU]*.
4. ➤ In 'All' mode: Use *[UP]* or *[DOWN]* to select the maximum brightness for all channels in a range 70 % ... 100 %. Confirm with *[MENU]*.  
In 'Independent – Single' mode: Use *[UP]* or *[DOWN]* to first select the channel whose maximum brightness is to be set. Confirm with 'MENU'. Then select the maximum brightness for this channel from a range 70 % ... 100 %. Confirm with *[MENU]* and repeat the procedure for all channels.
5. ➤ Press *[ESC]* to return to the main menu.

### Setting minimum brightness

Proceed as follows to set the minimum brightness for the dimmer channels:

1. ➤ Press *[MENU]* to open the main menu. Press *[UP]* or *[DOWN]* to select the 'MinLevel' menu.
2. ➤ Confirm with *[MENU]*.  
⇒ The display shows 'MinLevel'.
3. ➤ Use *[UP]* or *[DOWN]* to select between 'All' (all channels get the same minimum brightness) and 'Single' (each channel can get an individual minimum brightness).  
Confirm with *[MENU]*.
4. ➤ In 'All' mode: Use *[UP]* or *[DOWN]* to select the minimum brightness for all channels in a range 0 % ... 30 %. Confirm with *[MENU]*.  
  
In 'Single' mode: Use *[UP]* or *[DOWN]* to first select the channel whose minimum brightness is to be set. Confirm with 'MENU'. Then select the minimum brightness for this channel from a range 0 % ... 30 %. Confirm with *[MENU]* and repeat the procedure for all channels.
5. ➤ Press *[ESC]* to return to the main menu.

## Setting the dimmer curve

Proceed as follows to adjust the dimmer curve of the dimmer channels:

1. ➤ Press *[MENU]* to open the main menu. Press *[UP]* or *[DOWN]* to select the 'Curve' menu.
2. ➤ Confirm with *[MENU]*.  
⇒ The display shows 'Curve'.
3. ➤ Use *[UP]* or *[DOWN]* to select between 'All' (all channels get the same dimmer curve) and 'Single' (each channel can get an individual dimmer curve).  
Confirm with *[MENU]*.
4. ➤ In 'All' mode: Use *[UP]* or *[DOWN]* to select the dimmer curve from the options:
  - 'Linear'
  - 'S Curve'
  - 'Non Dim'
  - 'Square'


Confirm with *[MENU]*.

In 'Single' mode: Use *[UP]* or *[DOWN]* to first select the channel whose dimmer curve is to be set. Confirm with 'MENU'. Then select the dimmer curve for this channel from the options:

- 'Linear'

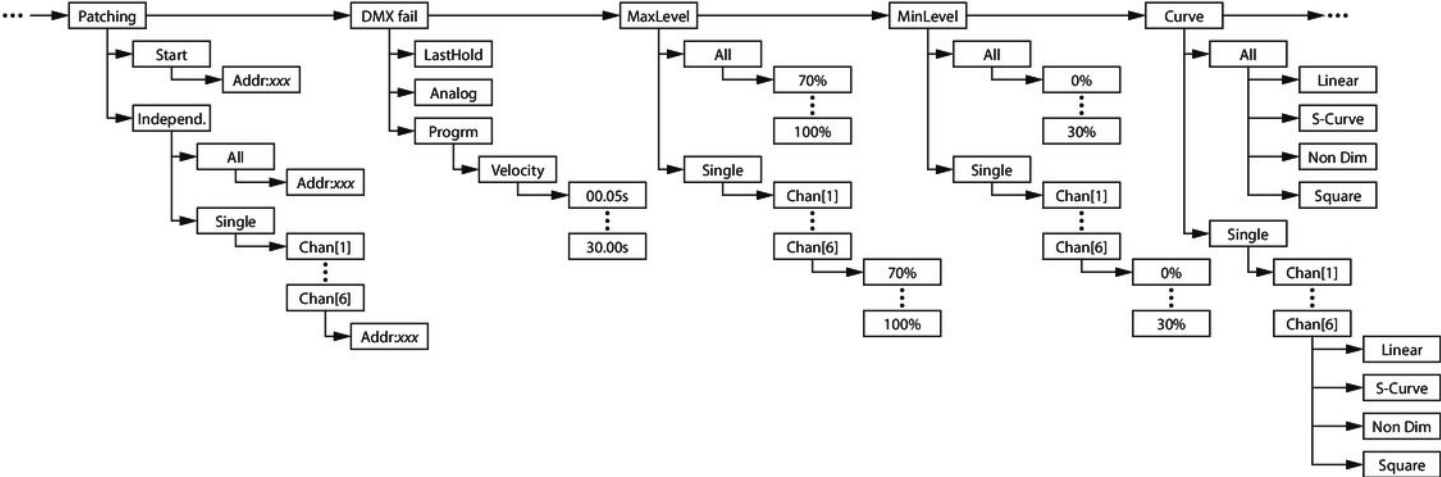
- 'S Curve'
- 'Non Dim'
- 'Square'

Confirm with [MENU] and repeat the procedure for all channels.

**5.**  Press [ESC] to return to the main menu.



Menu overview



## 7 Technical specifications

Control principle	Leading edge phase control		
Input connections	Power supply	Terminal block (3-phase connection, max. 32 A per phase)	
	Signal input	DMX 512 via 3-pin XLR plug	
Output connections	Power supply	6 × terminal block	
	Signal output	DMX 512 via 3-pin XLR socket	
Channel fuse	Circuit breaker (MCB) per channel	Trigger characteristic	C
		Rated current	16 A
		Number of pins	1-pin + N
Power consumption	22080 W		
Supply voltage	230 V ~ 50 Hz		
Degree of protection	IP20		

Installation	19", 2 RU	
Dimensions (W × H × D)	482 mm × 390 mm × 90 mm	
Weight	12.0 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	50 %, non-condensing

## 8 Plug and connection assignments

### Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

### DMX connections

The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.



Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX-, 'cold signal')
3	Signal (DMX+, 'hot signal')

## 9 Protecting the environment

### Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.





