

MaTrixx TLB-20
MK-II RGBW
LED flower effect

Musikhaus Thomann e.K.

Treppendorf 30

96138 Burgebrach

Germany

Telephone: +49 (0) 9546 9223-0

E-mail: info@thomann.de

Internet: www.thomann.de

15.10.2012

Table of contents

1	General notes.....	5
2	Safety instructions.....	8
3	Features.....	12
4	Installation.....	13
5	Starting up.....	16
6	Connections and operating elements.....	19
7	Operation.....	24
	7.1 Starting up the device.....	24
	7.2 Main menu.....	24
	7.3 Menu overview.....	30
	7.4 Functions in 2-channel DMX mode.....	31
	7.5 Functions in 3-channel DMX mode.....	32
8	Troubleshooting.....	35
9	Cleaning.....	37

10 Technical specifications..... 38

11 Protecting the environment..... 39


1 General notes



This user manual contains important information on 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, include the manual for the next owner.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

Symbols and signal words

This section provides an overview of the symbols and signal words used in this user manual.

Signal word	Meaning
DANGER!	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.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
NOTICE!	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 signs	Type of danger
	Warning – suspended load.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used as an electronic illumination effect using LED technics. 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. Never remove any covers.

There are no user-serviceable parts inside.



DANGER!

Electric shock caused by short-circuit

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. 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.



WARNING!

Eye damage caused by high light intensity

Never look directly into the light source.



WARNING!

Risk of epileptic shock

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons should avoid looking at strobe lights.



NOTICE!

Risk of fire

Do not cover the device nor any ventilation slots. Do not place 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.

3 Features

The LED effects projector is specially suited for professional lighting tasks, such as at events, on rock stages, in theatres and musicals. It is characterized by low power consumption and long life time.

Special features of this device:

- 192 LEDs (48 × white, 48 × red, 48 × green, 48 × blue)
- Control via DMX (2 different modes) and via buttons and display on the unit
- 25 preprogrammed automatic shows
- Sound control
- Master / slave mode
- Robust metal housing

4 Installation

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

You can install the device on the wall, ceiling or floor. A mounting bracket and the necessary screws are included in the package.



WARNING!

Risk of injury caused by falling objects

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.



NOTICE!

Risk of overheating

The distance between the light output and the illuminated surface must be more than 0.5 m (19.7 in).

Always ensure sufficient ventilation.

The ambient temperature must always be below 40 °C (104 °F).



NOTICE!

Use of stands

When mounting the device onto a stand, ensure that the stand is in a safe and stable position and that the weight of the device does not exceed the maximum permissible load capacity of the stand.

**NOTICE!****Possible data transmission errors**

For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.

Never connect the DMX output to audio devices such as mixers or amplifiers.

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 pin assignment.

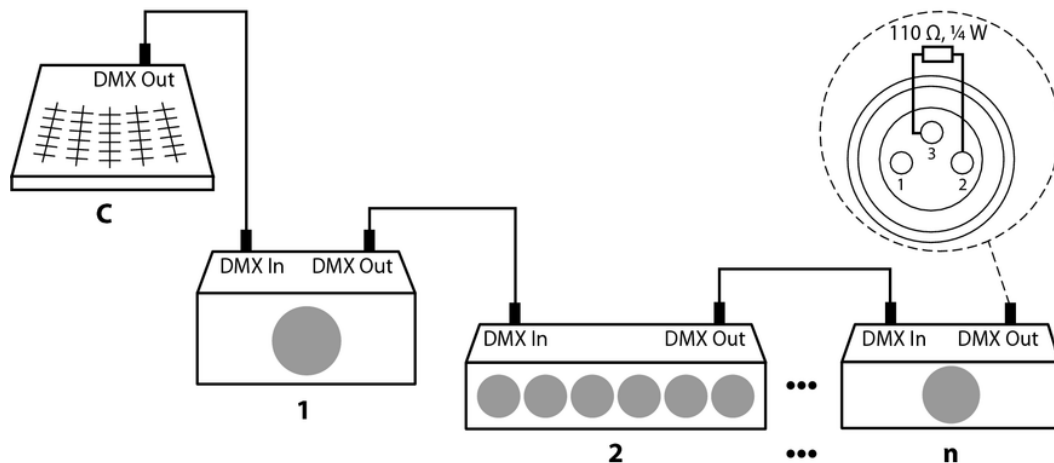
1	Ground, shielding
2	DMX data (-)
3	DMX data (+)

5 Starting up

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

Connections in DMX mode

Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor ($110\ \Omega$, $\frac{1}{4}\text{ W}$).

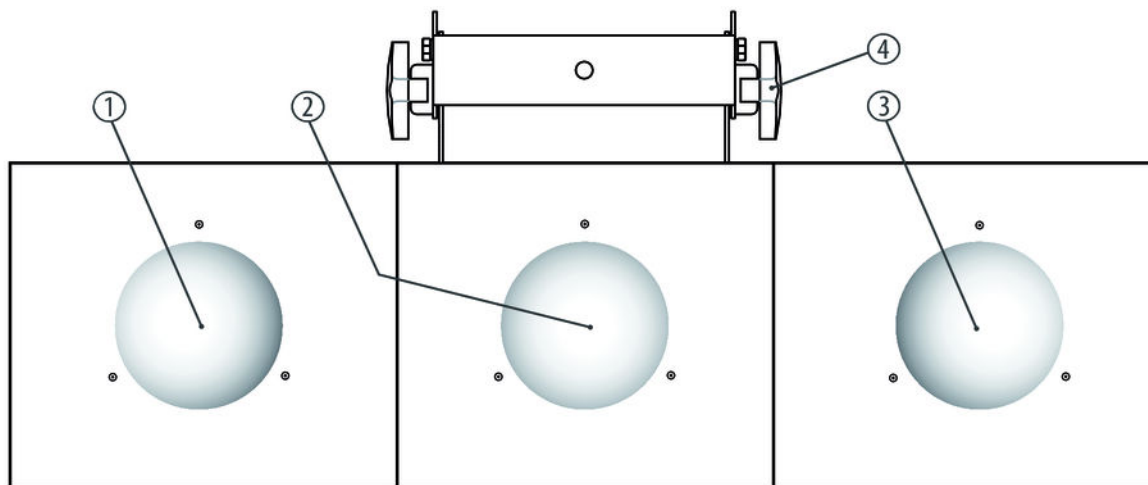


Connections in master/slave mode

When you configure a group of devices in master/slave mode, the first unit will control the other units for an automatic, sound-activated, synchronized show. This function is ideal when you want to start a show immediately. Connect the DMX output of the master device to the DMX input of the first slave device. Then connect the DMX output of the first slave device to the DMX input of the second slave device and so on.

6 Connections and operating elements

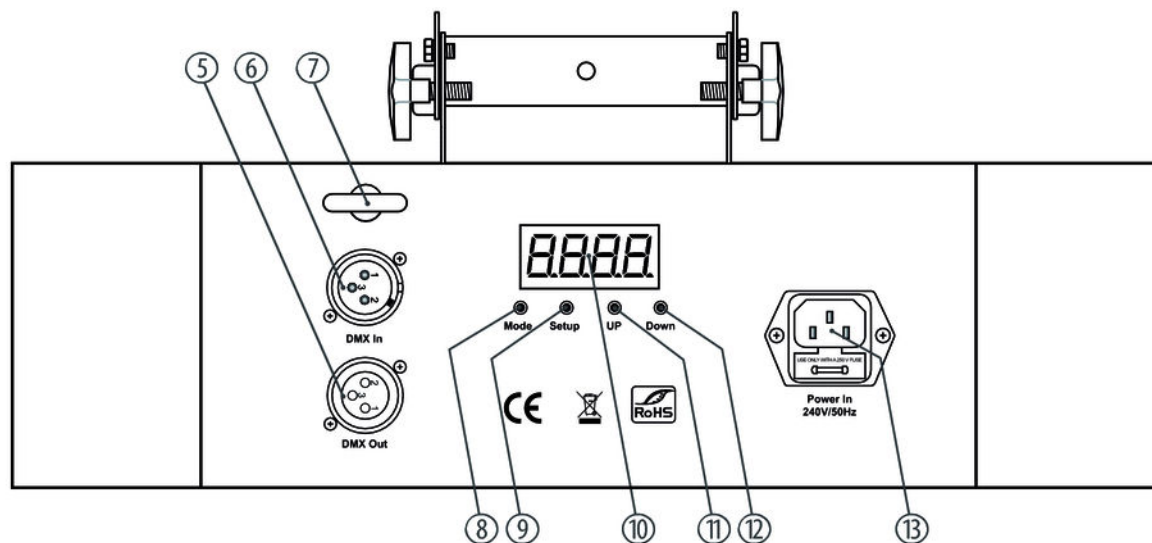
Front panel



MaTrixx TLB-20MK-II RGBW

1, 2, 3	Projection lenses.
4	Mounting bracket with locking screws.

Rear panel



MaTrixx TLB-20MK-II RGBW

5	DMX Out DMX output.
6	DMX In DMX input.
7	Safety eye.
8	<i>[Mode]</i> button Calls the main menu.
9	<i>[Setup]</i> button Calls submenus to adjust values.
10	Display.
11	<i>[UP]</i> button To increase the displayed value by one.

12 Taste *[Down]*

To decrease the displayed value by one.

13 **Power In**

IEC chassis connector for the mains cable, with fuse holder underneath. Beneath the connector, the proper operating voltage is indicated.

7 Operation

7.1 Starting up the device

Connect the unit to the power grid to start the operation. After a few seconds the display shows a running reset. Then the unit is ready for use.

7.2 Main menu

Press *[Mode]* to call the main menu and select an operating mode. Use the *[UP]* and *[Down]* to change the respectively shown value. When the display shows the desired value, press *[Mode]*.

If you don't press any button for about 30 seconds, the unit automatically applies the current setting and the display turns off. The set values are retained as long as the unit is connected to the voltage supply.

Operating mode 'Built-in automatic show'

A built-in automatic show can only be activated if the unit is working in standalone mode or as master device in a master / slave combination. This setting is only relevant if the unit is not controlled via DMX.

Press *[Mode]* repeatedly until the display shows 'Pr.xx'. Press *[Setup]*. Now you can select one of the preprogrammed automatic shows. Use *[UP]* and *[Down]* to select a value between 'Pr.01' and 'Pr.25'.

To adjust the speed of the selected automatic show, press *[Setup]*. Now press *[UP]* and *[Down]* to choose a value between 'SP01' (slow) and 'SP99' (fast) or 'SPFL' (flash effect).

To adjust the flash frequency, press *[Setup]*. Now press *[UP]* and *[Down]* to choose a value between 'FS00' (slow) and 'FS99' (fast).

Wait about 30 seconds until the display turns off. Then the settings have been applied. To return to the higher menu level without changes, press *[Mode]*.

Operating mode 'Automatic'

Automatic operation can only be activated if the unit is working in standalone mode or as master device in a master / slave combination. This setting is only relevant if the unit is not controlled via DMX.

Press *[Mode]* repeatedly until the display shows 'Auto'. Press *[Setup]*. Now you can select one of the automatic options. Use *[UP]* and *[Down]* to select a value between 'n.001' and 'n.100'.

To adjust the speed of the selected automatic option, press *[Setup]*. Now press *[UP]* and *[Down]* to choose a value between 'SP01' (slow) and 'SP99' (fast) or 'SPFL' (flash effect).

To adjust the flash frequency, press *[Setup]*. Now press *[UP]* and *[Down]* to choose a value between 'FS00' (slow) and 'FS99' (fast).

Wait about 30 seconds until the display turns off. Then the settings have been applied. To return to the higher menu level without changes, press *[Mode]*.

DMX mode

This setting is only relevant if the unit is controlled via DMX.

Press *[Mode]* repeatedly until the display shows 'dxxx'.

Now you can set the number of the first DMX channel to be used by the device (DMX address). Use *[UP]* and *[Down]* to select a value between 1 and 512 (the display shows 'd001' ... 'd512').

Make sure that this number matches the configuration of your DMX controller. The following table shows the highest possible DMX address for the different DMX modes.

Mode	Highest possible DMX address
2-channel	511
3-channel	510

Press *[Setup]*. Use *[UP]* and *[Down]* to select one of the following DMX operating modes:

- 'd-P1' (three channels)
- 'd-P2' (two channels)

Wait about 30 seconds until the display turns off. Then the settings have been applied. To return to the higher menu level without changes, press *[Mode]*.

Operating mode 'Slave'

This setting is only relevant if the unit is operated as slave device in a master / slave configuration and is not controlled via DMX.

Press *[Mode]* repeatedly until the display shows 'SLAv'.

Wait about 30 seconds until the display turns off. Then the settings have been applied. To return to the higher menu level without changes, press *[Mode]*.

Sound-control and microphone sensitivity

A sound-controlled automatic show can only be activated if the unit is working in standalone mode or as master device in a master / slave combination. This setting is only relevant if the unit is not controlled via DMX.

Press *[Mode]* repeatedly until the display shows 'SOUN'. This will activate a sound-controlled automatic show.

Press *[Setup]*. Now you can adjust the sound-control sensitivity of the built-in microphone. Use *[UP]* and *[Down]* to select a value between 0 (low sensitivity) and 31 (high sensitivity), the display shows 'S1.00' ... 'S1.31'.

Wait about 30 seconds until the display turns off. Then the settings have been applied. To return to the higher menu level without changes, press *[Mode]*.

Constant unicoloured pattern

A constant unicoloured pattern can only be activated if the unit is working in standalone mode or as master device in a master / slave combination. This setting is only relevant if the unit is not controlled via DMX.

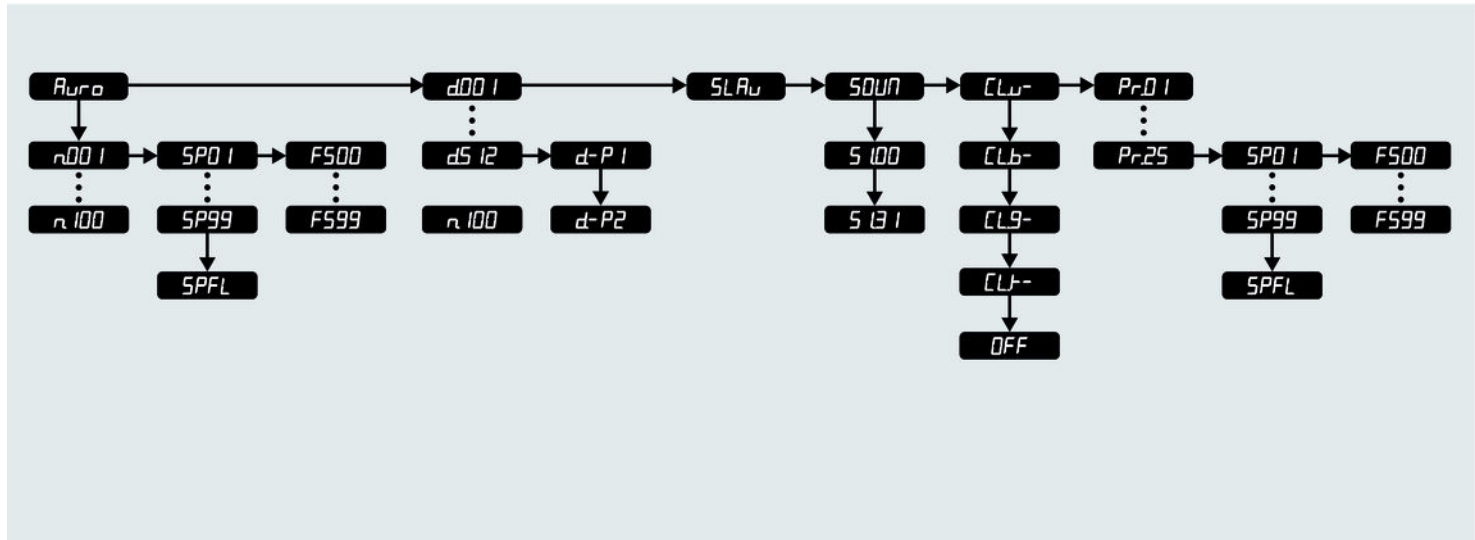
Press *[Mode]* repeatedly until the display shows 'CL.xx'.

Use *[UP]* and *[Down]* to choose from the following options:

Display	Description
'CL.r-'	Red
'CL.g-'	Green
'CL.b-'	Blue
'CL.u-'	White
' OFF'	LEDs off

Wait about 30 seconds until the display turns off. Then the settings have been applied. To return to the higher menu level without changes, press *[Mode]*.

7.3 Menu overview



7.4 Functions in 2-channel DMX mode

Channel	Value	Function
1	0	LEDs off
	1...9	Constant unicoloured red pattern
	10...19	Constant unicoloured green pattern
	20...29	Constant unicoloured blue pattern
	30...39	Constant unicoloured white pattern
	40...255	Sound-controlled automatic show
2	Function depends on channel 1 setting	
	Channel 1 = 0	
	No function	
	Channel 1 = 1...39	
	0...255	Flash effect (flash), increasing speed

Channel	Value	Function
	Channel 1 = 40...255	
	0...255	Sensitivity of the built-in microphone for sound-control

7.5 Functions in 3-channel DMX mode

Channel	Value	Function
1	Operating mode selection	
	0	LEDs off
	1...9	Preprogrammed automatic show no. 1
	10...19	Preprogrammed automatic show no. 2
	⋮	
	240...249	Preprogrammed automatic show no. 25

Channel	Value	Function
	250...255	Sound-controlled automatic show
2	Function depends on channel 1 setting	
	Channel 1 = 0	
	No function	
	Channel 1 = 1...249	
	0...255	Movement effect, increasing speed
	Channel 1 = 250...255	
	0...255	Sensitivity of the built-in microphone for sound-control
3	Function depends on channel 1 setting	
	Channel 1 = 0	
	No function	
	Channel 1 = 1...249	
	0...255	Flash effect (flash), increasing speed

Channel	Value	Function
	Channel 1 = 250...255	
	No function	

8 Troubleshooting

**NOTICE!****Possible data transmission errors**

For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.

Never connect the DMX output to audio devices such as mixers or amplifiers.

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
The unit does not work, no light.	Check the mains connection and the fuse.
No response to the DMX controller.	1. Check the DMX ports and cables for proper connection.
	2. Check the address settings and the DMX polarity.
	3. Try using another DMX controller.
	4. Check to see if the DMX cables run near or alongside to high voltage cables that may cause damage or interference to DMX interface circuits.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at www.thomann.de.

9 Cleaning

Optical lenses

Clean the exterior of accessible optical lenses periodically to optimise light output. The frequency of cleaning depends on the operating environment: wet, smoky or particularly dirty surroundings can cause more accumulation of dirt on the optics of the device.

- Clean with a soft cloth using normal glass cleaning products.
- Always dry the parts carefully.

10 Technical specifications

LEDs	192 LEDs (48 × white, 48 × red, 48 × green, 48 × blue)
Dispersion angle	15 °
Number of DMX channels	2, 3
Operating voltage supply	AC 230 V ~ , 50 Hz
Power consumption	30 W
Dimensions (W × D × H)	520 mm × 360 mm × 230 mm
Weight	4.5 kg

11 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 device is subject to the European directive 2002/96/EC.

Do not dispose of the device 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.

MaTrixx TLB-20MK-II RGBW



