



BTL-30
Battery Truss Light LED
LED spotlight

Musikhaus Thomann
Thomann GmbH
Hans-Thomann-Straße 1
96138 Burgebrach
Germany
Telephone: +49 (0) 9546 9223-0
E-mail: info@thomann.de
Internet: www.thomann.de

21.10.2016, ID: 361459 (V2)

Table of contents

1	General notes	5
	1.1 Further information.....	6
	1.2 Notational conventions.....	7
	1.3 Symbols and signal words.....	8
2	Safety instructions	10
3	Features	17
4	Installation	18
	4.1 Dealing with lithium batteries.....	23
5	Starting up	25
6	Connections and controls	27
7	Instructions for use	33
	7.1 Starting up the device.....	33
	7.2 Operating controls on the unit.....	33
	7.3 Menu diagram.....	36
	7.4 Functions in DMX mode.....	37

8	Technical specifications.....	39
9	Plug and connection assignments.....	40
10	Troubleshooting.....	41
11	Cleaning.....	43
12	Protecting the environment.....	44

1 General notes

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

1.1 Further information

On our website (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'*.

Cross-references




References to other locations in this manual are identified by an arrow and the specified page number. In the electronic version of the manual, you can click the cross-reference to jump to the specified location.

Example: See [↪](#) *'Cross-references'* on page 7.

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
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
 A yellow triangular warning sign with a black border and a black lightning bolt symbol in the center, indicating high voltage.	Warning – high-voltage.
 A yellow triangular warning sign with a black border and a black symbol of a person standing on a suspended platform or load, indicating a suspended load.	Warning – suspended load.
 A yellow triangular warning sign with a black border and a black exclamation mark in the center, indicating a general danger zone.	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used as an electronic illumination effect using LED technics. The device is designed for professional use and is not suitable for use in households. 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.

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



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.



WARNING!

Incorrect handling of lithium batteries can result in injury

In the event of a short circuit, overheating or mechanical damage, lithium batteries can cause severe injuries.

Follow the advice on the correct handling of lithium batteries in the present section.



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.



NOTICE!

Risk of fire due to incorrect polarity

Incorrectly inserted batteries may destroy the device or the batteries.

Ensure that proper polarity is observed when inserting batteries.



NOTICE!

Possible damage by leaking batteries

Leaking batteries can cause permanent damage to the device.

Take batteries out of the device if it is not going to be used for a longer period.



NOTICE!

Possible staining

The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains.

In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.



NOTICE!

Possible damage due to incorrect storage

Deep discharge can cause batteries to become permanently damaged or lose some of their capacity.

Before prolonged rest periods, charge the batteries to around 50 % of their capacity and then switch the equipment off. Store the equipment at a temperature between 10 °C and 32 °C in as dry an environment as possible. During extended storage periods, charge the batteries to 50 % approximately every three months.

3 Features

Special features of this device:

- 3 four-colour LEDs (red, green, blue and white, 10 W each)
- Operable in stand-alone mode or DMX
- Control via DMX, via the supplied infrared remote control and via buttons and display on the unit
- Numerous pre-programmed mixed colours and effects
- Sound control via built-in microphone
- Can be mounted in 3-point trusses
- Battery or mains powered
- Suitable for use in clubs, bars, theatres, exhibitions, etc. or for mobile use

4 Installation

Unpack and carefully check that 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.



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

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 input or output to audio devices such as mixers or amplifiers.

Mounting options

You can install the device using a stand, as well as standing or hanging upside down. When in use, the device must be mounted at a solid surface or clamped to an approved truss. Use the threads provided for mounting.

Always work from a stable platform whenever installing, moving or servicing the unit. Block access under the work area.

The safety cable must be routed through the safety eyelet in the housing (↪ *Chapter 6 'Connections and controls' on page 27*).

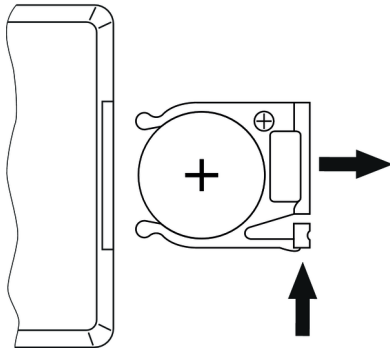


Please note that this device must not be connected to a dimmer.

Infra red sensor for the IR remote control signal.

The infrared receiver for the IR remote control signals is located between the LEDs on the front panel of the device. Make sure that it is not obstructed.

Inserting the battery into the remote control



Press the lock of the battery holder to the centre of the housing and pull out the battery holder like a drawer. Insert the battery. The battery is correct if the positive pole points to the housing base of the remote control. Slide the battery holder back into the remote until it clicks into place.

When shipping, the battery is already installed in the remote and protected against discharge by a transparent plastic foil. Remove the plastic foil prior to first use.

4.1 Dealing with lithium batteries

**WARNING!****Incorrect handling of lithium batteries can result in injury**

In the event of a short circuit, overheating or mechanical damage, lithium batteries can cause severe injuries.

Follow the advice on the correct handling of lithium batteries in the present section.

When handled correctly and appropriately lithium batteries pose no risk.

Store lithium batteries in a cool, dry place, ideally in the original packaging.

Store lithium batteries away from heat sources (e.g. radiators or sunlight). Lithium batteries are hermetically sealed. Never attempt to open a lithium battery.

If the battery housing is damaged small amounts of the electrolyte may leak out. If this should happen, seal the lithium battery in airtight packaging and wipe up the traces of electrolyte using absorbent paper towels. You must wear protective rubber gloves when doing so. Clean your hands and the affected surface thoroughly with cold water.

Never attempt to recharge non-rechargeable lithium batteries. When charging lithium batteries you must use a suitable charging device intended for the purpose.

Before disposing of the device remove the lithium batteries. Protect used lithium batteries against potential short circuits, e.g. by covering the poles with adhesive tape.

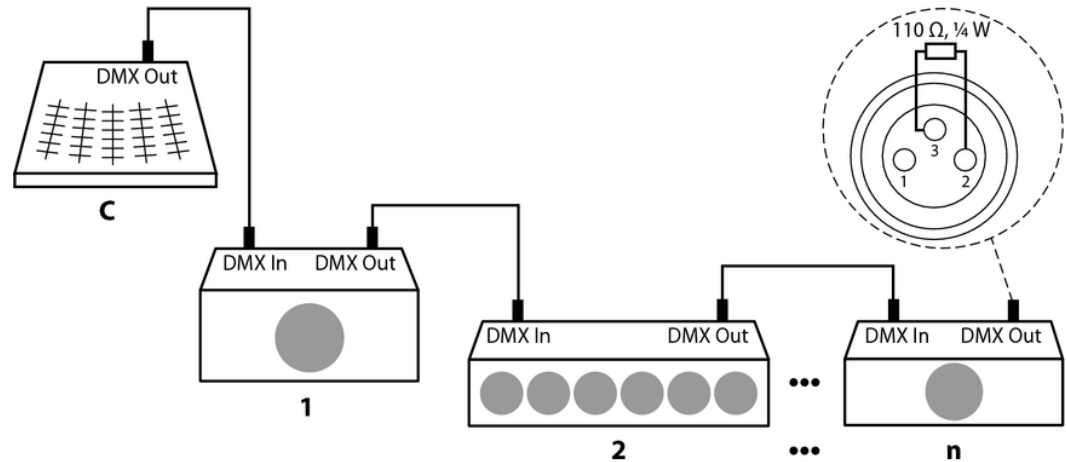
Only use powder extinguishers or other suitable extinguishing agents to extinguish a burning lithium battery.

5 Starting up

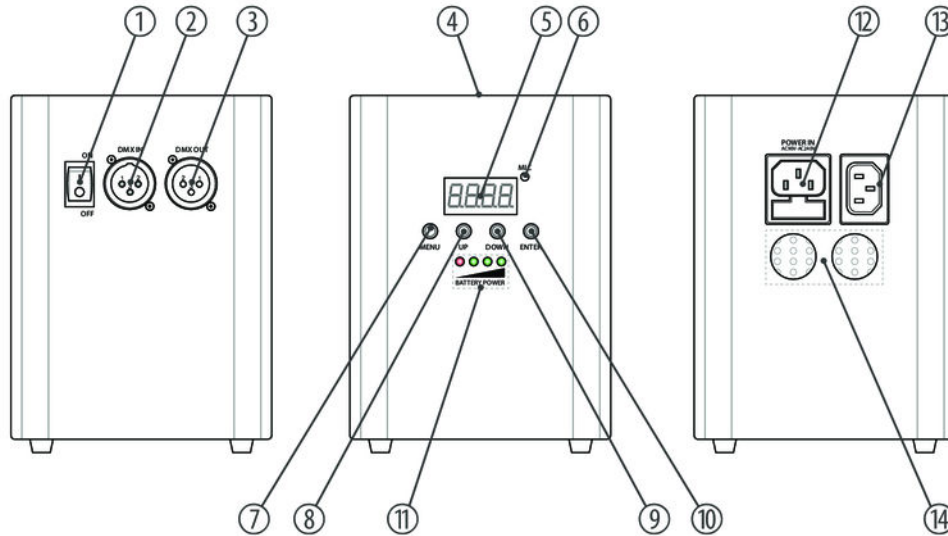
Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

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 ($110\ \Omega$, $\frac{1}{4}\ \text{W}$).



6 Connections and controls

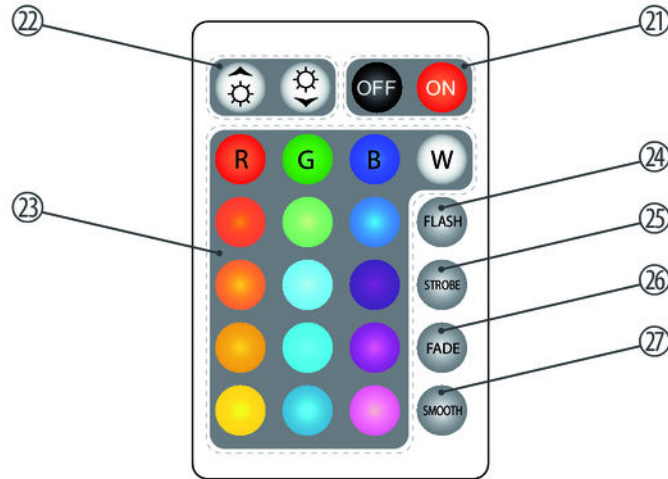


BTL-30 Battery Truss Light LED

1	<i>[ON / OFF]</i> Main switch. Turns the device on and off.
2	<i>[DMX IN]</i> DMX input.
3	<i>[DMX OUT]</i> DMX output.
4	Infrared receiver for the IR remote control signal.
5	Display.
6	<i>[MIC]</i> Microphone for sound control.
7	Button <i>[MENU]</i> Activates the main menu and moves between menu items. Closes an opened sub menu.

8, 9	Buttons <i>[UP]</i> , <i>[DOWN]</i> Toggles between the menu items of a menu level, increases or decreases the displayed value by one.
10	Button <i>[ENTER]</i> Selects an option of the respective operating mode, confirms the set value.
11	<i>[BATTERY POWER]</i> Remaining battery capacity display. When all the LEDs are on, the battery is fully charged. If only the red LED is on, the unit must be connected to the mains again to charge as soon as possible.
12	<i>[POWER IN]</i> IEC chassis plug for operating voltage supply.
13	<i>[POWER OUT]</i> IEC chassis socket for the power supply cable to the next unit.
14	Notches for threading a safety rope.

Remote control



21	<i>[ON]/[OFF]</i> Buttons to turn the device on and off.
22	Brightness control.
23	Buttons for colour selection. Use <ul style="list-style-type: none">■ <i>[W]</i> for white light,■ <i>[R]</i>, <i>[G]</i> or <i>[B]</i> for base colours red, green and blue,■ the coloured buttons for directly selecting a mixed colour.
24	<i>[FLASH]</i> Automatic change of all colours.
25	<i>[STROBE]</i> Stroboscope effect.

26	<i>[FADE]</i> Fade effect.
----	-------------------------------

27	<i>[SMOOTH]</i> Sound control.
----	-----------------------------------

7 Instructions for use

7.1 Starting up the device

Using the main switch, turn the device on. After a few seconds, the fan starts. The display shows the current operation mode.

7.2 Operating controls on the unit

Press *[MENU]* to activate the main menu and select an operating mode. Use *[UP]* and *[DOWN]* to change the respectively indicated value. The changes are applied immediately.

The set values are retained even when the device is disconnected from the mains power supply.

DMX mode, DMX address

Press *[MENU]* repeatedly until the display shows 'd.xxx'. The unit switches to "DMX" mode. You can now set the number of the first DMX channel used by the device (DMX address). Use *[UP]* and *[DOWN]* to select a value between 1 and 512 (the display shows 'd.001' ... 'd.512').

Ensure that this channel number fits to the configuration of your DMX controller.

Enable or disable remote control functions

Press *[MENU]* repeatedly until the display shows 'lr.xx'. With *[UP]* and *[DOWN]* you can now select between 'lr.on' (remote control functions enabled) and 'lr.oF' (remote control functions disabled). The changes are applied immediately.

"Colour change" mode

Press *[MENU]* repeatedly until the display shows 'P.xxx'. The unit displays 13 different colours in succession, with each colour displayed separately. With *[UP]* and *[DOWN]* you can select the progress speed from slow (display shows 'P.001') to fast (display shows 'P.255'). The changes are applied immediately.

"Auto colour mixing" mode

Press *[MENU]* repeatedly until the display shows 'L.xxx'. The unit displays 13 different colours in succession, with the colours gradually changing into one another. With *[UP]* and *[DOWN]* you can select the progress speed from slow (display shows 'L.001') to fast (display shows 'L.255'). The changes are applied immediately.

"Auto colour blend" mode

Press *[MENU]* repeatedly until the display shows 'E.xxx'. The unit displays 13 different colours in succession, with each colour displayed separately but dimmed before changing. With *[UP]* and *[DOWN]* you can select the progress speed from slow (display shows 'E.001') to fast (display shows 'E.255'). The changes are applied immediately.

Sound control

Press *[MENU]* repeatedly until the display shows 'SOUD'. The unit displays 13 different colours in succession; the colour change is controlled by the sound; each colour is displayed separately.

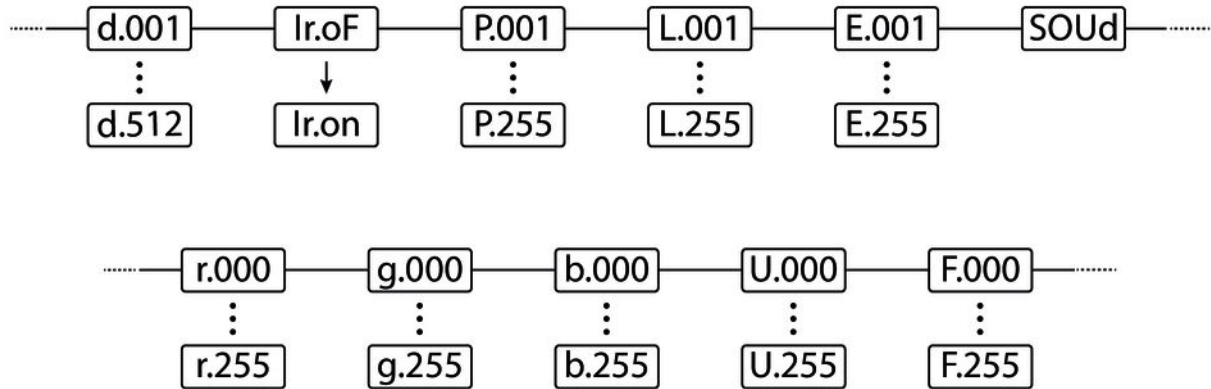
"Constant colour" mode

Press *[MENU]* repeatedly until the display shows 'r.xxx'. The unit now displays a mixed colour composed of red, green, blue and white. You can use *[UP]* and *[DOWN]* to set the intensity of each colour in the range from 0 to 255.

Menu item 'r.xxx' can be used to set the intensity of the colour red, menu item 'g.xxx' for the intensity of the colour green, menu item 'b.xxx' for the intensity of the colour blue and menu item 'u.xxx' for the intensity of the colour white.

Menu item 'F.xxx' can be used to turn on a flash effect for the constant mixed colour. Use *[UP]* and *[DOWN]* to select a speed between 0 (no flash effect) and 255 (flash effect with maximum speed).

7.3 Menu diagram



7.4 Functions in DMX mode

Channel	Value	Function
1	0 ... 255	Dimmer (0 % bis 100 %), if channel 6 = 0 ... 50
2	0 ... 255	Intensity Red (0 % bis 100 %), if channel 6 = 0 ... 50
3	0 ... 255	Intensity Green (0 % to 100 %), if channel 6 = 0 ... 50
4	0 ... 255	Intensity Blue (0 % bis 100 %), if channel 6 = 0 ... 50
5	0 ... 255	Intensity white (0 % bis 100 %), if channel 6 = 0 ... 50
6	Automatic programme	
	0 ... 50	Strobe effect, brightness adjustment by channel 1, colour selection by channel 2 ... 5
	51 ... 100	Automatic colour change
	101 ... 150	Automatic colour mixing
	151 ... 200	Automatic colour blending

Channel	Value	Function
	201 ... 255	Colour change with sound control
7	0 ... 255	Process speed, slow ... fast, if channel 6 = 0 ... 200

8 Technical specifications

LEDs	3 four-colour LEDs (red, green, blue and white, 10 W each)
Number of DMX channels	7
Beam angle	approx. 30 °
Operating supply voltage	100 ... AC 240 V ~, 50/60 Hz
	Built-in rechargeable battery (lithium-ion-battery, 11,1 V, 7200 mAh)
Fuse	5 mm × 20 mm, 5 A, fast blow
Operating time after a battery charging	4 h (four colours) ... 8 h (one colour)
Power consumption	30 W
Dimensions (W × H × D)	120 mm × 158 mm × 110 mm
Weight	1.5 kg

9 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')

10 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 input or 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
Device not working, no light	Check the mains connection and the main fuse.
Not responding to DMX controller	1. Check the DMX connectors and cables to see if they are properly linked.
	2. Check the address settings and the DMX polarity.
	3. Try using another DMX controller.
	4. Check whether the DMX cables run near or parallel to high-voltage cables that may cause damage or interference to the DMX interface circuit.
The built-in battery can no longer be recharged	Do not attempt to replace the built-in battery yourself. Please contact our service centre.

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

11 Cleaning

Optical lenses

Clean the optical lenses, that are accessible from the outside, regularly in order to optimize the 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 our lamp and lens cleaner (item no. 280122).
- Always dry the parts carefully.

Fan grids

The fan grids of the device must be cleaned on a regular basis to remove dust and dirt. Before cleaning, switch off the device and disconnect AC-powered devices from the mains. Use a lint-free damp cloth for cleaning. Never use solvents or alcohol for cleaning.

12 Protecting the environment

Disposal of the packaging material



For the 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 batteries



Batteries do contain some hazardous chemicals so they should not be thrown away with the normal household waste. They should be returned to the manufacturer for disposal or recycled elsewhere in accordance with your local regulations.

Remove lithium batteries from the device before disposal. Protect used lithium batteries against short circuit, for example by taping the poles.

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.



Musikhaus Thomann · Hans-Thomann-Straße 1 · 96138 Burgebrach · Germany · www.thomann.de