



FS-x350 LED Follow Spot

follow spot



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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.

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'.

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
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 – dangerous optical radiation.
	Warning – suspended load.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended for use as an electronic lighting effect by means of LED technology. 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.

Extend the life of the device by regular breaks in operation and avoid switching it on and off frequently. This device is not suitable for continuous use.

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.



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. Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures). Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction.

- !** **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!**
Possible damage due to installation of a wrong fuse
- The use of different types of fuses can cause serious damage to the unit. Fire hazard! Only fuses of the same type may be used.

3 Features

The follow spot is particularly suitable for professional lighting tasks and is recommended for distances of up to 30 meters.

Special features of the device:

- Control via DMX (6 channels) and via buttons and display on the unit
- Control of iris, dimmer and strobe via fader on the device
- Adjustable fade time, (0.5 s to 30 s)
- Master / Slave function
- Colour wheel with 5 colour filters
- 5 colour correction filters selectable via buttons from 2700 K to 8000 K
- Selectable response behaviour of the LED between "halogen" and "LED"
- Manual focus adjustable from soft to sharp spot
- Electronic shutter, shutter frequency: 0...20 Hz
- Stepless iris from 5...100%
- 4 meter power cord included

For technological reasons, the light output of LEDs decreases over their lifetime. This effect increases with higher operating temperature. You can extend the service life of the illuminants by providing adequate ventilation and operating the LEDs with the lowest possible brightness.

4 Installation

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.

You can install the unit on a follow spot tripod, on the ceiling or a crossbeam. Mounting bracket included.

**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 light output and the illuminated surface must be more than 1.5 m (19.7in).

Provide 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.



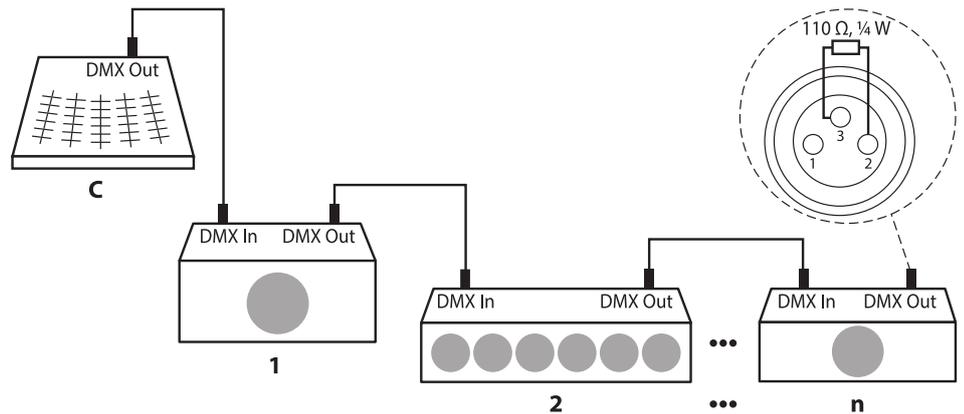
Please note that this device must not be connected to a dimmer.

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 Ω, ¼ W).



DMX indicator

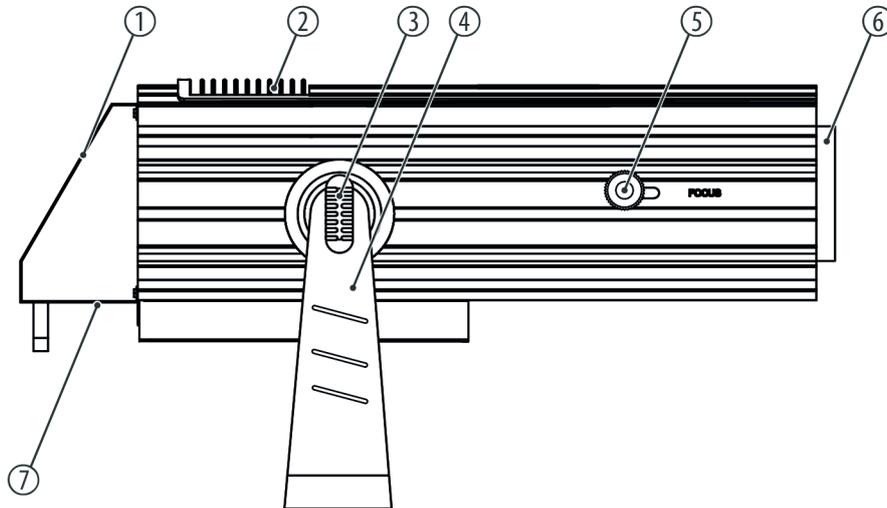
When the device and the DMX controller are operational, the DMX indicator in the display shows that a DMX signal is being received on the input.

Connections in 'Master / Slave' mode

When you configure a group of devices in 'Master / Slave' mode, the first device controls the others and allows an automatic and synchronized show. This feature is especially useful to start a show without much programming. Connect the DMX output of the master unit to the DMX input of the first slave unit. Then connect the DMX output of the first slave unit to the DMX input of the second slave unit and so on.

6 Connections and controls

Righthand view



1 Operating panel on the rear side of the unit

2 Ventilation opening

3 Locking screw for the mounting bracket

4 Mounting bracket

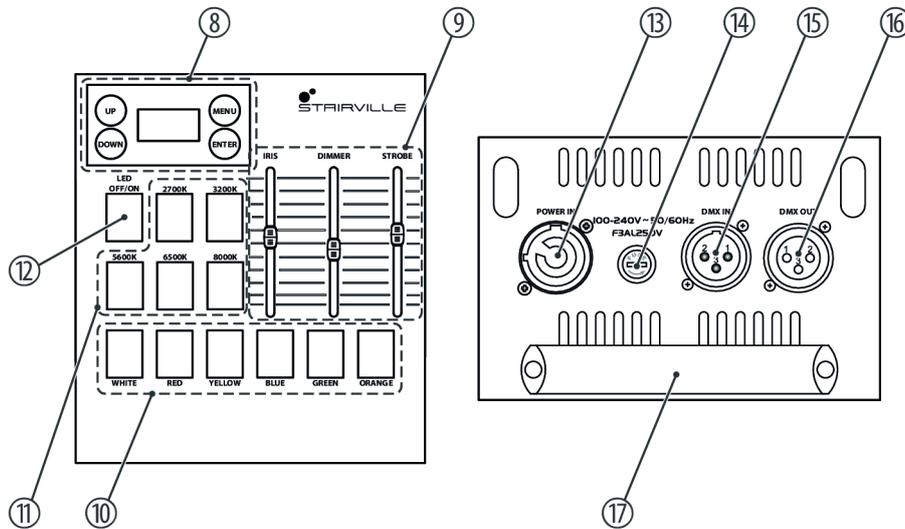
Steplessly adjustable mounting bracket for installing the unit on a follow spot tripod stand. The bracket can be mounted rotated by 180 degrees to attach the unit to the ceiling or a crossbeam.

5 Adjusting screw for the focus

6 Light aperture

7 Connections on the bottom of the device

Rear and bottom side



8	Display	
	[MENU]	Opens the main menu. Exits a submenu.
	[ENTER]	Confirms a selected value.
	[UP]	Increases the displayed value by one.
	[DOWN]	Decreases the displayed value by one.
9	Controller for setting the lighting effects	
	[IRIS]	Controller for adjusting the iris diaphragm. Steplessly adjusts the diameter of the light beam.
	[DIMMER]	Controller to increase or decrease the brightness.
	[STROBE]	Controller for setting the strobe effect from 0...20 Hz
10	Colour selection buttons	
	[WHITE], [RED], [YELLOW], [BLUE], [GREEN], [ORANGE]	Selects one of the five preset colours or white from the colour wheel.
11	Colour temperature selection buttons	
	[2700K], [3200K], [5600K], [6500K], [8000K]	Selects the colour temperature 2700 K (warm white), 3200 K, 5600 K, 6500 K or 8000 K (cold white).
12	[LED OFF/ON]	Enables or disables the LED.
13	[POWER IN]	Lockable input socket (Power Twist) for powering the device
14	Fuse holder	
15	[DMX IN]	DMX input, designed as 3-pin XLR chassis-mounted plug

16	<i>[DMX OUT]</i>	DMX output, designed as 3-pin XLR chassis-mounted coupling
17	Swivel bracket	

7 Operating

7.1 Main menu

Starting the device

Connect the device to the power grid. The display indicates a system reset. The device is then ready for use.

The device is controlled using the buttons and faders.

Navigating the menu

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* to select a submenu or value.
3. ➤ When the display shows the desired submenu or value, press *[ENTER]*.
⇒ The submenu opens or the new value is confirmed.
4. ➤ Press *[MENU]* to return to the parent menu level.

DMX address

This setting is only relevant if the device is controlled via a DMX controller.

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'DMX-Address' and confirm the selection with *[ENTER]*.
3. ➤ Press *[UP]* or *[DOWN]* to select a value between '1' and '512' for the desired DMX address and confirm the selection with *[ENTER]*.

Make sure that this number matches the configuration of your DMX controller. Since the device uses 6 DMX channels, the highest usable DMX start address is 507.

Slave function

This setting is only relevant if the device is not controlled via DMX.

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Slave' and confirm the selection with *[ENTER]*.
3. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Yes' and confirm the selection with *[ENTER]*.
⇒ The device is in Slave mode. With correct cabling, it behaves exactly like the controlling master device.
4. ➤ Press *[UP]* or *[DOWN]* until the display shows 'No' and confirm the selection with *[ENTER]*.
⇒ The device is not in Slave mode.

Operating hours display

1. ➤ Press *[MENU]*.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Fixture Hours' and confirm the selection with *[ENTER]*.
3. ➤ Press *[UP]* or *[DOWN]* until the display shows the desired submenu and confirm the selection with *[ENTER]*.
4. ➤ Press *[UP]* or *[DOWN]* to select the desired value and confirm the selection with *[ENTER]*.

Submenu	Value	Function
'Power On Time'	'Total'	Shows the total number of hours that the device was connected to the power supply.
	'Resetable'	Shows the hours that the device has been connected to the power supply since the last reset.
'Led On Time'	'Total'	Displays the total number of hours the LED has been on.
	'Resetable'	Shows the hours that the LED has been on since the last reset.

Backlight of the display

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Display Backlight' and confirm the selection with *[ENTER]*.
3. ➤ Press *[UP]* or *[DOWN]* until the display shows 'On' and confirm the selection with *[ENTER]*.
 - ⇒ The backlight of the display is activated.
4. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Off' and confirm the selection with *[ENTER]*.
 - ⇒ The backlight of the display goes out after one minute.

Behaviour on DMX signal failure

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'DMX Fail' and confirm the selection with *[ENTER]*.

3. ➤ Press [UP] or [DOWN] to select the desired submenu and confirm the selection with [ENTER].

Submenu	Function
'Hold'	If the DMX control fails, the last setting is retained.
'Blackout'	If the DMX control fails, the device is blacked out.
'Emergency Light'	If the DMX control fails, an emergency Light kicks in.

Fade time setting

The set fade time affects the push button [LED OFF/ON].

1. ➤ Press [MENU] to activate the main menu.
2. ➤ Press [UP] or [DOWN] until the display shows 'Fade Time' and confirm the selection with [ENTER].
3. ➤ Press [UP] or [DOWN] to select the desired value between '0.5 s' and '30 s' and confirm the selection with [ENTER].

Setting the dimmer curve

1. ➤ Press [MENU] to activate the main menu.
2. ➤ Press [UP] or [DOWN] until the display shows 'Dimmer Curve' and confirm the selection with [ENTER].
3. ➤ Press [UP] or [DOWN] to select the desired submenu and confirm the selection with [ENTER].

Submenu	Function
'Linear'	Linear course
'Exponential'	Exponential course
'Logarithmic'	Logarithmic course
'S Curve'	S-curve shaped course

Dimmer response

1. ➤ Press [MENU] to activate the main menu.
2. ➤ Press [UP] or [DOWN] until the display shows 'Dimmer Response' and confirm the selection with [ENTER].
3. ➤ Press [UP] or [DOWN] until the display shows the submenu 'LED' and confirm the selection with [ENTER].
 - ⇒ The dimmer setting for LED is activated.
4. ➤ Press [UP] or [DOWN] until the display shows the submenu 'Halogen' and confirm the selection with [ENTER].
 - ⇒ The imitation of the dimming behaviour for incandescent light is activated.

Key lock

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'AutoLock' and confirm the selection with *[ENTER]*.
3. ➤ Press *[UP]* or *[DOWN]* until the display shows the submenu 'On' and confirm the selection with *[ENTER]*.
 - ⇒ The key lock is activated. All buttons have no function after 60 seconds. The display shows 'Locked'. To cancel the key lock, press simultaneously *[UP]* and *[DOWN]* for 5 seconds.
4. ➤ Press *[UP]* or *[DOWN]* until the display shows the submenu 'Off' and confirm the selection with *[ENTER]*.
 - ⇒ The key lock is deactivated.

Device temperature

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Temperature' and confirm the selection with *[ENTER]*.
 - ⇒ The current LED temperature is displayed.

Firmware version

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Firmware' and confirm the selection with *[ENTER]*.
 - ⇒ The current firmware version is displayed.

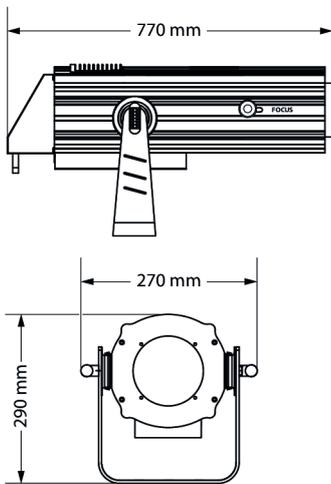
Reset

1. ➤ Press *[MENU]* to activate the main menu.
2. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Reset' and confirm the selection with *[ENTER]*.
3. ➤ Press *[UP]* or *[DOWN]* until the display shows 'Yes' and confirm the selection with *[ENTER]*.
 - ⇒ The device is reset to factory defaults after 5 seconds. To cancel the process, press any key within 5 seconds.
4. ➤ Press *[UP]* or *[DOWN]* until the display shows 'No' and confirm the selection with *[ENTER]*.
 - ⇒ The device is not reset to factory default settings.

7.2 Functions in DMX mode

Channel	Value	Function
1	Colour selection	
	000...015	White
	016...039	White and red
	040...063	Red
	064...087	Red and green
	088...111	Green
	112...135	Green and yellow
	136...159	Yellow
	160...183	Yellow and blue
	184...207	Blue
	208...231	Blue and orange
	232...255	Orange
2	Colour temperature	
	000...020	8000 K
	021...049	6500 K
	050...101	5600 K
	102...152	3200 K
	153...203	2700 K
	204...255	8000 K
3	Iris	
	000...255	Iris: adjusts the diameter of the light beam, from closed to open
4	Dimmer	
	000...255	Dimmer, increasing intensity
5	Strobe effect	
	000...255	Strobe effect, increasing speed from 0...20 Hz
6	Reset	
	000...199	No function
	200...239	Reset. The device is reset to factory default settings.
	240...255	No function

8 Technical specifications



Light source	1 × LED, 300 W	
Light source properties	Colour temperature	8000 K
Optical properties	Beam angle	10°
Control	DMX	
	Buttons, faders and display on the unit	
Number of DMX channels	6	
Input connections	Voltage supply	Lockable input socket (Power Twist)
	DMX control	XLR chassis socket, 3-pin
Output connections	DMX control	XLR chassis socket, 3-pin
Power consumption	350 W	
Operating supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 3 A, 250 V, fast-acting	
Protection class	IP20	
Mounting options	hanging, standing	
Dimensions (W × H × D)	770 mm × 270 mm × 290 mm	
Weight	11.3 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non-condensing)

Further information

Illuminant	LED
Incl. illuminant	Yes
Dimmer	Yes
Iris	Yes
Colour changer	Yes

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
The unit does not work, no light, the fan does not run	Check the mains connection and the main fuse.
No response to the DMX controller	1. Check the DMX connectors 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.

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 of any contamination, such as dust, etc. on a regular basis. Before cleaning, switch off the device and disconnect mains-operated devices from the mains. Only use pH-neutral, solvent-free and non-abrasive cleaning agents. Clean the unit with a slightly damp lint-free cloth.

12 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.

