VARYTEC

Colors StarBar 12

User manual

LED bar

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12.02.2020, ID: 472657

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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'*.

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 – hot surface.

Warning signs	Type of danger
	Warning – dangerous optical radiation.
	Warning – suspended load.
	Warning – danger zone.

2 Safety

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 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!

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.

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!

Risk of burns

The surface of the device can become very hot during operation.

Do not touch the device with bare hands during operation, and after switching off wait for at least 15 minutes.

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!

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!

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!

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

Special features of the device:

- LED-Bar with 12 × WW LED and 12 × RGB segment
- Ideal as an eye-catcher on stages and in night clubs
- Control via DMX (4 different modes) and via buttons and display on the unit
- Built-in automatic show programmes
- Strobe effect
- Master / Slave operation
- Sound control via built-in microphone
- Static colours

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.

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!

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 unit in hanging or standing position. When in use, the device must always be attached to a solid surface or an approved truss. Use the openings provided on the two-piece bracket for attaching.

Always work from a stable platform whenever installing, moving or servicing the unit. In doing so, the area underneath the unit must be cordoned off.

The safety cable must be attached to the bracket.

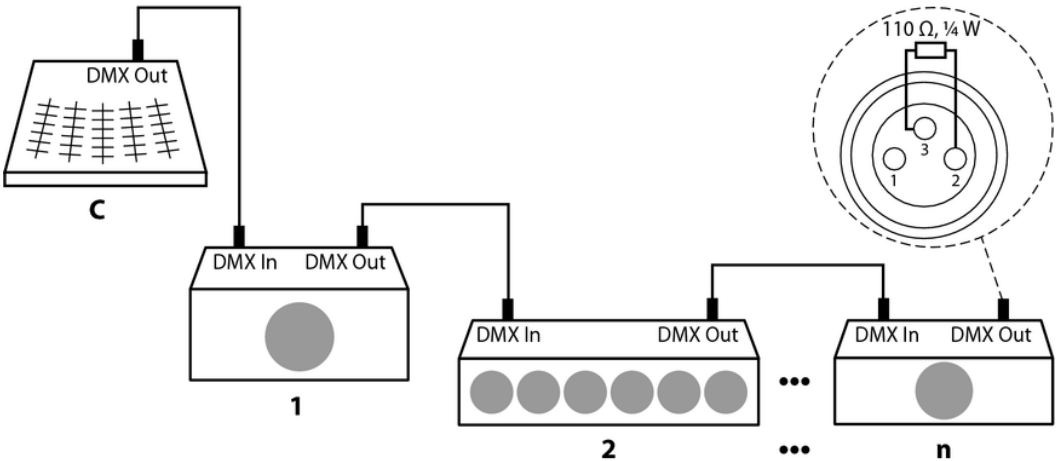
Please note that this device must not be connected to a dimmer.

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

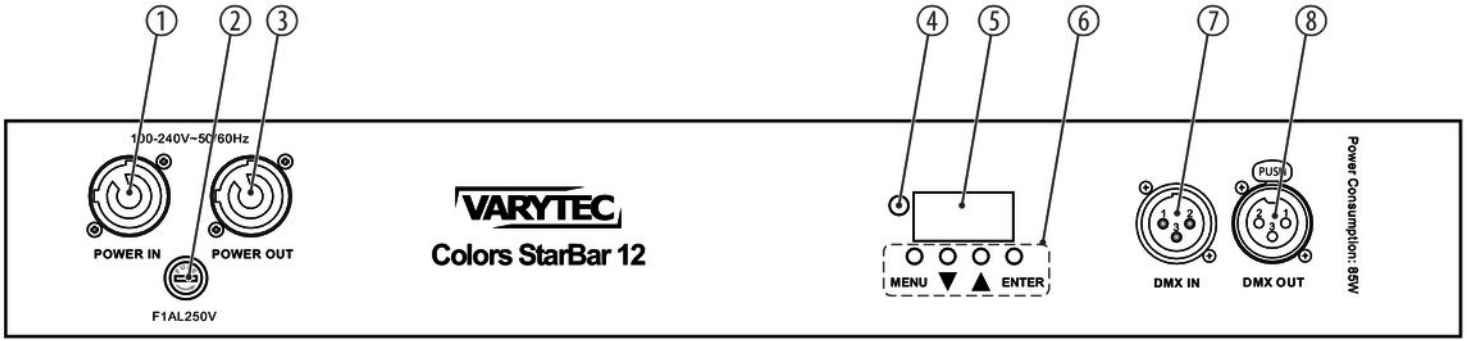
Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor (110 Ω, ¼ W).



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 controls



1	*[POWER IN]* Lockable input socket (Power Twist) for powering the device
2	*[F1AL250V]* Fuse
3	*[POWER OUT]* Lockable output socket (Power Twist) for powering further devices
4	Built-in microphone
5	Display
6	Operating buttons
	[MENU] Activates the main menu and toggles between menu items. Closes an opened submenu
	▲ / ▼ Toggles between the menu items of a menu level, increases or decreases the displayed value by one

	[ENTER] Selects an option of the respective operating mode, confirms the set value
7	*[DMX IN]* DMX input
8	*[DMX OUT]* DMX output

7 Operating

7.1 Starting the device

Connect the device to the power supply to start operation. After a few seconds, the display indicates that a reset is in progress. The device is then ready for use.

7.2 Main menu

Press *[MENU]* to activate the main menu and select an operating mode or to return to the main menu at any time. Use ▲ / ▼ to change the respectively displayed value. As long as the display is flashing the currently displayed value can be changed. Press *[ENTER]* to apply the current setting. After 5 seconds, the active operating mode is displayed.

If you do not press any key for about 20 seconds, the display turns off. The set values are retained even when the device is disconnected from the mains power supply.

Operating mode 'DMX'

This setting is only relevant when the device is controlled via DMX.

- Press *[MENU]* repeatedly until the display shows *'Addr'*. Press *[ENTER]*.
  Use ▲ / ▼ to select a DMX address in the range from *'A001'* … *'A512'* and confirm with *[ENTER]*.
- Press *[MENU]* repeatedly until the display shows *'ChNd'*.
  Use ▲ / ▼ to select a DMX mode (*'6Ch'*, *'8Ch'*, *'12Ch'* or *'52Ch'*) and confirm with *[ENTER]*.

DMX mode	Highest possible DMX address
6-channel	507
8-channel	505
12-channel	501
52-channel	461

Master/slave mode

This setting is only relevant if the device is serving as Slave in a Master / Slave configuration and is not controlled via DMX.

Press *[MENU]* repeatedly until the display shows *'SLNd'*. Press *[ENTER]*. *'MASt'* appears in the display. Use ▲ / ▼ to select the *'SL 1'* option to configure the device as Slave. Confirm with *[ENTER]*.

Operating mode 'Sound control'

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

Press *[MENU]* repeatedly until the display shows *'SoUn'*. Press *[ENTER]*.

The currently selected show flashes in the display, e.g. *'Su 8'*. Press *[ENTER]*. Now you can select another preprogrammed show. Use ▲ / ▼ to select a value between *'Su 0'* and *'Su59'*. Confirm with *[ENTER]*. Now *'SoUn'* appears in the display again.

To set the sensitivity of the built-in microphone for sound control, press *[ENTER]*. Use ▲ / ▼ to select the *'SeXX'* option (the currently set sensitivity is displayed) and press *[ENTER]*. Now use ▲ / ▼ to select a value between 0 (low sensitivity) and 99 (high sensitivity), the display shows *'Se00'* … *'Se99'*. Confirm with *[ENTER]*.

'Automatic mode'

A preprogrammed automatic show can only be activated when the unit is operating in stand-alone mode or as master in a master / slave combination. This setting is only relevant if the device is not controlled via DMX.

Press *[MENU]* repeatedly until the display shows *'Auto'*. Press *[ENTER]*. Now you can select one of the preprogrammed automatic shows. Use ▲ / ▼ to select a value between 0 and 59 (display shows *'Au 0'* … *'Au59'*). Press *[ENTER]*.

To set the speed of the selected automatic show, use ▲ / ▼ to select a value between 1 (slow) and 9 (fast) (display shows *'SP 1'* … *'SP 9'*). Confirm with *[ENTER]*.

Constant unicoloured pattern

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

Press *[MENU]* repeatedly until the display shows *'CoLo'*. Press *[ENTER]*.

Use ▲ / ▼ to choose from the following options:

Display	Meaning
'red'	Red
'Gree'	Green
'bLue'	Blue
'Uhlt'	White

Manual dimmer

Use *'Manu'* to manually dim individual colours.

Press *[MENU]* repeatedly until the display shows *'Manu'*. Press *[ENTER]*.

Use ▲ / ▼ to select the desired colour; display shows *'red'*, *'Gree'*, *'bLue'* and *'UhIt'*. Confirm with *[ENTER]*.

Use ▲ / ▼ to select the desired intensity in range from *'000…255'*. Confirm with *[ENTER]*.

Display setting

Use *'dISP'* to rotate the display by 180°.

Press *[MENU]* repeatedly until the display shows *'dISP'*. Press *[ENTER]*.

The *'dISP'* display flashes. Use ▲ / ▼ to select the *'dSIP'* option to rotate the display by 180°. Confirm with *[ENTER]*.

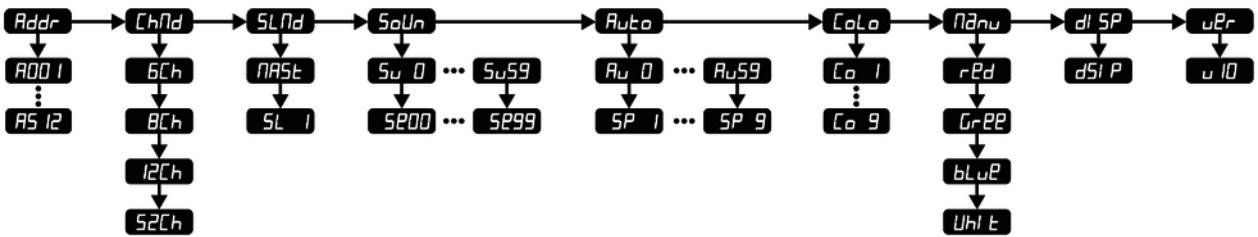
Software version

Use *'ver'* to display the software version.

Press *[MENU]* repeatedly until the display shows *'ver'*. Press *[ENTER]*.

The software version appears in the display, e.g. *'v10'*.

7.3 Menu overview



7.4 Functions in 6-channel DMX mode

Channel	Value	Function
1	0…255	Intensity Red (0 % to 100 %)
2	0…255	Intensity Green (0 % to 100 %)
3	0…255	Intensity Blue (0 % to 100 %)
4	0…255	Intensity white (0 % to 100 %)
5	0…7	No function
	8…12	Colour change 1
	13…16	Colour change 2
	17…20	Colour change 3
	21…24	Colour change 4
	…	…
	227…247	Colour change 59

Channel	Value	Function
	248…255	Sound-controlled run
6	0…255	Speed increasing, only if channel 5 = 8…247

7.5 Functions in 8-channel DMX mode

Channel	Value	Function
1	0…255	Intensity (0 % to 100 %)
2	0…255	Strobe effect
3	0…255	Intensity Red (0 % to 100 %)
4	0…255	Intensity Green (0 % to 100 %)
5	0…255	Intensity Blue (0 % to 100 %)
6	0…255	Intensity white (0 % to 100 %)
7	0…7	No function
	8…12	Colour change 1
	13…16	Colour change 2
	17…20	Colour change 3
	21…24	Colour change 4

Channel	Value	Function
	…	…
	227…247	Colour change 59
	248…255	Sound-controlled run
8	0…255	Speed increasing, only if channel 7 = 8…247

7.6 Functions in 12-channel DMX mode

Channel	Value	Function
1	0…255	Overall intensity (0 % to 100 %)
2	0…255	Strobe effect
3	0…255	Intensity red (0 % to 100 %), segment 1
4	0…255	Intensity green (0 % to 100 %), segment 1
5	0…255	Intensity blue (0 % to 100 %), segment 1
6	0…255	Intensity white (0 % to 100 %), segment 1
7	0…255	Intensity red (0 % to 100 %), segment 2
8	0…255	Intensity green (0 % to 100 %), segment 2
9	0…255	Intensity blue (0 % to 100 %), segment 2
10	0…255	Intensity white (0 % to 100 %), segment 2
11	0…7	No function

Channel	Value	Function
	8…12	Colour change 1
	13…16	Colour change 2
	17…20	Colour change 3
	21…24	Colour change 4
	…	…
	227…247	Colour change 59
	248…255	Sound-controlled run
12	0…255	Speed increasing, only if channel 7 = 8…247

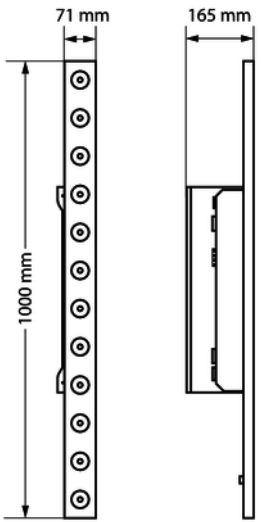
7.7 Functions in 52-channel DMX mode

Channel	Value	Function
1	0…255	Overall intensity (0 % to 100 %)
2	0…255	Strobe effect
3	0…255	Intensity red (0 % to 100 %), segment 1
4	0…255	Intensity green (0 % to 100 %), segment 1
5	0…255	Intensity blue (0 % to 100 %), segment 1
6	0…255	Intensity white (0 % to 100 %), segment 1
7	0…255	Intensity red (0 % to 100 %), segment 2
8	0…255	Intensity green (0 % to 100 %), segment 2
9	0…255	Intensity blue (0 % to 100 %), segment 2
10	0…255	Intensity white (0 % to 100 %), segment 2
11	0…255	Intensity red (0 % to 100 %), segment 3

Channel	Value	Function
12	0…255	Intensity green (0 % to 100 %), segment 3
13	0…255	Intensity blue (0 % to 100 %), segment 3
14	0…255	Intensity white (0 % to 100 %), segment 3
…	…	…
43	0…255	Intensity red (0 % to 100 %), segment 11
44	0…255	Intensity green (0 % to 100 %), segment 11
45	0…255	Intensity blue (0 % to 100 %), segment 11
46	0…255	Intensity white (0 % to 100 %), segment 11
47	0…255	Intensity red (0 % to 100 %), segment 12
48	0…255	Intensity green (0 % to 100 %), segment 12
49	0…255	Intensity blue (0 % to 100 %), segment 12
50	0…255	Intensity white (0 % to 100 %), segment 12
51	0…7	No function

Channel	Value	Function
	8…12	Colour change 1
	13…16	Colour change 2
	17…20	Colour change 3
	21…24	Colour change 4
	…	…
	227…247	Colour change 59
	248…255	Sound-controlled run
52	0…255	Speed increasing, only if channel 51 = 8…247

8 Technical specifications



Light source	12 × WW beam LED, 3 W 72 × 5050-SMD-RGB-LED	
WW beam LED properties	Colour temperature	3050 K
	Colour rendering index	CRI, RA 80
Optical properties	Beam angle	3°
Control	DMX	
	Buttons and display on the unit	
Number of DMX channels	6, 8, 12, 52	
Input connections	Voltage supply	Lockable input socket (Power Twist)
	DMX control	XLR chassis plug, 3-pin
Output connections	Voltage supply	Lockable output socket (Power Twist)

	DMX control	XLR chassis plug, 3-pin
Power consumption	85 W	
Operating supply voltage	100 – 240 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Protection class	IP20	
Mounting options	hanging, standing	
Dimensions (W × H × D), with bracket	1000 mm × 71 mm × 165 mm	
Weight	3.3 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	50 %, non-condensing

Further information

Outdoor-ready	No
Colour mixture	WW / RGB
LED type	x-in-1 and uni-coloured LEDs
Fanless	Yes
Remote control	Not possible
Wireless DMX	No
LEDs individually controllable	Yes
Housing	Metal, black

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

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 main fuse.
No response to the DMX controller	1. When the display flashes, e.g. *'A001'*, no valid DMX signal is received. Check whether the DMX controller is switched on. Check the DMX connectors and cables for proper connection.
	2. If the display is not flashing but there is still no response, 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 a DMX interface circuit.

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.

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.