



  
STAIRVILLE

AF-180 LED Fogger  
Co2 FX  
fog machine

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

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# 1 General information

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](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.

### 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 8.

## 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>WARNING!</b>	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.
<b>CAUTION!</b>	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor 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 – flammable substances.
	Warning – hot surface.
	Warning – harmful or irritating substances.
	Warning – danger zone.

## 2 Safety instructions

### Intended use

This device is intended for generating artificial fog by evaporating the fog fluid with which it is filled, with an additional 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!**

**Risk of burns from flammable liquids**

The use of flammable liquids in this device may cause severe burns and damage to property.

Always use approved fog fluids. Never fill flammable liquids into the tank of the device.



### **WARNING!**

#### **Risk of burns**

The generated fog at the fog nozzle is hot and can cause burns. Occasionally hot fluid drops may escape from the nozzle.

The distance of persons and objects to the fog nozzle must be at least fifty centimetre (1.6 feet).

Do not touch the fog nozzle during and shortly after operation. It becomes very hot and may cause burns even several hours after switching off the device.



### **WARNING!**

#### **Risk of slipping caused by condensation**

Fog machines can produce condensation. Do not direct the fog to floors. Floors and surfaces can become slippery by condensed fog.

Check at regular intervals whether it is possible to walk on the floors without a slipping hazard, and, if necessary, remove the condensation.



**WARNING!**

**Health hazard caused by fog fluid handling**

Fog fluid does contain glycols complying with the regulations for foodstuffs. However, it may be harmful if swallowed.

Do not induce vomiting. Seek medical advice immediately. Keep fog fluid in a safe place. If the fog fluid comes into contact with eyes rinse thoroughly with water.



**CAUTION!**

**Possible respiratory problems**

The device can be operated safely only with the approved fog fluid. The use of other fluids can release toxic gases. Claims for damages caused by the use of non-approved fluids shall be excluded.

Do not create fog in closed or poorly ventilated areas.

Do not expose persons with health problems (such as allergic respiratory conditions, asthma) to artificial fog.



### **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!**

#### **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!**

**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.

### **General information about how to safely operate fog machines and hazers**

The device was designed for use in professional event technology and works reliably when used properly. Observe the following information:

- Follow all warnings in these operating instructions.
- Never leave the device running without supervision.
- The device is not suitable for use in private households or as a child's toy.
- Place the device on a stable, fire-proof basis that is at least twice as large as the device.
- Maintain a safety distance of 1 m to flammable materials.
- The device is not intended for suspended assembly (the so-called "flying operation").

- During operation, ensure that the visibility in the room does not fall below 2 m so that everyone in the room can still orient themselves safely.
- The haze or mist generated by the device may trigger smoke alarms.

### 3 Features

This fog machine is suitable for use in clubs, bars, discotheques and on stages.

Special features of the device:

- Coloured fog effects by integrated LEDs
- Control via DMX (7 channels)
- Manual control via wired and infrared remote control (included)
- Vertically and horizontally usable
- Suitable for mobile use due to compact design

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 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.

The device requires 20 cm clearance at the sides and above. Place the unit on a flat, stable surface. Mount the unit in a horizontal position. Maximum inclination shall not exceed 15°.

Insert the fog fluid container into the unit and then mount the supplied safety bracket on the device. To do so, unscrew the two bolts on the left and right of the opening for the fog fluid container from the housing. Put on the safety bracket and secure it with the two bolts on the housing ( ↺ *'Side view, device is lying'* on page 24).

## 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.



### **NOTICE!**

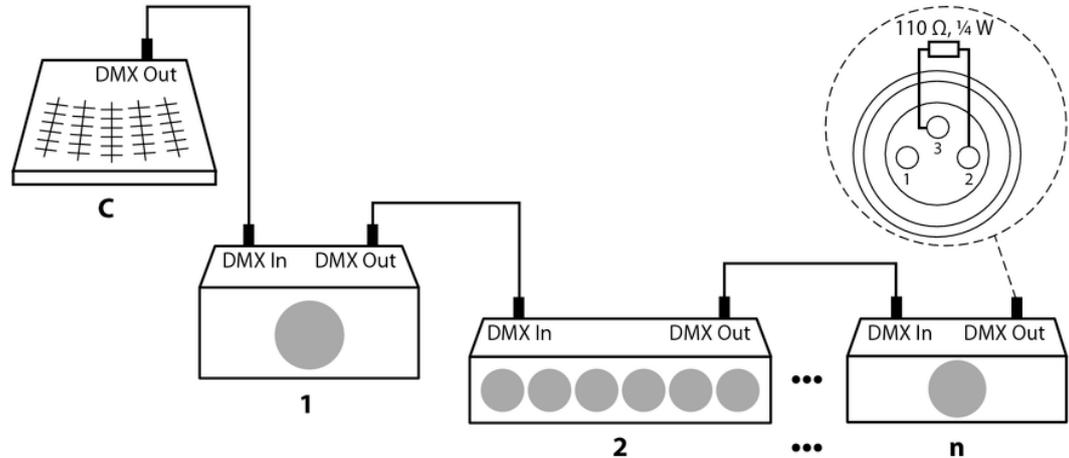
#### **Possible data transmission errors**

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.

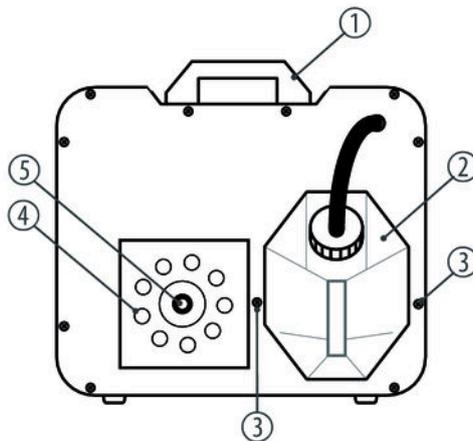
**Connections in DMX mode**

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



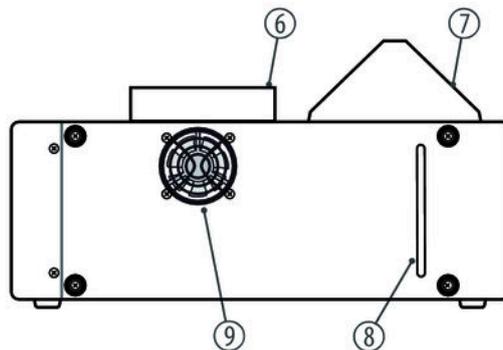
## 6 Connections and operating elements

Side view, device is lying



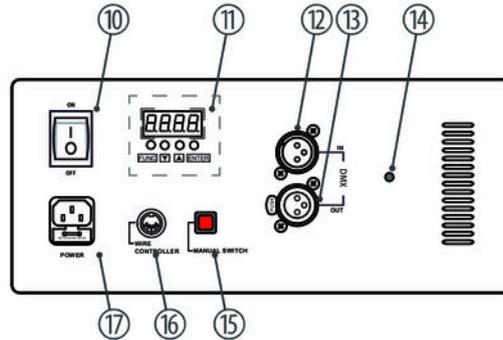
1	Carrying handle
2	Fog fluid container with screw-cap.
3	Fastening screws for the safety bracket of the fog fluid container.
4	9 × colour LEDs (3 × red, 3 × green, 3 × blue).
5	Fog nozzle.

### Bottom



- |   |   |
|---|---|
| 6 | Fog / light aperture.                       |
| 7 | Safety bracket for the fog fluid container. |
| 8 | Liquid level indicator.                     |
| 9 | Fan   |

Rear view device is lying



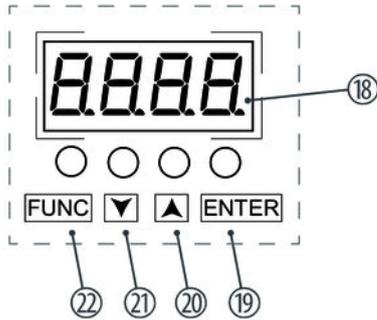
10 [ON | OFF]  
Main switch. Turns the device on and off.

11 Operating panel

12 [DMX IN]  
DMX input

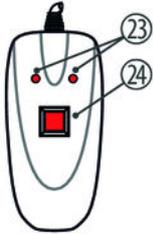
13	<i>[DMX OUT]</i> DMX output
14	<i>[MANUAL SWITCH]</i> Button for manually triggering the fog burst.
15	<i>[WIRE CONTROLLER]</i> Connection for the supplied wired remote control.
16	<i>[POWER]</i> Connection for the power supply.

**Operating panel**



18	Display
19	[ENTER] Button to select a menu option and to confirm the entered values.
20	▲ Key to page down in the menu system, and to increase the displayed value.
21	▼ Key to page up in the menu system, and to decrease the displayed value.
22	[FUNC] Button to open the menu control.

### Wired remote control

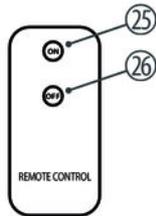


23 Standby indicators.

When the remote control is connected to the device, these two LEDs indicate that the unit has reached the operating temperature required for fog generation.

24 Button for manually triggering the fog burst.

### Infrared remote control



25 [ON]

Button for manually triggering the fog burst.

26 [OFF]

Button for manually triggering the fog burst.

## 7 Operating

### Filling the unit

**NOTICE!****Possible damages caused by unsuitable fog fluid**

Fog liquids not approved by the manufacturer may permanently damage the unit.

Only use the fog fluids listed on [www.thomann.de](http://www.thomann.de) and follow their instructions for use.

First, make sure the unit is disconnected from the mains.

Open the screw-cap of the liquid container and fill in the fog fluid. Make sure that no fog fluid is spilled or gets into the device. The easiest way is using a funnel. The container capacity is 2.5 litre.

Screw the cap firmly back on.

### Turning the unit on



#### **NOTICE!**

#### **Fire hazard**

Do not operate the machine unattended.

Connect the device to the mains power grid and turn it on with the main switch. During the warm-up time of about 3 minutes ( $\pm 30$  s) the display shows 'UP'. Once the device is operational, the display will change to 'rEAD'.

When the machine receives a DMX signal, the display shows the set DMX address, even during start-up and warm-up time. Then the unit does not respond to manual control commands, you only have the option to adjust the DMX address via the device menu.

In all modes, the maximum duration of a fog burst is 6 seconds, the charging time between two fog bursts is also about 6 seconds.

### Operation

Operation with an empty fluid container can lead to overheating and permanent damage of the pump. When operating, always ensure that there is sufficient fog fluid in the liquid container to avoid no-load running.

## Operating mode 'Manual control'

This mode can only be selected when no DMX controller is connected and turned on.

In this mode, the fog output can be triggered and deactivated using the *[MANUAL SWITCH]* or the remote control.

Using the *[MANUAL SWITCH]* on the device and the manual fog trigger button on the remote control ( ↪ 'Manual control via wired remote control' on page 35) to control the duration of the fog burst.

The colour effect can be adjusted via the menu of the device.

1. ➤ Press *[SET]* to confirm the selection.
2. ➤ Press the buttons *[FUNC]* or use the arrow buttons ▼ and ▲, until the display shows 'CoLo'.
3. ➤ Confirm with *[ENTER]*.  
⇒ The last set value 'Co1' ... 'Auto' is flashing in the display.
4. ➤ Select the desired colour setting with the arrow buttons ▼ and ▲ see following table.
5. ➤ Confirm the input with *[ENTER]*.

<b>Display</b>	<b>Colour setting</b>
'oFF'	LEDs off
'Co1'	Red steady light
'Co2'	Green steady light
'Co3'	Blue steady light
'Co4'	Red / green steady light
'Co5'	Red / blue steady light
'Co6'	Blue / green steady light
'Co7'	Red / green / blue steady light
'Auto'	Automatic colour change, all LEDs

### Manual control via wired remote control

If the device is not controlled by DMX you can trigger and regulate the fog output with the red push button on the remote control. When you release the button, or after about 6 seconds the device stops the fog output. After the charging time of about 6 seconds you can trigger another fog burst.

Connect the remote control to the connector socket *[WIRE CONTROLLER]* at the control panel of the device. Make sure that the two indicator LEDs on the remote control light up.

### Manual control via IR remote control

If the device is not controlled via DMX, you can control the fog output using the keys *[ON]* and *[OFF]* of the IR remote control. Press *[ON]* to trigger an even fog burst of maximum 6 seconds with maximum intensity. Press *[OFF]* to end the fog burst.

Activate the infrared port on the device.

1. ➤ Press *[FUNC]* to open the menu control.
2. ➤ Press the buttons *[FUNC]* or use the arrow buttons ▼ and ▲, until the display shows 'InFr'.
3. ➤ Confirm with *[ENTER]*.
4. ➤ Press the arrow keys ▼ und ▲ to change between 'on' (IR port on the device is turned on) and 'off' (IR port on the device is turned off).
5. ➤ Confirm the input with *[ENTER]*.

### Operating mode 'DMX'

Set the DMX address of the device using the menu control.

1. ➤ Press *[FUNC]* to open the menu control.
2. ➤ Press the buttons *[FUNC]* again or use the arrow buttons ▼ and ▲, until the display shows 'Addr'.
3. ➤ Confirm with *[ENTER]*.
  - ⇒ The last set value '1' ... '506' is flashing in the display.
4. ➤ Select the desired address with the arrow buttons ▼ and ▲.
5. ➤ Confirm the input with *[ENTER]*.

Make sure that this number matches the configuration of your DMX controller.

**DMX assignment**

<b>Channel</b>	<b>Value</b>	<b>Function</b>
1	Amount of fog	
	0...9	No fog output (0 %)
	10...255	Fog output (100 %)
2	Brightness of all LEDs	
	0...255	LEDs off to maximum brightness
3	Colour effect	
	0...20	All LEDs off
	21...35	Red steady light
	36...50	Green steady light
	51...65	Blue steady light
	66...80	Red / green steady light

Channel	Value	Function
	81...95	Red / blue steady light
	96...110	Blue / green steady light
	111...127	Red / green / blue steady light
	128...255	Automatic colour change, all LEDs, increasing speed
4	Strobe effect	
	0...9	Stroboscope effect off
	10...255	Stroboscope effect from slow to fast
5	Intensity colour effect red	
	0...255	Red LEDs off to maximum brightness when channel 3 ≤ 20
6	Intensity colour effect green	
	0...255	Green LEDs off to maximum brightness when channel 3 ≤ 20

Channel	Value	Function
7	Intensity colour effect blue	
	0...255	Blue LEDs off to maximum brightness when channel 3 ≤ 20

### Turning the unit off

Turn off the power using the main switch. Transport the device only when it is completely cooled down. To avoid leaking fog fluid during transport, you should transport the device only with empty fluid container.

## 8 Technical specifications

Fluid container capacity	2.5 l
Fluid consumption	approx. 40 ml / min
Warm-up time	3 min ( $\pm$ 30 s)
Heater power	820 W
For burst duration, max.	approx. 6 s
Charging time between fog bursts	approx. 6 s
Fog burst reach	3 m ( $\pm$ 30 cm)
LED configuration:	3 $\times$ red
	3 $\times$ green
	3 $\times$ blue
Operating supply voltage	230 V $\sim$ 50 Hz
Fuse	5 mm $\times$ 20 mm, 5 A, 250 V, fast-acting

Power consumption	850 W
Dimensions (W × H × D)	190 mm × 340 mm × 300 mm (15.35in. × 5.31in. × 15.55in.)
Weight	8.9 kg

### Environmental conditions

Temperature range	0 °C...40 °C
Relative humidity	50 %, non-condensing

## 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	Check the mains connection and the main fuse.
No haze output	<ol style="list-style-type: none"> <li>1. Check the fluid level in the fog container.</li> <li>2. Switch the device off and check the hose that leads into the fluid container for flow.</li> </ol>
No response to the DMX controller	<ol style="list-style-type: none"> <li>1. Check the address settings and the DMX polarity.</li> <li>2. Try using another DMX controller.</li> <li>3. 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.</li> </ol>

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at [www.thomann.de](http://www.thomann.de).

## 11 Cleaning



### NOTICE!

#### Possible damages caused by unsuitable cleaning agents

Cleaners not approved by the manufacturer may permanently damage the unit.

Only use the fog machine cleaners listed on [www.thomann.de](http://www.thomann.de) and follow their instructions for use.

Clean the appliance after every 30 operating hours, or if it was not in use for a longer period of time.

### Procedure

1. ➤ Make sure that the device is turned off, disconnected from the mains and completely cooled down.
2. ➤ Position the unit in a well ventilated place.
3. ➤ Insert the suction hose of the fog machine into the bottle with the fog machine cleaner.
4. ➤ Connect the device to the mains power grid and turn it on with the main switch.
5. ➤ Wait until the unit has reached the required operating temperature.

- 6.** ▶ Change to continuous operation and let the device produce fog for about 20 seconds.
- 7.** ▶ Insert the suction hose of the fog machine back into the fog fluid container and let the device again produce fog for about 20 seconds. This will rinse the lines.
  - ⇒ The cleaning is completed.

### 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 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 these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

### Disposal of batteries



Batteries must not be disposed of as domestic waste or thrown into fire. Dispose of the batteries according to national or local regulations regarding hazardous waste. To protect the environment, dispose of empty batteries at your retail store or at appropriate collection sites.

### 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 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.

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