



the
box pro

Achat 110 MA MKII
Achat 112 MA MKII
Achat 115 MA MKII

active speaker

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Table of contents

1	General information	4
	1.1 Further information.....	5
	1.2 Notational conventions.....	6
	1.3 Symbols and signal words.....	6
2	Safety instructions	9
3	Features	13
4	Installation	16
	4.1 Tips on handling speakers.....	18
	4.2 Hanging the speaker box.....	19
	4.3 Mounting bracket.....	19
5	Connections and operating elements	20
6	Technical specifications	26
7	Protecting the environment	35

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.

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.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.

Warning signs	Type of danger
 A yellow triangular warning sign with a black border. Inside the triangle, there is a black silhouette of a person standing next to a rectangular object (representing a load) that is suspended by a hook or cable.	Warning – suspended load.
 A yellow triangular warning sign with a black border. Inside the triangle, there is a large black exclamation mark.	Warning – danger zone.

2 Safety instructions

Intended use

This device is designed for sound reinforcement. 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 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.



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!

Consequences of faulty mounting

Faulty mounting may lead to lethal injuries or property damage. Please ensure that the norms and regulations valid in your country are always observed when mounting and operating your product. In Germany: DGUV rule 17 „Veranstaltungs- und Produktionsstätten für szenische Darstellung“ (event and production sites for stage presentations). Only expertly trained staff may mount speakers.



WARNING!

Risk of injury caused by falling objects

Portable PA systems should be secured from falling using two independently working devices, for example, safety ropes.



CAUTION!

Possible hearing damage

The device can produce volume levels that may cause temporary or permanent hearing impairment. Over an extended period of time, even levels that seem to be uncritical can cause hearing damage. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment. If this is not possible, keep a greater distance or use sufficient ear protectors.



CAUTION!

Risk of injury due to heavy weight

Due to the heavy weight of the device, at least two persons are required for transport and installation.



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.



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.

3 Features

Achat 110 MA MKII

Special features of the device:

- Active 2-way full-range speaker box with built-in crossover
- 10 inch Ferrit woofer and 1 inch compression driver (woofer with 3 inch voice coil)
- Output power: 140 W RMS, 550 W Peak
- 2 × XLR / 1/4" jack combo socket (mic / line input)
- 1 × XLR line output (mix)
- Switchable presets (bass boost / flat / 120 Hz HPF)
- 2-band EQ
- Lockable in and output socket (Power Twist)
- Black textured paint
- 36 mm pole mount flange
- M10 rigging points
- matching protective cover optionally available (item no. 243783)
- matching flight case optionally available (item no. 280588)
- developed in Germany

Achat 110 MA MKII Achat 112 MA MKII Achat 115 MA MKII

Achat 112 MA MKII

Special features of the device:

- Active 2-way full-range speaker box with built-in crossover
- 12 inch Ferrit woofer and 1.75 inch mid / high speaker (woofer with 3 inch voice coil)
- Output power: 350 W RMS, 1400 W Peak
- 2 × XLR / 1/4" jack combo socket (mic / line input)
- 1 × XLR line output (mix)
- Switchable presets (bass boost / flat / 120 Hz HPF)
- 2-band EQ
- Lockable in and output socket (Power Twist)
- Black textured paint
- 36 mm pole mount flange
- Aeroquip rail on the top side
- Attachment eyelet on the rear side
- matching protective cover optionally available (item no. 243017)
- developed in Germany

Achat 115 MA MKII

Special features of the device:

- Active 2-way full-range speaker box with built-in crossover
- 15 inch woofer and 3 inch Ferrit mid / high speaker
- Output power: 350 W RMS, 1400 W Peak
- 2 × XLR / 1/4" jack combo socket (mic / line input)
- 1 × XLR line output (mix)
- Switchable presets (bass boost / flat / 120 Hz HPF)
- 2-band EQ
- Lockable in and output socket (Power Twist)
- Black textured paint
- 36 mm pole mount flange
- Aeroquip rail on the top side
- Attachment eyelet on the rear side
- matching protective cover optionally available (item no. 249422)
- matching U bracket optionally available (item no. 258815)
- matching flight case optionally available (item no. 451589)
- developed in Germany

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.

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.



DANGER!

Electric shock caused by high voltages at the power amplifier output

The output voltages of modern high-performance amplifiers may result in death or serious injury.

Never touch the bare ends of loudspeaker cables when the amplifier is on.

**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!****Possible property damage by magnetic fields**

Loudspeakers produce a static magnetic field. Therefore, maintain an appropriate distance to devices that can be adversely affected or damaged by an external magnetic field.

**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.

4.1 Tips on handling speakers

We recommend you to set up the speakers in a way, that the sound signals can reach the audience unobstructedly. It will often be helpful to mount the speakers on tripods. Thus, the sound will be evenly spread with maximum range throughout the audience area.

Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

For optimum results both impedance and power handling of the speakers must match the requirements of the amplifier. Always follow the technical specifications of the speakers! The overall impedance of the connected loudspeakers must not exceed the minimum output impedance of the amp. The amp's max. RMS output power should be 50 % above the power handling capacity of the connected speakers.

If you notice distortion during operation, either the amp or the speaker is overloaded. This may permanently damage the amp or the speaker. Always reduce the volume when you hear distortion.

4.2 Hanging the speaker box

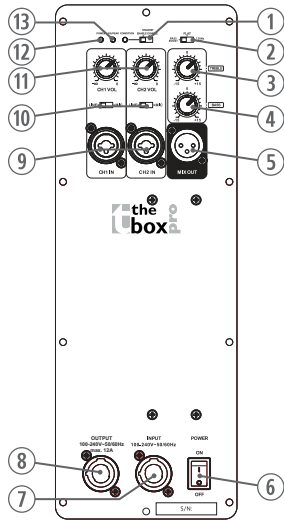
To hang the speaker box on special mounting devices (aka 'flying'), the top of the housing of Achat 112 and Achat 115 MA MKII offer built-in Aeroquip or fly tracks. In these tracks safety eyelets (double studs) can be screwed or latched. With the Achat 110 MA MKII, M10 flying points are available for suspension. Check the secure connection of the box with the respective suspension, before you use it in 'flying mode'.

4.3 Mounting bracket

Using the optional mounting brackets (U brackets) for vertical and horizontal mounting, the speaker can stably and securely mounted to the wall, the ceiling or a pipe clamp (half coupler), and, thus, secured to trusses.

5 Connections and operating elements

Achat 110 MA MKII



1 [STANDBY | CONDITION]

Slide switch to enable or disable the power saving mode.

If the speaker box is in power save mode and receives no signal for 60 minutes, it switches to standby mode. As soon as the unit receives a signal, it switches automatically back to normal mode.

The CONDITION LED lights up continuously in normal operation and turns off when the box - on activated power save mode - switches to standby mode.

2 [BASS BOOST | FLAT | 120Hz HPF]

Preset switch

[BASS BOOST]: Increasing the low frequencies.

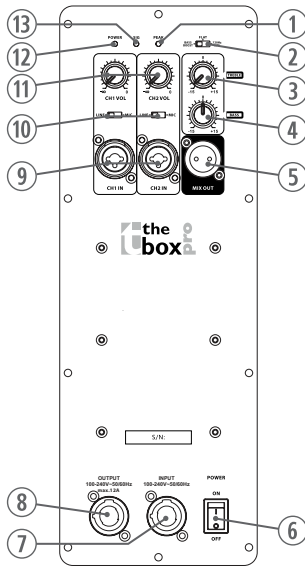
[FLAT]: Even frequency response.

[120Hz HPF]: Attenuation of frequencies below 120 Hz (high pass filter).

3	<i>[TREBLE]</i> Controller to increase or decrease the treble by up to 15 db.
4	<i>[BASS]</i> Controller to increase or decrease the bass by up to 15 db.
5	<i>[MIX OUT]</i> Line output for the mixed input signal from both channels.
6	<i>[POWER ON/OFF]</i> Use this mains switch to turn the device on or off.
7	<i>[INPUT]</i> Power Twist connector for powering the device.
8	<i>[OUTPUT]</i> Power Twist connector for powering another device.
9	<i>[CH1 IN CH2 IN]</i> Signal input, designed as XLR / ¼" jack combo socket.

10	<i>[LINE - MIC]</i> Switch for toggling the sensitivity of the respective input between microphone and line level.
11	<i>[CH1 VOL CH2 VOL]</i> Volume control for the respective channel.
12	<i>[POWER]</i> This LED lights up when the device is turned on.
13	<i>[SIG/PEAK]</i> This LED flickers or lights up green when a signal is present in at least one of the two channels. If the colour changes to red, this indicates that the permissible input level has been exceeded. Then reduce the volume in the relevant channel.

Achat 112 & 115 MA MKII



1	<i>[PEAK]</i> This LED indicates that the permissible input level has been exceeded. Then reduce the volume in the relevant channel.
2	<i>[BASS BOOST FLAT 120Hz HPF]</i> Preset switch <i>[BASS BOOST]</i> : Increasing the low frequencies. <i>[FLAT]</i> : Even frequency response. <i>[120Hz HPF]</i> : Attenuation of frequencies below 120 Hz (high pass filter).
3	<i>[TREBLE]</i> Controller to increase or decrease the treble by up to 15 db.
4	<i>[BASS]</i> Controller to increase or decrease the bass by up to 15 db.
5	<i>[MIX OUT]</i> Line output for the mixed input signal from both channels.

6	<i>[POWER ON/OFF]</i> Use this mains switch to turn the device on or off.
7	<i>[INPUT]</i> Power Twist connector for powering the device.
8	<i>[OUTPUT]</i> Power Twist connector for powering another device.
9	<i>[CH1 IN CH2 IN]</i> Signal input, designed as XLR / ¼" jack combo socket.
10	<i>[LINE - MIC]</i> Switch for toggling the sensitivity of the respective input between microphone and line level.
11	<i>[CH1 VOL CH2 VOL]</i> Volume control for the respective channel.

12 *[POWER]*

This LED lights up when the device is turned on.

13 *[SIG]*

This LED lights up when a signal is present in at least one of the two channels.

6 Technical specifications

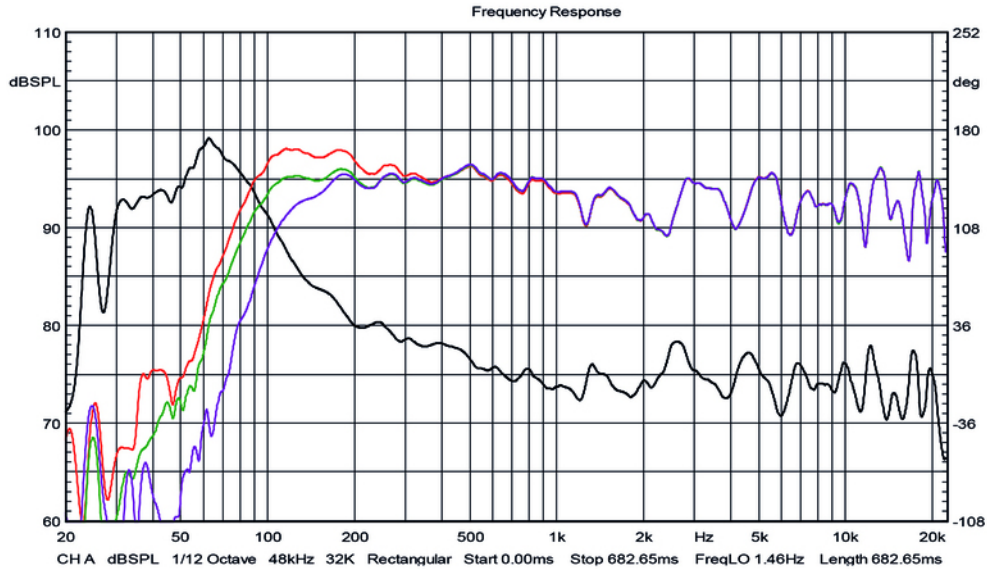
Achat 110 MA MKII

Speaker		1 × 10" ferrite woofer, 1" compression driver
Input connections	Mic/Line	2 × XLR / 1/4" jack combo socket
	Voltage supply	1 × lockable input socket (Power Twist)
Input sensitivity	Line	1 V (RMS) ± 10 %
	Mic	20 mV ± 10 %
Input impedance	Line	>20 kΩ
	Mic	>1 kΩ
Output connections	Line	1 × XLR chassis plug
	Power supply for further devices	Lockable output socket (Power Twist) Output current 12 A max.
Output power	Woofer	200 W @ 8 Ω

	Tweeter	20 W @ 8 Ω
Frequency range		75 Hz...20 kHz
Crossover frequency		2.8 kHz
Signal-to-noise ratio		LF ≥88 dB (630 Hz, typical), HF ≥75 dB (6,3 kHz, typical)
Sound pressure level (SPL), max.		120 dB
Dispersion angle (H × V)		100° × 100°
Power consumption		13.5 W ± 3 W (static)
Operating supply voltage		100 - 240 V ~ 50/60 Hz
Fuse		3.5 mm × 10 mm, 5 A, 250 V, slow-blow
Dimensions (W × H × D)		300 mm × 450 mm × 290 mm
Weight		12.6 kg
Ambient conditions	Temperature range	0 °C...40 °C
	relative humidity	20 %...80 % (non-condensing)

Achat 110 MA MKII Achat 112 MA MKII Achat 115 MA MKII

Frequency response



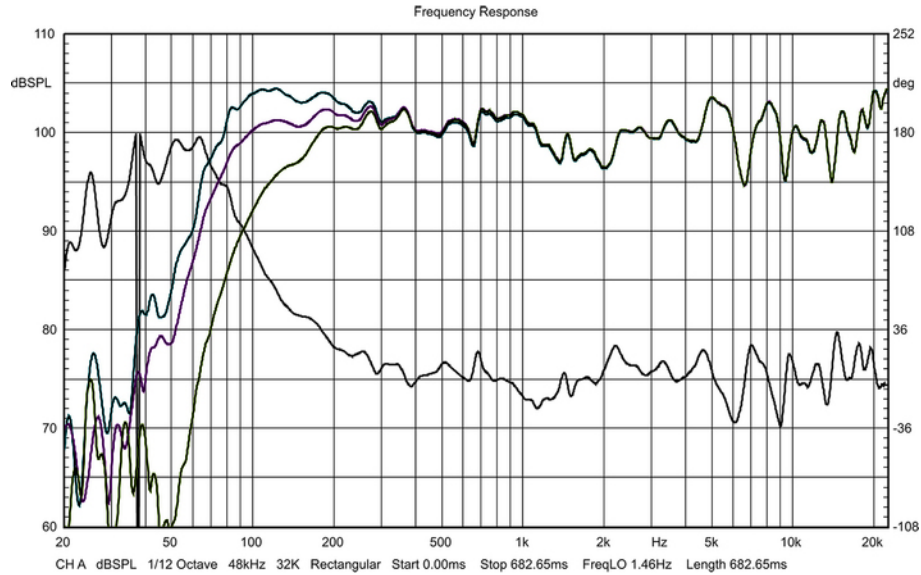
Achat 112 MA MKII

Speaker		1 × 12" ferrite woofer, 1.75" compression driver
Input connections	Mic/Line	2 × XLR / 1/4" jack combo socket
	Voltage supply	1 × lockable input socket (Power Twist)
Input sensitivity	Line	1 V (RMS) ± 10 %
	Mic	20 mV ± 10 %
Input impedance	Line	>20 kΩ
	Mic	>1 kΩ
Output connections	Line	1 × XLR chassis plug
	Power supply for further devices	Lockable output socket (Power Twist) Output current 12 A max.
Output power	Woofer	250 W @ 8 Ω
	Tweeter	28 W @ 8 Ω

Technical specifications

Frequency range	60 Hz...20 kHz	
Crossover frequency	2.8 kHz	
Signal-to-noise ratio	LF ≥95 dB (630 Hz, typical), HF ≥85 dB (6,3 kHz, typical)	
Sound pressure level (SPL), max.	126 dB	
Dispersion angle (H × V)	80° × 90° (rotatable horn)	
Power consumption	16.5 W ± 3 W (static)	
Operating supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	3.5 mm × 10 mm, 5 A, 250 V, slow-blow	
Dimensions (W × H × D)	360 mm × 600 mm × 365 mm	
Weight	20.7 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	relative humidity	20 %...80 % (non-condensing)

Frequency response



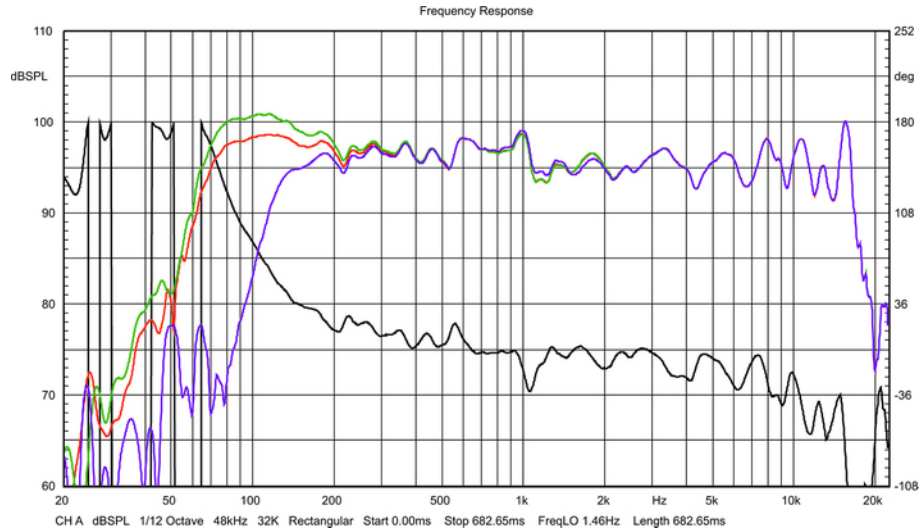
Achat 110 MA MKII Achat 112 MA MKII Achat 115 MA MKII

Achat 115 MA MKII

Speaker		1 × 15" ferrite woofer, 3" compression driver
Input connections	Mic/Line	2 × XLR / 1/4" jack combo socket
	Voltage supply	1 × lockable input socket (Power Twist)
Input sensitivity	Line	1 V (RMS) ± 10 %
	Mic	20 mV ± 10 %
Input impedance	Line	>20 kΩ
	Mic	>1 kΩ
Output connections	Line	1 × XLR chassis plug
	Power supply for further devices	Lockable output socket (Power Twist) Output current 12 A max.
Output power	Woofer	450 W @ 8 Ω
	Tweeter	50 W @ 8 Ω

Frequency range	60 Hz...20 kHz	
Crossover frequency	2.8 kHz	
Signal-to-noise ratio	LF ≥95 dB (630 Hz, typical), HF ≥85 dB (6,3 kHz, typical)	
Sound pressure level (SPL), max.	130 dB	
Dispersion angle (H × V)	60° × 60°	
Power consumption	16.5 W ± 3 W (static)	
Operating supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	3.5 mm × 10 mm, 5 A, 250 V, slow-blow	
Dimensions (W × H × D)	436 mm × 766 mm × 438 mm	
Weight	38.7 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	relative humidity	20 %...80 % (non-condensing)

Frequency response



7 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.

Achat 110 MA MKII Achat 112 MA MKII Achat 115 MA MKII



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