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# Introduction



# Congratulations on your purchase and thank you for choosing Burmester.

You have chosen a device that combines absolute fidelity and uncompromising quality with technical innovation and maximum versatility. Before using the device for the first time, we recommend that you read through the entire manual at least once so that you can make full use of the capabilities of this exceptional audio device.

If you still have any questions after doing this, please speak to your dealer or contact us directly. We're always happy to discuss your special requests, no matter how unusual. We love a good technical challenge.

We wish you an exceptional listening experience. Your Burmester team

# About this Loudspeaker

The BC150 is the second member of the BC product range, after the BC350. It is a three-way bass reflex speaker with a side-mounted, 32 cm woofer chassis, an 18 cm midrange driver chassis and an AMT tweeter chassis.

The BC150 has an additional, rear-facing AMT tweeter chassis. You can adjust the level of this (the ambience level) to suit your preferences using the control on the back of the loudspeaker. This will improve the spatial sound.

The loudspeaker stands on built-in, height-adjustable feet. The BC150 comes with a bi-amping function. The scope of delivery includes pre-installed connection jumpers made of high-purity, oxygen-free, gold-plated copper.

# About this Operation Manual

This operation manual provides instructions for users on how to operate the BC150 loudspeakers. It also provides information for skilled persons within the meaning of the EN 62368-1 standard. Sections that concern skilled persons only are labelled accordingly:

ARRANGE FOR A SKILLED PERSON TO CARRY OUT THIS STEP!

# Intended Use

This device is intended for use in home music systems.

# **Permissible Operating Conditions**

Please take care to only ever use your loudspeakers under the following conditions:

Maximum altitude: < 2000 m

Humidity < 50%

Temperature range: 20–30°C



# Safety Instructions

# **Instructions for Skilled Persons**

Certain steps in this operation manual may only be performed by skilled persons. The work steps in question are presented in this manual with a blue background and marked with the following notice:



If you require help at a later point during your use of the device or when moving home, please contact your dealer.

# Meaning of warning symbols and words

The following warnings, symbols and warning words are used in this document:



The general hazard symbol, in conjunction with the warning words **CAUTION**, **WARNING** or **DANGER** warns of the risk of serious injury. Follow all of the subsequent instructions to avoid injury or death.



The lightning symbol, in conjunction with the warning word **DANGER**, warns of potentially fatal electrical voltage.



#### **ATTENTION:**

indicates a hazard that could damage or destroy the device.



#### CAUTION

indicates a hazard that poses a low or moderate risk of injury.



#### **WARNING:**

indicates a hazard that could cause serious injury or death.

# **Important Safety Instructions**

Read and follow the instructions in this manual, particularly the warnings and safety instructions.

KEEP THIS OPERATION MANUAL IN A SAFE PLACE.



#### **CAUTION: RISK OF INJURY TO CHILDREN**

This device poses various injury risks if used improperly.

→ Never leave your children unattended with the device. This device is not intended for use by children.



#### **WARNING: DANGEROUS VOLTAGES**

The speaker outputs on a power amplifier may carry potentially fatal voltages.

→ Do not touch the speaker connections on the device, the loudspeaker or the loudspeaker chassis during use.



#### **ATTENTION: DANGER DUE TO IMPROPER INSTALLATION**

- → Never use the loudspeaker outdoors. Avoid exposure to direct sunlight, excessive heat, cold, moisture and dust.
- → Do not cover the slots or openings on the loudspeakers.
- → Do not expose the loudspeakers to dripping or splashing water, and do not place containers of liquid on the loudspeakers.
- → Never place open fire sources, such as lit candles, on the loudspeakers.



#### **ATTENTION: INCORRECT WIRING OR EXCESSIVE LEVEL**

Incorrect wiring or levels that are too high can damage the components of the system.

→ Before switching on the system, check all the cable connections to ensure the polarity is correct (plus, minus). After changing cable connections, slowly increase the volume until you are sure that everything is connected correctly.



#### **ATTENTION: DANGER DUE TO IMPROPER USE**

- → Set the connected amplifier to a low volume before switching it on.
- → Do not touch your loudspeakers' chassis during use. Doing so could damage the chassis.



#### **CAUTION: RISK OF INJURY DUE TO TIPPING OVER**

If used improperly, your loudspeaker may tip over.

→ Always place the loudspeakers on a flat, sturdy surface.
Make sure that the loudspeakers are completely straight at all times.



#### **CAUTION: HIGH-INTENSITY SOUND**

Loud output signals can damage your hearing.

- → Set the connected amplifier to a low volume before switching it on.
- ightarrow To prevent hearing loss, avoid listening at high volume levels for long periods of time.



1	AMT tweeter chassis	
2	Mid-range driver chassis	
3	Woofer chassis	
4	Rear-facing AMT tweeter chassis	
5	Binding posts	
	Control dial for rear-facing AMT tweeter	
6	chassis (ambience level)	
7	Port	
8	Height-adjustable feet	
	Terminal cover, opened, with space for	
9	storing the connection jumpers	

# Overview of the BC150





# Unpacking, Connection and Use



# Unpacking the loudspeakers



#### SCOPE OF DELIVERY

The following is included with delivery:

Packaging with the BC150 loudspeaker (left and right variants)

Decorative box with operation manual, warranty documentation, foot height adjustment tool and spirit level for levelling the loudspeakers

Care kit

#### PLEASE CHECK THE DELIVERY FOR COMPLETENESS AND DAMAGE.

If parts of the delivery are missing or if you notice any damage when unpacking the speakers, please do not connect them and consult an authorised dealer instead.

#### WE RECOMMEND KEEPING THE ORIGINAL PACKAGING FOR FUTURE TRANSPORT, MOVING, ETC.



#### **CAUTION: RISK OF INJURY**

The loudspeakers are very heavy and may cause serious injury if they tip over or fall.

→ The loudspeakers should only be unpacked and set up by skilled persons who are experienced in handling heavy loads.



#### **WARNING: SUFFOCATION HAZARD**

Some parts of the BC150 are delivered in bags.

→ Keep these bags out of reach of children in order to prevent suffocation. Keep children away from all the packaging materials.



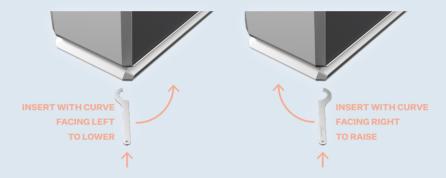
HOOK WRENCH FOR ADJUSTMENT

# Adjusting the feet

#### \*\*ARRANGE FOR A SKILLED PERSON TO CARRY OUT THIS STEP!

In order to ensure stability, the loudspeakers must be kept straight and level. In order to achieve this, the feet attached to the speaker can be adjusted using the hook wrench provided.

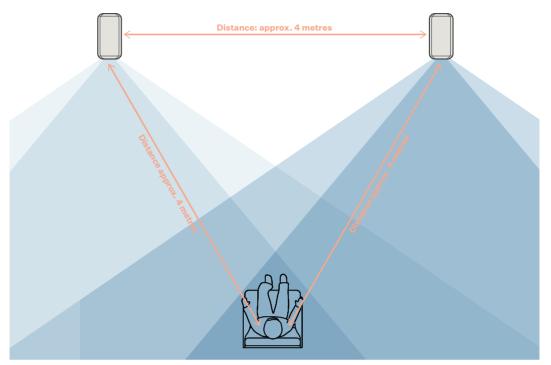
ightarrow Use the spirit level provided to check that the speakers are aligned correctly.



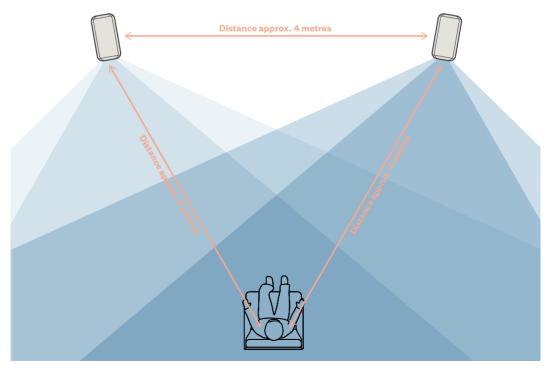
- Slide the hook wrench between the base plate and the floor as shown above.
   Hook it in place depending on the direction in which you want to make the
   adjustment.
- 2. Use the wrench to adjust the foot as required.
- 3. Repeat this procedure on the other feet until the speaker is straight and does not wobble. Take care not to unscrew the feet any further than necessary.
- 4. Place the spirit level provided on top of the loudspeaker. Adjust the feet accordingly until the air bubble is exactly in the middle of the spirit level.



SPIRIT LEVEL BALANCED CORRECTLY



SPEAKER FRONTS PARALLEL TO THE WALL



SPEAKERS POSITIONED AT AN ANGLE

## **Correct Installation Position**

Imaging improves as the distance between the speakers and the wall increases, while bass output decreases. The BC150s are designed so that they do not need to be placed close to a wall to boost the bass.

The distance between the two loudspeakers should be approximately 4 m, and the space between the loudspeakers should be kept as clear as possible. The distance to the listener should also be about 4 m.

Where possible, the loudspeakers should be set up on the longer side of a rectangular room rather than at one of the shorter ends. Where possible, the speakers should be set up in the "hard" acoustic area of the room (against smooth walls and window surfaces) rather than the "soft" acoustic area (where upholstered furniture, books and rugs may dampen the sound).

We recommend setting up the speakers with the side woofer chassis facing inwards. The left and right speakers are marked accordingly with the letters "L" and "R" at the end of the serial numbers on the labels of their respective boxes.

# DISTANCE FROM REAR WALL: MIN. 50 CM DISTANCE FROM SIDE WALL: MIN. 100 CM

The loudspeakers can be angled however you wish. This will affect the sound as follows:

#### LOUDSPEAKERS NOT ANGLED:

- → Increased spatial sound and wider soundstage
- → Less pronounced highs
- ightarrow More pronounced lows and low mids
- → Warmer sound

#### LOUDSPEAKERS ANGLED TOWARDS THE LISTENING POSITION:

- → More precise imaging and soundstage
- → More pronounced highs
- → Less pronounced lows and low mids
- → Clearer sound

# Connecting the Loudspeakers

Before connecting the loudspeakers, please also read the operation manuals for the components you plan to connect.

Pay attention to the correct polarity: red = positive, black = negative



## ATTENTION: INCORRECT CONNECTION CAN LEAD TO

ightarrow A short circuit or a faulty connection can damage the loudspeakers and other components.

# **Speaker Cables**

#### **SPEAKER CABLES**

Burmester recommends using cables with a large cross-section to connect the loudspeakers to the power amplifier. A large cross-section allows you to maintain the damping factor of the power amplifiers for optimal control of the loudspeakers. The best results are achieved by using original Burmester speaker cables, which have the same electrical and tonal characteristics as the internal wiring of Burmester loudspeakers and amplifiers. These cables have been optimised and tested for use with our loudspeakers.



#### **ATTENTION**

The insulation on your selected speaker cable must match that of the original Burmester loudspeaker cable and must have a flame rating of at least VW-1.

→ Please contact the manufacturer or your dealer for details.

# Opening the Connection Terminal



#### **WARNING: DANGEROUS VOLTAGES**

Switch off the power amplifier(s). The speaker outputs of a power amplifier may carry potentially fatal voltages.

The terminal cover is held in place by magnets.

To open the terminal cover, slide your fingers into the gap and pull the cover towards you.

To close it, place the terminal cover carefully up against the top edge. The terminal cover will be pulled into place by the magnets.



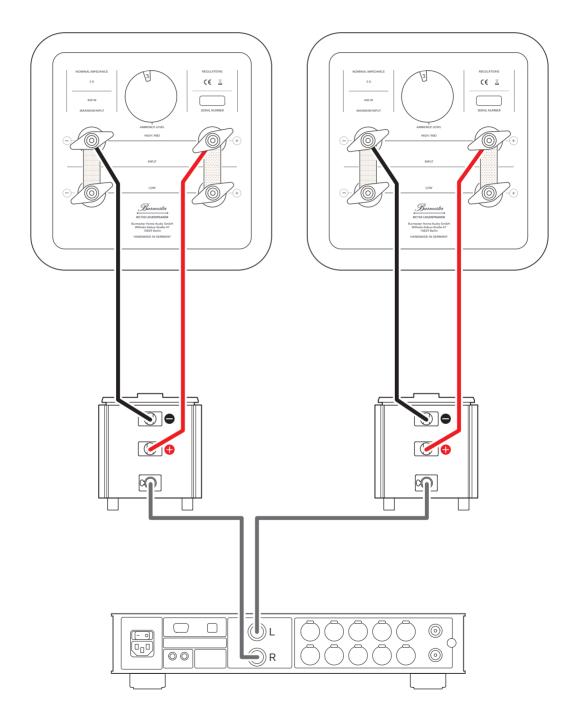
#### **CAUTION: RISK OF BRUISING**

→ During insertion, always grip it using only the bottom opening in order to avoid bruising.





#### SPEAKER TERMINALS WITH CONNECTION JUMPERS INSERTED FOR CLASSIC USE

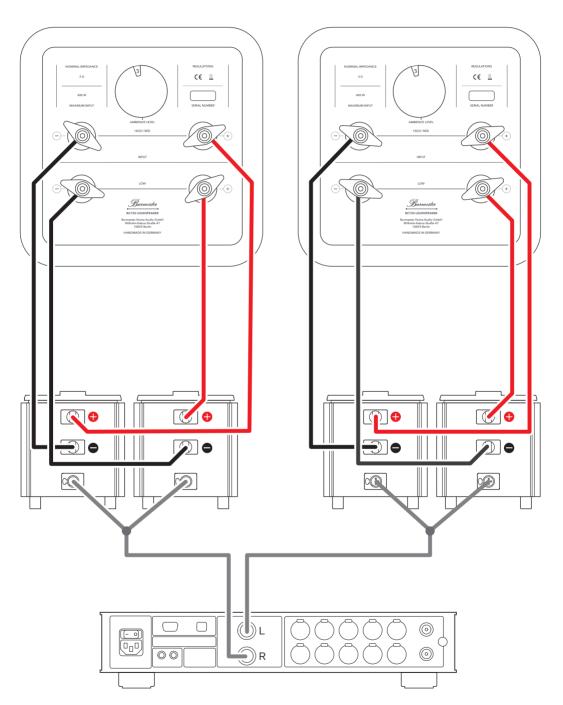


## Classic Connection

With this method, each channel on the power amplifier is connected to a loudspeaker via a 2-pole cable. Two mono power amplifiers are therefore required for stereo playback. Connect the loudspeakers as follows:

- 1. Switch off the amplifier.
- 2. Open the terminal cover of the BC150s as described above.
- 3. Make sure that the connection jumpers on the binding posts are inserted (see diagram).
- 4. Connect one end of the speaker cable to the negative terminal for the mid-range driver/tweeter (minus terminal ( )).
- 5. Connect the other end of the speaker cable to the negative terminal on the power amplifier.
- 6. Connect one end of the speaker cable to the positive terminal for the mid-range driver/tweeter (plus terminal ( + )).
  - Connect the other end of the speaker cable to the positive terminal on the power amplifier.
- 7. Repeat Steps 2 to 6 for the second loudspeaker.
- 8. Insert the terminal cover back in place, threading the speaker cables through the opening provided.

#### SPEAKER TERMINALS WITHOUT CONNECTION JUMPERS FOR USE WITH BI-AMPING



## **Bi-amping**

In bi-amping, woofers, mid-range drivers and tweeters are connected to separate power amplifier channels. This method offers significant advantages in terms of sound quality, as the power amplifier channel for the mid-range driver/tweeter is relieved of the high power requirements of the woofers. However, this type of connection also requires double the number of power amplifier channels. Four mono or two stereo power amplifiers are therefore required for this type of connection. This type of connection requires two speaker cables per speaker.

#### PREPARATION

- 1. Place two mono power amplifiers or one stereo power amplifier near each loudspeaker.
- 2. Switch off the power amplifiers.
- 3. Open the terminal cover.

#### REMOVING THE CONNECTION JUMPERS

- 4. Completely loosen the negative binding posts ( ) by turning them anti-clockwise.
- 5. Remove the connection jumper.
- 6. Re-tighten the negative binding posts ( ) by turning them clockwise.
- 7. Remove the knurled screws from the terminal cover and screw the connection jumper in place here for safe keeping.
- 8. Repeat Steps 3 to 7 for the positive binding posts (+).

#### CONNECTING THE LOUDSPEAKERS

- Connect the preamplifier to the power amplifiers as shown opposite.
   To do this, you will need two Burmester bi-amp adapters or adapter cables, which are available separately. Please contact your specialist dealer for details.
- 10. Separately connect the woofer and mid-range driver/tweeter of each loudspeaker to the outputs on the power amplifiers as shown in the diagram opposite. Make sure the polarities are correct. If you have any questions, please contact your dealer.
- 11. Insert the terminal cover back in place, threading the speaker cables through the opening provided.
- 12. Repeat Steps 2 to 11 for the second loudspeaker.



# Adjusting the Ambience Level

The BC150 has an additional, rear-facing AMT tweeter chassis. You can adjust the level of this (the ambience level) to suit your preferences using the control on the back of the loudspeaker. This will improve the spatial sound. The ambience effect is influenced by both the speakers' installation positions and the acoustic qualities of the surrounding surfaces.

## THE CONTROL DIAL FOR THE REAR-FACING AMT TWEETER CHASSIS IS LOCATED ON THE CONNECTION PANEL BEHIND THE TERMINAL COVER.

- 1. Open the BC150's terminal cover by reaching into the opening and pulling the cover towards you. The terminal cover is held in place by magnets.
- 2. Using the control dial (6), adjust the ambience level to suit your preferences.
- 3. Replace the terminal cover.



#### **CAUTION: RISK OF BRUISING**

- → During insertion, always grip it using only the bottom opening in order to avoid bruising.
- 4. Repeat Steps 1 to 3 for the second loudspeaker.

# Maintenance, Repair and Care

#### TROUBLESHOOTING

#### There is no sound coming from one or more speakers

Cause of problem: The electronics are not switched on.

→ Switch on the amplifier and/or the audio source.

Cause of problem: Short circuit or open circuit in the speaker wiring.

→ Check the wiring and fix any problems.

#### The sound has poor bass or is spatially diffuse

Cause of problem: Incorrect wiring polarity for one channel.

→ Swap the positive and negative cables on the amplifier around for the channel in question.

#### CLEANING



#### **ATTENTION: DAMAGE TO THE SURFACE**

Liquids and chemical agents can cause damage to the surface of the housing.

- → Ensure that no liquids get into the loudspeakers.
- → Use the care set provided to clean the surfaces of the BC150s.
- → Do not use chemical agents when cleaning.

#### WARRANTY

Burmester provides a five-year warranty on its loudspeakers.

For the warranty to be valid, the loudspeaker must have been connected properly and operated without overloading, the mechanical integrity of the loudspeakers must not have been comprised, and the warranty documentation must have been filled in and submitted.



#### DISPOSAL

German law stipulates that this device must not be disposed of with household waste (grey bin, yellow bin, compost bin, paper or glass). Instead, it must be handed in at municipal collection points or to voluntary recycling programmes.

# **BC150 Specifications**

Design principle	Three-way bass reflex
Weight	180 kg
Width	309 mm
Height	1433 mm
Depth	601 mm
Power rating	400 W
(DIN EN 60268-5)	
Sensitivity	88.5 dB
(at 2.83 V/1 m)	
Nominal impedance	3Ω
Frequency response	34 Hz to 20000 Hz
(+/- 3 dB)	
Tweeter	Air Motion Transformer
	18 cm
Mid-range driver	Elliptic phase plug and voice coil
	32 cm
	Sandwich cone and strong motor
Woofer	with dual magnets
Crossover frequencies	155 Hz/1800 Hz

Subject to technical changes without notice



VERSION: BA\_BC150\_EN\_1-1\_2108

#### BURMESTER HOME AUDIO GMBH

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