AMBEO Soundbar

SB01



Instruction manual

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"Specifications"

SENNHEISER

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Important safety instructions



- 1. Read these safety instructions.
- 2. Keep these safety instructions. Always include these safety instructions when passing the product on to others.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use the product near water.
- 6. Only clean the product when it is not connected to the power supply system. Clean only with a dry cloth.
- 7. Ensure circulating ventilation. The product generates heat which is dissipated through the housing. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, stoves, or other products that produce heat and do not expose to direct sunlight.
- 9. Do not defeat the safety purpose of the polarized or groundingtype plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power supply cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where it exits from the product.
- 11. Use only attachments/accessories/spare parts supplied or recommended by Sennheiser.
- 12. Use only with shelves, racks, or tables that can safely support the weight of the product (see instruction manual).
- 13. Unplug the product during lightning storms or when unused for long periods of time.
- 14. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, when the product has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15. WARNING: To reduce the risk of fire and electric shock, do not expose the product to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the product.
- 16. To completely disconnect this product from the AC mains, disconnect the power supply cord plug from the AC receptacle.
- 17. The plug of the power supply cord shall remain readily accessible.

Hazard warnings on the bottom of the product



The product generates heat which is dissipated through the housing! Do not touch when in use or directly after use!

The following label is attached to the bottom of the product.



The symbols on this label have the following meaning:

Read and follow the safety and operating instructions contained in this instruction manual.

Presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of fire or electric shock.



Never open the product. There is a risk of electric shock when touching live parts. Risque de choc electrique, ne pas ouvrir There are no user serviceable parts inside the product. Refer repairs to an authorized Sennheiser service partner.

CAUTION / AVIS / 小心 有电击风险 请勿打开

Safety instructions for lithium batteries (remote control)



WARNING

If abused or misused, the batteries may leak. In extreme cases, they may even present a risk of

- explosion, •
- fire development,
- heat generation,
- smoke or gas development.

	If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
	Keep away from children.
\triangle	Observe correct polarity.
	Immediately remove the batteries from obviously defective product.
X	Dispose of batteries at special collection points or return them to your specialist dealer.
	Do not mutilate or dismantle.
	Do not expose to moisture.

	Remove the batteries if the product will not be used for extended periods of time.
	Pack/store batteries so that the terminals cannot contact each other – danger of shorting out/fire hazard.
	Only use batteries specified by Sennheiser.
Â	Store the products in a cool and dry place at room temperature (approx. 20 °C/68 °F).
	Do not continue to use defective batteries.
	Do not heat above 70 °C/158 °F, e.g. do not expose to sunlight or throw into a fire.

Preventing damage to health and accidents



Protect your hearing from high volume levels. Permanent hearing damage may occur when listening at high volume levels for long periods of time.



- ▷ The product generates stronger permanent magnetic fields that could cause interference with cardiac pacemakers, implanted defibrillators (ICDs) and other implants. Always maintain a distance of at least 3.94"/10 cm between the product component containing the magnet and the cardiac pacemaker, implanted defibrillator, or other implant.
- ▷ Keep the product, accessories and packaging parts out of reach of children and pets to prevent accidents. Swallowing and choking hazard.
- ▷ Do not use the product in an environment that requires your special attention (e.g. when performing skilled jobs).

Preventing damage to the product and malfunctions

▷ If the product was moved from a cold environment to a warm one, allow the product to stand for at least 2 hours before putting it into operation.

Intended use/Liability

This product has been designed for playing TV sound and music via cable connections, Bluetooth, WiFi or Ethernet. This product is intended for private domestic use only. It is not intended for commercial use.

It is considered improper use when this product is used for any application not named in the instruction manual. Sennheiser is not liable for damages to USB devices that are not consistent with the USB specifications. Sennheiser does not accept liability for damage arising from improper use or misuse of this product and its attachments/accessories.

Before putting the product into operation, please observe the respective country-specific regulations.

Notes on data collection and processing and on firmware updates

This product stores individual settings such as volume, sound and UI settings (e.g. LED brightness), selected input and designations, Bluetooth addresses of paired devices, WiFi settings and usage data (e.g. power-on cycles and operating times). This data is required for the operation of the product and is not transferred to Sennheiser or companies commissioned by Sennheiser and is not processed.

You can update the firmware of the product for free via an Internet connection. If the product is connected to the Internet, the following data is automatically transferred to and processed by Sennheiser servers in order to provide and transfer suitable firmware updates: MAC address, IP address. The data will only be used as specified and will not be stored permanently. If you do not want this data to be transferred and processed, do not connect to the Internet.

Notes on the packaging

We recommend using the original packaging to ensure safe storage and transport of the Soundbar. Damage during transport is often caused by the use of unsuitable packaging. The original packaging of the Soundbar provides optimal protection and minimizes the risk of damage during transport.

Package contents





Online you can find:

- this detailed instruction manual and additional information (www.sennheiser.com/download)
- the Sennheiser Smart Control app for configuring the AMBEO Soundbar and for additional functions (www.sennheiser.com/smartcontrol)

Optional accessories



SB01-WM wall mount for the AMBEO Soundbar, bracket for wall mounting (article no.: 508612)



You can find a list of accessories on the AMBEO Soundbar product page at www.sennheiser.com or contact your local Sennheiser partner: www.sennheiser.com > "Service & Support".

Product overview

SB01 AMBEO Soundbar

Front



Control panel

1	MUTE button
2	Volume - button (volume down)
3	Volume +button (volume up)
4	AMBEO button for activating the AMBEO Soundbar (pressing for 4 seconds activates the room calibration)
5	Multi-function button • for controlling the media playback
6	Bluetooth pairing (by simultaneously pressing the multi-function button and the input source button for 2 seconds)
7	SOURCE button (input source selection)
8	NFC antenna
9	On/off button
10	Vibration absorbing feet
(11)	Input for room calibration microphone
(12)	OLED display with matt, scratch-resistant surface
13	Status LED
14)	AMBEO display

Back



(15) Cooling vents

Bottom



Connections

- (16) IEC mains socket POWER 100 - 240 V~, 50/60 Hz, 250 W
- USB input (for updates only) type B, USB 5 V--, 1 A
- Ethernet inputRJ45, ETHERNET
- (19) HDMI output HDMI TV (eARC) OUT 5 V-, 1 A
- 20 HDMI input HDMI 1 IN
- 21 HDMI input HDMI 2 IN
- 22 HDMI input HDMI 3 IN
- 23 S/PDIF input, optical, OPT IN
- Output for connecting a subwoofer with power amplifier RCA socket SW PRE OUT
- RCA input sockets for an analog audio source AUX IN
- 26 Mounting thread (under the rubber foot) for the SB01-WM wall mount (optional accessory)
- (27) Type plate

- Cable tie for bundling and strain-relieving the connected cables
- 29 RESET button
- 30 SETUP button for WiFi setup (WiFi Protected Setup; WPS)

SB01-RC remote control



- (31) Infrared transmitting diode
- 32 On/off button
- AMBEO button for activating the AMBEO Soundbar (pressing for 4 seconds activates the room calibration)
- 34 Multi-function button
- 35 Volume buttons
- 36 Sound profile button
- 37) Night mode button
- 38 Battery compartment (for 1x CR2032 battery)
- 39 Input source button
- (40) Mute button

SB01-MS microphone for room calibration



- (41) Microphone head
 - Omni-directional pick-up pattern
- (42) Microphone holder
- (43) Cable with 2.5 mm jack plug

Overview of the displays

Status LED



Color	Status	Meaning	
white	lights up 1x	Status change e.g. volume adjustment, sound profile selection	
	pulses	Booting, connecting via Chromecast	
hlue	red	Connected via Bluetooth	
Dide	yellow	Connecting via Bluetooth	
yellow	pulses	Update is being loaded and installed	
	flashes	WiFi lost (check router settings, restart router if necessary)	
	rad	Reset is terminated	
orange	lea	WPS found	
	yellow	Reset in progress	
		WPS search	
red	lights up	Soundbar in standby mode	

AMBEO display



AMBEO display	Meaning
lights up white	AMBEO mode is on
off	AMBEO mode is off
pulses white	Room calibration in progress

The brightness of the AMBEO display and the OLED display can be adjusted via the Smart Control app.



Error messages on the display

Message on the display	Possible error	Possible solution
TV Speakers On	The Soundbar mutes itself when the TV speakers are selected as the audio output.	In the TV settings, select the Soundbar as the audio output ("HDMI ARC Audio Output").
OVER HEAT	Overheating of the Soundbar	Switch the Soundbar off and let it cool down (> 32).
DOLBY Pass- Through	Selected function (e.g. sound profile or AMBEO mode) cannot be activated because the "Dolby Virtualizer" is activated.	Deactivate the "Dolby Virtualizer" in the Smart Control app (> 42).

Getting started

1. Setting up the Soundbar



The correct placement and setup of the AMBEO Soundbar is important for an optimum sound experience. You can place the AMBEO Soundbar on a piece of furniture (> 15) or mount it directly to a wall using the wall mount (optional accessory) (> 18).

2. Connecting a TV and/or audio devices



Connect your TV to the Soundbar. You can also connect other audio/ video devices (> 19) or play wireless audio via Bluetooth or WiFi (> 36).

3. Connecting the AMBEO Soundbar to the power supply system



Connect the AMBEO Soundbar to the power supply system - the AMBEO Soundbar comes to life and guides you through the initial switch-on process (> 27).

4. Starting the room calibration



For an optimum spatial sound experience, the AMBEO Soundbar must perform a room calibration. Connect the microphone for the room calibration and start the calibration. The calibration takes only a few minutes and leads to the best possible 3D spatial sound (> 28).

5. Installing the Google Home app on your smartphone



With the Google Home app, you can make the AMBEO Soundbar's WiFi settings. With Internet connectivity/WiFi, you can get up-todate firmware updates for the AMBEO soundbar and use Chromcast buit-in functionality. Follow the setup process in the Google Home app for the AMBEO Soundbar.

6. Installing the Smart Control app on your smartphone



The Sennheiser Smart Control app allows you to use all functions and settings of the AMBEO Soundbar and to e.g. adjust the sound to your liking using the equalizer (> 38).

Installing the AMBEO Soundbar

Placing the Soundbar on the device feet

CAUTION

Material damage due to overheating

Inadequate ventilation may cause the Soundbar to overheat.

▷ Do not place any objects on the Soundbar, keep the minimum clearances and ensure circulating ventilation.

CAUTION

Risk of staining of furniture surfaces!

Varnish or furniture polish may degrade the feet of the product, which could stain your furniture.

- ▷ Do not place the product on delicate surfaces; if necessary, use a non-slip pad under the product.
- ▷ With the help of a second person, take the Soundbar out of the packaging.
- \triangleright Remove the protective foil.
- \triangleright Remove the protective foil from the OLED display.



- With the help of a second person, place the Soundbar on a sturdy, level, horizontal piece of furniture that can safely carry the weight of the Soundbar (approx. 18.5 kg).
- \triangleright Observe the following:
 - The distance X of the Soundbar to the side walls should ideally be the same so that the Soundbar is centered in the room. The optimum distance between the Soundbar and the walls is between 1 and 5 meters.
 - There must be no objects that block the sound or have a strong sound-absorbing effect (e.g. furniture such as shelves or armchairs, room dividers, curtains, flower pots) between the Soundbar and the side walls and the ceiling of the room.
 - The distance X of the Soundbar to the ceiling should be between 1 to 5 meters, but should not exceed 5 meters. The ceiling should be flat and horizontal (no pitched roof or domed roof).
 - The Soundbar should be positioned below the TV.



- The distance of the Soundbar to the TV should be at least 10 cm.
- The seat (optimal point "sweet spot") should be positioned centrally in front of the Soundbar and have a distance of at least 2 meters to the Soundbar.



Ensure circulating ventilation. The product generates heat which is dissipated through the housing. Do not touch when in use or directly after use!



Optimum positioning

Schematic structure of the sound waves from the Soundbar, which are reflected by walls and objects and thus reach the optimal point ("sweet spot"). Thus, a virtual surround sound can be created with a Soundbar.



Object	Meaning
	Reflecting surface
	TV
	Soundbar
	Furniture/curtain
	Optimal point "sweet spot"
$\left(\left \left \right \right \right)$	Sound waves of the loudspeakers
((()))	Sound waves from the top-firing loudspeakers to the ceiling



When positioning the Soundbar, keep in mind that the sound is **i** When positioning the soundbar, keep in thick carpets reflected by the walls and ceiling. Many curtains, thick carpets and other rough surfaces can affect the 3D spatial sound.

Mounting the Soundbar to a wall

To mount the Soundbar to a wall, you require the SB01-WM wall mount (optional accessory, > 6).

▷ Proceed as described in the mounting instructions (enclosed with the SB01-WM wall mount) and use the drilling template.

Connecting devices to the AMBEO Soundbar

- ▷ Put a protective material (e.g. the foam parts of the packaging or a blanket) between the piece of furniture and the Soundbar.
- \triangleright Carefully turn the Soundbar on its front.



Preparation

Adjust the sound settings on the TV and on the audio/video device.

On your devices, adjust the sound settings for the HDMI and optical output from "Downmix/Stereo" to "Auto/Bypass/Pass-Through". (The menu of the devices may use different names depending on the manufacturer).

This ensures that the audio signals for 3D spatial sound from the source (e.g. TV) are passed on to the AMBEO Soundbar.



 $\,\triangleright\,\,$ On your TV, set the Soundbar as the audio output.

Connecting a TV

Connection to the HDMI eARC socket (recommended)

• Required cable: High Speed HDMI[®] Cable (supplied)

To connect the Soundbar to a TV with an HDMI IN socket labeled "ARC/eARC":

- ▷ Connect one connector of the supplied high-speed HDMI cable to the HDMI TV (eARC) OUT socket on the Soundbar.
- ▷ Connect the other connector of the cable to the HDMI (eARC) IN socket of your TV.
- \triangleright Please note the settings of your devices > 19.



Video signal



TV sets with an "ARC" output (not "eARC") can transmit surround formats only to a limited extent.

Connection without HDMI eARC socket

• Required cable: optical cable (recommended length: max. 5 m)

To connect the Soundbar to a TV without an HDMI IN socket labeled "ARC/eARC":

- ▷ Connect one connector of an optical cable (to be ordered separately) to the OPT IN socket on the Soundbar.
- $\triangleright~$ Connect the other connector of the cable to the OPTICAL OUT socket of your TV.
- \triangleright Please note the settings of your devices > 19.



Connecting an audio/video device

Digital connection

• Required cable: HDMI

To connect the Soundbar to an audio source (e.g. Blu Ray player, DVD player):

- Connect one connector of an HDMI cable (to be ordered separately) to one of the three HDMI sockets (HDMI 1 IN, HDMI 2 IN, HDMI 3 IN) on the Soundbar.
- ▷ Connect the other connector of the cable to the HDMI OUT socket of your audio source.
- \triangleright Please note the settings of your devices > 19.
- \triangleright



Analog connection

• Required cable: stereo RCA cable

To connect the Soundbar to a TV or an audio source (e.g. CD player):

- Connect the red connector of an RCA cable (to be ordered separately) to the red AUX IN socket and the white connector of the same cable end to the white AUX IN socket on the Soundbar.
- ▷ Connect the other red connector of the cable to the red socket and the white connector of the same cable end to the white socket of the TV or audio source.





Connection diagram (example)

Connect your audio sources to the AMBEO Soundbar and your TV according to the following diagram (example). Sennheiser recommends connecting the audio sources for high-resolution surround formats directly to the AMBEO Soundbar using a High Speed HDMI[®] Cable.

Connecting a subwoofer (optional)

Optionally, you can connect a subwoofer to the Soundbar.

- Recommended settings: Adjust the volume on the subwoofer to "approx. 50%" and set the crossover to "Max".
- ▷ Connect one connector of the mono RCA cable (to be ordered separately) to the SW PRE OUT socket on the Soundbar.
- Connect the other connector of the cable to the socket LOW LEVEL IN/MONO of the subwoofer.
- \triangleright Calibrate the Soundbar (> 28).



Disconnecting the subwoofer

When the subwoofer is disconnected from the Soundbar, the Soundbar will use the previous calibration without subwoofer, if one exists.

The app allows you to choose between the calibration with and without subwoofer.



Connecting an Ethernet cable

To connect the Soundbar to a wired network:

- Connect one connector of a network cable (with RJ-45 connector, to be ordered separately) to the ETHERNET socket on the Soundbar.
- ▷ Connect the other connector of the cable to the network socket of your router.

You may have to make settings to your router.



i If you connect the Soundbar to the Internet/Ethernet via cable, the WiFi function of the Soundbar is automatically deactivated.

Alternatively, the Soundbar can be connected to the Internet via WiFi. For more information > 39.

Using the cable tie

To achieve strain relief on the sockets of the Soundbar:

- $\,\triangleright\,\,$ Bundle the cables.
- \triangleright Place the cables in the cable tie and tighten it.
- \triangleright Close the cable tie.



Using the USB socket for updates

If the Soundbar is not connected to the Internet, you can install a firmware update on the Soundbar using a USB flash drive. For more information on the update > 46.

A power supply of 5 V -, 1 A for accessories (external devices) is possible.

Insert a USB flash drive or external accessory powered by USB (type B, to be ordered separately) into the USB socket on the Soundbar.



Putting the AMBEO Soundbar into operation

Preparing the SB01-RC remote control

To remove the transport protection of the battery:

- ▷ Use a suitable object (e.g. a coin) to open the battery compartment cover (located on the bottom side of the remote control) by turning one turn counter-clockwise.
- \triangleright Remove the plastic strip.
- Close the battery compartment cover by turning one turn clockwise.



Connecting/disconnecting the Soundbar to/from the power supply system

CAUTION

Danger of damage to the product!

If you connect to an unsuitable power supply, the product can be damaged.

▷ Use a suitable power cable to connect the product to the power supply system (100 - 240 V~, 50/60 Hz).

Connecting the Soundbar to the power supply system

- Connect the plug of the power cable to the POWER socket on the Soundbar.
- $\triangleright\,$ Connect the power plug of the power cable to a suitable wall socket.



Disconnecting the Soundbar from the power supply system

- \triangleright Unplug the power plug of the power cable from the wall socket.
- ▷ Unplug the plug of the power cable from the POWER socket on the Soundbar.

Starting the room calibration

The room calibration is necessary for the measurement of the room in order to let you get the optimum spatial sound experience.

Therefore, the room calibration should be performed when

- the Soundbar is put into operation for the first time in a room,
- the position of the Soundbar has been changed,
- a subwoofer has been connected or disconnected,
- the room has been changed (e.g. furniture has been moved).



If the "Dolby Virtualizer" is activated, you cannot perform a room calibration. If necessary, deactivate the "Dolby Virtualizer" in the Smart Control app (> 42).

Preparations for calibration

- Connect the Soundbar to the power supply system (> 27).
 The Soundbar switches on. This process takes about 15 seconds.
 The status LED pulses white.
- Press the on/off button on the top of the Soundbar or the on/off button on the remote control.
 The display shows "Hello" and the prompt "Set up microphone".



Calibrating the Soundbar

- ▷ Straighten up the microphone in the microphone holder.
- Place the microphone with the microphone holder on the seat in front of the Soundbar. The microphone head should be located approximately at ear height during normal use.
- Connect the jack plug of the microphone cable to the microphone input on the Soundbar.



Press the AMBEO button on the top of the Soundbar or the AMBEO button on the remote control. The display shows "Please step to the side".

Please note that the test tones are played at a high volume during calibration.

Avoid disturbing noises (open windows, household appliances, etc.) and do not stay between the Soundbar and the microphone as this can falsify the calibration.

The display shows a countdown for the start of the calibration "Calibration starts in 10 / 9 / ...".

The calibration process takes several minutes.

The display shows "Done!" and "Press AMBEO to finalize".

- Press the AMBEO button on the top of the Soundbar or the AMBEO button on the remote control. The display shows "Welcome". The AMBEO demo sound is played (approx. 10 seconds).
- ▷ Disconnect the jack plug of the microphone cable from the microphone input on the Soundbar.



Error messages during room calibration

Message on the display	Possible error	Possible solution
Calibration failed. Please press AMBEO to cancel.	Subwoofer volume is too low	Increase the volume of the subwoofer and restart the calibration
	Microphone is not connected	Connect the microphone
	Ambient noise is too high	Reduce ambient noise
	Too few sound reflecting surfaces in room	Change position of the microphone within the room
	General error	An error has occured, restart the calibration

Canceling the calibration

To cancel the calibration:

Press the volume buttons – (volume down) and + (volume up) for 4 seconds.



Repeating the calibration

If you want to repeat the calibration, you have the following options:

- Press the AMBEO button on the Soundbar for 4 seconds.
- Press the AMBEO button on the remote control for 4 seconds.
- Use the Smart Control app.



The app provides more detailed calibration options and an overview of the status of the calibration.



Using the AMBEO Soundbar

Switching the AMBEO Soundbar on

WARNING



Danger of hearing damage due to high volume levels!

Listening at high volume levels can lead to permanent hearing defects.

- $\triangleright\,$ Adjust the volume to a low level before selecting a source.
- $\,\triangleright\,\,$ Do not continuously expose yourself to high volume levels.

If you want to switch the Soundbar on, you have the following options:

- Press the on/off button on the Soundbar.
- Press the on/off button on the remote control.
- Press the on/off button on the TV remote control (if the TV is connected to the Soundbar via HMDI CEC).
- Use the Smart Control app.

1 If the Soundbar is inactive for 20 minutes (default setting), it automatically switches to standby, > 33.

Switching the AMBEO Soundbar off (standby)

If you want to switch the Soundbar off (standby), you have the following options:

- Press the on/off button on the Soundbar.
- Press the on/off button on the remote control.
- Press the on/off button on the TV remote control (if the TV is connected to the Soundbar via HMDI CEC).
- Use the Smart Control app.
 The status | ED lights up red

The status LED lights up red.

To completely disconnect the Soundbar from the power supply system, > 27.

ECO standby mode

The Soundbar has an ECO standby mode. You can set the mode via the Smart Control app. Booting the Soundbar takes longer when ECO standby mode is activated.

- ECO standby mode is activated: Booting takes approx. 20 seconds. The power consumption of the Soundbar is approx. 1.9 W (activated upon delivery).
- ECO standby mode is deactivated: Booting takes approx. 1 seconds. The power consumption of the Soundbar is approx. 5.5 W.



Auto standby

If there is no playback for 20 minutes, the Soundbar automatically switches to standby.

No playback:

- Bluetooth or Chromecast input is paused
- Bluetooth or Chromecast connection is disconnected
- Analog, optical or HDMI input: no playback available



When playback is muted ("MUTE"), auto standby is not active.

The time after which the Soundbar switches to auto standby can be adjusted via the Smart Control app.



Selecting the input source



WARNING

Danger of hearing damage due to high volume levels!

Listening at high volume levels can lead to permanent hearing defects.

- ▷ Adjust the volume to a low level before selecting a source.
- Do not continuously expose yourself to high volume levels.

If you want to change the input source, you have the following options:

- Press the SOURCE button on the Soundbar.
- Press the SOURCE button on the remote control.
- Use the Smart Control app.

Source selection:

- HDMI TV
- HDMI 1
- HDMI 2
- HDMI 3
- AUX
- Optical

- Bluetooth
- Streaming:
 - Casting Spotify
 - Casting TuneIn
 - Casting Soundcloud
- Media

The sources Streaming (e.g. Chromecast) and Media can not be selected via the input source buttons. The Soundbar automatically switches to the source when playback is started from the corresponding app.

If the connection is disconnected, the Soundbar jumps to the previous source.

The name of the source can be changed via the Smart Control app. The new name can consist of up to 9 characters (A-Z, a-z and 0-9).



Adjusting the volume



WARNING

Danger of hearing damage due to high volume levels!

Listening at high volume levels can lead to permanent hearing defects.

- > Adjust the volume to a low level before selecting a source.
- ▷ Do not continuously expose yourself to high volume levels.

If you want to adjust the volume of the Soundbar, you have the following options:

- Press the volume button (volume down) or + (volume up) on the Soundbar.
- Press the volume buttons on the remote control.
- · Press the volume button on the TV remote control (if the TV is connected to the Soundbar via HMDI CEC).
- Use the Smart Control app.
- Use your connected Bluetooth device to adjust the volume.

The volume can be adjusted from 0 - 50.



If the volume is adjusted to 0, the mute function is activated **i** (> 35).

Activating/deactivating the mute function

If you want to activate the mute function, you have the following options:

- Press the MUTE button on the Soundbar.
- Press the MUTE button on the remote control.
- Press the mute button on the TV remote control (if the TV is connected to the Soundbar via HMDI CEC).
- Use the Smart Control app.
- Adjust the volume to 0.

If you want to deactivate the mute function, you have the following options:

- Increase the volume (> 34).
- Press one of the mute buttons again.

i

The mute function remains activated when the input source is changed.

The mute function deactivates the auto standby function (> 33).

Using the AMBEO Soundbar

Connecting the AMBEO Soundbar to a Bluetooth/NFC device

Information on the Bluetooth wireless connection

The Soundbar is compatible with the Bluetooth standard 4.2.

If your audio source supports one of the following high-resolution audio encoding methods, music is automatically played in high audio quality: AAC. Otherwise the Soundbar will play your music in normal audio quality (SBC).

When selecting the "Bluetooth" input or when switching on with the last used input "Bluetooth", the Soundbar automatically tries to connect to the last used Bluetooth device.

The Soundbar can save the connection profiles of up to eight Bluetooth devices with which it has been paired.

If you pair the Soundbar with the ninth Bluetooth device, the saved connection profile of the least used Bluetooth device will be overwritten. If you want to re-establish a connection with the overwritten Bluetooth device, you have to pair the earphones again.

If a device is connected, you first have to disconnect it to connect a new device.

You can use the Near Field Communication (NFC) function for easy pairing of the devices.



Pairing the AMBEO Soundbar with a Bluetooth device

- ▷ Activate Bluetooth on your Bluetooth device.
- ▷ Press the multi-function button and the SOURCE button for 2 seconds.

The status LED pulses blue.

The Soundbar is in pairing mode.

- Hold your Bluetooth device at a distance of approx. 20 cm to the Soundbar.
- Via the menu of your Bluetooth device, start the search for new Bluetooth devices.
 All active Bluetooth devices in the provimity of your smartnbane

All active Bluetooth devices in the proximity of your smartphone are displayed.

- From the list of found Bluetooth devices, select "AMBEO Soundbar". If necessary, enter the default pin code "0000".
 If pairing was successful, the status LED lights up blue.
- **1** If no connection is established within 3 minutes, pairing mode is terminated. If necessary, start the pairing mode again.



The device name of the Soundbar can be changed in the Chromecast app (e.g. "Soundbar family room").

Disconnecting the AMBEO Soundbar from a Bluetooth device

▷ Via the menu of your Bluetooth device, disconnect the connection to the Soundbar.

The Soundbar is disconnected from the Bluetooth device. The display shows "Disconnected". The status LED goes off.

Pairing the AMBEO Soundbar with an NFC device (NFC pairing)

- $\,\triangleright\,\,$ Activate Bluetooth and NFC on your Bluetooth device.
- Place your NFC device close (less than 3 cm) to the NFC antenna on the Soundbar.

The status LED pulses blue. The devices are being paired.

If pairing was successful, the status LED lights up blue.



Disconnecting the AMBEO Soundbar from an NFC device

▷ Place your paired NFC device close (less than 3 cm) to the NFC antenna on the Soundbar.

The Soundbar is disconnected from the NFC device. The display shows "Disconnected". The status LED goes off.

Installing the Smart Control app

To control the Soundbar using a smartphone, Bluetooth Low Energy (Bluetooth LE, at least version 4.2) is required.



To make full use of all the settings and functions of the AMBEO Soundbar, you need to have the free Sennheiser Smart Control app installed on your smartphone.

Download the app from the Apple App Store or from Google Play and install it on your smartphone. Alternatively, you can visit the following website:

http://www.sennheiser.com/smartcontrol

- \triangleright Start the Smart Control app.
- \triangleright Follow the instructions in the app.
- Press the multi-function button and the SOURCE button for 2 seconds to accept the Bluetooth Low Energy connection.
 The Smart Control app recognizes the Soundbar and activates all available settings and functions.



Network connection via WiFi or Ethernet

Use the WiFi connection or the Ethernet connection for:

- Chromecast
- UPnP (Universal Plug and Play)
- Updates

Using Chromecast

To use Chromecast:

- \triangleright Download the Google Home app.
- \triangleright Start the setup in the app.

Establishing a WiFi connection

To establish a WiFi connection:

 Press the SETUP button for approx. 2 seconds to activate WPS (WiFi Protected Setup). The Soundbar searches for a connection. The display shows "WPS searching" and the status LED flashes orange.



If no connection is established within 2 minutes, the search is terminated.

10 Press the WPS button on your router.

The Soundbar connects to the WiFi.

The display shows "WiFi connected" for 4 seconds and the status LED lights up orange.

The Soundbar must be on the same network as the devices the Soundbar wants to communicate with.

The WiFi connection can be set up via the Google Home app and managed via the Smart Control app.



Establishing an Ethernet network connection

Make sure that the Ethernet cable is properly connected to the Soundbar and your network (> 25). ▷ The Ethernet connection can be set up via the Google Home app and managed via the Smart Control app.

i If you connect the Soundbar to the Internet/Ethernet via cable, the WiFi function of the Soundbar is automatically deactivated.



Controlling the music playback

You can control music playback by pressing the multi-function button on the Soundbar or the multi-function button on the remote control. The function is available for playback via Bluetooth or network connection.

Functions of the multi-function button

▷ Press the multi-function button.



Multi-function button	Result
Press 1x	Plays or pauses music
•	
Press 2x	Plays the next track in the playlist
• •	
Press 3x	Plays the previous track in the playlist
$\bullet \bullet \bullet$	

Using the sound profiles

If you want to activate a sound profile, you have the following options:

- Press the sound profile buttons on the remote control.
- Use the Smart Control app.

There are the following sound profiles:

- Movie
- Music
- News
- Sports
- Neutral



Adjusting the AMBEO modes

If you want to activate an AMBEO mode, you have the following options:

- Press the AMBEO button on the Soundbar.
- Press the AMBEO button on the remote control.
- Use the Smart Control app. The AMBEO display lights up.

Order of modes

- Off
- AMBEO Light
- AMBEO Standard
- AMBEO Boost

The preset mode for all inputs is AMBEO Standard.

The modes Light, Standard and Boost can be adjusted in the app and assigned to the sound profiles (> 40).



i If the "Dolby Virtualizer" is activated, you cannot use the AMBEO modes (> 42).

Using the night mode "NIGHT"

To activate the night mode:

Press the night mode button on the remote control.
 When the night mode is activated, the display shows an icon in front of the name of the sound profile.
 The bass is compressed (reduced).

৫ Movie	

The night mode can be applied to all sound profiles and modes, except AMBEO Boost.

Adjusting the equalizer

To be able to use the equalizer, you require the Smart Control app > 38).

▷ Adjust the equalizer via the Smart control app.

The settings are stored in the Soundbar. These settings are active even without using the Smart Control app, i.e. when you are using another Bluetooth device for music playback. Parameters:

- 4-band EQ split into
 - Foundation
 - Low-Mid
 - Clarity
 - Brillance
- Adjustment range + 10 dB to -10 dB

The app allows you to make additional acoustical settings in addition to the equalizer settings.



If the "Dolby Virtualizer" is activated, you cannot use the equalizer (> 42).

Using the Dolby DRC

You can use the "Dolby DRC" ("Dynamic Range Compression") to play back Dolby audio content. This function compresses the dynamics of the audio signal, thus changing differences from soft to loud passages.

The "Dolby DRC" function can be activated/deactivated in the codec settings of the Smart Control app.

- "Off": no change, full dynamics
- "Auto": automatic reduction of dynamics; changes in volume can be perceived during playback
- "Normal": slight compression of dynamics
- "Heavy": heavy compression of dynamics

Using the Dolby Dialog Normalizer

You can use the "Dolby Dialog Normalizer" to play back Dolby audio content. This function makes dialogs easier to understand by reducing loud music/background noise and amplifying softer dialog audio.

The "Dolby Dialog Normalizer" can be activated/deactivated in the codec settings of the Smart Control app.

Using the Dolby Virtualizer

You can use the "Dolby Virtualizer" to play back Dolby audio content. This function plays back Dolby audio content unchanged.

The "Dolby Virtualizer" can be activated/deactivated in the codec settings of the Smart Control app.

If the "Dolby Virtualizer" is activated, you can no longer use the following functions/settings:

- Sound profiles
- AMBEO modes
- Equalizer
- Room calibration data (the measured room data is not used for Dolby audio content)

Adjusting the brightness of the display and the AMBEO display

The brightness of the display and the AMBEO display can be adjusted via the Smart Control app.



There are three brightness levels:

- low brightness
- high brightness
- automatic brightness (activated upon delivery)

If "automatic brightness" is selected, the display and the AMBEO display automatically adjust to the ambient brightness.

The brightness of the display and the AMBEO display can also be adjusted independently of each other via the app.

Sound feedback

The beep tones can be switched off via the app.



Transporting the AMBEO Soundbar

ATTENTION

Material damage due to improper transport!

Incorrect packing of the Soundbar may cause damage to the Soundbar during transport.

▷ Only transport the Soundbar in the original packaging with its protective foam parts.

Use the original packaging to transport the Soundbar.

To transport the Soundbar:

- \triangleright Switch the Soundbar off (> 32).
- \triangleright Disconnect the Soundbar from the power supply system (> 27).
- Disconnect all other cables and connections from the Soundbar (> 19).
- ▷ With the help of a second person, place the Soundbar, the accessories and the foam parts in the original packaging as shown.



- \triangleright Close the packaging.
- \triangleright Close the packaging so that it does not open during transport.
- ▷ The Soundbar in its packaging must be carried by at least two people.

Maintaining the AMBEO Soundbar

Cleaning the Soundbar

ATTENTION

Liquids can damage the electronics of the product!

Liquids entering the housing of the product can cause a short-circuit and damage the electronics.

- ▷ Keep all liquids far away from the product.
- \triangleright Do not use any solvents or cleansing agents.
- \triangleright Clean the product only with a soft, dry cloth.

The fabric of the Soundbar cannot be removed.

 \triangleright Clean the fabric with a soft brush.

Replacing the battery of the remote control

If the range of the remote control decreases, you have to replace the battery.



CAUTION

Danger of accidents!

Misuse or swallowing of batteries can cause injuries and health problems.

- Observe the safety instructions for lithium batteries (> 3).
- ▷ Keep batteries away from children.
- ▷ Use a suitable object (e.g. a coin) to open the battery compartment cover by turning one turn counter-clockwise.
- Remove the used battery. In order to protect the environment, dispose of used batteries at special collection points or return them to your specialist dealer.
- ▷ Insert the new battery (type CR2032, 3 V) into the battery compartment. Observe correct polarity when inserting the battery.
- Close the battery compartment cover by turning one turn clockwise.



Installing firmware updates

Firmware updates are available free of charge and serve to enhance product improvement and also function extension.

You can update the Soundbar's firmware via a USB flash drive or using the Sennheiser Smart Control app.

Update via the Smart Control app

To update the firmware via the Smart Control app, the Soundbar must be connected to the Internet via WiFi or Ethernet (> 39).

- ▷ Start the Smart Control app on your smartphone.
- ▷ The app provides information on available firmware updates and guides you through the installation process.

Update via a USB flash drive

Required USB flash drive:

- Memory size: 1 GB
- File system: FAT
- Download the update file with the file name "image.swu" from the website www.sennheiser.com/download and save it on a USB flash drive.
- \triangleright Do not change the file name!
- \triangleright Switch the Soundbar on.
- $\,\triangleright\,\,$ Connect the USB flash drive to the USB socket on the Soundbar.



 Press the SETUP button for 5 seconds. The display shows "Updating" and the status LED pulses yellow.



The Soundbar restarts several times during the update. The process can take up to 8 minutes.

Resetting the Soundbar

 \triangleright Switch the Soundbar on.

If you want to reset the Soundbar, you have the following options:

- Insert a paper clip into the **RESET** recess on the bottom side of the Soundbar and press the paper clip for 2 seconds.
- Use the Smart Control app.

Action	Display	Status LED
Reset in progress	RESET	pulses orange
Reset terminated	RESET OK	lights up orange

Specifications

SB01 AMBEO Soundbar

Number of channels	5.1.4
Amplifier	class D
Total audio power	250 W (RMS)
	500 W (peak)
Total number of speakers	13
Low and mid-range	quantity: 6
speakers	Ø 10 cm/4 inch
	cellulose sandwich cones
Tweeters	quantity: 5 (sideways: right and left,
	front: right, center and left)
	Ø 2.5 cm/1 inch
	aluminum cones
Top-firing broadband	quantity: 2
speakers	Ø 9 cm/3.5 inch
	cellulose sandwich cones
Frequency response	30 Hz to 20 kHz (-3 dB)
Audio processors	Dual Core 1.2 GHz ARM Cortex-A7
	processor
	2 x Dual Core 500 MHz SHARC DSP
Display	graphic OLED with brightness sensor, status LED, AMBEO LED
Power plug	county-specific
Voltage range	100 – 240 V~ 50/60 Hz
Power consumption	250 W
Standby power	ECO standby mode activated: 1.9 W
consumption	ECO standby mode deactivated:
	5.5 W
Temperature range	operation: 0 °C to +45 °C
	storage: -20 °C to +70 °C
Relative humidity	operation: 20 to 85 %
(non condensing)	storage: 10 to 95 %
Dimensions (W x H x D)	approx. 126.5 x 13.5 x 17.1 cm incl. feet
	approx. 126.5 x 12.5 x 17.1 cm without
	reet
Weight	approx. 18.5 kg
Magnetic field strength	9 mT

Inputs/outputs

HDMI TV (eARC) OUT	default: HDMI 2.0a, eARC (HDMI 2.1) control: CEC video formats: up to 4K (60 Hz), Full HD, MHL 2.1 Encoding: HDCP 1.4 Power supply for accessories (external devices): 5 V ==, 1 A	
HDMI 1 IN	default: HDMI 2.0a	
HDMI 2 IN	encoding: HDCP 2.2	
HDMI 3 IN	control: CEC	
	video formats: up to 4K (60 Hz),	
	Full HD, MHL 2.1	
	HDR formats: Dolby Vision Pass-	
	Through	
OPT IN	S/PDIF	
	Supported sampling rates: up to 192 kHz	
AUX IN	stereo RCA sockets	
USB	USB socket (type A), for power supply	
	for accessories (external devices): 5 V	
	, 1 A; service socket for updates	
ETHERNET	RJ-45 socket, 100/10 MBit	
Subwoofer SW Pre-OUT	mono RCA, max. 2 V	
Microphone input for room calibration	2.5 mm jack socket, mono	

SB01-RC remote control

Transmission	infra-red
Range	approx. 8 m
Power supply	coin cell, type CR2032, 3 V

WiFi

Standard	IEEE 802.11 a/b/g/n/ac	
Transmission system	2 x 2 MIMO	
Transmission frequency (country-specific)	2,400 MHz to 2,483.5 MHz 5,170 MHz to 5,835 MHz	
Modulation 2.4 GHz band	CCK, DQPSK, DBPSK für DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM	
Modulation 5 GHz band	64QAM, 16QAM, QPSK, BPSK	
Output power	100 mW (max)	

Bluetooth

Version	4.2, class 1, BR/EDR, BLE		
Transmission frequency	2,400 MHz to 2,483.5 MHz		
Modulation	GFSK, π/4 DQPSK, 8DPSK		
Profiles	A2DP, AVRCP, GATT		
Output power	10 mW (max)		
Codec	AAC, SBC		
Pairing option	Near Field Communication (NFC)		

Network streaming

Network	Ethernet
	WiFi
Services	Chromecast built-in
	uPnP

Playable audio formats

Audio format/codec	File extension
MP3	.mp3
AAC/HE-AAC	.m4a
	.aac
	.mp4
	.3gp
LPCM	.wav
FLAC	.flac
AIFF	.aiff
	.aif
ALAC	.m4a
Vorbis	.ogg

Supported audio formats/surround formats

Format	Audio source via:		
	HDMI, HDMI eARC, OPTICAL, network streaming*	HDMI ARC**	OPTICAL
LPCM 2 Channel	yes	-	yes
LPCM 5.1 Channel	yes	-	yes
LPCM 7.1 Channel	yes	-	yes
Dolby Digital	yes	yes	yes
Dolby Digital Plus	yes	yes	yes
Dolby True HD	yes	-	-
Dolby Atmos - Dolby TrueHD	yes	_	-
Dolby Atmos - Dolby Digital Plus	yes	yes	yes
DTS	yes	yes	yes
DTS-ES Discrete 6.1, DTS-ES Matrix 6.1	yes	yes	yes
DTS 96/24	yes	yes	yes
DTS-HD High Resolution Audio	yes	-	-
DTS-HD Master Audion	yes	-	-
DTS-HD LBR	yes	-	_
DTS:X	yes	-	_
MPEG-H (Fraunhofer)	yes	-	yes

* not all streaming services support the playback of all codecs

** TV sets with an "ARC" output can transmit surround formats only to a limited extent

Manufacturer Declarations

Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product.

For the current warranty conditions, please visit our website at www.sennheiser.com or contact your Sennheiser partner.

In compliance with the following requirements

EU declaration of conformity

- ErP Directive (2009/125/EC)
- RoHS Directive (2011/65/EU)

Hereby, Sennheiser electronic GmbH & Co. KG declares that the radio equipment type SB01 is in compliance with the Radio Equipment Directive (2014/53/EU).

The full text of the EU declaration of conformity is available at the following Internet address:

www.sennheiser.com/download.

Notes on disposal



• WEEE Directive (2012/19/EU)

The symbol of the crossed-out wheeled bin on the product, the battery/rechargeable battery (if applicable) and/or the packaging indicates that these products must not be disposed of with normal household waste, but must be disposed of separately at the end of their operational lifetime. For packaging disposal, please observe the legal regulations on waste segregation applicable in your country.

Further information on the recycling of theses products can be obtained from your municipal administration, from the municipal collection points, or from your Sennheiser partner.

The separate collection of waste electrical and electronic equipment, batteries/rechargeable batteries (if applicable) and packagings is used to promote the reuse and recycling and to prevent negative effects caused by e.g. potentially hazardous substances contained in these products. Herewith you make an important contribution to the protection of the environment and public health.

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Appendix

Open Source license terms and conditions

The AMBEO Soundbar SB01 has a user interface to call up additional license terms and conditions for the open source software used. You can open the license terms and conditions on your computer or a mobile device in an Internet browser. This requires that the computer/mobile device is connected to the WiFi of the Soundbar ("AMBEO Soundbar [serial number]").

Open an Internet browser on your computer/mobile device and enter http://ambeo.soundbar in the address bar. The user interface is loaded and you can open the license terms and conditions.

In addition, you can access the license terms and conditions via the free "Sennheiser Smart Control" app.