

Instructions for Use
Installation Guide

TV ADAPTER 2



Introduction to this booklet

This booklet guides you on how to use and maintain your new TVAdapter 2. Please read the booklet carefully, including the Warning section. This will help you to achieve the full benefit of your new TVAdapter 2.

If you have additional questions about the use of your TVAdapter 2, please contact your hearing care professional.

Intended use

Intended use:	<p>TV Adapter 2.0 is intended to be used together with Bernafon wireless hearing aid and SoundGate.</p> <p>TV Adapter 2.0 enables the hearing aid user to listening to the TV, by wirelessly sending the TV sound from TV Adapter through SoundGate directly to the hearing aid.</p>
Indications for use:	No indications for use.
Intended user:	Adults and children older than 36 months.
Use environment:	Indoor.
Contraindications:	No contraindications.
Clinical benefits:	See clinical benefits of the hearing aid.

Table of Contents

Warnings	6
Package content	8
TVAdapter 2 Overview	9
Installation	11
Activating the TVAdapter 2 for the First Time	12
Placing the TV adapter	13
Connecting the TVAdapter 2 to a Power Outlet	15
Connecting the TVAdapter 2 to the TV	16
Pairing SoundGate with the TVAdapter 2	26
Instructions for Use	31
TV Listening	32
SelectMe	35
Visual Indicators	36
Cleaning and maintenance	37
Additional Information	38
Technical information	39
International Warranty	46

Warnings

For your personal safety and to ensure correct usage, you should familiarise yourself fully with the following general warnings before using your TVAdapter 2. Consult your hearing care professional if you experience unexpected operations or serious incidents with your TVAdapter 2 during use or because of its use. Your hearing care professional will support you with issue handling and, if relevant, reporting to the manufacturer and/or the national authorities.

Fire hazards

The power source in your TVAdapter 2 has insufficient energy to cause fire in normal usage conditions.

Connection to external equipment

The safety of the use of the TVAdapter when connected to external equipment with an auxiliary input cable, is determined by the external signal source. When connected to external equipment plugged into a wall outlet, this equipment must comply with IEC-62368-1 or equivalent safety standards.

Interference

Your TVAdapter 2 has been thoroughly tested for interference according to the most stringent international standards. However, interference between the TVAdapter 2 and other devices may occur. If this occurs, increase the distance between the TVAdapter 2 and the interfering device.

Incompatible non-supplied accessories

Only use accessories, transducers or cables supplied by the manufacturer. Incompatible accessories may result in reduced electromagnetic compatibility (EMC) of your device.

Package content

The following items are included within your TV Adapter 2 package and will be covered within this instruction guide:



TV Adapter 2
Model: BS-F200



Mini jack adapter



Installation Guide and
Instructions for Use



RCA cable



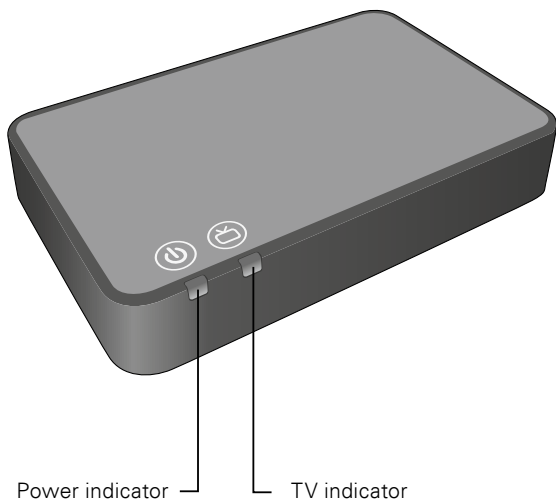
TOSLINK cable



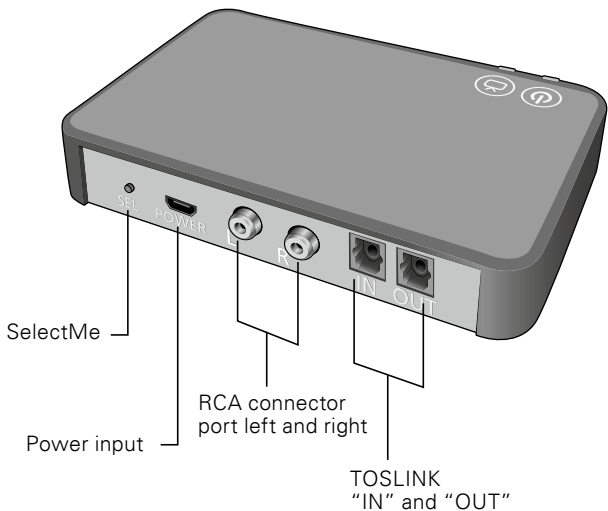
Power adapter

TV Adapter 2 Overview

Front View



Back View



INSTALLATION

Activating the TV Adapter 2 for the First Time

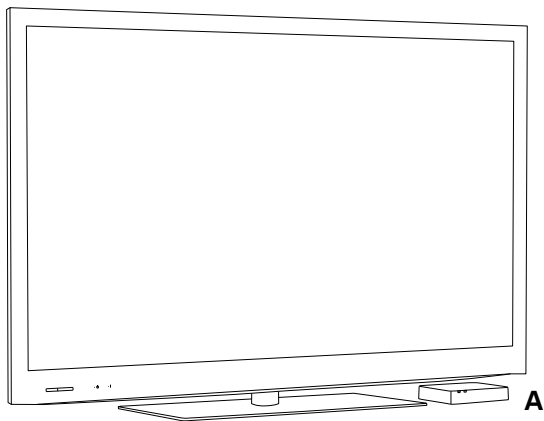
The following pages offer easy step-by-step instructions on how to install and operate your TVAdapter 2 device.

Before you can use the SoundGate and your hearing aids with your TV, the TVAdapter 2 must be connected to a power outlet, connected to the TV and paired with your SoundGate.

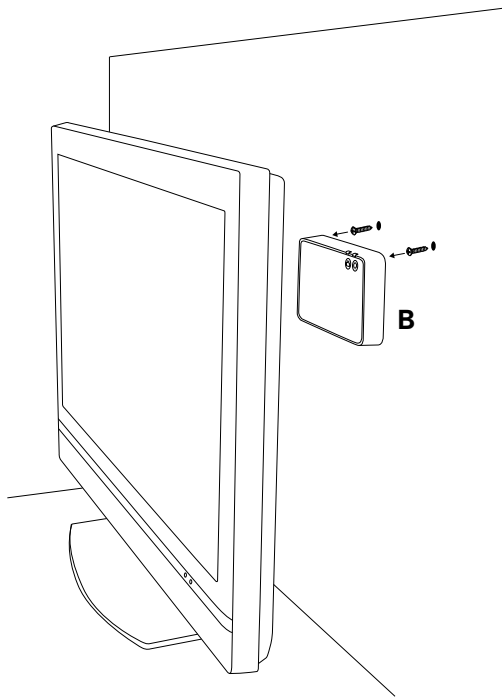
Placing the TV adapter

There are two options of placing the TV adapter:

1. Close to the TV – placed horizontally (A).



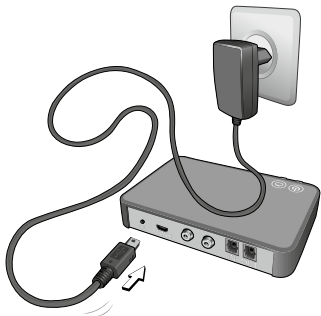
2. Behind or close to the TV hanging on the wall (vertically) (screws not included) (B).



Connecting the TV Adapter 2 to a Power Outlet

Start by connecting the TV Adapter 2 to a power outlet. Use the power adapter included within the TV Adapter 2 packaging.

- 1 Plug the power cord into the power input jack on the TV Adapter 2.
- 2 Plug the power supply into the mains wall socket.
- 3 Check that the power is turned on. After a few seconds the power indicator on the front of the TV Adapter 2 will illuminate green.



Important Notice

When charging the TV Adapter 2 use the supplied original power supply 5.0V/1A, CE and safety marked.



Connecting the TV Adapter 2 to the TV

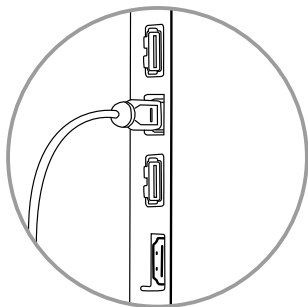
You can connect the TV Adapter 2 in four different ways.

Connection	Page
TOSLINK (either digital stereo PCM or Dolby® Digital*)	18
RCA audio output (L + R)	20
Mini jack output (typically headphone output)	22
SCART audio output (L + R)	24

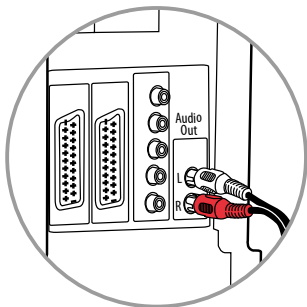
* Dolby is a registered trademark of Dolby Laboratories.

Please see the following pages for a solution which fits your TV.

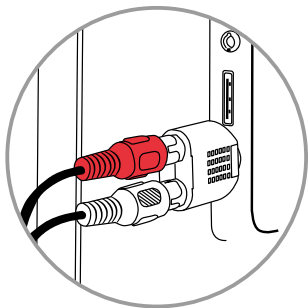
TOSLINK, p. 18



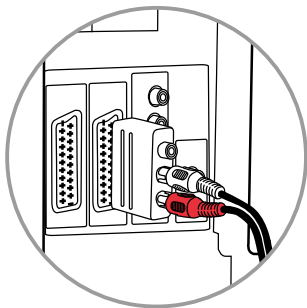
RCA, p. 20



Mini jack, p. 22



SCART, p. 24



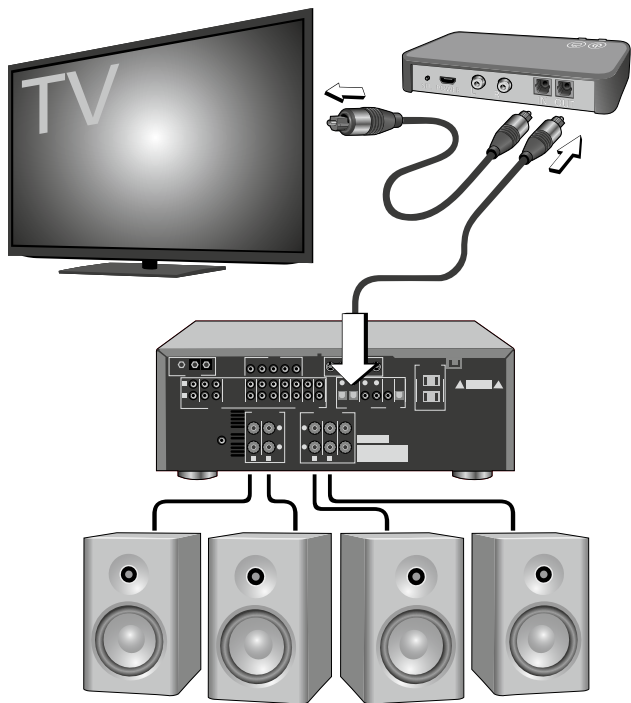
Connecting Using TOSLINK

Place the TVAdapter 2 in a suitable spot near your TV.

- 1 Remove the plastic cap from the TOSLINK cable.
- 2 Connect the TOSLINK cable to the TOSLINK **output** on your TV/home theatre system.
- 3 Connect the TOSLINK cable to the TOSLINK **input** on the TVAdapter 2.
- 4 The TOSLINK output on the TVAdapter 2 may be used to connect other TOSLINK devices such as external Dolby® Decoders and surround sound systems. An additional TOSLINK cable is then needed.
- 5 Refer to page 26 for pairing of the TVAdapter 2 with your SoundGate device.



It may be necessary to configure your TV, DVD player or home theatre system so that the correct audio output is available on the TOSLINK output.



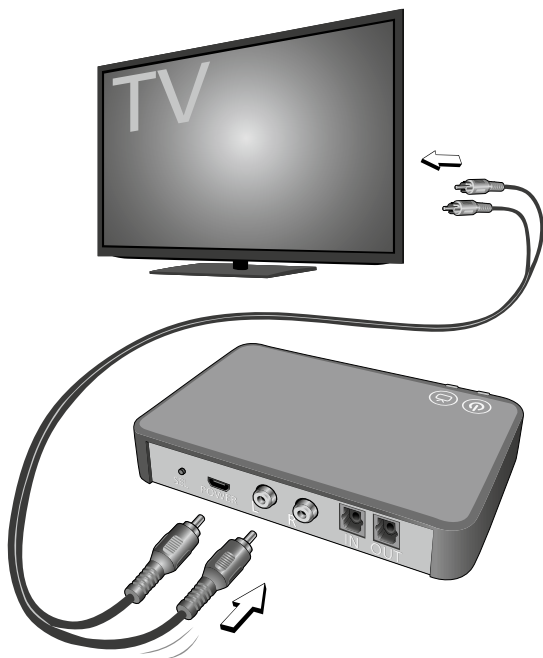
Connecting Using RCA

Place the TVAdapter 2 in a suitable spot near your TV.

- 1 Connect the RCA cable to the RCA **output** on your TV or home theatre system. (Typically marked "L – R AUDIO OUT" and found on the TV back or bottom panel.)
- 2 Connect the RCA cable to the RCA connector ports on the back of the TVAdapter 2.
- 3 Refer to page 26 for pairing of the TVAdapter 2 with your SoundGate device.



It may be necessary to configure your TV so that the correct audio output is available on the RCA output.



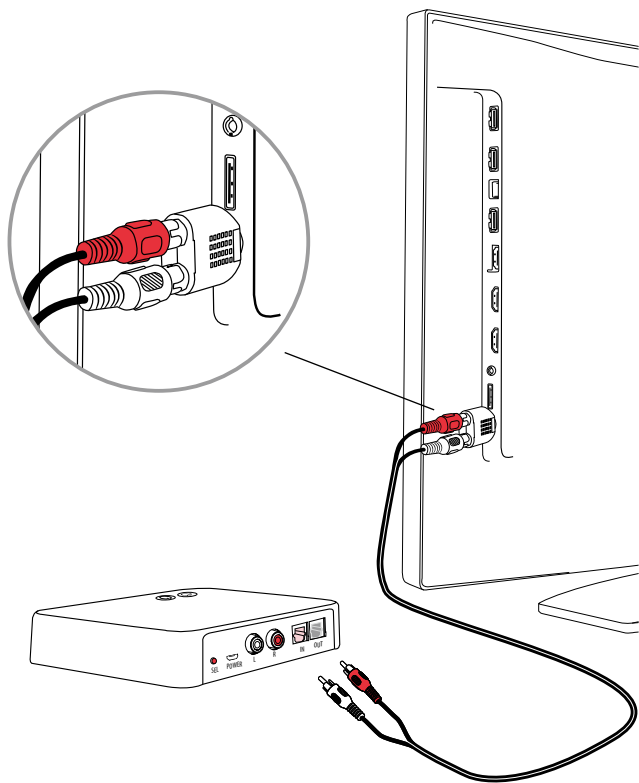
Connecting Using Mini Jack Adapter

Place the TV Adapter 2 in a suitable spot near your TV.

- 1 Connect the RCA cable to the mini jack adapter.
- 2 Connect the mini jack to the TV (typically, it is the headphone output).
- 3 Connect the RCA connectors to the TV Adapter 2 RCA connector ports.
- 4 Refer to page 26 for pairing the TV Adapter 2 with your SoundGate device.



The TV speakers may be muted when connecting to the headphone output, and sound will only be heard through your hearing instruments.



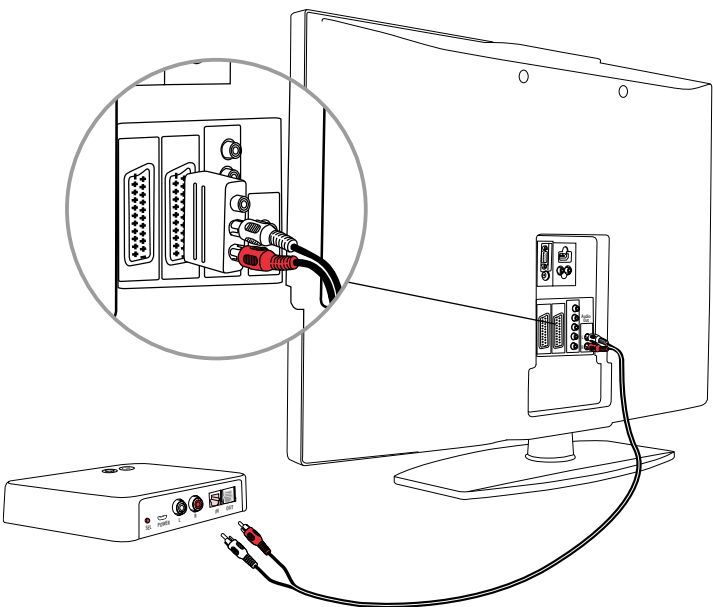
Connecting Using SCART

The SCART adapter is an accessory which is not included in the package content. If you need a SCART adapter, please contact your hearing care professional.

- 1 Connect the RCA cable to the red and white terminals on the SCART adapter.
- 2 Connect the SCART adapter to the SCART **output** on your TV.
- 3 Connect the RCA connectors to the TVAdapter 2 RCA connector ports.
- 4 Refer to page 26 for pairing of the TVAdapter 2 with your SoundGate device.



The audio output on the SCART connector can be dependent on the source selected on the TV. For example, some TV's will only make TV sound available on the SCART output (i.e. not sound from a connected DVD player).



Pairing SoundGate with the TV Adapter 2

TVAdapter 2 may be used with all versions of SoundGate. The first time your SoundGate is used with the TVAdapter 2, the SoundGate must be paired to the TVAdapter 2.

Please read the following instructions, specific to the version of your SoundGate device.



SoundGate 3 / SoundGate 2



SoundGate

Important Notice

Please refer to your hearing aid's instructions for use for details on the functionality of your specific hearing aid solution.

Pairing with SoundGate 3/SoundGate 2

Ensure the TVAdapter 2 is connected to a power outlet and the SoundGate battery is charged and powered ON. The TV indicator on the TVAdapter 2 and the LED indicator on the SoundGate should be illuminated green.

- 1 Press and hold the SoundGate Power Key for 5–6 seconds until the SoundGate LED indicator starts flashing blue rapidly.



- 2 Place the SoundGate on top of the TVAdapter 2 – the pairing can take up to 60 seconds. The pairing is completed when the TVAdapter 2 Power indicator turns blue and then stable orange.



Pairing is done only once and will normally not have to be repeated.

- 3 When the Power indicator on the TV Adapter 2 and the TV indicator on the SoundGate are both stable orange, the TV Adapter 2 is connected with the SoundGate and ready to stream audio.



Pairing with SoundGate

Ensure the TVAdapter 2 is connected to a power outlet and the SoundGate battery is charged and the key lock is in the unlocked (green) position. The TV indicator on the TVAdapter 2 should be illuminated green.

- 1 Press and hold the SoundGate Bluetooth® key for 6–8 seconds until the blue light flashes rapidly.
- 2 Place the SoundGate on top of the TVAdapter 2 – the pairing can take up to 60 seconds. The pairing is completed when the TVAdapter 2 Power indicator turns blue and then stable orange.
- 3 When the Power indicator on the TVAdapter 2 and the Audio Key on the SoundGate are both stable orange, the TVAdapter 2 is connected with the SoundGate and ready to stream audio.



INSTRUCTIONS FOR USE

TV Listening

You may now begin streaming audio from your TVAdapter 2. Ensure you are within the recommended range of 30 meters (98 feet) from the TVAdapter 2.

Begin Streaming

For optimal use with the TVAdapter 2, ensure the SoundGate device is worn with the neck strap antenna and that the hearing instruments are powered on.

- 1 Press the TV Key on the SoundGate 3/ SoundGate 2 or the Audio Key on the SoundGate to begin streaming.



SoundGate 3
SoundGate 2



SoundGate

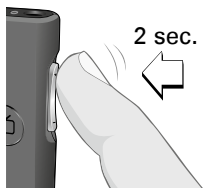
- 2 The TV Key/Audio Key on your SoundGate device will illuminate orange and the Power indicator on the TV Adapter 2 will turn from green to orange. You will hear a confirmation beep in your hearing instruments followed by the sound from the connected TV.

Volume Control

Use the volume button on the SoundGate device to adjust the TV volume level in the hearing instruments. Adjust the volume by pressing up or down briefly.

Mute

While watching TV it is possible to switch off the microphones in your hearing instruments, so that only the sound from the TV is heard.



SoundGate 3
SoundGate 2



SoundGate

Press the Volume Up or Down key for 2 – 3 seconds to mute your hearing instrument microphones. You will hear a confirmation beep indicating that the microphones in the hearing instruments are now muted.

Stop Streaming

Briefly press the TV Key/Audio Key on your SoundGate device to discontinue streaming from the TVAdapter 2. The TV Key/Audio Key on the SoundGate device will turn off and the Power indicator on the TVAdapter 2 will turn green. You will hear a confirmation beep in your hearing instruments.

Important Notice

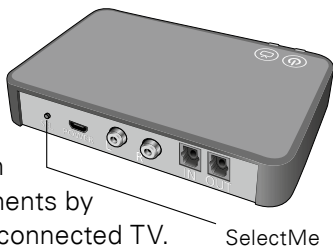
Please refer to your hearing aid instructions for use for details on the functionality of your specific hearing aid solution.

SelectMe

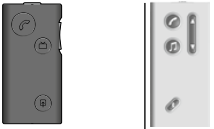





















With SoundGate 3/SoundGate 2 you can use multiple TVAdapters 2 devices (e.g., one in the living room and one in the bedroom). To use the SelectMe functionality your SoundGate device must be programmed with the latest firmware version. If you are in doubt, please contact your hearing care professional.

To Switch between the TV Adapter 2 Devices

- 1 Make sure you are not connected to any TVAdapter 2, i.e., the SoundGate should be turned on, but not active.
- 2 Briefly press the SelectMe button on the back of the TVAdapter 2 you wish to hear the sound from.
- 3 The TVAdapter 2 is automatically connected. You will hear a confirmation beep in your hearing instruments by the sound from the connected TV.



Visual Indicators

Devices						
Indicators	Power	TV	Front	Power	TV	
In pairing mode						
TVAdapter 2 streaming from RCA input						
TVAdapter 2 streaming from TOSLINK input						
Unsupported format on TOSLINK input						

Cleaning and maintenance

Use a soft, dry cloth to clean the TV Adapter 2.

Important Notice

The TV Adapter 2 must never be washed or immersed in water or other liquids.

Additional Information

Range

The TVAdapter 2 has a range of up to 30 meters (98 feet) to the SoundGate 3/SoundGate 2 device, depending on furniture and walls. Within this range you can listen to the TV with good sound quality (i.e. without “crackle” sound).

Turn Off the TVAdapter 2

The TVAdapter 2 uses very little power so it is not necessary to turn it off.

Technical information

Model name	BS-F200
Conditions of Use	
Operating conditions	Temperature: +5°C to +40°C (41°F to 104°F) Humidity: 15% to 93%, relative humidity, non-condensing Atmospheric pressure: 700 hPa to 1060 hPa
Storage and transportation conditions	Temperature and humidity shall not exceed the below limits for extended periods during transportation and storage: Temperature: -25°C to +70°C (-13°F to +158°F) Humidity: 15% to 93%, relative humidity, non-condensing Atmospheric pressure: 700 hPa to 1060 hPa
Dimensions	124 x 80 x 21 mm (4.9 x 3.1 x 0.8 inch); weight 100 g

System features	<ul style="list-style-type: none"> • Autopairing: TV Adapter 2 will automatically pair with SoundGate in pairing mode • Autoconnect: TV listening automatically resumed after phone call. • AutoPriority: an incoming phone call will have priority over TV sound. • SelectMe: switch between two or more TV adapters
Compatibility	TV Adapter 2 will work with all versions of SoundGate
Input connectors/format	<ul style="list-style-type: none"> • Mini jack 3.5 mm (L+R) (using included cable and converter) • RCA (L+R) • TOSLINK Digital Stereo (PCM)/Dolby® Digital
Output	TOSLINK (buffered output of TOSLINK input)
Range	Up to 30 metres with SoundGate 3 (free line of sight)
Audio inputs (format)	<ul style="list-style-type: none"> • Stereo analog input (RCA) • Stereo/PCM (TOSLINK) • Dolby® Digital (TOSLINK)

Latency (TV adapter input to hearing aids' speaker/receiver)	Analog: 37 ms Digital: 39 ms Dolby® Digital: 59 ms
Line input sensitivity	6 dB Vrms (analog), impedance: 10 KΩ
Audio bandwidth	7.4 KHz/mono from TV input to hearing aids
Dynamic self-adjustment	AGC (analogue inputs) (line in approximation to 0 dB 5 secs)
Status indicators	Power and status LED on front
Colors	Dark gray
Power consumption	Idle, not streaming sound: 0.3 W Connected to SoundGate, not streaming sound: 0.3 W Connected to SoundGate, streaming sound: 1.0 W
Transceiver	
Operating frequency	2.402 GHz – 2.480 GHz (ISM Band)
Output power	Max. 37 dBm EIRP. In compliance with all relevant standards.

The TV Adapter 2 contains a radio transceiver using Bluetooth at 2.4 GHz. The radio transmitter is weak and always below 10 mW equal to 10 dBm in total radiated power.

The TV Adapter 2 complies with international standards concerning radio transmitters, electromagnetic compatibility and human exposure.

Due to the limited space available on the TV Adapter 2 relevant approval markings can be found in this booklet.

Additional information can be found in the “Technical Information” section (see pages 39-41).

USA and Canada

This device contains a radio module with the following certification ID numbers:

FCC ID: U28TVBOX03

IC: 1350B-TVBOX03

Notice: The device complies with Part 15 of the FCC Rules and with Industry Canada's licence-exempt RSSs standards. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The manufacturer declares that this TV Adapter 2 (model BS-F200) is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

Declaration of Conformity is available at the manufacturer.



Manufacturer:

SBO Hearing A/S
Kongebakken 9
DK-2765 Smørum
Denmark
www.sbohearing.com



Waste from electronic equipment must be handled according to local regulations.

Complies with IMDA Standards DA103820








International Warranty

Your TVAdapter 2 is covered by an international limited warranty issued by the manufacturer for a period of 12 months from the date of delivery. This limited warranty covers manufacturing and material defects in the device itself, but not in accessories such as batteries, cables, power supplies, etc. Problems arising from improper/incorrect handling or care, excessive use, accidents, repairs made by an unauthorised party, exposure to corrosive conditions, damage due to foreign objects entering the device or incorrect adjustments are NOT covered by the limited warranty and may void it. The above warranty does not affect any legal rights that you might have under applicable national legislation governing sale of consumer goods. Your hearing care professional may have issued a warranty that goes beyond the clauses of this limited warranty. Please consult him/her for further information.


If you need service

Take your TVAdapter 2 to your hearing care professional, who may be able to sort out minor problems and adjustments immediately.

Description of symbols used in this booklet or on the packaging label

	<p>Warnings Text marked with a warning symbol must be read before using the device.</p>
	<p>Manufacturer The device is produced by the manufacturer whose name and address are stated next to the symbol. Indicates the medical device manufacturer, as defined in EU Regulations 2017/745 and 2017/746.</p>
	<p>CE mark The device complies with Medical Device Regulation 2017/745.</p>
	<p>Electronic waste (WEEE) Recycle hearing aids, accessories or batteries according to local regulations. Hearing aid users can also return electronic waste to their hearing care professional for disposal. Electronic equipment covered by Directive 2012/19/EU on waste and electrical equipment (WEEE).</p>
	<p>Regulatory Compliance Mark (RCM) The device complies with electrical safety, EMC and radio spectrum requirements for devices supplied to the Australian or New Zealand market.</p>
	<p>Double insulation Indicates that product power supply is double insulated. This means a very low risk of single fault failures i.e. single fault failures cannot occur.</p>
	<p>Indoor use Indicates that the product is qualified for indoor use.</p>

 <p>Complies with IMDA Standards DA103820</p>	<p>Singapore IMDA label Indicates that the device complies with the standards and specification published by Info-Communications Media Development Authority (IMDA) and is compatible with the public telecommunication networks in Singapore and does not cause radio frequency interference to other authorized radio-communication networks.</p>
	<p>South Africa ICASA label Indicates that the device has license to be sold in South Africa.</p>
	<p>Japan TELEC symbol Indicates mark for certified radio equipment.</p>
	<p>Brazil ANATEL label Indicates that the device is certified and homologated in Brazil.</p>
	<p>Korea Certification Mark (KC) The device complies with Korean product safety requirements for electrical and electronic equipment.</p>
	<p>NCC symbol Taiwanese certification for the National Communications Commission (NCC) of communication information equipment.</p>
	<p>Medical Device The device is a medical device.</p>
	<p>Keep dry Indicates a medical device that needs to be protected from moisture.</p>

	<p>Caution symbol Consult instructions for use for warnings and cautions.</p>
<p>REF</p>	<p>Catalogue number Indicates the manufacturer's catalogue number so that the medical device can be identified.</p>
<p>SN</p>	<p>Serial number Indicates the manufacturer's serial number so that a specific medical device can be identified.</p>
<p>Rated input: 5,0 V $\overline{\text{---}}$ 0,4 A</p>	<p>Power supply outlet Indicates the rate at which power is sent from the outlet to your electrical device.</p>

Date: _____ Model: _____

Warranty period: _____

Serial no.: _____

Hearing Center

< >
8,15 mm

Placeholder
for FSC logo

FSC
MIX
Paper

FSC® C043870

9.0 mm

< 15 mm >

19 mm

World Headquarters

Bernafon AG

Morgenstrasse 131
3018 Bern
Switzerland
www.bernafon.com



000021376000001

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