

TV Sound

User guide 2: instructions for use



CAUTION

It is important to read this user guide thoroughly and completely.

It is also important to read and follow the user guide 2 (instructions for use) and user guide 1 (safety manual) for the hearing aid you use with this accessory. Follow the safety information to avoid damage or injury.

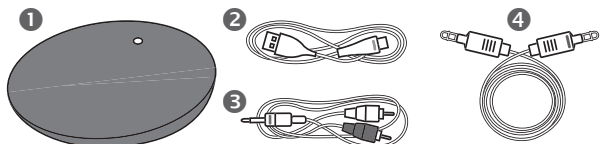
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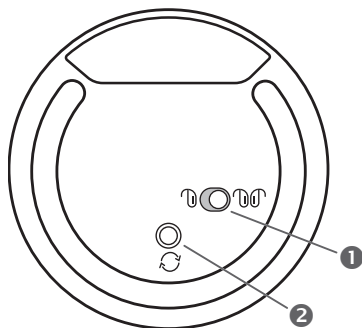
Welcome

Package contents



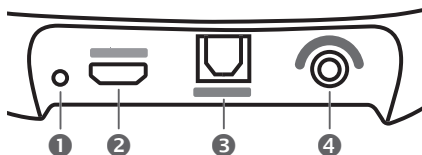
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- | | |
|-------------------|--|
| 1 TV Sound device | 3 Analog audio cable (mini jack-to-phono) |
| 2 Micro USB cable | 4 Optical TOSLINK audio cable |
-

Overview of the bottom of the device



-
- | | |
|----------------------|----------------|
| 1 Mono/stereo button | 2 Reset button |
|----------------------|----------------|
-

Overview of the back of the device



① LED

③ Optical TOSLINK socket

② Micro USB socket

④ Analog socket



Read this booklet and the user instructions for your hearing aids carefully before you start using the device.

Intended purpose / Intended use

This device is intended as a wireless sound transmitter from a television to supported hearing aids.

Important safety information

Read this section carefully before you start using the device.



WARNING

Risk of electric shock!

- ▶ Connect audio input only to a device conforming to safety standards IEC 60065, IEC 60950, EN 62368.



WARNING

Risk of electrical shock!

- ▶ Do not use obviously damaged devices and return them to point of sale.



WARNING

Risk of explosion!

- ▶ Do not use your device in explosive atmospheres (e.g. in mining areas).



WARNING

Choking hazard!

Your device contains small parts which can be swallowed.

- ▶ Keep hearing aids, batteries and accessories out of reach of children and mentally disabled persons.
- ▶ If parts have been swallowed consult a physician or hospital immediately.



WARNING

Your device is sensitive to low air pressure, extreme heat, high humidity, strong magnetic fields ($> 0.1\text{T}$), X-rays and mechanical stress.

- ▶ Do not expose your remote control to extreme temperatures or high humidity, and dry it quickly if it gets wet.

Do not immerse your device in water.

Never dry your devices in the micro-wave or oven.

Do not use any kind of liquid or disinfectant to clean your device.

Keep the device protected from dust or external particles.



NOTICE

Different types of strong radiation, e.g. during X-ray, MRI procedures, proximity of idle MRI or CT scan, may damage the device.

- ▶ Do not use the device during these or similar procedures.

Weaker radiation, e. g. from radio equipment or airport security, does not damage the device.



NOTICE

Your device is designed to comply with international standards on electromagnetic compatibility, but interference with nearby electronic devices could occur. In this case, move away from the source of interference.



WARNING

Active implants

- ▶ Caution must be taken with active implants. If you have an active implant, contact the manufacturer of your implanted device for information about the risk of disturbance.



WARNING

This device may interfere with measuring and electronic equipment.

- ▶ Do not use your device on airplanes or areas where sensitive or life-supporting electronic equipment is used.



NOTICE

- ▶ Recycle hearing aids, accessories and packaging according to local regulations.



WARNING

Never try to open or repair the device yourself.
Contact your hearing care professional if you need to have your device repaired.



WARNING

Note that any unauthorized changes to the device may cause damage to the device or cause injury.

- ▶ Use only approved parts and accessories.
Contact the customer service for support.
- ▶ Do not modify this equipment without authorization from the manufacturer.
- ▶ If this equipment is modified, appropriate inspection and testing must be conducted to ensure safe use of the equipment.



NOTICE

To avoid potential degradation of radio performance, your device should be separated by at least 25 cm (10 inches) to other radio communications equipment.



NOTICE

In case of a serious incident, report the occurrence to the manufacturer of the device and the competent authority under whose jurisdiction the user and/or patient resides.

Environmental conditions

The device is designed to operate within the temperature, humidity and atmospheric pressure ranges of 0 °C to 45 °C (32 °F to 113 °F), 5–93% rH, and 700–1060 mBar.

The device should be stored within the temperature and humidity ranges of 10 °C to 40 °C (50 °F to 104 °F), 10–80% rH, and 700–1060 mBar.

The device should be transported within the temperature, humidity and atmospheric pressure ranges of -20 °C to +60 °C (-4 °F to +140 °F), 5–90% rH, and 700–1060 mBar.

Getting started

Powering the device

To power the device, do the following:

- Connect the Micro USB cable (green) to the socket (green) on the back of the device.
- Connect the other end of the cable to the USB socket on the back of your TV.
- Turn on your TV.

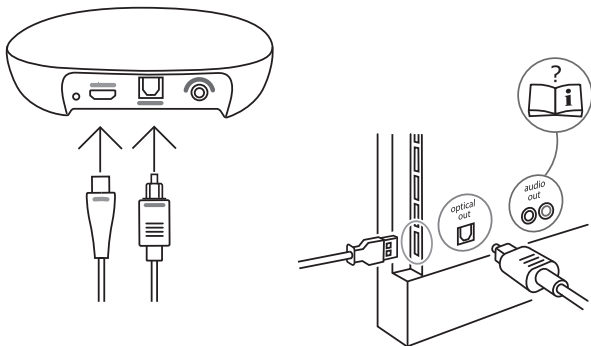


If your TV doesn't have a USB socket, you can use a standard USB wall charger (not included). The wall charger should supply at least 150 mA (0.75 W) of power.

Connecting the device to your TV

Option A: using the optical cable

For audio connection, we recommend that you use the optical cable (blue) to connect the device to your TV, as this gives you the best audio quality.



- Remove the protection caps from both ends of the optical cable.
- Connect the optical cable (blue) to the corresponding "Optical IN" socket (blue) on the back of the device, and then connect it to the "Optical OUT" socket on the back of your TV.



When using the optical cable to connect the device to your TV, the following digital formats are supported: Digital stereo (PCM), Dolby® Digital* It may be necessary to configure your TV, DVD player or home theater system to choose one of the supported audio formats. Note that the device may not be able to stream sound from unsupported audio formats.

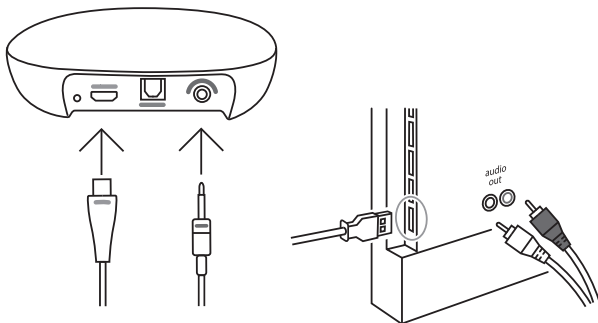


You can verify that there is a signal in the optical cable by looking into the end that goes into the device. If you see a red light, there is a signal.

* Dolby and the double-D symbol are registered trademarks of Dolby Laboratories.

Option B: using the analog audio cable

You can also use the analog cable to connect the device to your TV. To do so, follow these steps:



- Connect the analog audio cable (purple) to the socket (purple) on the back of the device.
- Connect the analog audio cable (purple) into the corresponding sockets on the back of your TV.



Use either the optical cable option or the analog cable option to connect your device to the TV. You don't need to use both.



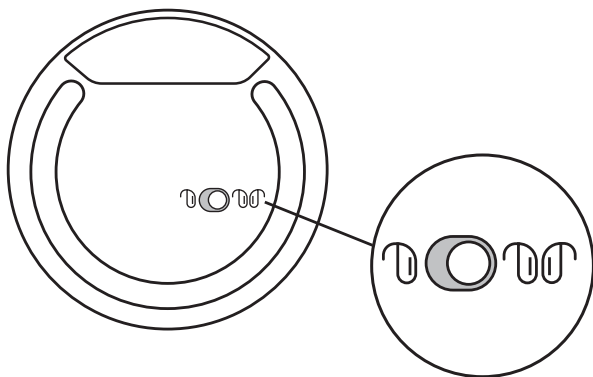
If you have connected both the optical cable and the analog audio cable, the device will choose the source from the optical connection if there is a signal in the optical cable. If there is no signal in the optical cable, the device will choose the analog connection.

Using an external audio transmitter (e.g. a sound bar)

You can use an external audio transmitter like a sound bar with the device. If the external audio transmitter requires a digital optical audio connection, the "Analog IN" socket on the device can be used as an "Optical OUT" socket. To use the "Analog IN" socket as an "Optical OUT" socket, connect it to an optical 3.5 mm adapter. An optical 3.5 mm adapter is not included with your device, but must be acquired separately.

Setting up the device for one or two hearing aids

You can set up your device according to your needs using the mono/stereo button on the bottom of the device. If you have one hearing aid, choose the mono setting. If you have two hearing aids, choose the stereo setting.



Mono sound

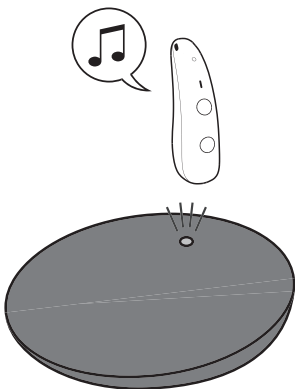


Stereo sound

Pairing the device with your hearing aids

You need to pair your device and hearing aids before you start streaming sound from your TV for the first time. Do as follows:

- Power your device by turning on your TV. Refer to the section "Powering the device" for more information.
- Restart your hearing aids by placing them in the charger for a minimum of three seconds and then removing them, or by turning them off and on again, or by opening and closing the battery compartment.
- Keep the hearing aids in pairing range of the device while pairing (0–20 cm).
- The LED on the device pulses blue while the device is attempting to pair with the hearing aids.
- When the device has successfully paired with the hearing aids, the LED on the device glows solid blue, and the hearing aids play a tone.



Your hearing aids are only in pairing mode for three minutes after you restart them. You might need to restart them again if you didn't pair them in time.



Your hearing aids are not paired with the device at the same time, but individually, one after the other.



The device can be used to stream sound to more than one user at a time. If you need this option, simply follow the same pairing procedure above.



If your hearing aids are paired to a phone that is close by, turn off Bluetooth on the phone before pairing the hearing aids with the device.



Don't keep the device in a drawer; this might shorten the transmission range.

Removing a pairing

Pairings with hearing aids are removed from the device in two ways. To remove all pairings from the device, do the following:

- Press the reset button on the bottom of the device for five seconds. The LED on the device turns off.
- Stop pressing the button. The device resets and removes all pairings.

To remove a pairing using the hearing aid app, follow these steps:

- Open the TV Sound program on your app, and enter the Sound Menu.
- Tap the three dots on the top right corner of the Sound Menu.
- Press the Delete pairing button and accept deleting a pairing.

Using the device

Using the device with the hearing aid app

When the device has been paired with your hearing aids, it will be ready to use via your hearing aid app. To start listening to your TV, do the following:

- Make sure your hearing aids are paired with your phone.
- Open the hearing aid app.
- Select the “Stream” tab, and press the play button.

To stop listening to the sound from your TV, press the pause or stop button on the streaming page.

If your hearing care professional has saved a dedicated TV streaming program in your hearing aids, do the following:

- Make sure your hearing aids are paired with your phone.
- Open the hearing aid app.
- Go to the program selection screen, and select the dedicated TV streaming program.

To stop listening to the from your TV, select another listening program.

Using the device without the hearing aid app

If your hearing care professional has saved a general streaming or dedicated TV streaming program to your hearing aids, do the following:

- Make sure your hearing aids are paired with the device.
- Select the streaming program by using the control element on your hearing aids, or the remote control for your hearing aids.



To comply with FCC RF exposure requirements, the device and the antenna for this device must be installed to ensure a minimum separation distance of 20 cm or more from a person's body. Other operating configurations should be avoided.

Adjusting the volume of the TV sound

Adjust the volume of the hearing aids and TV sound using the sliders for microphone volume and streaming volume in your hearing aid app. Without the app you can adjust the TV sound volume via the remote control using the volume buttons.



Your hearing care professional can also adjust the balance between the streaming signal and surrounding sounds according to your preference.

Making phone calls while using the device

If you have a compatible smartphone with direct streaming, answer incoming calls as you usually do on your phone.



If the phone call is not streamed to your hearing aids, try changing to another listening program using your app.

Additional information

LEDs

LED	Meaning
Glowing green light	The device is on, paired, and streaming.
Pulsating green light	The device is on, but not streaming.
Glowing blue light	One or both of your hearing aids have been successfully paired with the device.
Blinking blue light	The device has just been turned on for the first time, or the device has been reset.
Pulsating blue light	The device is searching for hearing aids to pair with, or attempting to establish a pairing.
Blinking orange light	The reset button has been pressed briefly, and streaming has been stopped for 30 seconds. Press the reset button again to resume streaming, or wait 30 seconds for streaming to resume automatically.
Glowing red light	The device is receiving an unknown sound format.
Blinking red light	The device has encountered an error.
Pulsating red light	The device is overheating. Let the device cool down before use.

Resetting the device

There is a reset button on the bottom of the device. Reset your device by following these steps:

- Press the reset button until the LED light on the device turns off (about five seconds).
- Release the button. The device reboots and removes all existing pairings from the device.



If you reset your device, you'll have to pair your hearing aids with the device again.

Maintenance

Clean your device using a soft, dry cloth, or vacuum clean it with a soft nozzle.



Don't wash your device and never immerse it in water or any other liquid.

Troubleshooting

These pages contain advice on what to do if your device stops working or if it doesn't work as expected. If the problem persists, contact your hearing care professional.

Problem	Possible cause	Solution
I cannot pair my hearing aids with the device.	a. The hearing aids are paired with a nearby phone. b. The hearing aids have been in pairing mode for more than three minutes.	a. Turn off Bluetooth on the phone while pairing the hearing aids with the device. b. Restart the hearing aids to put them into pairing mode again.

Problem	Possible cause	Solution
There is no sound from the TV in my hearing aids.	a. The hearing aids and the device are not paired. b. The device is not connected properly to your TV. c. The audio source is not turned on. d. The hearing aid batteries are almost flat. e. Your hearing aids are not in the TV Sound program. f. The volume is too low. g. Your device needs to be reset and paired with your hearing aids.	a. Pair the device and your hearing aids. b. Check that the device is properly connected to the TV. c. Turn the audio source on. d. Change the hearing aid batteries, or charge the hearing aids. e. Select the TV Sound program on the app. f. Turn up the volume on the TV or the app. g. Press the reset button for 5 seconds, and pair the device and your hearing aids.

Problem	Possible cause	Solution
Others can't hear the sound from the TV.	You have connected the device to the headphone socket.	a. Connect the analog cable as described in the Connection chapter. b. Use a different output on the TV. c. Check the audio settings on your TV and set the loudspeakers to be used in parallel.
I can only hear sound in one hearing aid.	a. The battery on the other hearing aid is flat. b. Only one hearing aid has been paired with the device.	a. Change the hearing aid battery, or charge the hearing aid. b. Make a new pairing.
I have connected the optical cable to my TV, but I have no audio in my hearing aids.	The TV is not configured to send audio out via the optical out connector.	Check the TV audio output settings (advanced settings).

Problem	Possible cause	Solution
I have connected the analog cable to my TV, but I have no audio in my hearing aids.	The analog connectors on the TV are only sound input.	a. Use the optical cable supplied with your device. b. Use a mini jack to mini jack cable and the headphone plug on your TV. c. Your TV may not be compatible with the device.
The volume is not comfortable.		a. Adjust the volume using the app or a remote control. b. Check the advanced settings on your TV to see volume settings.
The TV sound in my hearing aids is interrupted in one or both hearing aids.	a. The device has been placed in a drawer, or it is behind a wall. b. The device is out of range. c. There is interference from other radio transmission sources.	a. Place the device in line of sight. b. Place the device into range. c. Move away from other radio transmission sources.

Problem	Possible cause	Solution
The LED pulses red, and there is no sound in the hearing aids.	The device is overheating.	Keep the device away from sunlight. Don't place it in a drawer, and keep it away from the TV's heat vents.

If the problem persists, contact your hearing care professional.

Regulatory information

EU directives

Directive 2014/53/EU

WSAUD A/S declares that this TV Sound is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The TV Sound contains radio transmitters operating at 2.4 GHz, 10.0 mW EIRP. A copy of the Declaration of Conformity according to 2014/53/EU can be found at:
<https://www.wsaud.com/other/>

Information regarding disposal

Do not dispose of hearing aids, hearing aid accessories and batteries along with ordinary household waste.

Hearing aids, batteries and hearing aid accessories should be disposed of at sites intended for electrical waste and electronic equipment, or given to your hearing care professional for safe disposal.

Wireless functions and operating characteristics

The following tables summarizes the technical details of the wireless technology:

Technical details	Bluetooth (LE)
Antenna type	Integral frame antenna
Antenna dimensions	18 mm x 4.5 mm
Modulation	GFSK / FHSS
Output power (EIRP)	0 dBm / 1 mW
Range	6 m
Center frequency	2401–2480 MHz
Channel	40
Bandwidth	2 MHz
Data rate	1 Mbps
Data flow	Duplex
Protocol	BLE

Wireless security measures

Security of the wireless signals is assured through device system design that includes:

- Individual MAC address for each unit which is checked during each transmission.
- A built-in pairing table which specifies valid and legitimate pairing among units.
- A proprietary communication protocol which checks the package numbers during each transmission.

- A Cyclic Redundancy Check (CRC) to check data validity and correct errors.

Electromagnetic emissions/immunity standards

The product complies with the following EMC/EMI standards:

Standard	Test type	Note
47 CFP Part 15, Subpart B	RF emissions	US FCC requirements for unintentional radiators
47 CFP Part 15, Subpart C	RF emissions	US FCC requirements for intentional radiators
47 CFR Part 18	RF emissions	US FCC requirements for Industrial, Scientific and Medical Equipment
IEC 60601-1-2	General EMC including RF emissions, RF immunity, ESD	Medical Electrical Equipment, Electromagnetic compatibility

FCC and IC statements

FCC ID: 2AXDT-TVS

IC: 26428-TVS

CAN ICES-3(B)/NMB-3 (B)

Federal Communications Commission Statement

This device complies with part 15 of the FCC Rules.
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.



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.



This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Changes or modifications to the equipment not expressly approved by WSAUD A/S could void the user's authority to operate the equipment.

ISED STATEMENT / DÉCLARATION d'ISED:

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

This device may not cause interference.

This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISED RADIATION EXPOSURE STATEMENT:

This equipment complies with ISED RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

ISED EXPOSITION AUX RADIATIONS:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet émetteur ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou émetteur.

Symbols

Explanation of symbols

Symbols used in this document



Indicates the legal manufacturer of the device.



Points out a situation that could lead to serious, moderate, or minor injuries.



Indicates possible property damage.



Advice and tips on how to handle your device better.



The product is in conformity with the requirements set out in the European CE marking directives.

Other symbols on the device or packaging



EMC and radio communications compliance label Australia, refer to section "Conformance information".



Do not dispose of the device with general domestic waste. Read more in section "Disposal information".



Packaging can be recycled.



Read and follow the instructions in the user guide.



Keep dry during transportation.



Temperature during transportation. Read more in section "Operating, transport and storage conditions".



Relative humidity during transportation. Read more in section "Operating, transport and storage conditions".



Atmospheric pressure during transportation. Read more in section "Operating, transport and storage conditions".



Medical device.

Licenses and acknowledgements

Open-source acknowledgements

This device makes use of third party open-source software resources. The open-source resources are listed below, and their full license texts can be found on the following pages under "Third-party licenses".

nrfx

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SPDX-License-Identifier: BSD-3-Clause

<https://github.com/NordicSemiconductor/nrfx>

Licensed under the 3-clause BSD license.

CMSIS ARM

Copyright © 2009–2023 Arm Limited. All rights reserved.

https://github.com/ARM-software/CMSIS_5

Licensed under the Apache 2.0 license.

FreeRTOS

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Mbed TLS

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Tiny USB

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<http://tinyusb.org> or <https://github.com/hathach/tinyusb>

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MCUXpresso SDK (MIMXRT1040) - Parts of the SDK named as "SDK_**"

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January 2004

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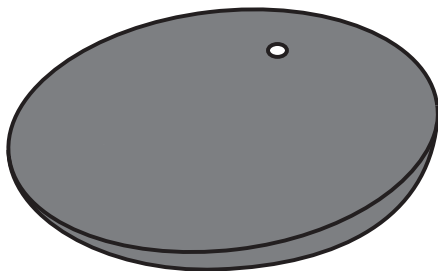
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TV Sound



CAUTION

Es importante que lea detenidamente este manual del operador de principio a fin.

También es importante leer y observar el manual del operador 2 (instrucciones de uso) y el manual del operador 1 (manual de seguridad) del audífono que utilice con este accesorio. Sigue la información de seguridad para evitar daños o lesiones.

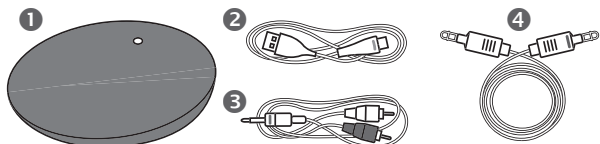
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Bienvenido

Contenido del paquete



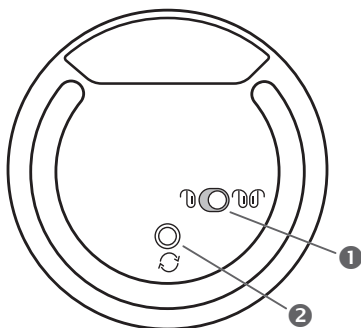
❶ Dispositivo de
sonido de la TV

❷ Cable micro USB

❸ Cable de audio analógico
(miniconector a entrada
phono)

❹ Cable de audio óptico
TOSLINK

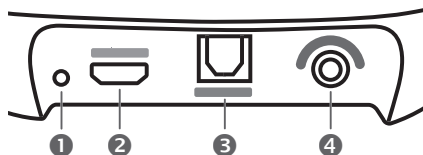
Vista general de la parte inferior del dispositivo



❶ Botón mono/estéreo

❷ Botón de reinicio

Vista general de la parte posterior del dispositivo



❶ LED

❸ Toma óptica TOSLINK

❷ Toma micro USB

❹ Toma analógica



Antes de comenzar a utilizar el dispositivo, lea atentamente este folleto y las instrucciones de uso de sus audífonos.

Finalidad prevista / Uso previsto

Este dispositivo está concebido como transmisor inalámbrico de sonido desde un televisor a unos audífonos compatibles.

Información importante de seguridad

Lea atentamente esta sección antes de comenzar a utilizar el dispositivo.



ADVERTENCIA

¡Riesgo de descarga eléctrica!

- Conecte la entrada de audio solo a dispositivos que cumplan las normas IEC 60065, IEC 60950 y EN 62368.



ADVERTENCIA

¡Riesgo de descarga eléctrica!

- ▶ Si el aparato está claramente dañado, no lo use y devuélvalo al punto de venta.



ADVERTENCIA

¡Peligro de explosión!

- ▶ No use el dispositivo en atmósferas explosivas (p. ej. en minas).



ADVERTENCIA

¡Peligro de asfixia!

El dispositivo contiene piezas pequeñas que se pueden tragar.

- ▶ Mantenga los audífonos, pilas y accesorios fuera del alcance de los niños y personas con deficiencias mentales.
- ▶ En caso de ingerir alguna pieza, consulte a un médico o acuda a un hospital inmediatamente.



ADVERTENCIA

El dispositivo es sensible a la baja presión atmosférica, el calor extremo, la humedad elevada, los campos magnéticos intensos ($>0,1$ T), los rayos X y el estrés mecánico.

- ▶ No exponga el control remoto a temperaturas extremas o a humedad elevada y séquelo rápidamente si se moja.

No sumerja el dispositivo en agua.

No seque nunca los dispositivos en el microondas ni en el horno.

No utilice ningún tipo de líquido o desinfectante para limpiar el dispositivo.

Mantenga el dispositivo protegido del polvo o partículas externas.



AVISO

El dispositivo podría dañarse por distintos tipos de radiación muy fuerte, p. ej., durante exámenes por rayos X, procedimientos de imagen por resonancia magnética (IRM) o por la cercanía de un equipo de TC o IRM en reposo.

- ▶ No use el dispositivo en este tipo de procedimientos o similares.

Las radiaciones más débiles, como las que emiten los equipos de radio o de seguridad del aeropuerto, no dañan el dispositivo.



AVISO

Su dispositivo está diseñado para cumplir los estándares internacionales en materia de compatibilidad electromagnética, pero pueden producirse interferencias con los dispositivos electrónicos cercanos. En este caso, apártese de la fuente de interferencias.



ADVERTENCIA

Implantes activos

- ▶ Se debe tener cuidado con los implantes activos. Si tiene un implante activo, póngase en contacto con el fabricante del dispositivo implantable para obtener información sobre los riesgos de perturbaciones.



ADVERTENCIA

El dispositivo puede interferir con los dispositivos de medición y electrónicos.

- ▶ No utilice el dispositivo en aviones o zonas donde se utilicen equipos electrónicos de soporte vital o equipos electrónicos sensibles.



AVISO

- ▶ Recicle los audífonos, accesorios y embalajes según la normativa local.



ADVERTENCIA

No intente nunca abrir o reparar el dispositivo usted mismo. Si necesita repararlo, póngase en contacto con su especialista en audición.



ADVERTENCIA

Tenga en cuenta que cualquier cambio no autorizado en el dispositivo puede dañarlo o provocar lesiones.

- ▶ Utilice solo piezas y accesorios autorizados. Póngase en contacto con el servicio de atención al cliente para que le ayuden.
- ▶ No haga cambios en este equipo sin contar con la autorización del fabricante.
- ▶ En caso de modificar el equipo, deben realizarse las pertinentes pruebas e inspecciones para garantizar que es seguro usarlo.



AVISO

Para evitar una posible degradación de la señal de radio, su dispositivo debe estar separado al menos 25 cm (10 pulgadas) de otros equipos de radiocomunicaciones.



AVISO

En caso de que ocurra un incidente grave, comuníquelo al fabricante del dispositivo y a las autoridades competentes con jurisdicción en el lugar de residencia del usuario y/o paciente.

Condiciones ambientales

El dispositivo está diseñado para funcionar dentro de los rangos de temperatura, humedad y presión atmosférica de 0 °C a 45 °C (32 °F a 113 °F), 5-93 % Hr y 700-1060 mBar.

El dispositivo debe almacenarse dentro de los rangos de temperatura y humedad de 10 °C a 40 °C (50 °F a 104 °F), 10-80 % Hr y 700-1060 mBar.

El dispositivo debe transportarse dentro de los rangos de temperatura, humedad y presión atmosférica de -20 °C a +60 °C (-4 °F a +140 °F), 5-90 % Hr y 700-1060 mBar.

Primeros pasos

Alimentación del dispositivo

Para alimentar el dispositivo, haga lo siguiente:

- Conecte el cable Micro USB (verde) a la toma (verde) en la parte posterior del dispositivo.
- Conecte el otro extremo del cable a la toma USB de la parte posterior de la TV.
- Encienda la TV.

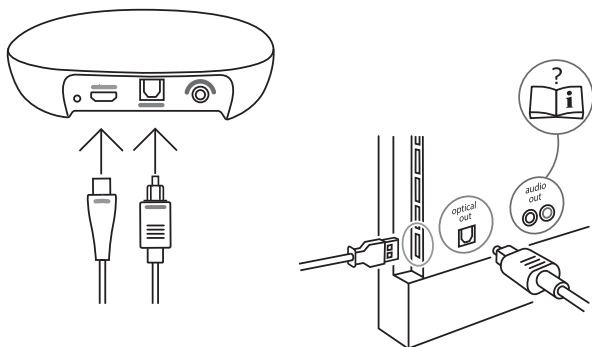


Si su TV no tiene toma USB, puede utilizar un cargador de pared USB estándar (no incluido). El cargador de pared debe suministrar al menos 150 mA (0,75 W) de intensidad.

Conexión del dispositivo a su TV

Opción A: mediante el cable óptico

Para la conexión de audio, le recomendamos que utilice el cable óptico (azul) para conectar el dispositivo a su TV, ya que le ofrece la mejor calidad de audio.



- Retire las tapas de protección de ambos extremos del cable óptico.
- Conecte el cable óptico (azul) a la toma “Optical IN” (azul) correspondiente de la parte posterior del dispositivo y, a continuación, conéctelo a la toma “Optical OUT” de la parte posterior de su TV.



Al utilizar el cable óptico para conectar el dispositivo a la TV, son compatibles los siguientes formatos digitales: Estéreo digital (PCM) y Dolby® Digital.*

Puede que sea necesario configurar su TV, reproductor de DVD o sistema de cine en casa para elegir uno de los formatos de audio compatibles. Tenga en cuenta que es posible que el dispositivo no pueda transmitir sonido de formatos de audio no compatibles.

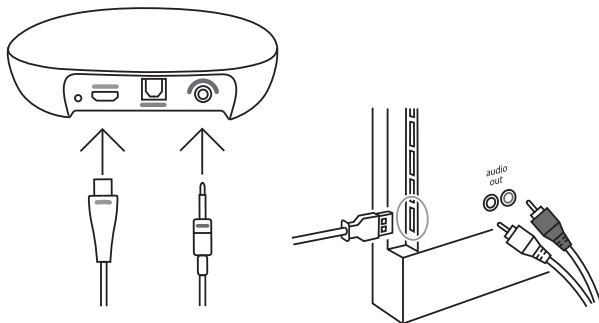


Puede comprobar que hay señal en el cable óptico mirando por el extremo que va al dispositivo. Si ve una luz roja, es que hay señal.

* Dolby y el símbolo de la doble D son marcas registradas de Dolby Laboratories.

Opción B: mediante el cable de audio analógico

También puede utilizar el cable analógico para conectar el dispositivo a la TV. Para ello, siga estos pasos:



- Conecte el cable de audio analógico (violeta) a la toma (violeta) de la parte posterior del dispositivo.
- Conecte el cable de audio analógico (violeta) en las tomas correspondientes de la parte posterior de su TV.

i

Utilice la opción de cable óptico o la de cable analógico para conectar el dispositivo a la TV. No es necesario utilizar ambos.

i

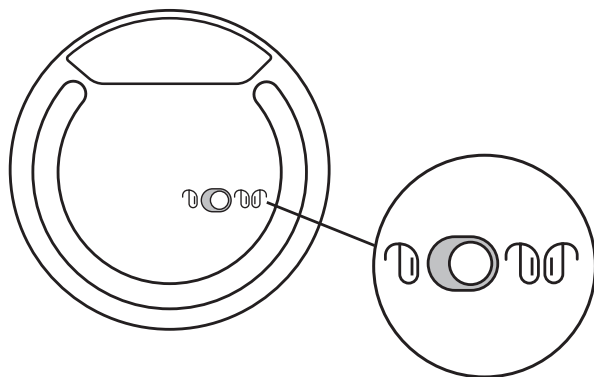
Si ha conectado tanto el cable óptico como el cable de audio analógico, el dispositivo elegirá la fuente de la conexión óptica, si hay señal en el cable óptico. Si no hay señal, elegirá la conexión analógica.

Uso de un transmisor de audio externo (por ejemplo, una barra de sonido)

Puede utilizar un transmisor de audio externo, como una barra de sonido, con el dispositivo. Si el transmisor de audio externo requiere una conexión de audio óptica digital, la toma "Analog IN" del dispositivo puede utilizarse como toma "Optical OUT". Para utilizar la toma "Analog IN" como toma "Optical OUT", conéctela a un adaptador óptico de 3,5 mm. El dispositivo no incluye un adaptador óptico de 3,5 mm, que debe adquirirse por separado.

Configuración del dispositivo para uno o dos audífonos

Puede configurar el dispositivo según lo necesite con el botón mono/estéreo en la parte inferior del mismo. Si tiene un solo audífono, elija el ajuste mono. Si tiene dos audífonos, elija el ajuste estéreo.



Sonido mono

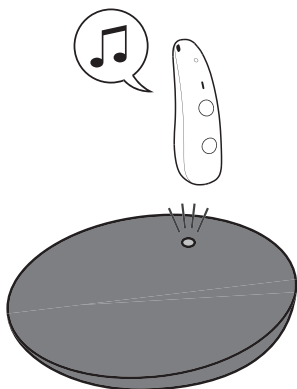


Sonido estéreo

Emparejamiento del dispositivo con sus audífonos

Antes de empezar a transmitir sonido desde la TV por primera vez, es necesario emparejar el dispositivo y los audífonos. Haga lo siguiente:

- Encienda la TV para encender el dispositivo. Para obtener más información, consulte la sección “Alimentación del dispositivo”.
- Reinicie sus audífonos colocándolos en el cargador durante un mínimo de tres segundos y retirándolos a continuación, o apagándolos y volviéndolos a encender, o abriendo y cerrando el compartimento de la pila.
- Durante el emparejamiento, mantenga los audífonos dentro del alcance de emparejamiento del dispositivo (0-20 cm).
- Mientras el dispositivo intenta emparejarse con los audífonos, el LED del dispositivo parpadea en azul.
- Cuando el dispositivo se ha emparejado correctamente con los audífonos, el LED brilla en azul fijo y los audífonos reproducen un tono.





Los audífonos solo estarán en modo de emparejamiento durante tres minutos después de reiniciarlos. Si no los emparejó a tiempo, puede que tenga que reiniciarlos de nuevo.



Los audífonos no se emparejan con el dispositivo a la vez, sino individualmente, uno tras otro.



El dispositivo puede utilizarse para transmitir sonido a más de un usuario a la vez. Si necesita esta opción, solo tiene que seguir el mismo procedimiento de emparejamiento anterior.



Si los audífonos están emparejados con un teléfono que está cerca, apague el Bluetooth® del teléfono antes de emparejar los audífonos con el dispositivo.



No guarde el dispositivo en un cajón, porque podría acortarse el alcance de la transmisión.

Eliminar un emparejamiento

Los emparejamientos con audífonos se eliminan del dispositivo de dos formas. Para eliminar todos los emparejamientos del dispositivo, haga lo siguiente:

- Pulse durante cinco segundos el botón de reinicio en la parte inferior del dispositivo. El LED del dispositivo se apaga.
- Deje de pulsar el botón. El dispositivo se reinicia y elimina todos los emparejamientos.

Para eliminar un emparejamiento usando la aplicación de los audífonos, siga estos pasos:

- Abra el programa TV Sound en la aplicación y entre en el menú de Sonido.
- Pulse los tres puntos de la esquina superior derecha del menú de Sonido.
- Pulse el botón Borrar emparejamiento y acepte borrar un emparejamiento.

Uso del dispositivo

Uso del dispositivo con la aplicación de los audífonos

Cuando el dispositivo se haya emparejado con sus audífonos, estará listo para usarse con su aplicación. Para comenzar a escuchar la TV, haga lo siguiente:

- Asegúrese de que los audífonos están emparejados con su teléfono.
- Abra la aplicación de los audífonos.
- Seleccione la pestaña “Stream” y pulse el botón de reproducción.

Para dejar de escuchar el sonido de tu TV, pulsa el botón de pausa o parada en la página de transmisión.

Si su especialista en audición ha guardado un programa de transmisión de TV específico en sus audífonos, haga lo siguiente:

- Asegúrese de que los audífonos están emparejados con su teléfono.
- Abra la aplicación de los audífonos.
- Vaya a la pantalla de selección de programas y seleccione el programa de transmisión de TV específico.

Para dejar de escuchar la TV, seleccione otro programa de escucha.

Uso del dispositivo sin la aplicación de los audífonos

Si su especialista en audición ha guardado un programa de transmisión general o de transmisión de TV específico en sus audífonos, haga lo siguiente:

- Asegúrese de que los audífonos están emparejados con el dispositivo.
- Seleccione el programa de transmisión utilizando el elemento de control en sus audífonos o el control remoto de sus audífonos.



Para cumplir los requisitos de la FCC sobre la exposición a la RF, el dispositivo y la antena de este dispositivo deben instalarse de forma que se garantice una distancia mínima de separación de 20 cm con el cuerpo de una persona. Se deben evitar otras configuraciones de funcionamiento.

Ajuste del volumen del sonido de la TV

Ajuste el volumen de los audífonos y el sonido de la TV con los controles deslizantes de volumen del micrófono y volumen de transmisión en la aplicación de los audífonos. Sin la aplicación, puede ajustar el volumen del sonido de la TV a través del control remoto con los botones de volumen.



Su especialista en audición también puede ajustar el equilibrio entre la señal de transmisión y los sonidos del entorno según sus preferencias.

Hacer llamadas telefónicas mientras se utiliza el dispositivo

Si tiene un smartphone compatible con transmisión directa, responda a las llamadas entrantes como lo hace habitualmente en su teléfono.



Si la llamada no se transmite a los audífonos, pruebe a cambiar a otro programa de escucha utilizando su aplicación.

Información adicional

LEDs

LED	Significado
Luz verde brillante	El dispositivo está encendido, emparejado y transmitiendo.
Luz verde intermitente	El dispositivo está encendido, pero no transmitiendo.
Luz azul brillante	Uno o ambos audífonos se han emparejado correctamente con el dispositivo.
Luz azul parpadeante	El dispositivo se acaba de encender por primera vez o se ha reiniciado.
Luz azul intermitente	El dispositivo está buscando audífonos con los que emparejarse o intentando establecer un emparejamiento.
Luz naranja parpadeante	Se ha pulsado brevemente el botón de reinicio y se ha detenido la transmisión durante 30 segundos. Pulse de nuevo el botón de reinicio para reanudar la transmisión, o espere 30 segundos para que la transmisión se reanude automáticamente.
Luz roja brillante	El dispositivo está recibiendo un formato de sonido desconocido.

LED	Significado
Luz roja parpadeante	El dispositivo ha encontrado un error.
Luz roja intermitente	El dispositivo se está sobrecalentando. Deje que se enfríe antes de utilizarlo.

Restablecimiento del dispositivo

Hay un botón de reinicio en la parte inferior del dispositivo. Reinicie su dispositivo siguiendo estos pasos:

- Pulse el botón de reinicio hasta que la luz LED del dispositivo se apague (unos cinco segundos).
- Suelte el botón. El dispositivo se reinicia y elimina todos los emparejamientos existentes en el dispositivo.



Si reinicia el dispositivo, tendrá que volver a emparejarlo con los audífonos.

Mantenimiento

Limpie el dispositivo con un paño suave y seco, o aspírelo con una boquilla blanda.



No lave el dispositivo y nunca lo sumerja en agua ni en ningún otro líquido.

Solución de problemas

Estas páginas contienen consejos sobre qué hacer si su dispositivo deja de funcionar o si no funciona como debería. Si el problema persiste, póngase en contacto con su especialista en audición.

Problema	Posible causa	Solución
No puedo emparejar mis audífonos con el dispositivo.	a. Los audífonos están emparejados con un teléfono cercano. b. Los audífonos han estado en modo de emparejamiento durante más de tres minutos.	a. Apague el Bluetooth® del teléfono mientras empareja los audífonos con el dispositivo. b. Reinicie los audífonos para ponerlos de nuevo en modo de emparejamiento.

Problema	Posible causa	Solución
Mis audífonos no emiten ningún sonido de la TV.	a. Los audífonos y el dispositivo no están emparejados. b. El dispositivo no está conectado correctamente a la TV. c. La fuente de audio no está encendida. d. Las pilas de los audífonos están casi agotadas. e. Sus audífonos no están en el programa TV Sound. f. El volumen es demasiado bajo. g. Es necesario restablecer el dispositivo y emparejarlo con los audífonos.	a. Emparejar el dispositivo y sus audífonos. b. Compruebe que el dispositivo está conectado correctamente a la TV. c. Encienda la fuente de audio. d. Cambie las pilas de los audífonos o cárguelos. e. Seleccione el programa TV Sound en la aplicación. f. Suba el volumen en la TV o la aplicación. g. Pulse el botón de reinicio durante 5 segundos y empareje el dispositivo y sus audífonos.

Problema	Posible causa	Solución
Otras personas no oyen el sonido de la TV.	Ha conectado el dispositivo a la toma de auriculares.	a. Conecte el cable analógico como se describe en el capítulo Conexión. b. Utilice una salida diferente en la TV. c. Compruebe la configuración de audio de la TV y ajuste los altavoces para utilizarlos en paralelo.
Solo oigo el sonido en un audífono.	a. La pila del otro audífono está agotada. b. Solo se ha emparejado un audífono con el dispositivo.	a. Cambie la pila del audífono o cárguelo. b. Haga un nuevo emparejamiento.
He conectado el cable óptico a mi TV, pero no tengo audio en los audífonos.	La TV no está configurada para enviar audio a través del conector de salida óptica.	Compruebe los ajustes de salida de audio de la TV (ajustes avanzados).

Problema	Posible causa	Solución
He conectado el cable analógico a mi TV, pero no tengo audio en los audífonos.	Los conectores analógicos de la TV solo sirven para la entrada de sonido.	a. Utilice el cable óptico suministrado con su dispositivo. b. Utilice un cable con miniconector a miniconector y la clavija de auriculares de su TV. c. Es posible que su TV no sea compatible con el dispositivo.
El volumen no es cómodo.		a. Ajuste el volumen con la aplicación o el control remoto. b. Compruebe la configuración avanzada de su TV para ver los ajustes de volumen.

Problema	Posible causa	Solución
El sonido de la TV en mis audífonos se interrumpe en uno de ellos o en ambos.	a. El dispositivo se ha guardado en un cajón o está detrás de una pared. b. El dispositivo está fuera de alcance. c. Hay interferencias de otras fuentes de transmisión de radio.	a. Coloque el dispositivo en la línea de visión. b. Coloque el dispositivo dentro de alcance. c. Aléjese de otras fuentes de transmisión de radio.
El LED parpadea en rojo y los audífonos no emiten ningún sonido.	El dispositivo se está sobrecalentando.	Mantenga el dispositivo alejado de la luz solar. No lo coloque en un cajón y manténgalo alejado de las salidas de calor de la TV.

Si el problema persiste, póngase en contacto con su especialista en audición.

Información normativa

Directivas UE

Directiva 2014/53/UE

WSAUD A/S declara que este TV Sound cumple los requisitos fundamentales y otras disposiciones pertinentes de la Directiva 2014/53/UE. El TV Sound contiene radiotransmisores que funcionan a 2,4 GHz, 10,0 mW PIRE. Puede encontrar una copia de la Declaración de Conformidad según la Directiva 2014/53/UE en <https://www.wsaud.com/other/>.

Información relativa a su eliminación

No deseche los audífonos, sus accesorios y las pilas junto con los residuos domésticos comunes.

Los audífonos, sus accesorios y las pilas deben desecharse en lugares destinados a residuos eléctricos y equipos electrónicos, o entregarse a su especialista en audición para que los elimine de forma segura.

Funciones inalámbricas y características de funcionamiento

Se resumen a continuación en forma de tabla los detalles técnicos de la tecnología inalámbrica:

Datos técnicos	Bluetooth (LE)
Tipo de antena	Antena integrada
Medidas de la antena	18 mm x 4.5 mm
Modulación	GFSK / FHSS
Potencia de salida (PIRE)	0 dBm / 1 mW
Rango	6 m
Frecuencia central	2401 – 2480 MHz
Canal	40
Ancho de banda	2 MHz
Frecuencia de datos	1 Mbps
Flujo de datos	Dúplex
Protocolo	BLE

Medidas de seguridad inalámbrica

La seguridad de las señales inalámbricas está garantizada con el diseño del sistema del dispositivo, que incluye:

- Dirección MAC individual para cada unidad comprobada con cada transmisión.
- Una tabla de emparejamiento incorporada que especifica el emparejamiento válido y legítimo entre unidades.

- Un protocolo de comunicación patentado que comprueba los números del paquete durante cada transmisión.
- Una comprobación de redundancia cíclica (Cyclic Redundancy Check, CRC) para verificar la validez de los datos y corregir errores.

Normas de emisiones electromagnéticas/inmunidad

El producto cumple las siguientes normas de CEM/IEM:

Norma	Tipo de test	Nota
47 CFR Parte 15, Subparte B	Emisiones de RF	Requisitos de la FCC de EE. UU. para los radiadores no intencionados.
47 CFR Parte 15, Subparte C	Emisiones de RF	Requisitos de la FCC de EE. UU. para los radiadores intencionados.
47 CFR Parte 18	Emisiones de RF	Requisitos de la FCC de EE. UU. para equipos industriales, científicos y médicos
IEC 60601-1-2	CEM generales incluyendo emisiones de RF, inmunidad de RF y descarga electrostática (ESD)	Equipos eléctricos médicos, compatibilidad electromagnética

FCC and IC statements

FCC ID: 2AXDT-TVS

IC: 26428-TVS

CAN ICES-3(B)/NMB-3 (B)

Federal Communications Commission Statement

This device complies with part 15 of the FCC Rules.
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.

i

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.



This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Changes or modifications to the equipment not expressly approved by WSAUD A/S could void the user's authority to operate the equipment.

ISED STATEMENT / DÉCLARATION d'ISED:

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

This device may not cause interference.

This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISED RADIATION EXPOSURE STATEMENT:

This equipment complies with ISED RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

ISED EXPOSITION AUX RADIATIONS:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet émetteur ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou émetteur.

Símbolos

Explicación de los símbolos

Símbolos utilizados en este documento



Indica el fabricante legal del dispositivo.



Indica una situación que podría provocar lesiones leves, moderadas o graves.



Indica posibles daños materiales.



Consejos y sugerencias para manejar mejor el dispositivo.



El producto cumple los requisitos establecidos en las directivas europeas sobre marcado CE.

Otros símbolos en el dispositivo o el embalaje



Para ver la etiqueta de conformidad según los requisitos de CEM y de comunicaciones por radio de Australia, consulte la sección "Información de conformidad".



No deseche el dispositivo con la basura doméstica general. Obtenga más información en la sección "Información sobre la eliminación".



El embalaje se puede reciclar.



Lea y siga las instrucciones de la guía de usuario.



Manténgase seco durante el transporte.



Temperatura durante el transporte. Obtenga más información en la sección "Condiciones de funcionamiento, transporte y almacenamiento".



Humedad relativa durante el transporte. Obtenga más información en la sección "Condiciones de funcionamiento, transporte y almacenamiento".



Presión atmosférica durante el transporte. Obtenga más información en la sección "Condiciones de funcionamiento, transporte y almacenamiento".



Dispositivo médico.

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<https://github.com/NordicSemiconductor/nrfx>

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https://github.com/ARM-software/CMSIS_5

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Document No. 05878-99T01-7800 EN-ES
Order/Item No. 21046627/ D21046627 Rev.1.0
Master Rev02, 12.2024 SI-21580
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