SurfLink

REMOTE MICROPHONE 2

OPERATIONS MANUAL

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Introduction

The **SurfLink Remote Microphone 2** is designed to stream remote microphone audio directly to your 900MHz wireless hearing aids. When worn by a distant speaker in noisy environments, SurfLink Remote Microphone 2 functions as an assistive listening device.

Streaming – Audio or sound transmitted from SurfLink Remote Microphone 2 to your 900MHz wireless hearing aids.

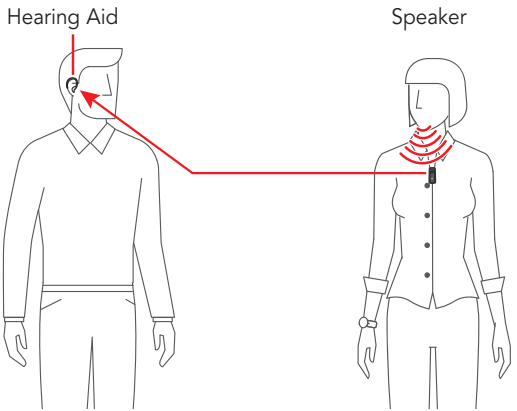
Package Contents

- SurfLink Remote Microphone 2
- USB-to-MicroUSB Charging Cable
- Wall Power Adapter
- Operations Manual

Optional Accessories

- Car Charger Adapter
- Lanyard

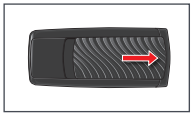
Typical Setup for SurfLink Remote Microphone 2



Basic Use

To quickly start using **SurfLink Remote Microphone 2:**

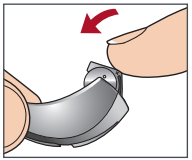
1. Power on SurfLink Remote Microphone 2. Green LED appears for 2 seconds.



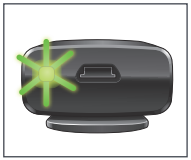
2. Press “Sync” icon on slider button for 5 seconds until LED starts rapidly blinking blue.

3. Power off and then power on one hearing aid. Green LED pulses to confirm successful sync.

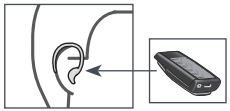
   If you only have one hearing aid, wait 20 seconds until red LED pulses.



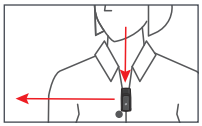
If you have two hearing aids, power off and then power on the second hearing aid. Green LED pulses to confirm successful sync.



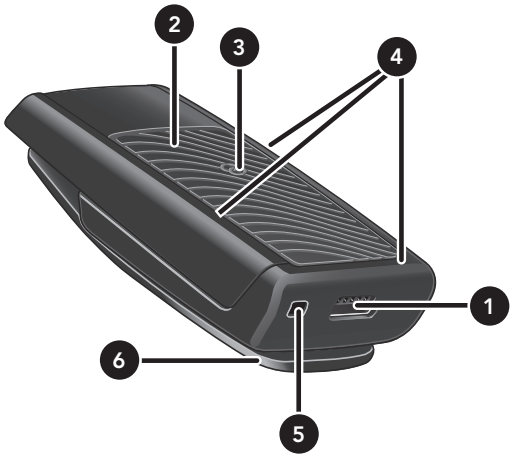
4. Each hearing aid should automatically start streaming audio. Blue LED slowly pulses when audio streaming is active.



5. Have a speaker attach SurfLink Remote Microphone 2 to their clothing, within 8 inches (20cm) of their mouth is recommended for best performance.



6. To stop streaming, turn off SurfLink Remote Microphone 2.



Controls Overview

1. **MicroUSB Jack for Charging**

   Charging via Battery-Charging Cable.

2. **Power On/Off Slider**

   - Moving the slider towards the microUSB jack powers on SurfLink Remote Microphone 2.
   - Moving the slider away from the microUSB jack powers off SurfLink Remote Microphone 2.

3. **Syncing**

   Establishes the relationship between SurfLink Remote Microphone 2 and hearing aids.

4. **Built-In Microphones**

   Pick up sound and transmit to hearing aids.

5. **LED Indicator**

   Identifies the current state of SurfLink Remote Microphone 2.

6. **Clip**

   Affixes SurfLink Remote Microphone 2 to clothing, lanyard, etc.

Controls Overview

Operation

Low Battery and Charging

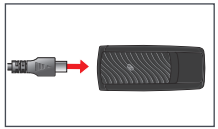
If SurfLink Remote Microphone 2 is on and enters a low battery condition, the LED slowly pulses red and provides an audible indicator tone to a hearing aid. The indicator tone is distinctly different from the low battery indicator for a hearing aid, so there is no confusion as to which is experiencing a low battery condition. Once SurfLink Remote Microphone 2 enters a low battery condition, the indicator tone will occur about every 5 minutes until SurfLink Remote Microphone 2 automatically shuts down, or until a power source is applied.

When SurfLink Remote Microphone 2 is attached to a power source, charging automatically begins. While SurfLink Remote Microphone 2 is off, the LED turns solid green during charging and turns off when fully charged. While SurfLink Remote Microphone 2 is on, the LED prioritizes streaming by slowly pulsing blue, but continues charging in the background.

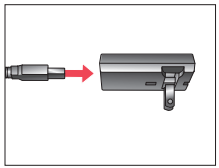
TIP – Charging SurfLink Remote Microphone 2 can take longer while streaming audio. Charging will be faster when the SurfLink Remote Microphone 2 is off.

Typical Charging Method

To charge the battery, attach the microUSB end of the charging cable to the microUSB jack on SurfLink Remote Microphone 2.

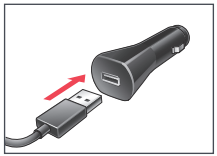


Attach the USB end of the charging cable to a female USB jack, such as found on a plugged-in wall power adapter, car charger adapter or computer.



Car Charger Adapter

The SurfLink Remote Microphone 2 can be charged using a car charger adapter. These adapters can be obtained from your hearing professional (ask for part #91052-000).



Power On/Off Slider

Power On – Move the slider toward the microUSB end to turn on. The LED turns green for 2 seconds to verify power is on.

Power Off – To stop streaming audio, move the slider away from the microUSB end until the brightly colored surface is exposed. The LED turns red for 2 seconds to verify power is off.

Syncing to Hearing Aids

Syncing establishes a relationship between your hearing aids and SurfLink Remote Microphone 2. For hearing aids to receive streamed audio from SurfLink Remote Microphone 2, you must first sync the hearing aids with SurfLink Remote Microphone 2. You only have to sync SurfLink Remote Microphone 2 with your hearing aids once, as they will automatically link when both are powered on and they are within wireless operating range.

To put SurfLink Remote Microphone 2 into an active syncing state, press the "Sync" icon on the Power On/Off slider for 5 seconds until the LED starts rapidly blinking blue. To sync a hearing aid with SurfLink Remote Microphone 2, power off and then power on your hearing aid.

The SurfLink Remote Microphone 2 remains in an active syncing state for up to 20 seconds (concluded by red LED blink), or until one hearing aid is synced with it (confirmed by a green LED blink).

After a successful hearing aid syncing, SurfLink Remote Microphone 2 continues in an active syncing state for another 20 seconds (concluded by red LED blink), or until the second hearing aid is synced with it (confirmed by green LED blink).

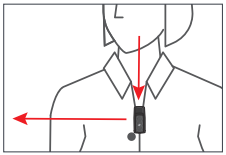
After successful syncing, each hearing aid should automatically start streaming audio. If syncing did not yield the desired result, then repeat the process.

To cancel syncing mode, turn off and then turn on SurfLink Remote Microphone 2.

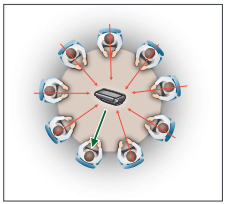
The SurfLink Remote Microphone 2 can be synced with at most one left and one right hearing aid at a time. When hearing aids are synced with SurfLink Remote Microphone 2, any previously synced hearing aids will be automatically deleted.

Built-In Microphones

Depending on SurfLink Remote Microphone 2's physical orientation, it automatically adjusts the microphone settings to either "Focus" (directional) or "Surround" (omni-directional).



"Focus" – When SurfLink Remote Microphone 2 is body worn, it automatically prioritizes sound from above while reducing sound levels from other directions. This is useful for listening to a single speaker when background noise is present.



"Surround" – When SurfLink Remote Microphone 2 is placed horizontally (on its clip), it receives sound from all directions. This setting is useful for listening to multiple nearby speakers in quiet environments.

TIP – In noisy environments, move SurfLink Remote Microphone 2 as close as possible to sound source.

LED

The LED indicator provides helpful information about SurfLink Remote Microphone 2:

LED BEHAVIOR	SURFLINK REMOTE MICROPHONE 2 STATE
Off	• SurfLink Remote Microphone 2 is off and is not attached to a power source • If SurfLink Remote Microphone 2 is off and attached to a power source, then battery is fully charged • If SurfLink Remote Microphone 2 appears on but is not operational, then battery may need charging
Solid green	• Battery is charging and SurfLink Remote Microphone 2 is off
Green for 2 seconds	• SurfLink Remote Microphone 2 successfully powers on
Slow pulsing red	• Low battery state and SurfLink Remote Microphone 2 is on
Red for 2 seconds	• SurfLink Remote Microphone 2 powers off
Rapid blinking red	• Possible error condition, refer to Troubleshooting section
Slow pulsing blue	• SurfLink Remote Microphone 2 is streaming audio
Rapid blinking blue	• SurfLink Remote Microphone 2 is in active syncing state

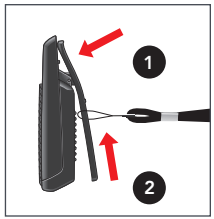
How to Wear

The SurfLink Remote Microphone 2 can be affixed to clothing or worn on a lanyard. For better performance, SurfLink Remote Microphone 2 should be within 8 inches (20cm) of the speaker's mouth.

Clip – Gently press the clip as shown. Slide clip opening onto clothing and release clip. Ensure SurfLink Remote Microphone 2 is securely affixed to clothing.

Lanyard *(optional)* –

1. Gently press the clip as shown.
2. Insert lanyard loop into clip opening and lift loop toward top of clip. Release clip. Ensure the lanyard is securely attached to SurfLink Remote Microphone 2.



Lanyards can be obtained from your hearing professional (ask for part #91324-000).

TIP – To achieve better signal-to-noise performance, a hearing professional can adjust (mute or attenuate) your hearing aid microphones during SurfLink Remote Microphone 2 use.

Streaming Audio

After SurfLink Remote Microphone 2 powers on, it automatically begins streaming audio to synced hearing aids. The LED slowly pulses blue to confirm that audio streaming is active and SurfLink Remote Microphone 2's battery is operational.
When SurfLink Remote Microphone 2 is turned off, it automatically stops streaming audio.

The user can adjust streamed audio volume level via their hearing aids. The SurfLink Remote Microphone 2 does not contain an integrated volume control.

TIP – Try placing SurfLink Remote Microphone 2 near a television. To achieve a comfortable listening level, adjust the SurfLink Remote Microphone 2 distance from the television speakers or modify the television volume level.

Interoperability with Other Accessories

If you also use a SurfLink Mobile, then phone call streaming will take priority over the SurfLink Remote Microphone 2 audio stream. When a SurfLink Mobile phone call stream ends, SurfLink Remote Microphone 2's audio stream automatically returns to a hearing aid.

SurfLink Remote Microphone 2 streamed audio is equal in priority to SurfLink Media streamed audio with preference being given to the first available audio source.

If you use a SurfLink Remote or SurfLink Mobile, then remote control commands will continue to be sent to your hearing aids.

Troubleshooting

SYMPTOM / ISSUE	POSSIBLE CAUSE	POSSIBLE REMEDY
One (or both) hearing aids unexpectedly drop out of audio streaming.	Hearing aid may be on the edge of wireless range.	Move closer to SurfLink Remote Microphone 2.
	Battery level in hearing aid can no longer support audio streaming.	Replace hearing aid battery with new one.
	Large object, such as furniture or a wall, may be degrading signal.	For best performance, your hearing aids should be within line-of-sight.
	Outdated hearing aid firmware.	Hearing professional can update hearing aids with the most recent firmware.
LED is slowly pulsing blue, but no streamed sounds are heard in the hearing aids.	Hearing aids are not within wireless range.	Move closer to SurfLink Remote Microphone 2.
	Hearing aids are not properly synced with SurfLink Remote Microphone 2.	Sync hearing aids with SurfLink Remote Microphone 2.
	Battery level in hearing aid cannot support audio streaming.	Replace hearing aid battery with new one.
LED is rapidly blinking red continuously.	Possible error condition.	Turn off SurfLink Remote Microphone 2, wait 15 seconds, and turn on SurfLink Remote Microphone 2.
Difficult to hear speaker in noisy environments.	SurfLink Remote Microphone 2 may be too far from speaker.	Move SurfLink Remote Microphone 2 closer to speaker's mouth.
	SurfLink Remote Microphone 2 may not be positioned for optimal streaming.	Re-orient SurfLink Remote Microphone 2 spatially by turning a few degrees to right or left.
	Signal-to-noise performance not optimal for current hearing aid memory.	Change to memory optimized by your hearing professional for use with SurfLink Remote Microphone 2.

Troubleshooting

Regulatory Notices

Required Information

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

Instructions for Disposal of Old Electronics

Starkey Hearing Technologies encourages, and your local community laws may require, that your SurfLink Remote Microphone 2 be disposed of via your local electronics recycling/disposal process.

The below instructions are provided for the benefit of disposal/recycling personnel. Please include this manual with your device when disposing of your SurfLink Remote Microphone 2.

For Disposal/Recycling Personnel Only

This product contains a Lithium Ion Polymer battery. To remove this battery from SurfLink Remote Microphone 2:

- Power off the SurfLink Remote Microphone 2.
- Insert small screwdriver into the side housing crevice just above the clip spring and pry apart the housing halves.
- Unplug the battery connector from the circuit board to prevent accidental shorting.
- Pry the battery away from the back plate using a wide flat blade.

Intended Use

The SurfLink Remote Microphone 2 is an accessory to a wireless air conduction hearing aid. It is intended to wirelessly transmit audio signals from the location of the SurfLink Remote Microphone 2 directly to an air conduction hearing aid.

The SurfLink Remote Microphone 2 is classified as a Type B applied part under the IEC 60601-1 medical instrument standard.

SurfLink Remote Microphone 2 is designed to comply with the most stringent Standards of International Electromagnetic Compatibility. However, it is still possible that you may experience interference caused by power line disturbances, airport metal detectors, electromagnetic fields from other medical devices, radio signals and electrostatic discharges.

SurfLink Remote Microphone 2 is designed to be cleaned with a damp cloth moistened with soapy water.

If you use other medical devices or wear implantable medical devices such as defibrillators or pacemakers and are concerned that your SurfLink Remote Microphone 2 might cause interference with your medical device, please contact your physician or the manufacturer of your medical device for information about the risk of disturbance. SurfLink Remote Microphone 2 should not be used during an MRI procedure.

Any serious incident that has occurred in relation to your Starkey device should be reported to your local Starkey Hearing Technologies representative and the Competent Authority of the Member State in which you are established. A serious incident is defined as any malfunction, deterioration in the characteristics and/or performance of the device, or inadequacy in the device Operations Manual/ labeling which could lead to the death or serious deterioration in the state of health of the user, OR could do so upon recurrence.

Use on Aircrafts

SurfLink Remote Microphone 2 should not be used on aircrafts unless specifically permitted by the flight personnel.

International Use

SurfLink Remote Microphone 2 is approved to operate at radio frequencies that are specific to your country or region and might not be approved for use outside your country or region.

Be aware that operation during international travel may cause interference with other electronic devices, or other electronic devices may cause interference with your SurfLink Remote Microphone 2.

The battery in your SurfLink Remote Microphone 2 is not replaceable. Do not attempt to replace the battery.

The SurfLink Remote Microphone 2 is designed to the following temperature ranges:

-

Operating: -10 to +45 degrees C (14 to 113 degrees F), humidity ≤ 95% non-condensing
-

Battery Charging: 0 to +45 degrees C (32 to 113 degrees F), humidity ≤ 95% non-condensing
- Storage: -20 to +63 degrees C (-4 to 145 degrees F)

We are required by regulations to provide the following warnings:

⚠ **WARNING:** Use of SurfLink Remote Microphone 2 directly next to other electronic equipment should be avoided because it could result in improper performance. If such use is necessary, note as to whether your hearing aids and the other equipment are operating normally.

⚠ **WARNING:** Use of accessories, components or replacement parts other than those provided by the manufacturer of SurfLink Remote Microphone 2 could result in increased electromagnetic emissions and decreased electromagnetic immunity and could result in degradation of performance.

⚠ **WARNING:** If Portable Radio Frequency communications equipment is used closer than 30 cm (12 inches) from SurfLink Remote Microphone 2, degradation of the performance of SurfLink Remote Microphone 2
could result. If this occurs, move away from the communications equipment.

The SurfLink Remote Microphone 2 has a rating of IP 52 per IEC 60529. This means that the SurfLink Remote Microphone 2 is protected from dust and protected against vertically falling water drops when the enclosure is tilted 15 degrees or less from vertical.

The SurfLink Remote Microphone 2 does not contain any user-serviceable parts. Do not open or modify these devices.

Do not connect the SurfLink Remote Microphone 2 to any devices not described in this manual.

The expected service life of the SurfLink Remote Microphone 2 is 3 years.

Wireless Technical Description

The European version of the SurfLink Remote Microphone 2 operates in the 863-865 MHz band with a maximum effective radiated power of 10 dBm. with transmission modulation type of 342KFXD. The receiver section of the radio has a bandwidth of 300 kHz.

The North American version of the SurfLink Remote Microphone 2 operates in the 902-928 MHz band with a maximum effective radiated power of 20 dBm. with transmission modulation type of 508KF1D. The receiver section of the radio has a bandwidth of 300 kHz.

SurfLink Remote Microphone 2 has been tested to, and has passed, the following emissions and immunity tests:

- IEC 60601-1-2 radiated emissions requirements for a Group 1 Class B device as stated in CISPR 11.
- RF radiated immunity at a field level of 10 V/m between 80 MHz and 2.7 GHz as well as higher field levels from communications devices as stated in Table 9 of IEC 60601-1-2.
- Immunity to power frequency magnetic fields at a field level of 30 A/m.
- Immunity to ESD levels of +/- 8 kV conducted discharge and +/- 15 kV air discharge.

FCC/IC Information

FCC ID: EOA-CM
IC: 6903A-CM (Model 400)

FCC/IC Notice

This device complies with part 15 of the FCC rules and with Industry Canada's license-exempt RSS standard(s). 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 of the device.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Note FCC/IC

Cet appareil est conforme à la partie 15 des règles de la FCC et avec les normes RSS de licence d'Industrie Canada. Le fonctionnement est soumis à deux conditions: (1) Cet appareil ne doit pas causer d'interférences nuisibles et (2) cet appareil doit accepter toute interference reçue, y compris les interférences qui peuvent causer des fonctionnements du dispositif.

NOTE: Le manufacturier n'est pas responsable de l'interférence créée par la modification de cet équipement lors de l'écoute du téléviseur ou de la radio. De telles modifications pourraient entrainer la révocation de l'autorité de l'utilisateur à opérer cet équipement.

Hereby, Starkey Hearing Technologies declares that the SurfLink Remote Microphone 2 is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the Declaration of Conformity can be obtained from the addresses on page 28 or from **docs.starkeyhearingtechnologies.com**

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Eden Prairie, MN 55344 USA

EC REP

Starkey Laboratories (Germany) G.m.b.H
Weg beim Jäger 218-222
22335 Hamburg
Germany

CE

The following symbols are used in this document and on the Mini Mobile Adapter:

- This device produces and receives radio frequency energy. Interference may occur in the vicinity of equipment marked with the following symbol.
- Class II device
- Dispose of properly
- Consult operations manual
- Keep dry

Notes

Notes

Notes

SurfLink is a trademark of Starkey Laboratories, Inc.

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