

Your StarLink Remote Microphone + User Manual



Accessory for:
Wireless hearing aids

Congrats!

You're about
to enhance
your hearing
experience.

You've got a Remote Microphone +.
Clearer speech. Easier conversations.

Your Remote Mic + enhances speech
so you can enjoy conversations.
And connect with the world around you.
Use this simple manual to get started.

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Get to know your Remote Microphone +

- Meet your Remote Mic +
- Set up your Remote Mic +
- Use your Remote Mic +
- Charge your Remote Mic +

Meet your Remote Mic +

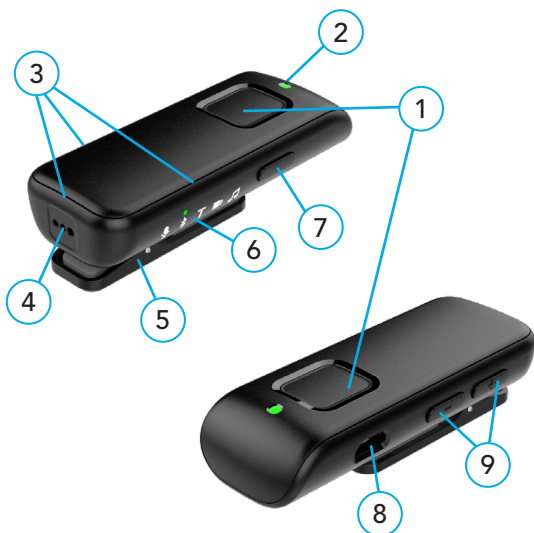
Overview

1. **Multifunction button**
Controls operational state of the Remote Mic +.
2. **Status indicator light**
Identifies the operational state of the Remote Mic +.
3. **Microphones**
 - Picks up audio (speaker's voice) during use.
 - Picks up your voice during Bluetooth® phone calls.
4. **FM receiver jack**
Accepts European FM receivers.
5. **Clip**
Attaches the Remote Mic + to the speaker's clothing or lanyard.
6. **Input Mode indicator lights**
Identifies audio source.
7. **Input Mode button**
Changes audio source.
8. **MicroUSB jack**
 - Allows recharging via USB-to-microUSB cable.
 - Plays in-line audio via optional cable.

Meet your Remote Mic +

9. Volume up (+) and Volume down (-) buttons

Adjust stream volume up or volume down.



Set up your Remote Mic +

Power ON/OFF

Use the multifunction button to turn your Remote Mic + **ON** or **OFF**:

- **ON** – press the multifunction button for 3 seconds. Release when the status indicator light glows green.



- **OFF** – press the multifunction button for 3 seconds. Release when the green status indicator light no longer appears.



To pair with hearing aids

Before using your Remote Mic + for the first time, you'll need to pair it with your hearing aid(s). This allows your accessory to recognize your hearing aids so they can work together.

STEP 1: Turn **ON** your Remote Mic +

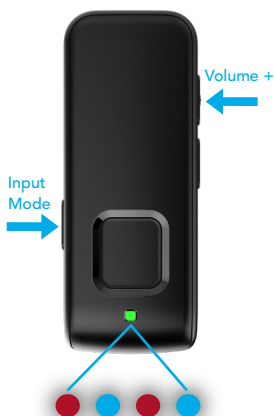
STEP 2: Turn your hearing aids **OFF** and **ON**.

- **For CROS hearing aid systems:** Turn **OFF** your hearing aids and CROS transmitter. Next, turn **ON** your hearing aids but leave the CROS transmitter **OFF**.

Set up your Remote Mic +

STEP 3: Pair your Remote Mic + with your hearing aid(s):

1. Ensure your hearing aids are not connected to nearby Bluetooth devices:
 - Turn **OFF** Bluetooth on your mobile phone.
 - Turn **OFF** any wireless accessories already paired to your hearing aids.
2. Place your hearing aids within 6 inches (15 cm) of your Remote Mic +.
3. Press the Input Mode and Volume Up (+) buttons simultaneously for 7 seconds until the status indicator light alternately blinks blue and red.



Set up your Remote Mic +

4. For a **set** of hearing aids:

1st status indicator light blink	2nd status indicator light blink	Pairing result	Next step
1	2	Both hearing aids paired	Complete
1	2	Only one hearing aid paired	Repeat 1-3 within STEP 3
1	N/A	No hearing aids paired	Repeat 1-4 within STEP 3

5. For a **single** hearing aid:

Status indicator light blink	Pairing result	Next step
1	Hearing aid paired	Complete
1	Hearing aid not paired	Repeat 1-3 and 5 within STEP 3

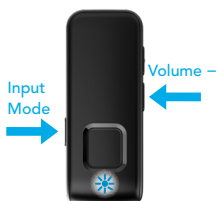
Set up your Remote Mic +

To pair with a Bluetooth device

For the Remote Mic + to wirelessly receive audio from a Bluetooth device, you must first pair them.

STEP 1: Turn ON your Remote Mic +.

1. Press the Input Mode and Volume Down (-) buttons simultaneously for 7 seconds until the status indicator light rapidly blinks blue.



STEP 2: Put your Bluetooth device in pairing mode.

1. When Remote Mic + appears on your Bluetooth device, select it.

NOTE: For more details, see the *Bluetooth device operations guide*.

2. The Remote Mic + status indicator light will show the pairing status
 - Successful pairing = green status indicator light for 2 seconds
 - Unsuccessful pairing = red status indicator light for 2 seconds

Use your Remote Mic +

To use your Remote Mic +

STEP 1: Check that your hearing aids are ON.

Reminder – Before streaming audio for the first time, ensure your hearing aids are paired to your Remote Mic +. See p. 10.

STEP 2: Start/stop streaming audio (a speaker's voice).

Do one of the following:

- **Turn On the Remote Mic +:**
Audio streaming automatically starts in hearing aid.
- **Hearing aid mobile app:**
Open the app on your mobile phone or tablet. Select the option to start/stop streaming from **Accessories** screen.
- **Hearing aid user control:**
If configured by your hearing care professional, a specific gesture (e.g., a long press on a user control) can start/stop streaming.
- **Wireless Remote:**
If configured by your hearing care professional, press the **Favorite** button.



Use your Remote Mic +

NOTE: An audible indicator may play in your hearing aids to signal the start/stop of audio streaming.

STEP 3: Adjust the streaming volume by pressing the Volume Up (+) or Volume Down (-) button on the Remote Mic +.



STEP 4: Adjust the audio source.

1. To change the audio, press and release the **Input Mode button**. Press the button repeatedly until you reach the desired audio source. For more details on the audio source options, see *How your Remote Mic + helps* on p. 19.

Icon on Remote Mic +	Audio source being used
	Remote Microphone
	Bluetooth phone and audio
	Loop system
	FM system
	Line-In

Use your Remote Mic +

2. To access audio from a Bluetooth device, it must be connected to the Remote Mic + (denoted by the slow, blinking blue status indicator light).



- Prior to streaming Bluetooth audio for the first time, your Bluetooth device must be paired to your Remote Mic +. See *To pair with a Bluetooth device* on p. 13.



STEP 5: To adjust the stream volume, press the + or – button.



NOTE: Typical wireless operating range is up to 60 feet (20 M). This may be shortened by environmental factors (e.g., obstructions, interference, position of people). Wider operating ranges may be possible, however, your audio or connection quality may decrease.

Use your Remote Mic +

Status indicator light

The status indicator light identifies how your Remote Mic + is currently operating:



Operational status	Status indicator light status
OFF	No green status indicator light appears
ON with no active Bluetooth connection	Slow, blinking green
ON with active Bluetooth connection	Slow, blinking blue
Low battery	Slow, blinking red
Malfunction or electrical issue	Solid red

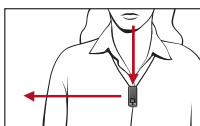
Use your Remote Mic +

Wearing the Remote Mic +

Your Remote Mic + can be attached to the clothing or lanyard worn by the person speaking. When your audio source is set to the remote microphone 🎤 or a Bluetooth device 📶, it's best to place it within 8 inches (20 cm) of the person's mouth.

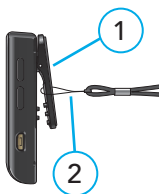
Clothing instructions:

1. Squeeze the clip of the Remote Mic + until it opens.
2. Slide the opening of the clip onto the clothing.
3. Release the clip.
4. Ensure your Remote Mic + is securely attached to the clothing.



Lanyard (optional) instructions:

1. Squeeze the clip of the Remote Mic + until it opens.
2. Slide the lanyard loop into the clip opening. Lift it towards the top of the clip.



Use your Remote Mic +

3. Release the clip.
4. Ensure your Remote Mic + is securely attached to the lanyard
5. Place lanyard around the neck.

How your Remote Mic + helps

Your Remote Mic + is designed to stream audio from different audio sources directly to your wireless hearing aids. When by a distant speaker in noisy environments, it functions as an assistive listening device.

The Remote Mic + can also interface with the following audio sources.

Remote Microphone 🎤

The Remote Mic + automatically optimizes the microphone settings based on its physical orientation.



- It helps focus on one person when background noise is present. When worn by a speaker, the Remote Mic + automatically prioritizes sound from above while reducing sound levels from other directions.



Use your Remote Mic +

- It can listen to multiple nearby speakers in quiet environments when placed horizontally on its clip by receiving sound from all directions.



Bluetooth phone and audio 📶

- Conduct phone calls in which (A) you hear the phone call in your hearing aids and (B) the Remote Mic + picks up your voice and transmits it back to the phone. (*Handsfree profile*)
- Listen to music in which you hear the streamed audio in your hearing aids. (*A2DP profile*)



Use your Remote Mic +

- General Bluetooth functionality:

Pair with Bluetooth devices	Remote Mic + can pair with up to 8 Bluetooth devices.
Connect with Bluetooth device	When both Remote Mic + Bluetooth device are powered on and within wireless operating range, they should automatically connect and the Remote Mic + status indicator light should be slow, blinking blue.
Listen to music (or other streamed audio)	Ensure the Remote Mic + input mode is set to Bluetooth audio source. When playing audio on Bluetooth device, it will be automatically routed to your hearing aids.
Change to Bluetooth audio source	When the Remote Mic + detects an incoming or outgoing phone call, it will automatically change to the Bluetooth audio source.

Use your Remote Mic +

Accept incoming call	When you hear the ringtone in your hearing aids, briefly press the multifunction button on your Remote Mic +.
Reject incoming call	When you hear the ringtone in your hearing aids, press and hold the multifunction button on your Remote Mic + for more than 2 seconds – release the button once the ringtone stops.
End call	Briefly press the multifunction button on your Remote Mic +.
Transfer call between phone and Remote Mic +	To conduct the call on the phone itself, press and hold the multifunction button on your Remote Mic + for more than 2 seconds. To move the call back to the Remote Mic +, press and hold the multifunction button again for more than 2 seconds. 
Make an outgoing call	Dial the phone number on your Bluetooth device. The phone call will be automatically routed to your hearing aids.

Use your Remote Mic +

Loop system T

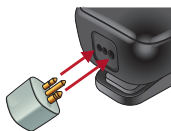
The Remote Mic + can receive audio from a Loop system (available in some public buildings). Wearing the Remote Mic + in a vertical orientation provides the best performance. In this mode, the Remote Mic + disables Bluetooth connections. Upon exiting this mode, the Remote Mic + will attempt to re-establish a Bluetooth connection.



NOTE: A manual reconnection may be necessary. For more details, see the *Bluetooth device operations guide*.

FM system ■

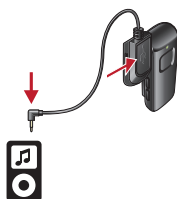
When an optional FM transmitter is attached via the Europin connector, the Remote Mic + can receive audio from an FM system. In this mode, you can wear the Remote Mic + or place it on a nearby stable surface.



Use your Remote Mic +

Line-In 🎵

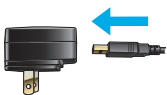
When an optional Line-In cable is attached via the microUSB jack, the Remote Mic + can obtain audio from a mobile phone, MP3 player, tablet, or computer that is not Bluetooth enabled. In this mode, it's best to place the Remote Mic + on a nearby stable surface.



Charge your Remote Mic +

To charge your Remote Mic +

1. Attach the microUSB end of the charging cable to the microUSB jack on your Remote Mic +.
2. Attach the microUSB end of the charging cable to the jack on the power adapter.
3. Plug the power adapter into an external power source, like a wall outlet.
4. Check the charging status using the status indicator light on your Remote Mic +.



Power status	Status indicator light status	Charging status
OFF	Solid green	Recharging
OFF	None	Fully charged
ON	Solid green briefly interrupted by other status indicator light behaviors	Recharging
ON	None	Fully charged

NOTE: Charging your Remote Mic + may take longer if you're streaming audio. Charging is typically faster when your Remote Mic + is OFF.

Troubleshooting guide

Troubleshooting guide

Problems with your Remote Mic +?
Try these tips. If issues continue,
contact your hearing care professional.

Symptom	Possible causes	Solutions
One (or both) hearing aids unexpectedly drops out of audio streaming.	Hearing aids may be on the edge of wireless range.	Move closer to Remote Mic +.
	Battery level in hearing aid can no longer support audio streaming.	• Replace hearing aid battery with new one. • Recharge your hearing aid, if applicable.
	Large object, such as furniture or a wall, may be degrading signal.	For best performance, your hearing aids should be within line-of-sight of Remote Mic +.
	Wireless connection with Remote Mic + was lost.	Restart the audio streaming. See <i>Start/stop streaming audio</i> on p. 14.

Troubleshooting guide

Symptom	Possible causes	Solutions
Streamed audio quality is distorted.	Low battery level in Remote Mic +.	Recharge Remote Mic +.
	Volume of audio source is not optimal.	Adjust volume level of audio source until better sound quality is achieved.
Streamed audio quality is inconsistent.	Bluetooth Mode: Bluetooth device may be on the edge of wireless range.	Move Bluetooth device closer to Remote Mic +.
	Loop Mode: Remote Mic + may not be positioned for optimal streaming.	Re-orient Remote Mic + into a vertical position.
Audio stream is too loud or too soft.	Volume streamed from Remote Mic + to hearing aid not optimal.	Press volume + or – button on Remote Mic +.
	Volume of audio source is not optimal.	Adjust volume level of audio source until better sound quality is achieved.

Troubleshooting guide

Symptom	Possible causes	Solutions
Remote Mic Mode: Difficult to hear speaker in noisy environments.	Remote Mic + may be too far from speaker.	Move Remote Mic + closer to speaker's mouth.
	Remote Mic + may be covered by clothing or poorly positioned.	Provide clear access from Remote Mic + to speaker's voice.
Bluetooth Mode: Caller cannot hear your voice during phone calls.	Remote Mic + may be too far from your mouth.	Move Remote Mic + closer to your mouth or speak louder.
Loop Mode: Phone calls are not heard in hearing aids.	Bluetooth connections with mobile phones are disabled while in Loop mode.	Move to another audio source. Re-establish your Bluetooth connection, if necessary.
LED is slowly blinking green or blue, but no streamed sounds are heard in the hearing aids.	Hearing aids are not ready to receive audio streams.	Restart the audio streaming. See <i>Start/stop streaming audio</i> on p. 14.

Troubleshooting guide

Symptom	Possible causes	Solutions
Status indicator light is slowly blinking green or blue, but no streamed sounds are heard in the hearing aids.	Hearing aids are not paired with Remote Mic +.	Follow steps in <i>To pair with hearing aids</i> on p. 10.
	No incoming audio signal is available.	• Turn on the electronic audio source. • Unmute or increase volume on electronic audio source. • Ensure loop or FM system is present.
Status indicator light is solid red.	Possible error condition.	Turn off Remote Mic +, wait 30 seconds, and then turn it on.
Input Mode indicator light is rapidly blinking.	Something is absent from current audio source.	Attach line-in cable, attach FM receiver, or re-establish your Bluetooth connection.
Input Mode indicator light is not illuminated.	Input Mode indicator light is turned off to conserve battery power.	Press Input Mode button to illuminate the Input Mode indicator light.

Troubleshooting guide

Symptom	Possible causes	Solutions
Desired Input Mode not available.	Something is missing from desired input.	Attach line-in cable, attach FM receiver, or re-establish your Bluetooth connection.
Unable to pair with more than one Bluetooth device.	Remote Mic + is already in an active Bluetooth connection.	Follow steps in <i>To pair with a Bluetooth device</i> on p. 13.
Unexpectedly lose TV (optional product) audio while status indicator light is slowly blinking blue on Remote Mic +.	Some Bluetooth device sounds are higher priority than TV Streamer audio.	Move out of Bluetooth input mode on Remote Mic +.

Additional guidance

- Intended use
- FCC information
- Regulatory information

Intended use

Intended Use

 The Remote Microphone + is an accessory to a 2.4 GHz wireless air conduction hearing aid. It is intended as a wireless transmitter of sound from a variety of audio sources to air conduction hearing aids. When worn by a distant speaker in noisy environments, it functions as an assistive listening device. It also connects to loop signals, FM signals when an Europin FM receiver is attached, analog line-in audio, and standard Bluetooth audio.

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

The Remote Microphone + 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.

The Remote Microphone + 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 Remote Microphone + 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. The Remote Microphone + should not be used during an MRI procedure or in a hyperbaric chamber. The Remote Microphone + is not formally certified to operate in explosive atmospheres such as may be found in coal mines or certain chemical factories.

Clinical benefit

The accessory itself does not provide a direct clinical benefit. An indirect clinical benefit is provided by enabling the parent device (wireless hearing aids) to achieve their intended purpose.

Use on Aircrafts

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

International Use

The Remote Microphone + 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 Remote Microphone +.



Your Remote Microphone + is designed to operate, be stored, and be transported within the temperature range of -10°C (14°F) to 45°C (113°F) and relative humidity range of 10%-95%, and altitude limits 70 kPa – 106 kPa (equivalent to altitudes from 1,200 ft (380 m) below sea level to 10,000 ft (3,000 m)).

We are required by regulations to provide the following warnings:

Intended use

⚠ WARNING: Use of the Remote Microphone + 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 the Remote Microphone + 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 your Remote Microphone +, degradation of the performance of your hearing aid could result. If this occurs, move away from the communications equipment.

Although the Remote Microphone + is not formally certified (IP rated) for protection against dust or water ingress, per IEC 60529, it has been tested to the IP 5X level. This means that the Remote Microphone + is protected from dust.

The battery in your Remote Microphone + is not replaceable. Do not attempt to replace the battery. The Remote Microphone + does not contain any user-serviceable parts. Do not open or modify it.

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

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

Wireless Technical Description

Starkey Laboratories, Inc. Remote Microphone + operates in the 2.4- 2.4835 GHz band with a maximum effective radiated power of 8 dBm with transmission modulation type of 1M12FXD and 1.1 MHz bandwidth. The receiver section of the radio has a bandwidth of 2 MHz.

The Remote Microphone + has been tested to, and has passed, the following emissions and immunity tests:

- IEC 60601-1-2 radiated and conducted emissions requirements for a Group 1 Class B device as stated in CISPR 11.
- Harmonic distortion and voltage fluctuations affecting the power input source as stated in Table 2 of IEC 60601-1-2.
- 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 and proximity magnetic fields as stated in Table 11 of IEC 60601-1-2
- Immunity to ESD levels of +/- 8 kV conducted discharge and +/- 15 kV air discharge.
- Immunity to electrical fast transients on the power input at a level of +/- 2 kV at a 100 Hz repetition rate.
- Immunity to surges on the power input of +/- 1 kV line to line.
- Immunity to conducted disturbances induced by RF fields on the power input as stated in Table 6 of IEC 60601-1-2.
- Immunity to voltage dips and interruptions on the power input as stated in Table 6 of IEC 60601-1-2.

Intended use

EU ADVERSE EVENT REPORTING

Any serious incident that has occurred in relation to your device should be reported to your local Starkey 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 user 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.

FCC information

WIRELESS NOTICES

FCC ID: EOA-24MFA

IC: 6903A-24MFA (Model 900)

This device complies with part 15 of the FCC rules and with ISSED 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.

Hereby, Starkey Laboratories, Inc. declares that the Remote Microphone+ 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 following addresses and from docs.starkeyhearingtechnologies.com.

Hereby, Starkey Laboratories, Inc. declares that the Remote Microphone + is in compliance with the UK Radio Equipment Regulations SI 2017 as amended. A copy of the UK Declaration of Conformity can be obtained from the following addresses and from docs.starkeyhearingtechnologies.com.

Regulatory information



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Waste from electronic equipment must be handled according to local regulations



Consult user manual



Keep dry

Instructions for Disposal of Old Electronics

Starkey Laboratories, Inc. encourages, the EU requires, and your local community laws may require, that your Remote Microphone + 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 when disposing of your Remote Microphone +.

FOR DISPOSAL/RECYCLING PERSONNEL ONLY

This product contains a Lithium-ion polymer battery.

To remove this battery:

- Power off the Remote Microphone +.
- Pry apart the housing halves with a small screwdriver.
- Cut the battery wires from the circuit board to prevent accidental shorting.
- Pry the battery away from the housing using a wide flat blade.

Such modifications could void the user's authority to operate the equipment.

Regulatory information

Symbol	Symbol Meaning	Applicable Standard	Symbol Number
	Manufacturer	BS EN ISO 15223-1:2021	5.1.1
	Authorized representative in the European Community	BS EN ISO 15223-1:2021	5.1.2
	Date of Manufacture	BS EN ISO 15223-1:2021	5.1.3
	Catalogue Number	BS EN ISO 15223-1:2021	5.1.6
	Serial Number	BS EN ISO 15223-1:2021	5.1.7
	Medical Device	BS EN ISO 15223-1:2021	5.7.7
	Keep Dry	BS EN ISO 15223-1:2021	5.3.4
	Temperature Limit	BS EN ISO 15223-1:2021	5.3.7
	Humidity Limitation	BS EN ISO 15223-1:2021	5.3.8
	Caution	BS EN ISO 15223-1:2021	5.4.4
	General warning sign	EC 60601-1, Reference no. Table D.2, Safety sign 2	ISO 7010-W001
	Refer to instruction manual/booklet	EC 60601-1, Reference no. Table D.2, Safety sign 10	ISO 7010-M002
	Collect Separately	DIRECTIVE 2012/19/EU (WEEE)	Annex IX
	Class II equipment	IEC 60417 Reference no. Table D.1	Symbol 9 (IEC 60417-5172)
	Regulatory Compliance Mark (RCM)	AS/NZS 4417.1:2012	N/A
	Giteki Mark	Japanese Radio Law	N/A
	Direct current	IEC 60601-1 Reference no. Table D.1	IEC 60417-5031
	Recycling Symbol	European Parliament and Council Directive 94/62/EC	Annex I-VII

[illegible]



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Patent: www.starkey.com/patents