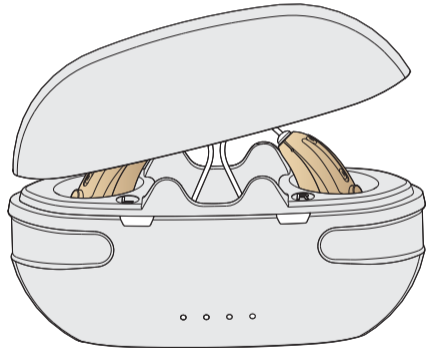


User Operation Manual

Discovery CR430S B+



Enjoy hearing, enjoy life!

Version: 102022

Please read this "User Operation Manual" carefully before use

For a better experience, please download the "HA-fit" APP first

1. Android users can scan the QR code below or download and install "HA-Fit" on "Google Play".
2. iOS users can scan the QR code below or download and install "HA-Fit" in the "APP store".



Contents

Warning	03
Product information	03
Working principle	04
Product drawing	05
Hearing aid on/off	06
To Charge the Products	07
Multi-function button	09
Hearing aid mode	10
Wearing a hearing aid	11
Replace hearing aid earplugs	12
Replace wax guards	13
“HA-Fit” APP	15
Bluetooth function	19

Cleaning and maintenance	21
Troubleshooting guide.....	23
Matters needing attention	25
(EMC)Electromagnetic compatibility	27
Product parameters	35

Warning

Hearing aids are devices for people with hearing loss that are customized and fitted according to personal hearing conditions and listening habits. Therefore it is not suitable for other people to use. Read this "User Operation Manual" carefully before using the hearing aid, and operate under the guidance of this operation manual. Improper operation may damage the hearing aid.

Product information

Please refer to the technical parameters for the performance indicators of this product. The main structure consists of a microphone, amplifier, receiver, volume control button and housing. Its scope of application is hearing compensation for patients with hearing loss.

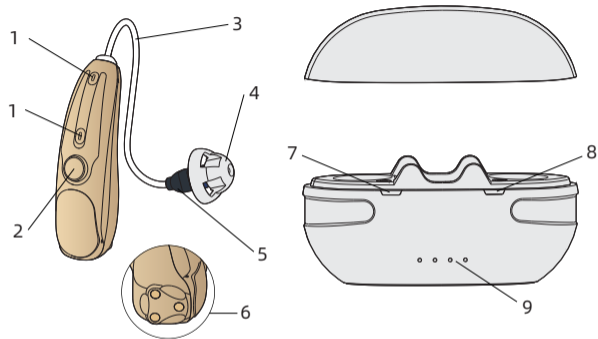
Technical Parameters

Model	Max.OSPL90	Max gain	Battery Type
Discovery CR430S B+	≤117dB	≤40±4dB	Lithium battery

Working principle

This hearing aid consists of a microphone, an analog-to-digital converter, a digital signal processor, a digital-to-analog converter, a receiver and other components. The principle is that the analog-to-digital converter converts the analog signal generated after the sound wave is received by the microphone into a digital signal. The digital signal processor performs various digital processing, and then uses the digital-to-analog converter to convert the digital signal back to an analog signal. The receiver converts the analog signal. The echo signal is converted into an echo signal, and then the sound signal is transmitted to the user's ear canal. The entire process uses digital signal processing technology to digitally complete the functions originally implemented by various electronic devices in analog hearing aids. It has higher comfort and better flexibility, thereby improving and enhancing the hearing of hearing-impaired patients.

Product drawing



1. Microphone port 2. Multi-function button 3. Sound tube
4. Earplug 5. Receiver 6. Charging base
7. Charge indicator of the left hearing aid
8. Charge indicator of the right hearing aid
9. Charging box charging indicator

05

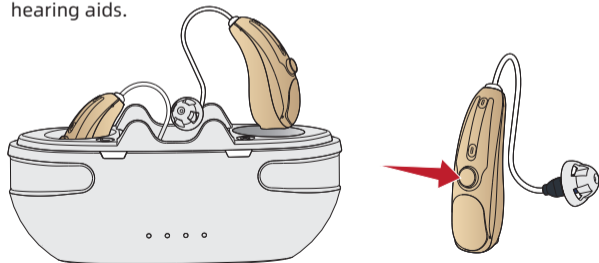
Hearing aid on/off

1. Power on

- Remove hearing aids from charging box, hearing aids will be turned on automatically.
- Long press the multi-function button for 3 seconds to turn on hearing aids.

2. Power off

- Put hearing aids into the charging box, hearing aids will be turned off automatically.
- Long press the multifunction button for 6 seconds to turn off hearing aids.



06

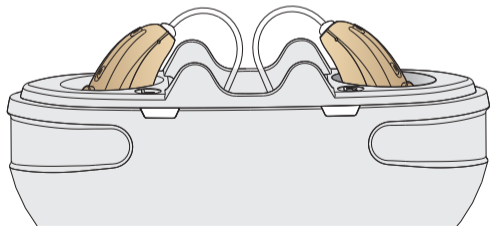
To Charge the Products

1.To charge the hearing aids

If you hear "low battery" prompt during using hearing aids, indicating the battery is low, please recharge in time.

- Being placed in the charging box, hearing aids will start charging automatically. You can confirm the charging status of your hearing aids through the charging indicators.

Charging State	State of Light
Charging	The light is on
Charging completed	The light is off



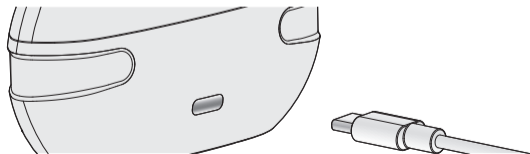
07

2.To charge the charging box

The charging box has a power storage function to charge hearing aids. When the charging indicator of the charging box has only one light and flashes, it means low battery, please charge it in time

- Hearing aids are connected to the power source and charged through the charging box. There are four charging indicators outside the charging box, charging indicators flash while the charging box is being charged. Everytime 25% full charged, one more indicator lights up.

State of Light	Battery Percentage of Charging Box
☀️ ⊗ ⊗ ⊗	0-25%
☀️ ☀️ ⊗ ⊗	26-50%
☀️ ☀️ ☀️ ⊗	51-75%
☀️ ☀️ ☀️ ☀️	76-100%



08

Multi-function button

To avoid complex operation, multifunction buttons are designed to control hearing aids easily by pressing multifunction button in different ways.

Operating Mode	Function
Press the multifunction button	Adjusting volume
Long press the multi-function button for 2 seconds	Switch mode
Long press the multi-function button for 3 seconds	Power on
Long press the multi-function button for 6 seconds	Power off
Long press the multi-function button for 10 seconds	Reset Bluetooth function

Hearing aid mode

Hearing aids have three modes, long press the multifunction button for 2 seconds to switch the mode, and identify the mode according to different prompts.

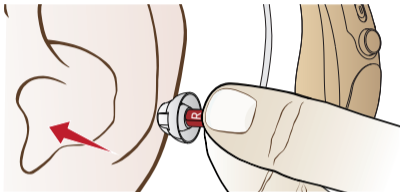
Cue tone	Mode
"beep"	Quiet mode
"beep,beep"	Noise reduction mode 1
"beep,beep,beep"	Noise reduction mode 2

Application scenes

Mode	Application environment of modes
Quiet mode	Suitable for quiet environment
Noise reduction mode 1	Suitable for noisy environment
Noise reduction mode 2	Suitable for outdoor environment

Wearing a hearing aid

Step 1: Pinch the receiver tightly with your hand and gently insert the earplug into the ear canal.



Step 2: Hang the hearing aid behind the ear and adjust the position of the hearing aid to a comfortable position.



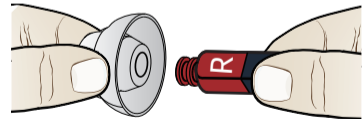
Replace hearing aid earplugs

Inappropriate earplugs may cause howling and swelling, so we recommend that you replace them with appropriate earplugs.

Step 1: Turn the edge of the earplug upside down, hold the hearing aid receiver with one hand and pull the earplug down with the other.



Step 2: Select the earplug that fits your ear canal, align the receiver and insert it.



Note: After installing the earplugs, gently pull the earplugs to ensure that the earplugs are firmly installed and not easy to fall off.

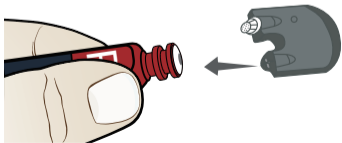
Replace wax guards

The wax guard filter is located in the sound hole of the hearing aid which can effectively prevent the cerumen from entering into the hearing aid to cause damage to the hearing aid. Please replace the wax guard filter every 3 months and do not reuse the used filter.

Step 1: Remove earplugs first. See "Replacing Hearing aid Earplugs".



Step 2: Align the sound hole with this notched side and insert.



13

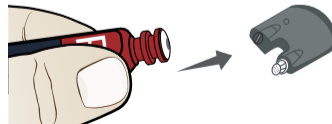
Step 3: Pull out the notched side with the used filter, if the used filter has not been pulled out, repeat last step.



Step 4: Insert the other end with the new filter into the sound hole.



Step 5: Pull out the installing end and a notched side will be exposed when the new filter is successfully installed.



14

“HA-Fit” APP

For a better experience, please download the "HA-fit" APP first

1. Android users can scan the QR code below or download and install "HA-Fit" on "Google Play".
2. iOS users can scan the QR code below or download and install "HA-Fit" in the "APP store".



1.Connect to the APP

Step 1:Turn the hearing aid on

Step 2:Enable the Bluetooth function of the smart device

Step 3:Open the HA-Fit APP

Step 4:Click the Search Device button

Step 5:After the "Searching for Devices" is completed, the HA-Fit APP will automatically connect to the hearing aids. The successful connection status is shown in the APP.



2.Hearing Evaluation

With the “Hearing Evaluation” , you can quickly set up your hearing aids according to your hearing condition.

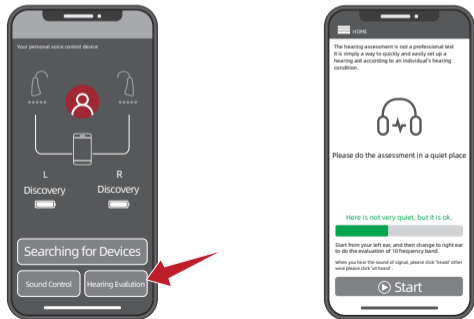
Step 1:Put on your hearing aid and make sure it's on

Step 2:Choose a quiet place

Step 3:Click the “Hearing Evaluation” button

Step 4:Follow the step to complete your personal “Hearing evaluation”

Step 5:After completing your “Hearing evaluation” , click the “Automatic Optimization” button and your hearing aid will be optimized according to your evaluation result



17

3.Sound Control

The “HA-Fit” APP is designed to let you easily control your hearing aids remotely from your smart device. The “HA-Fit” application covers key functions such as switching modes.

Step 1:Click the Sound Control button.

Step 2:Enter the sound control interface, you can easily control the hearing aids, adjust a variety of parameters, volume, mode, frequency band, noise reduction.....



18

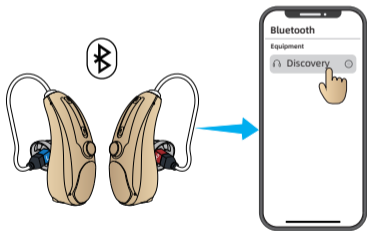
Bluetooth function

Hearing aids come with Bluetooth, which connects to a Bluetooth device to receive audio.

1. Bluetooth pairing

Step 1: Make sure that the hearing aids are Bluetooth-enabled and turn on Bluetooth on your smart phone.

Step 2: Open the list of Bluetooth devices on your phone, search for "Discovery" and click to pair. After successful connection, you will hear the "connected" prompt tone.



Note:

- The hearing aid's Bluetooth function automatically turns off when it is not connected for a long time.
- No re-pairing is required after the first successful connection.

2. Key operation in Bluetooth mode

Operation	Function
Click multi-function key	Play/pause a song; Answer/hang up the phone
Quick double click on the left hearing aid multi-function button	Next song
Quickly double click the right hearing aid multi-function button	Previous song

Note:

- Automatic switching of Bluetooth/hearing aid functions.
- When connected to Bluetooth, hearing aids automatically switch to Bluetooth mode when they receive audio transmissions.
- If you pause to stop music or end a call, the device will automatically enter the hearing aid function.
- When disconnected from the phone (Bluetooth off), the device will automatically enter the hearing aid function.

Cleaning and maintenance

1.Routine maintenance

It is important to keep your hearing aids clean and dry. To avoid potential damage from excessive humidity, a drying kit is also recommended.

2.Care and maintenance

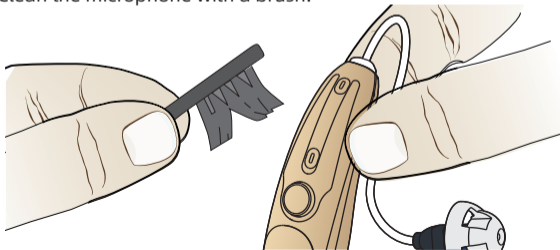
- Store in a safe area away from children and pets when not in use.
- Do not place hearing aids or charging box in hot areas such as by the stove or under direct sunlight.
- Do not leave the device in a damp place, such as a bathroom, for long periods of time.
- Be careful not to poke the microphone hole with any sharp object to avoid damage.
- Do not disassemble the hearing aids or attempt any repair. Doing so will void your warranty.

3.Clean

- Clean the receiver with a brush.



- Clean the microphone with a brush.



Troubleshooting guide

Malfunction	Possible reasons for	The Solution
No sound	Low volume	Please increase the volume
	Equipment is out of power	Charge your hearing aid
	Microphone clogging	Clean microphone
	wax guard is blocked	Replace wax guard
The voice was low, weak, or unclear	The battery is low.	Charge your hearing aid
	The earplugs are too loose	Choose the right size to wear
	Earplugs or wax guard have wax on them	Clean dirt from ears and earplugs; replace Newwax guard
	Hearing change	Contact your doctor
Abnormal bluetooth function	Hearing aids are connected to other devices	<ul style="list-style-type: none"> Turn off Bluetooth for other devices and restart your hearing aid Press and hold the multi-function button for 10s to restore Bluetooth Settings

Malfunction	Possible reasons for	The Solution
Abnormal bluetooth function	Your hearing aid has been connected to other smart devices	Turn off Bluetooth for other smart devices and reconnect the smart device you need to connect to
	The Bluetooth connection is unstable	Minimize the distance between hearing aids and smart device
The hearing aid whistle in the charging box	The hearing aid is placed out of position	Remove the hearing aid from the charging box and place the hearing aid in the charging box according to the "L,R" mark
	Low battery of the charging box	Charge the charging box
Hearing aid is in the charging box, the hearing aid charging indicator light is not on	Poor contact of charging contact	Insert the hearing aid back into the charging base
	The hearing aid is placed out of position	Check to see if your hearing aid is upside down

Matters needing attention

1. Contraindications

- Congenital atresia external or malformation of any part of the ear canal.
- Erratic deafness, where the degree of hearing loss often fluctuates.
- Persistent headache, dizziness, earache, tinnitus or other symptoms that are not suitable for adaptation.
- Sudden hearing loss within the last 3 months; Rapid progressive deafness.
- Unilateral hearing loss or other acute ear disease.
- Fluid accumulation in the ear or frequent insertion (unbearable).
- Central deafness (central nervous system) or non-organic deafness.
- Patients with acute otitis externa and otitis media.
- Patients with acute and chronic suppurative otitis media (in the suppurative infection stage).
- Patients who are allergic to this product material.

2. Hearing aid daily precautions

- Do not immerse hearing aid in any liquid.
- Remove hearing aid before swimming or bathing.
- After swimming or washing, wait until your ear canal is dry before wearing your hearing aid.

- After taking off the hearing aid at night, it should be placed in the box with desiccant as far as possible to avoid light, high temperature and high humidity environment.
- The outer surface of the hearing aid should be kept clean, and wax from the earbuds should be removed daily.
- When you are not using your hearing aid, charge the product regularly to avoid damaging the battery.

(EMC)Electromagnetic compatibility

Notice:

- 1.The purchaser or user of this product should use this product in the electromagnetic environment specified in 201, 202, 204, and 206, otherwise the product may not work properly.
- 2.Portable and mobile radio frequency communication equipment may affect the normal use of this product. Please use this product in the recommended electromagnetic environment.

Warning

- 1.In addition to the accessories provided by the manufacturer of this product, the use of accessories other than those specified may cause an increase in the hearing aid's emissions or a decrease in immunity.
- 2.This product should not be used close to or stacked with other equipment. If it must be used close to or stacked, it should be observed and verified that it can operate normally under the configuration it is used in.

Table 201

Guidance and Manufacturer's Statement - Electromagnetic Emissions		
RIC digital hearing aids are expected to be used in the electromagnetic environment specified below. The purchaser or user should ensure that it is used in this electromagnetic environment:		
Launch test	Conformity	Electromagnetic Environment Guidelines
RF emissions GB 4824	Group I	RIC digital hearing aids use RF energy only for their internal functions. Therefore, its RF emissions are very low and are less likely to cause interference in nearby electronic equipment
RF emissions GB 4824	Class B	RIC digital hearing aids are suitable for use in non-domestic and all establishments not directly connected to the public low-voltage power supply network for domestic use.
Harmonic emission GB 17625.1	N/A	
Voltage fluctuation/ Flicker emission GB 17625.2	N/A	

Table 202

Guidance and Manufacturer's Statement - Electromagnetic Immunity			
RIC digital hearing aids are expected to be used in the electromagnetic environment specified below. The purchaser or user should ensure that it is used in this electromagnetic environment:			
Immunity testing	IEC 60601 test level	compliance level	Electromagnetic environment-Guide
Static discharge GB/T 17626.2	±6 KV Contact discharge ±8 KV Air discharge	±6 KV Contact discharge ±8 KV Air discharge	Floors should be wood, concrete or ceramic tiles, and if the floors are covered with synthetic materials, the relative humidity should be at least 30%
Electrical fast transient pulse group GB/T 17626.4	±2 KV to power line ±1 KV for input/output lines	N/A	Mains power should be of a quality typically used in a commercial or hospital environment
Surge GB/T 17626.5	±1 kV line-to-line ±2 kV line to ground	N/A	Mains power should be of a quality typically used in a commercial or hospital environment

Guidance and Manufacturer's Statement - Electromagnetic Immunity			
Voltage sag, short interruption and voltage change on power input line GB/T 17626.11	<5% UT for 0.5 cycles (On UT, >95% dip) 40% UT for 5 cycles (On UT, 60% dip) 70% UT for 25 cycles (On UT, 30% drop) <5% UT, lasting 5s (On UT, >95% dip)	N/A	Mains power should be of a quality that would be typical of those used in a commercial or hospital environment. If the user of a RIC digital hearing aid requires continuous operation during a power interruption, it is recommended that the RIC digital hearing aid be powered by an uninterruptible power supply or battery
Power frequency magnetic field (50 Hz/60 Hz) GB/T 17626.8	3 A/m	3 A/m	Power frequency magnetic fields should have power frequency magnetic field level characteristics typical of a typical location in a typical commercial or hospital environment.
Note: UT refers to the AC network voltage before the test voltage is applied.			

Table 204

Guidance and Manufacturer's Statement - Electromagnetic Immunity			
RIC digital hearing aids are expected to be used in the electromagnetic environment specified below. The purchaser or user should ensure that it is used in this electromagnetic environment:			
Immunity testing	IEC 60601 test level	compliance level	Electromagnetic environment-Guide
Radio frequency conduction GB/T 17626.6	3 V (Valid values) 150 kHz ~ 80 MHz	N/A	<p>Portable and mobile RF communications equipment should not be used closer to any part of a behind-the-ear digital hearing aid, including cables, than the recommended isolation distance. This distance shall be calculated by the formula corresponding to the transmitter frequency.</p> <p>Recommended isolation distance $d=1.2\sqrt{P}$ 80 MHz ~ 800 MHz $d=2.3\sqrt{P}$ 800 MHz ~ 2.5 GHz</p> <p>In the formula: P-The maximum rated output power of the transmitter provided by the transmitter manufacturer, in watts (W);</p>


Guidance and Manufacturer's Statement - Electromagnetic Immunity			
Radio frequency radiation GB/T 17626.3	3 V/m 80 MHz ~ 2.5 GHz	3 V/m	<p>d-Recommended isolation distance, in meters (m). The field strength of fixed RF transmitters is determined by a survey of the electromagnetic field and should be lower than the compliance level in each frequency range b. Interference may occur in the vicinity of equipment marked with the following symbol.</p> 
<p>Note 1:At the 80 MHz and 800 MHz frequency points, the formula for the higher frequency band is used.</p> <p>Note 2:These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and human bodies.</p>			
<p>a.The field strengths of fixed transmitters such as base stations for wireless (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcasts, and television broadcasts cannot be theoretically predicted accurately. To assess the electromagnetic environment of fixed RF transmitters, a survey of the electromagnetic field should be considered. If the measured field strength in a location where a behind-the-ear digital hearing aid is used is higher than the applicable RF compliance level above, the behind-the-ear digital hearing aid should be observed to verify normal operation. If abnormal performance is observed, supplementary measures may be necessary, such as reorienting or repositioning the behind-the-ear digital hearing aid.</p> <p>b.In the entire frequency range of 150 kHz to 80 MHz, the field strength should be less than 3 V/m.</p>			

Table 206

Recommended isolation distances between portable and mobile radio frequency communications equipment and RIC digital hearing aids

RIC digital hearing aids are intended for use in an electromagnetic environment where radio frequency radiation disturbance is controlled. Based on the maximum rated output power of the communication equipment, purchasers or users can prevent electromagnetic interference by maintaining the minimum distance between portable and mobile radio frequency communication equipment (transmitters) and RIC digital hearing aids as recommended below.

Maximum rated output power of the transmitter in W	Isolation distance corresponding to different frequencies of transmitter/M	
	80 MHz ~ 800 MHz $d=1.2\sqrt{P}$	800 MHz ~ 2.5 GHz $d=2.3\sqrt{P}$
0.01	0.12	0.23
0.1	0.38	0.73
1	1.2	2.3
10	3.8	7.3
100	12	23

For the maximum rated output power of the transmitter not listed in the above table, the recommended isolation distance d , in meters (m), can be determined by the formula in the corresponding transmitter frequency column, where P is the transmitter provided by the transmitter manufacturer. The maximum rated output power of the machine, in watts (W).

Recommended isolation distances between portable and mobile radio frequency communications equipment and RIC digital hearing aids

Note 1: At the 80 MHz and 800 MHz frequency points, the formula for the higher frequency range is used.

Note 2: These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and human bodies.

Product parameters

Peak OSPL90(dB SPL)	$\leq 117\text{dB}$
OSPL90-HFA(dB SPL)	$102\pm 4\text{dB}$
Peak Gain(dB)	$40\pm 4\text{dB}$
HFA/FOG Gain(dB)	$33\pm 4\text{dB}$
Equivalent input noise(dB)	$\leq 32\text{dB}$
Frequency response range	$F1\leq 250\text{Hz}$ $F2\geq 5000\text{Hz}$
Harmonic distortion	$\leq 5\%$
Battery drain	3%

	Hearing aid	Charging box
Charging time	$\leq 2\text{H}$	$\leq 2\text{H}$
Service time	Hearing aid mode: $\geq 16\text{H}$ Bluetooth mode: $\geq 3\text{H}$	Charge a pair of hearing aids about 3 times