

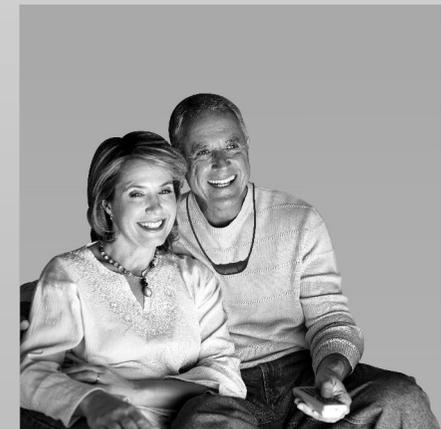
H. Notes

1. When you don't use the product, please turn off the transmitter and the receiver. If don't use it for a long time, please take out the adapter and cables, save them properly.
2. Pull the adapter out of the power socket before cleaning the product. Don't use liquid cleaner or spray cleaner on the product, please use a dry cloth to clean the product.
3. Don't use the product near water.
4. The product can only be used properly under indicated power. If you use any other kind of power, the product may not start or burn out.
5. Please take the cable out of the power socket in storm weather, or when not in use for a long time, to avoid damage from thunder or electric shock.
6. Don't overload the power output, extend electric cable or assemble the product by yourself.
7. Please place the product far away from heat sources.
8. Place the product far away from microwave oven and mobile phone to avoid unnecessary electronic wave interference.

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TV hearing neckloop



AA-2099

User Manual

TechBrands by Electus Distribution Pty. Ltd.

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H. Notes

A. Safety instructions

Please read and follow the safety instructions before using the product.

- * When using this unit, basic safety precautions as below should always be followed to avoid the risk of electrical shock or personal injury.
- * Listening to uncomfortable sound levels for a prolonged period could adversely affect your hearing.
- * Do not use the product in situations which require special attention (e.g. when performing skilled jobs).
- * If using a microphone or line input, the plug **MUST** be fully inserted into the correct socket and the **volume must always be turned to the lowest level** before turning the unit on. Failure to do so can result in high sound levels that could adversely affect your hearing.
- * Using this product inappropriately could adversely affect your hearing. Please follow the step-by-step instructions carefully!
- * Do not use in an environment that is damp, wet, very hot or very cold.
- * To clean the product, use only a soft cloth and an inorganic cleaner.
Always remove the power adapter before cleaning the product.
- * Only use the applied mains adapter. Do not use any other type of mains adapter.
- * Install the unit securely on a stable surface, well ventilated with at least 5 cms free space around the transmitter and install the unit where the power cord will not be subject to damage or cause a tripping hazard.
- * The unit may get warm when being used. Ensure the unit has adequate ventilation.
- * Please refer all servicing to qualified personnel **ONLY!** Do not attempt to open the unit!

B. Product introduction

1. What is a TV Hearing Neckloop

The TV hearing neckloop series are the ideal products for hearing loss people who are wearing hearing aids with T-coil function to hear sound from any sound source (e.g. TV) much more clearly and worry-free.

The transmitter will send the audio signal wirelessly from the audio source to the receiver, the audio signal can be inducted from the receiver loop to the hearing aid with T-coil function to help hear sound more clearly.

Besides the strong wireless TV hearing function, it is a perfect hearing aid and a wired hearing improving headset.

2. Brief introduction

AA-2099, applying IR wireless technology to transmit and receive audio signals. It is effective to avoid the interference from environmental RF signals. You can get pure sound. It's more suitable for users who are living in an environment with heavy RF interference.

3. Main functions

3.1 Wireless TV hearing aid: (refer to article 1 of P10)

With the product, the hearing impaired person can enjoy TV programs comfortably and clearly, by his/her special tone, volume.

3.2 Regular and extensional hearing aid: (refer to article 2 of P13)

The receiver can be used as a regular hearing aid. It's very convenient to use in a noisy environment.

3.3 Hearing aid function for phone call: (refer to article 4 & 5 of P15)

The external microphone works with the receiver that amplifies the voice from the phone call.

3.4 Computer chatting headphone with hearing aid function:

(refer to article 6 of P15)

With this function, the hearing impaired people can hear and talk on the internet very clearly.

3.5 Wired headphone with hearing aid function: (refer to article 3 of P14)
Connect a MP3/iPhone/PC, etc. to the headphone's line-in jack with our cables (wired headphone cable), the hearing impaired person can listen to the music enjoyably.

4. Main technologies

4.1 Voice clarifying technology(VCT):

Reduce background sound of TV, increase the sound of dialogues, so that hard to hear words can easily stand out, making television dialogues easier to understand.

4.2 Noise cancelling technology(NCT):

Reduce the environmental noise to help the users to focus on listening to the dialogues of TV.

4.3 Automatic signal control(ASC):

Hearing disable people's adaptive faculty for volume change is weak (can't hear loud sound, and can't hear low volume sound), our circuit will adjust the sudden change volume and make the output volume stable. It will avoid strong signal hurting the users' listening.

4.4 Tone control:

Specially designed for hearing impaired people who have different sound frequency sensitiveness. They can adjust the "TONE" button to find the best feature, and hear the target audio source clearly.

5. Features

Transmitter part:

- (1) Audio input: a standard 3.5mm audio jack.
- (2) Charging solution: put the receiver directly into the charging slot.
- (3) Power input: DC 12V

Receiver part:

- (1) Volume, Tone adjustable functions: adjust them to get the best sound.
- (2) Audio input function: with a standard Φ 3.5mm stereo signal jack.
- (3) Equipped MIC input hearing aid function: with a standard Φ 3.5mm jack.
- (4) Automatic muting: when the signal is out of reach or the transmitter's power is off, the receiver will automatically mute.

C. Product parts



AA-2099
(for one receiver)



AA-2099
(for two receivers)

1、 Transmitter



2、 Receiver



3、 Audio cable1



4、 Audio cable2



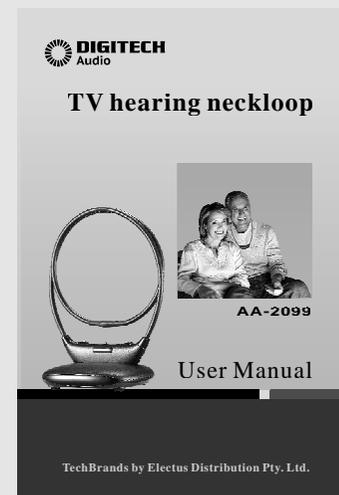
5、 Microphone cable



6、 Wired headphone cable



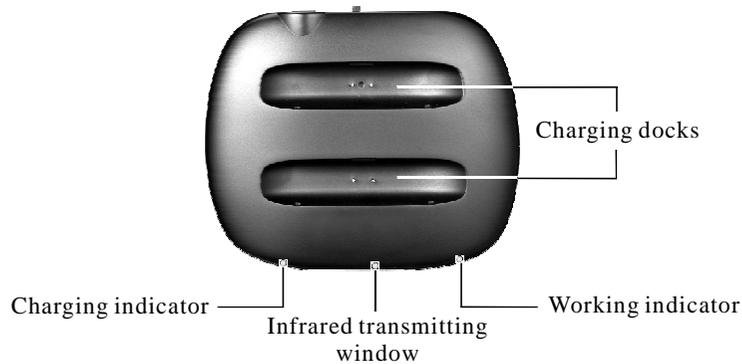
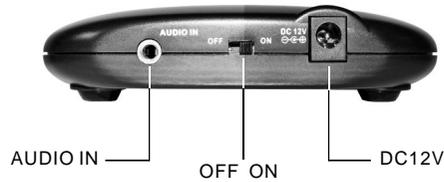
7、 Mains adapter



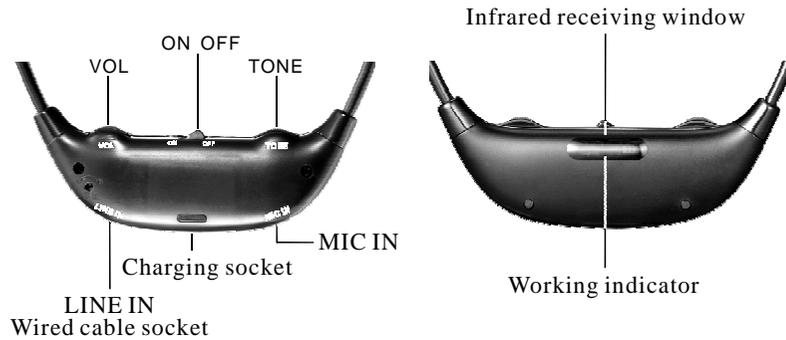
8、 Manual

D. Part function

1、 Transmitter



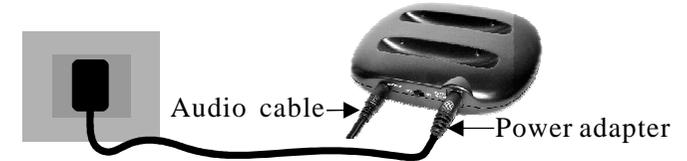
2、 Receiver



E. Setup and user instructions

1. Wireless TV hearing aid function

(1.1) Connect the mains adapter with the transmitter's power jack.

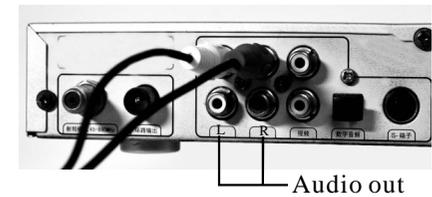


(1.2) Connect the 3.5mm plug of the Audio cable 1 to the transmitter's audio-in socket, other plugs to AUDIO OUT socket of a TV, DVD, STB, etc. If it is a computer, you need to connect the plugs with Audio cable 2, then the 3.5mm plug of Audio cable 2 to the earphone socket of the computer. If the TV is used with a STB, DVD, etc, please prior to connect with the STB, DVD, and don't connect to the TV set directly. (Maybe there isn't audio-out signal for some TVs when connect to them directly because the manufacturers of TVs are different.)

Connect to AUDIO OUT of TV



Connect to AUDIO OUT of STB



Connect to AUDIO OUT of DVD



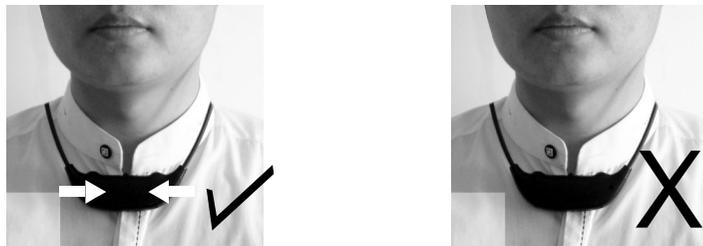
Connect to AUDIO OUT of PC



(1.3) After the transmitter and the audio cables are connected well, switch on the transmitter, the power indicator will be on. Choose a suitable place for the transmitter near the sound source (e.g. TV). Face the IR window of the transmitter to the receiving area. Adjust the audio source in working status and turn up its volume properly (when the transmitter is connected to a STB, DVD, PC, etc).



(1.4) Important: Make sure the volume on the receiver is set to the lowest to protect your hearing, then switch on the receiver, its power indicator will be on. Set your hearing aid to the position "T" and adjust its volume (if your hearing aid has no position "T", please contact your hearing aid acoustician); Put on the receiving neckloop, make sure the receiver's IR window faces toward the transmitter, and the hearing aid wearer will hear the sound from the sound source. Adjust the volume at the receiver to get the best status. Use the tone control wheel to adjust the tone frequency to suit your needs.



Note: because this product adopts IR technology, when you ensure that you have connected the parts well, please note as below:

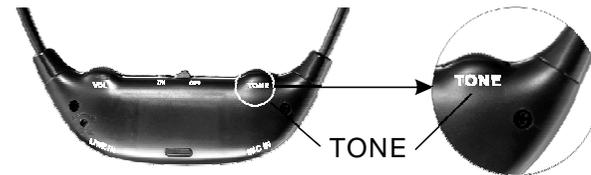
- a. The transmitter should be put on a high place, like the top of a TV.**
- b. The infrared window of the transmitter should face the receiver.**

Noise will occur in the following situations:

- a. There is some obstacles between the transmitter and the receiver.**
- b. The transmitter is put at a very low place.**
- c. The receiver is too far away from the transmitter, or deviation angle is too large.**



(1.5) Frequency response: Rotate the "TONE" wheel in the best position, make sure you can hear the TV sound clearly.



(1.6) After adjusting as above, you can hear the TV sound now. In order not to disturb others, you can turn down the TV volume or just mute it.

Note: this product adopts IR technology, it will not receive the TV sound when you move to other rooms.

(1.7) The transmitter will be in standby if there isn't a audio signal in 60 seconds. When you switch on the TV or input signal, the transmitter will start to work again. The receiver will mute when it is not in the receiving area, until it is back to the receiving area.

Note: when the transmitter is in standby, its power indicator will still be on, IR lamps will be off automatically. Please turn off the transmitter if you don't use it.

2. Regular and extensional hearing aid function

(2.1) Connect the microphone cable with the receiver in the MIC IN jack, extend the cable, stick the microphone near the person you are talking to.



(2.2) Important: Make sure the volume on the receiver is set to the lowest to protect your hearing, then switch on the receiver, its power indicator will be on.

(2.3) Set your hearing aid to the position "T" (if your hearing aid has no position "T", please contact your hearing aid acoustician).

(2.4) Put on the receiving neckloop, make sure the receiver's IR window faces toward the transmitter, and the hearing aid wearer will hear the sound from the sound source. Adjust the volume at the receiver to get the best status.



(2.5) Use the tone control wheel to adjust the tone frequency to suit your needs.

(2.6) When you go out, take the receiver and your hearing aid. Put the microphone cable in your pocket, clip on the jacket. It can be worn as a normal hearing aid.

3. Wired hearing aid function

Plug one end of the wired headphone cable in the LINE IN jack of the receiver, and connect the other end with a audio source like a PC, iPHONE, MP3, etc. According to "2.Regular and extensional hearing aid function instruction" (2.2), (2.3), (2.4), (2.5), set the receiver and your hearing aid.



4. Use the regular and extensional hearing aid function to listen to telephone

According to “2. Regular and extensional hearing aid function instruction” (2.2), (2.3), (2.4), (2.5), set the receiver and your hearing aid. Plug the microphone cable to the MIC-IN of the receiver. Put the microphone near the speaker of a telephone. Please be close to the telephone while talking, you can hear the sound from the telephone. According to the volume, you can adjust the distance between the microphone and telephone's speaker. When the distance is shorter, the volume will be louder. You can adjust the position of the microphone to get the best sound performance.

4.telephone



5.mobile phone



5. Use the regular and extensional hearing aid function to listen to mobile phone

According to “2. Regular and extensional hearing aid function instruction” (2.2), (2.3), (2.4), (2.5), set the receiver and your hearing aid. Put the microphone near the speaker of a mobile phone. Don't be too close to your mobile phone, otherwise there is some interference. While talking, please face to the microphone of the mobile phone. It's better to connect your mobile phone to the receiver's LINE-IN socket by the wired headphone cable.

6. Computer chatting instruction

- (6.1) Plug the microphone cable in the micro-in socket of a computer and clip the microphone onto your lapel close to your mouth.
- (6.2) Connect one end of wired headphone cable with the receiver, and the other end to the earphone socket of the computer. According to “2.Regular and

extensional hearing aid function instruction” (2.2), (2.3), (2.4), (2.5), set the receiver and your hearing aid. Switch on the receiver.

(6.3) Please adjust the VOLUME, TONE, according to your requirement. If the person at the other side can't hear you clearly, please be close to the microphone and adjust the computer's speaker volume to a proper position.



7. Charging instruction

Connect the AC adapter with the transmitter and a power socket, switch on the transmitter. Plug the receiver in the slot of the transmitter, the charging indicator on the transmitter will be on. It starts to charge the battery. After 4 hours, Li-ion battery is full, charging function will be closed automatically, and the charging lamp disappear. This will protect the Li-ion battery and circuit safety. It is better to turn off the audio source or pull out the audio input cable to make the transmitter stop signal transmission and be only in charging function.



Notice of charging:

- 1.Please fully charge battery only after its power is run out in the first three times of charging. You needn't charge frequently. It is better to charge when the power is nearly run out.
- 2.Please make sure the direction of charging slot at the transmitter and the receiver is correct.
- 3.Please turn off the receiver when it is charging the battery.

F. Technical specifications

1. Transmitter

Working voltage	12±0.8V, 400mA
Working current	105±8mA
Standby current	10±4mA
Transmitting frequency	2.3±0.02MHz
Signal input limiting volt.	400mV (It will be limited to 400mV to prevent too high voice when the signal input volt is over 400mV.)
Signal input starting volt. in standby	≥50mV
Signal input volt. in standby	≤40mV
Signal input frequency	20Hz ~ 20KHz
Signal input range	120mV~1.5V
Li-ion battery recharging current	125±5mA
Transmitting distance	≥10M
No signal standby time	60s±5s(when no signal put in, the transmitter come into standby state automatically)

2. Receiver

Working voltage	3.7V (3.2~4.2V)
Static working current	19±3mA
Dynamic working current	≤55mA
Maximum working current of input	25mA
Input signal range	100~800 mV
Working current of MIC input	≤20mA
Max. Gain of MIC signal input	33±2dB (at 1KHz)
Receiving frequency	2.3±0.02MHz
Distortion	≤1%
S/N ratio	≥70dB
Induction distance	≤200mm
Li-ion battery charging time	3~4 hours
Working time	12 hours for TV hearing aid function, 24 hours for regular & extensional hearing aid function.

3. Working environment

Working temperature: -10~60°C

Working humidity: 10%~90%

4. Storage condition

Temperature: -30~90°C

G. Trouble shooting

Symptom	Cause	Solution
No Sound	Audio cable is not well connected with the transmitter.	Connect it correctly.
	Audio-out socket of the audio source is not connected.	Connect with the correct audio-out socket of the audio source.
	The sound of audio source is not turned on or it is in a low volume. (when use a STB or DVD, PC, etc, please turn the volume louder.)	Turn on the volume of audio source, and adjust it to a proper volume.
	The transmitter's infrared window is not toward the receiving direction or it is blocked by something.	Adjust the position and direction of the transmitter, let its infrared window face the receiver's IR window, don't let anything block the signal.
Some noise occurs	The receiver is not turned on or its volume is adjusted to the lowest position.	Turn on the power, adjust the volume properly.
	The receiver is out of the transmitting range.	Take the receiver near the transmitter.
	The power of battery in the receiver is too weak.	Put the receiver in the transmitter's charging slot and charge it fully.
	There is some obstacles between the transmitter and receiver.	Move away the obstacles.
	The transmitter is put at a very low place.	Put the transmitter at a higher place.
Volume is low	Deviation angle of the receiver is too large.	Move the receiver to the front place of the transmitter.
	The volume from the transmitter is too low.	Adjust the volume of audio source properly.
	The volume of receiver is too low.	Adjust the volume of the receiver.