

# FAQ – Frequently Asked Questions

## The ClearSounds CLA7 Neckloop

### 1. What is a neckloop?

A neckloop is a personal listening accessory worn around the neck and connected to a sound source. The neckloop converts the input sound signal to electromagnetic waves that radiate from the wire loop placed around the individual's neck. These waves are detected and converted into sound signals by an induction coil (termed the "telephone coil" more commonly called the "t-coil") in the hearing aids. The electromagnetic waves are then reconverted back into sound by the hearing aid and delivered through the hearing aid circuitry to the audio speaker in the hearing aid. The person using a neckloop hears the sound directly through their hearing aid(s) or their cochlear implant.

### 2. Is there more than one type of neckloop?

Yes, there are two basic types of neckloops; an audio neckloop and a hands free neckloop like the CLA7.

Audio neckloops are for listening only. The CLA7 hands free neckloop is designed for two way conversations, both listening and speaking. The CLA7 has a built in microphone for outgoing conversation and is designed for use with cellular phones, cordless phones and the ClearSounds CSC50 corded phone. In addition, with the 3.5mm adapter included with the CLA7, it can also be used as a high performance audio neckloop.

### 3. How do I tell the difference between the two?

Audio only neckloops have 3.5mm jack and are passive which means they are not powered by batteries and, they do not have microphones. They take power from the sound source with which they are used such as a SoundWizard or PocketaTalker personal listening system or a FM Receiver or certain telephones with 3.5mm headset jacks. Audio only headsets cannot be used with cellular phones or cordless phones. Most audio only neckloops use 3.5mm monaural connectors since neckloops cannot separate sounds between left and right.

The ClearSounds CLA7 Hands Free neckloop has a smaller 2.5mm jack, a battery power source, and a microphone for outgoing speech. The 2.5mm jack is a de facto standard that most often identifies that the device has hands free capabilities (two-way conversations). The battery power source is important because cell phones and cordless phones do not provide enough power at their 2.5mm connectors to enable use of a neckloop. The CLA7 uses two easy to install AAA batteries. Battery powered neckloops conserve the battery power of the cordless or the cell phone for conversational use.

### 4. All cell phone 2.5mm jacks are NOT the Same!

Cell phones have either a 2.5mm jack that is used for hands free communication or they have an optional adapter available that provides a 2.5mm connector jack. Not all 2.5mm jacks operate the same. A standard hands-free headset or hands-free neckloop uses a two band connector (two black bands on the connector shaft). These are mono jacks and the black bands separate the connection points for ground, microphone and loop/speaker. All neckloops are monaural devices (mono)

Nokia phones use a three band proprietary connector that only works with Nokia accessories. The CLA7 can be used with Nokia phones but you will need to get an adapter that provides a standard 2.5mm jack. Adapters are available from Nokia and many cellular accessory suppliers.

Some of the newer cell phones are now providing music players and use three band connectors that provide stereo listening. Some of these connectors will properly connect with both mono and stereo jacks but not all of them will. You will need to confirm with the cell phone manufacturer or your carrier that the phone will work with a standard hands-free mono two band connector.

## 5. What are the key benefits of the CLA7 neckloop?

**Sound Quality.** The primary benefit of a neckloop is the sound quality. The sound signals delivered from a neckloop go **directly** into the hearing aid and the hearing aid converts those signals into the audible sounds that a person hears best. There is no or minimal background noise so the person hears only the sound they are trying to hear and the hearing aid or cochlear implant process shapes that sound to match their specific hearing ability.

**Binaural Listening.** If the user is wearing two hearing aids or cochlear implants and both have t-coils, then the user has the ability to get sound into both ears. Studies have shown that binaural listening increases speech recognition and understanding by more than 50% in most people. This is especially important for people with severe hearing loss.

## 6. How is the ClearSounds CLA7 neckloop different?

The CLA7 has several features that make it unique and usable in many different situations. It is an advanced multi-functional neckloop.

- a. **Multiple Uses:** The 3.5mm adapter allows the CLA7 to be used as an audio only neckloop for use with many telephones, and with other devices that have 3.5mm audio output connectors such as personal listening devices and FM receivers and with music sources like CDs players and iPods (may also require a mono to stereo adapter). The standard 2.5mm jack allows the CLA7 to be used as a hands free listening device with cordless phones that have 2.5mm connectors, with cellular phones that have standard 2.5mm connectors or adapters, and with the ClearSounds CSC50 and A50 Phones.
- b. **Amplification:** For of a variety of reasons, many t-coils in hearing aids are not as efficient as they could be therefore it is very important that the neckloop compensate for that inefficiency by being able to provide more signal (amplification). Some telephones with 3.5mm connectors, cellular and cordless phones, and other sound sources may not generate a powerful enough signal from the connector to drive the loop. The ability to amplify the sound at the neckloop is very important.
- c. **Efficient:** The CLA7 uses a multi-strand wire for its neckloop. A multi-strand neckloop wire is more efficient in power consumption and improves the signal strength and signal quality delivered thru the neckloop.
- d. **AAA Battery Power:** Unlike other hands free neckloops that use hearing aid batteries, the CLA7 uses easy to find, low cost and easy to install AAA batteries. Other neckloops use zinc-air hearing aid batteries that are very difficult to install, are expensive, have low power capacity and lose power regardless of whether the loop is in use or not.
- e. **Hands free operation:** When used with a ClearSounds CSC50 Phone, a cellular phone, or a cordless phone, the CLA7 functions like a hands free headset allowing the consumer to listen to incoming voice and to talk without having to hold a handset. This is better than a speakerphone when the caller wants a private conversation.

## 6. Who can use a neckloop?

Hearing aid users and Cochlear implant users. In order to use a neckloop the person must have a hearing aid or cochlear implant equipped with a t-coil and the t-coil must be turned on. Usually on the hearing aid or cochlear implant there is a "T" switch or a 'M/T' switch to turn on the hearing aid. If the person does not have a t-coil equipped hearing aid or cochlear implant, the neckloop is not a benefit.

## 7. Do all hearing aids and cochlear implants have T-coils?

No they do not. The consumer must specifically ask that a t-coil be put into the device. Some of the very small hearing aids do not have enough room in the hearing aid shell to install a T-coil. Most other hearing aids can accept a T-coil. The BTE, Behind-The-Ear, types of hearing aids most commonly have T-coils. Newer cochlear implants have BTE type processors that have T-coils. Sometimes it is possible for a hearing aid without a T-coil to be retrofitted with a T-coil. The consumer would need to check with their audiologist or hearing aid dispenser regarding the status of their device and t-coils.

## **8. My hearing aid has an “auto-switch” t-coil; will it work with a neckloop?**

It **will not** unless you can manually turn on the t-coil. Auto-switch t-coils require a strong magnetic field to turn on the t-coil. Older corded phones had powerful magnets in the speakers and they worked fine with the auto-switch t-coils. Newer corded phones, cell phones and cordless phones use speakers that have a small magnet and these do not turn on most of the auto-switch t-coils. Many hearing aid manufacturers ship a magnet with the hearing aid to help the user turn on their t-coil. Neckloops generate electromagnetic fields which are not magnetically strong enough to turn on the auto-switch t-coils. You need to discuss your options with your hearing aid provider. We suggest that to get the maximum benefit that you demand the ability to control when you can turn the t-coil on and off. Auto-switch t-coils do not work effectively with neckloops or cell phones.

## **9. Sometimes the sound thru my neckloop is distorted, why? Can I make it clearer?**

Yes, you can easily correct that situation. All sound can become distorted if it is amplified too much. The CLA7 has a 30dB amplification capability and many devices do send amplified sound thru the connectors used with the CLA7. If the sound is distorted, it means that you have too much amplification and you need to adjust either the volume control on the CLA7 or the volume control on the telephone or sound device you are using. If you have hearing aids with a volume control you may have to adjust the hearing aid volume as well. Fixing the distortion is easy. Just adjust the volume controls to a lower level.

However, if the sound source is sending distorted or garbled sound, there is nothing the neckloop or any other device can do to fix that – it’s the “garbage in; garbage out” rule. If you are using a cordless phone or a cellular phone you may be at the edge of the range of the phone and the signal gets fuzzy. Telephones are not high fidelity devices and conversations are not always clear. If nothing else works, try hanging up and making a new call; the new call will most likely go thru a different set of connections and may clear up.

## **10. How do I know when the batteries in the CLA7 are low?**

The green LED light in the top of the CLA7 that tells you the neck loop is on will turn amber or red telling you it is time to change batteries.

## **11. Can I use rechargeable batteries?**

Yes, you can. Rechargeable AAA batteries are fine for use with the CLA7. There is no recharging capability built into the CLA7 so you will have to use an external charger. The beauty of the CLA7 is that if you are using rechargeable batteries and your batteries run low while away from your home or office, you can go to virtually any corner store and purchase AAA batteries that will work fine. Installing new batteries is really easy.

## **12. How long will the AAA batteries last?**

That depends on how much the neckloop is used, how much amplification is used and the type of batteries used. These are variables that affect how much power is used or is available. In average use with average batteries, we find that the CLA7 will operate for approximately 100 hours.

## **13. I am in my car using the CLA7 with my cell phone and I get a buzzing sound, what is it?**

Unfortunately, the t-coil in your hearing aid or cochlear implant and the neckloop itself will pick up electromagnetic interference (EMI) generated by your car. The amount of EMI generated varies from car to car based on amount of electronics in the car and if the car manufacturer tried to shield the EMI generators. Airplanes can also generate a lot of EMI. If the t-coil in the hearing aid is not shielded and the EMI is very strong, the amplification in the CLA7 may not be able to override the interference. In most cases communication is possible with the buzzing a tolerable nuisance. EMI can also be generated by computers and other electrical devices. If you are using your neck loop in proximity of electrical devices you may experience a buzzing. To correct move away from the device. If you are using a digital cell phone or a digital cordless phone they may also generate EMI that is picked up by the t-coil. Keep these devices away from your hearing aids.

#### **14. Is there something special about the 2.5mm to 3.5mm adapter supplied with the CLA7?**

Yes there is. Because the CLA7's 2.5mm jack is designed to have connection points for audio input and microphone output, the jack looks like a typical stereo jack but it is not. The two black bands on the 2.5mm jack separate connection points for ground, microphone, and audio output. Standard stereo jacks have the two black bands separate connection points for ground, left audio output, and right audio output. If a standard 2.5mm to 3.5mm stereo adapter was used, one of the connectors would short out the microphone in the CLA7 and with extended use, would damage the microphone. It is important that if the CLA7 is to be used with an audio device requiring a 3.5mm jack, that only the adapter supplied with the CLA7 be used. It is a special adapter that connects the audio output connections and bypasses the microphone connection.

#### **15. Will the CLA7 work with the cell phones that have stereo music capabilities?**

Yes, but you have to use an adapter that makes the 2.5mm connector a standard connector. These adapters are usually available from the cell phone manufacturer. Unlike the standard 2.5mm connector described above, the stereo jacks have three black bands that provide for connections to ground, microphone, left speaker, and right speaker. Trying to use a standard 2.5mm jack with these type jacks results in either the microphone not working, the loop not getting audio output, or both. Make sure that you check with the cellular company to make sure that the cell phone that you pick has a standard 2.5mm mono connector or you get an adapter to make the connector mono. A mono connector works with jacks that have two black bands on the jack.

#### **16. What if I get no sound or the other person cannot hear me?**

1. First check to make sure the CLA7 is turned on and you get the green light. Then check to make sure that your hearing aids or cochlear is turned on and in t-coil mode. Then check the telephone or other device and make sure it is on and that the connector from the CLA7 is seated (pushed in all the way). If you continue to get a malfunction, you most likely have a phone with a non-standard 2.5mm connector. Check with your cell phone provider to verify that it is a standard connector (works with jacks that have two black bands). If it does not, you need an adapter for the phone.

2. It could also be possible that the CLA7 connector is not fully seated in the 2.5mm jack on the cell phone. The connector on the CLA7 is designed to work with the very large majority of cell phones. However, there is no standard for how or where on the cell phone the manufacturer places the 2.5mm connector or whether the jack is recessed or flat to the cell phone case or if recessed how deeply recessed it will be. There is an assumed or "de facto" standard that most cellular manufacturers use and with which the CLA7 complies. If you look at the 2.5mm jack on the cell phone and it is flat to the case or is just slightly recessed, the CLA7 will work perfectly with the cell phone as long as there is nothing on the cell phone to restrict the connector from being fully inserted and seated in the jack. There are some older cell phones that have a deeply recessed jack and it is possible that some new cell phones or other devices could deeply recess the jack or they could have a manufacturing defect that deeply recesses the jack. The 2.5mm connector on the CLA7 has a nib on the prong that is the de facto standard for working with recessed jacks. If the jack on the cell phone or other device is more deeply recessed than the nib on the connector you have two choices. You will either will have to modify the connector on the CLA7 or get a different device. You can cut back the rubber base near the nib on the CLA7 connector to expose more of the nib and allow it to fully seat in a deeply recessed jack. Doing so will, however void the warranty on the CLA7 and you make that modification at your own risk. Devices with deeply recessed or otherwise restricted jacks are not normal or common and the problem is with that device manufacturer not the CLA7.

3. If you are using the neckloop with the 3.5mm adapter for use with a phone, you need to try the neckloop in some other sound device known to be working like a CD player or the SoundWizard. Unfortunately, our experience with a number of corded phones with 3.5mm neckloop connectors is that there is a significant failure rate on that component of the phones. If the neckloop works with a different sound source then it is a phone problem. If it is a neckloop problem, check with ClearSounds for warranty service or for repairs if it is out of warranty.