# The Often Neglected Neck Loop

A neck loop is just a headset — for telecoil equipped hearing aids

BY: Stephen O. Frazier and Sally Schwartz

A neck loop connected to various devices makes it possible for the user to hear better anyplace in the world.

With the dramatic increase in awareness and use of hearing loops in homes, churches, live theater, meeting halls and other locations, another form of hearing loops - the neck loop - has been somewhat overlooked. This incarnation of induction loop technology can turn telecoil equipped hearing aids (or a Cochlear Implant) into a versatile and sophisticated personal listening system.

Think of a neck loop by itself is simply a headset for telecoil (sometimes called t-coil) equipped hearing aids. It comes in 2 forms - a non-amplified and amplified version. The amplified version comes in 2 forms: 1) blue tooth for cell phones and; 2) corded styles for cell phones, cordless phones and personal amplifiers. Just like a headset needs some type of audio source, so does the neck loop since a neck loop is..... a headset.

The one requirement for using a neck loop with hearing aids is that the hearing aids must have telecoils and there must be a manual control for the telecoils. Some so called "automatic" telecoils have no manual control - they are activated by the magnet in a telephone ear piece. They will not sense a neck or room loop and activate and thus those telecoils are useless for any purpose other than telephone use. Some "automatics" have a manual override so they will work fine. Also, you will have increased volume when the telecoil is set to "T" only. This means you will not hear through the microphones of your hearing aids.

The telecoil setting can be set to <u>one or all</u> of the following settings. Ask you audiologist or hearing instrument specialist for more information:

- 1. Telecoil only no other sound enters the hearing aids.
- 2. M/T (mic/telecoil) audio and other sounds in the room will be picked up by the hearing aid's microphones and mix with the sound from the neck loop.
- 3. Automatic telecoil only works with the telephone

Due to the varying strength of loop signals (some of which might not meet international standards) optimum loop/telecoil operation will be acquired using hearing aids that, in addition to the manual telecoil controls, also have manual volume controls.

# The Basic Neck Loop

By itself a neck loop is a non-amplified headset. It is a miniature loop that, like a full room loop, is plugged into electronic sound sources such as an iPod, the speaker jack on a TV or stereo system, a personal amplifier such as a Pocket Talker® etc. and it transmits that sound to the telecoils in hearing aids.



Pictured above are non-amplified neck loops that can be connected to I-pods, Mp3's, tape cassette players,

the headphone connection at the gym or on your stereo sound system. This symbol means that any one of the above neck loops will work for that device that has a 3.5 mm connection. With an extension cord it could even be plugged into a TV set. To control the volume setting you will need to use

the device's volume control due to the neck loop not having its own volume control. Ear hooks bring the "loop" directly up to the hearing aid and have a stronger signal than a non-amplified neck loop. There are two main manufacturers; NoizFree and Hatis. Hatis has a wider model selection and their's are priced between \$150.00 – \$200.00. The ear hooks are beneficial for behind the ear hearing aids but, if the signal strength is strong enough they can be used with in the ear and in the canal style hearing aids too. This style must be "hooked" behind the ear.

It can also be used in conjunction with a personal amplifier that picks up conversations or other sound and relay that sound to your hearing aids. Non-amplified neck loops are priced between \$40.00 – \$100.00.

#### **Amplified Neck Loops**

Amplified neck loops have 2 things that make them different from a basic neck loop:

- 1. Volume control
- 2. Microphone



With this type of device you can talk on the phone hands free as the mic in the neck loop replaces the mouthpiece of the telephone. The neck loop portion still functions just as the basic neck loop functions – as a headset. It is not limited to phone use and can be used with the same wide variety of devices as the basic neck loop.

The volume control provides an independent volume adjustment for whatever it plugs into. For example; the cordless phone has it's own volume control and with the amplified neck loop there is an additional volume control adjustment. In some hearing aids you will have an added volume control on your hearing aids. A special advantage of neck loop phone use is that you are hearing the caller through both ears and, unless you are using the mic/telecoil setting on your hearing aids, much of the background sound is eliminated. Amplified neck loops range from \$69.00 to \$100.00.

## Bluetooth® Neck Loops







WillamsSound BT



Earhook BT

Bluetooth® models of neck loop or ear hooks are also available. Bluetooth® provides two benefits:

- 1. No wire from the neck loop or ear hook to the cell phone.
- 2. Some have a "dongle" option to allow wireless listening to your TV, MP3 or any other music or "sound" device. When the phone rings you will be notified through your Bluetooth® device.

They pick up the signal from the Bluetooth® device and relay it to the telecoils in hearing aids. These neck loops will work with any telecoil equipped hearing aids that have a manual telecoil control. Bluetooth® style neck loops can be purchased for \$199.00 and up depending on their features.

## Personal Amplifiers and neck loops











**Pocket Talker®** 

Serene

Mino

Maxi

Duett

Personal amplifiers have a powerful little microphone that allows the user to "aim" the device at a speaker to pick up his or her voice. This helps to decrease the background sound and focuses more on the person's voice, increasing clarity. These personal amplifiers coupled with a neck loop or ear hook can increase the listening clarity in restaurants and other settings where hearing aids alone simply are not adequate.

Although these devices can be aimed at whoever is speaking in a group setting, they work best in one-on-one situations. Some of the personal amplifiers come with removable microphones as well as allow for different sizes of microphones that improve the "focused" sound. "Focused" sound just means that the microphone has been made to have a small and narrow area from which it will 'pick-up' the sound signal. This is very advantageous in restaurants and cars and, especially, those family dinners. This type of personal amplifiers start at \$127.00. Some models have built-in mics with an option to add an external plug—in microphone. These models start at around \$170.

\*Reminder: ALL of these use a headset so that means a neck loop or ear hooks will work too.

#### The Personal FM and the neck loop











Array AG3

WilliamsSound

Contego

**Domino** 

Comtek

Converser

A step up from the personal amplifier is the personal FM system such as the above models. With such a system the person talking will wear a mic that either has a built-in mic or a plug-in mic that attaches to the speaker's clothing. These can also be set on a table or countertop near the person who is talking. This will allow you to hear someone at a distance with the clarity as if they were standing next to you. In a restaurant setting the speaker could be wearing the transmitter and the user, instead of having a personal Amplifier, would have a small FM receiver. The receiver accepts a headset connection which means that a neck loop and/or ear hook will receive and send the transmission directly to the t-coil equipped hearing aid(s). FM systems operate on a special frequency; there may be times when others are on the same frequency. When this happens the user has the option to change the channel. This allows for multiple users to maintain a clear connection without interference.

Personal FM systems can also be used in conference rooms, classrooms and other settings where the hard of hearing listener may be some distance from the person speaking. Used as described above, several listeners can be equipped with receivers to hear the speaker/instructor.

# The personal FM as a TV listening system

All of the above can function as a wireless TV Listening system. For TV you would simply put the transmitter and its mic in front of the speaker on the TV. For a more clear sound you can plug the transmitter directly in the 'Audio Output' of the TV. This decreases external sounds.

### TV listening systems





Sennheiser RF 840S or IR 830S

Another alternative for TV use would be a system that is specifically made for television hookups. Such devices are plugged into the Audio Output jack in back of the TV and broadcast an Infrared signal that sends the sound silently to a receiving neck loop. The difference between the IR (infra red) or RF (radio frequency) style is that the RF feature allows you to listen from a different room, through the walls and at larger distances. For IR system they start at \$152.00 and RF systems start at \$379.00 for. Additional neck loops are also available at an additional cost.

#### Conclusion

Prices quoted throughout the article are the generally asked retail prices for the devices. A Google search for any specific device may find significantly lower prices are available at times. Search by brand name or, to get the most variety, search by category such as "amplified neck loop" or "personal amplifiers."

Again, neck loops are a "headset" for those who wear hearing aids equipped with telecoils or have a telelcoil equipped cochlear implant. Literally any device that can be used with a headset (with or without a mic) may be used with a neck loop.

Remember that since some hearing aids have the option to have the telecoils turned on at the same time as the microphone that, if you want the clearest sound (and only the sound from your device) then turn your hearing aids to the T-Coil ONLY mode.

Suffice it to say that, contrary to what some hearing care providers may tell their clients about telecoils and loops, there is a growing segment of the hard of hearing public that has found, through the use of this technology, that they can experience sound and words again that they had been unable to previously. They have learned that their hearing aids are even more adaptable and more versatile than they had been told when they purchased them.

Hearing loops installed in rooms make it possible for the hard of hearing to hear better in those rooms. A neck loop connected to various devices, makes it possible for the user to hear better anyplace in the world.

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