

# Cell Phone Tips

CII and Platinum BTE

## Using Cellular Phones with BTE Processors

Many people ask us for recommendations on a specific cellular phone that works best with a BTE sound processor; however, there are so many choices available that we have not found one cellular phone arrangement that works everywhere for everyone.

We suggest you contact your local cellular phone vendor and ask about using demonstration models or doing an in-home trial. We also recommend talking to other cochlear implant and hearing aid users to find out which cellular phones and what features have worked best for them in their area.

## Advanced Bionics offers several listening options for using a cellular phone with your BTE processor:

1. T-Mic® Microphone
2. Auxiliary Audio Earhook with a custom-made hands-free telephone adaptor cable
3. Auxiliary Audio Earhook with Telecoil Pickup Telephone Adaptor

### T-Mic® Microphone

The T-Mic is an in-the-ear microphone for hearing in noisy environments and for effortless access to cellular telephones, consumer audio electronics, and assistive listening technology. Many BTE users use the T-Mic full time and are able to use a cellular phone simply by placing the phone to their ear in a normal fashion.



The T-Mic is an optional earhook and is the default choice for most adult CI users. To order a T-Mic (#CI-5830), visit the [Webstore](http://www.BionicEar.com) at [www.BionicEar.com](http://www.BionicEar.com)

### Auxiliary Audio Earhook With a Custom-Made Telephone Adaptor Cable

Another option for using a cell phone with a BTE sound processor is directly connecting with a patch cable made specifically for your phone. To do this, you will need the Auxiliary Audio Earhook (from Advanced Bionics) and a custom made hands-free telephone adaptor cable (from an independent vendor\*).

To order the Auxiliary Audio Earhook (#CI-5705), visit the [Webstore](http://www.BionicEar.com) at [www.BionicEar.com](http://www.BionicEar.com) or call Customer Care at (877) 829-0026, (800) 678-3575 TTY.

To order a custom-made cable, contact the [patch cable vendors listed on our website](#).

Be sure to have your cellular phone brand and model information available.



\*Advanced Bionics does not support any products that are supplied by outside vendors.

### Auxiliary Audio Earhook With Telecoil Pickup Telephone Adaptor and T-Coil Compatible Cell Phone

The Telecoil Pickup Telephone Adaptor accessory is a cable with a suction cup that houses a T-coil. It provides access to inductive loop environments via the T-Coil.

To order the Telecoil Pickup Telephone Adaptor (also called the Telecoil Pickup for PSP & S-Series; #AB-7750), visit the [Webstore](http://www.BionicEar.com) or call Customer Care at (877) 829-0026, (800) 678-3575 TTY.



### What are induction loops and T-Coils?

An induction loop is a special wire within a room or phone that emits an electromagnetic signal. This signal is picked up by the T-Coil (or telecoil) and is then transmitted to the sound processor. When you plug the Telecoil Pickup Telephone Adaptor into your Auxiliary Audio Earhook, you are ready to pick up the signal from an induction loop.

Note: You do not have to attach the suction cup directly to the phone or loop. It simply must be close to it.

### T-Coil Compatible Cellular Phone Options

Traditional phones are required to be hearing-aid and T-coil compatible by having built-in inductive loops; however, cellular phones do not yet have this requirement. Some cellular phone manufacturers make certain styles of phones that are hearing-aid or T-coil compatible, while others make adaptors. For options in your area, contact your local cellular phone provider and ask what products are available.

### Other choices for getting a T-Coil compatible phone are:

1. Nokia and Motorola have a T-Coil neckloop that has a built-in microphone. Contact them to find out which phones work with this neckloop. The neckloop plugs into the phone, is worn around the neck, and emits electromagnetic energy that is picked up by the T-Coil.
2. Audex has a product called the CHAAMP that makes specific Verizon, Alltel or US Cellular phones hearing aid or T-Coil compatible.
  1. Visit the website for more details: <http://www.audex.com/chaamp.html> .
  2. Contact an Audex representative at (800) 237-0716 if you have questions.
3. Motorola has a cellular phone that is T-Coil compatible called the Motorola V60. Not every T-Coil user is able to use this phone, so try it before you buy it.

## Other Information on Using a Cellular Phone

### Audio Mixing

Audio mixing options are available on the BTE sound processors. Audio mixing allows the BTE microphone to remain active when connected directly to a T-Mic, telecoil, or any other external audio input. This is important so you can hear your own voice and environmental sounds in addition to the signal transmitted through the auxiliary device. You may need to see your audiologist to set up a program with the correct audio mixing for connecting to your cell phone. If you are directly connecting to a telephone with a cable or adaptor, you may want your audiologist to set up an audio mixing ratio of 100% auxiliary so that you hear only the sounds from the telephone.

### If You Hear Buzzing on Your Cellular Phone

Some cochlear implant users experience interference when using digital cellular phones. Digital cellular phones transmit information on radio frequency (RF) that is picked up by the electronic circuitry of the sound processor or by a T-Coil attached to the processor. This can create an audible interference or buzz. The interfering energy comes from many parts of the cellular phone including the backlight, antennae, battery, and internal circuitry.

### Here are some tips on avoiding the buzz:

1. Using a T-Mic, as opposed to a T-Coil, tends to lessen interference.
2. Design of phone: Clamshell or flip-style phones, as opposed to open faced phones, tend to put the bulk of the receiver below the ear and position the extended antenna away from the head. This reduces the interference by increasing the distance of the phone and antenna from the BTE processor.
3. Type of wireless service: Cellular phone companies use different transmitting technologies for their wireless services; some cause more problems than others.
  1. Try a provider that uses the CDMA digital protocol such as Verizon or Sprint or iDEN technology such as Nextel as these tend to cause the least interference.
  2. Also, find the CDMA or iDEN provider that has the best network coverage in the area(s) where you expect to use the phone (e.g., home, office, other cities and places where you travel).
  3. GSM and TDMA protocols are prone to causing interference with cochlear implants.
4. Ask a cellular phone provider to see their models with reduced RF. Since 2005, the FCC requires most service providers and phone manufactures to offer a certain percentage of cellular phone models with reduced emissions.
5. Try before you buy. Contact your local cellular phone vendor and ask about using demonstration models in the store or in-home trials. You may need to listen with several phones from several companies before you
6. Talk to your audiologist and other cochlear implant users. Ask what types of phones and cellular phone service has been successful for them in your local area.

For more information, contact the Bionic Ear Association at [hear@advancedbionics.com](mailto:hear@advancedbionics.com).