

## Article

### Opening an ITE Hearing Aid

Whether you're a seasoned hearing aid tech or someone new to hearing aid repair, opening an instrument is essential if you're going to perform any type of internal repair. Now this may seem a little basic for a tech, but you may want to stick around for a little trick.

#### **Before you open the aid, make sure it is necessary**

There are a few things you can do from the outside of the unit, depending on the problem. For example, if the unit is weak or dead, try cleaning the receiver port using a vacuum pump to remove any debris. Or if the unit is feeding back, you may be able to move the receiver a little through the sound port, or through the battery compartment. We'll cover some of these techniques in later issues.

Once you've decided to go in, the only thing you need to open a hearing aid is a single sided razor blade - and the sharper the better. Hearing aids are put together in two parts, the faceplate and the shell. These two components are glued together using an adhesive, and this process leaves a seam around the circumference of the hearing aid. So to open a unit, simply push the razor blade into and along the seam, and work your way around the unit until the shell separates from the faceplate.

#### **Sounds pretty simple, but there are a few important things to remember.**

First, be careful. Razor blades are sharp and they can cut into your finger in a hurry. Don't push too hard - keep it in control. Use the middle of the blade, not the edges. If the blade isn't going in, try a different part of the shell.

Second, there are components and wires inside the unit, so when you cut make sure not to go in too deep or you'll be creating more problems than when you started.

Third, try to start in the bowl area of the hearing aid if possible and work your way around. After you get over half way use the razor blade as a wedge and try to lightly push down, away from the faceplate. Many times, the hearing aid will pop open at the seam without cutting all the way around - less chance of cutting wires or components.

#### **Whoops**

Sometimes when you open a hearing aid, things go wrong. Instead of opening along the seam it may open through some of the shell. Not to worry. This can be easily fixed by patching the seam when we close the unit, which we will discuss in the next issue.

If you're reopening a unit where the seam has been previously patched, you need to take extra precautions. You can tell if a seam has been patched because part of the seam will be missing. In other words, the seam will be visible around most of the hearing aid except where it was patched. If you try and open it with a razor blade you will likely break off part of the shell where the patch was because there is no seam to break along. And don't even try and cut into this area with a razor blade. The only thing you'll likely cut into is yourself.

#### **For the more advanced:**

Here is a trick that will save you lots of headaches with patched seams. Using a dremel tool and a small saw blade bit, saw into the hearing aid lightly along the shell where the seam should be. You don't need to cut all the way through; you are just trying to give the shell a good place to break by creating a seam. After you have "scored" the shell in the patched area, take your razor blade and cut along the seam on the rest of the hearing aid. Using the razor blade as a wedge, pop the hearing aid open. The shell should separate right where you scored it.

As with any procedure, it gets easier the more you do it. It is a good idea to practice on a sample unit first if possible, but to tell you the truth it is not that difficult. Opening a hearing aid is no big deal no matter what happens as long as you can put it back together – and that's what we'll talk about next time.

**About the Author**

Chris Perkins is the owner of Lightning Enterprises, and facilitates the Lightning Enterprises newsletter. He has worked in the hearing aid industry since 1991 in hearing aid manufacturing and product development, as well as equipment and process consulting.