

possibly the best in-ear earphones in the world



Sound quality	★★★★★★
Functionality	★★★★★★
Ease of use	★★★★☆
Build quality	★★★★★★
Total rating	★★★★★★
Manufacturer	Starkey Norway
Price	NOK 6.790,- (\$ 1180)

*Starkey SA-43 is the ultimate high-end in-ear earphone – custom made to your ears, to fit as tight as glue, blowing you away with the tones almost directly connected to your skull*

By: Geir Gråbein Nordby

This is not earphones for those on a low budget. For almost twelve hundred dollars you can choose from many great headphones. There are extremely good headphones of the large type for half of what Starkey charges for its SA-43, for example, Beyer Dynamics' top model DT990 ED.

But on the other hand, the plugs from Starkey is suited for far more different applications. Firstly, one can go jogging with these earphones, which is practically impossible with big cups. Looking at the technical data, we also noticed that the Starkey's have an impedance of 50 ohms, where the headphones of the pro type usually has an impedance of 100 ohms + (in the Beyer Dynamics case, 250 ohms). Together with a portable player with limited amplifier power - such as an iPod - you cannot play loudly with the big headsets. Then these plugs have a clear advantage.

Regular earbuds of the universal type can sound pretty decent. We have heard earbuds in the \$100-200 range that offers a nice music reproduction with rich bass. But they have never been close to delivering the musical sound quality from a large headset. The closest we've heard is from Ultimate Ears, Etymotic Research and Shure, like the former top model E500PTH, at about \$550.

### Custom made

This is where Starkey SA-43 enters the stage. This is in fact no normal earbud, in the sense that these are custom molded to fit the user's own ears. That means you have to visit Starkey to get impressions made in which the earmoulds are being built after.

The SA-43 is a 3-way model, with the bass, midrange and treble having their own dedicated driver. Most earbuds has a single driver that renders the entire frequency range; to divide it up more items provides a far better dynamics.



In addition, the SA-43 an extra subwoofer, which can be enabled or disabled with a switch. So you can adjust the bass response without compromising dynamics and resolution. There is also a second switch which adjusts the crossover to the treble. Switching it on, the sound is amplified in the presence area, around 3 kHz. This can be especially helpful for singers who use them as monitors, to better hear themselves when singing. For pure music listening, we can immediately reveal that this should not be activated as it makes the sound a bit too aggressive and forward.

## **In use**

The editor has an unusually abrupt turn in the ear canal, close to 90 degrees. It means that the plugs are a bit difficult to insert. But when they're in place, they do fit well. And the sound quality is really out of this world.

Normally I do not listen to classical music with earbuds, as the sound is not natural enough. I usually prefer earbuds with a rich bass response, which often comes at the expense of resolution and reliability in the reproduction of acoustic instruments. Not the case here. Even with the extra woofer enabled, double bass sounds like just that, with lots of air around the strings, and a real life presence that's almost unheard. And with a rock steady foundation in the low end. In this respect, it is only an advantage to enable the second woofer, as it fattens the bass register a bit, but without overdoing it. My current reference set, the discontinued Shure E500PTH, is not even close to the Starkey's presentation of space, dynamics and presence.

The resolution in the treble region is the best I have heard from any in-ear version. Overtones from flutes, violins, and the upper register of a piano is really extensive and airy, so you experience a vast soundscape. The sound is infinitely complex, every pedal press on the piano is evident, without interfering with the tones. Popular music is presented rhythmic and cool, and here the extra bass driver should be activated, as the rhythms of the drums and groove from the bass guitar gets more physical. It also feels special to hear Rihanna and Jay-Z reproduced with this kind of dynamics and resolution. Listening to this type of music from a hi-fi perspective is way cool! The sound from the SA-43 is reminiscent of that from large high-end headphones, except that they are easier to operate and makes the user far more mobile. Moreover, they block out almost all outside noise since they fill the entire ear canal. From a sonically standpoint it's an obvious advantage. But beware when walking along the road!

## **Conclusion**

Starkey SA-43 is simply the best earphones the editor have ever heard. Since the shell is custom made to the users own ears, they block out all the outside noise and the music is almost connected directly to the eardrum. With four separate drivers to reproduce the audible frequency range the sound is extremely dynamic, and the resolution is really out of this world. The sound is gigantic, the instruments are rendered with a very high resolution and with air and space that we've hardly ever heard before. The earphones sounds as good as any pair of large headphones, but with much better noise reduction. Which one should be aware of when you're out walking close to traffic. Without getting a look at the Ultimate Ears Customs, which is also specially adapted to the user's ear, and that remains to be tested, it is tempting to declare Starkey SA-43 to be the best in-ear headphones in the world.

## ***The good***

*The best sound on the market?*

*Suited to portable players*

## ***The bad***

*Expensive*

*Conseals all traffic noise*

## **Conclusion**

*Specially recommended*