

3 SERIES™*:

Simple Yet Thoughtful Design

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2008

In the spring of 2008, Starkey Hearing Technologies released Zōn™, a revolutionary receiver-in-canal (RIC) product with a sleek contemporary design, painted finish, chromed microphone cover and accent-molded user control. With unparalleled algorithm performance, Zōn kicked off a tradition of high-performance digital hearing aids, including S Series®, S Series iQ, X Series™ and Wi Series® product lines (Figure 1).

2011

2011 brought further enhancements including the integration of a proprietary 900 MHz wireless system capable of direct programming and audio streaming without compromising ear-to-ear communication.

2012

2012 brings a family of completely redesigned products to Starkey Hearing Technologies' portfolio. These new products, known as 3 Series, were designed with input from both professionals and patients. Focal points of the new design strategy included new receiver cables, power-dome earbuds, user controls and easily seen right/left hearing aid identifiers.

Figure 1:
(from left to right)
Zōn RIC 312,
Wi Series RIC 13,
X Series (Xino™)
RIC 10



SnapFit Receiver Cable

The new SnapFit receiver cable connects to the hearing aid via a six-pin connector, looks smaller due to a 60-percent reduction in the connector protruding from the hearing aid case, and uses a new polymer allowing for thinner wall sections, ultimately making the receiver tube 25 percent smaller in diameter. In addition, the new tubing material offers better optical clarity and chemical resistance, which minimizes discoloration or clouding. The SnapFit design creates a stable connection between the hearing aid and cable that resists breakage and loss of electrical connection caused by everyday wiggles, twists and pulls (Figure 2). With “forward engineering” in mind, the SnapFit receiver cable was not only designed to interface with current technology, but also to allow for the integration of technologies that may be available two to three years from now.



Figure 2: 3 Series RIC SnapFit cable and connector.

Power-Dome Earbuds

The flexibility of RIC products has generated demand for larger and more occluding earbuds. In order to maintain the ease of fitting and provide an increased fitting range, a family of power-dome earbuds was developed. Usable with behind-the-ear (BTE) thin tube and RIC products, these power-dome earbuds:

- Provide an instant fit
- Fit existing and new receiver cables and thin tubes
- Allow flexibility to increase fit rates
- Reduce potential feedback associated with higher gain instant fittings

To allow for easy insertion and removal, the new earbud design includes a bottom-dome diameter that is slightly larger than the top-dome diameter. The occluding earbud design is available in three sizes (Figure 3):

- Small — 8 millimeter (Top) / 10 millimeter (Bottom)
- Medium — 10 millimeter (Top) / 12 millimeter (Bottom)
- Large — 12 millimeter (Top) / 14 millimeter (Bottom)



Figure 3: Power-dome earbuds small (left) to large (right).

User Control

After gathering feedback from professionals and patients, it became clear that there was no consensus as to the “perfect” user control. However, we identified key requirements to guide our designs. With these key requirements in mind, a well-designed user control should include:

- A tactile component that allows individuals with little feeling in their fingers to locate and actuate
- An ability to increase or decrease volume
- The ability to perform multiple functions

To meet these usability goals, a new “rocker

switch” design emerged. It offers a stable tactile “feel” and provides volume and memory control customization for each patient. For those patients who prefer to use a remote control or simply prefer the sleek design of not having a “rocker switch,” switchless versions of both the 312 RIC and 312 mini BTE 3 Series products are available (Figure 4).



Figure 4: 3 Series switchless mini BTE and RIC 312 with switch.

Right/Left Identification

A common request from professionals and patients is easy access to right and left hearing aid identification. Both 3 Series products include external indicators that are easily installed at the time of fitting (Figure 5). The RIC 312 also incorporates a second identification method, as there are also red and blue tips on the receiver cables.



Figure 5: 3 Series RIC right and left indicators.

Fully Featured Hearing Aids

The demand for fully featured hearing aids is global. Many states inside the U.S. are increasing access to hearing loops, while many other countries have had consistent access rates to hearing loops for many years. For instance, the London Underground includes hearing loops in each train car, as do many European and New York taxi cabs.

Both the RIC 312 and mini BTE are offered at three product positions: flagship, high-level and mid-level; yet no matter what product the patient and clinician decide on, they can be assured of robust telecoil and DAI connectivity. Table 1 shows an overview of all product features and options.

Product Family		General				Mechanical					Algorithms				Wireless Features*				Accessories		Other				
		Colors	Matrices	Memories	Adjustable Channels/Bands	Switches	Battery Door Lock	User VC	DAI	Automatic Telecoil/ Automatic Telephone	Water Resistance	Directionality	Frequency Lowering	Noise Management	Feedback Management	Environmental Classification	Binaural Processing	E2E Feature Sync	Programming	Streaming	SurfLink Mobile	SurfLink Media	SurfLink Remote	Self Learning	Data Logging
RIC 10	Xino	12	110/40 115/50 123/60 130/70	4	16, 12, 8, 6, 4	✓	✓	✓	✗	✓	HydroShield [®]	Dynamic	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✓	✓
RIC 312	Wi Series X Series	12	110/40 115/50 123/60 130/70	4	16, 12, 8, 6, 4	✓	✓	✓	✗	✓	HydroShield [®]	Dynamic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RIC 13	Wi Series X Series	12	110/40 115/50 123/60 130/70	4	16, 12, 8, 6, 4	✓	✓	✓	✓	✓	HydroShield [®]	Dynamic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RIC 312	3 Series	12	115/50 123/60 130/70	4	16, 12, 8, 6, 4	✓	✓	✓	✓	✓	HydroShield [®]	Dynamic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
mini BTE 312	3 Series	12	126/65	4	16, 12, 8, 6, 4	✓	✓	✓	✓	✓	HydroShield [®]	Dynamic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Wi Series and 3 Series only

Table 1

Conclusion

Guided by the motto “Better today than yesterday. Better tomorrow than today,” Starkey Hearing Technologies has set out to capture the voice of our customers. Today, that voice resonates in the SnapFit cable, power-dome earbuds, new user controls and improved right/left hearing aid identifiers. Tomorrow, the customer’s voice will be realized in additional hearing aid designs, hearing aid accessories and advanced processing algorithms including better hearing in noise.

* 3 Series is a Starkey brand name.



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