



New Balanced Armature Multi-Way Drivers for Premium Sound

Knowles Balanced Armature (BA) drivers are precision crafted and tuned to provide clear and consistent, premium audio. Knowles offers a wide portfolio of full-range drivers, woofers, tweeters, and super tweeters which enhance the listening experience in various custom and universal In-Ear-Monitors and TWS devices.

With years of experience and expertise in the premium audio industry, Knowles has developed a portfolio of multi-way driver designs boasting the latest state-of-the-art BA technologies.

Among these technologies are dual-diaphragm woofers, automated receivers, and supertweeters. Dual-diaphragm receivers offer a low-end response rivaling that of dual receivers while utilizing only a fraction of the space, by doubling the output with two diaphragms driven by a single motor. Knowles automated receivers offer precise

tolerances and uninterruptible supply continuity alongside tightened performance tolerances and improved supply chain traceability. The Knowles supertweeter boasts unparalleled treble extension through 40kHz, making it a complete offering to deliver lossless and high-resolution audio by establishing stability in the detail and air range. Jointly, these technologies enable vivid audio experiences with superior sound staging and precise playback.

The multi-way drivers are available as a package with integrated crossover circuits, enabling plug-and-play to an existing earphone design. The standard models are designed to meet the Knowles Curve for a transparent tuning; however, our multi-way design capabilities offer a variety of options available for designers looking to achieve various sound signatures.



Enjoy Vivid Audio Experiences with Superior Sound Staging and Precise Playback

We offer a wide portfolio of products to enhance the listening experience:

- **dual-diaphragm woofers:** a low-end response rivaling that of dual receivers while utilizing only a fraction of the space, by doubling the output with two diaphragms driven by a single motor
- **automated receivers:** precise tolerances and uninterruptible supply continuity alongside tightened performance tolerances and improved supply chain traceability
- **tweeters:** deliver high-res audio with superior performance
- **supertweeters:** unparalleled treble extension through 40kHz, making it a complete offering to deliver lossless and high-resolution audio by establishing stability in the detail and air range

MULTI-WAY DRIVER PRODUCT INFORMATION:

Product Family	Number of Ways	Number of BA Drivers	Description	Benefits	Applications
T202	2	2	<ul style="list-style-type: none"> Versatile BA driver combination exclusively using Knowles automated receivers, with 2 drivers and two-ways in a compact package size. Provide clear and high-quality listening experience. 	<ul style="list-style-type: none"> Customizable including capacitor value modifications, and amplitude fine tuning with added resistors. Offers precise tolerances and uninterrupted supply continuity with the KN automated receivers. 	<ul style="list-style-type: none"> Entry-level universal earphones Gaming earphones
T303	3	3	<ul style="list-style-type: none"> BA driver combination with 3 drivers and three-ways combination, offering a bass enhancement. Uses Knowles automated receivers and Knowles dual diaphragm technology. 	<ul style="list-style-type: none"> Smaller size results in a more comfortable fit (use a single dual diaphragm BA receiver in place of dual BA receivers). Provides bass extension 	<ul style="list-style-type: none"> High-end universal earphones Mid-tier custom In-Ear-Monitors Premium Gaming earphones
T404	4	4	<ul style="list-style-type: none"> BA driver combination with 4 drivers and four-ways combination. Bass enhancement and a unique high frequency extension using a Knowles supertweeter. A driver combination using Knowles automated receivers, dual diaphragm technology and super tweeter. 	<p>All of the T303 benefits, plus:</p> <ul style="list-style-type: none"> The small form factor of the supertweeters and the enhanced high frequency range of 40kHz makes it a complete offering to deliver lossless and high resolution audio in IEMs and TWS earphones. 	<ul style="list-style-type: none"> High-end universal earphones High-end custom In-Ear-Monitors
T408	4	8	<ul style="list-style-type: none"> BA driver combination with 8 drivers in a four-way combination. Best-in-class bass enhancement and high frequency extension using Knowles super tweeters Driver combination using Knowles automated receivers, dual diaphragm technology and super tweeter. 	<p>All of T404 benefits, plus:</p> <ul style="list-style-type: none"> The best-in-class bass extension of two dual diaphragm technology receivers and enhanced high frequency extension using a dual super tweeter. This combination makes it the industry-best offering for high-end custom and audiophile earphones. 	<ul style="list-style-type: none"> High-end custom earphones High-end universal earphones High-end audiophile earphones High-end gaming earphones

T202



T303



T404



T408

