



KNOWLES BALANCED ARMATURE DRIVERS FOR  
PREMIUM SOUND: PROFESSIONAL IN-EAR  
MONITORS, AUDIOPHILE & CONSUMER EARPHONE  
SELECTION GUIDE

MARCH 2023

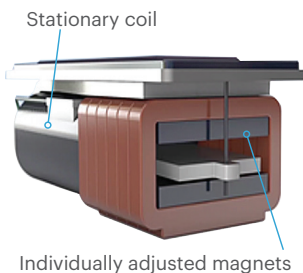
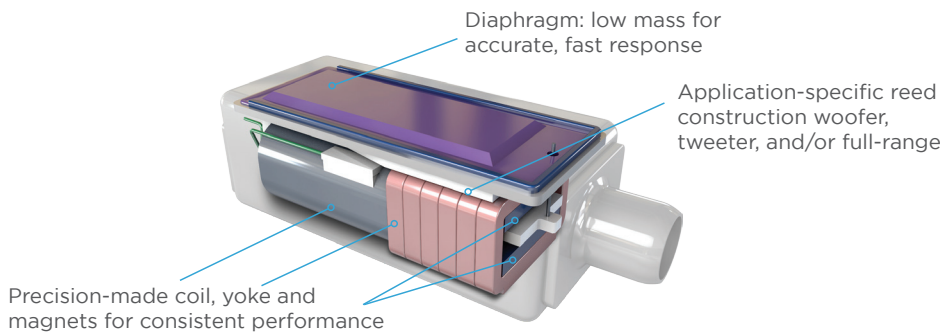


## Small Size, Premium Sound

Multiple Balanced Armature (BA) drivers, in many cases custom tuned, provide precise reproduction with superior soundstage and imaging.

Unlike ordinary speakers, the stationary coil of a BA can be wound with a wide range of impedances, making it easier to control the interaction between multiple drivers. Together with venting options and acoustic dampers, this simplifies crossover circuits and gives designers wide latitude in tuning In-ear monitors.

BA midrange drivers, tweeters, and supertweeters can be combined with dynamic woofers to create hybrid audiophile earphones.



### THE BALANCED ARMATURE ADVANTAGE

- ▶ Balanced Armature (BA) drivers offer improved fidelity, realism and detail over traditional dynamic drivers. They are incredibly small and lightweight, and provide greater output with less power.
- ▶ A BA driver can also be combined with a dynamic speaker to form a hybrid earphone. In this configuration, the BA drivers focus on the critical high end portion of the audio spectrum, bringing a new level of clarity and realism.

|                   | PART NUMBER                                     | CONFIGURATION              | SIZE IN (mm) | Z @ 1KHz (Ω)   | SENS (dB SPL) TO 100mV / TO 1mW | MAX SPL 10% THD 1kHz (dB SPL) | THD@ 94dB SPL / THD@ 100dB SPL            | VENTED              |    |
|-------------------|---|----------------------------|--------------|----------------|---------------------------------|-------------------------------|---|---------------------|----|
| TWEETER           | RAN-33860-B148                                  | Single                     | 5.1×2.8×2.0  | 14             | 94                              | 108                           | 0.3% / 0.5%                               | No                  |    |
|                   | SWFK-31736-000                                  | Dual                       | 5.0×2.7×3.9  | 6.9            | 102 / 100                       | 114                           | 0.2% / 0.2%                               | No                  |    |
|                   | RAU-34832-B148                                  | Single Supertweeter        | 5.1×2.8×2.0  | 14(*)          | 103(*) / n/a                    | 122(*)                        | 0.3% / 0.3%(*)                            | No                  |    |
|                   | RDU-35000-000                                   | Dual Supertweeter          | 5.1×2.8×4.1  | 7(*)           | 109(*) / n/a                    | 127(*)                        | 0.2% / 0.2%(*)                            | No                  |    |
| FULL RANGE        | RAQ-35091-000<br>RAQ-33862-000<br>RAQ-33985-000 | Single                     | 5.3×2.7×1.6  | 74<br>56<br>56 | 109/117<br>106/113<br>106/113   | 122<br>120<br>120             | 1.1% / 1.3%<br>0.7% / 0.8%<br>2.2% / 2.4% | Yes<br>No<br>Damped |    |
|                   | RLQ-34240-000                                   | Dual-diaphragm high-output | 5.3×3.1×2.7  | 57             | 111 / 120                       | 126                           | 0.3% / 0.4%                               | Yes                 |    |
|                   | ED-26805-000<br>ED-31305-163                    | Single                     | 6.3×4.3×3.0  | 28<br>84       | 109 / 113<br>102 / 111          | 123<br>119                    | 0.3% / 0.3%<br>2.8% / 3.9%                | Yes                 |    |
|                   | BK-26824-000                                    | Single                     | 7.9×5.6×4.0  | 22             | 114 / 118                       | 127                           | 0.2% / 0.2%                               | Yes                 |    |
|                   | DWFK-31785-000                                  | Dual                       | 5.0×2.7×3.8  | 30             | 106 / 111                       | 120                           | 0.4% / 0.5%                               | Yes                 |    |
|                   | TWFK-30017-000                                  | Dual                       | 5.0×2.7×3.9  | 43             | 106 / 112                       | 117                           | 0.5% / 0.6%                               | Yes                 |    |
|                   | GM-34020-000                                    | 2-way                      | 5.2×3.0×4.5  | 95             | 103 / 114                       | 119                           | 0.4% / 0.6%                               | Yes                 |    |
|                   | GQ-30783-000                                    | 2-way                      | 6.3×4.3×4.5  | 38             | 111 / 116                       | 125                           | 0.1% / 0.5%                               | Yes                 |    |
|                   | GU-32829-000                                    | 2-way                      | 7.9×5.6×5.9  | 17             | 113 / 116                       | 131                           | 0.1% / 0.2%                               | Yes                 |    |
|                   | HE-31751-000                                    | 2-way                      | 9.5×7.2×8.3  | 112            | 112 / 123                       | 132                           | 0.1% / 0.2%                               | No                  |    |
|                   | GK-31732-000                                    | 3-way                      | 9.5×7.2×8.4  | 11             | 113 / 113                       | 131                           | 0.1% / 0.2%                               | No                  |    |
|                   | GV-32830-000                                    | 4-way                      | 7.9×5.6×6.8  | 28             | 113 / 116                       | 125                           | 0.2% / 0.3%                               | Damped              |    |
|                   | WOOFER  | CI-22955-000               | Single       | 9.5×7.2×4.1    | 80                              | 112 / 122                     | 133                                       | 0.1% / 0.1%         | No |
| HODVTEC-31618-000 |   | Dual                       | 7.9×4.1×5.6  | 48             | 123 / 130                       | 141                           | 0.1% / 0.1%                               | Yes                 |    |
| RDI-34006-000     |   | Dual                       | 7.9×4.1×5.2  | 25             | 118 / 122                       | 141                           | 0.1% / 0.1%                               | Yes                 |    |

\* Supertweeter performance is specified at 10kHz

Other models available, please contact a Knowles representative