Trends In Instrument Microphones

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It seems like every time you turn your head, there is a new monitor company popping up. Unfortunately, most of them are making rubbish: poorly designed boxes of hype filled with cheap components. After spending a year with the amazing Focal Twin6 Be monitors, I’ve reconfirmed my belief that Focal is one of the few exceptions to the norm.

The Twin6 Be is a three-way active speaker with two 150w RMS and one 100w RMS amplifiers. The speaker’s enclosure is comprised of two Focal 6W4370B 6.5 inch “W” cone sandwich composite drivers, loaded by two large section laminar bass ports and a Focal TB871 reversed dome pure Beryllium tweeter (the reversed dome tweeter is a hallmark of Focal). Both of the 6.5” drivers handle low frequencies but only one of the two (selectable) passes to mid frequencies.

**FEATURES**

The Twin6 Be measures 9.8 inches by 19.7 inches by 13.4 inches and weighs 30.8 pounds. Its gorgeous cabinet has real red veneer sides with a black body and is truly visually stunning. The speaker has a frequency response of 40 Hz to 40 kHz and a maximum SPL of 115 dB (peak @ 1 meter). The input is a 10 kOhm electronically balanced female XLR jack switchable between +4 dBu and -10 dBu operation. In addition to the XLR jack and Input Sensitivity Switch, the rear panel includes a Midrange Driver Selector switch, HF and LF control potentiometers, voltage selector, fuse holder, IEC connector and power switch.

The Midrange Driver Selector switch allows the user to select which of the two Focal 6W4370B drivers will reproduce the midrange. Setting the switch to right will make the left driver the midrange driver and setting the switch to left makes the right driver the midrange driver. My listening tests have concluded that this setting isn’t important as long as one speaker is set to left and the other is set to right.

The Twin6 Be has settings that allow the high and low frequencies to be contoured to adjust to a control room’s sonic idiosyncrasies. The HF contour allows for a continuous adjustment of the high frequency level. It has a corner frequency of 6 kHz and is adjustable +/- 3 dB. The LF contour allows for a continuous adjustment of the low frequency level. It has a corner frequency of 150 Hz and is adjustable +/- 6 dB. The Twin6 Be’s voltage can be set to 230V (1.6A fuse rating) or 115V (3.15A fuse rating). When the power switch is activated, a Power on LED on the front face of the speaker illuminates. The HF amplifier is a 100-watt RMS class AB amplifier. The LF and LF/MF amplifiers are each 150 watts RMS and incorporate BASH technology. BASH technology, which combines elements of Class D and Class AB amplification, blends high efficiency, low distortion, high bandwidth, and low EMI, resulting in a high quality yet cost effective amplification solution. BASH has only one switching stage and in a multi-channel configuration, the BASH converter only has to deal with one switching stage instead of multiple stages. The load of a BASH amplifier is directly connected to a power amplifier giving an advantage in both linear frequency response and EMI performance. BASH can use lower switching speeds and slower rise and fall times without compromising the amplifiers performance. The speaker is integrally shielded through cancellation magnets or by magnet design.

Focal believes that an ideal dome must combine lightness, rigidity and damping. They found that Beryllium is the perfect material for this since its density is 2.5 times less than Titanium and 1.5 times less than Aluminum while its rigidity is 3 times greater than Titanium and 5 times greater than Aluminum. This means that for a dome of identical mass, a Beryllium model is 7 times more rigid than one made of Titanium.