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 lo-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 Switch, HF and LF control potentiometers, voltage selector, fuse holder, IEC connector and power switch.

The Midrange Driver 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 idiosyn-
crasies. The HF contour allows for a continuous adjustment of the high frequency level. It has a corner frequency of 5 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 EM, 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.
or Aluminum and the velocity of sound in a Beryllium dome is 3 times faster than a Titanium version and 2.5 times faster than an Aluminum version. The manufacturing of Beryllium is very difficult and today, its production is limited to just three countries: the United States, France and Russia. Beryllium’s unique characteristics make it extraordinarily expensive, much more than gold and nearly 100 times that of Titanium.

Focal considers the expense worthwhile since the result is an outstandingly detailed loudspeaker with a frequency response that extends to nearly 40 kHz while maintaining a perfect impulse response.

**IN USE**

When the Twin6 Be’s arrived nearly a year ago, I couldn’t wait to put them to work. Focal recommends that they be placed at a distance between 1 and 3 meters from the listener pointing towards the monitoring position with the tweeters at the approximate height as the listener’s ears. I heeded their advice and had excellent results. The Focal literature explains that the speakers are intended to be placed in landscape orientation although they can be positioned vertically if necessary. I have listened extensively in both positions and have found that I always prefer the sound of the speakers when in landscape orientation.

After using the Twin6 Be’s for nearly a year, I have found them to be extremely flat and natural sounding with the best imaging that I’ve ever encountered in a speaker in their price range. I have used the monitors in a wide variety of rooms, and — in nearly every instance — I have been pleased with the sound with them set flat. Needless to say, these have nearly all been professionally designed rooms but it is still nice to know that there is some sonic tailoring available within the box.

The Twin6 Be is remarkably transparent and its low distortion makes it relatively non-fatiguing. I’ve noticed that after a 12-hour mix session I don’t feel tired like I do when using some other monitors. The non-fatiguing aspect keeps me from constantly turning up as the day goes on as well which is nice and good for the ears too. They are capable of rocking out when necessary, however, so the bands are always pleased when they come into the control room for their larger than life playback. The bottom end is nice as well. There is plenty of defined low-frequency information making them accurate for tracking and mixing without a sub.

Most importantly, the Twin6 Be translates extremely well. I’ve found them to be exceptionally accurate and I know once I get a mix sounding right on the Twin6 Be’s, it’s going to sound right everywhere.

**SUMMARY**

At the end of the day, these monitors are absolutely marvelous. I haven’t seen another pair of monitors for less than $4000/pair that can touch them. Of course, what’s right for one person isn’t necessarily right for another; if that was the case, there would only be one monitor company). However, if you are in the market for an uncompromised studio monitor, the Focal Twin6 Be should be given top consideration.

Russ Long, a Nashville-based producer/engineer, owns The Carport recording studio. He is a regular contributor to Pro Audio Review.

**REVIEW SETUP:**

Apple Macintosh 2 GHz Dual Processor G5 w/ 2 GB RAM; Digidesign Pro Tools|HD 7.4; Apple Logic Pro; Lynx Aurora Converters

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