



ME Geithain RL944K1

Studio Reference Monitors

Hugh Robjohns MIBS checks out a compact cardioid studio monitor.

The last time a Musikelectronic Geithain studio monitor appeared in the pages of *Line Up* was in the Feb/March 2006 edition, and that was the very large and unusual RL901K flagship model. The K refers to the carefully controlled cardioid bass response (most speakers are essentially omnidirectional at low frequencies), and the same feature applies to the model reviewed here: the altogether more manageable RL944K1 studio reference monitor.

Like its big brother, the RL944 is an active three-way design with concentrically mounted drivers – their acoustically aligned centres optimising imaging accuracy. There are two versions of the RL944, the standard model incorporating the amplifier chassis in the rear of the cabinet in the usual way to measure 285x481x330mm (whd). For applications where cabinet size is an issue (such as small control rooms and outside broadcast vehicles) the K1 variant is supplied with separate amplifier housings. This allows the cabinet size to be reduced to an even more modest 254x398x245mm (whd), and the cabinet weight falls from 24kg to 11kg. Dedicated 'H' stands of various heights and other mounting options are available, and while both the speaker and amplifier tower are supplied as standard with a black ash finish, a wide variety of traditional and exotic veneers are cost options.

The K1's amplifiers are supplied in free-standing MDF towers measuring 279x475x100mm (whd) each weighing about 12kg and connecting to the speaker cabinet via very chunky two metre multicore cables fitted with Speakons. The mains and input connections are on the front plate, as you would expect, but the speaker connector can be factory fitted to either the top, side or front panels, as best facilitates the user installation and access

requirements. The only easily accessible controls are a signal earth-lift switch and an input gain control, although a full set of equalisation controls are hidden away inside the amp to prevent random tweaking!

Facts and Figures

The RL944's specifications are typically Germanic in their precision. Maximum SPL is 113dB SPL at one metre. Bandwidth extends between 35Hz and 20kHz (± 3 dB), and the speakers are calibrated to provide 89dB SPL (at one metre) for an input of -14dBu (the nominal input level is given as +6dBu, but is adjustable). The MOSFET amplifier pack provides 180W to the 200mm bass driver and 100W each to the 100mm midrange and 19mm dome tweeter, crossing over at 800 and 3800Hz, respectively. Self noise given as 7dBA (measured at one metre) and LEDs on the front grille indicate when the unit is powered and warn of amplifier clipping. Magnetic shielding is a cost option.

The on-axis frequency response is extremely well controlled and the QC plots supplied for the review models showed the response to be within 3dB across the entire range, with pair matching within 1dB at all frequencies. The linearity of off-axis response is equally as important, and I'm pleased to report that it falls away very gently and almost as smoothly from about 300Hz upwards. Below that frequency Geithain's clever cardioid response system kicks in, reducing the rear output by at least 6dB relative to the on-axis level at 150Hz, and by around 10dB below 80Hz. The idea is to reduce LF reflections from the rear and side room boundaries and thus minimise the in-room LF interference patterns that result in a lumpy bass response. Essentially, this 'Kardioid' feature (a clever arrangement of linked internal chambers forming an acoustic delay line that vents through rear panel slots) cancels out rearward LF energy and makes the RL944Ks rather less sensitive to room placement than pretty much any other speaker design. In a confined control room space or OB truck that can be a very useful advantage indeed.

Impressions

The RL944K1 is a far more conventional looking speaker than the 901K flagship, although still rather more industrial than most of the alternatives. The sound quality, though, belies the small size and is very well matched to the timbre of other RL series monitors which only seem to vary in their power handling capabilities – the sign of a well engineered range of monitor speakers. For such a compact speaker the low end balance is remarkably good, standing up well to comparisons with my much larger PMC IB1s, and shaming the more closely sized (but significantly less expensive) TB2 references I started with. The bass is fast and tuneful, with no obvious resonances, while the midrange is superbly clear, revealing and very dynamic. The top end is effortlessly open and detailed, too, and all in all, this is everything a true professional monitor should be. Used as near/mid field monitors, there was more than enough power and volume to satisfy all requirements, and as a mixing tool these monitors allowed me to hear precisely what was going on in the mix as I adjusted balance, EQ and dynamics. Stereo imaging is very precise and stable, with extremely impressive depth and width. Geithain isn't a familiar name (yet) in the UK broadcast market, but the company's monitors easily meet and exceed the lofty BBC standards most of us grew up with. If you can tolerate the looks, the transparency and accuracy will impress, and I recommend serious auditioning if you are seeking true reference monitor speakers.

jbs

Prices

RL 944K	£2754
(Built-in amp, standard black ash)	
RL 944K1	£3025
(Separated amps, standard black ash)	
Wood veneers add approx.	£70
Dedicated 'H' stands from	£284.00
(All prices exclude VAT)	

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