Good things come in threes

Since music production has been relocated into smaller rooms, the close-up listener must cuddle up to his/her bookshelf speakers. There is often no other choice because of space limitations, but even in professional studios of generous dimensions, the (active) close-up monitor has made a master stroke. In close-up listening, (negative) room influences are considerably minimized, which makes us wonder whether even professional studios automatically enjoy perfect spatial-acoustics relationships. Close-up listening lies somewhere between the experiences of loudspeakers and headphones, with a certain magnifying effect that presents details more clearly and provides a more distinct stereophonic image. However, the listener is bound to an exactly-defined, narrow listening position, and often loses distance, in the purest sense of the word. One may become lost in details that are insignificant in providing a good mixture for the music.

Listening at mid- or long-distance requires, however, a larger listening space. If the conditions are right, working at longer listening distances is not only great fun, but also provides the proper perspective for tonal or balance decisions with a larger action radius for the workstation. American loudspeaker specialists have followed this line of thought, but have also been faced with the task of creating a mid-field monitor with the price of a close-up monitor that functions well at listening distances of one to four meters. One may not really expect that the enthusiastic home-based music recorder might have the budget to provide designed room acoustics in order to be able to work at longer listening distances, so that the KRK Rokit RP10-3 must turn its attention more to this more elite project even if the sales price is truly sensationally low.

A three-way system principally offers the advantage that the sensitive mid-range does not lie exactly in the area of the crossover frequency between mid-range/tweeter and woofer, but rather is irradiated from a separate mid-range chassis. One may therefore theoretically expect improved precision within this range. The RP10-3 at 20 kHz is quite compact for its output class, and may be installed either vertically or horizontally. The horizontal position requires a minor re-configuration that requires only a screwdriver. The metal cover plate, which seems at first glance to support all three chassis, includes a recess for a sub-carrier plate onto which the mid-range and tweeter are mounted, and which simultaneously contains the sound-guide channel geometry for the tweeter. If one removes the four screws of this sub-carrier, it may be rotated by 90°. For this, the proper seating of the damping material located behind it must be ensured. In the horizontal position, the loudspeakers may be placed such that the mid-range/tweeter unit is to the inside or the outside with respect to the woofers. At shorter listening distances, one might select the inner positioning, and at greater distances, one might prefer outer positioning. The housing is not of the ideal rectangular design, but rather was provided with rounded edges near the front plate in order to prevent scattering reflections at the housing edges. In order to provide a deepened range of low-frequency, a front-facing bass-reflex port is provided that is intended to provide optimized frontal energy emission. The selection of the frontal position is explained by the manufacturer as an attempt to prevent wall reflections in the vicinity of the loudspeaker, although with spherical emission of the low-frequency sound, the laws of physics that involve positioning near a wall or other limiting feature also cannot be re-written here. Electronic compensation or positioning options often found in most active loudspeaker concepts will not be found in the RP10-3. At the sides of chassis components are located one-inch fabric-dome tweeters damped using ferro-fluid, which also provide efficient thermal dissipation; a four-inch cone mid-range speaker, and a 10-inch woofer. Aramide is the basis for the membranes of the mid-range and woofer- a material with very good damping properties and a high degree of stiffness with low weight. The black-and-yellow color scheme throughout the housing and membranes was also implemented for this model. It is mainly responsible for the high recognition factor of KRK studio monitors. The three chassis are driven by a three-way final amplifier with 140 watts of output power. The cross-over frequencies were

set at 400 Hz and 3.75 kHz. On the rear side is located a “taste equalizer’ for highs and lows, three-stage from -2 to +2 dB in four stages for the lows, and from -2 to +1 dB in four stages for the highs. The output level is infinitely variable from -30 to +6 dB by means of a stepped potentiometer. When one counts the clicks during fine adjustment, one achieves an adequately-balanced volume relationship between the stereo channels, which I could enjoy at my listening position. Regarding inputs, one finds XLR, jacks, and RCA jacks on the rear side. On the front plate, the KLK logo is illuminated as a power indicator. Internally, a protective limiter is integrated for excessive sound levels or thermal overload. Anyone who desires to listen at the level at which this loudspeaker is capable will not be able to pursue his/her audio career for long.

Listening

In my small studio, I was able to establish a listening distance of a little more than two meters with a corresponding speaker separation, and was able to move to various listening positions in the lower one-third. I tested the loudspeakers exclusively in the vertical position. After a brief period of listening and adjusting the volume level to my fixed Genelec System with Trinnov Optimizer, I opted for a reduction in high frequencies by 1 dB and a boost of 2 dB for the bass, which made me feel right at home. The price of 499 Euro gross for a loudspeaker, or a thousand for a pair, let me say up front, left me very surprised. I have no idea how one can produce so much loudspeaker at such a high quality level for this price. When one, after first hearing, is surprised by a very good, contoured bass response, precise stereo imaging, and needle-sharp mid-range response, then one loses one’s understanding of the world. This loudspeaker is very good, and may be favorably compared with more costly competitors. It is a little weak in the mid-range, which surprised me, but fills the room very well, provides a highly-resolved stereo image, clean, airy highs, and yet has enough reserve power for the lows that does not immediately cry out for a sub-woofer. The suppression of highs by a few dB, which I prefer, makes the cross-over frequencies more linear with respect to the mid-range/high-range relationship, which I was subsequently able to read from the frequency-response graph accompanying the operating instructions. The spectrum is otherwise completely reproduced, and only showed minor weakness in the low range in comparison to my Trinnov –equalized, sub-woofer-supported house system, since the cross-over frequency of the RP10-3 is adequate from 35 Hz and lower. The mid-range, as mentioned, tends to be a little under-illuminated, which left the mixes and music titles I heard a little too transparent. But I did not get the impression that the risk of mixing errors existed. In other words, the RP10-3 is a good, precise tool with tonal characteristics hardly to be expected in this price range. But I am a little irritated at how easily professional quality levels may be achieved in the Orient, so that both importers and dealers can come out profitably. As a user, of course I like the situation.

Summary

With the Rokit RP10-3, KRK has provided a professional studio monitor at a surprisingly low price that was able to impress me at all relevant levels. The fit-and-finish is clean, sound qualities do not reflect the low price, and the precision level of reproduction regarding time and frequency is remarkable. I would trust these monitors to produce a proper recording-session mix. Truthfully, I know other loudspeakers from the low-budget segment that cannot compare with the KRK Model RP10-3, which actually sounds like a reference symbol, in spite of higher prices. The list price set by the German importer Korg & More should not cause us suspicion, at least in this case. Not everything on the ‘cheap’ shelf needs be of low quality. To tune a loudspeaker, one needs not only science, but also sometimes a good role to play. That seems to be the case here. In other words, bulls-eye, a little low. I don’t want to conceal the fact that the KRK three-way loudspeaker was tested by me in a well-tuned acoustic chamber. Greater listening

distances always require the presence of well-planned spatial acoustics! Otherwise, all good effects will be lost…