



BULLET IN THE HEAD

# Rehdeko RK145/175

Rehdekos break all the  
rules. They have elliptical

drivers, wide shallow

cabinets and deckchair

stands. But they work!

**A**re you ready for Rehdeko? Almost certainly not, even if you have learned how to spell the name on some of the strangest loudspeakers ever to throw their

hats into the ring of high-end audio. The man behind this loudspeaker weirdness is French-domiciled Danish expatriate Weber Rehde, who had already enjoyed a successful career as a classical conductor and clarinetist prior to getting involved in audio hardware.

The theories behind Rehdeko loudspeakers are not at all easy to explain, and certainly have nothing whatsoever to do with any orthodoxies of speaker design. Poring over a many-paged and highly-suspect translation of the philosophy left me only a little the wiser about the physics and acoustics of the speakers, and conscious of the equally significant rôles played by alchemy and other such arcane philosophies in the conception of these enclosures.

But I've always had a soft spot for heretics, and Rehde's criticisms of today's loudspeaker norms do ring several chords of recognition. Moreover, if a talented designer starts off from the viewpoint

that loudspeakers do certain things (such as imitating reality) appallingly badly, and then changes the rules completely, there's a good chance of coming up with something that does

certain things uniquely well. Key features here include the use of hand-made paper drivers with very short travel, and very stiff suspensions designed on one hand to extend the high frequency output as high as possible, and on the other to avoid the unwelcome consequences of the fundamental resonance.

I was a shade disappointed to receive only a pair of 145s rather than the much larger and more expensive 175s. But even the former relatively compact, one-notch-down-from-the-top model costs a very substantial £3,400, plus an extra £375 for the elaborate deck-chair-style stand/frame. But a month's postponement in our publishing schedule meant that a pair of 175s (£6,500 plus £650) did become available, albeit rather late in the day. The net result is that what you have here is a combined two-for-the-price-of-one review.

The Rehdeko drivers are seriously bizarre,



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looking like throwbacks to an earlier era and bearing very little relationship to anything else on the market. The 145's so-called tweeter and midband drivers are apparently identical 90x155mm elliptical cone units, which look as though they might have been recycled from a mkIII Cortina. The bass unit is certainly bass-unit size and shape, but with virtually no suspension travel, very high stiffness and a curious taste in colour schemes — a little gold horn protrudes from the neck of a blue paper cone. The 175 uses a similar elliptical tweeter, but a 145-type bass driver covers the midband here, and a separate paper cone unit supplies the bottom end.

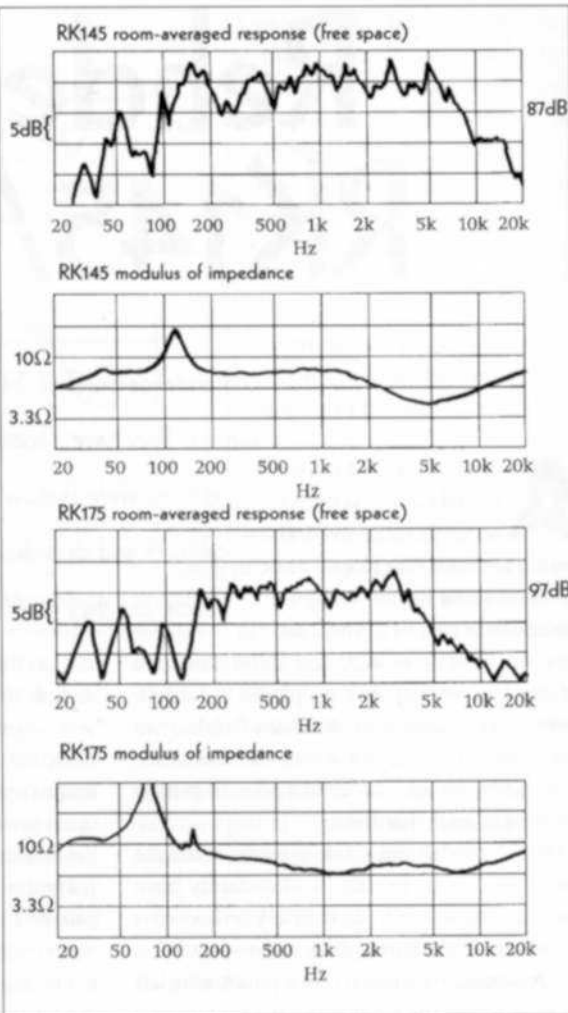
The cabinets are at least conventional rectangular boxes, albeit unfashionably wide and quite shallow. The 145s don't take up all that much space *per se*, unlike the 175s, but by the time either is sitting well clear of walls, cradled in the that frame, they undoubtedly brand the owner as a committed hi-fi loony with a bizarre taste in aesthetics.

I've been struggling with the perceived-value parameter in the Rehdeko equation ever since they moved in. There's no disputing the suitably decent construction of the solid-beechwood enclosures and uniqueness of the drive units, but I was still surprised that the prices were roughly twice what I'd expected. It's said that the drivers are very expensive to build, both in the number of different processes required and in the time taken from start to finish. This may well be true,

and I've no means of confirming or denying it, so we'll take it on trust. Which leaves us with expensive, reasonably compact and very unusual speaker systems, whose defiance of accepted practice looks certain to deliver a unique sonic result.

### MEASUREMENTS

A few basic tests confirm the strangeness of these





designs. The 145's impedance graph is very flat indeed, perturbed only by a small bump at around 120Hz. There's virtually no sign of the 'double bump' expected from a ported design, so the large front port is obviously not operating in the usual way, either. The 175 trace looks a tad more conventional here; well, maybe. However both designs look exceptionally easy to drive, which is a welcome bonus.

This is reinforced by the sort of sensitivity ratings which put a smile on the face of triode and other valve-amp users. My 94dB/W and 97dB/W figures may not be quite up to a full-range horn design, but are certainly dramatically better than run of the mill dynamic drivers. That much is encouraging, but rather less so is the bandwidth across which this sensitivity is achieved. To put it bluntly, these are primarily midband speakers, with severely compromised extension into the bass and treble.

The 145 is the more extreme here. It's fundamentally very well balanced from 100Hz up to 7kHz, but decidedly uneven along the way. The final treble octave is reproduced, but by that little gold cone in the middle of the bass unit, and at 12dB below the

midband datum. Even with the usual low-frequency room reinforcement, the bass rolls off pretty determinedly below 150Hz, registering -6dB at 50Hz and -15dB at 30Hz.

The 175 balance is just as strange, and also rather different from the 145 despite the driver similarities. The midband here is a little smoother but not quite so extended, beginning to roll off above 3kHz (still an octave higher than most

conventional speakers show). The treble roll-off is more gentle but just as determined: the small 15kHz spike registers -12dB. However, this larger model is much more capable at the bass end of things. It's still exceptionally dry and restrained, but does show genuine low-bass extension, registering -17dB down at 20Hz and averaging -10dB across the bottom three octaves.

#### SOUND QUALITY

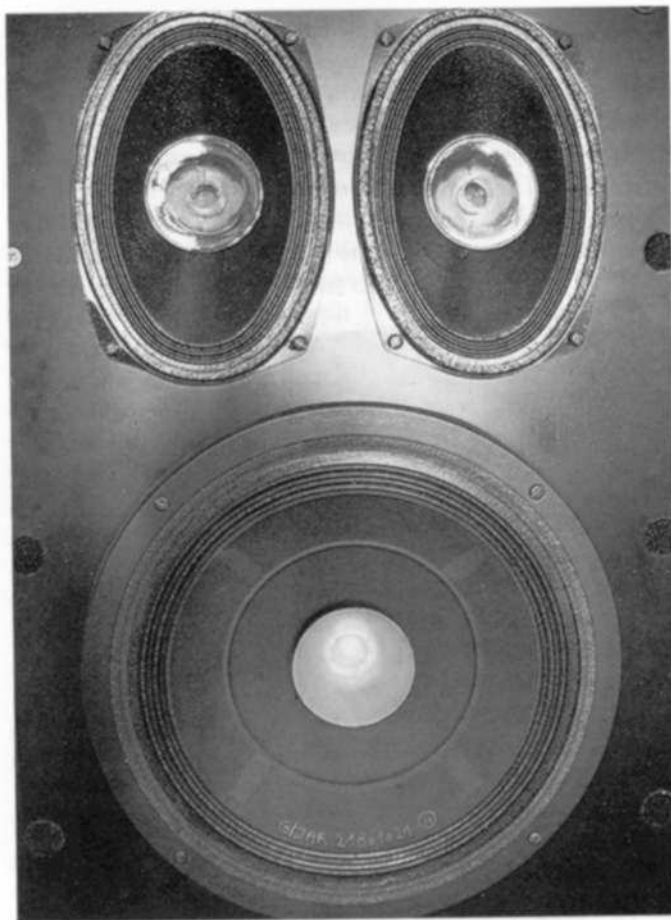
You want the coherence of a panel combined with the dynamics of a horn? The Rehdeko just about delivers the goods. You want low coloration too? From drivers which look like they belong in transistor radios and vintage radiograms?

These must be amongst the most obviously coloured speakers I've come across in a great many years of reviewing,





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but they're also the most fun speakers I've ever heard, too. It's one of those goddawful paradoxes that bedevil high-end hi-fi. The Rehdekos are just about the most communicative and entertaining speakers I've ever come across, but can also be amongst the most irritating and exasperating.

The reason is simply that they're the fastest and most time-coherent speakers I've heard, and in this respect sound more like an active than a passive system. Hi-fi speakers as a breed are utterly incompetent at reproducing a rim-shot, but

Rehdeko speakers make you blink, just like the real thing. Some might consider this over-the-top melodrama — I myself sometimes wondered whether I was listening to a loudspeaker, or a drum kit masquerading as a loudspeaker. But differences seem somehow magnified, and since shades of divergency are the fundamental tool of musical expression, this is a vital (and in my experience unequalled) strength.

I did rather struggle with the 145, finding it quite difficult to come to terms with the lack of bass energy and edge-of-the-seat fierceness. Yet at the same time I was totally captivated by a wonderfully open vocal delivery, and some of the most dramatic and exciting transients I've heard outside the live experience.

The 175 has many of the same characteristics, but

with much more serious bass delivery and a slightly more restrained presence band. Voices do sound a touch less vivid, but also a little less fierce, and again the colorations are obvious and unsettling. But after a short acclimatisation it had got under my skin at least as deeply as the splendid Klipschorn, yet in its own quite distinctive way. Over two weeks I became seriously besotted with the big Rehdeko, and wonder how I'm going to cope when it returns home to Chesterfield.

However, I think my partner will breathe a sigh



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of relief. She found it uncomfortable to stay in the same room as the Rehdekos for any length of time, especially if they were working hard. However, we both noticed how extraordinarily good they sounded from outside the listening room, something which is true of active systems as well, and a sure guide to the transient integrity of a speaker — likewise their ability to continue communicating at the very lowest levels.

### CONCLUSIONS

The purpose of this review is not to persuade you to go and spend an excessive amount of money on something truly weird. Rather it's to point out that this weirdness has its own powerful validity which definitely deserves a good ear-ing. At least half of a listening panel reacted with a mixture of disbelief and ribaldry — while the other half started booking up repeat sessions.

My best suggestion is that the curious, and especially anyone disenchanted with what conventional hi-fi has to offer, should book themselves a two-hour session with their nearest Rehdeko dealer (the minimum time needed for acclimatisation). The resultant experience will never be forgotten, and just might end up changing your life forever.

After the civilised presentation and control of the Wilsons, these heavy mothers sounded positively dangerous: the sheer speed hits you smack between the ears and pins you to the seat. These are full-commitment loudspeakers. The only other things I've heard that come close are Lowther-driven models like the Bravura or Agathon, the mighty Air Partners and my old Decca mkIII cartridge. Only the latter really has the same excitement and life (though some might call it aggression); Lowthers don't like going this loud and the Air Partner is less severe.

I can see why Paul likes the Rehdekos. Rage's *Bullet In The Head* never sounded this convincing before, and *Dixie Chicken* (from the Feat's *Waiting For Columbus*) never timed this well before. The Rehdekos do a lot of the important things incredibly well, a bit like good tube amps, but in a more forceful way. Come to think of it, the two might go together well: you'd lose a little level but on the other hand you'd smooth some of the excess energy, if that's what it is. This is a conundrum: an incredibly engaging loudspeaker that's always threatening to rip out your ears. It's a bit like a decent PA system, so if you want a full on rock concert in your living room, look no further. *JK Virtual Reality* ☎ (0227) 227355

### SECOND OPINION

I only got to hear the smaller of the two Rehdekos (RK145), so my impressions are of the relatively bass-light model. On the basis of that, however, I'm eager to hear the RK175 that Paul has been raving about since it arrived.

### LAB REPORT

	RK 145-4S	RK 175-4S
Model	RK 145-4S	RK 175-4S
Size (HxWxD)	66x39x29cm	96x50x37cm
Weight	18kg	36kg
Recommended amplifier power	5-150W	5-250W
Recommended placement	2ft from wall	2ft from wall
In-room averaged response limits 50Hz-10kHz	±8dB	±8dB
Large room/space LF roll-off (-6dB ref midband)	55Hz	28Hz
Large room output at 20Hz (ref midband)	well below -23dB	-17dB
Estimated midrange sensitivity (ref 2.83V, 1m)	94dB	97dB
Impedance characteristic (ease of drive)	good	very good
Typical price per pair (inc VAT)	£3400 (+£375 stands)	£6500 (+£650 stands)