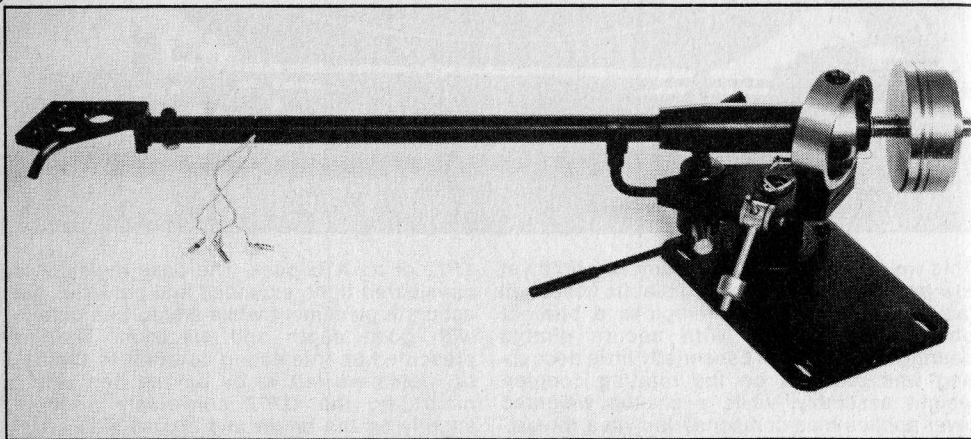


## Helius Standard

Helius Designs, The White House, Aldington, Eversham, Worcs WR11 5UB  
Tel (0386) 830083



Reviewed in its provisional form in the last issue, the Helius arm is now in full production. Two distinct versions are available, one with the established sliding/detachable headshell (no plug system however for the leads) and a second called the *Aurum*, where the shell is permanently bonded to the arm. We did not test the latter, but the Helius designer had indicated that it shows improved audio band resonance control and consequently a 'smoother' sound.

A medium mass design, the arm tries to avoid any injurious decoupling between the firm, large-area cartridge mounting platform, and the arm mounting base. The full-circle nested gimbal bearing is finely adjusted for moderate friction and zero detectable play, a condition critical to sound quality. The arm should therefore be carefully handled if this condition is to be maintained. An unusual ball race is employed with only three balls per race aligned to maintain mutual contact as well as firm contact with the bearing needle and of course the race itself.

The sliding headshell does confer certain practical benefits, allowing for easy adjustment of both overhang and vertical tilt. In practice the fixing is quite strong, a vertical bolt firmly clamping the splined main tube onto the headshell stub. The main tube is anodised alloy with cross section and thickness varying along its length, the intention being to break up symmetrical vibrational modes.

The rear section comprises a threaded brass rod on which the counterweights are screwed.

Two weights are used in various combinations and when the appropriate downforce has been set — a downforce gauge is required — the weights are contra-tightened to lock them firmly on the arm. A thread and weight lever bias compensator is fitted, this also uncalibrated.

While the overall finish and constructional standard was very good, the wiring around the bearings was exposed and somewhat untidy — particularly the single strand third earth. Wires must be kept in a good state of adjustment if the arm sensitivity is not to be impaired.

### Lab report

At 12g effective mass including hardware the arm was well suited to cartridges in the 10-25cu compliance range. The bearings were well adjusted with a satisfactory 50mg lateral friction and fine vertical friction figures.

Set half way, the lever weight provided bias appropriate for a 1.5g-downforce elliptical stylus, measuring 160mg rim and 220mg centre. On our sample, cue descent was rather slow at 4.2 seconds.

The arm resonance graph illustrated some anomalies though the general trend put it in the 'good' category. The 100Hz mode was quite energetic, probably due to the rigid counterweight mounting, a point noted also in our earlier Helius review. Those clustered around 600Hz were likely to be main beam modes, their complexity relating to the distributed structure. Above 1kHz the unit remains well behaved.

### Sound quality

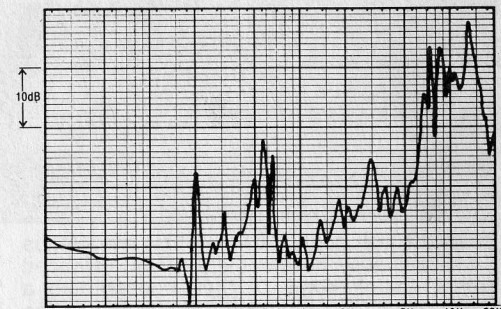
Loosely ranked in the 'good + ' category, the Helius sound was found to be lively with good transient attack, while the bass lines were well portrayed with substantial weight. A good first impression was gained, but prolonged listening suggested some mid colouration on vocal sections, and although the standard of stereo was high, with promising depth, the treble register did not perfectly integrate with the mid, the whole sounding a trifle uneven. These results were confirmed when moving onto the more costly and superior *Orion*.

### Conclusion

The second time around we were less enthusiastic about the Helius although it undoubtedly achieves a high technical and subjective standard. Possessing its own particular character it is recommended.

### GENERAL DATA

Approximate effective mass, inc screws, excl cartridge	12g	Tonearm
Type/mass of headshell	special detachable/7g	
Geometric accuracy	excellent	
Adjustments provided	overhang/height/lateral	
Finish and engineering	very good/very good	
Ease of assembly/setting-up/use	good/difficult/very good	
Friction, typical lateral/vertical	50mg/10mg	
Bias compensation method	thread and lever	
Bias force, rim/centre (set to minimum)	N/A	
Downforce calibration error	uncalibrated	
Cue drift, 8mm ascent/descent	moderate, 0.9 secs/4.2 secs	
Arm resonances	fairly good	
Subjective sound quality	good +	
Lead capacitance/damping method	70pF/none	
Estimated typical purchase price	£150	

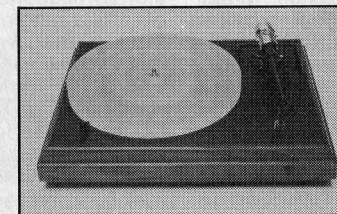


Structural arm resonances, audio band

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