

# Hi-fi news™

PURE AUDIO EXCELLENCE

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## GROUP TEST m-c cartridges

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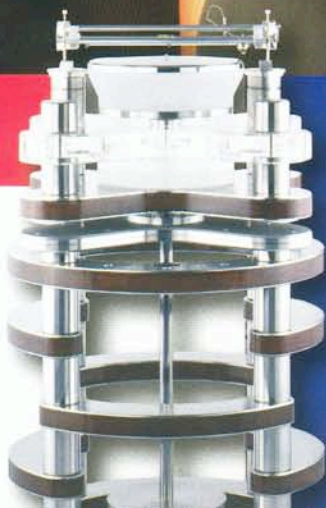
THE VINYL  
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INSIDE B&W  
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# B&W Diamonds 802D SPEAKERS

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Ken Kessler  
tests the  
stunning  
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Clearaudio  
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turntable!



## Speakers

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- » Sonus Faber Amati Anniversario Homage
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### Top tests

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## Amps

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- » Leema Acoustics Tucana amp

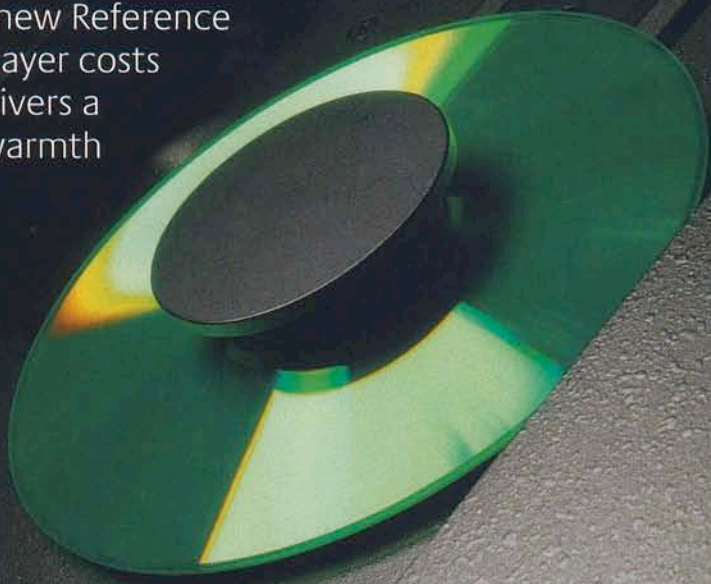
UK £3.95 US \$9.50 Aus \$9.95



# Sweetest thing

## **AUDIO RESEARCH REFERENCE CD7** (£8000)

Audio Research's new Reference top-loading CD player costs a stiff £8k but delivers a performance of warmth and sweetness...





LEFT: CD7 shares the basic layout and construction of the CD3 MKII, not to mention its features and functions

Tested by Ken Kessler

**O**K: No carping about how much I hate top-loaders. There's no point. The Audio Research Reference CD7 is what it is – like the Pathos Endorphin, a top-loader, if eminently less elegant with it. And in this case, where you stick the CD means a lot less than what comes out the back.

Audio Research has raised its own bar so high that any new product in the 'Ref' series is bound to cause a stir. The ARC flagship line-up hasn't sported a dud since its birth. There are discerning audio cognoscenti around the world who wouldn't even consider anything else. As a result, the prices have become meaningless. On another plane entirely, the CD7 is good enough for Dave Wilson, and it's driven a handful of equally prestigious connoisseurs, whom I respect fully, to deem it: 'the best CD spinner on the market'. They may be right.

Every time ARC launches a new high-end player, the company wonders about its worthiness for inclusion in the Reference range. It recognised that the CD3 MKII was astoundingly good, so logic dictated that something markedly superior just might cut the 'Ref' mustard. And it was inspired to push the envelope in 2006 because they felt that with the launch last year of the dazzling REF3 pre-amp that: 'We knew we had the missing link: a gain stage so pure and revelatory that it could finally push CD-player performance well beyond the limits of the CD3 MKII'. Hence, the resultant player is the first digital product to earn the 'Reference' badge.

### HEART-STOPPING PRICE

The CD7 is clearly based on the CD3 MKII: it uses the basic layout and construction, the Philips Pro2 laser mechanism, Crystal's 24-bit DAC, and the CD3 MKII's features and functions, including the sliding door top-loader tray and magnetic puck. But we have to dock it points: for £3000 over the '3, you have every right to expect something rather more impressive looking.

Where the heart-stopping price tag comes in – £8000 – is a gain stage borrowed directly from the Reference 3, a pre-amp so good that I could only fault its eye-wateringly ugly display. This means that the Ref CD7 employs the latest proprietary capacitor technology exclusive to Reference series components, while its main selling point for many will be the inclusion of seven class A triode operation 6H30 vacuum tubes: the analogue output stage and the high-voltage power supply regulation are all-valve with the former employing four of the 6H30 triodes, and the latter regulation using the remaining three.

Its septet of tubes necessitates that the right-hand half of the top plate is ventilated. Accommodating the added internals means that the Ref CD7 is slightly

'Almost breathtakingly microscopic retrieval of detail attests to the fact that no euphonic tweaking has sullied the 'open window' into the sound'

deeper than its less-expensive sibling, but height is unchanged. In keeping with tradition, black handles flank the controls on the right and the readout display on the left. But it simply lacks the presence of the other Ref models. I dunno: for £8k, I kinda expected a two-chassis player. But again, I carp.

### ANALOGUE OUTPUTS

Inputs and outputs are identical to the CD3 MKII, while the rear panel provides BNC coaxial and XLR digital outputs (an RCA/BNC adaptor is supplied), while analogue outputs include both single-ended phono sockets and balanced XLRs. One operational change is the standby function of the CD3 MKII: it's now a power on/off switch, with an LED indicator on the front panel.

Inside is a feast for the eyes. The circuit boards are substantial, assembly includes hand soldering and the layouts were 'optimised for lowest digital noise'; the Ref CD7 also features proprietary jitter reduction techniques. For tinkerers, the Ref CD7 can be used as a single-ended or balanced player fed straight into ☺



RIGHT: Front panel is thick and heavily bevelled in contrast to usual Reference components

Sweetest thing



ABOVE: The BNC and XLR digital outputs on the rear of the case are transformer-coupled and driven by a high current balanced line driver

any line-level pre-amp or integrated, while digital outputs are provided despite the presence of a superb bitstream DAC and high-current pure class A analogue output stage. The CD drive is a cutting-edge design in which the servos 'operate fully in the digital domain, whereas older transport models were hybrid designs using analogue servos, which placed greater demands on power supply reserves'.

### TRULY SPECIAL

It takes all of, oh, three seconds to determine that this is a truly special player, provided it was burned in and you let it warm up before your first exposure to it. I left it on 'repeat' for 72 hours before getting near it (I have the willpower when necessary) and I'm glad I did: I later left it off for a day and then listened to it 'cold' to determine that it needs a good 30 minutes, once it's had that initial burn-in from new.

And 'warmth' is what this is all about. There have been tube

players before; there will be tube players in the future. Most succeed in turning digital into something warm and cuddly. The Ref CD7 goes way beyond that in it does its best to emulate the smooth transitions of vinyl, the slam and dynamics of a great LP playback system. There's more air, space and three-dimensionality available from this player than any I've ever used, including my perennial fave, the Marantz CD12/DA12. With truly natural-sounding performances, like Keb' Mo's *Peace... Back by Popular Demand*, the richness of the bass and midband, plus the spit-free upper registers, make it awful hard to damn 'red book' CD.

It excels in every way, and its on-board DAC needs to make no apologies. Fabulous,

almost breathtakingly microscopic retrieval of detail attests to the fact that no euphonic tweaking has sullied the 'open window' into the sound by rolling off edges. And yet you can listen to this for six, eight, even 10

hours at a go without fatigue. My only regret is that the Ref CD7 isn't available in a version with an output level control and both fixed and variable outputs. I can only imagine what this would sound like with a direct feed to the power amps.

Furthermore, I can only make a single suggestion when imploring you to audition this player, once you're been assured that it's had at least two days' burn-in and a half-hour warm-up: don't audition it initially with either synthetic or hugely cluttered music. Take in a favourite recording with sparse content: familiar a cappella voices, an acoustic guitar, distinctive light percussion, like bongos. Ask the retailer to dim the lights. Sit back. And listen to the sound of your credit card screaming. ☺

**FOR:**  
Smooth, yet airy, spacious and detailed

**AGAINST:** Looks nothing special

Hifi news  
**Verdict**

**AUDIO RESEARCH  
REFERENCE CD7**  
(£8000)

SPEC/FEATURES



SOUND QUALITY



BUILD QUALITY



VALUE FOR MONEY



**I don't have eight grand. I don't like top-loaders. I own at least eight CD players. And I certainly do not need an Audio Research Ref CD7. But bloody hell, do I want one. Hands down, this is the sweetest, most musical player I've heard since the CAL Tempest II. You can understand why this is the first digital product to wear the Reference badge.**

OVERALL RATING

**16/20**

### Lab report

Any A/B comparison featuring Audio Research's CD7 will be swayed by the hefty 2.8V peak output (5.78V via the XLRs), although this does put some extra stress on the 6H30, triode-based output stage. The CD7 does have a slightly engineered mid/high treble roll-off that's some -0.7dB at 10kHz and -1.75dB at 20kHz - enough to sweeten its sound. The player enjoys a wide 108dB A-wtd S/N ratio and a very low 135psec of jitter with excellent low-level linearity right down to -100dBfs. Just as important is the minimal ~1% distortion achieved with digital signals as low as -90dBfs is a major factor in achieving its very clean sound.

### Hi-fi News lab specifications

MAXIMUM OUTPUT LEVEL	2.8V (5.78V, balanced)
A-WTD S/N RATIO	Unmeasurable (Quartz stability)
DISTORTION, 1KHZ @ 0DBFS/-30DBFS	108dB
DISTORTION, 20KHZ @ 0DBFS	0.009%/0.004%
FREQUENCY RESPONSE 20HZ-20KHZ	0.01%
DIGITAL JITTER	+0.0 to -1.8dB
RESOLUTION @ -90DBFS	135psec
STEREO SEPARATION, 20HZ-20KHZ	>70dB
DIMENSIONS	480 x 134 x 390mm (whd) plus 38mm for handles

### Contact numbers

TEL: +44(0)20 8971 3909 WEB: [www.absolutesounds.com](http://www.absolutesounds.com)

### Review system breakdown

**SOURCES** Marantz CD12/DA12 CD player/DAC, Musical Fidelity kW25 CD player/DAC

**AMPS** McIntosh C2200 pre-amplifier, McIntosh MC2102 power amplifier, Moscode 401HR power amplifier

**SPEAKERS** Sonus Faber Guarneri Homage, Tannoy Autograph Mini

**CABLES** Yter speaker cables and interconnects

### We listened to

#### KEB' MO' PEACE...

Back by Popular Demand  
(Okeh/Epic EK92687) CD

#### HOWARD KAYLAN

Dust Bunnies  
(Intentional Records 61432-41222) CD

#### BLIND MELON

Tones Of Home - The Best Of Blind Melon  
(Capitol 72348-63709-2-1) CD

#### ART GARFUNKEL

Breakaway  
(Columbia 468873 2) CD

#### MR. BIG

Lean Into It  
(Atlantic 7567-82209-2) CD

