

hi-fi news

& Record Review

PLAYING IT COOL!

Exclusive – MBL's Corona C31 CD player



'Last Shop Standing' & the vinyl revival

HFN goes behind the scenes of the movie, p14

T+A M10 monoblocks

Warm to these tube hybrid power amps

Chord QuteHD

USB DAC that does DSD



Integrated amps

Group Test of the £300-£2k favourites

Dali Epicon 8

Stunning Danish floorstander

Vintage Test

Marantz TT1000

'Cut out the rock 'n' roll!'

The Cavern Club, p74



• **PLUS** 18 pages of music reviews and features • **AUDIO MILESTONE** Audiolab's 8000A amplifier
 • **OPINION** 9 pages of letters and comment • **VINYL RE-RELEASE** Primal Scream's *Screamadelica* LP
 • **SHOW BLOG** HFN brings you the Moscow Hi-Fi Show • **READERS' CLASSIFIEDS** Hi-fi bargains galore

UK £4.00 US \$9.99 Aus \$9.95



09

9 771472 256226

MBL Corona Line C31 (£6200)

With its latest Corona Line Germany's MBL has made its prestigious high-end components a little more affordable, but no less exclusive or meticulously engineered
 Review **John Bamford** Lab: **Paul Miller**

Never failing to create oohs and aahs from enthusiasts attending hi-fi shows, Berlin's MBL Akustikgeräte company is renowned for its unique Radialstrahler omni-directional loudspeakers, and luxuriously appointed electronics that wouldn't look out of place in a prince's palace – with suitably heady price tags too.

This C31 CD player/DAC is one of the latest series of components from MBL dubbed the Corona Line. No less exotic, Corona Line components do, however, bring down the cost of MBL electronics to the merely luxury class, rather than the preserve of the super-rich. Rarely will you have seen test reports on any of the MBL's exclusive, hand-built electronics outside of Germany. As ever, *HFN* readers are privileged to read about them here first. (In addition to the C31 we also have on test a partnering C51 integrated amplifier, so watch out for our forthcoming review.) The Corona Line further includes an FM/DAB+/DVB-S tuner and, moving up the price ladder, a separate preamp and both stereo and monoblock power amps.

A DAC WITH DRIVE

As with the majority of CD players designed and manufactured today, the C31 is best considered as a DAC with the added convenience of a built-in CD drive. It has three digital inputs: S/PDIF via coaxial RCA and optical Toslink, plus USB for convenient connection of computer audio sources. All digital inputs will accommodate playback of downloaded hi-res audio files up to 24-bit/96kHz. Wha-at? No 192kHz capability? Well, before discounting the C31 as 'behind the times', any self-respecting audiophile should take stock and ask themselves a glaringly obvious question. What is preferable: so-so performance all the way up to maximum hi-res capability, or state-of-the-art performance at 24/96?

Around the turn of the century, when DVD-Audio was a new invention, didn't we all discover that CD replay done properly sounded better than DVD-A on-the-cheap? Don't get too hung up on the numbers: the proof is in the listening.

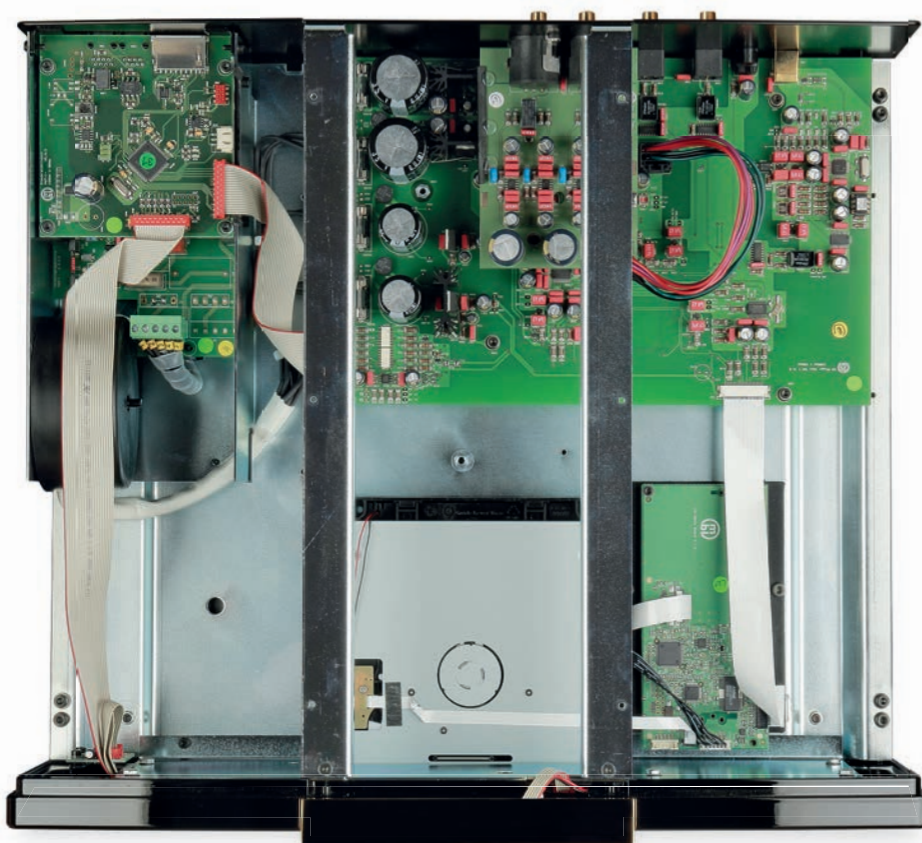
CLEAN LINES

MBL's more costly Noble Line and Reference Line components boast battleship construction and these 'entry level' Corona products continue this tradition, albeit with restraint. It's a case-within-a-case design comprising a steel chassis with aluminium skin (black or white finish options), with no visible screw fixings to detract from the clean lines. The C31's power supplies, digital and analogue stages are screened by magnetically shielded partitions, the regulated linear supply's toroidal transformer employing isolated

windings for the unit's display, control, disc transport and analogue and digital sections. A separate SMPS – disabled once the C31 is switched on – ensures less than 1W power consumption when in standby, it is claimed.

As our photograph shows, there are no legends on the fascia's row of five control buttons. They act as 'soft keys', their respective context-sensitive functions shown in the display panel once the machine is powered up. CD replay is via a slot-loading disc drive mechanism that Jürgen Reis, MBL's chief development engineer informs us is specially designed for audio. The mechanism is made by Sanyo, its laser head and decoder is from Sony, and the driver ICs from Philips.

MBL employs what it describes as a 'nested digital/analog FIFO PLL': incoming data employs a digital phase lock loop



RIGHT: Super-compact, slot-loading disc drive is accompanied by servo board alongside and custom USB, S/PDIF input, DAC and analogue boards behind. This is smart engineering



with a high (circa 10kHz) low-pass filter frequency in order to quickly lock to the signal. The output of the digital PLL goes into a FIFO buffer and data is rendered via the output of an analogue PLL with a 1Hz low-pass filter.

The MBL insignia logo on the component's top plate is encircled by an illuminated ring – a corona, no less – that can be pressed to dim the front panel display in four stages, or switch off entirely. Corona Line components can communicate with one another via a proprietary 'SmartLink' system using Ethernet cables to ensure common display brightness settings and provide one-touch operation via the company's unified remote control handset.

Use this C31 with one of its partnering amplifiers from the Corona Line and the amplifier will recognise the C31's digital inputs, the 'system' even intelligently shutting down the crystal oscillator governing CD playback when, for example, the USB input is selected – or vice versa. Only one oscillator is ever active to avoid potential interference, as well as minimising power supply demands.

Switch from CD playback to a digital input and after 15 seconds all parts of the CD drive go to sleep. So while the Art Deco-ish styling might look a little retro, there's plenty of carefully-considered,

up-to-date audiophile engineering under the hood that's borne out in our Lab Report [see p23]. Above the rear IEC AC connector, there's an integrated SD card reader slot for uploading any future software updates.

INSTANT APPEAL

It took only a brief audition to identify the C31's sonic character. Not wholly dissimilar to the megabucks TAD D300 player/DAC that I had the pleasure of hearing earlier this year [*HFN* May '12], it sounds extraordinarily 'analogue' in nature: creamy, rich, full-bodied and deliciously smooth. It sounds airy and spacious too – uncommonly so, in fact – serving up expansive sonic images with well-produced recordings. It's a relaxed, confident and luscious sound that I found instantly appealing.

Patricia Barber's 1999 album *Companion* [Blue Note/Premonition 724352 29632], recorded live in an intimate jazz club in Chicago with the audience reverently hushed, showcased the C31's ability to draw you in to the mood of a real musical event. Barber's warm, breathy voice and creative phrasing were portrayed wonderfully by the C31, its

ABOVE: MBL offers numerous colour ways for its Corona line with black and gold shown here, white and Palinux (a precious alloy) on our front cover. The display indicates the (changing) functions of the five fascia buttons

tonally warm and inviting sound character full of colour and texture. Image portrayal was observed to be not particularly deep but wide and spacious, the musicians spread openly across the soundstage.


Playing Miles Davis's *Kind Of Blue* [Sony/Columbia 480410 2] found the vintage jazz masterpiece sounding smooth

and silky, the C31 comfortably digging out vital top-end detail on the lightly shuffling drums and breaths during sax and trumpet solos. The player appeared to orchestrate the music's

'The C31 could draw you in to the mood of a real musical event'

arrangements and instrumental interplay beautifully, giving each element of the recording – such as Paul Chambers' nimble double-bass playing – plenty of room to breathe, even if it lacked some 'attack' on leading edges. This is the only criticism I can point at the C31's sound: its rendering of the very lowest frequencies appears a little bloated and soft.

Indeed, Me'Shell Ndegéocello's earth-shaking bass guitar in 'Mary Magdalene' from *Peace Beyond Passion* [Maverick 46033] was immensely powerful and immersive, while the delicate bells and percussive details in the track still rang out clearly above the pumping mayhem going on down below.

The clarity and finesse of this player certainly allows forensic observation of buried details with ease, all the while the sound appearing 'easy' and comfortable to listen to during prolonged music sessions. But I regularly experience tighter bass in my system, with a firmer sense of punch, 

GERMAN HIGH-END

You need only visit Munich's High End show to appreciate that audio manufacturing continues to thrive in Germany, with brands such as Burmester, T+A and MBL – to name only three – creating world-class, cost-no-object components for audiophiles. Based in Berlin, MBL was established in 1979 and is perhaps best known for its trail-blazing Radialstrahler speakers that inventor Wolfgang Meletzy and chief designer Jürgen Reis have continued to refine over the years. These omnidirectional speakers employ multiple segment strips of carbon fibre that act as bending-mode radiators when a signal is applied to their voice-coils. The awesome 101 X-treme flagship Radialstrahlers, incorporating separate subwoofer towers, cost £172,000. Fancy a complete suite of MBL's Reference Line electronics to drive them? You'll be looking at a cool £300k.

CD PLAYER/USB DAC



ABOVE: There are three 24/96-capable digital inputs: USB and S/PDIF via RCA and Toslink. Balanced (XLR) and single-ended (RCA) outputs are provided alongside a coaxial S/PDIF output. Remote controls complete MBL system

where this C31 delivers more of a swell of creamy bass – full of texture and detail, but more rolling than rollicking. More listening only served to confirm my initial observation – that the C31 delivers a warm, sensuous sound character that majors on supreme listenability.

But this doesn't mean it's all syrupy-smooth and soporific. Given the right material it's an exciting listen. With up-tempo dance music and electronica the C31 delivers a sound that's effortlessly entertaining, with a sense of rhythm and punch that never fails to get you involved in the music. Bass lines have immense depth while the player's 'widescreen' image and delightful sense of air helps create spellbinding sonic landscapes.

SPACE: REAL OR NOT

I reached for *I Syv Sind* from the young Danish music producer Mike Sheridan [Playground Music Scandinavia, MIKED1] in which sampled sounds – floating above a deep, pumping bass line typical of the electronica genre – are mixed with the recorded voice of guest singer Maya Albana in 'Med Små Skridt' ('With A Small Step'). The deep bass sounds had a superb combination of weight and low-frequency extension, the C31 keeping the myriad sensual threads comfortably separated.

In a mix like this there's no real space – only what the producer/DJ has decided to create using the computer tools at his home studio. Hi-fi components that diminish the spatial effects created by such processes, that compress or smear the soundstage, can't help but detract from the musical message.

As it sounds so open and spacious, the MBL did as wonderful a job with Mike Sheridan's electronic

production as it did with recordings where there was a real acoustic event (like the live jazz performance of Patricia Barber mentioned earlier). In this respect, it is the best CD player/DAC I have heard in my system to date, its confident yet serene character evident whether playing discs or using its digital inputs from a computer source.

Of course, the MBL C31 won't completely fix problems in a recording's balance and mixing. For example, harpist Andreas Vollenweider's 1989 CD release *Dancing With The Lion* [Columbia CK 45154] has always sounded bright and thin. Individual elements of the production – drums, piano and, in particular, the ethereal backing voices – seemed more fleshed out and robust with the C31.

So while the Vollenweider recording's inadequacies weren't completely disguised, the MBL CD player certainly made the brashness more bearable. Thanks to its bold, powerful bass character and smooth high frequencies, the civilised C31 never failed to make the most of the music. ☺

HI-FI NEWS VERDICT

Yes it's expensive, but in the realms of high-end audio MBL's Corona C31 can be considered a relative bargain given its solid engineering and outstanding performance. Sound quality is sumptuous and beguiling – simultaneously ballsy and energetic with airy delicacy and finesse. Any audiophile investing in a luxurious digital front end should put the gorgeous C31 CD player/DAC on their shortlist.

Sound Quality: 86%

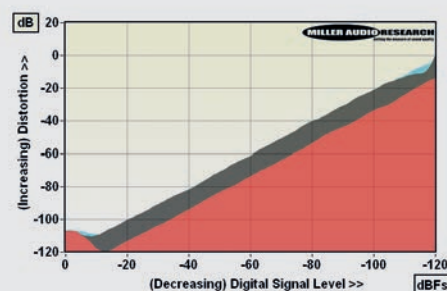


LAB REPORT

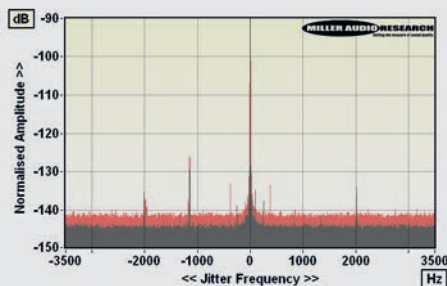
MBL CORONA LINE C31 (£6200)

Ordinarily, the discovery that not only MBL's USB but also its S/PDIF digital inputs are limited to 24-bit/96kHz might have put a damper on things. But not here, for the C31's performance is otherwise absolutely exceptional – including with plain vanilla CD. The 4V (balanced) output level, 96ohm source impedance and 113dB A-wtd S/N ratio are top-notch, as is the vanishingly low 0.00028% distortion achieved at this level, falling to a ludicrously low 0.00008% at –10dBFS with 24-bit data over USB or S/PDIF [red trace, Graph 1 below]. Even at 20kHz distortion remains just 0.00025% at full output – MBL's supreme analogue stage finally demonstrating the true capabilities of Crystal's longstanding CS4398 DAC. THD is fractionally higher via CD [black trace, Graph 1] but only because we are dealing with 16-bit data. Low-level resolution is up with the best that even SACD can offer at ±0.5dB over a full 120dB dynamic range.

Responses are subtly tailored, –0.5dB/20kHz with 44.1kHz/48kHz inputs and –3.6dB/45kHz with 24-bit/96kHz over USB or S/PDIF. Moreover, even with default USB 1.0 PC drivers, the USB input's performance mirrors 24-bit S/PDIF with state-of-the-art distortion figures, a 113dB A-wtd S/N ratio and jitter right on the baseline at 10-15psec. Rarely have we seen such a close parity between USB and S/PDIF with default drivers [see Graph 2, below and p35]. A >100dB channel separation, any idle patterns <–137dB and a mere –8ppm clock error are the icing on this player's digital cake. Readers are invited to view comprehensive CD, LPCM (S/PDIF) and USB QC Suite test reports for MBL's C31 CD player/DAC by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: Distortion versus digital signal level over a 120dB dynamic range comparing 24-bit/48kHz (1kHz, red) and 16-bit CD (1kHz black, 20kHz blue)



ABOVE: High resolution jitter plot comparing 24-bit/48kHz LPCM (black) and USB digital inputs (red)

HI-FI NEWS SPECIFICATIONS

| | |
|---|---------------------------|
| Maximum Output Level (Balanced) | 3.95Vrms at 96ohm |
| A-wtd S/N Ratio (CD / LPCM in / USB in) | 112.8dB/113.0dB/113.0dB |
| Distortion (1kHz, 0dBFS/–30dBFS) | 0.00028% / 0.00025% |
| Distortion & Noise (20kHz, 0dBFS/–30dBFS) | 0.00038% / 0.0026% |
| Frequency response (20Hz–20kHz) | +0.00dB to –0.50dB |
| Digital jitter (CD / LPCM in / USB in) | 115psec / 10psec / 15psec |
| Resolution @ –100dB (CD / LPCM input) | ±0.2dB / ±0.1dB |
| Power consumption | 13W |
| Dimensions (WHD) | 450x145x445mm |