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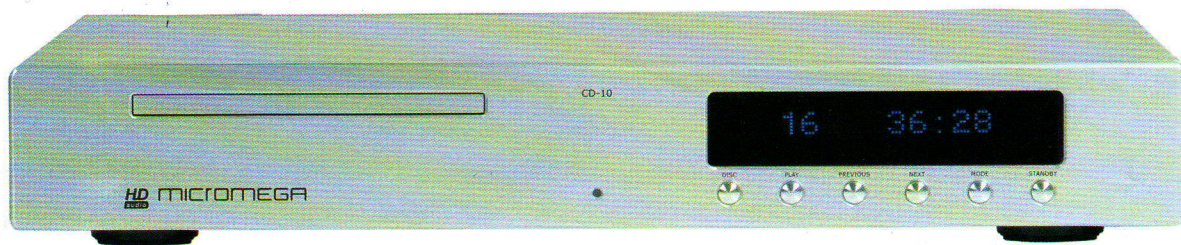


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EQUIPMENT REVIEW

Micromega CD10, CD20, and CD30

by Malcolm Steward



When Micromega relaunched in the UK I immediately telephone Absolute Sounds and requested a review sample of one of the new players. I was pleasantly surprised to be asked if I would prefer to receive all three so that I could write a comparative review of the range instead, detailing the progress as one moved from the least expensive unit up through the ranks. It sounded a fascinating proposition and I readily agreed.

The first player in the new line-up is the £799 CD10, which looks to be outwardly identical – bar a couple of tiny details – to the more expensive CD20 and CD30. All that gives the game away about the identity of any of these players are the small model designations printed on the top of the fascia, which were a very discreet grey on the silver review samples, and the display panel, which briefly flashes up the model number when the player is powered up.

Having learned from past mistakes, Micromega has elected to use mass-produced DVD mechanisms for these players – either the Sony KHM313 or the Sanyo SFH850 device – in the quest for the long-term reliability and consistent performance that rigorous quality control associated with high volume production items promises.

The mechanisms are controlled by the Philips SAA7824 chip and proprietary Micromega code featuring what are described as particularly efficient error correction algorithms specifically designed for audio reproduction.

If you happen to be as impatient as I am with contemporary electronics – i.e. an instantaneous response is just about fast enough to satisfy – one facility that is worth exploring is setting the speed at which the drawer mechanism operates. To effect a change hold the *Play* and *Previous* button while switching the machine on; then select fast, medium or deathly slow by pressing the *Next*, *Mode* or *Standby* buttons; then save your preferred setting by pressing *Disc*. That *Disc* button, if held while a CD is playing, will also extinguish the display if you find these things as distracting as I do. I guess I am old-fashioned but

I found this multi-function button approach rather confusing. I expect a button marked *Disc* simply to permit access to the disc, strangely enough, regardless of how long it is held or how many times it is pushed or what the machine happens to be doing at the time. And a button that controls the display really ought to be labelled *Display* to my way of thinking. I also found it unusual to have to press *Play* to cancel fast forwarding though a track. In truth, though, how many times would the typical user need these secondary functions?

While there is little externally to differentiate the players the internal differences are seemingly minor, too, centring upon the sophistication and configuration of the power supplies and, in the case of the CD30, the DAC Sample Rate Conversion. Only in this player does the AD1853 have its native sampling frequency ramped up to 132.3 kHz and its 16-bit resolution increased to 24-bits. This unusual sampling rate is simply 44.1 kHz multiplied by 3. Such integer up-sampling does away with the need for troublesome multiple clocks and processor-draining floating point calculations involving the rounding errors that are inevitable when you try, for example, to up-sample 44.1kHz to 96kHz or 192kHz.

As one moves up through the player range, the power supplies become increasingly sophisticated. The least expensive player, the £799 CD10, for example, uses a linear supply based on an R-Core mains transformer, whose narrow bandwidth was felt to be better suited to

rejecting incoming mains interference in this moderate current application than the much broader bandwidth of the typical toroidal type. The supply is made up of several discrete sections in order to avoid the problems of cross talk, in particular between the digital and analogue portions.

The digital supply provides the necessary power for the drive mechanism, the feedback circuits and the user interface section. Additionally, linear regulators with high power supply rejection capability deliver clean power, free of noise to all of the digital elements. The analogue section uses a different technique. After rectification and filtering, the regulation of the analogue supply is carried out by a sophisticated circuit, whose rejection level from 20Hz to 20 kHz exceeds 100dB. The digital section of the DAC features a constant power source and a shunt type, very low noise regulator.

Listening to the CD10 analogue output through my active Naim DBLs, Sia's track 'Academia' from her CD *Some People Have Real Problems* sounded fundamentally fine in musical terms. Even when judged alongside players that represent CD's aristocracy it stood proud, even if it could not equal the authority of their presentation. All the instruments were playing in tune and in time, and the music's rhythmic element was hard to fault. The presentation had real vitality; her voice in particular had a great sense of power and vibrancy. It was also very well articulated and showed excellent dynamic gradation, which combined to enhance the music's ability to communicate fluently. At the same time, though, the presentation lacked a degree of finesse and conviction. It would not have persuaded anyone that they were listening to Sia and her band because the presentation sounded obviously like a CD playing. However, that having been said, listening was still an enjoyable experience.

"The presentation had real vitality; her voice in particular had a great sense of power and vibrancy."

The CD10 fared slightly less well with Beck's album *Guero* where the busier mixes with frequent 'noises off', such as 'Que Onda Guero?', introduced a vague sense of imprecision and slight muddle to the proceedings. Perhaps the Analog Devices AD1853 DAC sounded a little too unrefined within the context of a highly revealing system, but this was less apparent in a more appropriate mid-range system where the player is most often going to find itself.

At times the CD10 appeared to be sending contradictory messages: bass can be a little indistinct, loose and sloppy although the weight is okay. Rhythmically it's not as insistent and snappy as normal but it can still boogie. Detail seems to be getting lost on occasions when the mix becomes dense, but is far better when the arrangement is sparser and less busy. Running the player into a Cambridge Audio DACMagic delivered consistent and predictable results.

The situation seemed far more straightforward with classical music, listening, for example, to Tim Hugh and Olga Sitkovetsky playing Fauré's *Après un Réve*. Both instruments sounded splendid; the piano substantial, rich and natural, and the cello gloriously textured and dynamically wonderfully expressive. The music flowed with a stately poise within a credible acoustic. The digital output/DACMagic combination did extract

an extra degree of texture, body and dynamic subtlety from both instruments. The C string on Hugh's cello certainly appeared to have more prominence and Sitkovetsky's left hand seemed to be doing more work.

The number two player in the line-up, the £1,222 CD20 also has an R-Core transformer based power supply for its digital section, much like the CD10, while the analogue section benefits

MICROMEGA EXPLAINS THE ACTS POWER SUPPLY PRINCIPLE

Micromega considers that "There are very few companies today which pay extreme attention to the power supply of audio products. We could even say that most companies are turning to SMPS (the Switched Mode Power Supply) for the sake of simplicity and cost reduction. These supplies are all designed within the borders of today's regulation. However, none of these regulations has been set with audio reproduction in mind."

The company's ACTS® supply design is based on the inherent electrical properties of the construction of particular transformers. The idea is to tune the secondary windings of them to the quadruple of the mains frequency and to minimize instantaneous current demand from the rectifiers, cancelling their switching peaks and having them work in such a way that current and voltage are synchronous. This way, the rectifiers provide almost the same average current during the complete cycle of the rectified wave. A smoothing inductor with large reservoir capacitors gives a pure sinusoidal ripple whose value does not exceed 25 mV peak to peak.

This is fundamentally how the front end of the new ACTS® power supply works, while the back end (the active regulation stage) differs from one product to another. But, in all cases, ACTS® offers the regulators a very clean supply. Measurements indicate that the rejection of the ACTS® front end is better than 200 dB above 1 kHz. In fact, the ACTS® supply is, according to Micromega, the ideal solution for audio products where transparency is required.

▶ from Micromega's ACTS® power supply technology. This proprietary design aims to filter garbage from the mains – in particular, the nasty variety generated by switched mode power supplies, Ethernet-over-power-line devices and their malevolent brethren.

Like the rest of the range the CD20 uses the same value-for-money Analog Devices AD1853 DAC, so I guessed that any significant improvements could only be put down to the different power supply configuration. And significant improvements there most certainly were.

The player had considerably less rawness about its sound than the CD10, and low frequencies seemed better defined and tighter. It even had appropriate weight for tracks such as Beck's 'Girl'. Rhythmically it seemed more animated and exhibited noticeably more get up and go. Mixes – even busy examples – sounded more open and details were cleaner and easier to identify. It was not the most sophisticated performance I have ever heard, but it was excellent at this price and it sounded far more polished than the CD10 in a revealing system. Overdriven guitar, for example, didn't have me reaching for the Next button on the remote in search of a track that would be less challenging to audition. There was certainly a familial resemblance about the sound and presentation but the CD20 had a sense of sophistication, poise and composure that had eluded the CD10. Music sounded far better controlled with the result that the CD20 sounded like you were listening to a performance rather than a CD under appropriate circumstances.

The CD20 also fared better with female vocalist, Sia and her band. Bass guitar had more weight and more percussive impact to its leading edges. Drums and percussion had more attack, power, and follow through. They displayed a more complete and detailed note envelope. Piano sounded harmonically richer, more solid and secure. Most tellingly, though, Sia's voice had greater communicative ability: her phrasing made more sense and raised the hairs on the back of my neck far more readily. She sounded less like a facsimile and more like a woman, even if there was some minor emphasis to the nasal elements of her delivery at times.

Similarly, listening to the Hugh/Sitkovetsky rendition of Fauré's *Après un Rêve* the sound had more detail, and the performance had appreciably more energy. The presentation, as a whole, was more believable. The added substance and downwards dynamic extension the CD20 brought to the party simply made the performance sound more like a performance and less like a recording. Adding the DACMagic gave less dramatic improvements than it had with the CD10, but it still unearthed useful concealed subtleties: Hugh's vibrato was more evident even as notes decayed and his playing assumed greater authority and what I can only describe as a truly life-like vibrancy. So, it too makes a fine transport, as well as a CD player.

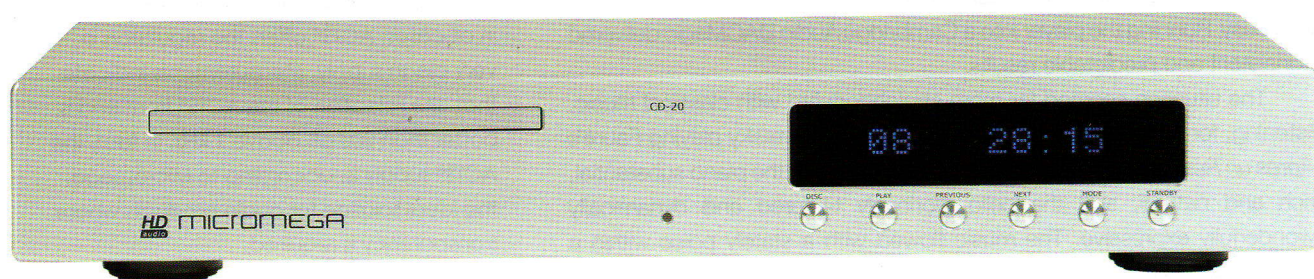
All round, the CD20 presented a far easier to audition and a more convincing portrayal of music. Musically and cosmetically it comfortably had

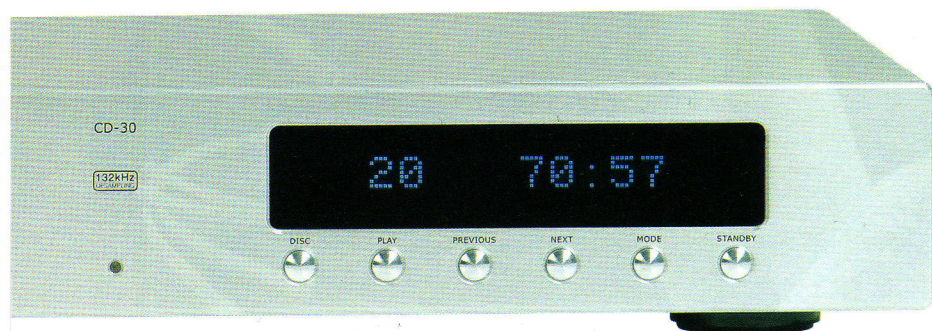
“Rhythmically it seemed more animated and exhibited noticeably more get up and go. Mixes – even busy examples – sounded more open and details were cleaner.”

the beating of the CD10 as, indeed, it ought, given the price difference between the two players.

And so, on to what one might expect to turn out to be the star of the show, the £1,599 CD30. This is in essence a CD20 with 132kHz Sampling Rate Conversion, which represents three times the native CD sampling rate of 44.1 kHz.

Instantly that Beck's album *Guero* started playing, it became abundantly clear the performance of the CD30 was in another league compared to that of its junior stablemates. That familial get up and go, and that inherent musicality and vibrant enthusiasm were still obviously present but its zeal was tempered by a refreshing sense of control and composure. Drums and bass guitar had greater impact and weight but notes also started and stopped with increased resolve and precision. The same was true at the opposite end of the frequency range where instruments and voices demonstrated far greater finesse than I had heard up to this point. There was no rawness or astringency but that did not mean that leading edge definition was reduced or transients softened. There was plenty of snap ▶





▶ to the presentation so the rhythmic impetus of tracks such as Beck's 'Hell Yes' was not diminished one iota.

Despite the player sounding cosmetically smoother, there was also no loss of detail evident. The increased cohesion and authority it displayed seemed to weave that detail more tightly into the musical fabric rather than leaving it exposed like random loose threads. As a result, the CD30 was very easy to listen to even with exciting, invigorating music.

Songs like 'Little Black Sandals' on the Sia album sounded outstanding on the CD30. The bass, drums and piano provided a really solid foundation over which she could perform her sensual vocal gymnastics. The player made light work of exposing her lissome phrasing and its interplay with her band's playing. Timing, a real strongpoint in Sia and her band's performance, was entirely dependable, accurate, and fluent, coming across with an innate effortlessness. And that polish paid worthwhile dividends in portraying the richness and variety in her vocal timbre.

That superiority was especially evident in the Tim Hugh cello pieces, imparting a realistic weight and sonority to the accompanying piano, and giving his instrument an appropriately vibrant palette with which he could communicate his skills and animation. The range of expression and tonal colour he managed to coax from his cello during Paganini's *Moses in Egypt* was moving as well as technically impressive, and the CD30 had no difficulty in conveying either aspect of his playing. The player's speed doubtless helped it convey his extreme dexterity and fingering accuracy during the more briskly played sections. It all amounted to an enthralling portrayal of this wonderful recording.

If I had to be brutally honest I would have to say that while these players are nowhere near perfect – that is far too much to expect at these prices – they are so inherently musical and communicative that it is easy to forgive them their sins, which are mostly benign and highly unlikely to spoil anyone's listening. If you want the finest go for the CD30 but if your budget dictates that you spend less you will not feel dramatically short-changed by the CD20. And if times are truly tight you could do very much worse than consider the CD10, which, although not the most authoritative player you are ever likely to hear, is still intrinsically musical and conveys what truly matters in a performance with disarming ease.

I feel that the CD30, though, is the best of the bunch by a substantial margin. It combines musicality with poise, and fluency with finesse to deliver an engaging performance that sounds reassuringly analogue. And, if nothing else, it proves that cranking up the sampling frequency on that value-for-money DAC was certainly a worthwhile exercise.

Micromega appears to be back with a vengeance. These new designs pay homage to the strengths of its earlier models. There was always an intrinsic rightness and fluency about the way those early players conveyed the emotion

TECHNICAL SPECIFICATIONS

Micromega CD10, CD20, and CD30

Type: Single-box CD players

Chipset: Analog Devices AD1853

Three-times oversampling in CD30

Dimensions (WxHxD): 6.9x26.5x43cm

Weight: 3.5kg (CD10)

4.5kg (CD 20 & CD30)

Outputs: Analogue RCA

Digital RCA

Finish: Silver or black

Price: CD10 – £799

CD20 – £1,222

CD30 – £1,599

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and meaning in music, and I am delighted to hear that characteristic has been maintained in the latest generation.

I will just wait now is to see if the company intends to reconsider the *Performance* models and perhaps bring those fantastic machines up to date. That would be a truly thrilling prospect if these budget and mid-fi boxes are anything by which to judge the company's developmental progress over the past decade. It will be interesting to see if Monsieur Hamdi considers high-end CD players to be a viable proposition or if, like Linn, he decides that his company's future will rest with streaming products. I have to say that Micromega's interpretation of a digital streamer ought to be a fascinating product and if one ever emerges from Paris, I would very much appreciate being first in the queue for a review sample. +