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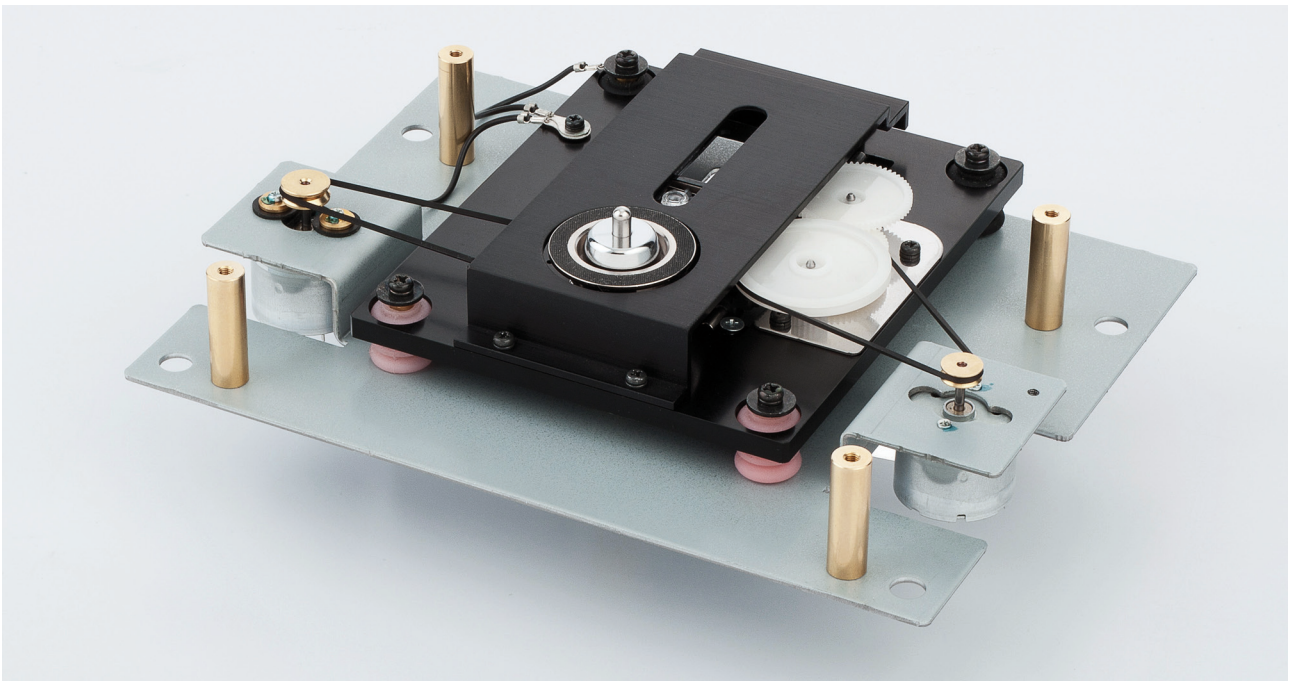
CEC belt drive TL 3N and CEC D/A converter DA 3N

The surprise package

Faithfully reproduce music and convey to the listener the soundscape of the music just as the artist in question intended - in its Press Release, that is just what the manufacturer CEC promises to deliver with its new DA3N D/A converter and its new TL3N CD belt drive. As the manufacturer goes on to say, this dream team is supposed to make it possible to reproduce music of the highest quality. Sounds good of course, but is this not exactly the objective that the other major manufacturers are striving for? And anyway - what is it that this new combination of devices can do better?

Now, let's get it clear, CEC is anything but a newcomer to the field of audio. The company, founded in Tokyo in 1954, managed within a short time to get itself an excellent reputation in the industry.

So much so, that over the years even many well-known brands had their audio equipment built by CEC. (e.g. Grundig, Marantz, Teac, Sony, Sanyo, Toshiba, Mitsubishi, Alpine, Kenwood, Sharp etc) The young, ambitious company was extremely innovative. For instance, as early as the company's first year, the engineers at CEC developed the world's first belt-driven drive for analogue record players. And building on this experience, they surprised the professional world in 1991 with the very first belt-driven CD drive: the famous CEC TL 1. This development is based on recognizing that the analogue record player and the digital CD player basically work on the same principles. The specific mechanical effects in the CD drive are that the CD is scanned from a slow but smooth-running drive weighted with a puck which reduces jitter so that motor vibrations are hardly transferred to the CD.



The heart of the CEC TL 3N. The new double belt drive.

No wonder, then, that there is a belt drive at work in the Japanese manufacturer's latest CD drive. This drive is designated the TL3N and was introduced in 2012. And a few weeks ago the TL3N received a playing partner of its own status in the shape of the DA3N D/A converter. Both silvery devices are now sitting in my listening room and we want to check whether they deliver what the press release promises.

double belt-drive mechanism

But before the first silver disks rotate, a little technical information would be appropriate; let's start with the TL3N drive first. It is equipped with the double belt mechanics from the highly reputed TL1. The drive motor for the CD and the laser drive motor are separated from the laser unit by each having separate belts. A sub-chassis design also decouples the scanning kinematics from the chassis. Also, special attention has been paid to the power supply. Drive and electronics have each been given separate power supply units.

special characteristics

The front panel has a pleasantly simple and uncluttered look. In the middle, the screen with blue

numbers and letters, to its left the power button surrounded by a blue-lit area when switched on. On the right of the display window, four additional buttons for forwards and backwards-skip, stop, and play/pause; additional functions can be controlled via remote control. The rear panel is decidedly more opulent. Besides the obligatory TOSLINK and the 75-ohm coaxial output, the TL3N has a professional AES/EBU balanced digital audio output for 110-ohm cable with XLR connectors. But that's not all! Four additional jacks are reserved for what CEC call the „Super Link“, introduced a few years ago, an optimized connection between digital devices from the same manufacturer. This works via four 75-ohm cables with BNC connectors (included) and of course connects the drive with the new DA3N D/A converter. In addition, the TL3N can be controlled via an external word clock generator and also features a 44.1 kHz word clock input. What more could you want?

CEC again manufacturing exclusively in Japan

At 43 centimetres in width and almost eleven centimetres high, the drive has the same dimensions as





Rear View of CEC TL 3N

the DA3N. The finish of both devices is excellent. The considerable weight - the drive weighs eleven kilograms and the D/A converter nine - indicates the outlay that has gone into the materials. Incidentally, for over a year CEC has been doing its development and production exclusively in Japan, after the relocation of production to China resulted in some bad experiences. „The high-quality drives were always made in Japan anyway and are probably the longest-lasting CD drives in the world,“ says Rolf Braun from the German sales department, adding: „We can even repair twenty-year-old devices and update them to state of the art technology - we see this as a good, indeed important argument for our customers.“ Future compatibility as a plus point. But for the moment, we are talking about the new DA3N D/A converter. Moving the big, left-hand control dial, the display shows the currently selected input. Also at the left on the front panel there are connections for a TOSLINK mini-plug and a USB cable with mini-B connector. Very practical! To the right of the display you then have the second big knob

and a connection for headphones jack. The knob controls both the headphone volume and the output signal to the variable outputs.

Multitude of connection options

The rear panel connectors of the DA3N literally leave nothing to be desired. The digital inputs range from the usual 75-ohm coaxial RCA sockets by way of two TOSLINK connectors and the balanced AES/EBU with XLR socket to yet another USB port. Then there are the four BNC connectors for the „Super Link“ on the TL3N, as already mentioned. In fact, these Super Link connections are doubled up on the DA3N - the second is for the nine-pin D-sub connection with which the manufacturer's older CD drives, such as the TL1, TL51 or TL5100, are equipped. The people at CEC, however, are expecting an even more precise, optimized separation using the new Super Link via the four enclosed 75-ohm cables with BNC connectors. Incidentally the converter, too, has a master clock input - especially of interest for studios. On the DA3N four analogue outputs are available: one stereo pair each, with fixed and adjustable signal level in balanced (XLR)



Rear View of CEC DA 3N

and unbalanced output (RCA). Anyone who wants to listen only to CDs can thus use the CEC converter as a pre-amp and either operate an amplifier or active speakers on the variable outputs.

New DA chip Sabre Reference ES 9008

So, the DA3N is a highly flexible device - but that's not the end of the story, surely? No, because there are also some interesting things inside. The heart of the DA3N, so to speak, is the built-in Sabre Reference D/A chip, designated the ES 9008, the world's first 8-channel audio DAC that opens up real professional digital audio to the market. It is considered to be the best currently available DAC for audiophile equipment, replacing the chip from Burr-Brown, previously used by CEC. The ES 9008 processes S/PDIF or PCM signals from 16 to 24 bits, with a sampling frequency of up to 192 kHz.

Those who are getting tired of the technical descriptions can now breathe again at this juncture. Because from here on it's all about whether the new combination, at nearly Euro 7.000, meets the high expectations on its playback quality. So we can start. First of all, please ensure that the equipment is positioned exactly horizontal in the audio rack and top-quality cable connections to the amp or preamp are in place. Once this homework is done, turn on the device - best of all, always the drive first, then the D/A converter, and last of all the amplifier. Switch off in the reverse order. This avoids switching crackles or even damage to the speakers.

After several hours warm-up, I start the first listening test with the great pianist Vladimir Horowitz and his very last CD recording. It was recorded in 1989 and Haydn, Chopin and Liszt (CD Horowitz/ The last recording, Sony Classical SK 45818) are on the programme. I consider piano recordings to be particularly relevant in terms of sound reproduction quality. The varying intensity of the striking piano

keys, the sequence of felt-thrummed steel strings, the faithful representation of the concert grand piano in the control room as if it were on high-quality headphones - to me, these are the indicators of quality. The CEC combination takes these hurdles with ease. I do not remember ever having been so moved by this CD recording before.

Sound reminiscent of an analogue mass-loaded turntable

I place another disc on the spindle in the TL3N and put the 330-gram puck on top to stabilize it. The sampler of the audiophile label „Reference Recordings“ contains some excellent recordings by the sound engineer Keith O. Johnson (Reference Jazz, Etc., RRS2CD), highly appreciated in audiophile circles. I choose „Tropic Affair“ and am impressed how clearly the striking of the piano keys stands out from the orchestral tutti. „Misturada“ by Airto Moreira - a piece for flute, piano, bass and drums - is already familiar to me in all its details from an LP from this label. As I listen to the deep-reaching bass and the notes of the flute ascending to the highest heights, I suddenly realize where to classify the CEC duo in terms of sound. Yes, that's exactly it: the calm, sovereign composure and ease with which the TL3N and DA3N play music together remind me of the sound reproduction by an analogue, mass-loaded turntable. And then there's the question of the digital filter. Because the remote control allows the choice between „Flat“ and „Pulse“. Most CD players work with the flat setting which achieves a near perfect frequency response. The disadvantage with it is the appearance of what is termed „ringing“, in other words the initial oscillating and later resonating in pulse signals. This is avoided using the „Pulse“ setting but at the same time with a minimal loss in the high frequency range - about -2 dB at 20 kHz, „Flat“ and „Pulse“ according to the manufacturer. My personal listening experiences give me a

definite preference for the Pulse setting which reproduces musical structures better. The Flat setting seems to me to be just a trice sharper and less harmonious.

Further listening

Modest Mussorgsky's original piano version of „Pictures at an Exhibition“ with the exceptional American pianist Byron Janis cannot be left out of my listening session. This Mercury Living Presence production was recorded in 1961 and released for the first time on CD in 1994 (Byron Janis plays Moussorgsky, Mercury 434 346-2). This recording stands out for its feeling of space, the CEC duo seems to effortlessly open up some hitherto somewhat concealed sonic structures. Following on from the piano, the same CD contains in addition the orchestral version by Maurice Ravel. The then Minneapolis Symphony Orchestra under Antal Dorati was recorded in 1959 in the most purist style with just three Telefunken 201 microphones. The live nature of this recording captivates me time and again - and this is particularly true of the playback on the TL3N and DA3N: the insistent squeaking and yammering of the oxcart in „Bydlo“, the sudden crack of the whip in the „Gnome“ which literally makes one wince, the lively and light-hearted ballet of the chicks in their eggshells and not least the finale, irrupting with tremendous momentum. Detail, richness of tone and spatial information are just glorious. The concentrated application of know-how, innovative capacity and decades of experience have quite obviously paid off; the manufacturer's press release has not promised too much.

For me, the result is clear:

playback on the TL 3N drive and the DA 3N D/A converter are among the finest I have ever heard from a CD. This turns the new duo by the Japanese manufacturer CEC into a surprise package for audiophiles. Let yourself be surprised, too.



In a nutshell

Since the company was founded almost sixty years ago, the Japanese manufacturer CEC has repeatedly made people sit up and listen with its innovations. The ingenious belt drive in its CD drives has now long been standard; the latest generation continues to provide good service in the form of the TL3N. The DA3N D/A converter which has now come out is the ideal partner for the TL3N and scores, among other things, by using the latest D/A chip whose use has so far been limited purely to the professional field. Just under Euros 7.000 for this combination may well seem a lot of money, but in return you get sound reproduction quality at its finest. The calm, supreme composure and confidence with which the TL3N and DA3N produce music together recall the playback by an analogue mass-loaded turntable. Great job!

Harald Obst | HIFI STARS | 2013

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