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CEC Belt Drive CD Transport TL 5

introduction or promotion?

"...Among the four CD transport by the Japanese manufacturer CEC, the TL 5 is at the lower end of the price range. In view of the very high playback quality, this solid device offers an outstanding price/performance ratio. Combined with an appropriate DA converter, a digital pre-amplifier and power amplifier, this opens up a highly interesting as well as recommendable entry opportunity in the upper quality regions of CD playback. An addition plus in the TL 5, is the belt-drive principle that is used. As a buyer, you cannot do anything wrong!."

Review from HIFI STARS - 2015



CEC Belt Drive CD Transport TL 5

Introduction or promotion?



CEC calls its new CD drive, TL 5 – it has been on the market since August 2015. For this reason, the renowned Japanese manufacturer now has no less than 4 CD drives in its product range. Enthroned alone at the top, the flagship TL 0 3.0 at a proud, but relative to the purpose-drive expense, and completely appropriate price of 29,900 Euros - we made a review on this exceptional drive in edition 24 of HIFI STARS. In the ranking, the TL 1 N is one level lower at 12,998 Euros, followed by the TL 3 N (2,998 Euros) presented in the edition 17 of HIFI-STARS. The TL 5 that I am carefully taking out of the packaging, is the most reasonably priced CD drive by CEC available at a selling price of 2,298

Euros. At CEC, the emphasis is clearly placed on the CD drive, but on the other hand, three CD players - combined devices of drive and integrated DA converter - are offered. What at first glance, might only surprise a few, will prove it self to be a completely consistent logic. Reason being that the CEC experts have been intensively working with the actuation of drives for a long time. This dates back to the year 1954, as CEC, the first manufacturer, introduced the belt-drive in analogue record players to the market. Furthermore, the belt-drive in the analogue record player, in the mean time, has clearly prevailed because most of the record player drives that are offered today use this drive concept.



In the eighties when the CD was introduced, CEC fell back on their own decades worth of experience with the belt-drive principle in analogue record players and developed the world's first ever belt-driven CD drive - it was introduced in 1991. Today, CEC uses this patented drive concept in all of its CD players and CD drives. The success of the belt-drive in analogue record players is based on the fact that, in doing so, the record turntable axis is uncoupled from the motor shaft and vibrations as well as disturbances fall away due to the motor. The same thing is aimed for through the belt-drive in CD drives. However, although in an analogue LP it has to do with always maintaining the exact same speed, the signal on CD is recorded with Constant Linear Velocity (CLV). This means: In order to read the signal contained on the CD, the rotation speed must be accurately reduced if the laser moves outwards. A spindle motor regulates the adjustment of the speed. In most of the CD drives and CD players available on the market, this spindle motor is located directly below the turn-

table for the CD. The motor spindle in this so-called Direct-CD-Drive-System creates the central point of the turntable for the CD. A precise and stable rotation in this system however, requires a very high motor torque, which in turn, will inevitably result in vibrations and electro-magnetic disturbances.

What does the belt-drive do in the CD drive?

In the belt drive system developed by CEC - also in the new TL 5 - the spindle motor and the central spindle are separated which considerably reduces the vibrations and electro-magnetic disturbances. The considerably lower torque and the greater distance of the motor to the central spindle - and thus, to the turntable - are basic requirements for the perfect music playback. Furthermore, a massive stabiliser ensures greater inactivity of the turntable and has a more stable and more equal rotation of the played silver disc. All good and well but it may be at this precise point that the readers object: In order to listen to a CD in excellent quality, using a good



CD player with an integrated DA converter is good enough right? What are the advantages of a separate CD drive? Firstly, of course, if a digital pre-amplifier or power amplifier or a DA converter is already available in the system. But, there are still other reasons. For example, an independent and thus, more stable power supply. Do not underestimate the release of the DA converter of resonances of the turning CD drive. Add to the fact that power supplies can irradiate into the digital circuits. Each of these factors has an impact on the playback quality and can be minimised by separating both of these components. Due to the significantly higher cost, the team composed of a separate drive and a converter dominate the highest price regions.

No frills design, everything is discreet and functional

So much for theory. The practice in the form of the new CEC TL 5 is now in my control room. The TL 5 is - like the other belt-driven drives of the Japanese manufacturer - a top loader with a CD tray on the upper side of the device that can be opened by hand.

A black, 330 gram heavy puck with a seven centimetrediameter is placed as a stabiliser on the CD. On the scales, the device has a weight of 9 kilograms with a width of 43.5 centimetres, a depth of 33.5 centimetres and height of 10.9 centimetres. It can be delivered in silver and black.

The housing gives it a dignified and significant impression and is manufactured in Japan one hundred percent. No frills design, everything is set up discreetly and functionally, one could almost say an understatement in pure culture. On the left side of the power button, four additional buttons. Two of them are used to selected back and forth between titles, a further button acts as a stop button and the button at the very right controls the Play and Pause functions. The numbers and letters illuminated in blue in the display above, signalise the entire playback time after reading in the number of music pieces. During the playback process, the number of tracks played back as well as the elapsed time are displayed. Other functions can be selected above the sensor for the remote control with the

designation RU-217, among other things, the display can be dimmed or even switched off completely. Now, let's look at the back of the device.

The CEC TL 5 has three connection possibilities for the digital output signal. Firstly, there is the Toslink light guide, whose use, in my experience, is only advantageous under very special conditions – for example, when it is needed to prevent ground loops. Secondly, the common 75 Ohm Coax-connection above the cinch/RCA connector and finally, the symmetrical 110 Ohm XLR connection for the data transmission according to the AES/EBU standard. I selected the last connection, because with my own – also belt-driven – CEC TL 5100 CD player, I had the best auditory experience. Unfortunately, the TL 5 – like the CEC belt drives TL 0 3.0, TL 1 N and TL 3 N – does not have CEC Superlink interconnect system, as is the case with DA converter DA 3 N, but this, however

this can be blamed on the cost-effective price of the device. For the TL 5, the aforementioned DA 3 N (price: 3,998 €) as currently the only DA converter by CEC is naturally the first address. At least until, until the Japanese manufacturer – as already announced – brings a DA converter as a game partner equal in terms of prices for the TL 5 on the market. I will refrain from going into more detail about the DA 3 N as I already appreciated its qualities in edition 17 of HIFI STARS.

The listening test begins after the playing phase

The listening test begins after several hours of the playing phase. With CD equipment, I usually start with a piano recording and in this case, one that was played by an exceptional pianist, Vladimir Horowitz, shortly before his death in November 1989. It is piano playback in particular that presents the CD drive with a considerable challenge.



How the CEC TL 5 performs in doing so?

Outstanding, because this technically excellent recording is played back very spatially, I can even understand the dimensions of the large Steinway grand piano without difficulties. This is a very good start!

My CD collection has a new recording by the Croat Joscho Stephan with his Formation Acoustic Rhythm. (*Joscho Stephan's Acoustic Rhythm, MGL/inakustik CD 029130*) Joscho Stephan (acoustic guitar) and his partners Sebastian Gahler (epiano), Nico Brandenburg (bass) and Thomas Kulies (drums and percussion) deliver a wonderful mixture of melody, rhythm and virtuosity on this silver disc. This includes pop-classic by George Benson („Weekend in L.A.“) or Santana („I love you much too much“), but even catchy tunes such as „What a Wonderful World“ and several personal pieces by Joscho Stephan, which are dedicated to the Latin idiom. The CD is already on the TL 5 turntable, the stabiliser is quickly started and the tray is closed – now it can start. The recording captured very directly and without bigger reverberations shifts the musicians and their instruments into my imaginary stage in my control room.

I had already played this CD right before on my own, already-mentioned CEC CD player TL 5100. Using the same DA converter and the symmetrical AES/EBU connection, it is perfect! The result then clearly does speak in favour of the combination with the TL 5. It is a drive, which paints with a finer brush and places the instruments in the room in an even more realistic manner. My belt-driven, although quite old CD player from the same company does not even come close to it. This clearly shows the technical progress of the once again optimised belt-drive of the TL 5.

Appealing contrast of voices in a duet

The „Antonio Brasileiro“ CD, according my knowledge, is the last recording of the great Brazilian composer and interpreter Antonio Carlos Jobim who died in December 1994. He recorded the CD in the first half of 1994 and it was released just after his death. On it, Jobim is accompanied by his then seven year old daughter Maria Luiza Jobim, who is from his second marriage to photographer Anna Beatrix Lontra-Jobim. During the playback, it sometimes sounds as though the duet of both voices are not kept apart enough and melt into one. When played on the TL 5, this is not the case. In my records I have noted that the contrast of the voices of father and daughter in the „Forever Green“ song are particularly appealing. High resolution is also demanded in „Blue Train“ when the composer accompanies the choir in the background with his quiet humming. Another detail that was of course uncovered by the TL 5. If the CEC drive is integrated in the reproducing chain, there is another detail that I very much like. The lower pitches in the recordings are reproduced extremely accurately. I found a good example on a silver disc of the audiophile label „Reference Recordings“. („*Reference Jazz, Etc.*“ - RR-S2CD) Mike Garson (piano), Billy Mintz (drums) and Stanley Clarke (bass) are the composers of „Autumn Leaves“. A plucked bass on a CD has never sounded this spectacular before. The TL 5 also makes a good impression when it has to do with deep dimension picture of larger sound bodies. I listened to the Parisian Orchestre de l'Opéra Bastille under Myong-Whun-Chung, which played Rimsky-Korsakovs „Scheherazade“ for the Deutsche Grammophon Gesellschaft. My notes on that: „Exemplary is the fine, soft drawing of the solo violin in the second movement. On the other hand, the brute force of the orchestral tutti is felt all across the body.



CEC's new standard of the highly recommended CD Belt Drive System enables user replacement of Belt.

The TL 5 is the most cost-efficient CD drive by the renowned Japanese manufacturer – nevertheless, it is more than an entry-level model. Since in the world of large CD drives a few manufacturers dedicated themselves to belt-drive - not without good reason. With the belt-driven CEC TL 5 in the system, one can benefit from the advantages of this type of drive - the newest CD drive by CEC helps improve the tonal progression.

Specifications CEC TL 5

Drive System	Belt Drive // Spindle
Power Supply	AC 100-240V / 50-60Hz
CD Stabilizer	Brass (ø70mm, weight: 330g)
Digital Output	AES/EBU(Balanced XLR) ×1: 2.5Vp-p/110Ω TOS ×1: -21 ~ -15dBm EIAJ COAXIAL(SPDIF) ×1: 0.5Vp-p/75Ω
Dimensions	435(W) × 335(D) × 109(H) mm
Weight	Unit 9 kg
Color	Silver or Black

In a nutshell

Among the four CD drives by the Japanese manufacturer CEC, the TL 5 is at the lower end of the price range. In view of the very high playback quality, this solid device offers an outstanding price/performance ratio. Combined with an appropriate DA converter, a digital pre-amplifier and power amplifier, this opens up a highly interesting as well as recommendable entry opportunity in the upper quality regions of CD playback. An addition plus of TL 5, is the belt-drive principle that is used. My opinion:

As a buyer, you cannot do anything wrong!

Harald Obst | HIFI STARS | 2015

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