Temporal Coherence amplifiers

The discrete circuits

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I got to know the brand “Temporal Coherence” after a visit to the manufacturer where I could listen to the active loudspeakers and by visiting “Hepta” in Westzaan, where the amplifiers attracted attention and are standby for a demonstration. I did not need time to think about the question whether I wanted to listen to the control and power amplifier at my home. The more than excellent impression I have of Temporal Coherence and the serious approach of the manufacturer for music reproduction at a very high quality level made my hand itchy beforehand to connect these. So it came that the control and power amplifiers were fitted between source and loudspeakers for a couple of weeks at my home.

The description of the appearance of Temporal Coherence can hardly be more modest. The control amplifier has at its front a green display, which can be dimmed, showing the selected input source or the volume setting. Two LED’s indicate whether the control amplifier is in stand-by mode and / or a first order rumble filter of 34 Hz is active. The control amplifier uses the remote control for all its functions. The power amplifier has only a blue illuminated on and off switch in its front. There is more to say about the rear. The control amplifier has six RCA inputs, a recorder output, two outputs for power amplifiers / active loudspeakers and two outputs which can be configured to the customers’ wishes. Again, all RCA. A mains power input with an on/off switch completes the rear. The power amplifier has, of course, also a mains power input, an RCA stereo input and a pair of loudspeaker connectors, equipped with WBT clamps. The housings are of solid steel and the aluminium fronts can be delivered in silver or black. Simplicity without raiment, characteristic for the manufacturer who rather spends money on the quality of reproduction than on cosmetics.

Looking inside the control amplifier shows some four printed circuit boards on which the whole circuitry is placed. First of all the power supply with two robust toroidal transformers and a deliberately small capacitive buffer after the bridge rectifier. The buffering of the current happens locally, close to the active components. The second printed circuit board controls the amplifier, also of the display, which makes up for the third small printed circuit board. The actual amplifier printed circuit board has the inputs to the left, the volume control, which is build using precision resistors and relays. No turning control or a cheap IC is used for this function. A very beautiful, but costly solution. Neither on the left nor on the right hand side of the printed circuit board IC’s or operational amplifiers can be found, the control amplifier circuit is based on the use of over 50 transistors in those two parts. Add to all this the resistors, LED’s, diodes, capacitors in different shapes and sizes, plus the relays and the consumer price is all of a sudden not just realistic, but even modest. A discrete build up product with a minimal use of wire on printed circuit boards with a good overview and tight placement of the components.

At the centre of the power amplifier sits a toroidal transformer which would suit well in a Pass Labs amplifier which will feed via a bridge amplifier the two 27.000 µF buffers, one for the left and one for the right hand side part of the amplifier. The amplifiers themselves are again build up completely discrete with four power transistor per channel, supported by more than 25 ordinary transistors on each printed circuit board. The amplifier is split up in three compartments: power supply, amplifier left and amplifier right. All cabling is shielded using metal tubes. It is unavoidable to use more wires in a power amplifier to connect the, in this case five, printed circuit boards with each other and the

inputs and the outputs. Part of the cooling is internally, the rest is done using cooling fins, which can be seen at the rear. A part of the not too small weight of the power amplifier can be explained by the use of the large transformer, another part comes from the 5 mm thick aluminium plate, covering the entire floor of the amplifier. Connection with the WBT clamps can best be made using banana plugs because of the limited amount of space in between the cooling fins. In that same space, also the RCA interlinks and the power cord have to be placed. The output power of the amplifier is 2 x 70 Watt, a power bandwidth of 5 -50 000 Hz and a bandwidth of 5 – 150 000 Hz.

The set-up is as follows: the source is a NAD M50/M52 digital music player with its own storage of digital music files, coupled with an Apogee XLR cable to a Metrum Acoustics Pavane Level 2 D/A-converter. From here it is taken with a Crystal Cable Connect Ultra to the Temporal Coherence control amplifier and further with a CC Connect Reference to the power amplifier. Using CC Speak Reference a couple of PMC fact.12 loudspeakers were connected, with the addition of Townshend Audio Maximum Supertweeters, this all placed on Townshend Audio Podium Type 2 decouplers. Power cords come from Crystal Cable, Supra and AudioQuest. The digital source gets its power from a PS Audio Powerplant P5.

After connecting, warming up and listening to the first sounds, the foundation of the low frequencies is markedly, which instantly raises the suspicion that the power supply is generously sized in the amplifiers. In no other way, such a deep and solid foundation can be achieved. Don't mess it up with an overdone or spongy low, quite the contrary, as I noticed with my own loudspeakers and with a set of Dynaudio Contour 20 speakers which I happened to have available for a short while together with the amplifiers. A relaxed kick-off of the listening session was made with the Retrospect Trio with beautiful sonatas of Henry Purcell in 24/88.2 studio master quality. With "fit for purpose" modesty, the members of the trio play the sometimes sad and sometimes more than cheerful works in a great setting which unfolds between and behind the loudspeakers. The amplifiers of Temporal Coherence do not enlarge the whole more than it should be, but project it in a realistic size. The music also has to say thanks to the amplifiers for the above mentioned modesty, as these only do their job punctually, with just as little raiment as can be presumed on their appearance. The basis is laid down in the low tones, the midrange above it remains neutral and does not attract improper attention, with on top of it all the silky smooth higher tones, which never had the tendency to get sharp during the past weeks. Works with a larger orchestra are this time provided by Dvorak's symphony nr. 8, directed by Nikolaus Harnoncourt. It is not possible to drive the amplifiers of Temporal Coherence into mischief, the orchestra is playing with full energy in the listening room, still at a pleasant distance and certainly not insistently. Neither in the loudest parts, while the details remain fully present in the soft parts. Remarkable is though that where my reference amplifiers fill the whole listening room with music, spread all over the back wall, these amplifiers keep the music in between the loudspeaker setting. With a large sweet-spot, so I do not have to sit precisely in the middle.

I could avoid Stacey Kent with her CD "The changing lights", but I don't want that because the quality of the recording is so good. Enjoyable how her voice sounds at the start of "This happy madness" with only the piano as accompaniment. The voice has a beautiful projection regarding the size and it puts the lady realistically in the space. Percussion and base, which in the meantime have become part of the music, are energetic and intense, but they will never beat Stacey, who uses a microphone which puts her in the foreground. When the husband drops in with his saxophone, the party is at full swing and I let myself be engulfed in music. Another favourite of mine is Natalie Cole, performing the beautiful "What a difference a day makes". It includes a base, which gives off quite some energy, which needs to be controlled. This is well done by Temporal Coherence, just as well the explosion of the big band which joins Nathalie. Marvellous, that power in the amplifiers, which gives space to the music. "Love letters" is the next track and I cannot get myself to stop it. The mouth-organ, popping up every now and then, has to be the one from Thielemans. The absolute truth that these amplifiers demonstrate might not be everybody's cup of tea, who wants to add some coloration should look for

a brand which gives more base, more prominent mid-range or more high, Temporal Coherence is straight in the learning. This property gives all the floor to the artist, listen e.g. to Herman van Veen on his CD “In vogelvlucht”, on which the characteristic voice of Herman is the essence, which should not be effected or coloured by the audio system itself.

Through the years, quite a lot of masterpieces have been put on CD or any other medium. With seven mile boots through the Jazz. Dave Brubeck Quartet with “Take five” is lively in that uncommon measure. With a decent volume from the loudspeakers, the drums still do not sound as real, which is next to impossible on an audio system, but it is very impressive with especially much impact in the deep low, where the base drum is the star of the show. I should not neglect the saxophone of Paul Desmond, who also gets a feather in the ass from these amplifiers. From a later date is an enactment of “Round Midnight” by Toots Thielemans on his mouth-organ, a live recording from The Netherlands, in which he plays together with Joe Pass and Niels Henning Orsted Pedersen. Of course, “Bluesette” should not be missed in this composition. Memorably beautiful and tense. Much more modern is Esbjörn Svensson work “Dolores in a shoestand” which I play afterwards. Pleasant rhythm which clearly stands out and is maintained by the percussion and base. As it sounds, you would expect that the amplifier has much more power than specified, it is never short of breath. Even though my speakers really know how to handle a bunch of raw Watts. A compliment to the technician who has designed the circuit and realised it without compromise.

One starting point for Temporal Coherence is to minimise the distortion for which our hearing is most sensitive. This is a bit different from connecting an analyser and showing a graph. It requires research and development in combination with very critical listening and understanding how our hearing operates. A second starting point is to realise that a loudspeaker is a complex load, which should not influence the sound of the amplifier and its operation. Too often it is assumed that the load is purely ohmic for the basis of design and a loudspeaker certainly is not. Temporal Coherence builds its amplifiers under its own private management and leaves nothing to chance. The circuits are discrete, they do not consist of a handful of operational amplifiers, the power supplies are up to their job, the exterior is temperate because the real beauty (quality of sound reproduction) sits inside. That Temporal Coherence lives up to their promises is already shown by the fundament of the reproduction, thanks to the very heavy power supply, which has been optimised for music reproduction. But there is more to enjoy and I tried to describe this above. It is left to the reader to make a ride to Westzaan or Wapenveld to judge with your own ears whether this brand can become your audio nirwana. I promise you, you will not return home disappointed. But I have no solution for a greedy feeling which might come, you will have to please the manager of your bank.

Price:

Control amplifier	€ 3350,-
Power amplifier	€ 3650,-
Set price	€ 6950,-

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