



## DacT CT100 Phono module + custom psu's

by Christos Skaloumbakas (see his hi-fi installation) / 18-July-01 (completed on 22-June-02)

This phono module came to my house 7 months ago (03 Jan 01) but I did not have time to evaluate earlier (too many changes have happened to my system lately...). Interesting pictures from the material reviewed are described below and my comments are following.

I am comparing below:

- The Rowland 'consummate' phono stage with it's own psu, vs. the new DacT CT100 phono module by Danish Audio Connect, powered by a custom psu by [Babis xaitas - Nexus Acoustics](#).
- A custom psu for the Rowland 'consummate' line preamplifier by Babis xaitas - Nexus Acoustics, vs. the original Rowland 'consummate' psu.

DacT CT100 Stereo Phone Stage Module description (taken from [DacT CT100 phono module](#)).

The CT100 is a two-channel phono preamplifier module with very accurate RIAA equalization and many features. It is realized with the best semiconductors available and non-inductive, low noise, SMD metal film resistors. The circuit is designed to accept both moving coil (mc) and moving magnet (mm) transducers/cartridges directly in order to eliminate the need for an external mc step-up transformer or amplifier.

MC/MM input loading and input nominal level values are easy to select with high resolution by DIP-switches. The CT100 is ideal for the most demanding applications requiring accurate RIAA equalization, very low noise, extremely low distortion and superior sonic performance. CT100 is a pre-assembled PCB ready for building into an enclosure or even better into your turntable (shorter signal cables). The high output voltage from CT100 makes it equivalent to other signal sources like CD-players.

### Features:

- Compact design. Dual-mono. Very low noise.
- Balanced output option .
- Non-inductive low noise SMD metal film resistors.
- Input accepts moving coil/moving magnet.
- (mc/mm) cartridges directly without step-up transformer.
- Input loading 10 Ohm to 47kOhm for MC/MM selectable in 21 steps.
- Input nominal levels 0.1mV to 10mV selectable in 34 steps.
- High output drive. Balanced 28V. Unbal. 14
- High accuracy RIAA equalization with 0.05dB tolerance.
- Additional time constants of 3.18uS and/or 7950uS are selectable.
- Total harmonic distortion 0.0003%.
- Low output impedance - drives long signal cables.
- High output current capability - drives even high impedance headphones.
- Two-stage dual-supply voltage regulator on-board for each channel. Separate DC supply input for each channel (dual mono).

## Custom P.S. for the DacT CT100 phono module



the custom power supply driving the Rowland 'consummate' line preamplifier with the a.a.s. Gabriel motor battery psu on top

This is a dual mono 800 watt tuned transformer with ultra fast diodes, ground free with discrete shielding and fast optimised capacitance with resistor passive regulation and zero phase in the audio spectrum. It is hard-wired (avoiding thin printed copper conductors).



Custom made powerful dual mono ultra fast psu (made by Babis xaitas - Nexus Acoustics), driving the DacT CT100 phono stage

### Listening comments (entered on 22 June 2002)

It was a Friday morning of June 2000 when my phone in the office rung. It was Dimitris Katsiolis, a Club member, who proposed to me to have a new phono module tested with my system. A friend of his Mr. Vangelis Lazarou, a Greek Hi-End magazine reviewer and also reviewer for enjoythemusic.com had called him, suggesting my system for a thorough review of this new gear. That is how it all started.

Just a couple of months ago, V.L. had written a very favorable review about DacT CT100 phono module from Danish Audio Connect, the famous manufacturer of various upgrade kits and Hi-End accessories in Denmark. Nobody had given notice at that time to this report though, possibly due to the fact that not many people accept the idea of a 'cheap' phono stage beating phono preamplifiers 4 and 5 times more expensive, as he was insisting in his review, plus the fact that he was representing the firm, thing not very innocent looking to many potential buyers...

I did not have anything to lose by accepting, so at this very day in the afternoon, V.L. and D.K. came in, holding two boxes (a small one with the phono module inside and a huge one which was the psu!). My family was away for vacation, so we had plenty of time to evaluate...



Back side of the Rowland 'consummate' phono stage (top) with it's own psu (bottom)

To tell you the truth, Vangelis was not prepared for the audition. He brought a very cheap RCA interconnect and the module was very roughly regulated for my cartridge load characteristics. The phono stage used in my system at that time was the Jeff Rowland 'Consummate', the '94 top model of this famous manufacturer, properly



Rowland 'consummate' phono stage from the inside

regulated for my cartridge and with balanced interconnects used, as they were much better in comparison with the RCAs (Jeff Rowland is the first who designed true balanced audio gear remember?). On the contrary, the DacT CT100 had been wired-up to my line preamplifier unfortunately with RCA interconnects as it had no XLR out jacks. So conditions were not favorable, in fact against the newcomer...

Having said that, I was not prepared for the big difference... and it was not, although in dynamic music passages, I had the sense of a more realistic sound with the CT100. As time went by, putting record after record on the table, the sense of realism was more evident with this minimalistic Danish product. I started to imagine how this could've sounded if I had it properly placed, very close to the arm (recommended and its small size permits that... GREAT advantage!) with the proper interconnects and the proper settings regulated (it has a million combinations believe me!) for my Clearaudio 'insider reference' cartridge.

For the price of this product, value for money seemed excellent, although most of the cost goes to the power supply unit which really needs to be very strong and well designed as the Danish manufacturer insists. In fact, I am not sure, even today, to which extent, a good psu contributes to the magic sound of this product. I will explain the word 'magic' in a moment...



Minimalist design of the CT100 phono stage from Danish Audio Connect. The shortest signal path has been found (custom ordered to Nexus Acoustics) and has been silver-wired with XLR outputs (even the earth wire is silver!). Do enlarge the photograph.

After a couple of hours, my friends left, taking the 2 boxes with them... leaving me to my dreams.

A couple of months passed by and one day I read in a magazine that Babis Xaitas was also bringing these DacT modules making the power supplies for them. I knew B.X. from the 2 Isolators I am using in my system and I thought that there was a chance to acquire this CT100 at last. I was sure that B.X. was able to make a better power supply for this module and also I



DacT CT100 just behind the arm, connected with the shortest possible arm cable...

could order it made custom for my needs (the main phono stage that is) with the minimum signal path I could design and for balanced interconnects. So I did and on the first week of January 2001 my new toy was on my rack, in fact just behind by T/T arm base, with a total phono (arm) cable length (from cartridge to the CT100 RCA input jacks) of 80cm.! and no arm jacks in between.

When I first entered this review, it was 18 July 2001, about a year ago. The CT100 had already burn-in (7 months had passed by since it was incorporated in my system) and also the proper settings had been chosen (after 2 months of work). So I was ready to make the listening review but always something was happening distracting me from doing so...

The word magic I have promised to explain, comes from the fact that this unit I have now, has almost nothing to do with the one I first heard from V.L. I mean the sound has nothing to do with the one produced by V.L. product I had experienced. I had noticed the potential of the unit when I was first introduced to that product, that's true, but I could never imagine how much more a proper placement, a proper interconnect, a proper minimalist design and an excellent power supply could benefit the sound!!

This is a 2,350 Euro product (psu included!) and believe me although price does not sound particularly cheap, I come to V.L. words now that it can beat phono preamplifiers much more expensive. Believe me, I have heard a lot of Audio gear and to tell you the truth, I

have never heard another phono preamplifier, ss or valve what ever the price, sounding even close to this unit. And not only that but it offers so many settings it can amplify virtually all mm or mc cartridges, low or high gain with incredible ease and versatility. But please, try to exploit the manufacturer's philosophy, which is my philosophy too: The simpler the better, or in other words, the shorter the better...

The CT100 module provides the following settings provided through 4 x 8 on-off dip switches (2/channel):

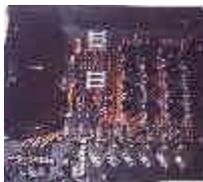
- Resistive input loading, Ri  
The resistive input loading for mc/mm cartridges can be set in accordance with the cartridge manufacturer's recommendation or experimentally.
- Capacitive input loading, Ci  
The capacitive input loading for mc/mm cartridges can be set in accordance with the cartridge manufacturer's recommendation or experimentally.
- Gain  
The gain required for mc/mm cartridges can be set in accordance with the manufacturer's specification for mc/mm nominal output level or experimentally. (For mc/mm nominal output levels below 0.10mV (=100uV), gain is set at 0.10mV. For mc/mm nominal output levels above 10mV, gain is set at 10mV). Both channels must be set identically unless balance adjustment is necessary.
- Gain settings  
Settings specified apply for a CT100 nominal output level of 1 Volt (Vo=1V) unbalanced and 2 Volts balanced.
- Time constants 3.18uS and 7950uS  
It can be most advantageous to activate the time constant 7950uS (20Hz) as a high pass filter (RIAA/IEC) to minimize warp and infrasonic signal interference. The time constant 3.18uS (50kHz) is only activated if the phonograph disc is cut with this time constant. Otherwise the high frequencies will be affected. In most cases the 3.18uS time constant should be left in its default 'on' position (meaning filter 'off').



Babis Xaitas - Nexus Acoustics, testing the custom power supply used for the Rowland 'consummate' line preamplifier

(Do click [CT100 instruction manual](#) for setting and other details.)

### Custom P.S. for the Rowland "consummate" line preamplifier



Impressive look of the original Rowland 'consummate' psu

This is a dual mono 450W tuned transformer, with ultra fast diodes soft recovery, having fast optimised capacitance (30,000µF), with resistor passive regulation and zero phase in the audio spectrum. It is hard-wired (avoiding thin printed copper conductors) and with a separate supply for displays.



Custom made powerful ultra fast psu (made by Babis Xaitas - Nexus Acoustics), driving the Rowland 'consummate' line preamplifier

[Listening comments](#) (entered on 22 June 2002)

After the audition of the DacT CT100, I decided to keep it with all my heart. Eventually I had to give away my Rowland 'consummate' phono stage but I had to give away its power supply too. Well that's fine but that psu was also used for the Rowland line preamplifier. So, Babis Xaitas had to make a custom psu for my preamp too, taking the chance of course to make it stronger and better...AND HE DID!

For a week I had both psu's in my system, comparing them, using both analogue and digital sources. Difference was incredible. I had the impression that I had acquired a much better preamplifier (I wonder if exists). Increasing the volume, difference was stunning in authority, dynamics, bass control, transparency...



3 power supplies, 2 power isolators behind and Rowland 8T power amplifier in the middle, all contributing to the ... central heating of the room!!!

I can now fully understand how much I should give credit to power supplies for the sound quality, preamplifiers and amplifiers are making.

#### System:

- Genesis 300/301 w/new ribbon - Rowland 8T amp - "Consummate" line preamp, using 2 power supplies - Wadia 8 transport - Wadia 15 D/A converter - a.a.s. Gabriel turntable mod. - insider reference wood on Souther linear arm mod. feeding DacT CT100 & "Consummate" phono stages.
- Wiring: a. interconnects: XLO "signature"(XLR) & b. digital cable: XLO "limit. ed."(BNC-BNC)
- Power cables: Xaitas "black signature".
- Power installation: 2X35A dedicated power lines + 2 Xaitas isolators.

#### Music program highlights

- CANTATE DOMINO (Proprius PROP 7762)
- JANACEK "fanfares" (CzStPh/Serebrier, Ref Rec, RR-65)
- Jacintha "Danny Boy" (Groove Note Records GRV1001-1, the 45rpm attached record was used)
- Bill Evans Trio "Waltz for Debby" Analogue Productions APJ 009)
- Rob Wasserman with ... "DUETS" (alto analogue AA011)
- Exotic Dances (MISO/Oue, Ref. Rec. RR 71HD CD)
- Clifford Jordan Quartet "Live @ Ethel's" (Mapleshade 56292)
- M.Nakamoto, "Mari" (TBM xxrcd 3005)
- MAHLER Syphony No2 (PO/Klemperer, EMI 7 69662 2)
- Discovery & Christmas Music, James Welch organist (Wilson Audiophile WCD-806/8419)
- Martha Argerith in Rachmaninoff's PIANO CONCERTO No3 (Philips 446673 2)
- The ARC Gospel Choir "Walk with me" (Mapleshade 04132), etc

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For additional comments on this incredible phono stage, you can also click [DacT CT100/101 phono/line modules review in TAS 2001](#), by Dan Sweeney.

After a few months, 2 other members of the Club have acquired the *DacT CT100* phono module: Dimitris Katsiolis, who has also ordered it from *Nexus Acoustics* and ...

Aristidis Coumpas, who got it straight from the manufacturer and made his own DIY power supply (w/ useful hints f/ *Babis Xaitas*). He is going to make a review after the break-in period...

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