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JEAN MICHEL JARRE

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Canor TP306 VR+

Rooted in the strong heritage of East European valve amplifier design, this versatile and well-made seven-tube phono preamp from Slovakia promises exceptional sound

Review: **Steve Harris** Lab: **Paul Miller**

Phono preamplifiers come in all shapes and sizes, but if you're serious, you'll probably end up with a full-width component that needs its own shelf in the rack, rather than some dinky device that sits alongside the turntable. If you're taking the plunge and going for a tube design, the probability becomes almost a certainty.

But while there are plenty of phono stages as big as Canor's TP306 VR+, there can't be many that are as heavy. When you take delivery of this 12kg-plus package, you could be forgiven for thinking that they've sent you an integrated amplifier by mistake. Once it's out of the box, though, you realise that among its many modern virtues, the Canor has the old-fashioned one of being very strongly built.

CONSISTENT HOUSE STYLE

And you can't help but be impressed by Canor's house styling, distinctive yet unfussy with its black acrylic panel set into the fascia, within which various indicator lights and displays appear. The phono preamplifier comes in the same size casework as the CD2 VR+ CD player, and although the TP106 VR+ integrated amplifier is actually taller, the fascias still match nicely as the acrylic section is at the same height.

For any of these units, you can choose between the pleasingly sober shiny-black-against-brushed-charcoal finish seen on our phono preamplifier review sample, or go for the contrasting effect of a black band on brushed aluminium.

Naturally, the TP306 VR+ has the simplest fascia, as the only front-panel control is the on/standby button in the centre. When connected to mains power, the TP306 VR+ will come on in standby mode, indicated by a discreet red LED. When you touch the button to bring the unit to life, the logo lights up while the

LED begins to flash, showing that the unit is muted while warming up. After 40 seconds, the LED goes out, the unit unmutes and you can play music.

Canor has assumed that switching on and off is all you'll want to do during day-to-day operation, and other adjustments are relegated to the back panel. But the facilities are comprehensive. There are separate pairs of input sockets for moving-coil and moving-magnet inputs, selected via a toggle switch, the layout reflecting the dual-mono construction inside [see lid off shot, below].

Below the socketry, accessed by removing a small cover plate, DIP switches provide all the loading options you could wish for [see picture, p37]. With a total of 20 switches per channel, these DIP arrays might look daunting, but they turn out to be easy to use. Clearly explained in the manual, the settings are also helpfully printed in concise form on the cover.

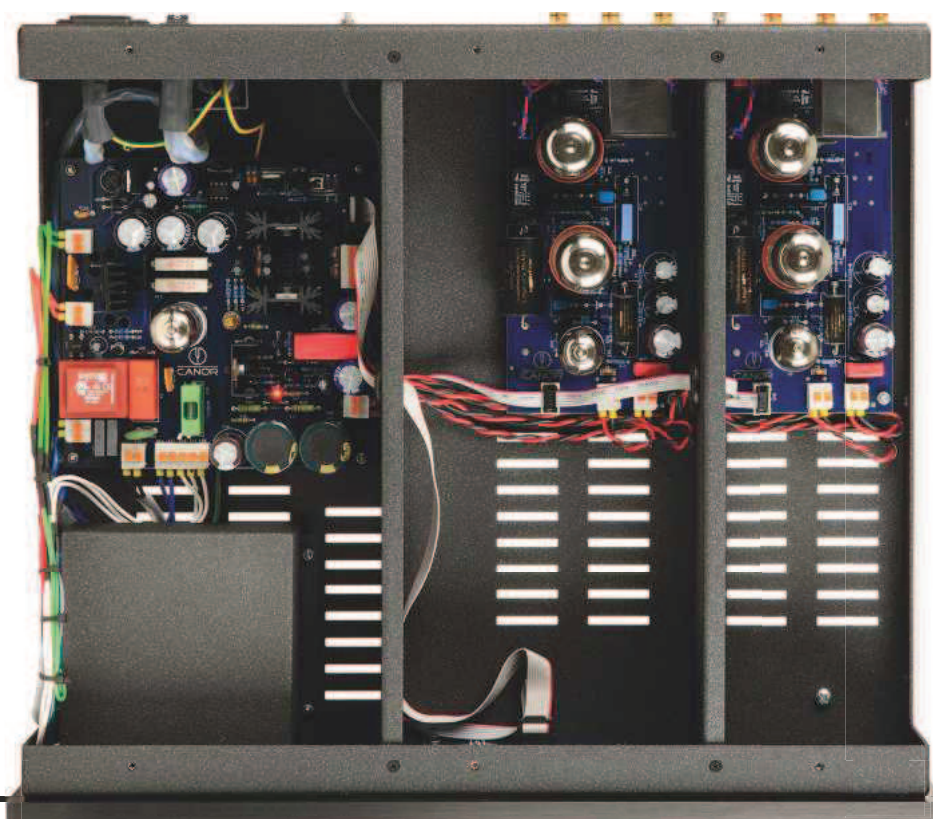
Starting from the left, ten switches set the moving-coil sensitivity at 54dB, 60dB or 66dB of gain [see Lab Report, p37]. Next come a set of six for moving-coil load impedance. Here the effect of each switch varies according to the gain setting, so at 54dB gain the six load options will range from 80 to 2400ohm, while for 60dB gain the range becomes 20 to 600ohm, and for 66dB gain, 5 to 150ohm.

Finally, for MM, four switches provide capacitive loading. They are labelled 100pF, 100pF again, 220pF and 470pF, and in this case the effect is cumulative, so by using combinations you can achieve ten different settings covering the range from 100pF up to 890pF.

CANOR MILLING TECHNOLOGY

It's pretty difficult to build a valve input stage to give acceptably noise-free amplification of the tiny voltages produced by MCs, so most designers opt for

RIGHT: An all-tube design, the TP306 VR+ employs an EZ81 rectifier in the PSU (left hand PCB) with 4x6SL7 triodes offering 40dB gain in the RIAA network. 6922s form the output buffer





transformers to provide the necessary step-up ahead of the MM input stage. Canor's transformers come from the leading specialist Lundahl of Sweden.

While the familiar 6922 (E88CC) tube is used as an output buffer, the combined MM/MC RIAA gain stage uses the bigger 6SL7 double-triodes, each run with its two triode sections connected in parallel.

Canor has obviously put a lot of careful development work into its designs, but its signature innovation is Canor Milling Technology or CMT. Modern valve amps, even the golden-age revivals of Quad and McIntosh, are nearly always based on printed circuit boards because it is usually found impractical to revive the old technique of point-to-point wiring.

However, in Canor's CMT process, areas of the circuit board are precisely removed by milling, leaving only the wanted track areas between key components. You can just about see this in the lid-off picture. (Look between the active components in the two mono phono stage modules to the right of the picture for the neat slots that have been cut through the board.)

According to Canor, the result is 'to give the circuit similar characteristics to one direct wired with air-dielectric cables.' Canor also points out that 'wire-to-wire'

circuits 'cannot achieve the accuracy and consistency of component positioning, which is also critical in achieving the maximum performance' and hence 'Canor CMT provides the best of both worlds.'

A SENSE OF SPACE

With that thought in mind, I settled down to listen to the TP306 VR+. Cartridges to hand included Benz Glider and Koetsu Black, but after some experimenting I spent the most time listening to a Roksan Shiraz, on a Xerxes turntable that had recently been refurbished and setup by its designer. Moving-magnets available included a budget Ortofon 2M Red, Rega Exact and the Goldring-based Roksan Corus Silver.

For no good reason I started with a battered but lovable old budget LP of Beethoven's fourth piano concerto, recorded in 1961 by Hans Richter-Haaser with the Philharmonia Orchestra and István Kertész [Classics for Pleasure CFP 155]. I was captivated, as the Canor gave the sound a pleasing transparency. In this recording the piano is not pushed forward but nestles in the

ABOVE: Styled to match Canor's integrated amp and CD player, the fascia carries just the power switch. Warm-up from standby takes 40s

arms of the orchestra, yet it shone out with clarity, sparkle and definition. The sound of the orchestra itself was inviting, with a real feeling of scale and perspective as the horns and woodwinds emerged from behind the warm mass of the strings.

With the same disc on moving-magnet, the sound was acceptable, but undeniably thin or scrawny by comparison. Feeling

'Vocals loomed with warmth and body from a truly black silence'

I needed a shot of rhythm 'n' blues, I switched back to MC and put on Albert King's 1968 Fillmore concert recording, *Live Wire Blues Power* [Stax SXATS 1002], and here the Canor didn't disappoint.

With this lucid phono stage in the system, you could feel the solid presence of Albert and his band on a stage, and at the same time sense the huge space around them, as the realistic audience sounds defined its dimensions. King's guitar became a force of nature, a monolithic sound that had its own huge presence, but the image was so stable that its power never overwhelmed the system's ability to portray the venue. An impressive result.

Still in the San Francisco in the late '60s, I put on *The Worst Of Jefferson Airplane* [RCA SF8164]. Actually, the Canor couldn't help but reveal the rather grungy sound of this 1971 UK-pressed compilation, which has eight tracks squeezed in on each side. But there was no doubting the power and impact of Grace Slick's vocals on the anthemic 'Somebody To Love' and 'White Rabbit'. It was also nice to hear Jorma's familiar instrumental 'Embryonic journey' sounding forcefully rhythmic.

Dave Brubeck's *Time Out* (in the 1995 Classic Records remastering of Columbia CS 8192) had guts and bite. You could ➔

CZECH UP ON CANOR

Though its Canor brand name first appeared little more than five years ago, this maker has been building high-grade valve amplifiers for nearly two decades. Based in Prešov in eastern Slovakia, the growing Elnika company entered the hi-fi amplifier market under its original product name, Edgar, when the first TP101 amp was shown at an exhibition in Brno in the Czech Republic in 1995. Notable for its solid wood chassis surround, this was the foundation for a series of valve integrateds. While the TP101 had its four EL34 tubes on display, the later TP105 was a fully enclosed design and came with a massive real-wood fascia. At the end of 2007, with its exports increasing, the company dropped the Edgar name in favour of the current Canor brand, while retaining the established logo icon and type style. To maintain quality, Canor says that all its tubes are tested on its own unique measuring systems, and are then carefully matched and burned in. Today, Canor has distributors in Japan and Singapore as well as Europe.

PHONO STAGE



ABOVE: Rear panel layout reflects the dual-mono layout inside, while removing a small cover (shown enlarged) reveals DIP switches that give three gain settings and six load options for moving-coil, and capacitive loading for moving-magnet

feel the individual notes that made up Brubeck's chords even on the fastest passages of 'Blue Rondo' and in the chorus of block chords where he seems to refer to Ray Charles's 'Rock House'. On 'Take Five' the sound was expansive, built up convincingly on the foundations of the cavernous acoustic, Wright's bass line and the punctuations of Morello's deep-diving bass-drum.

SOLIDLY REAL

Moving on to *The King James Version* [Sheffield Lab LAB 3] the Canor again seemed to allow a strikingly integrated and coherent sound. On 'Corner Pocket' the James band swung in happy harmony, though it seemed that the Canor laid bare that momentary slight equivocation over the tempo, not to mention the gain-riding by the engineer.

This became all the more apparent by comparison with the following tracks, as the band plays absolutely as one on 'Lara's Theme' and then gives a truly fabulous performance on 'Cherokee'. You could just wallow in the gorgeous sound of the brass, full, fat and solidly real-sounding. Dave Stone's bass had a great bounce and life to it, and Les DeMerle's drums started and stopped with air-moving attack.

Going back to MM, the sound was still fine, lively and quite invigorating, but no longer had that tactile solid quality in the bass or the convincing dynamic impact from the drums that I'd enjoyed with MC.

In search of female vocals, I turned to a favourite old audiophile treasure, Rob Wasserman's *Duets* [GRP 97 121], and the quintessential Jennifer Warnes in 'Ballad Of The Runaway Horse'. On the first words,

Warnes' voice seemed to loom out of a truly black silence, and it had warmth, body and intimacy. She just sounded more patently present, by comparison with lesser phono stages. Wasserman's string bass had a tangible, woody quality and the sound was firm, free of any vagueness or subjective smearing, and with the fundamental note and its overtones seeming all of a piece.

I then put on the same singer's album of Leonard Cohen songs, *Famous Blue Raincoat* (Classic Records' 10th Anniversary Edition of RTH 5052-1). On the title track, the sound of Paul Ostermayer's torchy tenor sax was pleasantly soft-edged while the rhythm section and strings provided a velvet cushion for the singer's fabulously expressive vocal. On 'Joan Of Arc', Jenny and Lenny were both right there in front of you, and producer Roscoe Beck's slide guitar was spine-chillingly effective: snaky and scaly rather than purely metallic. What more could you want? ☺

HI-FI NEWS VERDICT

Built in a way that inspires confidence, and behaving impeccably in use, the Canor TP306 VR+ certainly puts up a strong argument for tubes. Sonically, especially on moving-coil, it has a hint of character that subtly seems to flesh the sound out, and even if it seems to lack the ultra-detailing of the best solid-state phono amps, it can make most of them sound a little cool and almost impersonal.

Sound Quality: 83%



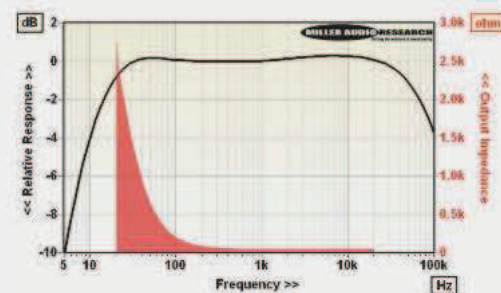
LAB REPORT

CANOR TP306 VR+

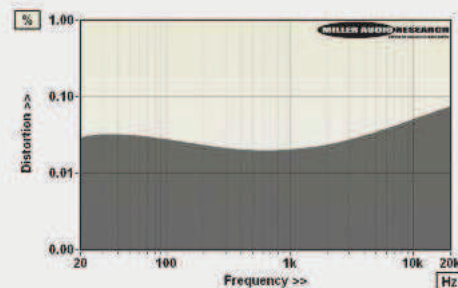
Canor's TP306 VR+ is certainly one of the most technically capable and compatible phono stages we've tested in many a year. The combination of 6SL7 and 6922 triodes in the RIAA and output stages with a Lundahl step-up for the MC input yields a gain of 40dB (MM) and 55dB/61dB/66dB (MC). This may be 1-2dB less than specified by Canor but the range is still perfectly judged for a very wide range of pick-ups and – moreover – the associated input overload margins are extremely generous at 300mV (MM) and 53mV/27mV/15mV (MC), all assisted by a mammoth 25V maximum output.

The preamp does not 'clip' abruptly but distortion steadily increases, instead, with output level from 0.008% at 500mV to 0.035% at 2V, 0.17%/10V and 1% at 25V. Distortion is also fairly uniform with frequency, increasing by just 2-3x between the midrange and 20kHz [see Graph 2, below]. If the TP306 VR+ had a volume control it could drive a power amp directly, but while the <40ohm output impedance is impressive, the increase to 2.39kohm from 400Hz down to 20Hz [see red trace, Graph 1 below], and reduction in LF stereo separation, may impact on subjective bass performance in some systems.

Otherwise, the RIAA corrected response [black trace, Graph 1] is accurate to $-0.8/+0.3$ dB over the 20Hz-20kHz audio range and looks to adhere to the more recent IEC variant (7950 μ s/20Hz), rolling away subsonic resonance and warp signals to the tune of -3.8 dB/10Hz and -14 dB/4Hz. The A-wtd S/N ratio(s) – determined largely by the final tube output stage – is a consistent 79-81dB via all MM and MC settings. Readers may view a full QC Suite test report for Canor's TP306 VR+ MM/MC phono amp by navigating to www.hifinews.co.uk and clicking on the red 'Download' button. PM



ABOVE: RIAA corrected freq. resp. from 5Hz-100kHz (black) with output impedance from 20Hz-20kHz (red)



ABOVE: Distortion versus frequency from 20Hz-20kHz at 1V output. Typically <0.05% through bass and mid

HI-FI NEWS SPECIFICATIONS

Input loading (MM / MC)	47kohm/100-890pF / 5-2.4kohm
Input sensitivity (re. 0dBV, MM/MC)	10mV / 1.82mV/923 μ V/501 μ V
Input overload (re. 1% THD, MM/MC)	300mV / 53mV/27mV/15mV
Maximum output (re. 1% THD)	25V (32-2.4kohm o/p impedance)
A-wtd S/N ratio (re. 0dBV, MM/MC)	80.5dB / 79.8dB/80.7dB/80.4dB
Frequency response (20Hz-20kHz)	-0.8 dB to $+0.27$ dB
Distortion (20Hz-20kHz, re. 0dBV)	0.019-0.077%
Power consumption	50W
Dimensions (WHD)	435x122x350mm