

Stereo Perreaux Eloquence 150i + eDAC, review. Magazine "AudioMagazin", № 2 (109) 2013 r.

An outstanding example of the modern approach to the creation of versatile, feature-rich audio components, in which nothing is sacrificed.

At our first meeting with the New Zealand brand of its typical French name of many geographically disorienting. But that's not the geography, especially as field effect transistors, Perreaux main hobby for over thirty years, work the same way and in the northern and southern hemisphere. Today, powerful MOSFET-devices used in amplifiers almost every third company, and Perreaux if not the first, and in this way, then, in any case, was at the forefront of ideology.



Perreaux company has always sought as much as possible to reveal inherent advantages of a powerful field-effect transistors, among which - even distortion spectrum with a predominance of even harmonics (hence field workers have part-tube nature of the sound), reverse (usually) the dependence of leakage current on the temperature of the crystal, the zero input current. However, in comparison with bipolar transistors field have a higher resistance to heat up the channel and stronger, but these minor flaws with the development of hardware components are secondary.

The menu for tehnogurmana

The integrated amplifier Eloquence 150i (like his older brother Eloquence 250i) is one of the clever audio components - it has a microprocessor, menu, a lot of service functions, remote control, a large blue display on the front panel, part-time hours of playing a role in sleep mode. This gives the user who likes to dig in the settings but feel proud of owning a modern instrument with the beginnings of artificial intelligence? If we talk about service lotion, the device provides the ability to assign a name to any input set for each of them the minimum and maximum volume, the rate of change and the starting level when switching inputs, assign each entry a direct access button on the remote control. In addition, each input can be through-tone (it will be fed directly to the power amplifier stages, bypassing the preliminary stage), as well as a loop for connection between the provisional and the output stage of the external component (such as EQ). In the menu there is an item on display by the management: provide as much as ten brightness levels (up to complete blackout), and contrast, and even set the time to turn off the display when you select this option. As long as there is a microprocessor, the extended service - is, of course, the natural, but not the only or even the main feature of his. On it and go to more important duties, among which in the first place to mention tracking mode and lock out (as well as the protection of the scheme) in case of emergency situations: the appearance of a DC voltage or short circuit, overheating, the output transistors, as well as overload, with by displaying the appropriate message. One of the most important features of Eloquence 150i is the volume control and channel balance, carried out by means of integral resistive matrix with electronic keys that are controlled by digital codes from the processor provides a very high accuracy and smooth adjustment (in this case the step is 0.5 dB). And although the electronic switching supporters not less than the opponents, who prefer traditional potentiometers and stage regulators for long-term reliability of mechanical contacts are clearly inferior to electronic keys. Furthermore, in this case, and volume, and the balance being implemented on the same matrix and not separately, it would be inevitable in the traditional schemes potentiometers. By the way, the input selector is constructed from high quality relay, which is also controlled by the microprocessor.

**In a healthy body - healthy mind**

Overall Eloquence 150i can be likened to a hero Schwarzenegger, rather, Superman's comedy "Twins": The unit is smart, knows a lot and is able, physically developed, athletic, cheerful, neat, well-mannered and also a brand-dressed. Finally, on top of that he charmingly modest. On the front panel - just a few buttons (start and menu navigation), volume control (which is also used to navigate in the setup) and, of course, a large multi-line display. Minimalism is not, of course, but still ... Remote control, unlike them managed amplifier, slim, slender and even not too overloaded with buttons. However, not that he prostetsky in appearance - it obviously has a certain sophistication.

Noteworthy is very well-designed and ergonomic design: in the middle of the rear panel mounted mains, and disperse to the periphery of the input connectors (one balanced XLR and five unbalanced RCA), the output terminals of a good quality speaker connectors, as well as line outputs a preliminary stage. Destroy the





symmetry, however slightly, only unmatched service Connectors: Trigger Input, RS-232 (for integration into the global system of governance and to download software updates), as well as input and output IR commands. However, centrally located network connector owners often frustrating three-legged rack hardware, but with the depth is not too big body Eloquence 150i such fears in most cases be excessive. Also do not often have to reach out to this connector: plug-and-forget.



Equally strict symmetry (and I want to say, biological) reigns inside the case. Sidewalls occupied thick ribbed radiators, which sit on the two pairs of high-power MOSFET-transistors on each channel. Boards amplifying stages are attached to the inner walls of radiators. In the center you can see the board with the input selector switch and the circuit elements a preliminary stage. Actually amplifier is built on a "dual mono", although the toroidal power transformer with him all the same one (but massive enough). Right behind him begins split two pairs of electrolytes to 5600 uF (not too much) and on the order in the same spirit. By the way, the quality of the power supply unit from the point of view of power has said that the transition from an 8 ohm load on the 4 ohm power amplifier doubles. It should be noted, and pretty solid value Damping factor: 800.



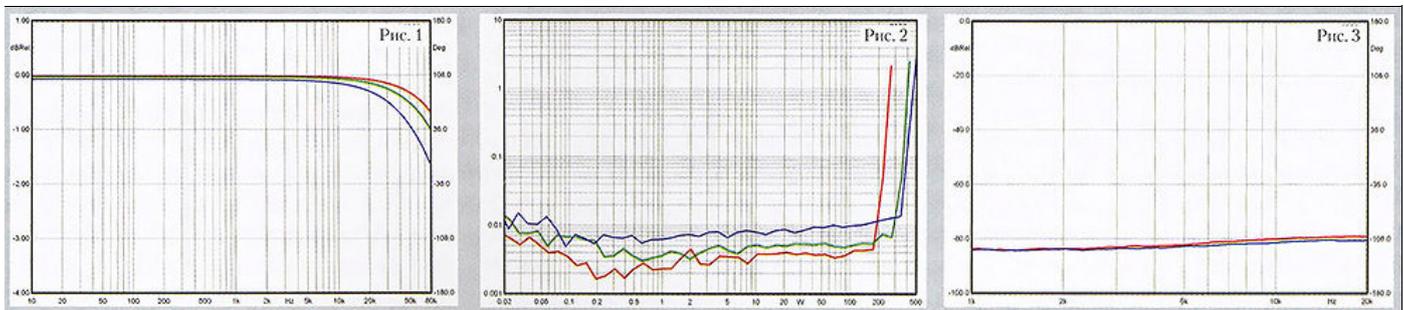
At no capacitors in the signal path - no one: the interstage connection exclusively electroplating, all inputs are open.

Full stuffing

Mistaken who think that talking about the generous equipment and powerful amplifier to this end: the manufacturer offers two options: a module Phono MM / MC (on the rear panel there is a ground terminal for connection of the corresponding output fonokablya) and digital to analog converter module, namely last we tested had a copy of Eloquence 150i (and therefore to the title from him and added appendage «eDAC»). The module is built on chips Burr-Brown PCM 1792 perceiving formats to 24/192. Input signals with lower parameters are brought to this condition by apsemplera (technical details are unknown), which optionally disabled via the settings menu. Both inputs S / PDIF implemented on 75-ohm connectors BNC (the company is strongly recommended that you use a digital cable and only when absolutely necessary to agree on common, with RCA-adaptor). The galvanic isolation of the inputs S / PDIF, which can give signals to 24/192 provides pulse transformers. In addition to the S / PDIF, there are a couple of optical inputs TosLink, as well as port USB-B (1.1 protocol compatibility with USB 2.0).

It only remains to add that the DAC clock is different (according to manufacturer) impressively low jitter value - only 5 ps.

Measurements



Frequency response of sound frequencies from the amplifier Perreaux 150i does not exceed 0.07 dB (Fig. 1). The trend of decline in the supersonic region schedule allows you to define the bandwidth of the signal is not less than 100 kHz. The device is capable, without reducing the quality of work with a face value of loads. According to the graph in Fig. 2 (8, 4 and 2 Ohms / 1 kHz) that the level of distortion is not more than 0.01% over the range of operating capacities. This value is stored for the other end of the sound range. Maximum power output for 8 ohms, fixed at 0.7% THD, is 255 watts. The damping coefficient for the specified nominal ballast is 540 units. The level of attenuation between channels - more than 80 dB (Fig. 3). S / N ratio - not less than 100 dBA.

The results of instrumental examination

Max power (0.7% THD, 1 kHz) for 8/4/2 ohms, W	255/395/450
Max power (0.7% THD into 8 ohms) at 1 kGts/80 Hz/10 kHz, W	255/255/255
THD at 0.5 to 1 p max kGts/80 Hz/10 kHz%	0,004 / 0,003 / 0,016
Crosstalk attenuation between channels at 10 kHz, however, Db	80
Signal / noise ratio, dB	100
Damping factor	540
Frequency response of 20 Hz - 20 kHz, dB	0.07
The upper limit on the level - 1 dB kHz	...
The decline in the frequency of 80 kHz, dB	0.67

The tests and provocation

When a hand gets so fancy and stuffed the machine, there is a desire not just to experience it, and how to torture, having tried as much as

possible of what is available. Therefore, the amplifier connected to a digital source (CD-player) in three ways: through unbalanced inputs, balanced and through the digital interface S / PDIF, with the benefit of switching inputs on the fly so convenient management had no problems. In addition to speakers PMC OB-1 to it and a couple more of connectable Davis Acoustics Cesar Vintage, as fully as possible to highlight the inherent quality of Eloquence is against the background of the typical handwriting of varying acoustics. The only thing that does not come down to the hand - port USB, but it's safe to say that what has been done is sufficient for a reliable evaluation of the model.

I must say that in the presence of intact inquisitive user default settings amplifier is very comfortable, and very pleasing sense of comfort when switching inputs volume decreases by 40 dB, and then quickly but smoothly returns to the original level.

With all (and no small) difference sound speaker individuality PMC Davis Acoustics we were able to clearly identify the contribution of the amplifier in a common cause: he clearly dictate its rules speaker sound game, not just gave an amplified signal at the mercy of the electroacoustic transducer in an attempt to shift the responsibility for the final result. At the beginning of the character mentioned about the lamp Polevikov. Indeed, in the present sound anything remotely like the plastic tube-and at the same time (and no less, and even more) - transistor power and assertiveness, palpable density of the sound field. In a variety of musical genres, creating a dense tract, concentrated sound material with a well defined structure, the magnitude of the stage. The amplifier is clearly shared spatial images in a deep and frontal dimensions. Sometimes, though, the rising edge of approaching too close to the stage (the feeling was almost the same as that which occurs when listening to music on headphones), and would slightly increase the distance to the speakers.

During the tests on different kinds of music but have never arisen claims tonal balance. It should also be noted quite good, though not outstanding sense of rhythm. In drawing the nuances and fine details New Zealander also did not lose face.

However, in this tremendous ointment to find a tiny drop of tar - which, however, did not spoil the experience, yet a drop, not a spoon ... Little details like amplifier pulled on a slightly higher level of significance, then they are not as too small. Like a bad thing, especially since the sound is not done analytic and stores music and emotional. However, when a "sound undercoat" slightly lifted, though it leads to a slight but noticeable distortion of the proportions between the music of macro-and micro-world. Individual records that property even will benefit, but others may slightly disrupt the smooth flow of musical thoughts and shaky internal harmony.

When switching from balanced to unbalanced input sound rich dynamic passages fragments became a little less bulky, more airy and free. About the same feeling, though not at all phonograms arise in the transition to the digital input when the apsemplere, but in this case the effect was not as clear and stable, and therefore wiser to abstain from the unambiguous conclusions on the level of "worse - better . " Again, as in the manipulation of the speakers, the sound character remained the same, changing only the same implicit shades, and then only in a very small range. No provocation could not get the amp to change the tone and at least something to give up the slack.

To all of this we would add only one thing: a little more delicacy (even through the smallest of details) - and an amplifier, whose name is a remarkably accurate reflection of his personality (eloquence is translated as "eloquence"), moved to yet another small but important step to the absolute realism of live music, which seeks the best audio equipment that never reached the full.

The control path

- Speakers PMC OB-1, Davis Acoustics Cesar Vintage
- CD-player Bryston BCD-1
- Interconnect cable Analysis Plus Solo Crystal Oval Interconnects
- Digital cable KimberKable DV-75 BNC
- Speaker cables Analysis Solo Crystal Oval 8

Output

Undoubtedly, an outstanding example of a modern approach to the creation of versatile, feature-rich audio components, in which nothing nothing is sacrificed. Eloquence 150i Sonic style with his characteristic energy and informative will probably find a lot more supporters than opponents. It is possible that your best qualities amplifier with speakers reveal a relatively low sensitivity.

Prepared according to the magazine "AudioMagazin", № 2 (109) 2013 r. www.audiomagazine.ru