BRYSTON COMPONENT SYSTEM

Author: Nikolay
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A mono-brand system is always interesting, because it is the embodiment of a certain sound idea in an extremely pure form. True, it is extremely rare to assemble a kit so that both electronics and acoustics are from the same manufacturer. But today we have just such a case - there is a chance to get acquainted with several components of the Bryston of the most different purposes. And we decided not to miss it.

UNIQUE UNION

Canadian Bryston always had an extensive range of electronic components, and five years ago began to produce more and speaker systems. And I approached their design in their best traditions - non-standard and at the same time it is absolutely logical to get the highest quality result. But I will begin the description of the system from the very beginning; source. The signal from the NAS server over the local network was fed to a Bryston **BDP-2** digital player. This is a time-tested development of Canadian engineers for Linux OS with software control over IP from a computer, as well as gadgets

for iOS Android Android. The design is based on the motherboard iBase MI-890. The latest version of 2018 software guarantees support for files with resolutions up to 384 Hz / 32 bits in the most common formats, including AIFF, FLAC, WAV, mp3, M4A and OGG. It is possible to install an internal HDD or SSD with a capacity of 1 and 0.5 TB, respectively. Content can be received from a variety of sources, for them there are already eight inputs - six USB 2.0 interfaces and a pair of 1 Gbit Ethernet network connectors. The output signal is transmitted via SPDIF (via the BNC socket) and balanced AES / EBU. External control is also possible via two RS-232 ports in Crestron, AMX, etc. systems. Although the BDP-2 stuffing is mainly to convert the numbers to an analogue, a **BDA-3** DAC was connected to the player.

Since these devices were originally designed to work together, many of the parameters (resolution and file formats, management methods) are identical. The BDA-3 has ten inputs - four HDMI, two asynchronous USB 2.0 B, two S / PDIF (on BNC and RCA), Toslink and AES / EBU. The most interesting thing is that HDMI inputs are designed to receive DSD streams when playing SACD, and besides, they directly pass video in 4K. The converter itself is built on a dual 32-bit AKM chip, after which the analog signal is fed to a class A discrete balanced amplifier. The output line connectors are XLR and RCA. Digital and analog paths are divided both by location in the housing and in power.

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The Bryston BP17 **preamplifier** belongs to the elite series of equipment, respectively, it uses the patented circuitry Salomie. This is a sound path on discrete transistors operating in class A with balanced output. Volume control - software, on a microprocessor, with the ability to adjust the stereo balance. You can connect up to seven line sources to the network. The outputs are also on RCA, but there are a couple fixed on the XLR. All switching is on the relay, the audio path is powered separately from the service and control, which is carried out from the remote control, via RS232 or 12-volt trigger. Optionally, a MM phono preamp or DAC card with a pair of optical and a pair of SPDIF inputs can be added to the BP17.

But further in our system - the most interesting. The fact is that the three-way Bryston Mini T speakers that we are going to listen to do not have built-in crossovers. They are designed for separate amplification of bands with active filters in the preliminary path. For this purpose, the **BAX-1** programmable digital crossover was created.. The signal coming from the pre-amplifier is first

digitized and fed to the DSP, where it is divided into three bands in each channel. Pre-type filters, their slope and frequency section are set by the manufacturer for specific speakers, and all conversions occur in 24-bit / 96 kHz. For converting into analogue, six AKM DACs are used, the signal from which through matching buffers is output to balanced line outputs. For optimal coordination with power amplifiers, you can choose one of three output level values - 0, +3 and +6 dB. In addition, for room-correction in the DSP has a 10-band equalizer operating in the range of 10 - 160 Hz. Settings are made easier thanks to the intuitive graphical interface that is transmitted over the LAN to a PC, and if there is a wireless network, to any type of gadget.

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The name of the Bryston **875 HT is** simply decoded - 8 channels of 75 W each (8 Ohms). He has the same circuit design as the entire SST2 series - which provides low distortion and effective acoustic damping. In our version, four channels were connected by a bridge by two, which gave 250 W of power for each of the bass bands, while the rest worked separately on MF and HF. This power is quite enough for more serious acoustics, for example, floor Bryston Middle T.

Mini T monitorssix input terminals - two from each speaker, and amplifier cables of equal length were connected to them with speaker cables of equal length. The name "Mini" is here exclusively in the sense of "Bryston" - systems of 57 centimeters high have a mass of 19 kg and do not seem miniature in any way. The MDF hard case has three heads - an 8-inch low-frequency one with an impressive suspension, a 5.25-inch mid-range tweeter and an inch titanium dome tweeter. The optimal frequency section of the bands 160 and 2300 Hz were set in the BAX-1 crossover. Since the monitors were originally designed for separate amplification for each speaker, the developers sacrificed sensitivity (85 dB) for the dynamic range, i.e. the ability to reproduce sharp peaks in volume without compression and distortion. The hulls with effective damping were also designed from the same positions.

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All cables in the system are also Bryston, and all are interconnects, like RCA and XLR with silver-plated copper conductors, and for acoustic cables they are from OFC 6N. Networkers - Neotech copper OFC UP-OCC.

As you can see, the architecture of the system turned out to be complicated, with a fair amount of signal cables, which at first glance even strained a little. I listened for about ten minutes, but did not notice any artifacts associated with temporal (phase) mismatches. The sound was solid, energetic and detailed. Immediately you pay attention to the lower case flow: the bass was not only well structured, with an instant attack, but also with an unexpected drive for speakers of this caliber. Due to this, the sound has found a spectacular relief and a clearly built structure, even on serious symphonic music.

Some of the files being played were creaked from our test CDs, and it seemed to me that some of them sounded even better than in the original — somehow alive, exciting, and more dynamic. And it is more interesting to listen to music, its presentation seems more prominent and spectacular. Why? The answer is simple - all speakers in the speakers are connected to amplifiers directly, without intermediate chains of capacitors, coils and resistances, in which spontaneous time delays occur and energy is lost. The simultaneous transmission of attacks in all three bands and the speed of response of the diffusers give the sound picture reliability and integrity from the base to the very airy overtones. This is an important advantage of the digital crossover - it allows you to adjust the phase characteristics in each band. BAX-1 is calibrated at the factory taking into account the characteristics of each speaker, due to which even minor time shifts are eliminated, to which our ear is very sensitive. In traditional passive filters, this accuracy cannot be achieved.

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In our case, as an additional bonus, we get a three-dimensional scene with a sharp rendering of the smallest sound nuances. Spatial alignment is sometimes so effective that it seems a bit artificial, but you quickly get used to this interpretation. On most phonograms, the main action takes place in the center of the scenes, a little further than the front line, and only a few sounds go to the flanks. But sometimes the director unfolds the panorama so that it clearly goes beyond the stereo base - it turns out very interesting.

Now for the numbers. While the overwhelming majority of the music was recorded at a resolution of 44/16, and the DACs in the BAX-1 work in 24/96 format, there were no obvious artifacts - stiffness, dryness or noticeable simplifications - in the upper range. Mini T tweeters have a smooth and calm character. Bryston never chased for ultrasound, which in this case clearly benefits the sound - the top is comfortable, without accents and sharpness. If the room is muffled with carpets and upholstered furniture, simply remove the grills from the monitors.

For the purity of the experiment, a Rega Planar 8 player with an Apheta II MS head, a Rega phono MC phono preamp and a Sugar Cube click suppressor were added to the system. With such a source, the picture, of course, has changed, but not so radically, so that one can speak of the mega advantages of the analogue. He received more freedom for the bass - when he went into the depths

he relaxed a little, he became softer, but he did not lose the composure and clarity of the structure - well, if only quite a bit. On good editions the dynamic range was subjectively expanded, the orchestral works sounded as if larger, with a more open panorama. Some tension was gone, but the detail and resolution in the upper band was slightly blurred. I liked how Sugar Cube Click Remover works - it really removes clicks with almost minimal impact on useful information.

CONCLUSION:

As for the Bryston set, it can be considered an example of an integrated approach to building a sound field that can be easily adapted to different conditions and tastes of a particular owner.

Sources of content can be different, while the concept will not lose its strength, since it is implemented through a perfectly consistent bundle of crossover, amplifiers and speakers.