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Reprint

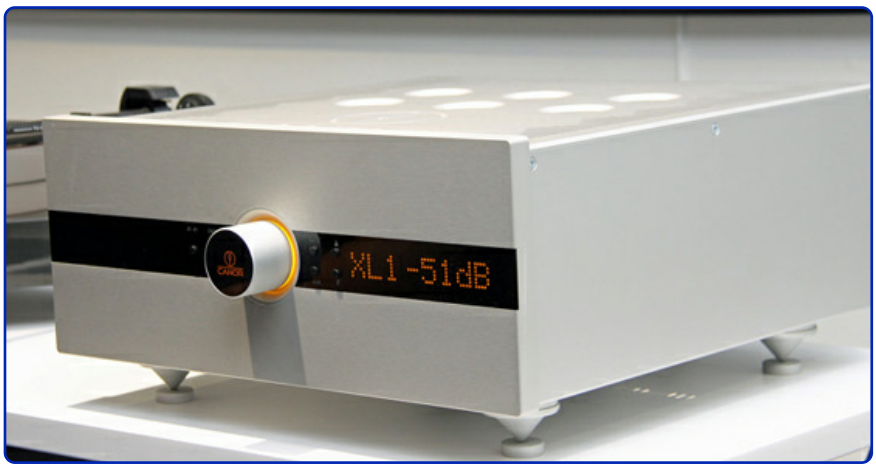
A backstage visit at Canor:

Passionate Pros

Canor from Slovakia builds high-class audio components and has ample and, for a high-end manufacturer, almost incredible production capacities. i-fidelity.net took a 2,600- kilometre car ride to look behind the curtain.

Dresden lies already way behind. For perceived hours we have been driving on that Polish highway, the Tatra mountain range is now rising before us. We are right in the middle of nowhere and still need to cover well over one hundred of the 1,300 kilometre distance. With every mile our expectation to find a state-of-the-art production site for audio electronics at our destination in Presov is dwindling, for in this area people rather tend to spend their winter or sommer vacation. While thinking about valve-equipped amplifiers, CD players and phono preamps, a long day draws to an end.

The next forenoon starts with our visit to the Canor headquarters. Managing Director and Chief Designer Zdenek Brezovják gives us a welcome. Since 1994 his company has manufactured high-quality hi-fi electronics at various sites in the city. Soon it becomes obvious that the Slovak doesn't really like the word »supplier«. Because only for those things that lie in your personal scope of responsibility, you have full control over the quality, as he explains – not to mention the extra price edge. In 1995 he designed his



The new Hyperion high-end preamp is scheduled to earn Canor a seat in the amplifier House of Lords.

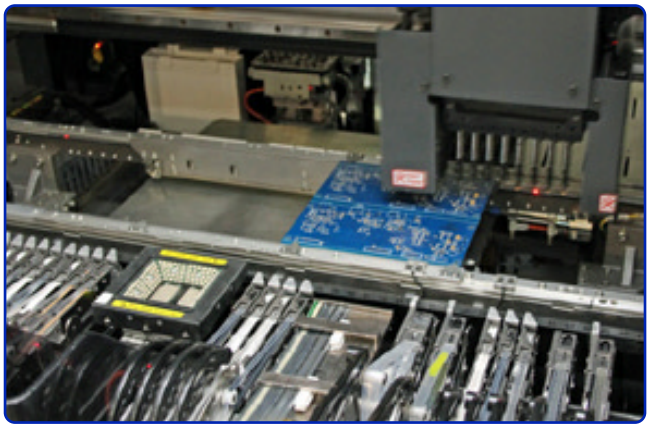
first own amplifier, a valve model by the name of TP101. Zdenek Brezovják openly admits that marketing their own products had no priority – until 2019 the company focus definitely lay on the OEM business.

Canor was founded already in 2000. Currently their range comprises two series of integrated amplifiers, CD players and phono preamps which are distributed worldwide. In particular the American and the Chinese market generate high turnover figures here, as Zdenek Brezovják reports. The 2.10 line will soon be complemented by an eagerly awaited D/A converter equipped with Sabre chips which can process DSD512 and PCM up to 384 kilohertz including MQA. This DAC allows to switch the output stage between valve and solid-state operation, there will be an upsampling option, and finally the sound can also be fine-tuned via discrete digital filters. With the Hyperion preamp (the »Titan of Light«) and the Virtus power amps, Canor wants to secure a permanent place in the international amplifier olymp next year. During our visit we got an exclusive first demonstration of the new high-end electronics.

Today Canor has nearly 100 employees who can carry out almost every in-house production step. Yet the metals to be processed, electronic components, printed circuit boards as well as the valves, which are praised by Canor for their sound quality, are supplied. Walking through the several hundred metre long production hall you can't stop being amazed. For instance, after the multi-hour burn-in procedure every single valve is measured and classified by means of a custom-developed system called Aladdin. This is to make sure that only precisely matched valve sets are used in production. In the event that a replacement should be needed years later, a suitable glass bulb can certainly be found. i-fidelity.net was able to watch all those meticulous steps at close range.

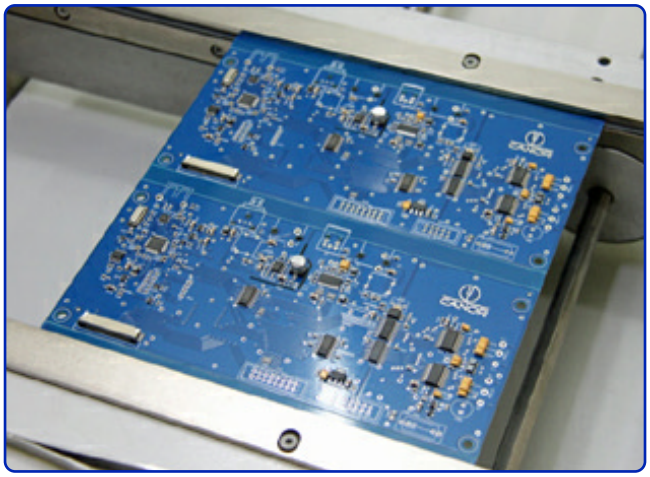
From the early days: before Canor the Slovaks were making valve amplifiers under the brand name Edgar.

This is where Zdenek Brezovják develops the Canor modules. For him gardening is not only a compensation for his time-robbing job, but also a fertile soil for inspiration. Although he uses valves for his designs, this doesn't mean working with outdated technology. State-of-the-art measuring equipment enables circuits the technical values of which are far better than those of many competitors.



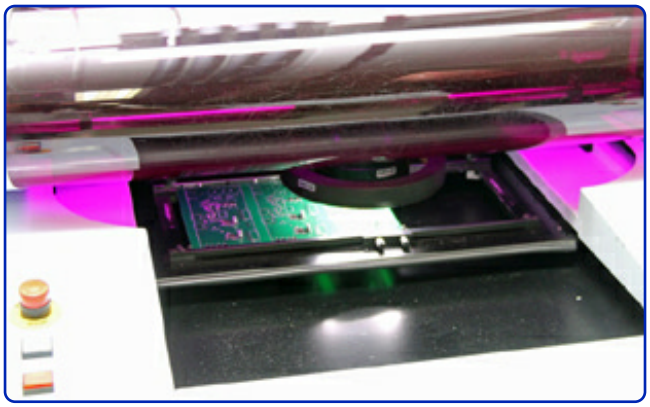
Canor equips the pc boards with SMD and THT parts. This machine fits in 50 SMD parts per second. Due to their low weight they are glued into place.

Error messages are then displayed and an employee checks their relevance.



The processing of the boards is done in several steps. During the breaks a surface inspection is performed before going to the next assembly robot.

Larger parts are manually inserted into the board.



Since the parts are so small that their placement and contacting cannot be made with the naked eye, this is done by a camera that scans every square inch of the board and compares the actual image with a reference image.

After that they are soldered by hand.

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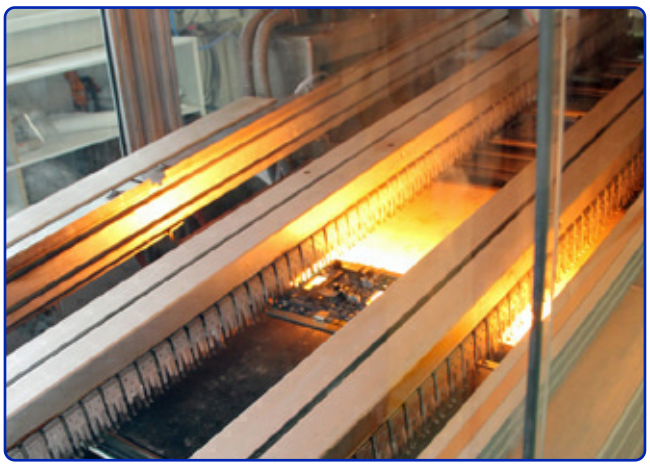
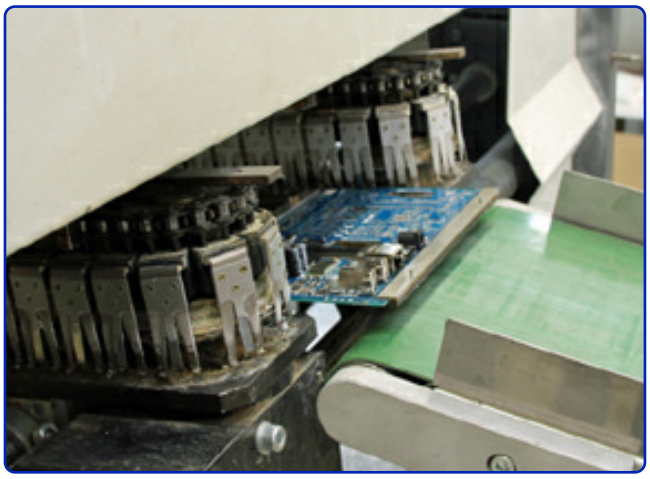
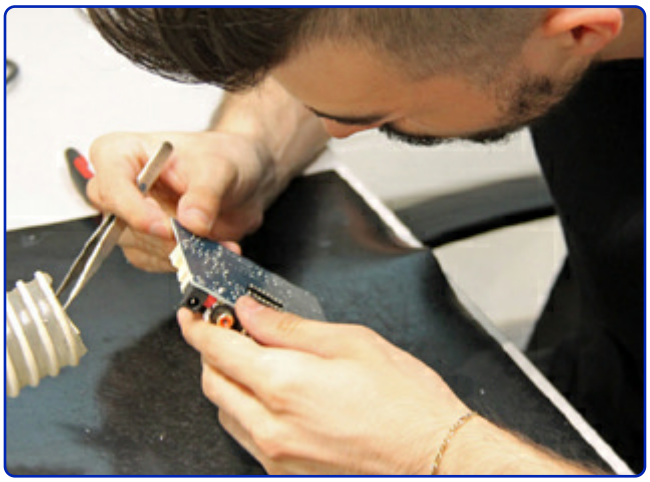


The rest runs over a professional solder wave …



… at the end of which the result should be a functioning board.



Once again the product is given a close look before it's taken to the first electrical test.

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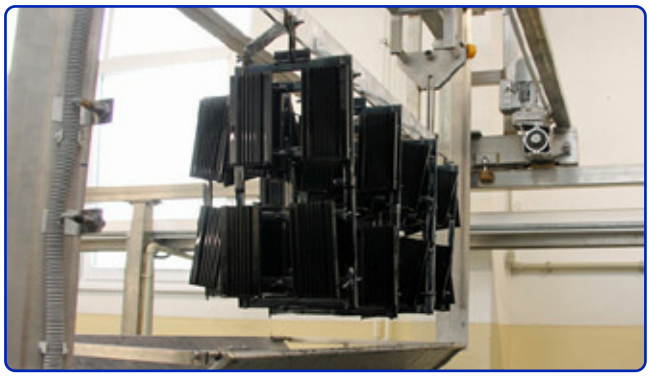
The raw material for the housing manufacture arrives at the Canor site in the shape of aluminium rods.

Next comes the dip. This is where the later surface colour is determined. Here we see the »silver« bath while …



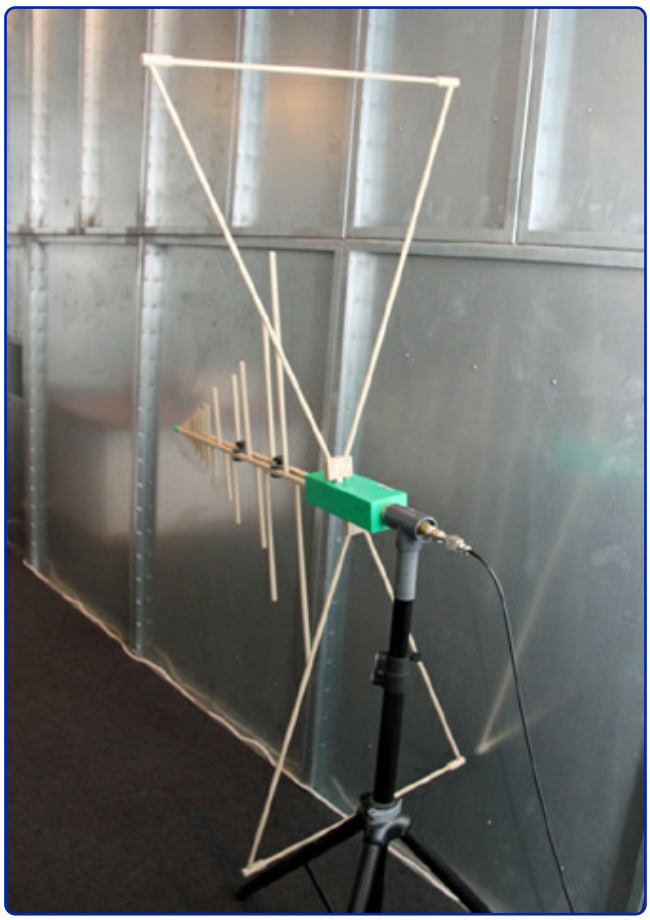
…a few metres away everything turns black, which is done at Canor in fully automated immersion steps.

The next stage is the surface treatment. By means of a sandblaster the surface texture is worked out.

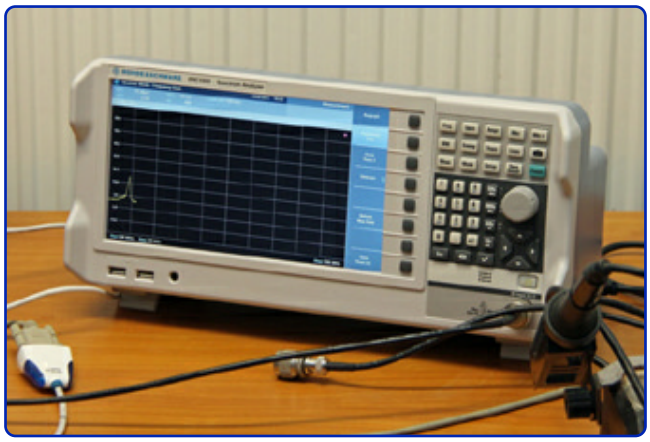
The key to the successful valve concept is called »Aladdin«. This measuring station has been in use for decades.

Every valve is measured with different signals. The results are stored in a huge database. For the production valves of highest electrical similarity are selected.

In order to bring the valves into a stable condition already before the measurement, Canor submits each of them to a multi-hour burn-in procedure. Here, too, Zdenek Brezovják accepts no compromises.



The true dimension of the production capacities: with this antenna new modules are bombarded with radio frequency. For this purpose Canor has a special room in the building. The aim is to find out whether …



…the modules comply with the EMC directives. The subsequent certification by an official laboratory is merely a formality.

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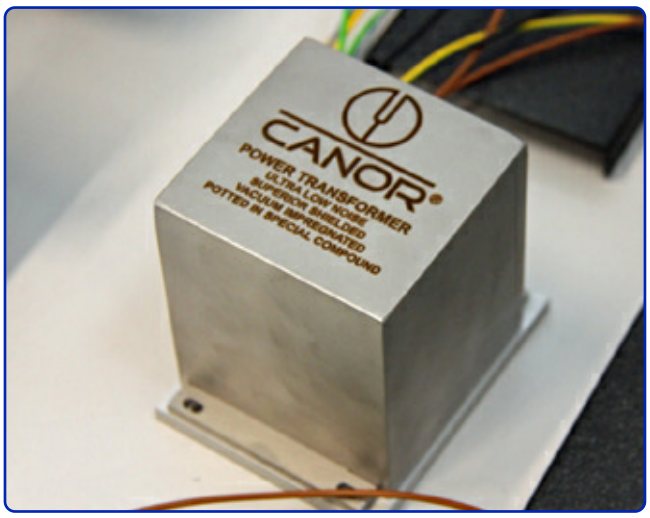

Canor also makes ample use of the existing measuring equipment park for development. For instance, the transformer of the PH 2.10 phono preamp is extremely well protected against RF interference, but will not radiate into the device, either.

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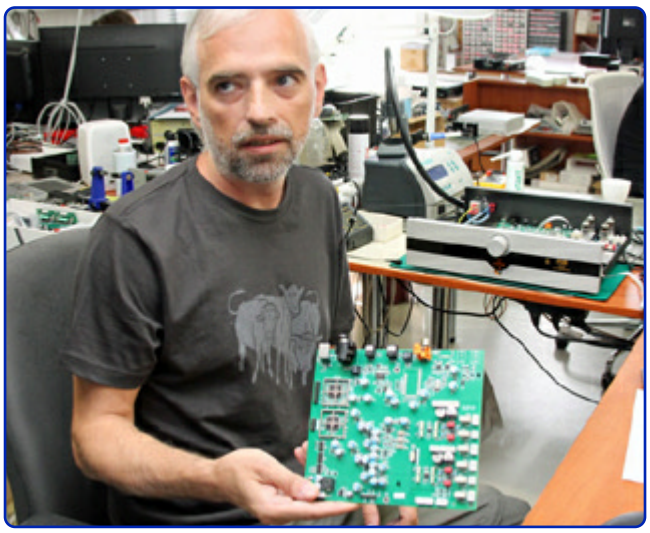
The crowning glory of all efforts is the musical enjoyment at Canor's new listening room. With a Fink Team Borg a superb monitoring speaker is present on the site.

With the new Hyperion preamp and the ...

… Virtus mono power amps a highly musical listening pleasure is already guaranteed. Yet the terminal fine-tuning and the valve selection still lie ahead. Canor enjoys the luxury that time pressure kind of doesn't exist.



Finally the big surprise: in the R&D department we are spotting a Canor DAC which, beside the valve output stage, also has a solid-state power amp. The D/A conversion is effected by parts from Amos and Sabre.

It will handle up to 384 kilohertz PCM and DSD512. We found it exceptional that it can also be controlled via Bluetooth. This certainly meets the wishes of quite a few customers, but requires a substantial know-how as to the clean technical implementation.

IDC-Klaassen is responsible for the German sales. Managing Director Martin Klaassen points out that prior to shipping every device is tested for a good 30 hours. For each serial number there is a corresponding protocol.

Zdenek Brezovják is the master of the valves. When asked why he sticks to these components, he answers with utter conviction: »because of their outstanding sound quality!«

Contact

IDC Klaassen Int'l OHG
Am Brambusch 22
44536 Lünen

Internet: www.canor-audio.de
E-Mail: info@mkidc.eu
Phone +49 231 9860-285

IDC-Klaassen on facebook.

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