

PREAMP/AMP BENCH TEST

All in the nuance

MIMETISM AUDIO PL342 & PA462

by Dominique Mafrand

The 300 and 400 electronics range from the French manufacturer Mimetism Audio have met with great success... outside of France. And it is even more of a pity that they are manufactured in France. We had the chance to test the latest: the PL342 preamp and the PA462 stereo unit. This is real high-end gear; just what we like.

The company Mimetism Audio and the Mimetism brand was created in 2004 by two specialists, France's William Andrea and the Swiss Yvan Coderey. The first paid his dues at many French companies like Supravox and Famco, he produced electronics for Yves Cochet, YBA and Vecteur. He developed the circuits that became the design basis for most of these products.

The second, owner of the Audiophile store in Lutry, close to Lausanne, specialises in high-fidelity equipment, including the whole Mimetism range. He began by designing products for Vecteur and introduced the Anagram brand to product developers, such as Mimetism Audio. The company is based in Brittany, not far from Vannes. William Andrea is currently in charge of the research and development, the manufacture and export, while Yvan Coderey oversees everything to do with the design, software and manufacture of printed circuit boards. As their website states, Mimetism Audio is the culmination of Swiss precision and French creativity.



PL342 PREAMPLIFIER

This device was launched in July 2012, followed by its first global presentation at the Hi-Fi Show in Hong Kong in August 2012. As for the PA462 amplifier (PA for Power Amplifier), its name PL342 (PL for Preamplifier Line) breaks with previous models that consisted of a number followed a decimal, reminiscent of the product references of a well-known Helvetic brand. The plan for the high-end Mimetism PL342 was to design a simple and highly reliable electronic circuit without technical compromise, all housed in an elegant and refined chassis. The 'dual mono' structure was a logical choice for both power and audio aspects. Extreme care has been taken in the power supply, with regulation respectively distributed and applied separately for each circuit level. Components have been cleverly selected in the various technologies used (traditional, surface mounted) and in various versions (discrete, integrated circuit). Passive elements were sorted according to very tight tolerances. The main design is based on a trio of chips with high volume, very low distortion and noise levels, operational amplifiers Burr Brown OPA2227 and Texas Instruments AD797 as well as the digital volume control MAS6116. In fact, only the processing of the

adjustment is done digitally because the volume itself is handled purely in the analogue domain. Another feature specific to the PL342: excellent distributed control over two levels. First in the output, rectifying and filtering via regulators in series, then at each stage of the audio chain where the manufacturer has used a second layer of regulation, notably with the L T1461 chips (precision series regulator with high output current and very low temperature drift). All components are installed on four printed circuits, including one for the audio section and three for power supply and regulation. There is also a board on the back of the front panel for managing the controls and a board attached to the rear face that receives the directly soldered connectors and inputs' switching relays. Connections between the boards are entrusted to ribbon-type cables. Two molded toroidal transformers of 100 VA supply the necessary voltages. The unit sits on four aluminum feet that can be replaced by Sound Care models. It is housed in a chassis made up solely of thicker (front and cover) or thinner (rear and underside) aluminium plates. They are screwed together by means of solid aluminum angles. At the rear, the quality XLR and RCA connectors are rather dense and there are two mini-jacks for the "trigger" control, an RS-232 port for updating the software for the device controls and the on/off switch.

The front face has a blue LED display and six buttons, including those for standby, source selection and volume control. These functions are also covered by a beautiful remote control that is proprietary to MA ZAP. This remote has additional functions such as adjusting the level of each input, setting the balance or selection of the source sent to the recording output.

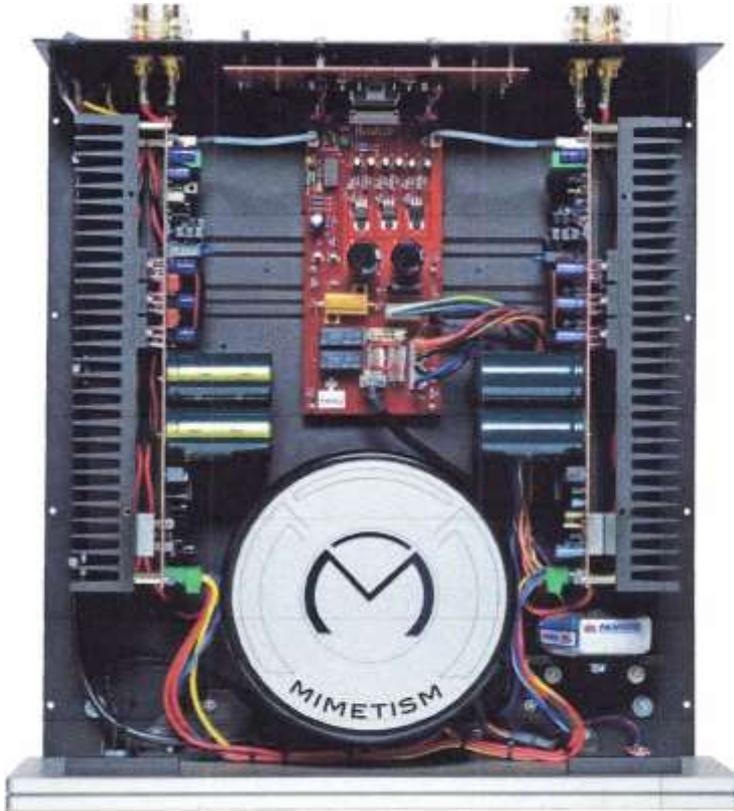


PA462 AMPLIFIER

Officially introduced in September 2012, the PA462 stereo unit was also presented exclusively to the Hong Kong show the same year as the PL342. Its presentation is similar to that of the preamp, with a longer chassis for the to house its particular functions, but built identically. The front face also differs with a simple power button, a blue LED indicator and the brand logo engraved in the centre. As with the PL342, the brand name is machined into the cover. Connectivity includes two pairs of speaker plugs isolated by channel, two mini-jacks for trigger control, a pair of RCAs and a pair of XLRs, selected by a switch, and a mechanically locking switch to go from stereo mode to bridged mode. Removing the cover reveals a large shielded transformer of 1500 VA which contribute to increase the weight of the apparatus



MIMETISM AUDIO PL342 & PA462



SPECIFICATIONS

Origin: France

Price: 8000 euros (PL342 preamp)

8000 euros (PA462 amp)

Dimensions:

450 x 130 x 400 mm preamp

435 x 130 x 465 mm amp

Weight: 20 kg preamp, 32 kg amp

Preamp PL342

Frequency response:

5 Hz to 260 kHz at +0/-3 dB

Distortion

< 0.03% (harmonic, 1 kHz)

< 0.05% (intermodulation)

Signal to noise ratio: < -102 dB

Input sensitivity: 0.2 mV (4 V RMS max)

Output level: 15 V max (600 ohms)

Inputs (line level): 4 RCA, 3 XLR

Outputs: 2 RCA, 2 XLR

1 line out

PA462 Amplifier

Nominal output:

2 x 150W into 8 ohms,

2 x 300 W into 4 ohms,

1 x 600 W into 8 ohms (bridged mode)

Frequency response:

5 Hz to 105 kHz to +0/-3 dB

Distortion:

< 0.03% (harmonic, 1 kHz)

< 0.05% (intermodulation)

Signal to noise ratio:

< -102 DB (full power)

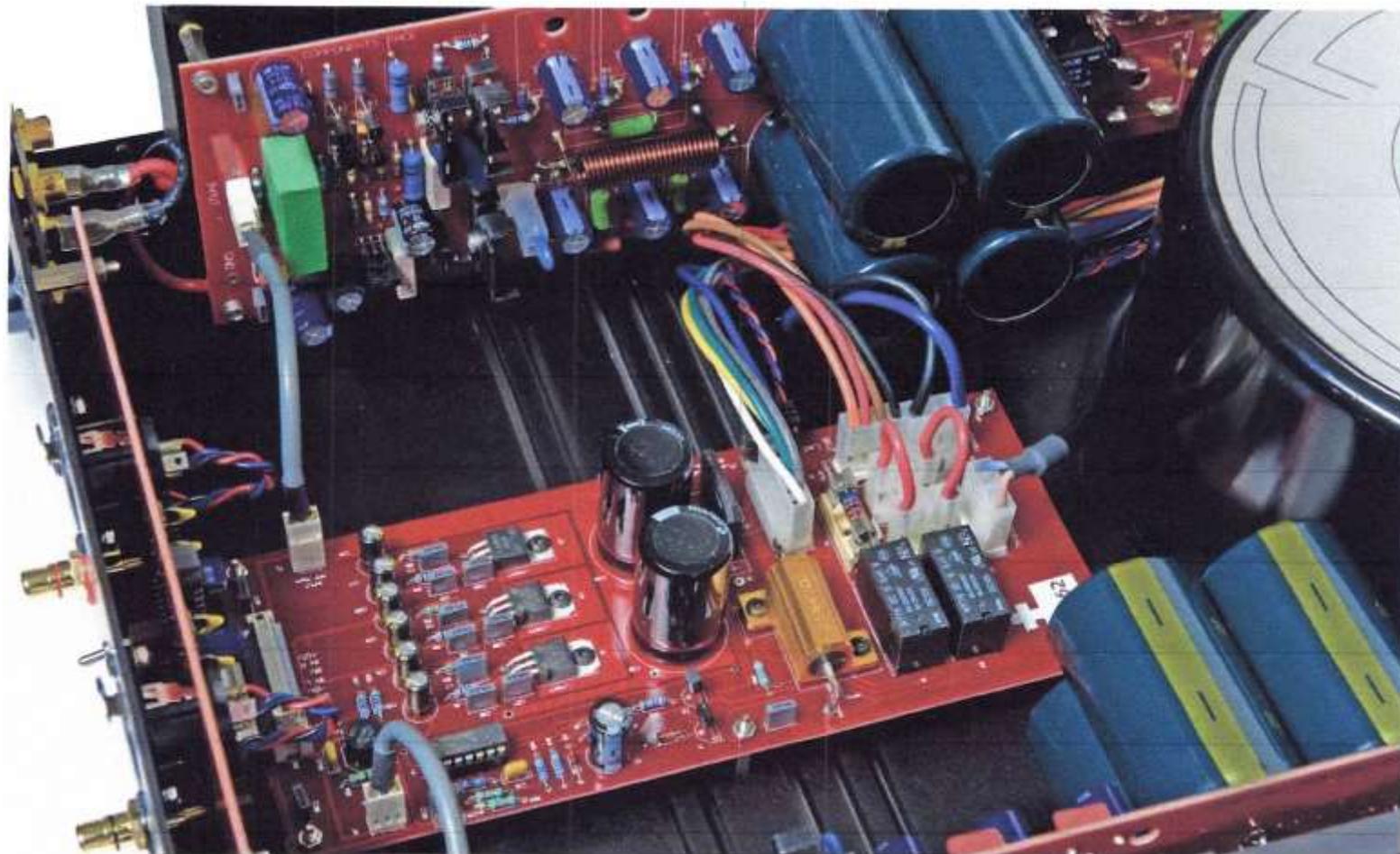
Input sensitivity: 1.3 V (RCA, 30 K).

2.6V (XLR, 30 K)

Analogue inputs: 1 RCA, 1 XLR

Outputs: 4 pairs of speaker connectors

The internal layout of the PL342 (below) leaves no doubt as to the dual mono design of the circuit. The small toroidal transformer in the PA462 (top) to the right of large shielded one, provides the voltages that are then regulated for the control and trigger circuits.



On the rear pcb are welded directly RCA and XLR connectors, there are also relays, and two balanced / unbalanced integrated circuit INA134 of origin BURR-BROWN used for XLR inputs. The board installed at the bottom of the chassis generates the regulated voltages for low level audio stages and for the "trigger" circuit, among others. The audio track circuits for each channel are installed on a board fixed to the back of a finned, solid aluminum heat dissipator. Ventilation is provided in the bottom plate to promote natural convection. This board, which has decent capacitive filtering, with a total value of 40,000 μF , receives all amplification stages. The input stage comprises a bipolar transistor differential stage coupled to a cascode circuit, it is polarised by a constant current source. Both the pre-driver and driver are also bipolar (2SA and 2SC series) with Class A biasing of the driver. Just one capacitor is inserted in the path of the input signal, then direct to the six Mosfet Exicon power transistors of the ECW series in triple push-pull configuration.

MANUFACTURE AND SOUND

Build: Compared to the previous achievements of the manufacturer,

the growing personality of the products' aesthetics towards an evidently more upscale look was pleasing. It gives a real visual identity, a Mimetism signature that is both contemporary and warm. The build quality of the chassis, made of a careful assembly of thick plates of solid aluminum, and the remarkable work done with the printed circuits and internal implementation are unparalleled.

Components: The manufacturer has focused on intelligent simplicity in its circuits, but preferred to use traditional components and some specific components, of which some are SMD, with the sole intention of producing the highest musicality of each device. In addition to the oversized transformers of each model, the preamp handles the whole electronic chain (power and audio) in a dual mono configuration and uses fully regulated power supplies for each stage. The amplifier meanwhile has a lightly encumbered circuit with an almost direct link from the input. We also note the presence of some high-level chips, notably on the preamp (top of the line voltage circuit, latest generation volume controls).

Bass: The technical specifications of the Mimetism units, especially in terms of lower frequencies, clearly indicate

that we should not have any kind of constraint in the delivery of the band. In addition, the power and current capacities of the amplifier point to the same conclusion. The result is bass delivered with elegance, with no stress nor particular emphasis. It sounds powerful (electric bass line, track "Dis-le" by Baz, The Dali CD2) without exaggerating the instruments (bass, track "My Treasure" by Sinne Eeg, The Dali CD2). However, the lowest bass frequencies remain discrete (large pipe organ, track "Julsang" CD Cantate Domino), likely due to the implementation of a relatively high damping factor for the speakers.

Mid: A beautiful rendition of this frequency range by the Mimetism duo. Timbres appear very refined with a precise analysis of the notes once underway. The rather dense sonic texture suggests a coherent and harmonious development, a minute dullness in the upper midrange does not unduly impair the message's delivery, which is quite satisfactory. On the "Ha Vinto Arnor" track sung by Simone Kermes, the shimmering soprano voice is very naturally reproduced, with an excellent sense of space and volume in the recording location.

Treble: We were keen to find out how the PA462 amplifier performed on this criterion. In no small part due to the Mosfet power transistors,

MIMETISM AUDIO PL342 & PA462

connected in parallel, which often tend to sanitise high frequencies, giving them a pleasantly clear sound, but with a limited depth. Congratulations then to the Mimetism team who have obviously mastered the situation, the higher ranges proving to be well developed and detailed in their harmonic structure. The Mimetism units reproduce various Asian metal percussion on the track "Moonlight on Spring River" by Zhao Cong (The Dali CD2) with a good quantity of the various resonances, distinctly modulated.

Dynamics: With such a technical pedigree, specifying that the power increases to 500 W per channel into 2 ohms, we learned that the amplifier has a good current reserve on the one hand, and that it has a proven, solid stability on the other hand. The introduction of the "Dis-le" track by Baz effectively portrays this feeling of easy power with surprising (and virtual) volume of the drummer's toms. If we increase the level, the Mimetism units make no complaints and send through the current. Always with a certain flexibility, or "with torque" as they say in automotive jargon.

Attack: This relative flexibility noted in the dynamics in particular, and in its general reproduction, reflects the ever-controlled nature of the Mimetism units. Far from being slow or devoid of rhythm, both of these electronic units gave us the impression of favouring nuance over effect. Considered generosity rather than deluge. And it must be said that this choice

is definitely not devoid of charm to listen to. On the track "It's Alright With Me" by Harry Connick Jr., the effect of proximity to the singer and his trio fades slightly, but the rhythm suffused by the ensemble loses nothing in intensity.

Soundstage: The Mimetism duo create a credible stage, with performers evolving on a soundstage whose virtual dimensions are similar to those developed by our own reference electronics. In addition, the large amount of sonic detail (atmosphere, reverb, mixing, etc.) helps us to penetrate the atmosphere of each track.

The hierarchy of different audio levels is naturally wide ranging through a layering that is quite satisfactory.

We are quite taken in, and we believe what we hear.

Transparency: This is one of the characteristics of these two electronic devices, a feature that can not be doubted once heard. Linearity dominates the tonal balance, you can just note a slight accentuation in the upper midrange, without devastating effect on listening. The lowest, tightest frequencies will benefit from speakers that are generous but ordered in this range. The Mimetism units display a frequency response that is particularly wide ranging, yet they have the delicacy to never overdo it in the tonal rendition; they remain on the tasteful side for all types of music.

Value for money: The manufacturer makes it a point of pride to build in France, near to Vannes. The development of the software, including all control



LISTENING SYSTEM

Electronics:

Nagra CD-P player

Cables:

Purist Audio Design (HP)

Van den Hul The Mountain (mod XLR)

Jonna Design n° 2 (mod RCA)

Gigawatt (mains)

Acoustic speakers:

Fostex GX250MG

management, is dealt with in Switzerland. In addition, the aluminium parts are machined by a French partner who provides remarkable work. Of course this raises prices but, with the high-end level displayed by these two devices, they remain within the current norms. The choice of separate elements meets a demand from the high-end market, but in this price range, between 15,000 and 20,000 euros, it is already quite crowded. Or even very crowded, with manufacturers offering very high-level integrated units...

VERDICT

It was truly a pleasure to meet up with Mr. William Andrea again, and to test his latest generation of electronics. The PL342 preamp and PA462 stereo unit are technically very accomplished and aesthetically very well made, which has not escaped the attention of the Asian market, to where Mimetism production is mainly exported. The reproduction qualities are evident from the first moments of listening. You feel on familiar sonic ground thanks to the distilled serenity and drive. The highest level of Made in France.



The connectivity offered by the two devices is of great quality. Two pairs of speakers can be connected to the PA462, which is generous with its current.

CONSTRUCTION	■■■■■■■■■
COMPONENT	■■■■■■■■■
BASS	■■■■■■■■■
MID	■■■■■■■■■
TREBLE	■■■■■■■■■
DYNAMICS	■■■■■■■■■
ATTACK	■■■■■■■■■
SOUNDSTAGE	■■■■■■■■■
TRANSPARENCY	■■■■■■■■■
VALUE FOR MONEY	■■■■■■■■■