

## A Holistic Perspective on Absolare Hybrid Topology & Hybrid Stereo Amplifier

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We would be pleased to explain our design and build philosophy from a holistic perspective. Since the introduction of our SET amplifiers, our vision has been clear, where we have always prioritised the emotional, musical involvement and realism of their sonic presentation. The steady focus of our design team to adapt the sonic envelope and emotional musicality of the SET amplifier to the new hybrid architecture necessitated a very steep learning curve and has been exciting for us – where we are continuously learning about what is possible in high end audio. The more purity we strive to achieve, the more sensitive our equipment becomes. We hope we can respond to your request with clear and comprehensive attention.

### Why Hybrid Topology?

We are very satisfied with the acclaimed performance of the Absolare SET Amplifier, in terms of musicality, mid-range quality, tonal balance and speed – everything that brings the ultimate realism. But in the last couple of decades new recording mediums and formats are changing the music. Higher bit rates allow more dynamic range than before, surpassing the audible dynamic range of the SET amplifiers. Also, newer speakers are less efficient and have greater impedance variations than before – in exchange of a flatter response – which present challenges for low power zero-feedback SET amplifiers.

To meet this challenge, we created a new line of amplifiers combining the sonic signature of a SET amplifier with the power and control of a solid-state amplifier:  
Absolare's hybrid amplifiers.

Absolare hybrid amplifiers get most of the voltage gain from a zero feedback SET-like tube input stage. This preserves the sonic characteristics of an all-tube amplifier while adding the advantages of stable high-power output, utilizing a low voltage / high current solid-state gain stage.

All hybrid family amplifiers have similar designs; therefore, they have similar sound characteristics. The main difference between them is the number of the solid-state output "cells" working in parallel. More cells allow more output power (better dynamic range at very high listening levels) and better performance while driving speakers with difficult impedance curves.



## **All Absolare Electronics Incorporate the Same Design Principles:**

### **- Minimalist approach**

Our minimalist design approach continues in the new series. We always try to achieve better performance with the simplest topology and fewer components. This allows us to use higher quality parts and reach a higher level of sonic purity.

### **- Customizable sonic character**

Sonic character can be optimized by changing input tubes to suit personal taste and listening room acoustics.

### **- Customizable appearance**

Combinations of custom leather and stitching colors can be selected to match personal taste and room decor.

### **- Cost-no-object design and manufacturing philosophy**

All Absolare amplifiers utilize: silver/gold alloy signal capacitors; Japanese carbon inside aluminum Amtrans resistors; teflon tube sockets, triple thickness (105 micron) PCB tracks; silver-plated pure copper hollow speaker terminals; tellurium-copper RCA terminals; transformer matched balanced inputs; teflon coated silver/gold/palladium alloy internal wiring; silver/gold alloy solder; laser cut folded and welded aluminum monoblock chassis; thick CNC milled heatsinks; dual custom toroidal power transformers; Schottky rectifiers; ultra-low ESR supply capacitors and critically auditioned and matched NOS tubes etc.

### **- Optimized Power Supplies**

Independent from the quality of the signal path, we also critically evaluate the contribution of power supplies and give equal importance to both. All Absolare products have individually regulated and filtered power supplies for every section, namely: the tube high voltage; heaters; coupling section; solid state output section and control electronics. The design and component choices are optimized according to the specific requirements of each of these sections.

### **- Improvements**

We implement all improvements regardless of the difficulty, cost or size of the potential benefit. We believe that the accumulation of small but significant improvements result in a substantial performance difference overall.

### - Physical Layout

Placement of internal components is optimized in an artisanal fashion similar to the SET amplifier. The impact of electromagnetic interference, vibration, grounding and cooling are all carefully considered for each section as well as the entire amplifier.

### - Design with tolerance

All parts are chosen by considering the working behavior of each component's worst operating conditions.

### **Common Design Features of Absolare Hybrid Amplifiers:**

- Dual Mono construction with fully symmetrical internal layout – including completely separate power supplies with their own power transformers.
- Voltage gain is delivered by a zero-feedback SET-like tube stage, preserving the sonic envelope and behavior of a 'super powerful' SET amp.
  - Balanced speaker outputs.
- Physically separated power transformer section to minimize electromagnetic noise.
  - Overheat and overload (output short circuit) protection.
  - Extremely low ESR power supply capacitors.
  - Separate signal ground.



### **The Hybrid Stereo Amplifier:**

The Absolare Hybrid Stereo Amplifier is the single chassis version of the Absolare Hybrid Monoblock Amplifiers. They are built upon similar architecture and sonic envelope, with slightly less power output. Absolare's Hybrid Stereo Amplifier is a solution for music lovers who cannot accommodate two Hybrid Monoblock chassis.

#### **Technical Details:**

- Dual Mono construction
- 16 active output components provide 275 Watts continuous power per channel into 4Ω loads. They are individually hand tuned for perfect symmetry and load balance.
- A timer circuit protects the speakers and power components from transient signals and in-rush currents when powered on.
- Hi/Low gain operation is selectable on the back panel.
- The solid-state output section uses separate custom designed power transformers for each channel with 184,000uF ultra-low ESR capacitor banks.

- Discrete Schottky diodes provide fast and noise free rectification.
- Tube heaters are DC regulated and filtered.
- Signal ground is separate from chassis ground to minimize hum and noise.
- Output stage is protected from overheating and overloads.

#### The Hybrid Stereo Amplifier Signature Model:

- The Signature series is a significant step above the Passion series.
- The signal path utilizes Duelund's select CAST coupling capacitors together with Echole's Orius cabling.
- Most critical parts of the PCBs feature proprietary Silver/Gold/Palladium+copper connections.
- Critical parts of the power section and signal path utilize other custom components including custom designed Mundorf Silver/Gold/Oil capacitors and Japanese carbon inside aluminum Amtrans resistors.

#### **Technical Summary:**

Design : Dual Mono, Tube input, Solid-State output, Hybrid Architecture

Tubes : 2 x 12AU7 (ECC82) or 12BH7 - every unit comes with select NOS tubes

Bandwidth : 20Hz – 20kHz within +/- 0.2dB, 15 Hz - 30 kHz +/- 1.0 dB

Input : 1 RCA unbalanced + 1 XLR balanced

Input impedance : 10 k $\Omega$  RCA input, 20 k $\Omega$  XLR input

Input Sensitivity : 1.2 Volts @ Hi-gain setting, 2.4 Volts @ Low-gain setting

Gain : 29 dB @ Hi-gain setting, 23 dB @ Low-gain setting

Output power : 275 Watts @ 4 $\Omega$ , 175 Watts @ 8 $\Omega$

Speaker impedance : 4 - 8  $\Omega$

Dimensions : 38.2 x 64.8 x 20 cm / 15" x 25.5" x 7.9" (W x D x H), excl. feet

Weight : 33 kg / 73 lbs., net