



Privilege 350W Mono Amplifier

Technical Specification

Our philosophy for this new line was simplicity and effectiveness of aesthetics.

"But how is assembled this device?"

It is this question that we wanted to rely on each individual in seeing it. We have therefore tried to remove all visible screws and designed the chassis in one piece. Nevertheless the 350W Power Amp have also an high end electronic technology parts which correspond to the image of its Chassis.

From Ingot raw at the box finished

Basically, the chassis is a solid aluminum block weighing around 120kgr. At the exit of the machine, it weighs only 30kgr. From that moment on, we underwent after an last treatment to apply a anodization for highlighting the natural color of aluminum. This massive Chassis is supported by three feet in stainless steel and polished. Finally, they have white pad in POM facilitating travel on the ground of this unit. The frame piece itself gives us a better dissipation, an better rigidity and good insulation against external electromagnetic radiation.

Overview

The front panel is composed a ring 12 blue LEDs and a piezo electric button with red LED. This button control all the functions of the unit (standby, wakeup, brightness of the leds). On the back panel, there are the input connectors (Neutrik, Ad & Con) who are doubled to allow chaining the amplifications and the outputs connectors for the loudspeaker are WBT model " Platinum Signature". The speaker output is protected by a box made of sheet steel black. There are also two small switch, one to select the input (RCA or XLR) and the other switch to select the command mode of the unit (using the trigger input or not).

Inside

All electronics are mounted upside down, and the main circuits are inclined at 45 degrees giving you the impression of looking at the engine of an Formula One. The assembly is done with utmost care. All the socles are made in aluminum with the same treatment creating a homogeneity. No detail has been left to chance!

Electronics

Technology Powerloop “Property Right of Orpheus Media”

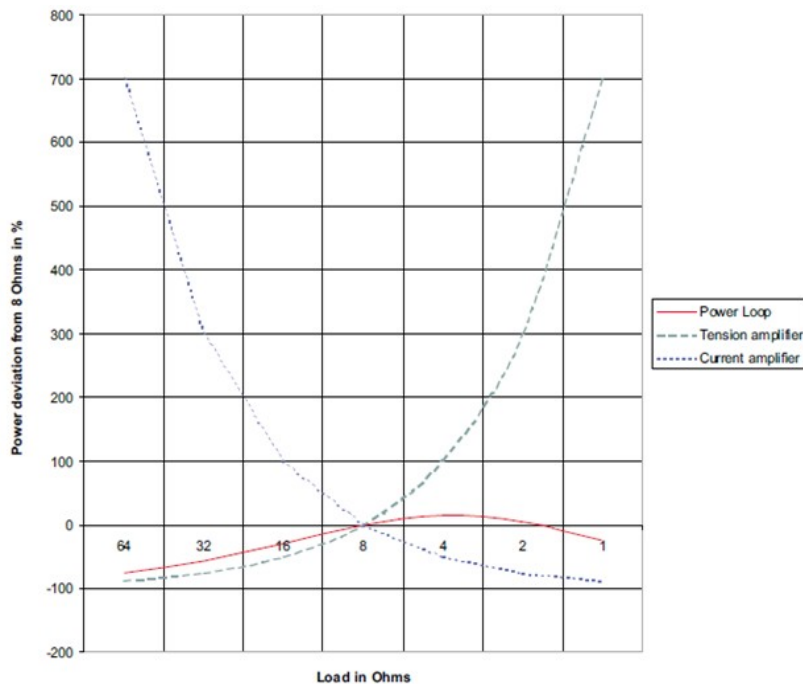
To understand what this technology can bring, we must take the theory of a traditional amplifier. An amplifier traditional "solid state" behaves like a voltage amplifier (voltage output is k times the input voltage). It generally has a loop-reaction which monitors the output voltage and adjusted so that the output voltage is always proportional to the input voltage. If the load is a resistor, the current flowing through it is proportional to voltage. In addition, the output energy (voltage \times current) will be proportional to the input voltage. When you use a speaker phone, the burden is not only resistive, but it is also reactive.

Therefore, the current will no longer be simply the result of a linear equation of the tension. A by, if you have no input signal or if you used a sinusoidal waveform which is transformed into a cosine. But this is not music. The music is almost entirely composed of transient signals and there is almost no constant frequency in the signal.

This means that the coil of a loudspeaker should not only deal with rapid changes in the signal and it must cope. This means that the current is no more a "copy" of the tension that you have applied to the input of the amplifier. The displacement of the membrane of the speaker is directly linked to the current through the coil (magnetic laws). Imagine now that we apply a pulse type signal to the amplifier input voltage.

The result of the output therefore position the diaphragm of the speaker before and after each stage of travel will be adequately controlled, but not during the trip itself. We can observe the effects of oscillations during the journey between the two positions. It controls only the starting point and destination of travel.

Now consider the case of our amplifier equipped with PowerLoop technology.



We will monitor the voltage and current through the loop - reaction. We will see that the energy output of the amplifier is proportional to the input voltage, which results that as soon as the energy deviates from the transition, it will be directly corrected in both tension and in the current, thus optimizing energy.

His behavior with a resistive load (resistance) will be exactly the same as a voltage amplifier. But when the amplifier is

connected to a loudspeaker (reactive load), the amplifier will control the power transmitted to the load during transitions so that it can not take too much or not enough current. This ensures that the cone is controlled, even during transients.

Amplification

The design is fully symmetrical from input stage to the output. This piece was designed to turn a single amplifier stage transistors to 8 equipped with a loop-reaction Powerloop minimizing losses and distortion. The ultra-precise adjustment of quiescent current darlington transistor operates the amp in Class AB.

The routing of audio signals is very short because we use the chassis as a heatsink. The speaker connectors are directly connected to the elements and not on PCB tracks to further minimize the losses.

Power supply

Orpheus has equipped this amp with vitamin power transformers made by Noratel (among the best manufacturers) with a total electric force 1050VA. These are set in the center of the frame and enclosed by a box made of sheet steel and powder coated black connected to ground, minimizing the magnetic radiation.

After passing through an outlet with a filter, the voltage through a power relay which is connected to the two power transformers delivering the required voltage to the power adapter. It consists of two rails with switching power supplies by increasing capacity equivalent to 2,000,000 uFarads by rail alim. This allows them to provide all the necessary current amplification stage. A separate regulated power supply and provides tension to the map of the input stage. The path of the tension cable is 2.5mm² and is completely separated from the signal path.

Side interface

Controlling all this is done by a microcontroller protected by a cage made of sheet steel powder coated. The role of this microphone is to allow the standby of amplifier, adjusting brightness, input processing Trigger good start feeding and monitoring of power levels. You will have the opportunity to interact with the amplifier via a button piezo electric quality.