

# AMP 71 Specification

- **Power Variation Free Signal Transistor**

Usually all signal transistors in power amplifiers current output stage pass through a wide range of the whole output power. This is even true for output tubes of all known tube amplifiers. Power variation causes a lot of chain effects: due to its nature the transistor or tube makes distortion, a feedback effect to the voltage amplifiers decreases stability remarkably, Negative feedback loop is necessary to lower distortions. Phase variations during power variations cause unstable sound and very often overshoots to amplifiers using negative feedback, the power supply is part of the unstable system and needs to be largely oversized. AMP71 uses the first circuit design naturally free of all this effects. This provides a powerful, colorful, sensible and sweet sound quality.

- **Single Ended Class A**

AMP71 circuit design is just using one transistor to proceed the whole signal. Unlike most amplifiers it is not split into positive and negative half-wave. Transistors of different polarity never provide same dynamic behavior and result in un-harmonic sound. A single ended amplifier is naturally a pure "class A" amplifier as well.

These kind of amp is famous for its unbeatable sound quality, but due to the low efficiency of "class A" amplifiers the delivered output power is very low (usually 5W...50W) and the operating temperature is quite high.

- **High efficient class A**

Due to a unique circuit AMP71 combines a single ended class A amplifier with higher efficiency and provides very high output power (200  $\Omega$  / 8 W; 300 W / 4  $\Omega$ ).

- **No Negative Feedback**

To achieve stability and linearity AMP71 does not require the use of a negative feedback loop and keep a very straight and short signal proceeding. AMP71 uses just one voltage gain and one current gain stage is for the full performance.

- **Pure Dual Mono Design**

Already looking from the connecting terminals location the pure dual mono design of AMP71 is apparent. Starting from the power supply up to the speaker terminals there is no common used part between left and right channel – just beside the AC-power plug.

Thus the channel separation and stereo image is kept in the original quality.

- **Full Balanced Signal Proceeding**

The higher speed and lower distortion of full balanced signal proceeding is consequently realized in AMP71. From the balanced input, through the volume control, the whole power amplifier circuit, up to the speaker terminals the signal is fully differentially proceeded. Unbalanced input signals will be perfectly balanced by the AMP71.

Thus the speaker signal output is balanced as well. This has essential consequences for the whole amplifier: For the same output voltage swing just half power supply voltage is needed. The same transformer size deliver double current. All power supply capacitors has much more capacitance due to the lower voltage.

- **High performance volume control**

In order to minimize the losses in the volume control no mechanical potentiometer is used. AMP71 has no CMOS volume control as well. The volume is set by a row of 100 precision resistors. The "glider" is switched by just one single FET. This result in high precision and channel match and no aging as well. For maximum convenience the switching process is digitally controlled.

- **Sophisticated Protection**

An absolutely loss-less protection circuit guarantee highest reliability. It is ultra fast, free of any mechanical contact and controls current, voltage, DC-offset and the power supply.

- **6 Inputs**

2 balanced and 4 unbalanced (chinch) inputs offer a wide range of use. All inputs are switched by pulse controlled relays with no magnetic field during operation.