ECLER DIGITAL TRILEVEL TECHNOLOGY AMPLIFIERS

ECLER's lightweight amplifiers employ a regulated switch-mode power supply with PFC (Power Factor Correction) technology and digital amplifiers. ECLER's R&D engineers have been opting for new innovative solutions in digital amplification to offer end-users an amplifier that sounds like an analogue equivalent and is capable of delivering all its output power all the time. This last aspect in particular represents an important step taken by ECLER for the consolidation of this technology.

Finally, a digital amplifier exists whose audio quality and reliability is perfectly comparable to the most reputable analogue power amps in the pro audio world. Its advantages, that go beyond low weight, exceptional efficiency, and compact size, are evident in a wide range of installations and events. Digital technology furthermore opens a universe of possibilities yet to arrive. Don’t compromise! Amplify digitally with all the power all the time.

DT6800: The first 2 x 3300WRMS /2 Ohm digital amplifier with “all the power all the time” operation that sounds like an analogue amp.

ALL THE POWER ALL THE TIME PHILOSOPHY

The main design and component selection criteria is reliability and sound quality. Component dimensioning for continuous operation in consequence the period delivering full specified output power is indefinitely.

The final result is a good reproduction of musical dynamics, professional reliability and opposite to many existing light amplifiers output power measurements can be done because DT’s are able to reproduce sinusoidal signals.

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THE DIGITAL TRILEVELS

THE POWER SUPPLY INSIDE THE DIGITAL TRILEVELS:
The DT’s engine is a quite special switch-mode power supply

EFFICIENCY STRUCTURE

While the efficiency of stabilized linear power supplies, whose main characteristics are excellent regulation and heavy weight, merely reaches 50%, the efficiency of the switch-mode power supply built into the Digital Trilevels rises up to 92%.

HIGH RELIABILITY

The tough world of live touring needs extremely robust and reliable products. Ask your service technician about all the DT’s features, as output power becomes independent from mains supply voltage.

BUILT-IN PFC (POWER FACTOR CORRECTION)

The PFC (Power factor) is an indication of how well a certain circuit makes use of electrical energy taken from the electrical network.

REAL POWER, NOT PEAK VALUES

If sound quality is a key factor and additionally all the output power is required all the time, a “class BD” amplifier is suitable for such a task. The switch-mode power supply inside the DT is engineered so that the maximum power is available on every moment continuously, and not only during short periods of time.

CLASS D: PWM AMPLIFIER (Pulse Width Modulation)

Class BD is characterized by:
• On absence of signal at the input, no output pulses appear at all.
• Its effective frequency is twice that of the reference signal. The higher the frequency, the better the filter will attenuate unwanted frequencies and the less residual ripple will exist, thus directly affecting audio quality.
• The existence of both positive and negative pulses (TRILEVEL Modulation) means that the effective amplitude of the pulse signal is half that of a class AD Modulation, further decreasing residual ripple content.

CIRCUIT DESCRIPTION:

The input signal is processed in the modulator. The modulator converts the input signal into a PWM signal, which is then amplified and sent to the output stage. The output stage consists of several power transistors that switch on and off at high frequency, creating the PWM signal.

The PWM signal is then filtered by a passive filter, which reduces the noise and harmonic distortion, and produces the final output signal.

The efficiency and power consumption of the DT are significantly improved compared to conventional amplifiers. This is due to the use of advanced power devices and optimized circuit design.