

A pioneering masterpiece in amplification technology

 **TubeSync**

TubeSync®'s Bias Engine is designed to optimise
the performance of the hallowed tube amp



Introducing the Bias Engine

Pure tube magic - that warm, uncluttered sound powered by superior amp technology deserves the best. TubeSync takes care of the detail, giving unsurpassed performance from any tubes.

Plugging straight into the tube powered heart of your amp, in perfect harmony with its fine tuned circuitry, TubeSync's Bias Engine eradicates the need for bias current matching, increases tube life and takes your tubes to their optimum temperature as soon as you power up . . . and there's more.

The result: a well honed tone tyrant with none of the problems hampering conventional tube amps; a streamlined orchestrator of analogue magic.

POWER UP HOT

The Bias Engine's 'Hot Anode' cranks up the heat and has you running hot from the very first chord. It knows the optimum temperature for your tubes best performance and gets them there the minute you start playing.

JUST PLUG IN AND PLAY

The Bias Engine is easily incorporated into your amp's systems at manufacture. It removes the need for bias current matching but still achieves the absolute best tone.

INCREASED EFFICIENCIES

Increased manufacturing efficiencies (due to reduced testing) are achieved by eliminating the need for bias current matching.

ROOTING OUT THE RENEGADE

Fear not the cherry red glow of a failing tube! The Bias Engine continuously monitors the performance of each tube during operation and searches for typical tube failure modes and trends. If the Bias Engine detects a faulty tube, it can

automatically 'switch out' the offending tube and run the amp, at half power, until the defective tube can be changed.

HARDER, BETTER, LONGER

Work your tubes at their full potential. The Bias Engine automatically micro-adjusts the bias on each tube to ensure its full potential is realised throughout its working life. The amplitude of drive signals supplied to the grids is dynamically measured and performance is optimised accordingly. Tubes work harder, better and for longer.

RAISING THE BAR

TubeSync revolutionises convention by completely replacing traditional testing methods. Every time you power up TubeSync runs an automatic 'in circuit' test and assures reliability.

MINIMUM POWER, MAXIMUM OUTPUT

Less power input, same big output. TubeSync reduces quiescent power consumption by an average of 20% compared to conventional amplifier biasing techniques.

KBO Dynamics is a world leading design consultancy and supplier of high performance electronic power and control devices.

TubeSync® is the flagship in our range of tube amplifier products . TubeSync® was developed to overcome many of the problems associated with conventional tube amplification, such as biasing problems , tube longevity and amplifier reliability.

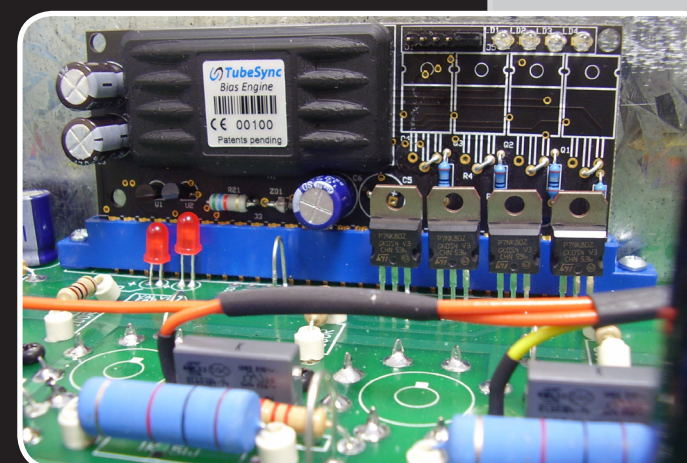
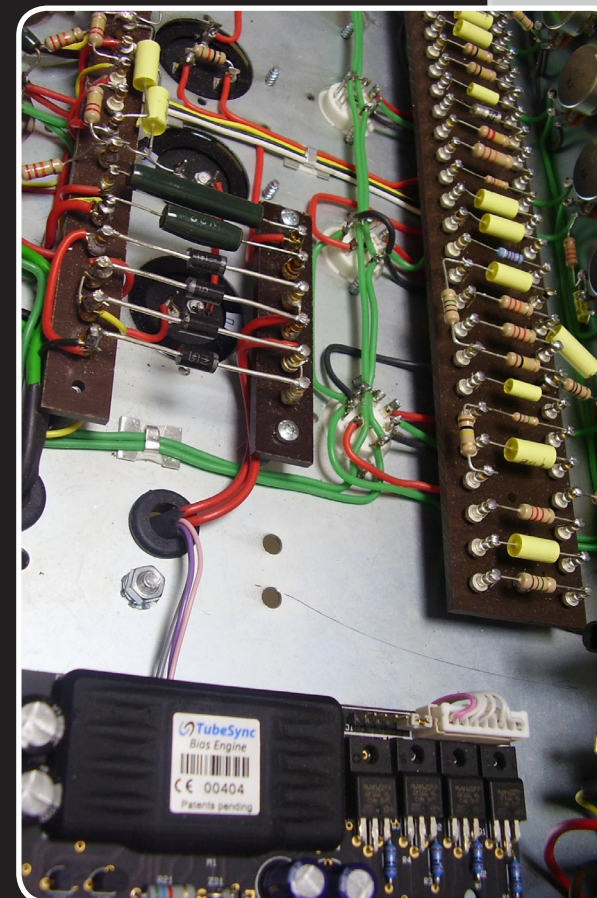
Our goal is to improve amplifier design without changing the fundamental amplification process so tone and sound remains unaltered.

TubeSync
Sound Intelligence

Improving amplifier design, performance and efficiency

We work closely with our customers to deliver the best possible technical solution that satisfies both technical and commercial needs. Our designs are created with flexibility in mind and in most cases clients will have the opportunity to create their own unique product features.

- Eliminates the need for bias current matching of output tubes
- Increases manufacturing efficiencies
- Micro-adjusts the bias on each tube to ensure its full potential is realised
- Assures reliability
- Maintains optimum performance
- Increases tube life
- Reduces quiescent power consumption
- Easily integrated into amp systems
- Sets tubes at their optimum temperature as soon as you start
- Detects tube failure and prevents catastrophic damage to amp
- Switches out faulty tubes and runs amp at half power until tube can be changed



Left: TubeSync incorporated in both point-to-point and PCB wired amps

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