▲ Balanced Audio Technology



# BAT VK-33SE PREAMP



# UNCOMMONLY GOOD TRANSFORMER DESIGN

With its transformer-coupled outputs and superb user interface, the VK-33SE offers extremely transparent renditions of musical events and the industry's best ease-of-use versatility. A 6H30 SuperTube forms a high-current, low-impedance gain stage.



### NEVER FRET ABOUT VOLUME LEVELS AGAIN

Courtesy of a trademarked Unistage circuit, the signal is transmitted through only one gain stage. A proprietary electronic shunt volume attenuator offers 140 steps of precise volume settings that sound continuous to the human ear.



## UNPARALLELED USER INTERFACE AND OPTIONS

Dim the display from the comfort of your chair. Fade music at the touch of a button. Even name your sources. An optional VK-P3 phono card provides switch-selectable moving-magnet and moving-coil gain settings.

#### **SPECIFICATIONS**

Inputs	2x XLR + 3x RCA	Output Impedance	300Ω
Outputs (Main)	1x XLR + 1x RCA	Noise (Unweighted)	-96dB
Outputs (Tape)	1x RCA	Distortion at 2V Output	0.005%
Maximum Gain	18dB	Maximum Output Signal	30V
Global Feedback	None	Absolute Polarity	Switchable
Volume Control Resolution	0.5dB	Power Consumption	150VA
Volume Control Steps	140	Dimension	19" x 5.75" x 15.5"
Frequency Response	2Hz to 200kHz	Weight	40 lbs
Input Impedance (Minimum)	100kΩ	Tube Compliment	4x 6H30, 2x 6C19

### BAT VK-33SE PREAMP

The VK-33SE preamplifier is truly an outstanding performer in Balanced Audio Technology's line of Special Edition vacuum tube preamplifiers. At BAT, we don't look over our shoulders to see what the competition is doing. Our toughest competition comes from within.

Balanced Audio Technology is pleased to confirm that the VK-33SE substantially exceeds the performance of the already stellar VK-32SE preamplifier. With its new transformer-coupled outputs, the VK-33SE simply offers a far more dynamic and transparent rendition of the musical event than previously thought possible.

### TRANSFORMER COUPLED OUTPUTS

Like the VK-53SE and REX II preamplifiers, the VK-33SE features transformer-coupled outputs. This new design replaces BAT's venerable Six-Pak of output capacitors with customdesigned output transformers. Each transformer is encapsulated within a mu-metal shield for the ultimate in signal purity and noise isolation. This change to a transformer-coupled output stage has a solid engineering foundation. All devices have inherent imperfections. Yet, while both capacitors and transformers can perform the same task of DC decoupling, in many cases transformers can be designed closer to the ideal device model. This benefit, however, does not come easily. First - the design of a linear, and close-to-ideal, transformer is not trivial. Second - some applications are more suitable for transformers than others. And third - the highest quality transformers are also much higher in cost. The combination of these three elements explains why good transformers are relatively uncommon in high-end audio.

In order to achieve this "transformational" goal, years were spent in prototyping and testing various alternative output transformer designs. The result: BAT's new transformer-coupled output stage proved itself to be substantially superior to any capacitor in maintaining a purity of signal transmission. Electrically, these custom transformers significantly improve the VK-33SE preamplifier's ability to drive low impedance loads. Sonically, they offer improvements in every area of musical reproduction.

#### UNISTAGE™ DESIGN

Simplicity of design, especially in the direct signal path, has always been the hallmark of Balanced Audio Technology's purist approach to circuit topology. Some advocates of this purist approach like to talk about a "direct wire with gain" as being the ideal circuit. The VK-33SE preamplifier deftly meets this simple design criterion. Effectively, the signal in the VK-33SE preamplifier is transmitted through only one gain stage. It is a design that is free from the negative artifacts attributable to both extremes of modern preamplifier designs: passive preamplifiers at one end of the spectrum and multistage buffered active circuits at the other.

The benefit of the Unistage<sup>™</sup> circuit is that it provides the ultimate simplicity of amplifying the incoming signal only once, while using no global feedback to double-back on the straight-through integrity of that signal. Imagine telling a joke to your friends and telling them to "pass it on".... Pass it on enough times and you won't recognize the joke. Pass the music through too many gain stages, and you'll no longer recognize the genius and beauty of your favorite recordings.

#### HIGH-CURRENT 6H30 SUPERTUBE CIRCUIT

Well over a decade ago, Balanced Audio Technology introduced the world to the 6H30 SuperTube with the introduction of the VK-50SE preamplifier. Today, many of our major tube competitors have followed Balanced Audio Technology's lead by designing their own reference products based on this stellar vacuum tube. As the fourth generation of our renowned VK-3x series of preamplifiers, the VK-33SE preamplifier continues to proudly use the 6H30 SuperTube to form a high-current, low impedance gain stage. As we had written upon introduction, "comparing the 6H30 tube to a standard 6922 is like comparing a Formula 1 race car to a family sedan." Balanced Audio Technology is certainly proud of having the longest "track record" in using this stellar device.

#### FULLY BALANCED DESIGN

Of course the VK-33SE preamplifier is balanced. Balanced Audio Technology staked its reputation on this principal of circuit design from day one. Today, it isn't hard to find many followers in the industry. Why do we believe that balanced is better? In our opinion balanced topology simply provides a complete signal representation. Something magical happens when you free yourself from the limitations of the single-ended structure with its half-signal processing. If a one-handed craftsman can be very good, imagine what he could do with two hands.

It is fairly common to associate the benefits of balanced design with improved signal integrity when dealing with long interconnects, for example. In fact, the true benefits of a balanced approach to circuit design go much further than signal transmission. These benefits include such fundamental aspects of design as the interaction between the power supply and its associated gain stage. It is now common wisdom that the power supply should be considered a part of the signal path. However, whereas the sonic contribution of the power supply can be overwhelming in a single-ended design, it is much less of a concern in a balanced circuit. As the circuit becomes more symmetrical, the residual effect of the power supply becomes less intrusive. In effect, the demand on the power

supply is reduced, making it easier to design a balanced circuit that conforms more closely to the engineering ideal.

For added convenience, the VK-33SE incorporates a mix of balanced and single-ended inputs as well as outputs.

#### SHUNT VOLUME CONTROL

The VK-33SE preamplifier employs a proprietary electronic shunt volume attenuator that offers one hundred and forty steps of 0.5dB resolution. Only a single Vishay bulk foil resistor per phase – the most precise and thermally stable resistor available – is in the signal path. Discrete metal film resistors are used to bleed the unused signal to ground. With this circuit, only the highest quality Vishay resistor is in series with the signal. In addition, the one hundred and forty steps give precise, repeatable volume settings that sound continuous to the human ear. With the VK-33SE preamplifier, you can always get the volume just right!

#### OPTIONAL PHONO MODULE

The user can order the VK-33SE preamplifier with Balanced Audio Technology's outstanding VK-P3 phono card. The VK-P3 phono card is a solid-state phono module that is designed to compete with external phono stages that are twice its price. It offers switch-selectable moving magnet or moving coil gain settings, and provides a convenient, high performance, single-box solution for the vinyl record aficionado.

#### SUPERB USER INTERFACE

The VK-33SE preamplifier is easy to use right out of the box. It is also just as easy to customize. Its user interface has been widely acknowledged to be one of the best and perhaps the most flexible in the industry. You can dim the display (or turn it off entirely) from the comfort of your chair by using the BAT remote. Fade the music gently at the touch of one button. Name your sources. For example, name your home theater playback input THTR. Fix the volume for your THTR input to allow easy master control of your home theater system from your pre/pro remote. Switch phase from your chair to see if a recording was made in reverse absolute polarity. The list of features is extensive. If you only use one of the many delightful features of the VK-33SE preamplifier, you'll appreciate the thoughtfulness behind its desian.

#### SUMMARY

The VK-33SE is an extraordinary, highperformance preamplifier that we are proud to place on the same podium with the VK-53SE and REX II.

All you need to do is listen...