# Balanced Audio Technology



### BAT VK-P12SE SUPERPAK PHONOSTAGE







### PHONOSTAGES DON'T COME ANY BETTER

A new phonostage king is crowned. Balanced Audio Technology's VK-P12SE SuperPak takes analog to previously unheard levels. This is your ticket to seeing your favorite musicians from the best seat in the house, each and every time you play a record.

# NEW SUPERPAK DESIGN, UPGRADED POWER SUPPLY, DUAL SIX-PAKS

The second-generation SuperPak replaces electrolytic capacitors in the first two gain stages with the largest-value oil capacitors ever employed in a BAT design. An upgraded power supply and dual Six-Paks of paper-in-oil output capacitors personify this phonostage's nonpareil operation.

## STEP-UP TRANSFORMERS OFFER UNRIVALED dB IMPROVEMENT

New step-up transformers provide as much as a 20dB improvement in signal-to-noise ratio. With up to 80dB of gain available, no signal is too small. Totally state-of-the-art, the VK-P12SE SuperPak pays priceless dividends on your investment in vinyl.

#### **SPECIFICATIONS**

Outputs	Transformer-coupled	Signal-to-Noise Ratio	Direct (Low) - 73dB (High) - 76dB
Inputs	1x RCA + 1x XLR		Set-up (Low) - 86dB (High) - 93dB
Outputs	1x XLR	Absolute Polarity	Switchable
Gain at 1kHz	Direct (Low) - 45dB (High) - 60dB	Power Supply Energy Storage	200 joules
	Set-up (Low) - 65dB (High) - 80dB	Power Consumption	150VA
Cartridge Loading (Resistance ohms)	Selectable from 100 to 47k	Dimensions	19" x 5.75" x 15.5"
Cartridge Loading (Capacitance pF)	Selectable from 0 to 1000	Weight	43 lb.
Tube Complement	4x 6922, 4x 6C45, 2x 6SN7		

### BAT VK-P12SE SUPERPAK PHONOSTAGE

Reaching dramatic new performance levels while pristinely preserving the delicate signals generated by modern cartridges, the VK-P12SE SuperPak represents a new reference for phonostages. Building on knowledge gained during the design of BAT's groundbreaking REX amplification products, the transformer-coupled output stage and second-generation SuperPak yield a far more open sound, with a more coherent portrayal of musical texture from the lowest to the highest frequencies—and an astonishingly vibrant, three-dimensional soundstage

#### **BALANCED ARCHITECTURE**

The VK-P12SE SuperPak is fully balanced from input to output. For the best possible performance, the phono cartridge should be used in a matching balanced configuration. Many turntables and tonearms allow for such a termination. In some cases, even if only RCA connectors are present on the arm, the cartridge can still be used in a balanced configuration by using a specially designed cable.

### TEN-TUBE, TRANSFORMER-COUPLED, ZERO-FEEDBACK DESIGN

The VK-P12SE SuperPak features an all-tube zero-feedback design that combines the benefits of balanced operation with complementary vacuum-tube current sources. Dual-mono construction and enormous energy reserves are matched by extensive flexibility in cartridge loading. The first gain stage achieves a very low noise floor by using premium Vishay Bulk FoilTM resistors that replace metal film resistors in critical circuit areas. The output stage employs

four powerful high-current 6C45 vacuum tubes for improved gain and better drive capability. Like the elite VK-33SE, VK-53SE, and REX II preamplifiers, the VK-P12SE SuperPak features a transformer-coupled output stage. This new design replaces BAT's venerable Six-Pak of output capacitors with custom-designed output transformers. This new transformer-coupled output stage proves substantially superior to any capacitor in maintaining a purity of signal transmission.

#### FLYING RIAA NETWORK

Among the benefits of the VK-P12SE SuperPak's differential RIAA network are ease of adjustment and improved common mode noise rejection. This circuit is also completely passive and has fewer components than a more traditional implementation. The ease of factory adjustment translates into improved matching of the RIAA curve to specification, with an RIAA error typically not exceeding 0.1dB! With the BAT Flying RIAA network, you can be assured that all of your records sound the way that the recording engineer intended.

#### VACUUM-TUBE CURRENT SOURCES

Vacuum-tube current sources further improve the linearity of any gain stage to yield a more open and textured sound than a simple resistor-based solution. In the VK-P12SE SuperPak, dual 6SN7 vacuum tubes act as current sources for the second gain stage. They complement the inherent strength of vinyl playback in that the finest texture and harmonic structure of musical instruments are portrayed with greater delicacy.

#### SELECTABLE STEP-UP TRANSFORMERS

The VK-P12SE SuperPak features secondgeneration step-up transformers that provide as much as a 20dB improvement in signal-to-noise ratio in comparison to direct mode operation. This allows the customer to successfully use even the lowest output moving-coil cartridges. With up to 80dB of gain available, no signal is too small!

#### SECOND-GENERATION SUPERPAK

Knowledge gained during the design of the groundbreaking REX Series of amplification products bore fruit for the second-generation SuperPak. It replaces all electrolytic capacitors in the most critical first two gain stages with the largest-value oil capacitors ever employed in a BAT design, yielding improvements beyond those that can be achieved by using oil caps for power supply bypass alone. This second-generation SuperPak yields a far more open sound, with a more coherent portrayal of musical texture from the lowest to the highest frequencies—as well as an astonishingly vibrant, three-dimensional soundstage.

#### SUMMARY

With its second-generation SuperPak and transformer-coupled output stage, the VK-P12SE SuperPak unlocks hidden performance in virtually any phono cartridge. The whole of its engineering achievement is greater than the sum of its individual technical advances. Such synergy will pay undreamed-of dividends in your investment in vinyl. This elite phonostage takes vinyl playback into the next frontier.