



## VK-P5

### WARRANTY REGISTRATION FORM

Unit Serial Number: \_\_\_\_\_

Customer Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Purchased From:

Dealer Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

#### **IMPORTANT NOTE:**

In order to receive the full five year product warranty, please mail this completed form together with a copy of your sales receipt to Balanced Audio Technology at the address below, within **thirty days** of purchase.

Failure to do so will result in the product being warrantied for **one year** from the date of manufacture.



# **VK-P5**

## **Balanced Phono Stage**

### **Owner's Manual**

**NOTE:**

**Your VK-P5 Phono Preamplifier was preset at the factory to the following configuration:**

Gain:	High
Input Resistive Loading:	47k $\Omega$
Input Capacitive Loading:	None

**Please refer to the chapter on configuration switch setting for information on optimizing the unit parameters.**

## Introduction

Thank you for your purchase of the Balanced Audio Technology VK-P5 balanced phono stage. Please read this owner's manual to obtain the full benefit of the VK-P5 in your system. It will provide you with the needed safety information and operating procedures for this exceptional unit.

### WARNINGS:

To prevent the possibility of serious injury, electrical shock or fire:

**DO NOT** operate with the cover removed.

**DO NOT** expose to rain or moisture.

**DO NOT** defeat the ground power-plug.

**DO NOT** replace fuse with anything other than the same type and rating as supplied by the factory.

## Package Contents

Included in the box should be the following:

Description	Quantity
VK-P5 Balanced Phono Stage	1
Power Cord	1
Male Connector Pins	10
Spare 6922 tube	1
Spare Fuse (See <b>Fuse Protection</b> )	1
Torx Wrench (T-10)	1
Spare Top Cover Screws	5
User's Manual	1
Optional Accessories	(as ordered)

Save all the packaging material in a safe dry area for the unlikely event that you need to return the VK-P5 to the factory for service.

## Reseating Tubes

Normally, reseating tubes upon delivery is not required. However, if any tubes have *noticeably* drifted out of position due to unusually high transportation stress, it will be advisable to reseat the tubes. Use the supplied Torx wrench to remove the top cover. Reseat the tubes in their sockets and reinstall the top cover.

**NOTE:** When using the Torx wrench, make sure it is fully inserted so that the screw head is not stripped.

## Physical Placement

It is recommended that you provide for at least 6" of free space around the unit for proper ventilation.

Mount the unit on a hard surface with proper ventilation underneath.

Do not stack the VK-P5 phono stage on top of other units, nor vice versa.

## General Description of VK-P5 Phono Preamplifier

The VK-P5 balanced all-tube phono stage is designed to provide the maximum possible performance while operating in conjunction with the wide verity of phono cartridges available today. The unit offers high degree of versatility in system configuration by providing the following features:

- User-selectable gains of 50dB and 56dB
- Selectable cartridge loading for both resistance and capacitance

Please refer to the **Configuration Switches** section of this manual for information on how to configure the VK-P5 phono stage for optimal performance in your system.

# Connecting the VK-P5 to Your System

## Cartridge Input

The back panel of the VK-P5 phono stage is equipped with one set of RCA cartridge input connectors.

## Output Connection

The VK-P5 is equipped with XLR output connectors. Any high quality set of balanced interconnects can be used to connect the VK-P5 to your balanced preamplifier.

**Single-ended preamplifiers** can be connected to the VK-P5 output through the use of XLR-to-RCA adapters, available from BAT.

## Description of Controls

### Power Switch

The power switch has two positions: OFF and ON. Putting the switch in the OFF position (even for a short period of time) will reset the soft start and mute circuits. The VK-P5 will then require about 45 seconds to return back to normal operation.

When you turn the unit ON, the VK-P5 will automatically go through a gentle power-on sequence. At the end of this sequence the unit will automatically unmute. However, since the source volume may be unknown at this time, it is advisable to turn the volume control on your preamplifier fully **counterclockwise** and place the mute switch in "Mute" position before turning the VK-P5 ON.

### Output Muting

The output of the VK-P5 phono stage has a mute relay that disables it for about 45 seconds every time the unit is turned ON.

When the unit is powered up it automatically self-mutes until the proper operating points of the circuitry are reached. It will then go into normal play mode.

Changing the power switch position from ON to OFF even for short time, will make the unit reset its power sequencing circuit and mute its output. *It will then require about 45 seconds for the unit to become operational again.*

## Configuration Switches

### **WARNINGS:**

**Please make sure that the VK-P5 is turned OFF and your preamplifier is in MUTE before changing the state of any internal configuration switches in VK-P5.**

**Hazardous voltages are present on the unit's printed circuit board. DO NOT operate the VK-P5 with its top cover removed.**

This section describes the setting of internal configuration switches that are located inside the VK-P5 phono preamplifier. In order to access these switches, do the following:

1. Turn the VK-P5 OFF and disconnect the power cord from the power line receptacle.
2. Remove the top cover, using the supplied Torx T-10 wrench.

**Figure 1** depicts the locations of the VK-P5 internal configuration switches. These include:

1. Left and right channel cartridge loading switches **S101** and **S201**
2. Gain switch **S2**
3. Gain potentiometers **R130** and **R230**

The following section describes the operation of these controls.

## Cartridge loading switches S101 and S201

### Resistance:

The 47K load resistor is **permanently connected** to the cartridge input. If a different loading value is desired, it can be obtained by switching in additional resistors, installed on the VK-P5 PC board. This is accomplished by using the two DIP switches, **S101** and **S201**, which allow multiple choices for resistive and capacitive cartridge loading. Four positions are reserved for the choice of resistance and four for capacitance. Out of each group of four, one position is loaded with female pins and allows the user to install any desired value component (this position is marked "USER"). Gold-plated solderable pins are supplied with the VK-P5 accessory kit, that should be attached to either resistors or capacitors supplied by the user. This allows for easy installation and upgrade of user-supplied components.

The following resistors can be added in parallel with the 47K load:

<u>Switch position</u>	<u>Resistor Value</u>
1	100 Ohm
2	1K
3	10K
4	User-Defined

Any parallel combination of the these values is also allowable.

### Capacitance:

Various values of capacitors can be connected in parallel to the input via switches **S101** and **S201**. With these switches in the OFF position, there is no capacitive loading to the cartridge. The capacitance choices include:

<u>Switch Position</u>	<u>Capacitor Value</u>
5	100pF
6	470pF
7	1000pF
8	User-Defined

Any possible parallel combination of these values is also allowable.

## Gain Switch

By moving the switch **S2** from High to Low position, the amplifier's gain is reduced by about 6dB. While the High gain position provides the most universal setting, it may be desired to reduce the overall system gain when using some high output phono cartridges.

## Gain Potentiometers

Gain potentiometers **R130** and **R230** allow the user to optimize the VK-P5 performance when using very high output cartridges. It is recommended that for the cartridges with a nominal output of 3mV or lower these controls be set *fully clockwise*.

Some high output cartridges (those with nominal output of over 3mV) may benefit from a reduction in overall gain of the VK-P5 preamplifier and a corresponding increase in its input overload margin. Moving the **R130** and **R230** controls *fully counterclockwise* will reduce the overall preamplifier gain by approximately 6dB and increase the overload margin.

The *fully clockwise* position provides the most universal setting and is recommended for most cartridges.

**Balance Adjustment:** The **R130** and **R230** controls can also be used to compensate for system balance shift, such as when using cartridges exhibiting output voltage differences between the left and right channels.

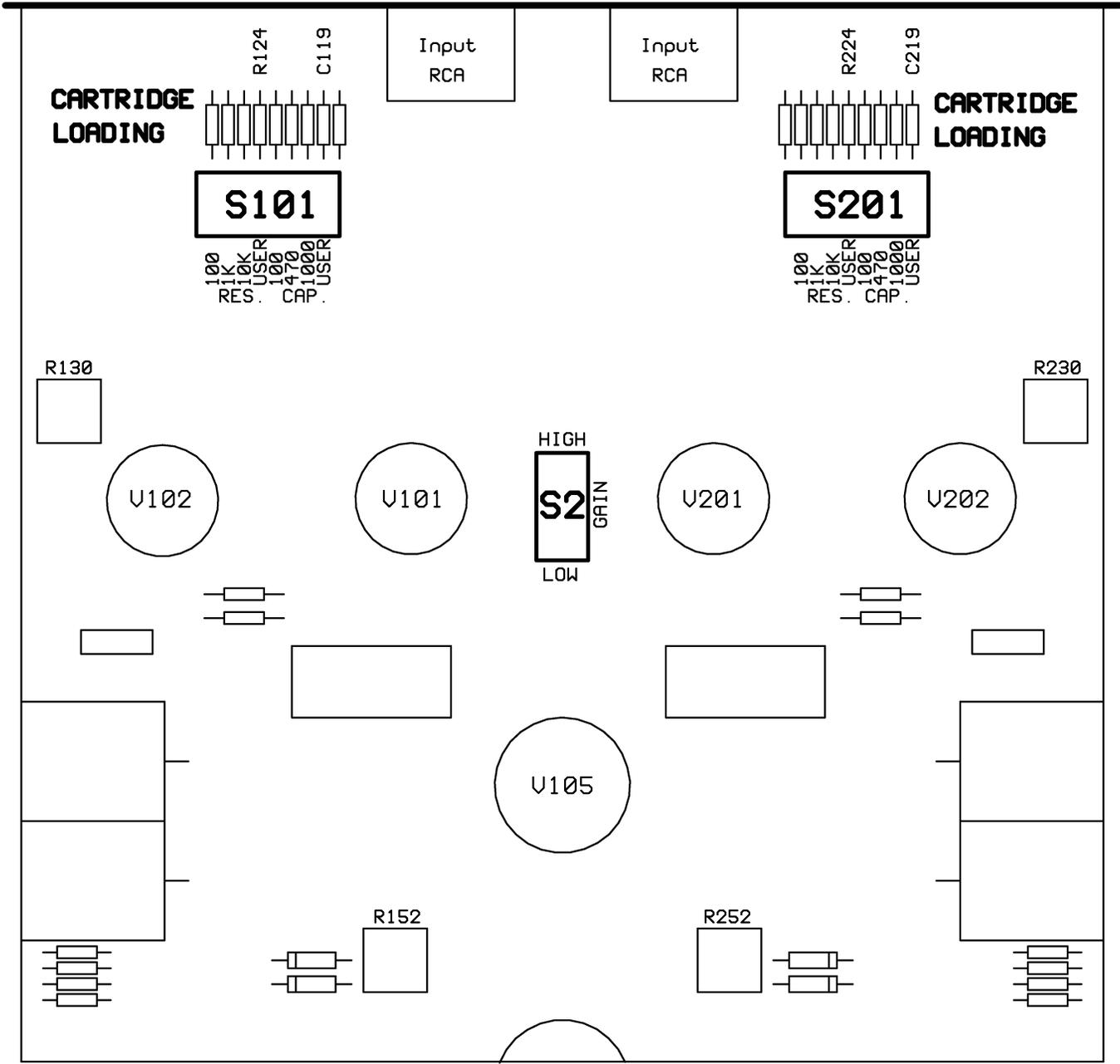


Figure 1: UK-P5 Internal Controls

## **Fuse Protection**

A blown fuse in the VK-P5 may be an indication of a serious problem. If a replacement fuse fails as well, no further attempts should be undertaken. Please contact the factory for professional service.

The proper fuse ratings are as follows:

For 100-120 VAC Units: 2A 250V Slow Blow

For 200-240 VAC Units: 1.5A 250V Slow Blow

### **WARNING:**

**Factory supplied fuses should be only replaced with the same type and rating parts.**

## **Servicing**

The Balanced Audio Technology VK-P5 should require no service other than changing tubes to maintain its high performance. The vacuum tubes used in the VK-P5 are high quality 6922's and 6SN7's rated for approximately 5000 hours of use. Please direct any further service inquiries to the factory.

## **Cleaning**

To remove dust, occasionally wipe the front and top surfaces of your VK-P5 with a damp soft cloth. If fingerprints appear, you may use a mild, non-alkaline soap solution. Do not use abrasive cleaners, as they may damage the fine finish of the unit.

# VK-P5 Specifications

**Total Energy Storage:** 76 joules

**Gain at 1kHz:**

High Gain Position: 56dB

Low Gain Position: 50dB

**Signal-to-Noise Ratio:** (A-weighted, referenced to 1mV)

Low position 71dB

High Position 73dB

**Cartridge Loading:**

Resistance: Selectable from 100 $\Omega$  to 47k $\Omega$

Capacitance: Selectable from 100pF to 1000pF

**Inputs:** RCA Connectors

**Outputs:** XLR Balanced  
(XLR-to-RCA adapters available)

**Tube Complement:** 8 6922's and 2 6SN7's

**Power Consumption:** 150 VA Max

**Dimensions:** 19" (W) x 5.5" (H) x 14" (D)

**Weight:** 35 lb. unpacked

# Five Year Limited Warranty

## Terms and Conditions

### 1. Limited Warranty

Upon receipt of the attached warranty registration form, Balanced Audio Technology warrants the purchased product to be free from manufacturing, materials, and workmanship defects for **five years** from date of original purchase, excepting vacuum tubes, subject to the following conditions. **Failure to return the enclosed registration form within 30 days from original purchase will result in a warranty period of one year from the date of manufacture.**

### 2. Vacuum Tubes

Vacuum tubes (including replacements under warranty) are warranted for one year from the date of the original VK-P5 purchase.

### 3. Limited to Original Purchaser

This warranty is for the sole benefit of the original purchaser of the covered product, and may not be transferred to a subsequent purchaser of the product.

### 4. Conditions and Limitations

This warranty is subject to certain conditions and limitations, as follows. This warranty is void and inapplicable if the product has not been used in accordance with the instructions found elsewhere in this manual, or if it has been misused or abused, damaged by accident or neglect, or in transport once in possession of the purchaser. The warranty is also void if the product has been repaired, modified, or tampered with by anyone other than Balanced Audio Technology or its specifically authorized agents.

### 5. Remedy

If this product contains a materials, manufacturing, or workmanship defect that cannot be repaired at the dealership where the product was purchased, it must be packed in original packaging and returned to Balanced Audio Technology via insured freight, at the owners expense. If replacement packaging materials are required, they will be supplied by the factory at a nominal charge. **Returned products must be accompanied by a written description of the defect, and a return authorization number (available from the factory via phone or fax).** Upon receipt of defective product, Balanced Audio Technology agrees to repair the product without charge for parts (except vacuum tubes if the unit is more than one year old), or labor. The product will then be returned via prepaid, insured freight, with carrier at the sole determination of Balanced Audio Technology. This constitutes the purchasers sole remedy.

### 6. Design Changes

Balanced Audio Technology reserves the right to modify its products or change specifications at any time without obligation or liability to previous purchasers.

### 7. Miscellaneous

Any implied warranties relating to the above product shall be limited to the duration of this warranty. This warranty does not extend to any incidental or consequential costs or damages to the purchaser. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.