



VK-5*i* **Balanced Stereo Preamplifier**

Owner's Manual

1300 First State Blvd. Suite A Wilmington, DE 19804
Tel: 302-999-8855 Fax: 302-999-8818

Introduction

Thank you for your purchase of the Balanced Audio Technology VK-5i preamplifier. Please read this owner's manual to obtain the full benefit of the VK-5i in your system. It will provide you with the needed safety information and operating procedures for this exceptional unit. For more technical information on the circuit design, please read the Balanced Audio Technology VK-5 white paper.

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-5i Preamplifier	1
Power Cord	1
Spare Fuse	1
Torx Wrench (T-10)	1
Spare Top Cover Screws	5
User's Manual	1
VK-R1 Remote Control	(If ordered)

Save all the packaging material in a safe dry area for the unlikely event that you need to return the VK-5i 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 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-5*i* preamplifier on top of other units, nor vice versa.

Connecting the VK-5*i* to Your System

Balanced Components

Use balanced XLR interconnects. All input and output connectors are clearly marked on the back panel.

Note: The VK-5*i* XLR connectors are wired as follows:

Pin 1:	common/shield
Pin 2:	positive
Pin 3:	negative

Use either the Main 1 or Main 2 Output for connection to your power amplifier. Both yield equivalent results.

Single-Ended Components

Single-ended components have RCA connectors. The VK-5*i* preamplifier is designed to work with any mix of single-ended and balanced components connected to its inputs and outputs. All that is required to connect a single-ended component with RCA connectors to the VK-5*i*'s inputs or outputs is the optional balanced to single-ended adapters. These adapters are available from an authorized Balanced Audio Technology dealer at a nominal charge.

Two types of adapters are available:

Input Adapters: RCA Female to XLR Male

Output Adapters: RCA Female to XLR Female.

Mixed Balanced and Single-Ended Systems

Any mix of single-ended and balanced components can be connected to the VK-5i by following the above instructions.

Operating the VK-5i

Turning the VK-5i On:

When you turn the VK-5i On, it will automatically go through a gentle power-on sequence. This sequence takes 50 seconds, during which time the display will be flashing, indicating the status of the unit.

1. The number on the display during this time indicates the volume setting. This will be equal to the last volume setting before the unit was turned OFF. This setting can be changed during this time by using the volume knob or Volume Up/Volume Down buttons on your remote control transmitter. **All other remote control functions except the MUTE are disabled during this time.**
2. Normally the VK-5i will be *not muted* (Mute LED on the display is OFF) and will begin playing at the end of the 50 second delay. If so desired, the unit can be put in the MUTE mode during this delay interval either by depressing the front panel MUTE switch or by using the MUTE button on the VK-R1 remote control transmitter.

Turning the VK-5i Off:

The unit can be turned OFF at any time (even while playing) without first activating the Mute switch. It will automatically mute.

Gain Controls:

Separate left and right gain controls replace the traditional balance control and provide up to 4 dB attenuation for each channel. Turning them counterclockwise will reduce the gain of the corresponding channel. The preferred position is up fully clockwise (pointer at 12 o'clock).

DISPLAY FUNCTIONS:

Volume Display. The two-digit display in the middle of the VK-5i front panel shows the current volume setting. The range of values for the volume settings is from 00 to 99. With the volume set to 00, the VK-5i output will automatically MUTE.

For volume settings from 22 to 99, the display changes by one count corresponding to a gain change of 0.5dB. Between the numbers 13 and 22 this scale corresponds to 1dB per step. The step size for the settings from 01 to 13 is equal to 1.5dB.

The maximum signal gain of the VK-5i (volume display at 99) is equal to 19dB.

Mute LED. This is located directly above the digital display and turns ON when the VK-5i is in its Mute state.

Command LED. This is located to the left of the digital display. This LED is activated whenever the remote control command is being received by the VK-5i.

DISPLAY ON-OFF Function

Turning the display OFF: The VK-5i display can be turned OFF at any time by simply pressing the STORE button on your VK-R1 remote control transmitter TWICE.

Turning the display ON: To turn the VK-5i display back on, simply press ANY button except the MUTE on the VK-R1 remote control. The command associated with this button will be executed and the display will turn ON.

VOLUME KNOB:

The volume control knob on the VK-5i is linked to a digital encoder and is of a continuously rotating type (there are no stops).

MUTE FUNCTION:

The VK-5i has two mute modes: manual and automatic. The red LED above the digital volume display goes ON when the unit is in MUTE state. To MUTE the VK-5i, depress the MUTE switch located on the right side of the front panel. Depressing this switch again will return the unit to its normal operation and turn the mute LED off.

When the unit is powered up it automatically self-mutes until the proper operating points of the circuitry are reached. It will then automatically go into Play mode, provided the Mute function was not activated (the red Mute LED is Off).

Turning the VK-5i OFF even for short time, will make the unit reset its power sequencing circuit and mute its output. *It will then require 50 seconds for the unit to become operational again.*



REMOTE CONTROL FUNCTIONS:

The VK-R1 remote control that comes with your VK-5i has the following functions:

1. Volume Up and Volume Down control
2. Mute function
3. Fade Down/Fade Up function
4. Storing and recalling of the preset volume positions

The following describes these functions.

Volume Up and Down

These two buttons are programmed with variable speed volume change profiles. The rate of volume change will be slow upon initial pressing of the Volume Up or Down buttons. Holding the button depressed will cause the rate of change to accelerate, allowing for more flexible control when large changes in volume are required.

Mute

Pressing this button will cause the MUTE function in the VK-5i to toggle between ON and OFF states. The Mute LED on the VK-5i display will reflect the status of the Mute circuit.

Fade

Pressing the FADE button on the VK-R1 remote control will cause the volume to smoothly decay over the period of several seconds. This allows for a gradual reduction in volume, as opposed to the instantaneous MUTE function. This can be particularly useful during the presentation or demonstration of your equipment. When the FADE button is pressed, the volume will go down all the way to zero (00 on display, unit in Mute).

Pressing the Fade button again will cause the volume to ramp up and return to its initial value.

VOLUME PRESETS:

Volume presets. This function provides for an instant change to a predetermined volume setting at any time. This may be convenient when switching between sources with different output levels or for accurate and repeatable gain adjustments during testing of audio equipment.

The VK-5i can store up to five user-defined volume settings. In addition, the sixth position is reserved for the UNITY GAINn setting, useful and popular in Audio/Video system installations. *The UNITY GAIN position is NOT user programmable.*

In the UNITY GAIN position the VK-5i gain is set to 0dB. The signal from the selected source will propagate through the unit with its volume unchanged. This is commonly used in Audio/Video installations, when the overall sound volume is adjusted using the surround sound processor master volume control.

To store a volume setting:

1. Set the VK-5i volume to the desired level
2. Press the STORE button. The display will begin to flash
3. Press any Volume Preset button from 1 through 5. The volume setting number will now be stored in this location

This preset volume associated with any of the five programmable buttons can be changed at any time by simply following the same sequence.

To recall the volume setting:

1. Press the desired volume preset button (1 through 5) on the VK-R1 remote control transmitter. The display will start flashing indicating the volume setting associated with this button. (This is done for safety reason - to avoid a sudden unpredictable change of volume).

The display will continue flashing for 10 seconds, during which time the previous volume setting stays unchanged. If no further command is received during this time, the display will return to the previous setting.

2. Pressing the same preset button for the second time will lock the desired volume into the system and the volume will now change to the new selected setting.

UNITY GAIN Setting:

Pressing the Unity Gain button on the remote control will cause the “U” symbol to be displayed. The second press of this button will make the VK-5i to go into its Unity Gain mode. This will be indicated by the character “U” on the volume display.

WARNING: Please use this function carefully. as invoking this setting will apply a full scale signal from the source selected at this time to your power amplifier. If external surround sound processor is used, set its volume control to low level before switching the VK-5i into its UNITY GAIN position.

Overcurrent Protection:

Both channels in the VK-5i are protected from certain overload conditions via electronic current-sensing circuits. If an overcurrent condition is detected in either channel (for example, a short in one of the regulator tubes), the unit will immediately be disabled, its high voltage supplies disconnected and the output muted. The protection circuit may be reset by turning the unit Off for a short period of time. However, if the fault condition remains, the unit will again be disabled and therefore require professional service.

Fuse Protection:

A blown fuse in the VK-5i is 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

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

Servicing

The Balanced Audio Technology VK-5i should require no service other than changing tubes to maintain its high performance. The vacuum tubes used in the VK-5i are quality 6922s and 5881s 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-5i 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.

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-5i 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.

