



VK-80i

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-80i
Balanced Integrated Amplifier
Owner's Manual

Introduction

Thank you for your purchase of the Balanced Audio Technology VK-80i Integrated Amplifier. Please read this owner's manual to obtain the full benefit of the VK-80i in your system. This manual provides you with necessary 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 bottom cover removed.

DO NOT expose to rain or moisture.

DO NOT defeat the ground power-plug.

DO NOT replace fuses 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-80i Integrated Amplifier	1
6C33C-B Output Tubes	4
6SN7 Signal Tubes	4
Power Cord	1
Torx Wrench (T-10)	1
Spare Cover Screws	5
Spare Fuses	1
Owner's Manual	1
VK-R7 Remote hand set	1

Save all the packaging materials in a safe dry area for the unlikely event that you need to return the VK-80i to the factory for service.

Installing Tubes

Install the signal 6SN7 tubes in the front sockets.

When installing the output 6C33C-B tubes please make sure their pins are lined up with the sockets. Insert the tubes with gentle downward pressure, while making slight rocking motion to facilitate the proper insertion.

Physical Placement

It is recommended that you provide open space above the unit for proper ventilation, with no electronic components placed directly overhead.

Mount the unit on a hard surface with proper ventilation underneath. Avoid placing the unit directly on a carpeted floor.

Connecting the VK-80i to Your System

Input connections:

There are four sets of input connectors on the VK-80i's rear panel.

1. One XLR balanced input
2. Three RCA single-ended inputs

The input is selected through the front panel push button, or via the VK-R7 remote control.

Speaker Connections:

The speaker connectors are clearly marked on the back panel of the VK-80i. There are three sets of output taps marked LOW, MEDIUM and HIGH for connecting a variety of speakers to the VK-80i. Please note that some experimentation may be required. Try each output tap until you find the one that gives the most balanced performance in your system.

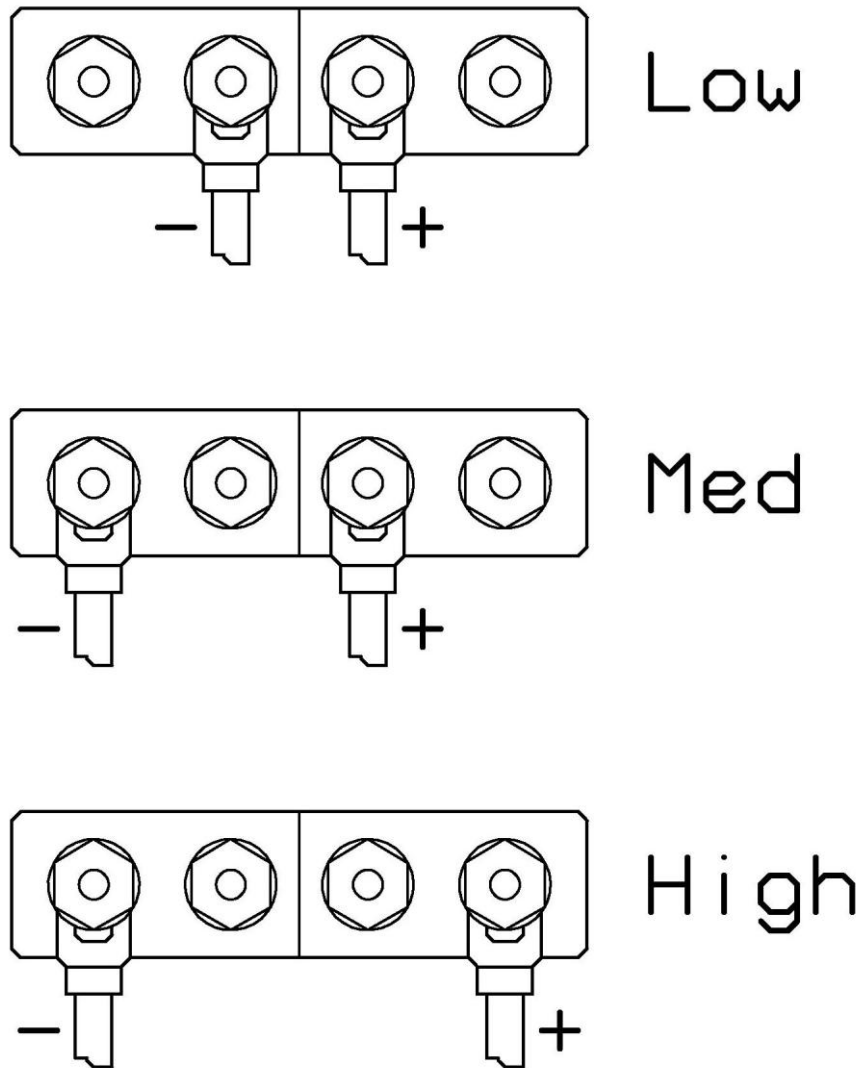


Figure 1
Output Connections

Operating the VK-80I

NOTE: Upon plugging the unit into the power line, its display will show for a few seconds its software revision numeric code.

Normal operation of the VK-80I requires simply turning the unit on, selecting the required input, and setting the volume. The unit's internal AutoBias circuit provides full-time bias control for the output tubes. Please read the **Autobias Feature** section for more details.

In addition, VK-80i has a smart protection circuit, that eliminates the rail fuses, and allows for a quick **Reset** in case of an intermittent fault.

Turning the VK-80I On:

Pressing the front panel, or remote-control Power button will turn the unit ON. The VK-80i will then enter its warm up cycle. During that cycle the display will be flashing..

As tubes warm up, their green LED bias indicators will turn ON indicating their readiness. Different tubes can take different times to get ready, but normally all four LED's should be ON by the time the unit completes its warm-up cycle.

Conditions such as low line voltage and tubes' age can delay the readiness of the tubes.

Input Selection:

Input selection can be done by using either the front panel buttons, or the **VK-R7** remote control Input buttons.

Volume Setting:

Volume can be set using either the front panel Volume knob, or remote control Up and Down buttons.

The VK-80i volume control has 90 steps of 1dB each, to allow for a very wide range of settings.

Mute Function:

The Mute function will disable the output. It is accessible via either the front panel button or the button on the remote control.

Fade Function:

The FADE function on the remote-control transmitter allows for gradual reduction in volume, all the way to zero. In some cases this can be more suitable than the abrupt Mute operation.

Pressing the FADE button again will gradually bring the volume back to its initial setting.

Display Brightness:

The display brightness can be set to any of five levels, including fully OFF. It is done by pressing the Display button on the VK-R7 remote control transmitter.

Turning the VK-80I Off:

The unit can be turned Off at any time by pressing the Power button on the front panel or on the remote control.

Autobias Feature:

The VK-80I implements a sophisticated autobias circuit that automatically compensates for tube aging and line voltage fluctuations, as well as marginal mismatching of tubes. The successful operation of the autobias circuit is noted by individual LED's that glow visibly next to each output tube when viewed from the top of the chassis. A total of four LED's should light up to indicate proper operation of the circuit. If one of the LED's fails to light up (after the unit is warm), there could be two reasons for this problem:

1. The individual output tube is defective. In this case replacing this tube with a known good one should turn the LED ON.
2. The amplifier was over-stressed and the internal protection circuit disabled one or both channels.

Protection Circuits

Your VK-80i amplifier is equipped with two types of sophisticated protection circuits.

Thermal Protection. Thermal protection circuits monitor power dissipation in each of the unit's four output tubes. Should the power dissipation in that part of the circuit exceed the preset value, the protection mechanism will disable that channel. The corresponding green LED will then go out.

When this happens, simply turn the unit OFF, then turn it back ON after waiting a couple of minutes. That should clear the thermal protection mechanism.

Overcurrent Protection. There are two independent over-current protection circuits (one per channel) that monitor the currents flowing through each individual output tube. Should the current exceed the preset value, the protection circuit will disable that particular channel, and its green LED's will go OFF.

To clear the fault, one should simply power cycle the unit OFF and then back ON. *Please wait 30 seconds before turning the unit back ON.*

Understanding the Overcurrent Protection.

The VK-80i can enter over-current protection mode if either of the following conditions take place:

1. The unit is being driven hard into a speaker that represents a particularly difficult load. At a point of peak demand the over-current protection may become activated. Power cycling the unit will restore its operation.
2. An intermittent internal discharge in one of the power tubes.

The internal discharge can take several forms. In some instances, the weak spot in the tube will evaporate, and the tube will continue working normally for an extended period of time.

In other cases the tube might continue activating the protection circuit, indicating the need for replacement.

The standard recommendation is to ignore the first occurrence, and replace the tube following any further events.

What to do when the LED lights goes out:

If you notice that green LED's goes out, the first step should be to RECORD THEIR POSITIONS.

Turn the unit OFF using the front panel power switch.

Then, counting the output tubes 1 through 4, from left to right, swap the tubes 2 and 3. Turn the unit back ON.

If the same tubes exhibit the same fault again, they should be replaced.

While it is always best to replace a matched pair of tubes, it is not always absolutely required. If your unit is fairly new, then you might consider replacing just one faulty tube. The factory can supply a tube with similar characteristics.

NOTE: Please note that in some cases performing the protection circuit RESET once may not be sufficient, so it should be tried several times before further steps are taken.

Replacing Fuses:

WARNING: Please turn the unit OFF and disconnect the power cord before proceeding.

The main power fuse in VK-80i is Slow-Blow fuse:

10A rating for 100-120VAC-line

5A for the 200-240VAC range

It is located on the unit's rear panel.

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

To maintain the optimal performance of your unit, replace the 6C33C-B output tubes only with matched sets available from Balanced Audio Technology. If only one tube fails, then just one pair needs to be replaced.

Please do not substitute any random tube as a replacement. Although the automatic bias circuit in the VK-80i will accept virtually any random set of output tubes, the unit will not be guaranteed to meet all of its performance specifications under such conditions. Finally, the determination that a **single tube replacement** is prudent rests solely with the customer, based on actual hours of use for the particular set of tubes. The factory assumes no responsibility for possible performance decrease under such conditions.

Servicing:

The Balanced Audio Technology VK-80i should require no service other than tube replacement to maintain its high performance. Please direct any further service inquiries to the factory.

Cleaning:

To remove dust, occasionally wipe the front and top surfaces of your VK-80i 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-80i 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 warranty registration form together with a copy of your sales receipt within 30 days from original purchase will result in a warranty period of one year from the date of manufacture.**

2. Vacuum Tubes

The 6SN7 vacuum tubes (including replacements under warranty) are warranted for one year from the date of the original VK-80i purchase. The output 6C33C-B vacuum tubes are warranted for ninety days.

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.