



VK-80t

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-80t

Balanced Power Amplifier

Owner's Manual

Introduction

Thank you for your purchase of the Balanced Audio Technology VK-80t power amplifier. Please read this owner's manual to obtain the full benefit of the VK-80t in your system. This manual provides you with necessary safety information and operating procedures for this exceptional unit. For more technical information on the circuit design, please read the Balanced Audio Technology VK-80T White paper.

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-80t Power Amplifier	1
6C33C-B Output Tubes	4
6SN7 Signal Tubes	2
6H30 Signal Tubes	2
Power Cord	1
Torx Wrench (T-15)	1
Spare Cover Screws	5
Spare Fuses	1
Owner's Manual	1

Please note that there are two 6922 tubes mounted internally. These come installed in the unit.

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

Installing Tubes

The signal 6SN7 and 6H30 tubes can be installed in the corresponding sockets. Output 6C33C-B tubes are marked 1 to 4, and should be installed in that order, left to right, when viewed from the front of the unit.

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-80t to Your System

For Balanced Preamplifiers:

Use balanced XLR interconnects. The left and right channel input connectors are clearly marked on the back panel of the VK-80t.

Note: The VK-80t XLR inputs are wired as follows:

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

For Single-Ended Preamplifiers:

Single-ended preamplifiers have RCA connectors. The VK-80t power amplifier is designed to work with either balanced or single-ended preamplifiers connected to its inputs. All that is required to connect a single-ended preamplifier with RCA connectors to the VK-80t's inputs is the optional balanced to single-ended adapters.

For Speaker Connections:

The speaker connectors are clearly marked on the back panel of the VK-80t. There are several sets of output taps marked LOW, MEDIUM and HIGH for connecting a variety of speakers to the VK-80t. 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.

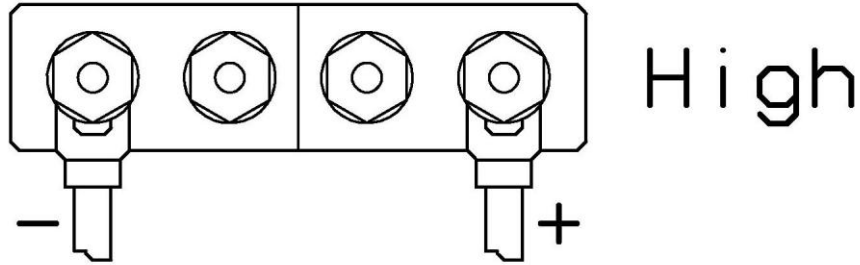
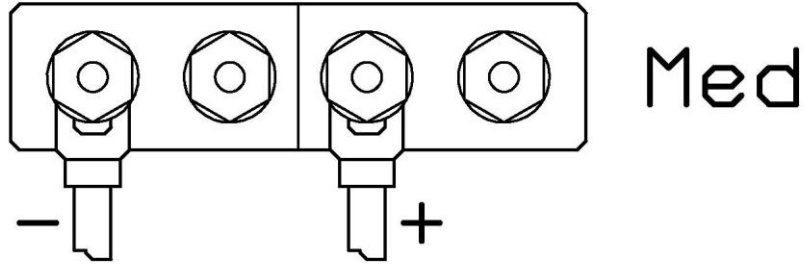
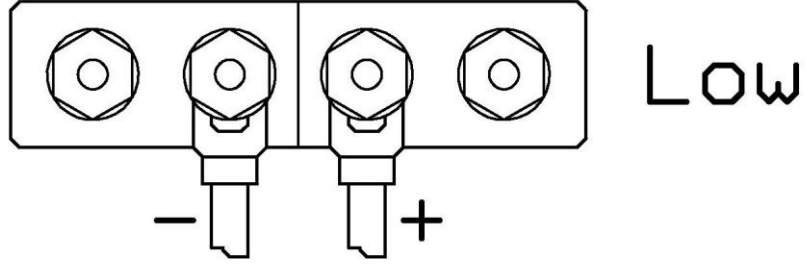


Figure 1
Output Connections

Operating the VK-80t

Normal operation of the VK-80T requires simply turning the unit on. There are no meters to connect, bias setpoints to remember, or drifting bias points to adjust. Please read the **Autobias Feature** section for more details.

Turning the VK-80t On:

The power switch button and Power On indicator are located at the front of the unit. 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 after about one minute. Conditions such as low line voltage and tubes' age can delay the readiness of the tubes.

Turning the VK-80t Off:

The unit can be turned Off at any time (even while playing). If needed, please wait at least 30 seconds before turning the unit ON again.

Autobias Feature:

The VK-80t 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 particular output tube is defective. In this case replacing this tube with a known good one should turn the LED ON.
2. The amplifier was overstressed and the electronic protection circuit inside tripped. These circuits protect output tubes from overloading. There are two protection circuits, one for each channel. Any overload in one channel will disable both output tubes.

Protection Circuits

Your VK-80t 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 particular tube. The corresponding green LED will then go out.

When this happens, simply turn the unit OFF using the front panel power switch, 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 monitoring the currents flowing through each output tube. Should the current exceed the preset value, the protection circuit will disable that particular channel, and the 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-80t 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 over-current protection due to 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 light goes out:

If you notice that one or more 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.

Replacing Fuses:

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

The main power fuse is of Slow-Blow type (10A rating for 110-120VAC line voltage and 5A for the 200-240VAC range). It is located on the unit's back panel.

There are no other fuses in the unit.

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

Replacing Output Tubes:

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-80t 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-80t 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-80t 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.

Producent:

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Polska
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e-mail: eic@eic.com.pl

VK-80t 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, 6922 and 6H30 vacuum tubes (including replacements under warranty) are warranted for one year from the date of the original VK-80t 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.