

**audio research**  
HIGH DEFINITION®

VT80 SE

Stereo Power Amplifier

Thank you for choosing the VT80 SE to be a part of your audio system. Since 1970, Audio Research has been creating some of the world's finest audio products. Each piece is handcrafted in Minnesota and has been designed to provide many years of enjoyment.

We understand you may want to begin listening; however, it may take a few minutes to read this guide for useful information concerning the operation of your new amplifier. Once you have read this performance of this amplifier, we encourage you to continue to improve your listening pleasure by allowing us to provide you with the information you need to fully appreciate your investment. We hope this guide will provide to your satisfaction.

After reading this guide, if you have any further questions regarding your amplifier, please contact your dealer who will be happy to assist you.

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To prevent fire, or shock, do not touch the interior of the unit or the top cover. To expose your VT80 SE to the interior of the unit, refer to the instructions in the manual.

Do not place objects on top of this unit.

This unit contains voltage components that can cause serious injury or death. Do not attempt to repair the unit unless the covers are removed. Refer to the instructions in the manual for authorized Audio Research personnel.

The detachable power cord is equipped with a heavy-duty three-prong grounding cable and a standard grounding plug appropriate to which it is originally shipped. For safety protection, do not defeat the plug. This provides protection of the VT80 SE chassis from electrical shock and protection from electrical fire.

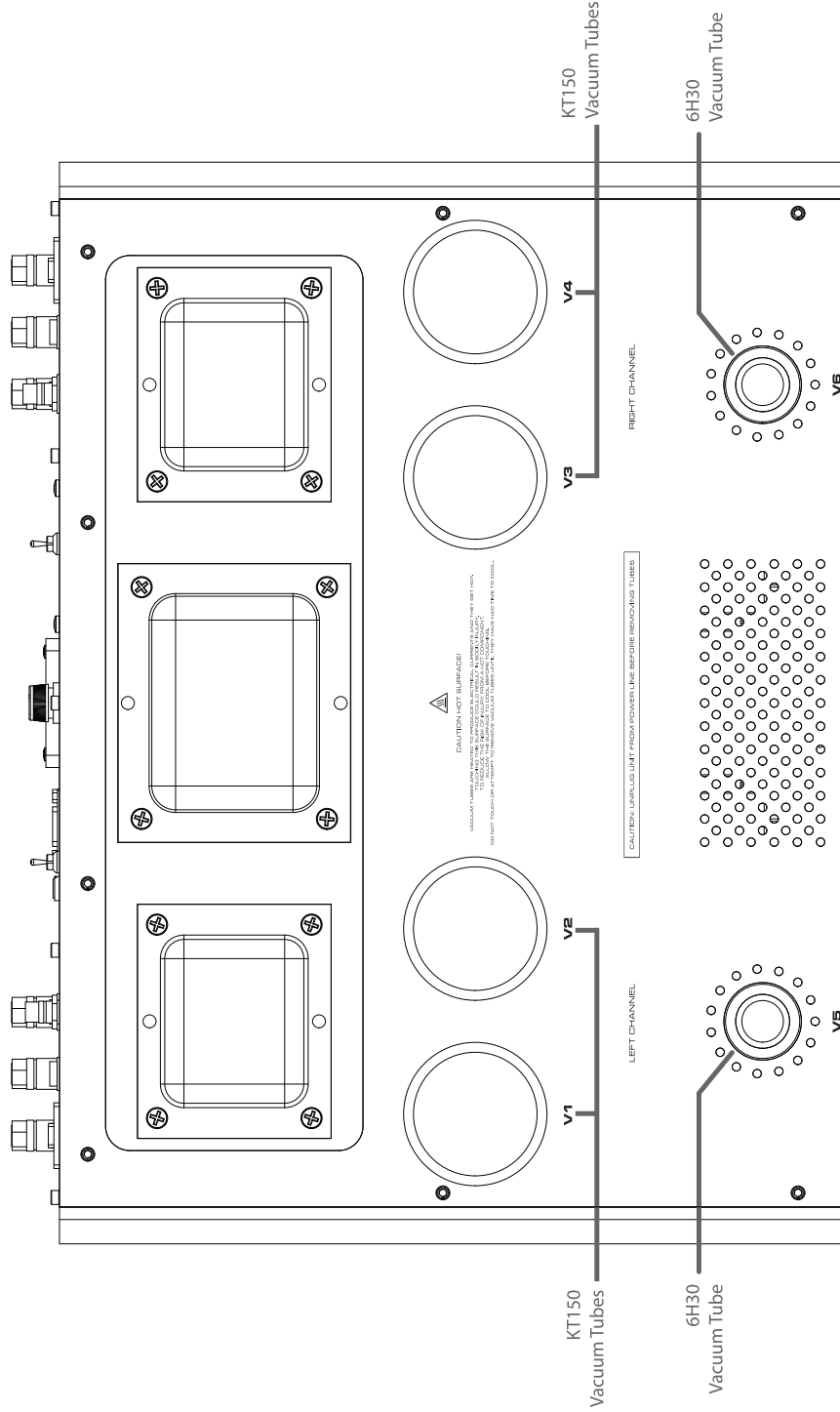
The appliance coupler (a.c. power cord) is located at the rear of this unit. In the event of an emergency power disconnection, refer to the instructions in the manual.

The VT80 SE shipped outside of North America is shipped with a protective cover. While the cover may be removed, it is recommended to prevent damage to the unit with the hot vacuum tubes.

# Installation

## Top Plate

### VT80 SE TOP VIEW



**To remove the top cover units sold outside of No** Using the provided hex- the fastening screws fr back edges of the tube the screws have been re the cover.

After removing the top cc tubes packed in protec Top Plate illustration to your VT80 SE in their pro chassis. Note that the n each tube correspond to on the chassis next to Insert each tube firmly the tube pins with the co holes.

### In your system

To insure normal comp operation this unit mus in an upright position. Ac proper cooling can occu restriction above and bet either side.

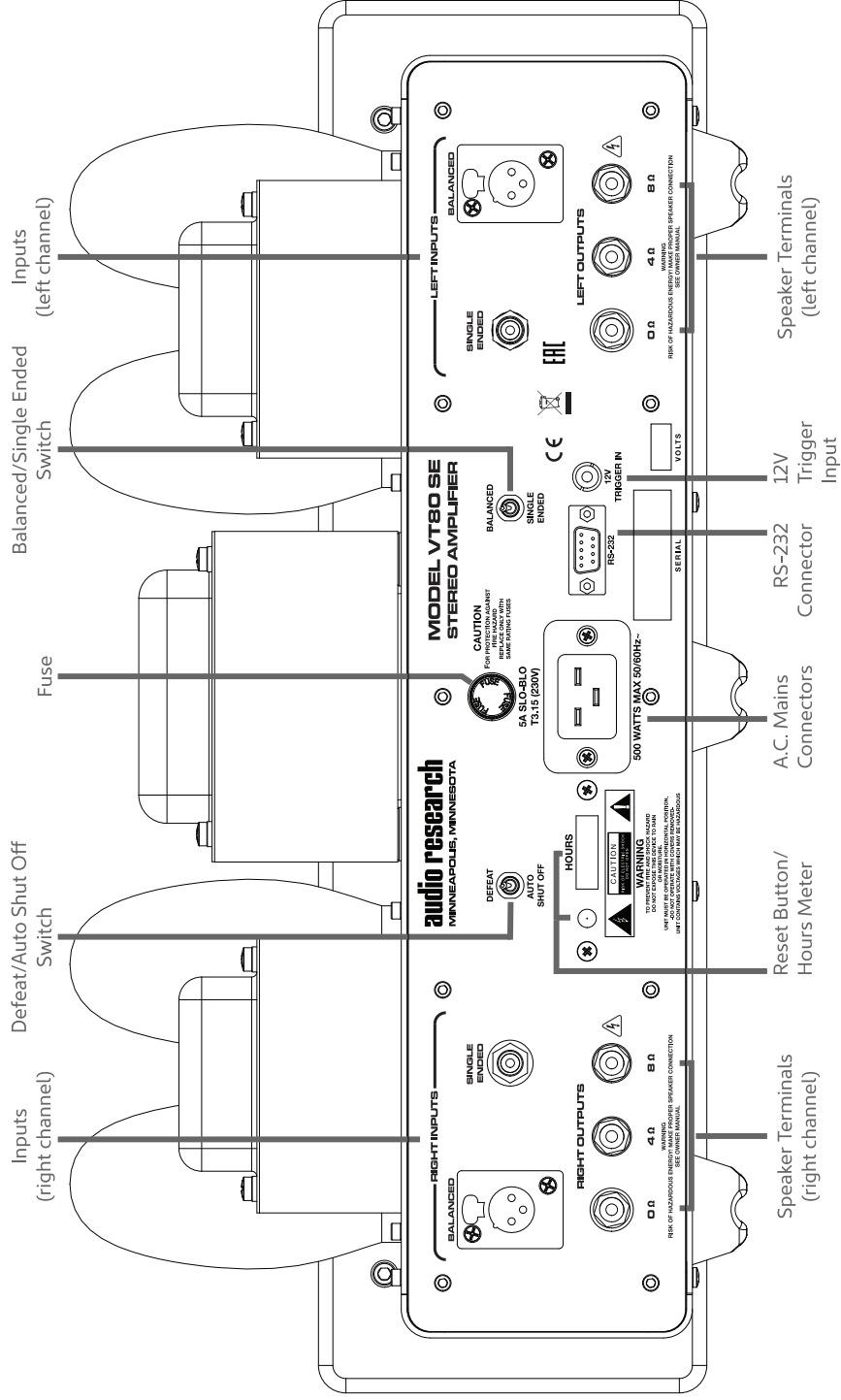
The special non-marrir provide adequate spa only on a smooth, harc assist to isolate the amp vibrations. For upright

# Connections

## Back Panel Controls and Connections

**Input Connectors**  
The VT80 SE uses a full topology and has a pair of connectors along with a RCA input connectors. They must be in the appropriate Single-Ended or Balanced preamplifier's output to turning on the amplifier the balanced XLR input single-ended RCA connector - connect one pair of

### VT80 SE REAR VIEW



## Output Connectors

Proprietary, heavy-duty are provided on the rear 8-ohm speaker impedance high-quality speaker cable the (-) speaker lead to (0 Ω black banded) (+) lead to the matching banded) terminal. Follow manufacturer's impedance The VT80 SE puts out the power whether the 4 Ω are used.



**Note:** The 4 Ω tap wiring and speaker switch have a common ground of the amplifier output

## Connections

Connect the VT80 SE input to the preamplifier or electronic crossover, using only the highest grade of audio interconnect cables. To avoid sonic degradation use the shortest practical length of cables.



**Note:** The VT80 SE will not be damaged by improper impedance match to the speakers, but maximum power delivered into the speakers may be affected.

### A.C. Power Connection

It is important that the VT80 SE be connected via its supplied 20 amp IEC 12-gauge power cord to a secure, dedicated A.C. power receptacle. Never connect to convenience power receptacles on other equipment. Only use the power switch on the front of the VT80 SE for On/Off control of the amplifier, or the 12V start-up trigger for remote installations.

The AC power source for the VT80 SE amplifier should be capable of supplying 10 amperes for 100 or 120 volt units, or 5 amperes for 220 or 240 volt units.

For the very best performance on 100 or 120 volt circuits, the VT80 SE should be connected to its own AC power circuit branch, protected by a 15 amp breaker. The

other components of your system. If the VT80 SE is turned on before other components, the amplifier will amplify any extraneous turn-on noises those components might generate, which could potentially damage the loudspeakers. Good operating practice dictates that the amplifier should be turned on last, and turned off first in an audio system.

The VT80 SE uses a grounding system that does not require a ground-lifter adapter plug on the A.C. power cord to minimize hum. The power cord supplied with the VT80 SE has a standard grounding plug to provide maximum safety when properly connected to a grounded wall receptacle. If there is any question regarding proper grounding procedures in your installation, seek help from a qualified technician. Caution should be taken before using custom after-market power cords: they must be at least 12-gauge and have a standard grounding plug properly installed. These power cords are to be used with caution, at the sole risk of the owner.

If electronic crossovers or other audio equipment is used with the VT80 SE, it may be necessary to use 'ground' on the power plugs or to minimize system hum. The lowest hum is achieved with a direct connection between the amplifier's 'ground' and true earth ground. Other equipment in the system may have some form of isolation or ground loops and associated hum.

### Remote Turn-on

The VT80 SE has a built-in turn-on/off circuit for optional remote control system in a home audio system. Use a 3.5mm mini plug to connect to the jack on the rear of the VT80 SE.

The +12V TRIGGER IN is connected to the +12V master control system, +12VDC signal at 12mA for a duration of amplifier on-time. Momentary or data pulse signals are not supported.

The +12VDC remote jack is for protection, so they will not be damaged. -12VDC signal is accidental. The control wires are reversible.

# Operation

## Front Panel Controls and Displays

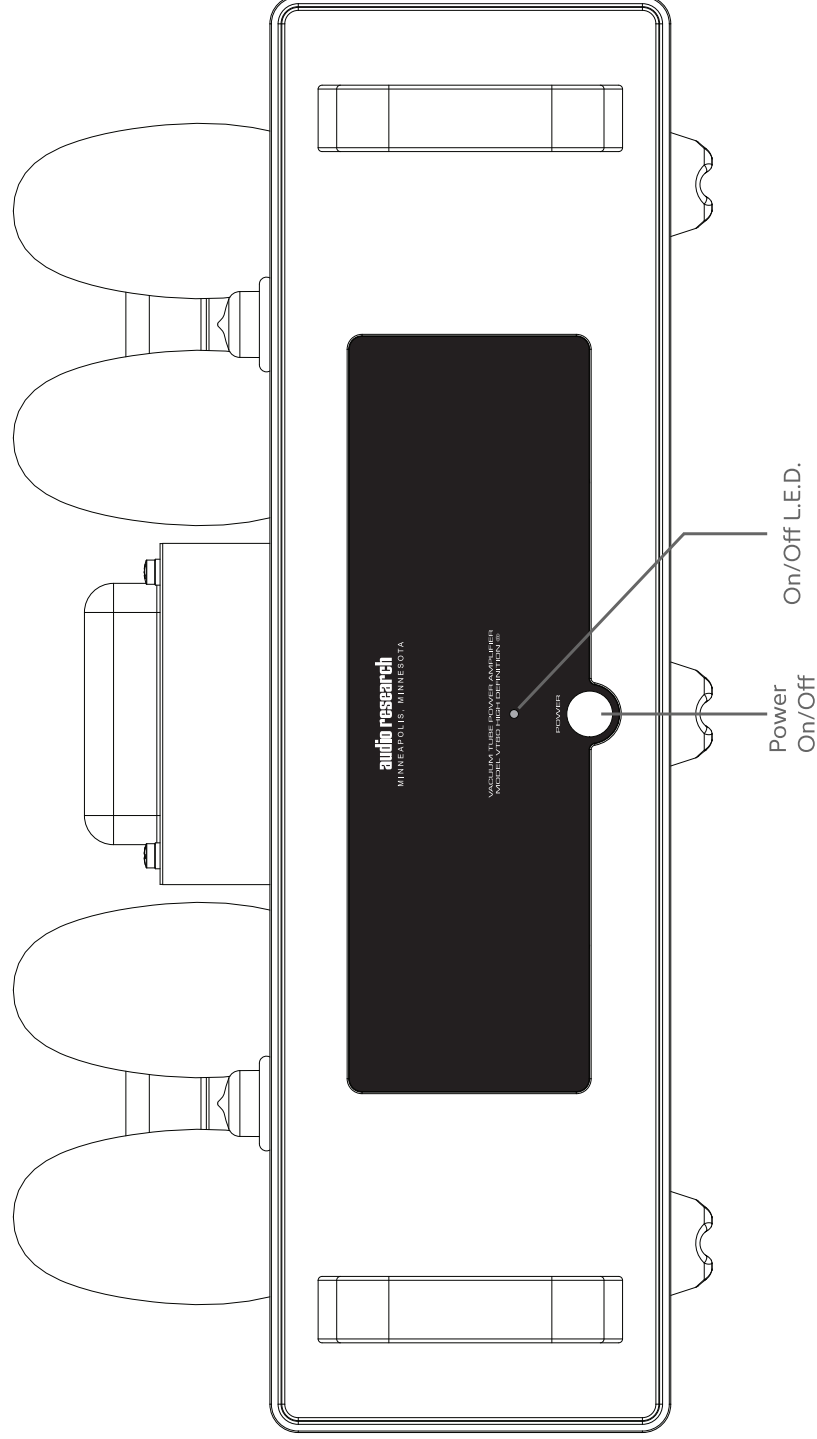
### Start-Up

- Secure interconnects between your preamplifier and your preamp to the appropriate output.
- Attach supplied power inlet of amplifier, and grounded A.C. power receptacle.
- Turn on preamp and allow mute preamp output.
- Press VT80 SE front panel Green power LED will illuminate.
- The VT80 SE has an auto mute circuit which allows stabilize before becoming active.
- Unmute preamplifier source component signal as appropriate.

### Shut-Down

- Mute preamplifier output.
- Press VT80 SE front panel Mute button.
- Turn off preamplifier associated input source.

## VT80 SE FRONT VIEW



## Operation

### **Auto Shut Off**

The VT80 SE is equipped with an auto shut off feature, designed to turn the amplifier off after two hours of no signal being present at the output of the amplifier.

In the event that quiet music is listened to at very low volumes, there may not be adequate signal for the auto shut off circuit, resulting in the amplifier turning itself off. If this is the case, please disengage the auto shut off feature. The auto shut off feature control switch is located on the back panel of the VT80 SE. Toggling the switch allows you to turn the feature on or off.



**Note:** The auto shut off feature is not in the signal path of the amplifier and has no deleterious sonic effect on music playback.

### **Break-in**

All quality stereo equipment benefits from a break-in period; during this time, various components change as electrical signals pass through them. While your VT80 SE will sound excellent out of the box, it will only improve with continued use.

### **Auto Bias**

The VT80 SE incorporates a highly

### **Vacuum Tubes**

It is recommended that vacuum tubes of your All of the tubes in your been matched to have characteristics, to provide quality and reliability. In to replace a single output to the numbers written at the bottom of the vacuum Research recommends tubes after 3,000 hours of

### **Servicing**

Because of its careful standards of manufacture amplifier should normally minimal service to maintain performance. Your VT80 individual fuses for each is to prevent circuit board tube arc occur. These fuses the underside of the circuit each tube. In the event a qualified service technician Research Customer Service can exist long after the Use extreme caution.

### **Caution**

Your VT80 SE amplifier levels of voltage and current

auto bias circuit compensates to maintain the proper bias as the tubes age. Auto-bias sets idle current at 65ma per tube.

It is always recommended owners purchase replacement tubes from Audio Research Corp. It is still recommended that matched sets of output tubes be installed. While auto-bias will correct for mismatches, sonic benefits still apply with matched tubes.

The auto bias circuit will not accommodate output tubes with extremely high or low plate current readings. Aftermarket tubes may not be tested to the same rigorous standards as Audio Research tests, so care must be exercised when installing aftermarket tubes. If uncertain about aftermarket tube requirements, please contact Audio Research Customer Service for recommendations.



## Warranty

Audio Research Corporation products are covered by a 3-Year Limited Warranty or a 90-Day Limited Warranty (vacuum tubes). This Limited Warranty initiates from the date of purchase, and is limited to the original purchaser, or in the case of demonstration equipment, limited to the balance of warranty remaining after original shipment to the retailer or importer.

In the United States, the specific terms, conditions and remedies for fulfillment of this Limited Warranty are listed on the warranty card accompanying the product in its shipping carton. The warranty terms are also available on the internet at [www.audioresearch.com/en-us/company/warranty-statement](http://www.audioresearch.com/en-us/company/warranty-statement). Outside the United States, the authorized importing retailer or distributor has accepted the responsibility for warranty of Audio Research products sold by them.

The specific terms and remedies for fulfillment of the Limited Warranty may vary from country to country. Warranty service should normally be obtained from the importing retailer or distributor from whom the product was purchased.

In the unlikely event that technical service beyond the ability of the importer is required, Audio Research will fulfill the terms and conditions of the Limited Warranty. Such product must be returned at the purchaser's expense to the Audio Research factory, along with a photocopy of the dated purchase receipt for the product, a written description of the problem(s) encountered, and any information necessary for return shipment. The cost of return shipment is the responsibility of the purchaser.

**POWER OUTPUT:** 75 watts; distortion typically 1% at 7 dependent upon both line power will be affected adversely

**POWER BANDWIDTH:** (-3

**FREQUENCY RESPONSE:**

**INPUT SENSITIVITY:** 1.4V F

**INPUT IMPEDANCE:** 300K

**OUTPUT POLARITY:** Non-

**OUTPUT TAPS:** 8 ohms, 4

**OUTPUT REGULATION:** A (Damping factor approximat

**OVERALL NEGATIVE FEED**

**SLEW RATE:** 10 volts/micr

**RISE TIME:** 4.0 microsecond

**CHANNEL SEPARATION:**

**HUM & NOISE:** -84dBV w

**SIGNAL TO NOISE:** 112dB

**CONTROLS:** Power on/off,

**AMBIENT AIR TEMPERAT**

**POWER SUPPLY ENERGY**

**POWER REQUIREMENTS:** 500 watts maximum, 230

# FOUNDATION SERIES

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