



# **KAV-250a Stereo Amplifier & KAV-250a/3 Three Channel Amplifier Service Manual**

**v99.0**

## **Table of Contents**

**Specifications: KAV-250a**

**Specifications: KAV-250a/3**

**Unit Test Procedure**

**Test Equipment Required**

**Amplifier Test Procedures**

**Burn-in Procedure**

**Schematic Diagrams and Bill of Materials are separately attached**

# KAV-250a Stereo Amplifier Specifications

## Frequency Response

20 Hz - 20 kHz +0dB, -0.1 dB  
0.4 Hz - 170 kHz +0dB, -3 dB

## Output Voltage

Peak to peak 138 V  
RMS 49V

## Signal to Noise Ratio

118 dB. "A" weighted

## Dimensions

19w x 6.3h x 15.3d inches  
48.3w x 16h x 40d centimeters

## Distortion

1 kHz <0.06% THD  
20 kHz <0.25% THD

## Weight

Unit 43 lbs., 19 kg  
Shipping 57 lbs., 26 kg

## Gain

26.4 dB

## Input Sensitivity

2.15 Vrms

## Input Impedance

100 kOhms

## Output Power

each channel driven

8 Ohms 250W

4 Ohms 500W

Bridged

8 Ohms 1000 W

## Power Consumption

Idle 210 W

Max. 1850 W

## Inputs

2 balanced via XLR connectors

2 single-ended via RCA  
connectors

## Outputs

1 pair five way speaker binding  
posts

# KAV-250a & KAV-250a/3 Amplifier Test Procedure

## 1. Purpose

To verify proper assembly and functionality

## 2. Test Equipment Required

- 1 Fluke 75 MM and a 8085 A MM or equivalent (Digital Multi-Meter)
- 1 Hitachi V-212 Oscilloscope or equivalent
- 1 ATS-1 (Audio Precision Analyzer) or equivalent
- 1 Variac (Autoformer)
- 1 Load Bank (50 Watt 8 Ohm Resistors)
- 1 0.015uf capacitor
- 1 0.1uf capacitor

## 3. Amplifier Test Procedure

- a) Perform a visual inspection. Verify that the connections from and to the rails are sound and following the correct polarity.
- b) Set the power supply switches for 120VAC

	SW1	SW2	SW3	* SW4
<b>100V</b>	1	1	-	1
<b>120V</b>	2	1	-	1
<b>200V</b>	1	2	1	2
<b>220V</b>	1	2	2	2
<b>240V</b>	2	2	2	2

- c) Verify a balanced voltage between the positive and negative rail. Each rail should have a voltage of approximately  $\pm 85$  VDC respectively.
- d) Set the ATS-1 as follows: Set the Generator Output for 50 $\Omega$  **Balanced**. Set Analyzer filter bandwidth to Un-weighted 10Hz – 300KHz. Set the analyzer amplitude function to read in volts. Adjust the Generator Output to 2.16 Vrms at 1KHz.

#### **4. Burn-in Procedure**

- a) Allow unit to sit, turned on for 1 day.
- b) Switch off the unit and let sit for five or ten minutes. Turn the unit back on and follow the Amplifier Test Procedures on page 3.

**Note:** The bias should not be readjusted again.