Accuphase

INTEGRATED STEREO AMPLIFIER

E-3000

● AAVA type volume control ● Power amplification stage configured as an instrumentation amplifier ● Three-fold parallel push-pull configuration using power transistors driven in Class AB ● Powerful 100 watts into 8 ohms, 150 watts into 4 ohms ● High damping factor of 600 ● Strong power supply with massive transformer and high-voltage, large filtering capacitors ● Protection circuitry using MOS-FET switches

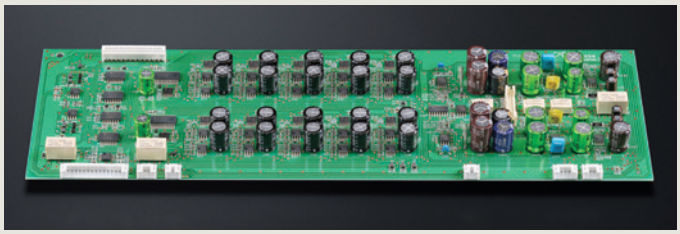
Integrated amplifier that touches the soul of music

The E-3000 integrated amplifier emerged from the path forged by the technologies used in high-end equipment. Among this amplifier's constituent elements, the vitally important volume control circuits incorporate AAVA that employs the ANCC principle. The power amplifier section produces balanced signals relying on the instrumentation amplifier principle while simultaneously creating a robust output stage through three-fold parallel push-pull power transistors driven in class AB. Every moment spent immersed in the vibrant playback of the E-3000 is one to relish.

Innovation – At the leading edge of technology

AAVA volume control circuit

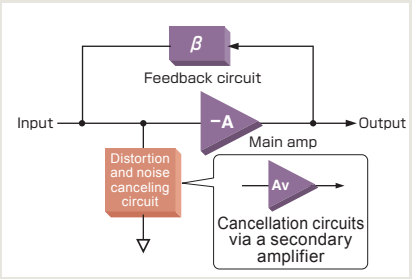
Conventional preamplifiers use variable resistors to adjust volume, which can cause contacts to deteriorate and create rasping as well as increase noise at normal volume levels. AAVA, however, produces multiple, widely varying signals from the input signal and controls volume by changing the combination of those signals. This achieves minimum noise levels at all volume levels without any rasping.



AAVA volume control circuit

ANCC significantly reduces distortion and noise (Accuphase Noise and distortion Canceling Circuit)

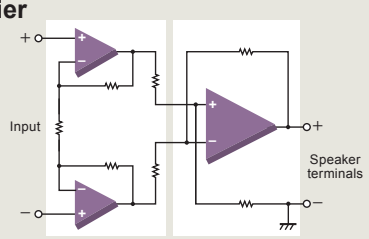
The E-3000's I-V conversion amplifier uses the ANCC principle. ANCC uses a secondary amplifier to cancel out noise and distortion from the main amplifier. The secondary amplifier utilizes a low-noise amplifier to increase the effect of the ANCC. Incorporating this ANCC in the AAVA I-V conversion amplifier drastically improves noise performance, particularly when transitioning from low volume settings to typical volume positions.



Block diagram of ANCC

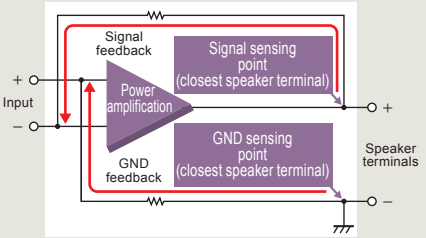
Power amplification stage configured as an instrumentation amplifier

The instrumentation amplifier circuitry's equal impedance on the + and – sides and exceptional external noise suppression provide optimal performance for an audio amplifier.



Balanced remote sensing

Balanced remote sensing improves the damping factor by feeding back the GND at the same time as the signal output from the speaker terminals.



Sound quality – Simply aiming for the best

Robust power amplification stage

The power amplification stage on both the left and right sides features a large heat sink and employs three-fold parallel push-pull power transistors driven in Class AB to provide rated, high-power output of 100 watts into 8 ohms and 150 watts into 4 ohms.

High damping factor brings out the full potential of speakers

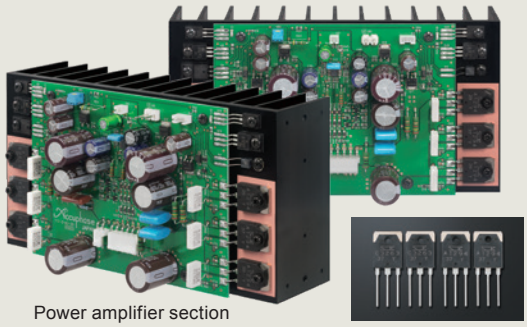
The damping factor represents the amplifier's ability to drive the speakers. A damping factor of 600 (guaranteed) extracts the maximum potential from the loudspeakers.

Power supply circuitry designed for optimum stability

A strong power supply featuring a massive transformer and two high-voltage, large filtering capacitors (33,000 µF/71 V) offer a stable power supply at all times.

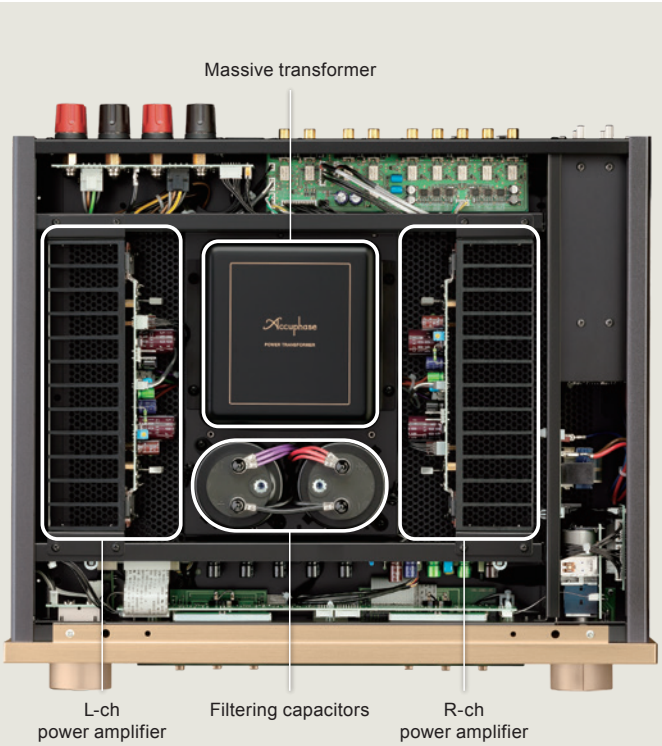
Massive transformer

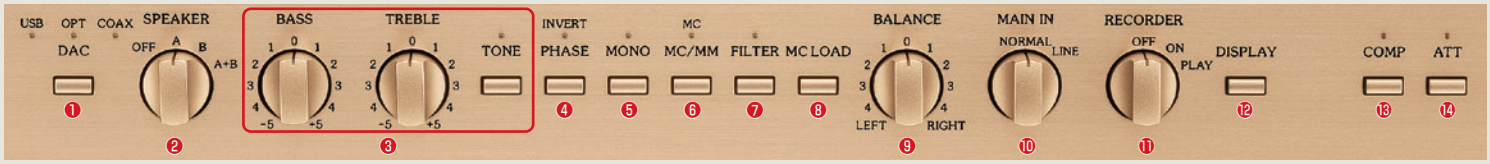
Large filtering capacitors



Power amplifier section

Power transistors





- **AAVA volume control circuit**
- **Highly reliable logic-control signal switching relays**
- **Power amplification stage configured as an instrumentation amplifier**
- **Balanced remote sensing to improve the damping factor**
- **Current feedback amplification circuit topology assures excellent phase characteristics in the high range**
- **Preamplifier I/O terminals (LINE)**
- **Dedicated, high-quality headphone amplifier**
- **DAC input selector (when DAC-60 / DAC-50 / DAC-40 is installed) ···①**
- **Speaker output selector ·····②**
- **Tone controls using summing active filters ·····③**
- **Individual phase setting for each input ·····④**
- **Stereo signal can be switched to monophonic ·····⑤**
- **MC/MM selector (when AD-60 / AD-50 / AD-30 / AD-20 is installed) ···⑥**
- **Subsonic filter ON/OFF selector (when AD-60 is installed) ···⑦**
- **MC input impedance selector 30 / 100 / 200 / 300 ohms ···⑧⑰ (when AD-60 is installed)**
- **Left/right balance control using AAVA ·····⑨**
- **Power amp input selector (LINE) ·····⑩**
- **Recorder selector ·····⑪**
- **Display mode selector ·····⑫**
- **Loudness compensator to adjust audible sonic balance ···⑬**
- **–20 dB volume attenuator to instantly reduce the sound level ···⑭**
- **Volume display ·····⑮**
- **Sampling frequency display (when DAC-60 / DAC-50 / DAC-40 is installed) ···⑯**
- **Five sets of line inputs ·····⑱**
- **Balanced input connectors ·····⑲**
- **Speaker output protection circuit guards against short-circuiting ···⑳**
- **Two sets of large speaker terminals ·····㉑**
- **Highly reliable MOS-FET switches ·····㉒**
- **High-carbon cast iron insulators for superior vibration damping ···㉓**

A highly-sensitive, large analog power meter capable of displaying output levels to –50 dB

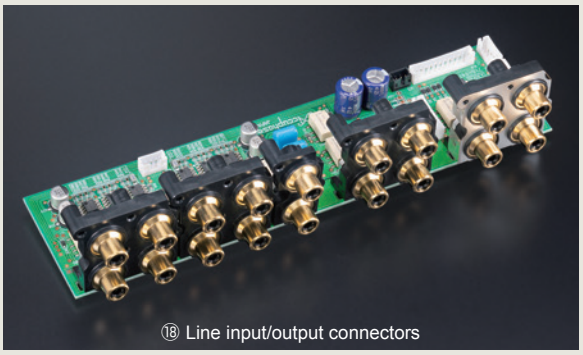
Includes CD player operation

Supplied Remote Commander RC-260

⑮ Volume display

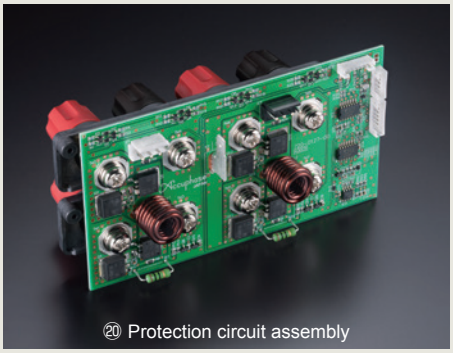
⑯ Sampling frequency display

⑰ MC input impedance display

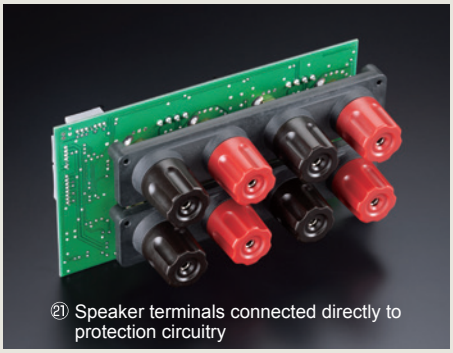


⑱ Line input/output connectors

⑲ Balanced input connectors



⑳ Protection circuit assembly



㉑ Speaker terminals connected directly to protection circuitry

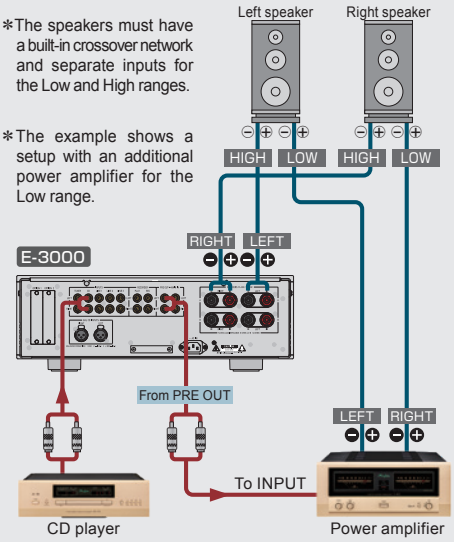
㉒ MOS-FET switches

㉓ High-carbon cast iron insulators

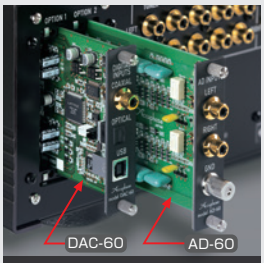
Bi-amping for Further Enhanced Sound

In a bi-amped setup, the speaker units for the Low range and the High range are driven by separate amplifiers with equal gain, enabling playback with higher sound quality.

* The speakers must have a built-in crossover network and separate inputs for the Low and High ranges.
* The example shows a setup with an additional power amplifier for the Low range.



Option Boards



Option board installation example

The rear panel expansion slots allow use of three types of option boards (DAC-60, AD-60, and LINE-10). Up to two boards can be installed, according to requirements.

■ **The following option boards can also be used**

Digital Input Board	DAC-50/DAC-40/ DAC-30/DAC-20/ DAC-10
Analog Record Input Board	AD-50/AD-30/ AD-20/AD-10/AD-9
Line Input Board	LINE-9

Analog Record Input Board AD-60

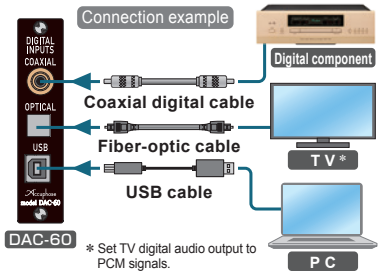
AD-60

Features a high-performance phono equalizer for playback of analog records.

- Supports MC and MM cartridges
- Load impedance selection (MC only)
- Subsonic filter

Cartridge	MC	MM
Gain	66 dB	40 dB
Input impedance	30 ohms 100 ohms 200 ohms 300 ohms	47 kilohms

Digital Input Board DAC-60



* Set TV digital audio output to PCM signals.

High-performance DAC with two ES9016K2M chips from ESS Technology driven in parallel.

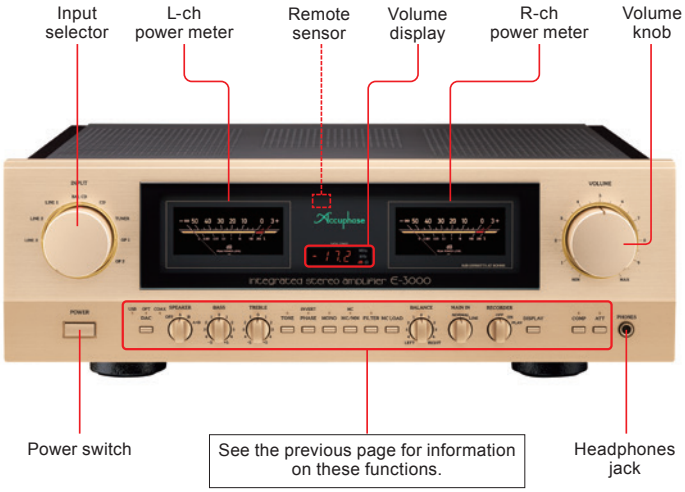
Input	Signal	Sampling frequencies	Number of bits
USB	DSD	2.8 MHz 5.6 MHz 11.2 MHz [11.2 MHz: ASIO only]	1-bit
	PCM	32 to 384 kHz	32-bit
OPTICAL	PCM	32 to 96 kHz	24-bit
COAXIAL	PCM	32 to 192 kHz	24-bit

Line Input Board LINE-10

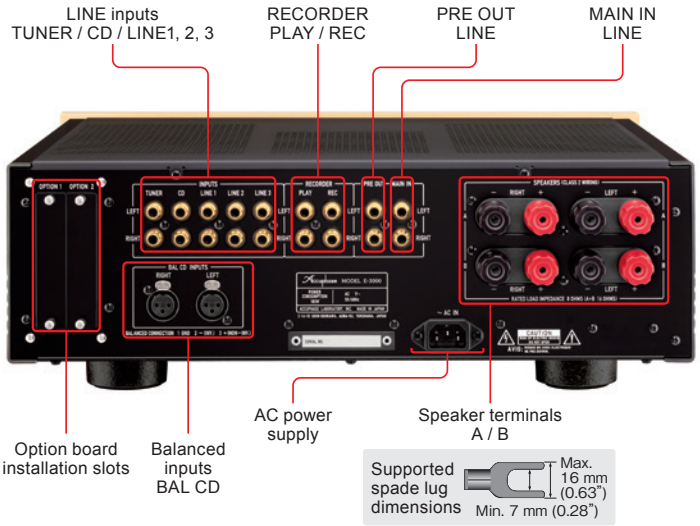
LINE-10

Provides an additional set of unbalanced line level inputs.

Front Panel



Rear Panel



E-3000 Guaranteed Specifications

Rated Output (20 to 20,000 Hz)	Both channels driven simultaneously	4-ohm load*	150 W/ch
		8-ohm load	100 W/ch
Total Harmonic Distortion (20 to 20,000 Hz, at rated output)	Both channels driven simultaneously	4 to 16-ohm load	0.05 %
Intermodulation Distortion	0.01 %		
Frequency Response	At rated output	INPUT (BALANCED/LINE)	20 to 20,000 Hz (+0, –0.5 dB)
		MAIN IN	20 to 20,000 Hz (+0, –0.2 dB)
	At 1 W output	MAIN IN	3 to 150,000 Hz (+0, –3 dB)
Damping Factor	600		
Input Sensitivity	At rated output	INPUT (BALANCED/LINE)	142 mV
		MAIN IN	1.13 V
	EIA (at 1 W output)	INPUT (BALANCED/LINE)	14.2 mV
		MAIN IN	113 mV
Input Impedance	INPUT (BALANCED)		40 kilohms
	INPUT (LINE)		20 kilohms
	MAIN IN		20 kilohms
Max. Input Voltage	INPUT (BALANCED/LINE)		5.0 V
Output Voltage	At rated output	PRE OUTPUT	1.13 V
Output Impedance	PRE OUTPUT		50 ohms
Gain	INPUT (BALANCED/LINE) → PRE OUTPUT		18 dB
	MAIN IN → SPEAKER OUTPUT		28 dB

Tone Controls	Turnover frequency and adjustment range	Bass: 300 Hz	±10 dB
		Treble: 3 kHz	±10 dB
Loudness Compensator	+6 dB (100 Hz)		
Attenuator	–20 dB		
S/N Ratio	At rated output (Input shorted, A weighting)	INPUT (BALANCED)	96 dB
		INPUT (LINE)	107 dB
		MAIN IN	122 dB
	EIA	INPUT (BALANCED/LINE)	97 dB
		MAIN IN	101 dB
Power Meters	Logarithmic peak level display of output in dB or %		
Headphones Jack	Compatible impedance		8 ohms or higher
Power Requirements	120 V, 220 V, 230 V AC (voltage as indicated on rear panel)		
Power Consumption	Idle		69 W
	In accordance with IEC 62368-1		185 W
	Stand-by		0.3 W
Maximum Dimensions	Width 465 mm (18.3") × Height 161 mm (6.3") × Depth 422 mm (16.6")		
Mass	23.1 kg (50.9 lbs)		
In shipping carton	29 kg (64 lbs)		

* Music signals only
- Measurement methods for Guaranteed Specifications adhere to JEITA CP-1301A and IEC 60268-3.

Supplied accessories

- **AC power cord (2 m (6.5'))**
- **Remote Commander RC-260**

Remarks

★ *This product is available in versions for 120/220/230 V AC. Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.*
★ *The 230 V version has an Eco Mode that switches power off after 120 minutes of inactivity.*
★ *The shape of the plug of the supplied AC power cord depends on the voltage rating and destination country.*

Accuphase

ACCUPHASE LABORATORY, INC.

- The specifications and appearance of this product are subject to change without notice.

https://www.accuphase.com/

C2504Y 850-2243-00(B1) PRINTED IN JAPAN