Accuphase

PRECISION INTEGRATED STEREO AMPLIFIER

E-5000

● Integrated amplifier with fully balanced configuration extending from input to output ● Balanced AAVA volume control ● Power amplification stage configured as instrumentation amplifier ● Five-fold parallel push-pull configuration of power transistors driven in Class AB ● High power output of 240 watts into 8 ohms / 320 watts into 4 ohms ● High damping factor of 1,000 ● Strong power supply with massive high-efficiency toroidal transformer and high-voltage, large filtering capacitors ● Protection circuitry using MOS-FET switches

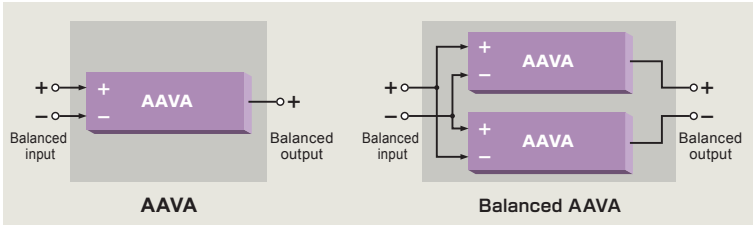
High-output integrated amplifier featuring Balanced AAVA

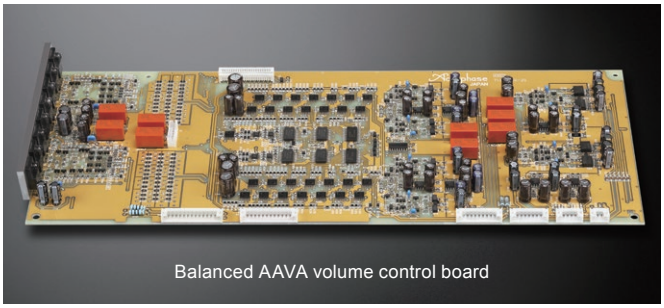
The E-5000 is the flagship high-power Class AB integrated amplifier developed to mark Accuphase's 50-year anniversary. The preamplifier section features our superior Balanced AAVA volume control, while the power amplifier section includes an instrumentation amp and power transistors in a five-fold push-pull arrangement driven in Class AB. These circuits create a balanced circuit from input to output. With its precisely balanced circuits and solidly built output stage, the E-5000 integrated amplifier presents every piece of music in exquisite detail.

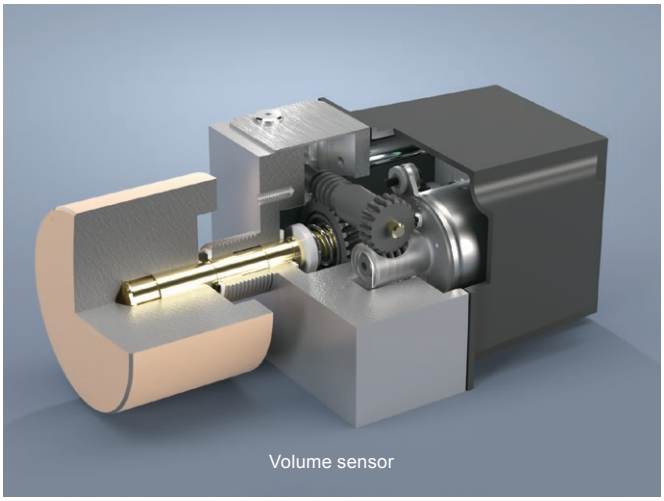
Innovation – The leading edge of technology

Balanced AAVA volume control

Conventional preamplifiers use variable resistors to adjust volume, which causes contacts to deteriorate and create grit 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 at all volume levels without any grit. The E-5000 with its balanced AAVA circuits delivers exceptional noise suppression performance.




Balanced AAVA volume control board


Volume sensor

Quiet and smooth volume sensor design

The AAVA controls the volume levels by using its volume sensor to detect the position of the volume knob and then changing the combination of those signals. Accuphase developed the volume sensor in-house, using robust and heavy materials and crafting it using an aluminum block extrusion process to achieve smooth operations, a solid operation feel, and precise position detection when rotating the knob. It also suppresses operation sounds when using the Remote Commander to allow for quiet and pleasant volume adjustment.

Sound quality – Simply aiming for the best

Formidable power amplification stage

The power amplification stage on both the left and right sides is equipped with a large heat sink and employs five-fold parallel push-pull power transistors driven in Class AB to provide rated, high-power output of 240 watts into 8 ohms and 320 watts into 4 ohms.

High damping factor brings out the full potential of the loudspeakers

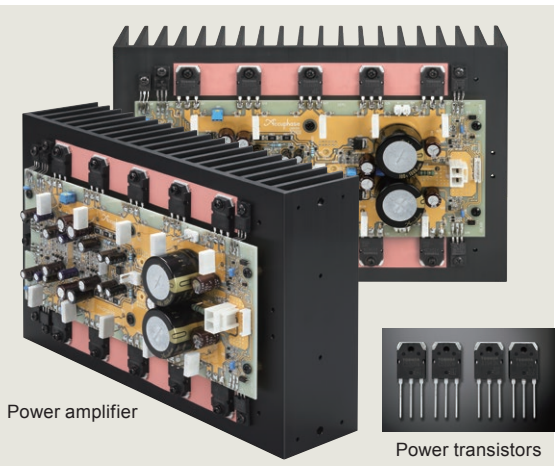
The damping factor represents the amplifier's ability to drive the speakers. A damping factor of 1,000 (guaranteed) extracts the maximum potential from the loudspeakers.

Power supply circuitry designed for optimum stability

A strong power supply featuring a massive toroidal transformer and two high-voltage, large filtering capacitors (40,000 µF/100 V) offers a stable power supply at all times.


Massive toroidal transformer


Large filtering capacitors


Power amplifier

Power transistors

When style

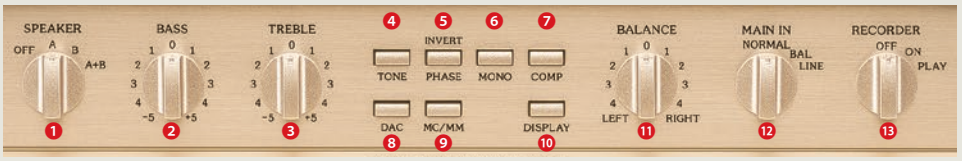
matters


Accuphase
VOLUME / FREQ
- 18.0
MHz
kHz
dB
50 40 30 20 10 5 0 3
dB
0dB:240WATTS AT 8OHMS
VOLUME
MIN
MAX
ATTENUATOR
PHONES
DAC
USB
OPT
COAX
MC
TONE
PHASE
MONO
COMP
ATT
precision integrated stereo amplifier E-5000

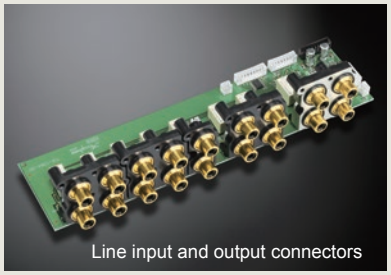
Advanced features

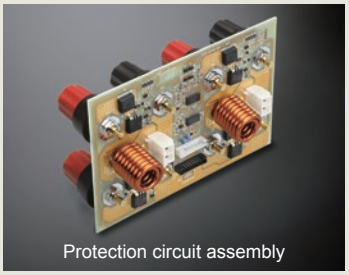
- **Balanced AAVA volume control**
- **Highly reliable logic-control signal switching relays**
- **Ample input connectors (Five line level and two balanced)**
- **Line level input and output connectors for a recorder**
- **Individual phase setting for each input**
- **Stereo signal can be switched to monophonic operation**
- **Left / right balance control through Balanced AAVA**
- **Volume attenuator that can instantly reduce sound as low as –20 dB**
- **Loudness compensator to adjust audible sonic balance**
- **Tone controls using summing active filters**
- **Power amplification stage employs instrumentation amplifier principle**
- **Current feedback amplification circuit topology assures excellent phase characteristics in high range**
- **Speaker output protection circuit guards against short-circuiting**
- **Protection circuitry using low impedance, highly reliable MOS-FET switches**
- **Two massive speaker connectors for output switching and simultaneous output**
- **Line level and balanced outputs at the preamplifier section support bi-amping connection**
- **Line level and balanced inputs at the power amp section allow use as a power amplifier**
- **Dedicated, high-quality headphone amplifier constructed with discrete components**
- **Two expansion slots for option boards**

[When AD-50 / AD-30 / AD-20 is installed]
• MC / MM switching from the front panel
[When DAC-60 / DAC-50 / DAC-40 is installed]
• DAC switching from the front panel
• Sampling frequency display of digital input signal

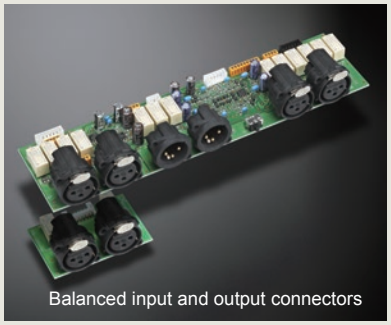


❶Speaker output selector
❷Bass control
❸Treble control
❹Tone control on / off button
❺Phase selector button
❻Mono / stereo selector button
❼Loudness compensator on / off button
❽DAC input selector button
❾MC / MM selector button
❿Display mode selector button
⓫Balance control
⓬Preamplifier / power amplifier separator switch
⓭Recorder selector


Line input and output connectors


Protection circuit assembly


MOS-FET switches


Balanced input and output connectors


Speaker terminals connected directly to protection circuitry


High-carbon cast iron insulators

Volume display

Sampling frequency display (When DAC-60 is installed)

A newly developed large analog power meter capable of displaying output level to –50 dB

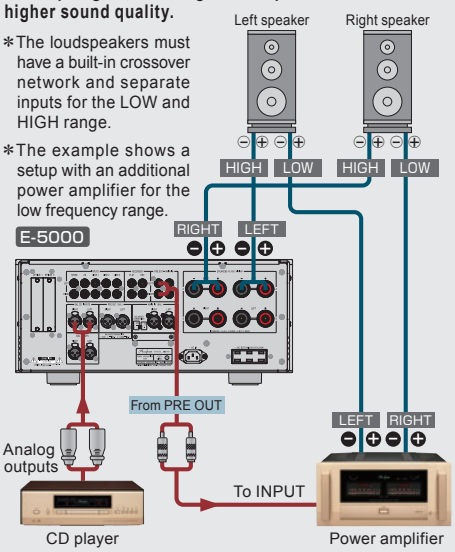
Includes CD player operation

Supplied Remote Commander RC-250

Bi-amping for further enhanced sound

In a bi-amped configuration, the speaker units for the LOW and HIGH frequency range are driven by separate amplifiers with equal gain, enabling sonic reproduction with even higher sound quality.

* The loudspeakers must have a built-in crossover network and separate inputs for the LOW and HIGH range.
* The example shows a setup with an additional power amplifier for the low frequency range.



Option Boards

Option board installation example

According to the requirements, the rear panel expansion slots allow mounting of up to two option boards: DAC-60, AD-50 and/or LINE-10.

■ **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-30 / AD-20 / AD-10 / AD-9
Line Input Board	LINE-9

Analog Record Input Board AD-50

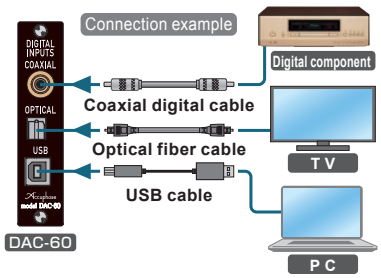
AD-50

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 300 ohms	47 kilohms

Digital Input Board DAC-60



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

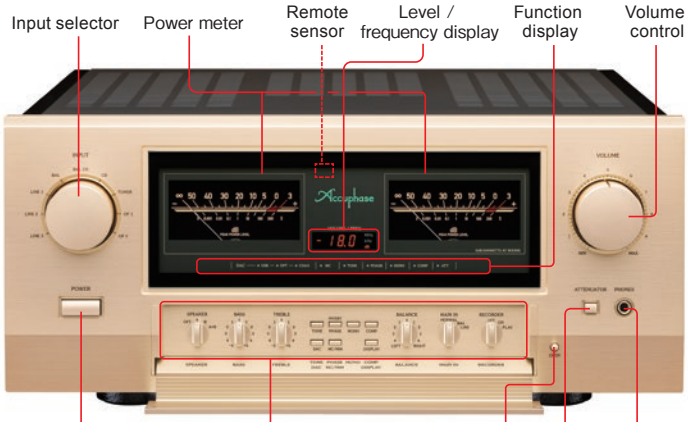
Input	Signal	Sampling frequencies	Number of bits
USB	DSD	2.8 MHz 5.6 MHz 11.2 MHz [11.2 MHz: ASIO only]	1-bit
	PCM	32 to 384 kHz	32-bit
OPTICAL	PCM	32 to 96 kHz	24-bit
COAXIAL	PCM	32 to 192 kHz	24-bit

Line input board LINE-10

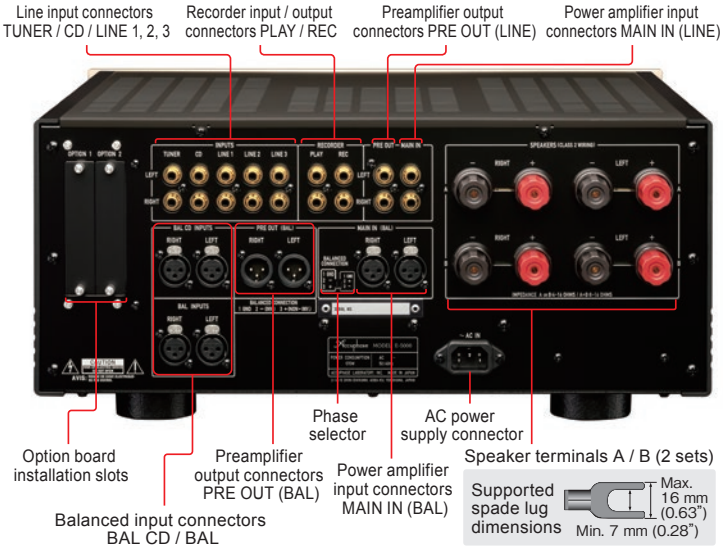
LINE-10

Provides an additional set of unbalanced line level inputs.

Front Panel



Rear Panel



Supported spade lug dimensions: Max. 16 mm (0.63") / Min. 7 mm (0.28")

E-5000 Guaranteed Specifications [Guaranteed specifications are measured according to EIA standard RS-490]

Rated Continuous Average Output (20 – 20,000 Hz)	both channels driven	4-ohm load	320 W / ch
		8-ohm load	240 W / ch
Total Harmonic Distortion (20 – 20,000 Hz)	both channels driven	4 to 16 ohm load	0.05%
Intermodulation Distortion	0.01%		
Frequency Response	INPUT (BALANCED / LINE)	*	20 – 20,000 Hz (0, -0.5 dB)
	MAIN IN (BALANCED / LINE)	*	20 – 20,000 Hz (0, -0.2 dB)
		At 1 W output	3 – 150,000 Hz (0, -3.0 dB)
Damping Factor	with 8-ohm load, 50 Hz	1,000	
Input Sensitivity	At rated output	INPUT (BALANCED / LINE)	220 mV
		MAIN IN (BALANCED / LINE)	1.74 V
	EIA (at 1 W output)	INPUT (BALANCED / LINE)	14.2 mV
		MAIN IN (BALANCED / LINE)	113 mV
Input Impedance		INPUT (BALANCED)	40 kilohms
		INPUT (LINE)	20 kilohms
		MAIN IN (BALANCED)	40 kilohms
		MAIN IN (LINE)	20 kilohms
Maximum Input Voltage	INPUT (BALANCED / LINE)	5.0 V	
Output Voltage and Impedance	At rated continuous average output	PRE OUTPUT (BALANCED / LINE)	1.74 V / 50 ohms
Gain	INPUT (BALANCED / LINE) → PRE OUTPUT (BALANCED / LINE)		18 dB
	MAIN IN (BALANCED / LINE) → SPEAKER OUTPUT		28 dB

*: At rated continuous average output

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 / LINE)	111 dB
		MAIN IN (BALANCED / LINE)	126 dB
	EIA	INPUT (BALANCED / LINE)	97 dB
		MAIN IN (BALANCED / LINE)	101 dB
Output Meters	Logarithmic compression peak level display showing output in dB / %		
Output Load Impedance	Speaker set 1	4 – 16 ohms	
	Speaker set 2	8 – 16 ohms	
Stereo Headphones	Compatible impedance	8 ohms or higher	
Power requirements	120 V, 220 V, 230 V AC (voltage as indicated on rear panel)	50 / 60 Hz	
Power Consumption	Idle	98 W	
	In accordance with IEC 60065	570 W	
	Stand-by	0.3 W	
Maximum dimensions	Width 465 mm (18.31") × Height 211 mm (8.31") × Depth 502 mm (19.76")		
Mass	Net	33.8 kg (74.5 lbs)	
	In shipping carton	43 kg (95 lbs)	

Supplied accessories

- **AC power cord**
- **Remote Commander RC-250**

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.*

• The specifications and appearance of this product are subject to change without notice.
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ACCUPHASE LABORATORY, INC.
K2105Y 850-2228-00(B1) PRINTED IN JAPAN