

CLASS-A STEREO POWER AMPLIFIER

Pure Class A operation delivers quality power: 45 watts x 2 into 8 ohms
Power MOS-FET output stage features 6-parallel push-pull configuration
Instrumentation amplifier principle ● Further improved MCS+ circuit topology ● Current feedback combines stable operation with outstanding sound ● Bridged mode allows upgrading to true monophonic amplifier
Large high-efficiency toroidal transformer ● 4-step gain control





Pure Class A power amplifier with power MOS-FET devices – Fully balanced signal paths realized through instrumentation amplifier configuration. Further refined MCS+ topology and current feedback result in superb sound quality and excellent ratings for S/N ratio, THD, and other parameters. Strong power supply and power MOS-FET devices in six-parallel push-pull configuration sustain an amazing 360 watts per channel into ultra-low impedance 1-ohm loads (with music signals). 4-step gain control provides flexibility.

Pure Class A power amplifiers from Accuphase have long been blending the purity of class A operation with the superior performance of power MOS-FETs. Acclaimed by audiophiles the world over, these products reflect a level of technical know-how that is second to none. Each model in the A-65/A-45/A-35 lineup has received high praise, both for sound quality and performance. The A-46 is a minor-change successor to the A-45, positioned as the medium power level model of the series. Naturally, the A-46 also demonstrates the same unwavering dedication to sound quality and outstanding design policy which are the hallmark of Accuphase. This pure class A stereo power amplifier with its distinctive external heat sinks is built for the true enjoyment of music.

The A-46 uses latest instrumentation amplifier topology throughout, which allows fully balanced transmission in all signal handling stages. The power amplifier section features further improved MCS+ topology and the renowned current feedback approach. This results in electrical characteristics that surpass even the demanding standards set by its predecessors. Employing only highest grade materials and strictly selected parts, the A-46 realizes very low output impedance which ensures that constant drive voltage is available for the speakers.

The output stage features power MOS-FETs renowned for their excellent sound and superior reliability. For each channel, six of these devices are arranged in a parallel push-pull class A arrangement. MOS-FETs have excellent frequency response characteristics and high input impedance, which reduces the load of the preceding (drive) stage. Driving these devices in pure class A means that constant power is always supplied, regardless of the presence or absence of a musical signal. This makes the amplifier completely immune to external influences and ensures stable operation at all times. The large heat sinks mounted on the outside reliably prevent internal heat buildup, allowing the amplifier to sustain output levels of as much as 360 watts per channel into 1 ohm (with music signals). If even higher power is required, bridged mode turns the A-46 into a high-grade monophonic power amplifier.

- Power modules with 6-parallel push-pull arrangement of power MOS-FETs deliver a guaranteed linear output of 360 watts per channel into 1 ohm (music signals only), 180 watts into 2 ohms, 90 watts into 4 ohms, or 45 watts into 8 ohms.
- Amply dimensioned power supply with high-efficiency toroidal transformer and two large 47,000 μF filtering capacitors.
- Bridged mode allows upgrading to monophonic amplifier with 720 watts into 2 ohms (music signals only), 360 watts into 4 ohms, or 180 watts into 8 ohms.
- Revised NFB design minimizes output impedance and increases damping factor, resulting in further improved sound quality.
- Fully balanced input stage shuts out external noise interference.
- Mode selector for easy switching between dual mono/stereo/bridged operation
- Front panel input type selector (line/balanced).
- 4-step gain control (MAX, -3 dB, -6 dB, -12 dB) minimizes residual noise.
- Large analog power meters with operation/illumination and sensitivity selector.
- Speaker protection uses semiconductor (MOS-FET) switch. Elimination of mechanical switches assures long-term reliability and improved signal purity, resulting in further improved sound quality.
- PCB copper foil and all major signal path components are goldplated.
- Two sets of speaker outputs, with large terminals that accept also Y lugs.









Protection circuitr

Power MOS-FETs

Filtering capacitors

GAIN

3dB MAX

Gain selecto

Meter selecto

20dB

METER

6dB

OFF

12dB

Toroidal power transformer

INPUT

Input selector

MOS-FET switche

Parts selected for sound quality and reliability

Line/balanced input connectors





Instrumentation amp configuration allows fully balanced signal paths

The advanced instrumentation amplifier principle used in the A-46 ensures that all signal paths from the inputs to the power amp stage are fully balanced. This results in excellent CMRR (common mode rejection



ratio) and minimal distortion. Another significant advantage is that external noise and other external influences are virtually shut out. The result is a drastic improvement in operation stability and reliability.

Further refined MCS+ topology for even lower noise

Accuphase's original MCS (Multiple Circuit Summing) configuration uses a number of identical circuits connected in parallel to achieve superior performance characteristics. MCS+ is a further refined version of this approach. By extending parallel operation to the class-A drive stage of the current/voltage converter, the noise floor has been lowered further.



Power amplifier assembly with six parallel push-pull

amplifier

Class A stored Dower amplifier A-46

power MOS-FET pairs per channel mounted directly to large heat sink, MCS+ circuitry, and current feedback Current feedback principle assures excellent phase characteristics in high range

As shown in the illustration, the A-46 uses the output signal current rather than voltage for feedback. Since the impedance at the current feedback point is very low, there is almost no phase shift. A minimal amount of NFB therefore results in maximum improvement of circuit parameters.



Phase selector for balanced input

- In the factory default condition, the switch is set to the left side ("pin 3 +"), as shown in the illustration.
- If the balanced output of the connected preamplifier has a "pin
 +" arrangement, the switch should be set to the right side.





Maximum Dimensions

Mass

- 4 Speaker selector buttons A: ON/OFF. B: ON/OFF
- 5 Power switch
- Input selector button
- LINE, BALANCED

Supplied accessory AC power cord

- DUAL MONO, NORMAL, BRIDGE Balanced input phase selector switch
 - Right/left-channel speaker output terminals
 - A/B, 2 sets
 - (B) AC power supply connector*

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 shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.



Width 465 mm (18-5/16")

Height 211 mm (8-5/16")

Depth 464 mm (18-1/4")

39.0 kg (86.0 lbs) in shipping carton

31.9 kg (70.3 lbs) net

• Specifications and design subject to change without notice for improvements. http://www.accuphase.com