

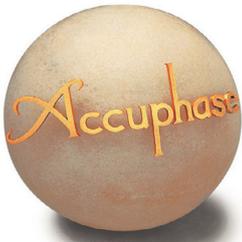
Accuphase

CLASS-A MONOPHONIC POWER AMPLIFIER

A-200

- Pure Class A operation delivers 100 watts of quality power into 8 ohms
- Two totally identical power amplifier units driven in parallel
- 20-parallel push-pull arrangement of MOS-FET devices in output stage delivers linear high power progression to ultra-low 1-ohm impedance
- Input section configured as double instrumentation amplifier
- Double MCS+ circuit and current feedback topology in amplification stage
- Support for bridged use of two A-200 units with even higher output power
- Strong power supply with massive high-efficiency toroidal transformer and large filtering capacitors





Eminently capable pure Class A monophonic power amplifier with power MOS-FET technology – Ultra-low-noise double instrumentation amplifier configuration enables fully balanced signal transmission, augmented by double MCS+ circuit and current feedback topology. Experience astounding S/N ratio and impeccable sound quality on a level that has to be heard to be believed. A hefty power supply and 20 power MOS-FETs arranged in a parallel push-pull configuration deliver 1,000 watts (music signal) into an ultra-low 1-ohm load. Output stage with further lowered impedance results in a damping factor of 1,000.

Accuphase was founded in 1972 and astonished the audio world right from the start, with its separate amplifier combo, the C-200 and P-300 released in the following year. Ever since, the company has steadfastly pursued the path of true high-end audio, making uncompromising quality and exquisite sound reproduction its hallmark. Sophisticated technology provides the basis for creating products of true value. At Accuphase, innovation goes hand in hand with reliability, imbuing each product with the mark of greatness. The long succession of reference products crafted by Accuphase has found enthusiastic reception among audiophiles both in Japan and overseas. The A-200 encompasses Accuphase power amplifier know-how to the fullest. It is destined to become another milestone, taking the art of audio to the next level.

In order to realize ideal speaker drive capability, the A-200 employs a structural design that exceeds even the M-6000. Two completely separate power amplifier units, each with its own dedicated heat sink on either side of the chassis, are driven in parallel. This completely parallel configuration allows a significant increase in output current and results in a power amplifier with extremely low output impedance. Along with the choice of only the finest materials and parts, as well as advanced circuit and pattern technology, this has made possible an amazing damping factor value in excess of 1,000. A pure class A amplifier consumes a considerable amount of power and therefore produces thermal energy at all times, which means that the circuitry has to be designed so as to ensure problem-free operation in any environment. The power MOS-FETs used in the A-200 are renowned for their excellent high-frequency characteristics and high thermal stability. This allows finely honed control to maintain the temperature balance between two power amplifier units, achieving stable operation even when the load and operating conditions change dramatically.

Another outstanding characteristic of the A-200 is its enormously improved S/N ratio. By adopting the advanced instrumentation amplifier principle for the input stage in a double configuration, using only discrete electronic components instead of ICs, and fine-tuning the gain complement with the following stage, simply amazing S/N ratings were achieved: 126 dB at the maximum gain setting and 132 dB with gain set to -12 dB. These represent ultimate values even in the formidable Accuphase lineup.

- 20-parallel push-pull arrangement of power MOS-FETs delivers linear power progression: 800 watts (music signal) into 1 ohm, 400 watts into 2 ohms, 200 watts into 4 ohms, or 100 watts into 8 ohms.
- Strong power supply with massive high-efficiency toroidal transformer and two large 100,000 µF filtering capacitors.
- Printed circuit boards made from glass cloth fluorocarbon resin with low dielectric constant and minimum loss.
- Output level indication switchable between 5-digit numeric readout and 40-point LED bar graph.
 - Meter operation and illumination on/off switch
 - Digital power meter showing true power values, based on output current detected by a Hall element
 - Switchable peak hold time: 1 second or infinite
- 4-stage gain selector (MAX, -3 dB, -6 dB, -12 dB) also minimizes residual noise.
- Two sets of oversize speaker terminals accept Y lugs and allow bi-wiring.
- Fully balanced input stage shuts out external noise interference.
- Mode selector allows use of two A-200 units for bi-amping or bridged operation. Bridging enables upgrade to monophonic amplifier with even higher power, delivering 1,600 watts into 2 ohms (music signal), 800 watts into 4 ohms, or 400 watts into 8 ohms.
- Semiconductor (MOS-FET) switch used for protection circuitry prevents contact problems and ensures long-term reliability. Eliminating mechanical contacts from the signal path further enhances sound quality.



Large toroidal transformer 100,000 µF filtering capacitors



Digital power meter/bar graph meter



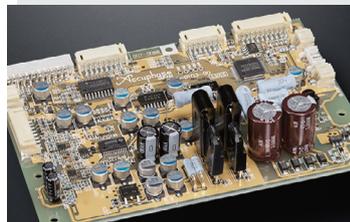
Hall elements Gain control selector Mode selector



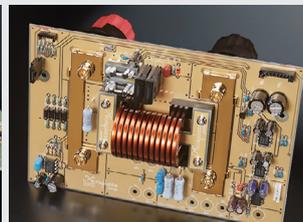
Large gold-plated speaker terminal cut from solid brass



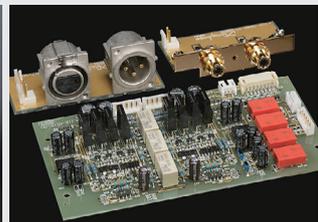
Super-heavy-gauge edgewise coil



Meter circuitry/control circuitry



Ultra-low-impedance output circuit with semiconductor switch



Input terminals and ultra-low-noise input circuitry

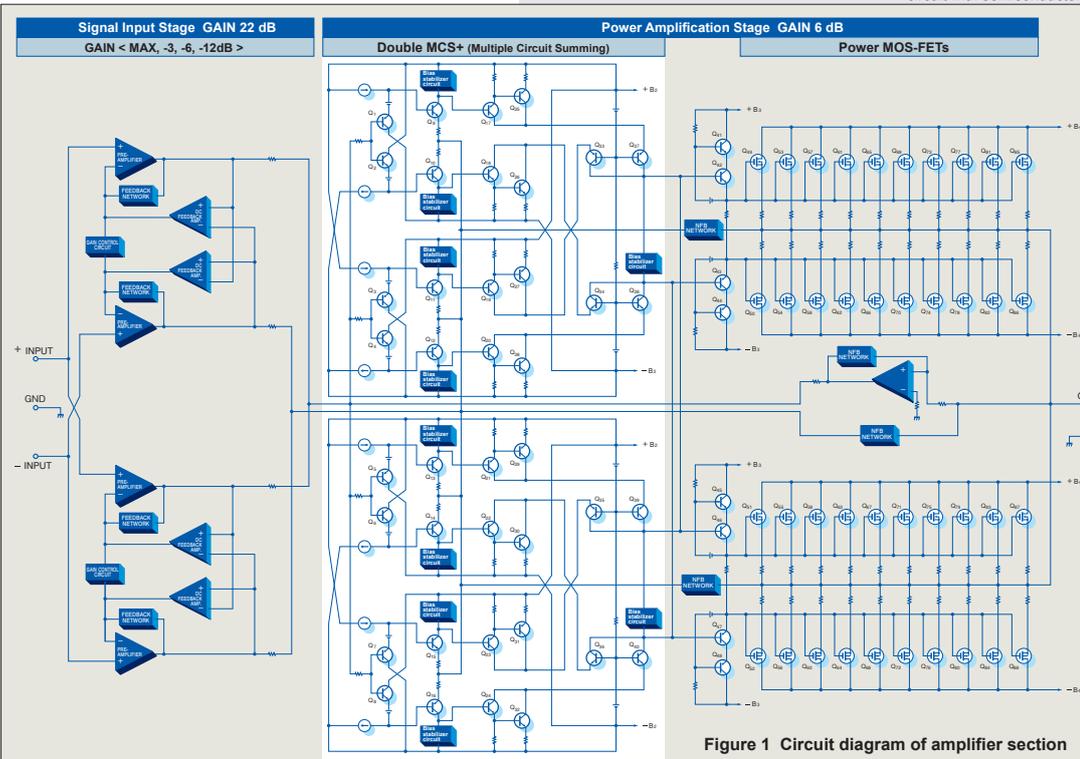


Figure 1 Circuit diagram of amplifier section

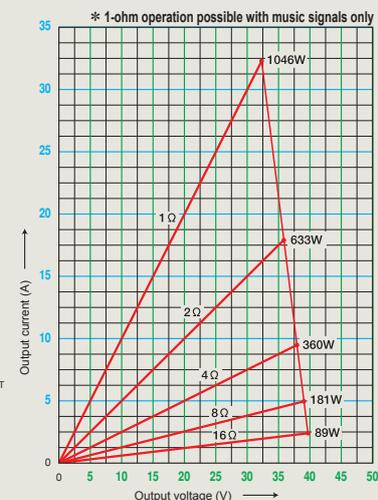


Figure 2 Load impedance vs. output power (output voltage/output current)



Power MOS-FETs

“The Ultimate Harmony



of Craft and Beauty”



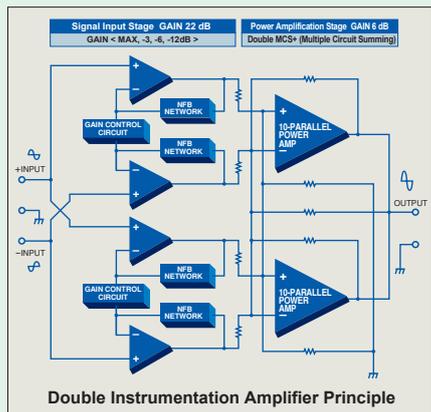
The A-200 is built to excel in every respect. Only the finest parts and materials, advanced circuit topology, and impressive looks come together behind the massive gold-colored faceplate. External heat sinks on both sides effectively dissipate thermal energy and exemplify the solid build quality. Exuding a warm atmosphere, the A-200 combines style and texture, grace and power.



Latest Instrumentation Amplifier Topology and Further Advanced Double MCS+ Circuit

Fully balanced signal paths realized double instrumentation amplifier configuration

The A-200 uses the instrumentation amplifier principle in a dual configuration. This allows all signal paths from the inputs to the power amp stage to be fully balanced. The result is excellent CMRR (common mode rejection ratio), minimal distortion, as well as superior performance in all other vital aspects as well. Noise and other extraneous influences are virtually shut out, and the use of latest technology and fully discrete circuitry contributes to amazingly high S/N ratio. Even the most minute details are no longer buried in noise and emerge with utter clarity.



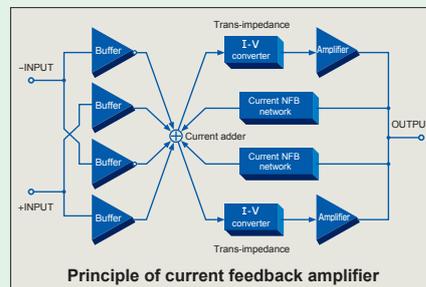
Double MCS+ in amplifier stage further improves S/N ratio

The input stage of the amplifier section features another Accuphase innovation. Double MCS+ makes ample use of cascode drive circuits and dedicates each component to a clearly defined task, thereby ensuring stable performance. Four circuits for amplifying the input signal are connected in parallel to keep distortion to a minimum and to further enhance S/N ratio and other parameters. The resulting level of sound quality is simply stunning.



Current feedback assures excellent phase characteristics in high range

As shown in the illustration, the A-200 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.



Power amplifier assembly

Power amplifier assembly with 10-parallel push-pull power MOS-FET arrangement for output stage mounted directly to large diecast aluminum heat sink, also comprising MCS+ circuitry and current feedback amplifier. Two completely identical circuits are used.

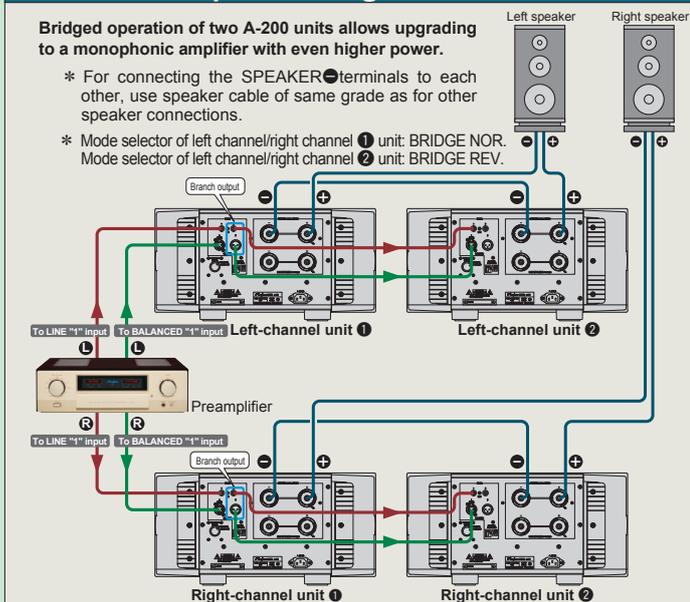


■ Using four A-200 units, bridged operation or bi-amping is possible. ■ Connect the input signal either to the balanced or the unbalanced inputs.

Example for bridged connection

Bridged operation of two A-200 units allows upgrading to a monophonic amplifier with even higher power.

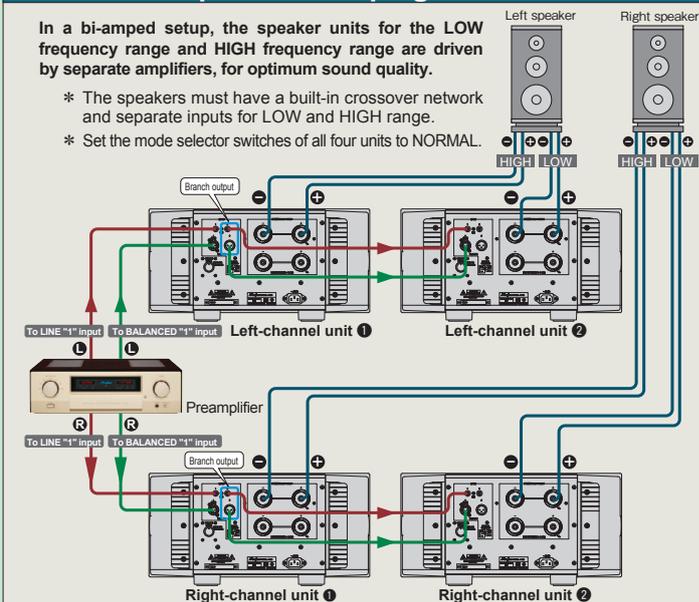
- * For connecting the SPEAKER terminals to each other, use speaker cable of same grade as for other speaker connections.
- * Mode selector of left channel/right channel ① unit: BRIDGE NOR.
Mode selector of left channel/right channel ② unit: BRIDGE REV.



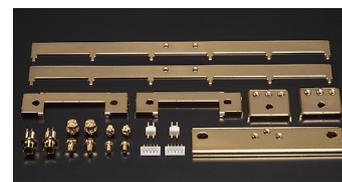
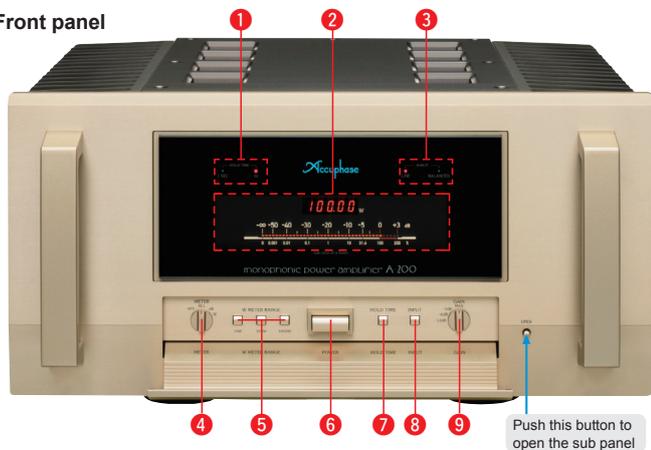
Example for bi-amping connection

In a bi-amped setup, the speaker units for the LOW frequency range and HIGH frequency range are driven by separate amplifiers, for optimum sound quality.

- * The speakers must have a built-in crossover network and separate inputs for LOW and HIGH range.
- * Set the mode selector switches of all four units to NORMAL.



Front panel



Rear panel



- ① Hold time indicator
- ② Digital power meter
Bar graph meter
- ③ Input type indicator
LINE / BALANCED
- ④ Meter selector
OFF / ALL / dB / W
- ⑤ Digital power meter range buttons
10 W / 100 W / 1000 W
- ⑥ Power switch
- ⑦ Hold time selector button
1 SEC / ∞
- ⑧ Input selector button LINE / BALANCED
- ⑨ Gain selector
MAX / -3 dB / -6 dB / -12 dB
- ⑩ Line inputs
(One is used for signal pass-through during bridged connection etc.)
- ⑪ Speaker terminals (same output at both sets)
- ⑫ Mode selector
NORMAL / BRIDGE NOR. / BRIDGE REV.
- ⑬ Balanced inputs
(One is used for signal pass-through during bridged connection etc.)
① Ground ② Inverted (-) ③ Non-inverted (+)
(Can be changed with phase selector switch ⑭)
- ⑭ Balanced input phase selector switch
- ⑮ AC power 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.
- ★ 230 V version has an Eco Mode that switches power off after 120 minutes of inactivity.
- ★ The shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.

- Supplied accessories:
• AC power cord

A-200 Guaranteed Specifications

[Guaranteed specifications are measured according to EIA standard RS-490.]

- **Continuous Average Output Power (20 - 20,000 Hz)**
 - Normal mode
 - 800 watts into 1 ohm (*)
 - 400 watts into 2 ohms
 - 200 watts into 4 ohms
 - 100 watts into 8 ohms
 - Bridged mode (using two A-200 units)
 - 1,600 watts into 2 ohms (*)
 - 800 watts into 4 ohms
 - 400 watts into 8 ohms
- **Continuous Peak Output Power (1 kHz)**
 - 1,000 watts into 1 ohm (*)
 - 630 watts into 2 ohms
 - 360 watts into 4 ohms
 - 180 watts into 8 ohms
- Note: Ratings marked (*) are for music signals only.
- **Total Harmonic Distortion** 0.05% with a 2-ohm load
0.03% with a 4 to 16-ohm load
- **Intermodulation Distortion** 0.01%
- **Frequency Response**
 - At rated continuous average output: 20 - 20,000 Hz +0, -0.2 dB
 - At 1 watt output: 0.5 - 160,000 Hz +0, -3.0 dB
- **Gain** 28.0 dB (GAIN selector in MAX position)
- **Gain Selection** MAX, -3 dB, -6 dB, -12 dB
- **Output Load Impedance**
 - Continuous output: 2 to 16 ohms
 - With music signal: 1 to 16 ohms
- **Damping Factor** 1,000
- **Input Sensitivity (with 8-ohm load)**
 - 1.13 V for rated continuous average output
 - 0.11 V for 1 watt output
- **Input Impedance**
 - Line: 20 kilohms
 - Balanced: 40 kilohms
- **Signal-to-Noise Ratio (A-weighted, with input shorted)**
 - 126 dB (GAIN selector in MAX position)
 - 132 dB (GAIN selector in -12 dB position)
- **Output Level Meter**
 - Digital meter 5-digit indication showing true power (W)
 - Bar graph meter Range selection: 10 W / 100 W / 1,000 W
Represents output voltage values (dB) using 40 points
 - Peak hold time 1 second / infinite (selectable)
• Display off switch provided
- **Power Requirements** 120/220/230 V AC, 50/60 Hz
- **Power Consumption**
 - 300 watts idle
 - 400 watts in accordance with IEC 60065
- ※ 230 V version has an Eco Mode.
- **Maximum Dimensions** Width 465 mm (18-5/16") Height 238 mm (9-3/8")
Depth 514 mm (20-1/4")
- **Mass** 46 kg (101.4 lbs) net
55 kg (121.3 lbs) in shipping carton