

# Accuphase

CLASS-A STEREO POWER AMPLIFIER

## A-48

- Pure Class-A stereo power amplifier
- Power amplification stage with power MOS-FETs in 6-parallel push-pull configuration
- Linear output characteristics over entire load impedance range
- Instrumentation amplifier topology
- Current feedback principle in amplification circuitry
- Balanced Remote Sensing
- High damping factor of 800
- Speaker output protection circuit guards against short-circuiting
- Highly responsive large peak power meters
- Support for bi-amping and bridged mode





# True Class-A stereo power amplifier with authentic musicality

Featuring a six-fold parallel push-pull architecture with power MOS-FETs, as well as ideal gain allocation realized with discrete semiconductors in an instrumentation amplifier configuration, the A-48 harnesses a wealth of advanced technology. Its outstanding performance is exemplified by a signal/noise ratio of 117 dB, output of 360 watts into 1 ohm (music signals), and a damping factor of 800. The newly designed output protection circuit can detect any short-circuiting of the speaker terminals, for complete peace of mind. This power amplifier is the ultimate instrument for immersive music appreciation on the highest level.

*Technology development ahead of the curve*

Instrumentation amplifier principle realizes excellent S / N ratio and linear output characteristics

## Instrumentation amplifier topology for improved noise performance

The A-48 employs an instrumentation amplifier configuration that is highly effective in keeping external noise from affecting the signal transmission lines. Furthermore, the input stage is designed for high gain (22 dB) and the power amplification stage for low gain (6 dB). Consequently, the signal emerging from the signal input section has a large amplitude which makes it much less prone to external interference, thereby further improving the noise performance.

## Signal input section with high gain

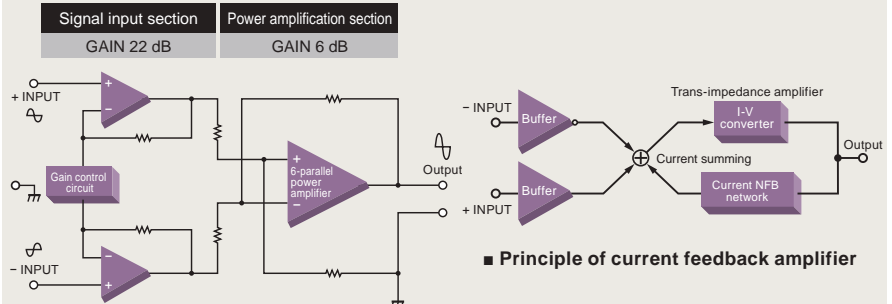
Similar to the higher-ranked A-75, the signal input stage of the A-48 is entirely configured with low-noise discrete circuit components. This makes it possible to design the circuit for a high gain of 22 dB (a multiplication factor of approx. 12.5), something that cannot be achieved with OP amp ICs. As a result, the S/N ratio of the amplifier is an astonishing 117 dB.



Signal input section

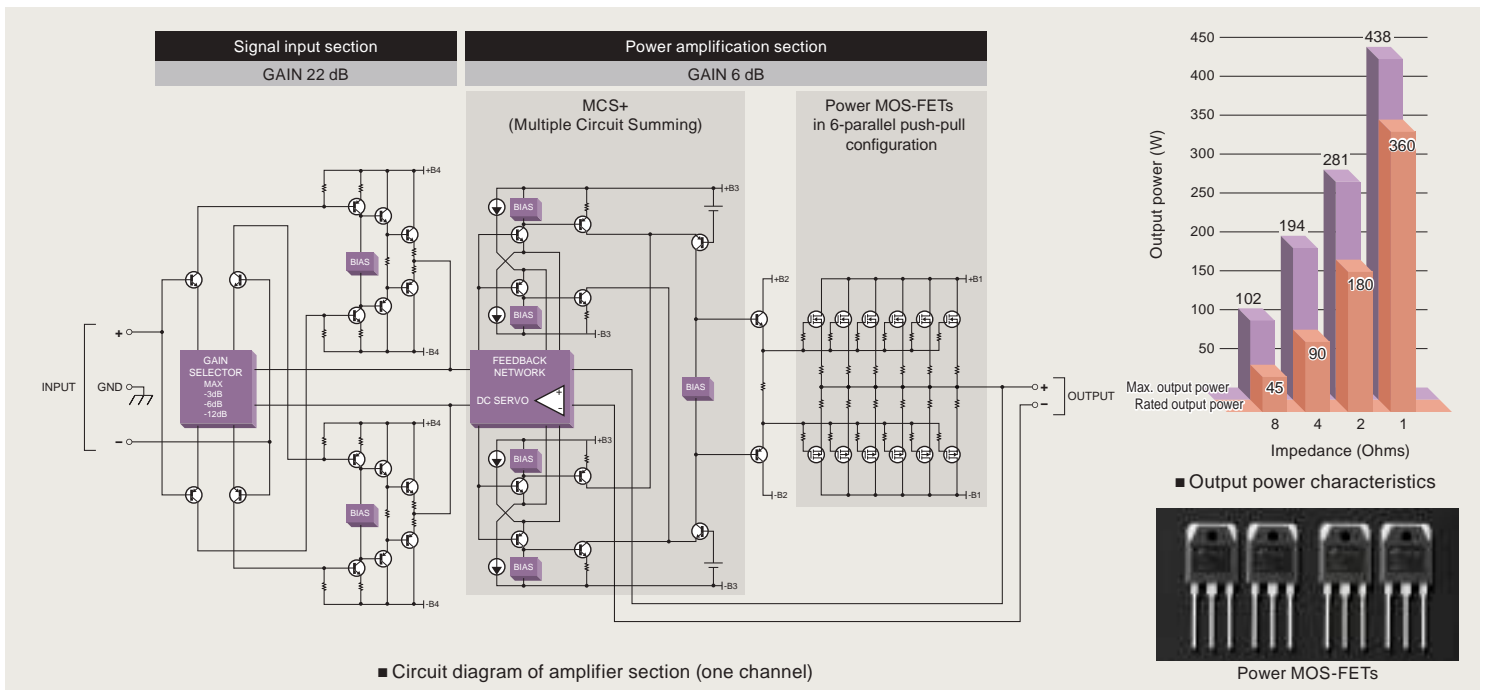
## Linear output characteristics over entire load impedance range

The power amplification stage employs a 6-parallel push-pull arrangement of power MOS-FETs mounted directly to large heat sinks for highly efficient thermal dissipation. The result is fully linear power progression of 45 watts into 8 ohms, 90 watts into 4 ohms, 180 watts into 2 ohms, and 360 watts into 1 ohm (music signals). Plus, the impressive damping factor of 800 means that the amplifier can easily and competently drive any kind of loudspeaker.



■ Principle of current feedback amplifier

Power amplification stage with power MOS-FETs in 6-parallel push-pull configuration



Power MOS-FETs

## Functionality - Convenience that makes sense



- ❶ Speaker output selector for two pairs of speakers
- ❷ Meter display characteristics selector



- ❸ Input selector button for selecting the input signal
- ❹ Gain selector for changing the amplification gain

## Advanced Features

- Power MOS-FETs in 6-parallel push-pull configuration
- Linear output characteristics over entire load impedance range
- Strong power supply with massive toroidal transformer and large 60,000  $\mu\text{F}$  filtering capacitors
- Instrumentation amplifier principle
- High-gain signal input section in discrete configuration
- Dedicated power supply for signal input section
- Line and balanced input connectors
- Polarity switching for balanced input connectors
- MCS+ circuit topology
- Current feedback principle in amplification circuitry
- Protection circuitry using MOS-FET switches
- High damping factor of 800
- Balanced Remote Sensing
- Speaker output protection circuit guards against short-circuiting
- Highly responsive large peak power meters
- Two sets of large speaker terminals
- 4-step gain control
- Support for bi-amping and bridged mode
- Aluminum top plate with hairline finish



Large high-efficiency toroidal power transformer



60,000  $\mu\text{F}$  filtering capacitors



Input signal and protection circuit board



MOS-FET switches



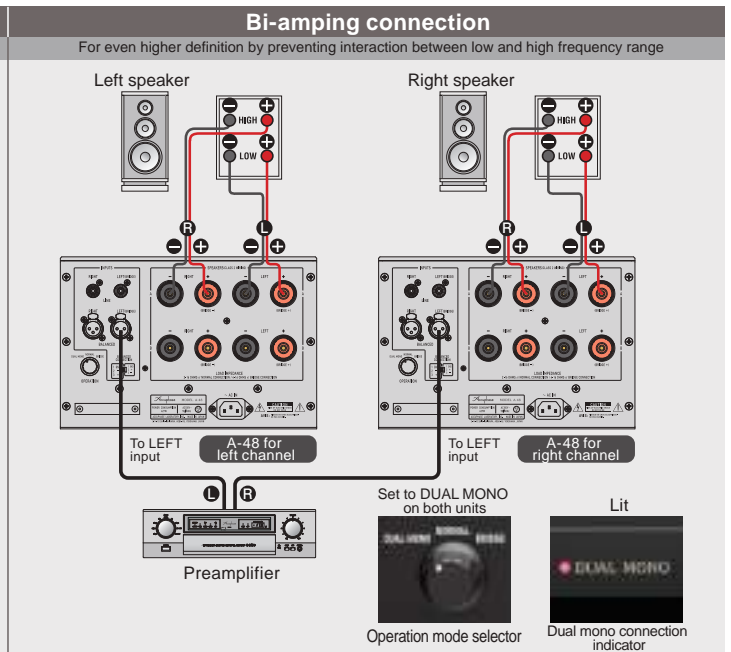
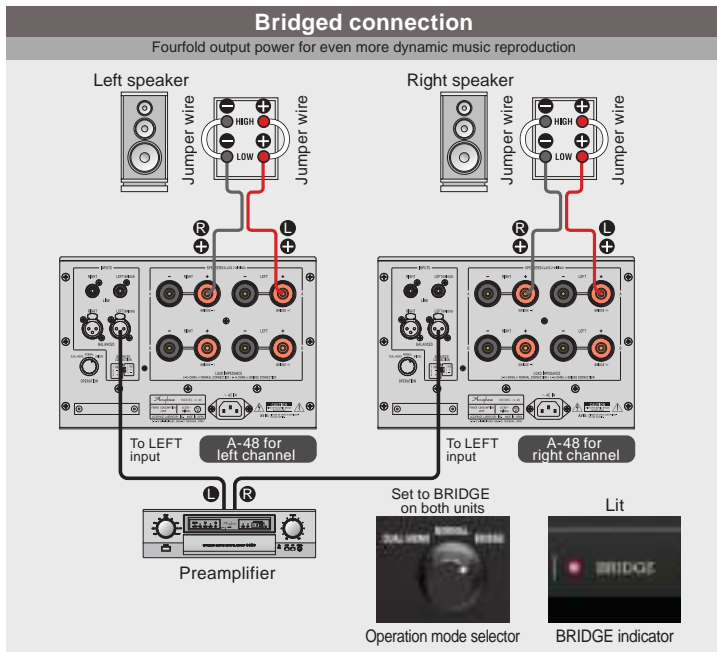
Dedicated power supply for signal input section



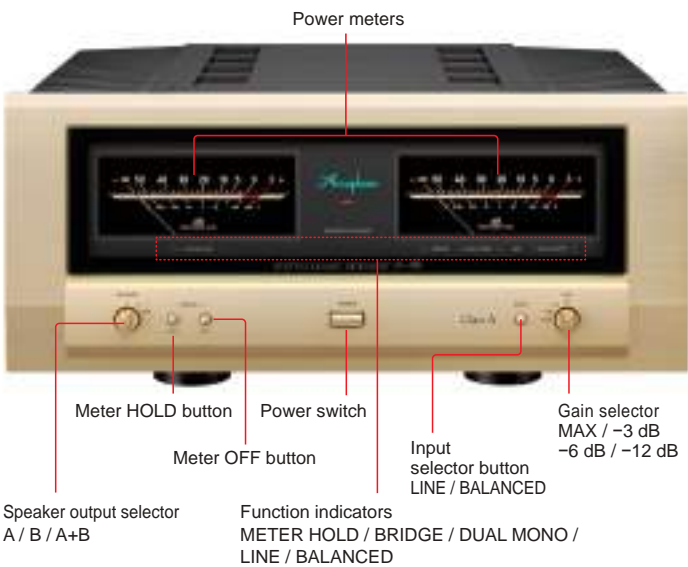
Aluminum top plate with hairline finish







### Front Panel



### Rear Panel



### A-48 Guaranteed Specifications [Guaranteed specifications are measured according to EIA standard RS-490.]

| Continuous Average Output Power (20 - 20,000 Hz)                              | Load                                    | 8 ohms                         | 4 ohms  | 2 ohms       | 1 ohm   |
|-------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|---------|--------------|---------|
|                                                                               | Normal / Bi-amping connection           | 45 W                           | 90 W    | 180 W        | 360 W*1 |
| Bridged connection                                                            | 180 W                                   | 360 W                          | 720 W*1 | —            |         |
| Total Harmonic Distortion                                                     | Load                                    | 2 ohms                         |         | 4 to 16 ohms |         |
|                                                                               | Normal / Bi-amping connection           | 0.05%                          |         | 0.03%        |         |
| Bridged connection                                                            | —                                       |                                | 0.05%   |              |         |
| Intermodulation Distortion                                                    | 0.01%                                   |                                |         |              |         |
| S/N Ratio (A-weighted, with input shorted) At rated continuous average output | Gain selector at MAX                    | 117 dB                         |         |              |         |
|                                                                               | Gain selector at -12 dB                 | 122 dB                         |         |              |         |
| Damping Factor                                                                | 800                                     |                                |         |              |         |
| 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                                                                          | Selector position                       | MAX                            | -3 dB   | -6 dB        | -12 dB  |
|                                                                               | Normal / Bridged / Bi-amping connection | 28.0 dB                        | 25.0 dB | 22.0 dB      | 16.0 dB |

| Input Impedance       | Balanced input                                                      | 40 kilohms                                    |
|-----------------------|---------------------------------------------------------------------|-----------------------------------------------|
|                       | Line input                                                          | 20 kilohms                                    |
| Output Load Impedance | Normal / Bi-amping connection                                       | 2 to 16 ohms*2                                |
|                       | Bridged connection                                                  | 4 to 16 ohms*3                                |
| Power Meters          | Format                                                              | Logarithmic scale, with indication off switch |
|                       | Display range                                                       | -∞ to +3 dB (indication in dB and %)          |
|                       | Hold time                                                           | ∞                                             |
| In bridged mode       | Same indication for left and right                                  |                                               |
| Power Requirements    | 120 V/220 V/230 V AC, 50/60 Hz (Voltage as indicated on rear panel) |                                               |
| Power Consumption     | Idle                                                                | 180 watts                                     |
|                       | In accordance with IEC 60065                                        | 427 watts                                     |
| Maximum Dimensions    | Width                                                               | 465 mm (18.31")                               |
|                       | Height                                                              | 211 mm (8.31")                                |
|                       | Depth                                                               | 464 mm (18.27")                               |
| Mass                  | Net                                                                 | 33.0 kg (72.8 lbs)                            |
|                       | In shipping carton                                                  | 40.0 kg (88.2 lbs)                            |

\*1 With music signals only \*2 1-ohm load permissible with music signals only \*3 2-ohm load permissible with music signals only

#### 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.

Supplied accessory  
● AC power cord



ACCUPHASE LABORATORY, INC.