CP400

High-Performance, Dual-Channel, Commercial Power Amplifier

CP400

Features

- Independent Power Supplies
- Soft Clip Limiter Protection
- Dual-Speed, High Efficiency Fan Cooling
- Stepped Attenuators Mounted on the Rear for Security
- Stereo, Bridge, or Parallel Operating Modes Selectable Via Rear Mounted Switch
- Balanced Inputs on Barrier Strip and XLR Connectors
- Loop Through Feature on Male XLRs, One Per Channel Input
- Short-Circuit, Temperature, and DC Offset Protection
- 25V, 70.7V, 100V, and Direct Coupled (2,4, & 8Ω) Outputs Mounted on Barrier Strips with Covers for Safety
- Toroidal Output Transformers Provide Extended High Frequency Response and Effectively Lower the Electrical Interference
- Power-Up Muting

General Description

The Atlas Sound CP400 is a high power dual channel amplifier with independent internal power supplies, providing excellent channel separation and low distortion. Rear mounted stepped attenuators provide gain setting repeatability and ease of setup. Front panel mounted indicators provide status of signal present, limiter operation, and protection circuit operation. In addition to having rear mounted barrier strips for inputs and outputs for permanent installations, the Atlas Sound CP400 also has XLR input connectors for portable sound equipment use. In Bridge Mono mode, the CP400 can provide 140V/200V operation for long, speaker lines and large speaker loads. Large toroidal output transformers (1 per channel) provide outstanding isolation for commercial applications.

Applications

The Atlas Sound CP400 is the perfect choice for distributed paging/BGM systems, foreground music systems, and distributed sound masking applications. Also perfect for night clubs, theaters, portable sound systems, and anywhere clean high-fidelity audio amplification is needed.

CP400
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Specifications

Direct Power Out	
8 Ω, 1kHz, 0.1% THD	160 Watts x 2
4 Ω, 1kHz, 0.1% THD	240 Watts x 2
2 Ω, 1kHz, 0.1% THD	270 Watts x 2
Bridged Mono 8 Ω 1kHz, 1% THD	500 Watts
Bridged Mono 4 Ω 1kHz, 1% THD	600 Watts
Transformer Outputs	
25V	175 Watts
70.7V	200 Watts
100V	200 Watts
140V Bridged	400 Watts
200V Bridged	400 Watts
Frequency Reponse	
Direct Outputs	30Hz – 50kHz (±3dB)
Transformer Outputs	30Hz – 16kHz (±3dB)
THD+N	
8Ω, 1kHz, 240 Watts per channel	<.05%
Sensitivity	
Rated Output into 8Ω	1.25V
Voltage Gain	
32dB	
Input Impedance	
Balanced	20kΩ
Unbalanced	10kΩ
Damping Factor	
8Ω Output, 10Vrms	>200dB
S/N RATIO	
8Ω per Channel @ 240 Watts	>100dB

Protection Circuits
- Output Offset Voltage Protection
- Heat Sink Overheat Protection
- Transformer Overheat Protection
- Load Shorting Protection
- Power On/Off Protection
- Soft Clip Limiters

Controls
- Power Switch, Ch 1 / Ch 2 gain (41 step)
- Parallel / Stereo / Bridge Switch

Cooling
- Dual Speed Fan, Temperature Controlled

Indicator LEDs
- Power, Protect, Signal, Limit

Power Consumption	
Idle	.41A, 38 Watts, 130 BTU
Average	2.4A, 291 Watts, 992 BTU
Max	7.3A, 876 Watts, 2989 BTU

Note: *Average Power is ⅓ rating, 25% head room, and 50% music signal duty cycle.*

Dimensions	
Height	5.19" (132mm)
Width	19" (483mm)
Depth	16.85" (428mm)

Architect & Engineer Specifications

The amplifier shall be Atlas Sound CP400 Commercial Audio Amplifier. The power amplifier shall have two channels. At 8Ω, 35Hz – 20kHz, it shall deliver 160 Watts per channel. At 4Ω, 1kHz, it shall deliver 240 Watts per channel. At 2Ω, 1kHz, it shall deliver 270 Watts per channel. In bridge mono mode, with an 8Ω load, it shall deliver 500 Watts. In bridge mono mode, with a 4Ω load, it shall deliver 600 Watts. The amplifier shall have internal circuits to protect itself from output short circuits and thermal overload and will protect attached loudspeakers from amplifier failure and DC voltages. A variable speed fan shall provide heat sink cooling. Each channel to have an input sensitivity of 1.25V, frequency response shall be 30Hz – 50kHz (±3dB) direct mode and 30Hz – 16kHz (±3dB) in transformer mode. Front panel indicators to include signal present, limiter, and protection LEDs. Rear mounted stepped attenuators to provide repeatability of gain settings. Input terminations shall be balanced on barrier strip terminals or XLR female connectors. Loudspeaker outputs shall be of the barrier strip type. A switch on the rear panel to provide selection of Stereo, Parallel, and Bridge Modes of operation. Dimensions shall be 5.19" x 18.9" x 16.85" (132mm x 483mm x 428mm) and the amplifier shall weigh 47lbs.

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