SERIES THREE AMPLIFIERS FROM QSC

MODEL 3500

The QSC Series Three Model 3500 is designed for very high power audio applications where reference quality audio reproduction must be combined with rugged low profile design. Engineered specifically for recording studios, touring systems and engineered sound, this amp is well suited for any high quality professional audio application. Because of the very high output power, this amplifier is an excellent choice for driving large full range systems or bass enclosures in multi-way systems.

The amplifier is passively cooled and uses a high efficiency output circuit to reduce operating temperatures. The dual mono configuration and front removable channel module design are important features for those interested in very high reliability and minimum down time. A comprehensive interface panel is provided to assure proper connection to any professional system.

Features:
- Low Profile Chassis
- 300 watts per channel at 8 ohms
- 450 watts per channel at 4 ohms
- Dual Mono Configuration
- Front Removable Channel Modules
- Three Year Warranty
- Precision 31 Step Detented Gain Controls
- Passive Cooling with High Efficiency Output Circuit
- Comprehensive Interface Panel
- Passive and Active Accessory Input Modules
- Automatic Back-up in Bridged Mono Mode
SPECIFICATIONS

MODEL 3500

OUTPUT POWER (per channel)
Continuous Average Output Power
both channels driven
8 ohms, 20-20kHz
16 ohms, 20-20kHz
0.1% THD
600
1% THD
700
1% THD
800
4 ohms, 20-20kHz
8 ohms, 20-20kHz
0.1% THD
450
1% THD
560
1% THD
800
2 ohms, 1kHz
1% THD
700

DISTORTION
THD: 0.1% at 20kHz from 250 milliwatts to rated power shall be less than 0.1%.
0.015% typical. SMPT and IMD less than 0.02% at 250 milliwatts to rated power.

FREQUENCY RESPONSE
20-20kHz: ±0.1dB
8-300kHz: ±0.5dB

DAMPING FACTOR
Greater than 200

DYNAMIC HEADROOM
3.0dB (44 ohms)

NOISE
<100uV 20-20kHz

SENSITIVITY
4W RMS for rated power (8ohms)

INPUT IMPEDANCE
20kOhm balanced or unbalanced

CONTROLS
Front - Braille detented gain control - Reverse AC switch and AC circuit breaker for each channel.
Rear - Mono bridging and accessory module switches.

INDICATORS (per channel)
B-color LED indicating DC power + CK/Protect mode + LED Clip indicator + 6dB and -6dB signal level indicators - Flashing output level indicators.

CONNECTORS (per channel)
XLR 3-pin XLR, (ring, tip, sleeve) and 3 terminal barrier strip inputs wired in parallel - 2 terminal barrier strip and 5-way binding post outputs wired in parallel - DC input and output sockets provided for AC transformers or active accessories. Ground lift terminal block.

COOLING
Passive - built-in high efficiency output stage for reducing operating temperatures. Unique circuit configuration allows direct metal mounting of output devices for reduced thermal stress from short-term peaks.

AMPLIFIER PROTECTION
Indefinite short circuit, open circuit, overload, ultrasonic and HF protection - Insufficient; needs and matched loads - Unintentional overload - All protection completely independent on each channel.

LOAD PROTECTION
Individual channel, (Grounding, overload relays provide 4:1 fault, 3 second delayed turn on (transient protection), and excessive low frequency protection, Instant turn-off, pop suppression and power interrupt protection is also provided.

OUTPUT CIRCUIT TYPE
Full complementary two-level high efficiency

OUTPUT DEVICES (Total)
24

POWER SUPPLY
Two completely separate power supplies including AC switches and AC circuit breakers, only AC cord is common.

POWER REQUIREMENTS
120V, 60Hz 12A

DIMENSIONS
Faceplate: 19” x 3.5”
Depth (behind mig, with rear support): 17.9”
Depth (chassis): 16.9”

WEIGHT
Shipping (lbs.): 55
Net (lbs.): 50

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The power amplifier shall contain all solid-state circuitry, using complementary silicon semiconductors. It shall be capable of operating from 120V, 60Hz AC mains.

The amplifier shall contain two fully independent channels, with separate AC switches, circuit breaker, power transformers and protective systems. Each channel shall have independent protective circuitry against open-circuit, short-circuit or mismatched loads, independent thermal warning and shutdown circuits, and independent load protection circuitry for turn-on transient included among input circuit board and DC fault circuits within or preceding the amplifier.

All protective circuits shall be self-resetting. The remaining channel shall continue to operate, in stereo or bridged mono mode, after failure of either channel.

Each channel of the amplifier shall be capable of meeting the following performance criteria, with both channels driven simultaneously.

Output power into 8 ohms 300 watts, from 20-20kHz with less than 0.1% distortion.
Output power into 4 ohms 450 watts, from 20-20kHz with less than 0.5% distortion.
Output power into 2 ohms 700 watts, at 1kHz, with less than 1% distortion.
Frequency response shall be 20-20kHz with less than 0.1dB deviation.

The voltage gain shall be 34dB at full gain.

The power gain shall be 65dB at full gain.

The input sensitivity for rated 8 ohm power shall be 1W RMS balanced triode input circuitry shall be standard, and the amplifier shall meet all performance criteria in the balanced or unbalanced mode.

Input impedance shall be 20kOhm balanced or unbalanced.

Nonsilicon devices are used in the input stage. Each channel shall have the following controls, functions, and connectors:

3-line 60Hz control, with 1dB steps over the highest 1dB of adjustment range, with accuracy within 1dB.

Green LED for proper protection indication.
Yellow LED for presence of input 6dB and 30dB below rated power.
Red LED indicator for any output clipping larger than 0.1%.
Flashing red LED indicator for hard sink temperatures within 10°F of thermal shutdown.

Balanced/Unbalanced input jacks of the 1/4 inch ring-tip-sleeve, female XLR, and barrier strip screw terminal type.
Speaker connections of the five-way binding post and barrier strip screw terminal type.

An octal socket with DC power for passive and active plug-in input accessory modules.

8-way microswitches for octal socket bypass, mono-bridged mode, cross-connection of channels and XLR input polarities.

Each channel shall be front-removable with the amplifier mounted in a rack and without disconnecting the input/output cables. All active components, except AC power transformer, AC switch, circuit breaker, and input/output connectors, shall be mounted on the removable channel module. Module connectors shall be flexible to withstand shocks and vibration.

The amplifier chassis shall have a permanently attached AC cord and a ground lift jumper which permits the separation of circuit and chassis grounds if required.

The chassis shall have front and rear 1/4” rack supports, and shall occupy two rack spaces (3.5”).

The base shall be 17.9 inches high.

Weight shall be 50 lbs.

The power amplifier shall be the QSC Audio Products Model 3500.