USA 400

The **USA 400**, a member of QSC's world-wide best-selling line of amplifiers, is now even *better*. The USA Series now offers even more value and performance: Neutrik Combo input connectors (1/4" and XLR), selectable limiters, variable low-frequency filters, and even more power in a new rugged, all-steel chassis. Other standard features include comprehensive amplifier and load protection, ample heat sinks, clip indicators, mono-bridging switch, and active balanced inputs. The USA 400 is ideal for live sound specialists, system installers, and other professionals who demand QSC's legendary reliability and audio quality.

QSC Audio Products—the leader in amplifier technology.

F E A T U R E S

- **250 watts per channel at 2 ohms**
- **200 watts per channel at 4 ohms**
- **Built-in limiting (defeatable) for speaker protection**
- **Selectable high-pass filter (30 Hz, 50 Hz, or out)**
- **Active balanced inputs**
- **Neutrik "Combo"™ input connectors accommodate both 1/4" TRS and XLR**
- **Barrier strip inputs**
- **"Touch-proof" binding post outputs**
- **Passive cooling**
- **LED clip indicators**
- **Patented Output Averaging™ short circuit protection**
- **Stereo, bridged mono, or parallel operation**
- **QSC reliability and audio performance**
- **Made in USA**
- **3-year warranty PLUS optional 3-year extended warranty**

LOAD	*20Hz-20kHz, 0.1% THD (typical)*	*1kHz, 1% THD (typical)*
Stereo (W/Ch)		
8Ω	**110 watts**	**125 watts**
4Ω		**200 watts**
2Ω		**250 watts**
Mono-Bridged		
16Ω	**220 watts**	**250 watts**
8Ω		**400 watts**

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USA Series

USA 400 Specifications

OUTPUT POWER (per channel, typical)

8 ohms, 20 Hz to 20 kHz,	0.1%	THD, 110 watts
8 ohms, 1kHz,	1%	THD, 125 watts
4 ohms, 1 kHz,	1%	THD, 200 watts
2 ohms, 1 kHz,	1%	THD, 250 watts

OUTPUT POWER (bridged mono)

16 ohms, 1 kHz,	1%	THD, 250 watts
8 ohms, 1 kHz,	1%	THD 400 watts

DISTORTION:
SMPTE-IM, less than 0.025%

FREQUENCY RESPONSE:
20 Hz to 20 kHz, +0/-1 dB, 1 watt

DAMPING FACTOR:
Greater than 200

DYNAMIC HEADROOM: 2 dB at 8 ohms

NOISE: 105 dB below rated output (A weighted)

SENSITIVITY: 1.12 Vrms for rated power (8 ohms)

VOLTAGE GAIN: 28 (29 dB)

INPUT IMPEDANCE: 10K unbalanced, 20K balanced

CONTROLS:
Front: AC Switch, AC Circuit Breaker
Back: Stereo/Bridge Switch/Ch 1 and Ch 2 Gain Knobs
8 Position DIP Switch for Filter & Limiter

INDICATORS:
PWR-ON: Green LED
CLIP: Red LED, 1 per channel

CONNECTORS: (each channel)
Input: Barrier strip and Neutrik "Combo" 1/4" TRS and XLR, tip positive
Speakers: "Touch proof" binding posts

COOLING: Passive

AMPLIFIER PROTECTION:
Full short circuit†, open circuit, ultrasonic, and RF protection. Stable into reactive or mismatched loads.

LOAD PROTECTION:
On/off muting and DC-fault protection.

OUTPUT CIRCUIT TYPE:
Complementary linear outputs.

POWER REQUIREMENTS: 100,120, 240 Vac, 50-60 Hz

POWER CONSUMPTION:
Normal Operation: 4 ohms per channel: less than 4.4 amps, 120 Vac (900 VA)

DIMENSIONS:
19.0" (48.3 cm) rack mounting
5.25" (13.3 cm) tall (3 spaces)
9.5" (24.1 cm) deep

WEIGHT: 24 lbs (10.9 kg) net, 28 lbs (12.7 kg) shipping

†Output Averaging™ short circuit protection (US Patent 4,321,554)
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

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ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The power amplifier shall contain all solid-state circuitry, using complementary silicon semiconductors. The amplifier shall operate from 50-60 Hz AC power, with voltages of 100, 120, or 240 Vac. The amplifier shall operate from a normal household AC outlet, drawing less than 900 VA when driven with random program material at 1/8 rated power into four ohm loads. The amplifier shall be supplied with a single molded AC cord having an appropriate AC plug for the intended operating voltage.

The amplifier shall contain two independent channels. Each channel shall have independent protective circuitry against open circuit, short circuit, or reactive loads, and the remaining channel shall continue to operate if one channel fails. A muting circuit shall provide three seconds of muting after turn-on, and shall mute within 1/4 second after turn-off or loss of power, to protect the load against turn-on or turn-off thumps. Self resetting thermal shutdown shall protect the circuitry against temperatures in excess of 90°C, and a front panel resettable circuit breaker or fuse shall protect against AC overloads.

Each channel of the amplifier shall have an independently defeatable limiter. Each channel shall also have bypassable high-pass filtering, with independently selectable -3 dB frequencies of 30 Hz or 50Hz. The limiter and high pass filter controls shall be on an 8-position DIP switch on the amplifier's rear panel.

Each channel of the amplifier shall typically be capable of meeting the following performance criteria, with both channels driven simultaneously, unless otherwise stated: Output power, 8 ohms per channel, 20 Hz-20 kHz, less than 0.1% distortion, at least 110 watts rms per channel. Output power, 4 ohms per channel, 1 kHz, less than 1% distortion, at least 200 watts rms per channel.

Frequency response shall be 20 Hz-20 kHz + 0, - 1 dB at 1 watt output. SMPTE IM distortion shall be less than 0.025% at rated power, 8 ohms, and less than 0.05% at rated power, 4 ohms. IHF damping factor shall be at least 200. Signal to noise, below rated output, shall be at least 105 dB (A weighted). Dynamic headroom at 8 ohms shall be at least 2 dB. The voltage gain shall be 29 dB at full gain. The input sensitivity for rated 8 ohm power shall be 1.12 Vrms. Input impedance shall be 20 kilohms balanced and unbalanced noninverting, 10 kilohms unbalanced inverting. Balanced, bridging input circuit shall be standard, and the amplifier shall meet all performance criteria in the balanced or unbalanced mode. The amplifier shall have passive cooling for ultra-quiet operation. Each channel shall have the following controls, indicators, and connectors: Rear mounted gain control calibrated in dB. Clipping indicator, responding proportionally to any distortion in excess of 0.1%. Balanced/unbalanced input jack of the Neutrik "Combo" (combined 1/4" TRS and XLR). Balanced input of the barrier strip screw terminal type. Speaker terminals of the "touch proof" binding post type. In addition, the chassis shall feature a rear mounted mono-bridging switch, front mounted AC switch and circuit breaker or fuse in some export locations, mounting positions on the rear for optional 70 V output transformers, and built-in rack mounting ears. The chassis shall mount in a 19" rack, occupying 3 rack spaces (5.25"). Chassis depth behind the rails shall be 8.5" plus 1 in allowance for the binding posts. Weight shall be 24 lb. The amplifier shall be the QSC Model USA 400.