



DCA 4-channel Digital Cinema Amplifiers

Features

- The DCA1824 is ideal for surround channels—each channel can power up to four 8 ohm speakers in parallel for a total of up to 16 speakers
- The DCA1644 is perfect for powering screen channels in small to medium theatres, or for powering mids and highs in tri-amp systems for larger theatres
- DCAs are equipped with a DataPort for use with QSC's DCP (Digital Cinema Processors), DCM (Digital Cinema Monitors) and DXP (Digital Expansion Processor), a total system solution that greatly reduces labor and wiring costs
- THX™ approved for professional cinema applications
- PowerLight™ technology for the added dynamic range required by today's digital soundtracks
- Compact size (2 RU, 14" deep) ideal for use in console mounted sound systems
- Great for upgrading existing systems to immersive sound surround formats with no increase in rack space
- All DCA models only 21 lb for easier racking & shipping
- Active inrush limiting won't blow circuit breakers at turn on
- Gain control security cover protects amp from misadjustment
- 3-year warranty plus optional 3-year extended service contract



The latest advances in sound system technology such as multi-channel immersive sound surrounds and tri-amplification require more amplifier channels than ever before. That's why we designed our newest DCA amplifiers to give you four channels of power in a compact package that doesn't eat up precious rack space. And, compared to the cost of two stereo amplifiers, you'll find they leave more room in your budget as well. In addition to their superior performance we've packed these amps with useful features designed specifically for the cinema market.

DCA 4-channel Amplifiers

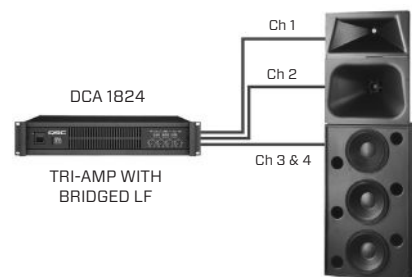
Model	Watts per channel		
	8Ω	4Ω	2Ω
DCA 1644	250	400*	NR
DCA 1824	170	250†	450**

20 Hz – 20 kHz, 0.05% THD

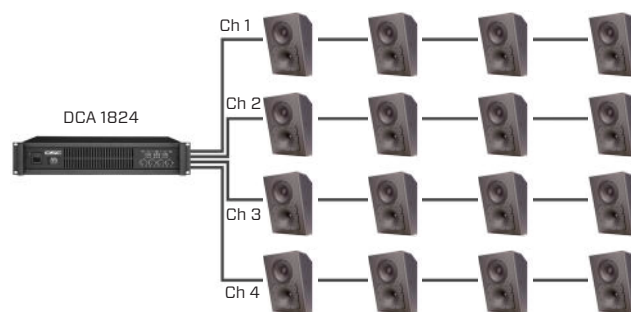
*1 kHz, 0.1% THD

**1 kHz, 1% THD

†20 Hz – 20 kHz, 0.1% THD



Using 4-channel DCA amplifiers to power tri-amp speaker systems by bridging a pair of channels

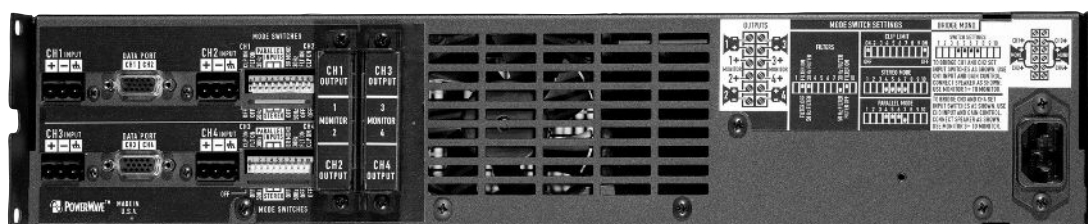


The DCA 1824 is ideal for powering surround channels—each channel can power up to four 8 ohm speakers in parallel for a total of up to 16 speakers.

DCA1644 | DCA1824 Details

	DCA1644	DCA1824
Stereo Mode	Continuous average output power per channel	
8Ω / FTC 20 Hz – 20 kHz / 0.05% THD	250 W	170 W
4Ω / FTC 20 Hz – 20 kHz / 0.1% THD	400 W (0.1% THD, 1 kHz)	250 W
4Ω / EIA 1 kHz / 1% THD	450 W	—
2Ω / EIA 1 kHz / 1% THD	NR	450 W
Bridge-Mono Mode	Continuous average output power	
16Ω / FTC 20 Hz – 20 kHz / 0.1% THD	500 W	340 W
8Ω / FTC 20 Hz – 20 kHz / 0.1% THD	800 W (0.1% THD, 1 kHz)	500 W
4Ω / EIA 1 kHz / 1% THD	NR	900 W
Signal to Noise (20 Hz – 20 kHz)	-105 dB	-105 dB
Input Sensitivity at 8Ω	1.12 Vrms	0.93 Vrms
Input Sensitivity at 4Ω	1.00 Vrms	0.8 Vrms
Power Requirements (1/8 pink noise)	14 A at 4Ω	10 A at 8Ω
Output Circuitry	Class AB+B	
Distortion (SMPTE-IM)	< 0.01%	
Distortion (typical)		
20 Hz – 20 kHz: 10 dB below rated power	< 0.02% THD / 4Ω and 8Ω	
1.0 kHz and below: full rated power	< 0.02% THD / 4Ω and 8Ω	
Frequency Response	20 Hz – 20 kHz, ± 0.2 dB 8 Hz – 50 kHz, + 0, -3 dB	
Damping factor (1 kHz and below)	> 500	
Input Impedance	10k ohms unbalanced, 20k ohms balanced	
Input Clipping	10 Vrms (+22 dBu)	
Cooling	Variable-speed fan, rear-to-front air flow	
Connectors (each channel)	Input: 3-pin detachable terminal blocks (one each per channel) Output: Safety shrouded barrier strip, including monitor output DataPort: One HD15 per pair of channels	
Controls	Front: AC switch, Ch. 1, 2, 3 and 4 gain knobs Rear: DIP switches for Ch. 1, 2, 3 and 4 clip limiter on/off LF filter on/off LF filter freq select 30 or 50 Hz inputs parallel or stereo; bridge mode	
Indicators	Power-On: Green LED Parallel inputs: Yellow LED Bridged: Yellow LED (one per pair of channels) Clip/Prot: Red LED Level -10 dB: Green LED Level -20 dB: Green LED Signal -35 dB: Green LED (one per channel)	
Amplifier Protection	Full short circuit, open circuit, thermal, ultrasonic, and RF protection. Stable into reactive or mismatched loads	
Load Protection	On/off muting, DC fault power supply shutdown	
Dimensions (HWD)	3.5" (8.9 cm) 2 RU x 19" (48.3 cm) rack mounting x 14" (35.6 cm) from front mounting rails	
Voltage Gain	40x (32 dB)	
Weight - Net	21 lb (9.5 kg)	
Optional Accessories	DCP Digital Cinema Processors and DCM Digital Cinema Monitors provide complete crossover and monitor functions DXP and QSCControl.net™ for a complete networked audio solution, including DSP and control and monitoring of amplifiers and loudspeakers The DSP-3 and DSP-4 digital signal processor features a fully programmable signal chain and includes crossover filters plus numerous additional dynamics processors	

* at 120 VAC, both channels driven; multiply current by 0.5 for 230V units FTC: all channels driven EIA: one channel driven



Specifications subject to change without notice.

QSC™

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