

DSP Power Amplifiers

By George Petersen

Over the years, one of the most amazing advances in technology in pro audio comes in the form of the modern power amplifier. Long gone are the days when the glass ceiling of \$1 per watt seemed unbreakable. Meanwhile, amplifiers have incorporated Class-D switching power supplies to reduce weight and size, and at the same time, networking and onboard digital signal processing have made these powerhouses more versatile and flexible than ever. With that in mind, we decided to look at some third-party designs that can adapt to nearly any situation. That said, we are not presenting proprietary amplifiers — such as those designed for systems such as L-Acoustics, VUE or Bose, where the amps are integrated specifically to match the speakers from those companies.

Ashly Audio nXP Series



Top Model: nXp 3.04
Topology: Class-D
Channels: 4
Power/channel: 2,000 Watts @ 4 ohms
Bridgeable: Yes; four into two channels.
Dimensions (HxWxD): 3.5 x 19 x 16.84"
Weight: 28 pounds

I/O: Euroblock 3.5mm, TRS/XLR inputs; Speakon outs.
Networking: Ethernet control; optional CobraNet or Dante and AES3 digital input.
DSP: 32-bit SHARC, with dynamics, gain, EQ, 2x4 or 4x4 matrix mixer, crossover, delay, metering and signal generator functions.

ashly.com

Peavey IPR2 Series



Top Model: IPR2 7500
Topology: Class-D
Channels: 2
Power/channel: 2,020 Watts @ 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 17"
Weight: 14.6 pounds

I/O: TRS/XLR inputs; Speakon outs.
Networking: No
DSP: Delay, parametric EQ, crossovers, high-pass filter, limiter, crossovers, HF driver EQ, Waves MaxxBass harmonic enhancer.

peavey.com

Powersoft X Series



Top Model: X8
Topology: Class-D
Channels: 8
Power/channel: 3,000 Watts @ 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 1.75 x 19 x 18.7"
Weight: 26.5 pounds

I/O: XLR inputs (analog and AES3 digital); Speakon outs.
Networking: RS-485 interface; Dante and Ethernet options and control/monitoring via Armonia Pro Audio Suite software.
DSP: DSP option adds power and peak limiters, delays, crossovers, high-pass filters, bandpass filters, input/output EQs.

powersoft-audio.com

Crest Audio Pro-LITE Series



Top Model: Pro-LITE 7.5 DSP
Topology: Class-D
Channels: 8
Power/channel: 2,810 Watts @ 4 ohms
Bridgeable: Yes; 2/4/8 channels
Dimensions (HxWxD): 3.5 x 19 x 17"
Weight: 14.6 pounds

I/O: TRS/XLR inputs; Speakon outs.
Networking: None.
DSP: Delay, parametric EQ, limiters, crossovers, high-pass filter, crossovers, HF driver EQ, Waves MaxxBass harmonic enhancer.

crestaudio.com

Crown I-Tech HD Series



Top Model: I-Tech 4x3500HD
Topology: Class-I (BCA)
Channels: 4
Power/channel: 2,400 Watts @ 4 ohms
Bridgeable: Yes; four into two channels.
Dimensions (HxWxD): 3.5 x 19 x 17"
Weight: 29 pounds

I/O: XLR inputs (analog and AES); Speakon or binding post outs.
Networking: CobraNet, HiQnet and Ethernet; USB for preset loading
DSP: Onboard 24-bit/192 kHz BSS OmniDriveHD DSP, Sweep Load Monitoring and system diagnostics.

crownaudio.com

QSC PLD Series



Top Model: PLD 4.5
Topology: Class-D
Channels: 4
Power/channel: 1,250 Watts @ 4 ohms
Bridgeable: Yes, four into two or one channel.
Dimensions (HxWxD): 3.5 x 19 x 16"
Weight: 22 pounds

I/O: XLR inputs; Speakon outs.
Networking: USB port for (Mac/PC) Amplifier Navigator software.
DSP: RMS and peak limiters, crossovers, parametric EQ, filters, delays and Intrinsic Correction for speaker array/horn non-linearity compensation.

qsc.com

Voice-Acoustic HDSP Series



Top Model: HDSP-6D
Topology: Class-D
Channels: 6
Power/channel: (2) 2,400W + (4) 800W into 4 ohms
Bridgeable: N/A
Dimensions (HxWxD): 3.5 x 19 x 17"
Weight: 16 pounds

I/O: XLR analog and AES digital; Speakon outs.
Networking: Software control via Ethernet interface.
DSP: Integrated loudspeaker management systems with two 80-memory slots.

voice-acoustic.de

Electro-Voice TG Series



Top Model: TG7
Topology: Class-H
Channels: 2
Power/channel: 2,500 Watts @ 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 20"
Weight: 32 pounds

I/O: XLR inputs; binding post and Speakon outs.
Networking: Optional
DSP: Optional RCM-26 IRIS-Net DSP and control module.

electrovoice.com

Lab.gruppen PLM+ Series



Top Model: PLM 20K44
Topology: Class-TD
Channels: 4
Power/channel: 4,400 Watts @ 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 18.1"
Weight: 37 pounds

I/O: XLR inputs (AES and analog); binding post outs.
Networking: Ethernet, Dante.
DSP: Four Lake Processing modules, each with delays, crossovers, EQ and limiting, including Lake Mesa EQ and LimiterMax protection.

labgruppen.com

XTA APA Series



Top Model: 4E8
Topology: Class-D
Channels: 4
Power/channel: 3,400 Watts
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 19.6"
Weight: 33 pounds

I/O: Speakon outs; AES digital inputs (analog and network in's optional).
Networking: Yes.
DSP: Adaptive processing plus 96kHz filtering, EQ, FI, phase linearization, limiting, crossover and matrix routing.

audiocore.co.uk

Yamaha TXn Series



Top Model: TX6n
Topology: Proprietary EE Engine
Channels: 2
Power/channel: 2,750 Watts @ 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 18.15"
Weight: 35.3 pounds

I/O: XLR analog (AES optional); Speakon and binding post outs.
Networking: RJ-45 port; optional EtherSound and CobraNet cards.
DSP: Limiters, crossovers, delays, input and output parametric EQs, filters, horn compensation EQ.

yamahaca.com