

DSP Power Amps

By George Petersen

Without a doubt, amplifiers are smart and keep getting smarter, with recent models offering increasing amounts of onboard DSP to handle system setup/engineering chores. Originally, mostly limited to simple tasks such as high-pass filtering, limiting and perhaps a basic crossover, many of today's DSP-enabled amplifiers have capabilities rivaling stand-alone system processors, often with multi-way crossovers, parametric EQ, alignment delay, advanced FIR filtering, networked audio/control and more. And with stereo or multichannel powering built right in, these offer a convenient package for installations, touring or portable sound reinforcement applications.

However, if your rig is designed to work with system-specific amplifiers — such as Bose, d&b audiotechnik, L-Acoustics or Nexo — you're better off contacting the manufacturer directly. If you're seeking a top-end solution that works with a variety of speaker brands, check these out.

We looked at top-of-the-line units from a number of manufacturers and found solutions to fit anyone's needs and company URLs are provided for more information.

Powersoft X8



Topology: Class-D
Channels: 8
Power/channel: 3,000W @ 4 ohms
Bridgeable: Yes
Size/Weight: 1U x 18.7" deep; 26.5 lbs.
I/O: XLR analog and AES3 digital; Speakons
Networking: RS-485; optional Dante, Ethernet, Armonia Pro Audio Suite control/monitoring
DSP: 96k Hz DSP option adds limiters, delays, crossovers, HP/BP filters, EQs

powersoft-audio.com

Ashly Audio nXp 3.04



Topology: Class-D
Channels: 4
Power/channel: 2,000W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 16.8" deep; 28 lbs.
I/O: Euroblock 3.5mm, TRS/XLR inputs; Speakon
Networking: Ethernet; optional CobraNet, Dante and AES3
DSP: 32-bit with dynamics, gain, EQ, 2x4/4x4 matrix, crossover, delay, signal generator

ashly.com

Dynacord TGX20



Topology: Class-D
Channels: 4
Power/channel: 5,000W @ 4 ohms
Bridgeable: No
Size/Weight: 2U x 20.25" deep; 40.4 lbs.
I/O: XLR analog or AES digital; Speakon
Networking: Integrated Dante and OCA/AES 70 remote control
DSP: 96k Hz DSP with multiband PEQs, crossovers, limiters and delay

dynacord.com

QSC CXD4.5Q



Topology: Class-D
Channels: 4
Power/channel: 1,250W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 16" deep; 22 lbs.
I/O: 3-pin Euroblock; 2-pin Euroblock outs
Networking: Q-SYS integration via Gigabit Ethernet
DSP: Crossovers, PEQ, filters, dynamics, delay and Intrinsic Correction

qsc.com

Crown I-Tech 4x3500HD



Topology: Class-I (BCA)
Channels: 4
Power/channel: 2,400W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 17" deep; 29 lbs.
I/O: XLR analog and AES ins; Speakon or binding posts
Networking: CobraNet, HiQnet and Ethernet; USB
DSP: BSS OmniDriveHD DSP, Sweep Load Monitoring, system diagnostics

crownaudio.com

Lab.Gruppen PLM 20K44



Topology: Class-TD
Channels: 4
Power/channel: 4,400W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 18" deep; 37 lbs.
I/O: XLR (AES and analog); Speakons or binding posts offered
Networking: Ethernet, Dante.
DSP: 96k Hz Lake processing

labgruppen.com

XTA DPA100



Topology: Class-D
Channels: 4
Power/channel: 3,500W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 18" deep; 27.6 lbs.
I/O: Analog XLR, AES3, Dante; Speakon
Networking: USB, Ethernet RS-485, iPad app
DSP: 96k Hz delay, IIR EQ, crossovers, FIR filtering, dynamic EQ, program/peak limiting

audiocore.co.uk

DAS DX-100i



Topology: Class-D
Channels: 4
Power/channel: 2,400W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 16.7" deep; 27.3 lbs.
I/O: Analog XLR, AES3, Dante optional; Speakon
Networking: USB, Ethernet and RS-485
DSP: System protection, crossover, delay, output matrixing

dasaudio.com

Lea Professional Connect 3004D



Topology: Class-D
Channels: 4
Power/channel: 3,000W @ 4 ohms
Bridgeable: Yes
Size/Weight: 1U x 14.2" deep; 26 lbs.
I/O: Analog Amphenol Anytek, Dante, AES67; Anytek outs
Networking: IoT enabled; Ethernet; Dante
DSP: 96k Hz with 48 dB/oct filters, 8 PEQs, speaker protection limiting and more

leaprofessional.com

Yamaha PC412-D



Topology: Class-D
Channels: 4
Power/channel: 1,900W @ 4 ohms
Bridgeable: Yes
Size/Weight: 2U x 20.8" deep; 35.3 lbs.
I/O: XLR analog, Dante; Speakon
Networking: Dante, ProvisionAire remote software
DSP: Matrix mix, IIR EQ, delay, crossovers, PEQ, peak/RMS limiters

usa.yamaha.com