DSP Amplifiers

By GeorgePetersen

No doubt about it — amplifiers are smart and keep getting smarter, with recent models offering an increasing amount of onboard DSP to handle system setup/engineering chores. Originally, these were just limited to simple tasks such as high-pass filtering, limiting and perhaps a basic crossover. However, 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 and more. And with stereo or multichannel powering built right in, these offer a convenient package for installations, touring or portable applications. We looked at top of the line units from a number of manufacturers and found solutions to fit anyone's needs or budget. Note that all prices are MSRP and URL's are provided for more information.

Ashly Audio nX 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.
MSRP: $6,695

ashly.com

Behringer iNUKE Series

Top Model: iNUKE NU12000DSP
Topology: Class-D
Channels: 2
Power/channel: 3,400 Watts @ 4 ohms
Bridgeable: No
Dimensions (HxWxD): 3.5 x 19 x 13"
Weight: 26.5 pounds
I/O: TRS/XLR inputs; Speakon outs.
Networking: USB port for remote access to DSP functions.
DSP: Delay, crossover, 8-band parametric & 2-band dynamic EQ, **peak limiter.**
MSRP: $1,499

behringer.com

Crest Audio Pro-LITE Series

Top Model: Pro-LITE 2.0 DSP
Topology: Class-D
Channels: 2
Power/channel: 540 Watts @ 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 10.5"
Weight: 11.6 pounds
I/O: TRS/XLR inputs; Speakon outs.
Networking: USB port for external DSP access.
DSP: Delay, parametric EQ, limiters, crossovers, high-pass filter, crossovers, HF driver EQ, Waves MaxxBass harmonic enhancer.
MSRP: $699

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.
MSRP: $12,350

crownaudio.com

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.
MSRP: $5,589

electrovoice.com

Hoellstern Amplifiers Delta Series

Top Model: Delta 12.2-DSP
Topology: Class-D
Channels: 2
Power/channel: 4,400 Watts @ 4 ohms
Bridgeable: Yes; four into two channels.
Dimensions (HxWxD): 3.5 x 19 x 11.8"
Weight: 22 pounds
I/O: XLR inputs (in/thru); Speakon outs.
Networking: RS-485 network (and RS-232 interface).
DSP: Konfigurator2 software includes loudspeaker management setups for major brands — Adamson, Alcons, d&b, Danley, EAW, JBL, L-Acoustics, Nexo, etc.
MSRP: $7,100

hoellstern.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.
MSRP: $12,500

labgruppen.com

Peavey IPR[2] Series

Top Model: IPR2 7500-DSP
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.
MSRP: $1,299

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.
MSRP: $13,815

powersoft-audio.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.
MSRP: $2,399

qsc.com

SAE Audio XLi Series

Top Model: 2000XLi
Topology: Class-D
Channels: 2
Power/channel: 980 Watts into 4 ohms
Bridgeable: Yes
Dimensions (HxWxD): 3.5 x 19 x 17"
Weight: 22 pounds
I/O: Analog XLR in/thru; Speakon outs
Networking: USB port for included Windows ASR (Amplifier Status & Response) software for real-time amplifier status and control.
DSP: 8-band parametric EQ, delay, crossover. limiter and level control.
MSRP: $429

saeaudio.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 DSP: filtering, EQ, FI, phase linearization, limiting, crossover and matrix routing.
MSRP: $12,500

audiocore.co.uk

Voice-Acoustic HDSP Series

Top Model: HDSP-12
Topology: Class-D
Channels: 12
Power/channel: (4) 2,400 Watts; (8) 800 Watts @ 8 ohms
Bridgeable: Yes, as eight 1,580W channels
Dimensions (HxWxD): 5.25 x 19 x 18.5"
Weight: 35.2 pounds
I/O: XLR analog and AES digital; Speakon outs.
Networking: VAWLAN wireless remote network; RJ-45 port for wired network.
DSP: 64-bit/96kHz with 10-band parametric EQ, delay, phase adjust, crossovers; 320 memory slots.
MSRP: New model — pricing TBA

voice-acoustic.de

Yamaha TXn Series

Top Model: TX6n
Topology: Proprietary EEEngine
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.
MSRP: $4,839

yamahaca.com