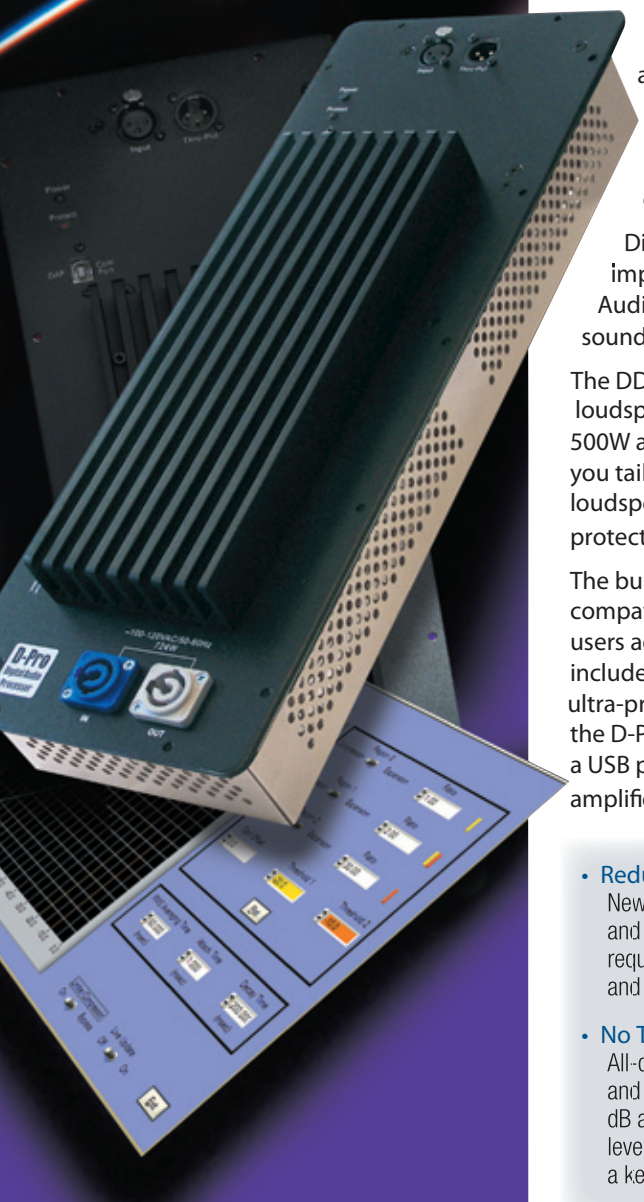
DDC552



Digmoda™ DDC552 Three-Channel Plate Amplifier with Integral D-Pro™ DSP

In today's cost-conscious marketplace, powered loudspeaker systems are often the first choice for production studios, sound-reinforcement operators and high-end consumers. Loudspeaker manufacturers have several available options. Source a conventional amplifier and hope that it provides the features you need. Or design your own amplifier modules. Alternately, why not take advantage of an all-digital solution from Digmoda™ – in other words, a Digmoda™ Class-D Plate Amplifier with an integral DSP section– and one that provides affordable, simple-to-fabricate configurable designs. Existing loudspeaker systems also can benefit from Digmoda's D-Pro™ DSP to fine-tune the system's frequency response and/or add specific characteristics for a target marketplace or end user. There is, quite literally, unlimited potential for improvement.

Digmoda™ Digital Plate Amplifiers offer original equipment manufacturers a unique, easily implemented solution. Our Class-D Plate Amplifiers with user-programmable D-Pro Digital Audio Processor can turn any studio monitor or sound-reinforcement loudspeaker into a better sounding, self-contained, active system that extends your market opportunities.

The DDC552 Three-Channel Plate Amplifier is the ideal choice for fabricating traditional tri-amped loudspeaker systems. The unit features a 500W amp for powering a low-frequency driver, a 500W amp for LF, or MF driver ,and a 250W amp for a HF driver. The programmable DSP lets you tailor the output of each of these three sections to match the requirements of the chosen loudspeaker components; crossover frequencies, overall equalization, component-overload protection, level trims and time-alignment delays. Easily saved to a configuration file.

The built-in D-Pro™ Digital Audio Processing System consists of two components: a Windows® compatible D-Pro™ Software Application which, via an easy-to-use Graphical User Interface, lets users adjust each system parameter; and a DP Series Digital Audio Processor (DAP) Module included within each plate amplifier that utilizes up to 16 Bi-quad filters per channel to provide ultra-precision, 24-bit/96 kHz DSP functions to implement the system settings developed by the D-Pro™ Software. To program, you simply connect a PC or laptop to the plate amplifier via a USB port, and load the relevant crossover, EQ, overload protection and delay settings into the amplifier's non-volatile flash memory. It couldn't be easier.

- **Reduced Time to Market …**
  New and updated products can be designed and put into production in a fraction of the time required with conventional amplifier designs and analog components.
- **No Tolerance Stack …**
  All-digital D-Pro circuits are totally predictable and produce results accurate to a fraction of a dB at any crossover frequency, bandwidth and level adjustment. Ultra-accurate results are just a keystroke away.
- **More Granular System Performance …**
  Because they are generated with all-digital precision, D-Pro crossovers, dynamics and EQ circuits are surgically accurate, which translates to tight, predictable response across the entire frequency range.
- **One SKU Fits All …**
  Any Digmoda Plate Amplifier can be used within a number of different loudspeaker models, with configuration-specific D-Pro system settings to suit different drivers and cabinet designs.

Consider the many practical and financial advantages of the Digmoda Plate Amplifiers:

- Speed up system development and evaluation.
- Eliminate component errors via all-digital circuitry.
- Add enhanced systems performance.
- Dramatically reduce inventory.
- Utilize side-chain processing.

The DDC552 amplifier is secured to the enclosure via screws that fasten the amp panel to the speaker enclosure. Supplied on the amp panel is a rubber gasket, ensuring an air-tight fit. Only 2.5 inches of depth is required within the speaker cabinet, making it suitable for slim-line enclosure designs.

For ultra-precision audio quality, we use only Class-D Power Amplifiers with analog feedback. To ensure audiophile-quality, Digmoda Class-D circuits utilize a proprietary topology that converts a low-level analog signal into a high-power pulse-width modulated (PWM) output. All our models are more than 80% efficient, thanks to a highly-evolved Class-D design and power supplies. They produce very little heat – a useful feature for high power plate amplifiers.

Digmoda

The Digmoda® Professional Power Amplifier Systems with integral D-Pro™ DSP filters, crossovers and delay, enable loudspeaker engineers to quickly create and voice self-powered loudspeaker systems. The combination of powerful easy-to-use D-Pro™ calibration software, coupled with fully configurable onboard signal processing, significantly reduces product development time. Allowing an engineer to quickly adjust frequency-response, time, phase and power anomalies in real time. Once completed, configuration settings are quickly flashed into the DSP's non-volatile memory, you're ready to listen to or measure for final adjustment. A complete line of Digmoda™ Plate Amplifiers is available in a variety of power levels; one, two or three-channel models.

Key Digmoda Series "Top Five" Benefits:

1. One-stop, all-digital Power Amplifier and Signal Processing solution.
2. Integral DSP functions for digital crossovers, system equalization and driver protection.
3. Interactive Windows® D-Pro™ Software Application for real-time system adjustment.
4. High-efficiency switching power supply for high-power density and small form factor.
5. Global feedback for high damping factors, producing ultra-precise control of transducers.

Input/Output Connection

- Single six-way Molex connector on rear of amplifier chassis connects individual loudspeaker drivers.
- Line-level Audio-In via industry-standard XLR connectors on front of chassis (pin #2 Hot).
- Front-panel Signal-Overload Indicator and Power-on LEDs.
- Input sensitivity: Average 1.28V RMS variance
- Input impedance: 36 k , balanced; 18 k , unbalanced
- DAP Communications Port via bi-directional USB connector for DSP adjustments.
- Power In/Out via industry-standard PowerCon® lockable connectors; available as 115V or 230V.
- RoSH compliant

Digmoda™ Amplifier channel configurations

Model:	1000W*	500W*	250W*	DSP	Dim.
DDC520		1	1	Mono	A
DDC550		2		Mono	A
DDC552		2	1	Mono	A
DDC1000	1			Mono	B
DDC1000SW	1			Stereo	C
DDC1050	1	1		Mono	B
DDC1055	1	2		Mono	B
DDC1055SW	1	2		Stereo	C
DDC1100	2**			Mono	B
DDC1150	2**	1		Mono	B

* Based on 4-ohm load (1% THD+N (P_o) (AES17 filter))
** Second 1000W channel band-limited to 3kHz.

A = 18.6 x 7 x 2.8 (in.), 47.2 x 17.8 x 7.1 (cm.)
B = 21 x 7 x 3.6 (in.), 53.4 x 17.8 x 9.1 (cm.)
C = 14.5 x 14.5 x 3.3 (in.), 36.8 x 36.8 x 8.4 (cm.)

Corner Radius for all models = 0.39 (in), 10 (mm)
Mounting Flange width all models = 0.6 (in)

Typical electrical performance:

THD+N in 4 (AES17 filter)	f = 1 kHz, Po = 1W	0.019 %
Nominal Voltage Gain (A_V)	f = 1 kHz	29.98
Frequency Response (Po = 1W)	f = 2 Hz - 20 kHz	±0.5
Signal to Noise Ratio 4	0db=1% THD, 1 kHz	-110
Damping Factor (DC_{clip})	f = 100 kHz, R_L = 8	2000
Power Draw at Idle P_{idle}	(115VAC/60 Hz)	19.33

Weight ea./Pkg.Wt. ea.	Model
13.2 /16.5 LBS (6 / 7.5 kg)	DDC1150, DDC1055, DDC1055SW
12.5 /15.8 LBS (5.7/ 7.2 kg)	DDC1050
11.8 / 15 LBS (5.4 / 6.8 kg)	DDC552
12.7 / 14 LBS (5.8 / 6.4 kg)	DDC1000SW, DDC1000
9.7 / 13 LBS (4.4 / 5.9 kg)	DDC520, DDC550

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