X2800.8

X2 DSP SERIES

X2 Multi-Channel Performance

Amplified DSP Solutions

DNA Equipped

X2800.8 DSP
Precision Tuning Meets Practical Design

What if the power and flexibility of ARC Audio's legendary DSP technology could be brought to a wider audience—without the price tag of its flagship models? That's exactly what the X2800.8 DSP delivers.

Developed in collaboration with Robert Zeff, one of the most respected minds in high-end car audio design, the X2800.8 DSP is the result of ARC Audio's ongoing mission to offer real-world performance, robust tuning capabilities, and clean OEM integration capabilities—without forcing system builders into premium price catagoeis or enthusiasts into 2nd morgatages to finance it.

With 8 channels of bridgeable Class-D amplification and a full suite of 12-channel DSP processing tools powered by ARC's DNA software platform, this amplifier was purpose-built for real-world installs. It's compact, intuitive, Maestro AR compatible, and ready to deliver professional results in both OEM upgrades and full custom builds.

It's not about pushing the limits of price or power. It's about making ARC Audio's signature clarity, control, and integration flexibility available to a broader range of systems—while staying true to the performance-first mentality the brand is known for.

MADE FOR THE TRUE AUDIO ENTHUSIAST

You won't find oversized heat sinks or flashy lighting here. The X2800.8 DSP is a product of practicality—designed to perform where space is tight, expectations are high, and time is valuable.

Housed in ARC Audio's Level 2 X2 chassis, the amplifier's compact footprint and clean cosmetic lines make it ideal for modern OEM and stealth-style installations. A brushed aluminum top plate with a removable silver badge adds subtle visual appeal, but the real beauty is in its functionality.

The amplifier's efficient Class-D platform allows it to run reliably on factory charging systems—no alternator upgrades required—while still delivering impressive, under-rated real-world power. Internally, a processor-controlled multi-speed fan system quietly manages thermal flow, pulling air from side-mounted vents and pushing it through a ducted central chamber. This design ensures smooth operation in confined spaces where airflow is limited—like under seats, inside storage cavities, or tucked into trim panels.In short: the X2800.8 DSP was designed to disappear visually, not sonically.

INTEGRATION WITHOUT COMPROMISE

Installing in factory-integrated systems can be messy. But not with this amp.

The X2800.8 DSP features balanced differential inputs that accept both RCA and high-level speaker signals, eliminating the need for converters or adapters. Whether you're tapping into a premium OEM system or connecting an aftermarket head unit, the amplifier's input stage is ready.

For vehicles supported by iDatalink Maestro AR, the X2800.8 DSP goes even deeper. Through a single plug-and-play connection, installers can:

- Eliminate the factory amplifier entirely
- Retain full OEM functions—volume, fade, balance, vehicle alerts
- Re-assign OEM controls (like steering wheel buttons or menus) to DSP features such as subwoofer level or preset switching
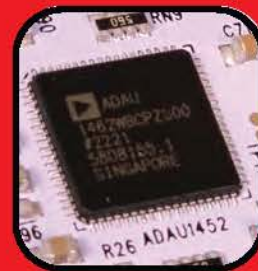- Retains the OEM Operation now with a customized listening experience.

Unlock seamless OEM integration with support for iDatalink Maestro AR. Replace factory amplifiers, retain all OEM audio functions, and even reassign factory controls for sub level or preset switching—all with a clean, plug-and-play connection in supported vehicles.

This drastically simplifies installations, reduces the parts count, and allows for advanced system tuning without altering the factory appearance or user interface.

REAL DSP POWER, NO DOWNSCALED FEATURES

Under the Hood: Pro-Grade DSP Power

At the core of the X2800.8 DSP amplifier lies the Analog Devices ADAU1462—a high-resolution, fixed-point 32-bit DSP chip trusted across ARC Audio's top platforms. Known for its low-latency processing and powerful architecture, it forms the foundation of the DNA software experience, enabling advanced tuning features like precise EQ, crossovers, delay, and all-pass filters—all with

AKM VELVET SOUND INSIDE
Asahi Kasei Microdevices

The X2800.8 DSP is built on AKM's advanced Velvet Sound™ architecture, featuring the AK5558B ADC and AK4438VN DAC. Together, they deliver high-resolution 32-bit conversion, ultra-low distortion, and exceptional dynamic range—capturing fine input details and reproducing clean, balanced output across all channels. Trusted in ARC's top-tier DSP systems, this audiophile-grade signal path brings transparency and refinement to every note.

ARC Audio didn't hold back on DSP architecture for this amplifier. At the heart of the X2800.8 DSP is the same high-resolution processing platform used across ARC's Pro-Series products—powered by the Analog Devices ADAU1462, a 32-bit fixed-point processor known for stability, low-latency response, and razor-sharp resolution.

To complement it, ARC integrated AKM's Velvet Sound series converters—including the AK5558B ADC and AK4438VN DAC. This precision pairing provides studio-grade signal conversion at both ends of the audio chain, delivering exceptionally low noise, wide dynamic range, and rich detail throughout all 12 output channels. It's the same analog performance foundation trusted in ARC's top-tier DSP designs—now accessible in a compact, integration-focused platform.
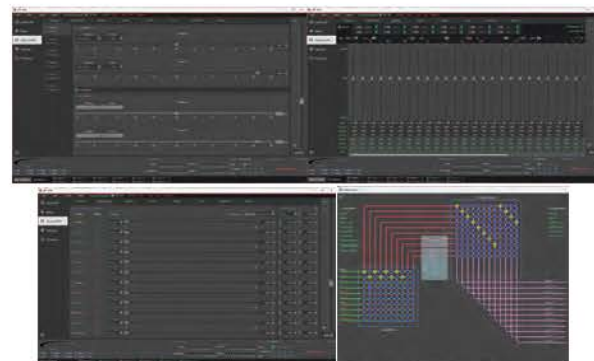
What that means in real-world terms is control. Clean, surgical, fully assignable control.

Through ARC's intuitive DNA software, users gain access to:

- 12 fully processed outputs (8 amplified, 4 RCA)
- Full-bandwidth 32-bit fixed-point processing
- Up to 192kHz resolution through the coaxial digital input
- Optical TOSLINK input (96kHz max)
- A complete DSP toolset:
  - Parametric or 1/3 octave EQ (up to 444 bands)
  - Fully assignable crossovers, all-pass filters, and shelving
  - Independent delay, phase, and output trim
  - Flexible mixer routing and summing
  - Adjustable output levels and limiters

Whether you're tuning by ear or extensive tuning tools, the X2800.8 DSP gives you the platform to dial it in with confidence.

DESIGNED TO GROW WITH YOUR SYSTEM

Despite its size, the X2800.8 DSP is not a limited solution. In fact, it's built for growth.

Each channel pair can be bridged to deliver more power for component drivers or subwoofers, while the four additional RCA preamp outputs (CH9–12) give you the freedom to expand with dedicated bass amps or rear-fill processors—without giving up DSP control.

Need to link multiple amplifiers together? The DNA software allows multi-device synchronization, letting you control multiple ARC DSP amplifiers from a single session with complete preset consistency.

This makes the X2800.8 DSP equally at home in a modest two-way front stage or as the nerve center of a multi-amp show car build.

SIMPLE, POWERFUL USER CONTROL

One of the most underrated features of the X2800.8 DSP is how seamlessly it fits into the driver's day-to-day experience.

You can store up to four fully customized tuning presets for quick switching between use cases—daily driving, competition demo, bass-heavy settings, or passenger-optimized profiles.

Presets can be triggered in three ways:

- Hardwired profile inputs (latched triggers or toggle switches)

- DNA software for laptop-side control

For system flexibility, the optional LR1 remote can be assigned to control subwoofer level, master volume, fader, or any user-defined output group.

This gives the end user meaningful interaction with their audio system—without adding clutter or needing to access a screen.

Add simple, on-the-fly control to your system with ARC Audio's LR1. This compact, single-knob rotary controller can be assigned to manage subwoofer level, master volume, fader, or other user-defined output groups via the DNA software. Perfect for stealth installs, the LR1 offers intuitive control without the need for screens, menus, or complex interfaces.

BUILT FOR THE INSTALLER

From its wiring harness to its remote turn-on system, the X2800.8 DSP is designed to work with the installer—not against them.

Key features include:

- Auto Sense Turn-On, with selectable BTLD (DC detect) or Signal Sense modes
- Pre-wired output harness dongle with flexible connection points—ideal for tight installation spaces and improved serviceability
- Switchable Class-D frequency control, allowing installers to optimize EMI performance and eliminate unwanted system noise
- Per-channel clip/protect indicators for safer tuning and real-time signal monitoring
- Integrated signal meter system, providing detailed reference during setup and fast diagnostics in the event of signal issues
- Profile 1 / 2 control inputs for physical preset switching—offering total system flexibility and enabling multiple sound profiles in a single install

It's a smarter workflow and a smoother install—whether you're in a high-volume shop or building a one-off masterpiece.

CONCLUSION

The ARC Audio X2800.8 DSP was built for people who care about how things sound—and how they install. It's a flexible, focused amplifier that doesn't try to be everything to everyone, but instead delivers exactly what serious system designers need in today's OEM-dominated landscape: smart power, trustworthy DSP, and integration made easy.

It brings ARC's signature tuning tools, system expandability, and real-world muscle into a more accessible, installation-friendly design—one that's compact, efficient, and honest in what it delivers.

No gimmicks. No bloated specs. Just ARC performance, tuned for the real world.

Specifications:

	X2800.8 DSP
Total Channels (amplified)–	8 Channels
Total Channels (DSP)–	12 Channels
Power @ 4-ohms Stereo–	8 x 50W
Power @ 2-ohms Stereo–	8 x 85W
Power @ 4-ohms Bridged–	4 x 170W
RCA Channels Out–	4
RCA Voltage Out–	Up to 8V
Fuse Rating–	3 x 30 Amp
Amp Operating Voltage–	8.0V – 17.7V
Adjustable Class-D Switching Frequency–	Yes
Built-in Fan Cooled–	Yes
Input Channels (Analog)–	8
Input Channels (Analog Type)–	Balanced (RCA / Speaker)
Optical Input–	Yes
Digital Coaxial Input–	Yes
Digital Max Signal Rate–	192khZ/32Bit
Start Stop Compliant–	Yes – to 4.5V
Auto-sense Turn-on–	Yes – Signal & DC
Compatible Controllers–	LR1
idata Maestro Compatible–	Yes