Dayton Audio DAX88

Dayton Audio DSP-408 Digital Signal Processor User Manual

Model: DAX88 | Brand: Dayton Audio

Introduction

The Dayton Audio DSP-408 is a versatile 4-input, 8-output Digital Signal Processor designed for both home and car audio systems. It offers comprehensive audio customization capabilities, including built-in EQ, crossovers, time alignment, and input/output mixing, providing real-time signal processing for ultimate control over your sound environment.

Your browser does not support the video tag.

Video: Dayton Audio DSP-408 Overview. This video provides a visual overview of the DSP-408, highlighting its key features and connectivity options for both home and car audio applications. It demonstrates the physical unit and its various ports.



Image: Dayton Audio DSP-408. A front-angled view of the Dayton Audio DSP-408 unit, showcasing its compact black brushed aluminum chassis and the Dayton Audio logo. This image provides a general view of the product's design.

Setup and Installation

Proper setup is crucial for optimal performance of your DSP-408. This section guides you through the necessary connections and initial configuration.

Package Contents



Image: DSP-408 Accessories. This image displays the accessories included with the Dayton Audio DSP-408, which typically consist of a wiring harness for car audio integration, a USB cable for PC connection, a power adapter for home use, and mounting hardware.

Before beginning installation, ensure all components are present:

- Dayton Audio DSP-408 Unit
- Car Audio Wiring Harness
- USB Cable
- Power Adapter (for home use)
- Mounting Brackets and Screws

Input Connections



Image: DSP-408 Input Panel. This image shows the input side of the DSP-408, featuring the car audio connection port, power input, RCA input channels (CH1-CH4), remote control port, and PC control USB port. The power indicator LED is also visible.

The DSP-408 features both high-level (speaker) and low-level (RCA) inputs, allowing integration with various audio sources:

- **RCA Inputs (CH1-CH4):** Connect your audio source (e.g., head unit, pre-amp) using RCA cables. These are typically used for two separate left and right stereo sources.
- **Car Audio Connection:** Utilize the included wiring harness for high-level input from your car's speaker outputs.

Output Connections



Image: DSP-408 Output Panel. This image displays the output side of the DSP-408, showing eight RCA output channels (CH1-CH8) and a USB port for the optional Bluetooth dongle. These outputs connect to amplifiers or powered speakers.

The DSP-408 provides eight RCA output channels (CH1-CH8). Connect these outputs to your amplifiers or powered speakers. Each output channel can be individually configured and tuned using the DSP software.

Power and Turn-On Options

The DSP-408 offers flexible power and turn-on options:

- **12VDC 1.5A Input:** Connect the provided power adapter for home use, or wire to a stable 12V DC power source in a car audio setup.
- **Turn-On Switch:** This switch allows you to select how the DSP-408 powers on:
    - **REM (Remote):** The unit turns on when a remote turn-on signal is received (common in aftermarket car stereo installations).
    - **SPK (Speaker):** The unit turns on automatically when it detects an audio signal from the high-level speaker inputs (useful for integrating with factory car stereos).
    - **RCA:** The unit turns on when it detects an audio signal from the RCA inputs (ideal for home theater

applications or sources with auto-sensing RCA outputs).

PC Control and Remote

- **PC Control (USB):** Connect the DSP-408 to your computer via the USB port to access the desktop-based application for detailed configuration and tuning.
- **Remote Port:** This port is for an optional wired remote control, which can manage volume and switch between presets.
- **Bluetooth (USB Port):** An optional Bluetooth dongle can be inserted into the dedicated USB port on the output side, enabling wireless control via Android or iOS applications and allowing mobile devices to be used as an audio source.

Operating the DSP-408

The DSP-408's full potential is unlocked through its intuitive Graphical User Interface (GUI), available on both desktop and mobile platforms.

Software Interface

The DSP-408 software provides comprehensive control over all audio parameters:

- **10-Band Parametric EQ:** Each of the eight output channels features a fully adjustable 10-band parametric equalizer, allowing precise frequency response shaping.
- **Crossovers:** Configure high-pass, low-pass, and band-pass filters for each channel to properly route frequencies to your speakers and subwoofers.
- **Time Alignment:** Adjust the delay for each channel to ensure all sound waves arrive at the listening position simultaneously, creating a cohesive soundstage.
- **Input/Output Mixing:** Flexible routing and mixing capabilities allow you to combine and distribute input signals to various output channels as needed.



Image: DSP-408 Software Interface. A screenshot depicting the graphical user interface of the DSP-408 control software, showing various audio adjustment parameters such as EQ sliders, crossover settings, and channel mixing options. This interface is used for precise audio tuning.

Mobile App Control

With the optional Bluetooth dongle, you can control the DSP-408 wirelessly using a dedicated mobile application on your Android or iOS device. This provides convenient access to key settings and allows for real-time adjustments from your listening position.



Image: DSP-408 Mobile App. A visual representation of the DSP-408's mobile application interface, showing simplified controls for common adjustments like volume, input selection, and basic EQ settings, designed for on-the-go tuning.

Maintenance

To ensure the longevity and optimal performance of your Dayton Audio DSP-408, follow these simple maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to wipe down the unit. Avoid abrasive cleaners, solvents, or harsh chemicals, as they can damage the finish or internal components.
- **Ventilation:** Ensure the unit is installed in a location with adequate airflow to prevent overheating. Do not block ventilation openings.
- **Connections:** Periodically check all cable connections to ensure they are secure and free from corrosion. Loose connections can lead to signal loss or noise.
- **Environment:** Protect the unit from extreme temperatures, direct sunlight, moisture, and excessive dust.

Troubleshooting

If you encounter issues with your DSP-408, refer to the following common problems and their solutions:

Problem	Possible Cause	Solution
No Power / Unit Not Turning On	Incorrect turn-on switch setting, loose power connection, blown fuse (in car audio).	Verify the "Turn-On" switch is set correctly (REM, SPK, or RCA) for your setup. Check all power connections (12V, Ground, Remote). Ensure the power adapter is functioning (for home use). Inspect any inline fuses in car audio installations.

Problem	Possible Cause	Solution
No Sound Output	Incorrect input/output routing, low volume, muted channels, incorrect crossover settings, loose RCA cables.	Check input and output routing in the DSP software. Ensure master volume and individual channel volumes are not muted or set too low. Verify crossover settings are appropriate for your speakers. Confirm all RCA cables are securely connected at both ends.
Distorted Sound / Noise (Humming, Whine)	Ground loop issues, improper gain staging, damaged cables, interference.	Ensure proper grounding for the DSP and all connected components. Adjust gain levels in the DSP software and on amplifiers to prevent clipping. Inspect RCA cables for damage and ensure they are routed away from power cables. Consider using a ground loop isolator if noise persists.
Cannot Connect to PC/Mobile App	Incorrect USB driver, Bluetooth dongle not inserted/paired, software issues.	Install the correct USB drivers for the DSP-408 on your PC. Ensure the optional Bluetooth dongle is fully inserted and properly paired with your mobile device. Restart the DSP unit, your PC/mobile device, and the software application. Check for software updates.

Specifications

Detailed technical specifications for the Dayton Audio DSP-408:

Feature	Detail
Product Dimensions	6.53 x 4.55 x 0.04 inches
Weight	1.94 Pounds
Item Model Number	DAX88
Manufacturer	daytonaudio
Maximum Supply Voltage	240 Volts
Minimum Supply Voltage	220 Volts
Mounting Type	Surface Mount
Upper Temperature Rating	65 Degrees Celsius

Warranty and Support

Dayton Audio products are designed for reliability and performance. For specific warranty information, please refer to the documentation included with your purchase or visit the official Dayton Audio website. For technical support, troubleshooting assistance, or service inquiries, please contact Dayton Audio customer support through their official channels.
You can visit the Dayton Audio Store on Amazon for more product information and support resources.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question