Marani DPA260P+

Marani DPA260P Professional Audio Processor User Manual

Model: DPA260P+

1. INTRODUCTION

The Marani DPA260P is a cost-effective 2-input, 6-output digital speaker management system designed for professional audio applications. It provides comprehensive processing and control capabilities suitable for live sound environments. Featuring a powerful MARANI DSP Engine and 24-Bit AD/DA Converters, the DPA260P offers advanced audio manipulation for optimal sound performance.

This manual provides essential information for the proper setup, operation, and maintenance of your DPA260P unit. Please read it thoroughly before use to ensure safe and efficient operation.

2. KEY FEATURES

- Excellent Sonic Performance with 24-Bit High-End Converters and 48kHz Sample Rate.

- 2 Inputs, 6 Outputs with Full Matrix Mixing capabilities.

- 11-Band Parametric Equalization per input channel.

- 7-Band Parametric Equalization per output channel.

- Each EQ band can be switched to Bell, Low/High Shelving with Variable Q Response.

- Crossover Filters with slopes from 6dB/Octave up to 48dB/Octave, including Butterworth, Bessel, and Linkwitz-Riley types.

- Each output features a Dynamic Range Controller composed of a Peak Limiter.

- Adjustable Delay Time up to 900 ms for every input channel, and up to 340 ms for every output channel.

- Phase Correction per output channel.

- Internal White/Pink Noise Generator.

- RMS Compressor and Noise Gate function per input channel.

- Remote configuration and control via USB or RS485 connections with PC software.

3. SETUP

Proper setup is crucial for optimal performance and safety. Follow these steps to connect your DPA260P unit.

3.1 Power Connection

- Ensure the unit's power switch is in the OFF position.

- Connect the supplied AC power cable to the IEC inlet on the rear panel of the DPA260P.

- Plug the other end of the power cable into a suitable AC power outlet (AC 90-240V, 50/60Hz).

3.2 Audio Connections

Figure 3.2.1: Rear panel of the Marani DPA260P, illustrating the input and output XLR connectors, power inlet, and USB/RS485 ports.

- **Inputs:** Connect your audio source (e.g., mixing console) to the two analog input XLR connectors labeled "INPUTS A" and "INPUTS B" on the rear panel.

- **Outputs:** Connect your amplifiers or powered speakers to the six analog output XLR connectors labeled "OUTPUTS 1" through "OUTPUTS 6".

- Ensure all audio cables are securely connected and are of high quality to prevent signal loss or interference.

3.3 Control Connections (USB/RS485)

- For remote configuration and control, connect the DPA260P to a computer using a USB cable via the USB port on the front panel, or use the RS485 connections on the rear panel for multi-unit control.

- Install the dedicated PC control software (typically provided with the unit or available for download from the manufacturer's website) on your computer.

4. OPERATING INSTRUCTIONS

The DPA260P offers extensive control over your audio signal. This section outlines the basic operation and key functionalities.

Figure 4.1.1: Front panel of the Marani DPA260P, showing the LCD display, navigation buttons, and output level meters.

4.1 Front Panel Controls

- **LCD Display:** Shows current settings, menus, and real-time levels.
- **Navigation Buttons (NAV/PREV, ENTER, ESC, UTILITY):** Used to navigate through menus, select options, confirm settings, and exit menus.
- **Parameter Knobs:** Adjust various parameters such as gain, frequency, Q, and delay.
- **Input/Output Level Meters:** Provide visual indication of signal levels for both inputs and outputs. Monitor these to prevent clipping (indicated by the "CLIP" LED).

4.2 Basic Signal Flow and Processing

1. **Input Processing:** Each input channel (A and B) features an 11-band Parametric EQ, gain control, noise gate, RMS compressor, and configurable delay. Adjust these parameters to optimize the incoming audio signal.
2. **Matrix Mixing:** The DPA260P supports a full matrix mixing mode, allowing you to route and mix inputs to any output in any desired ratio. This is essential for creating custom speaker configurations.
3. **Output Processing:** Each of the six output channels offers up to 5-band parametric equalization, crossover filters, peak limiter, and driver alignment delay.
   - **Crossover Filters:** Configure high-pass and low-pass filters to correctly route frequencies to specific speakers (e.g., subwoofers, mid-range, tweeters). Select filter types (Butterworth, Bessel, Linkwitz-Riley) and slopes (6dB/Octave to 48dB/Octave) based on your speaker specifications.
   - **Peak Limiter:** Set the peak limiter threshold to protect your speakers from excessive signal levels.
   - **Delay:** Use the output delay to align drivers in multi-way speaker systems or to time-align speakers in different physical locations.

4.3 PC Software Control

For advanced control and real-time monitoring, utilize the dedicated PC software. This software allows for simultaneous control of up to 32 units, providing a comprehensive interface for setting all parameters and viewing real-time levels. Refer to the software's help documentation for detailed instructions on its features and usage.

5. MAINTENANCE

To ensure the longevity and reliable performance of your Marani DPA260P, follow these simple maintenance guidelines:

- **Cleaning:** Regularly wipe the unit with a soft, dry cloth. Do not use abrasive cleaners, solvents, or waxes, as these can damage the finish and internal components.
- **Ventilation:** Ensure that the ventilation slots on the unit are not obstructed. Proper airflow is essential to prevent overheating.
- **Environment:** Operate the unit in a clean, dry environment, away from direct sunlight, excessive heat, dust, and moisture.
- **Cables:** Periodically check all audio and power cables for signs of wear or damage. Replace any faulty cables immediately.
- **Firmware Updates:** Check the Marani official website periodically for any available firmware updates. Keeping the firmware updated can improve performance and add new features.

6. TROUBLESHOOTING

If you encounter issues with your DPA260P, refer to the following common problems and their solutions:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
No power	Power cable disconnected; Power outlet faulty; Unit switch off.	Ensure power cable is securely connected. Try a different power outlet. Turn the unit's power switch ON.
No audio output	Incorrect input/output connections; Muted channels; Low gain settings; Faulty cables.	Verify all audio cables are correctly connected. Check if any input or output channels are muted or have very low gain settings. Test with different cables.
Distorted audio	Input/output levels too high (clipping); Incorrect impedance matching; Faulty unit.	Reduce input and output gain levels to prevent clipping (monitor CLIP LEDs). Ensure impedance matching between devices. If problem persists, contact support.
PC software not connecting	Incorrect USB/RS485 connection; Driver issues; Software version mismatch.	Ensure USB/RS485 cable is connected properly. Reinstall USB drivers. Verify software compatibility with your operating system and unit firmware.

If you are unable to resolve the issue using these steps, please contact Marani customer support for further assistance.

7. SPECIFICATIONS

Parameter	Value
Model Number	DPA260P+
Inputs	2 Analog Inputs
Outputs	6 Analog Outputs
Converters	24-Bit AD/DA Converters
Sample Rate	48kHz
Input EQ	11-Band Parametric EQ per input
Output EQ	5-Band Parametric EQ per output
Crossover Slopes	6dB/Octave up to 48dB/Octave
Input Delay	Up to 900 ms
Output Delay	Up to 340 ms
Control Interface	USB, RS485
Dimensions	52 x 24 x 7.5 cm
Item Weight	3 kg
Color	Black
Manufacturer	Marani

Parameter	Value
Country of Origin	China

8. WARRANTY AND SUPPORT

Marani products are manufactured to high quality standards. Specific warranty terms and conditions are typically provided with your purchase documentation or can be found on the official Marani website. Please retain your proof of purchase for warranty claims.

For technical support, service, or further inquiries, please contact your authorized Marani dealer or visit the official Marani website for contact information and support resources.

Related Documents - DPA260P+

	Marani MIRxxxA Software and Firmware Release Notes Official release notes for Marani MIRxxxA series audio processors, detailing software and firmware updates, bug fixes, and new features for models like MIR480A. Includes updates for MEQ A Series software and firmware versions.
	Marani MIR480A Speaker Management System - Technical Specifications and Features Detailed overview of the Marani MIR480A digital audio processor, including its advanced DSP capabilities, comprehensive input/output processing features, and technical specifications for professional audio applications.
	Marani MIRxxxA Software and Firmware Release Notes Official release notes for Marani MIRxxxA series audio processors, detailing software and firmware updates, bug fixes, and new features for models like MIR480A.

[Marani MIRxxxA Software and Firmware Release Notes](#)
Release notes detailing software and firmware updates for the Marani MIRxxxA series, including bug fixes, new features, and performance improvements.

[MDA4-1000M Quick User's Guide: Installation and Operation](#)
A comprehensive guide to installing and operating the MDA4-1000M amplifier, covering setup, device connection via USB or TCP/IP, software configuration, and advanced features.

[Marani MDAx-xxkDM Software and Firmware Release Notes](#)
Release notes for Marani MDAx-xxkDM series amplifiers, detailing software version v0.4.3.exe and firmware updates, including improvements and bug fixes for Loudness Filter, Dynamic Amp Boost, and PEQ editing.