Power Dynamics PD410A

Power Dynamics PD410A 10-inch Active Speaker User Manual

Model: PD410A

1. SAFETY INSTRUCTIONS

Please read this manual thoroughly before operating the Power Dynamics PD410A active speaker. Retain this manual for future reference.

- **Power Supply:** Ensure the speaker is connected to a power source that matches the voltage specified on the unit.
- **Ventilation:** Do not block ventilation openings. Ensure adequate airflow around the unit to prevent overheating.
- **Water and Moisture:** Do not expose the speaker to rain or moisture. Do not place objects filled with liquids, such as vases, on the speaker. This product is not waterproof.
- **Heat Sources:** Keep the speaker away from heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- **Cleaning:** Clean only with a dry cloth. Do not use liquid cleaners or aerosols.
- **Servicing:** Do not attempt to service this product yourself. Refer all servicing to qualified service personnel.
- **Placement:** Ensure the speaker is placed on a stable surface or mounted securely on a tripod using the designated tophat.
- **Microphone Input:** Only connect a microphone to the designated microphone input channel (CH1). Connecting other devices to this input may cause damage.

2. PRODUCT OVERVIEW

The Power Dynamics PD410A is a 10-inch bi-amplified active speaker designed for various sound reinforcement applications. It features an 800W peak power output, a 1-inch titanium compression driver, and a 10-inch woofer. The robust polypropylene enclosure ensures durability and portability.

Key Features:

- 800W Peak Power, 200W RMS Bi-amplified design (175W Class D for woofer, 25W Class D for tweeter).

- 10-inch woofer and 1-inch Titanium compression driver.
- Integrated 2-way active filter.
- Bluetooth receiver for wireless audio streaming.
- Multiple input options: Line and Microphone.
- 4 pre-programmed DSP equalization settings (PA, Monitor, Sub, Speech).
- Beveled design for stage monitor use.
- 35mm tophat for tripod mounting.
- Robust polypropylene enclosure with side handles for easy transport.
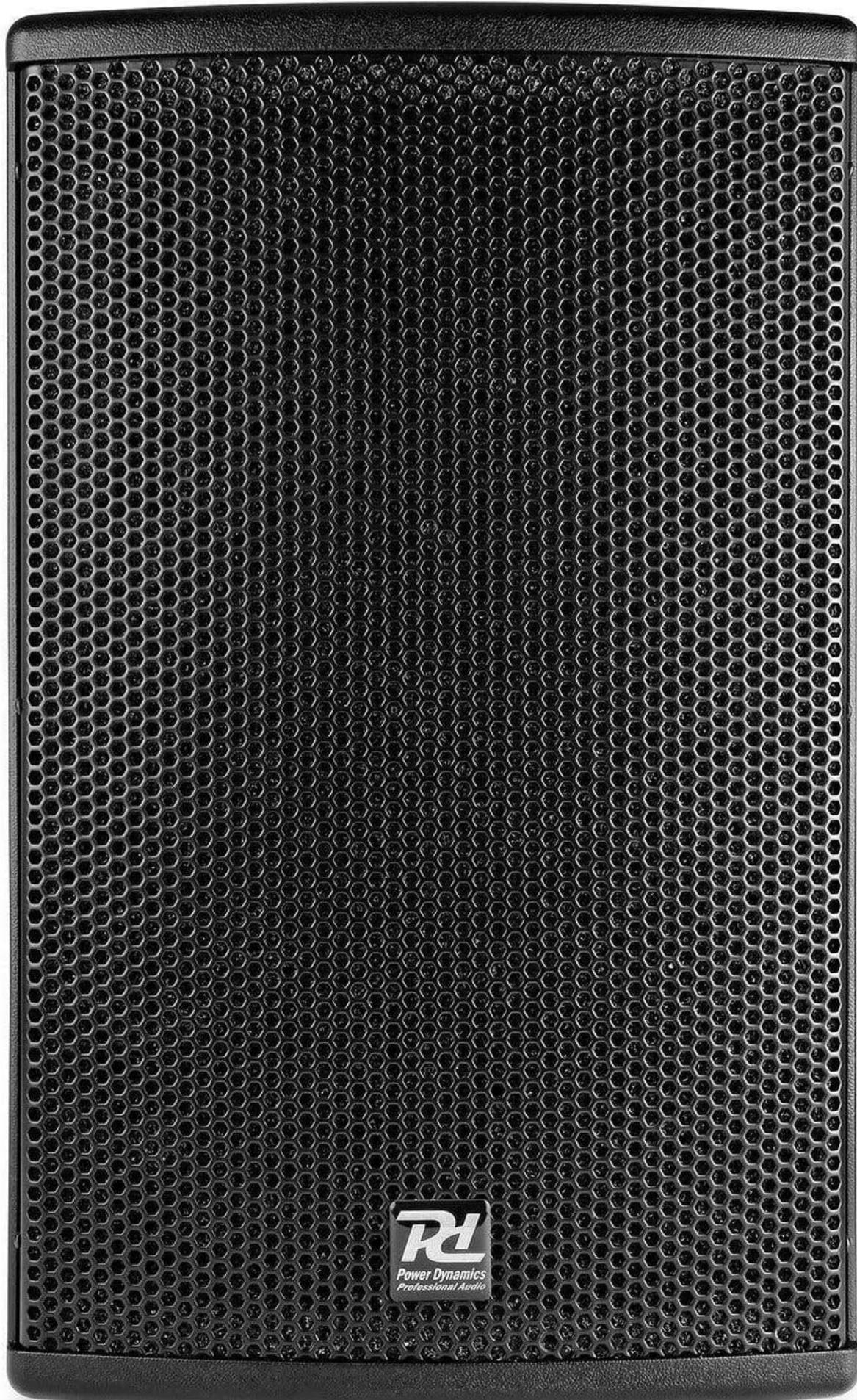
Front View of the PD410A Speaker

Figure 2.1: Front view of the Power Dynamics PD410A active speaker.

Control Panel Overview

Figure 2.2: Detailed view of the PD410A control panel with various inputs and controls.

3. SETUP

3.1 Unpacking

Carefully remove the speaker from its packaging. Inspect the unit for any signs of damage during transit. Retain the packaging for future transport or storage.

3.2 Placement

The PD410A speaker can be positioned in several ways:

- **Floor Placement:** Place the speaker directly on a stable, flat surface.
- **Stage Monitor:** Utilize the beveled side of the enclosure to position the speaker as a stage monitor, directing sound towards performers.
- **Tripod Mounting:** The speaker is equipped with a 35mm tophat insert on the bottom for mounting on a standard speaker tripod. Ensure the tripod is stable and rated for the speaker's weight (11.6 kg).

Figure 3.1: PD410A speaker positioned as a stage monitor.

3.3 Connecting Power

Connect the supplied power cable to the 'POWER IN' socket on the rear panel of the speaker and then to a suitable mains outlet. Ensure the power switch is in the 'OFF' position before connecting.

Figure 3.2: Rear panel showing power input and switch.

3.4 Dimensions

The physical dimensions of the speaker are important for planning placement and transport.

Figure 3.3: Dimensions of the PD410A speaker.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

1. Ensure all volume controls are set to minimum before powering on.

2. Flip the 'POWER' switch on the rear panel to the 'ON' position. The 'POWER' LED on the control panel will illuminate.

3. To power off, set all volume controls to minimum, then flip the 'POWER' switch to 'OFF'.

4.2 Input Connections and Volume Control

The PD410A offers multiple input options:

- **Input CH1 (Line/Mic):** This input accepts either an XLR or 1/4" TRS/TS jack. Use the 'LINE/MIC' switch to select the appropriate input sensitivity. Adjust the 'VOLUME CH1' knob to control the level.
- **Input CH2 (Line):** This input accepts an XLR, 1/4" TRS/TS jack, or RCA connectors. Adjust the 'VOLUME CH2' knob to control the level.
- **Output Mix:** An XLR output is provided to send the mixed audio signal to another active speaker or audio device.

4.3 Bluetooth Pairing

To connect a Bluetooth device:

1. Ensure the speaker is powered on.
2. Press and hold the 'BT' button on the control panel for 1 second. The 'BT STATUS' indicator will flash, indicating pairing mode.
3. On your smartphone or tablet, search for Bluetooth devices and select 'PD410A'.
4. Once connected, the 'BT STATUS' indicator will remain solid.
5. Adjust the 'BT VOLUME' knob to control the Bluetooth audio level.
6. To disconnect, press and hold the 'BT' button for 1 second again.

4.4 DSP Mode Selection

The PD410A features 4 pre-programmed DSP (Digital Signal Processor) modes to optimize sound for different applications:

- **PA:** General public address setting.
- **MONITOR:** Optimized for stage monitor use.
- **SUB:** Enhances low frequencies, suitable when used with a subwoofer.
- **SPEECH:** Optimized for vocal clarity.

Press the 'DSP MODE' button repeatedly to cycle through the modes. The corresponding LED will illuminate.

Figure 4.1: Control panel detailing DSP mode and Bluetooth controls.

5. MAINTENANCE

5.1 Cleaning

To maintain the appearance and performance of your speaker:

- Always disconnect the power cable before cleaning.
- Use a soft, dry, lint-free cloth to wipe down the exterior surfaces.
- Do not use abrasive cleaners, waxes, or solvents as they may damage the finish.
- Use a soft brush or vacuum cleaner with a brush attachment to gently clean the speaker grille.

5.2 Storage

If storing the speaker for an extended period:

- Store in a cool, dry place, away from direct sunlight and extreme temperatures.
- Protect the speaker from dust and dirt, ideally by placing it back in its original packaging or using a protective cover.

6. TROUBLESHOOTING

If you encounter issues with your PD410A speaker, refer to the following common problems and solutions:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
No power	Power cable not connected; Power switch off; No power from outlet.	Check power cable connection; Ensure power switch is ON; Test outlet with another device.
No sound output	Volume controls set too low; Input cable faulty or disconnected; Incorrect input selected; DSP mode unsuitable.	Increase relevant volume knobs (CH1, CH2, BT); Check input cables and connections; Ensure correct input source is active; Try different DSP modes.
Bluetooth not connecting	Speaker not in pairing mode; Device too far; Interference; Already connected to another device.	Press and hold BT button to enter pairing mode; Move device closer to speaker; Reduce interference sources; Disconnect from other devices.
Distorted sound	Input level too high (clipping); Speaker volume too high; Faulty cable.	Reduce input source volume; Reduce speaker volume; Check and replace cables if necessary. Observe the 'LIMIT' LED on the control panel. If it illuminates frequently, reduce volume.

7. SPECIFICATIONS

Technical specifications for the Power Dynamics PD410A active speaker:

Feature	Specification
Model Number	PD410A
Speaker Type	Active, Bi-amplified
Woofer Diameter	10 Inches
Tweeter	1-inch Titanium Compression Driver
Max Power Output	800 Watts
RMS Power	200 Watts
Woofer Amplifier	175W Class D
Tweeter Amplifier	25W Class D
Frequency Range	50 Hz - 20 kHz
Crossover Frequency	2.5 kHz
DSP Module	24-bit / 48 kHz
SPL @ 1W/1m	92dB
Max SPL	121dB
THD	<0.05%
Impedance	4 Ohms

Feature	Specification
Connectivity Technology	Bluetooth
Compatible Devices	Smartphone, Music Player, Tablet
Control Method	Tactile (Knobs, Buttons)
Audio Output Mode	Stereo
Enclosure Material	Polypropylene
Mounting Type	Floor Mount, Tripod Mount
Product Dimensions (L x W x H)	33 x 31 x 51 cm
Item Weight	11.6 Kilograms
Color	Black
Manufacturer	Tronios B.V.

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your retailer. Keep your proof of purchase for any warranty claims.

For further assistance, you may also visit the official Power Dynamics website or contact their customer service department.