



CLIO Series

Professional Active Speaker

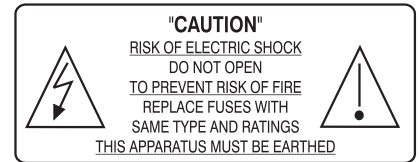


- Thank you for purchasing the SMProfessional Clio series Active Speakers.
- To ensure optimum performance and safety, please follow this instruction manual carefully.
- Please retain this manual for future reference.
- For any complaint, feedback or testimonials please contact our distributor / dealer.

1.....	Safety Instructions
2.....	Features
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1. Safety Instructions

- CAUTION:** TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE THE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE; REFER SERVICING TO QUALIFIED PERSONNEL.
- WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK. DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.



This symbol wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Read the manual.

DETAILED SAFETY INSTRUCTIONS:

All the safety and operation instructions should be read before the appliance is operated.

Retain instructions

The safety and operating instructions should be retained for future reference.

Heed Warnings

All warnings on the appliance and in the operating instructions should be adhered to

Follow instructions

All operation and user instructions should be followed

Water and Moisture

The appliance should not be used near water (e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement etc.)

Heat

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliance (including amplifiers) that produce heat.

Ventilation

The appliance should be situated so that its location or position does not interfere with its proper ventilation. The appliance should not be situated to impede the flow of air through the ventilation opening.

Power Source

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance. In order not to jeopardize the safety of the speaker, it must only be connected to the mains using the power cable provided. If the power cable plug does not fit your electrical outlet, contact a qualified electrician to replace the outlet with a suitable one.

Grounding or Polarization

Precautions should be taken so that the grounding or polarization means of an appliance is not defeated. To prevent the risk of electrical shock, the metallic parts of the speaker must be earthed. If the current outlet used for supplying the speaker, is equipped with an earth terminal, the speaker is earthed by means of the power cable.

Power Cord Protection

Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles & the point where they exit from the appliance.

Cleaning

Do not use solvents, alcohol, benzene or volatile substances for cleaning the exterior parts.

Non-use Periods

The power cord of the appliance should be unplugged from the outlet during lightning storms or when left unused for a long period of time.

Carts, stands and accessories

The component should be used only with a cart or stand that is recommended by the manufacturer. The Component should be moved with care.

Object and Liquid Entry

Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Damage Requiring Service

- The appliance should be serviced by qualified service personnel when:
- The power supply cord or the plug has been damaged; or
Objects have fallen, or liquid had been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance had been dropped, or the enclosure damaged.

Servicing:

The user should not attempt to service the appliance beyond that is described in the Operating Instructions. All other servicing should be referred to qualified service personnel.

IMPORTANT NOTES

This manual is to be considered an integral part of the product, & must always accompany the speaker when it changes ownership as a reference for correct installation and operation as well as for the safety regulations. Studiomaster will not assume any responsibility for incorrect installation of the speaker.

OPERATING PRECAUTIONS

- Do not force the amplifier incorporated in the speaker to work in overload for extended periods of time.
- Never force the control elements (switches, controls, etc.).



CAUTION

- Make sure that the speaker is positioned in a stable & secure way in order to avoid any dangerous conditions for persons or objects.

CONNECTION



CAUTION

- For connecting the speaker, use only qualified & experienced personnel having sufficient technical knowledge or specific instructions for making the connections correctly & thus preventing electrical dangers.
- To prevent the risk of electrical shock, the speaker must only be supplied from the mains after all connections have been completed.
- Before powering up the speaker, it is advisable to re-check all the connections, making sure in particular that there are no short circuits.
- The entire sound system must be designed & installed in compliance with the current standards & regulations regarding electrical systems.



CAUTION

- To prevent inductive phenomena from giving rise to hum or disturbance which would jeopardize efficient speaker operation, the cables that transmit microphone signals or line level signals (e.g. 0 dB/V) must be screened and should not be run in the vicinity of:
 - 1) Equipment that produces strong magnetic fields (e.g. large power supply transformers)
 - 2) Electrical energy conductors
 - 3) Lines that supply speakers.

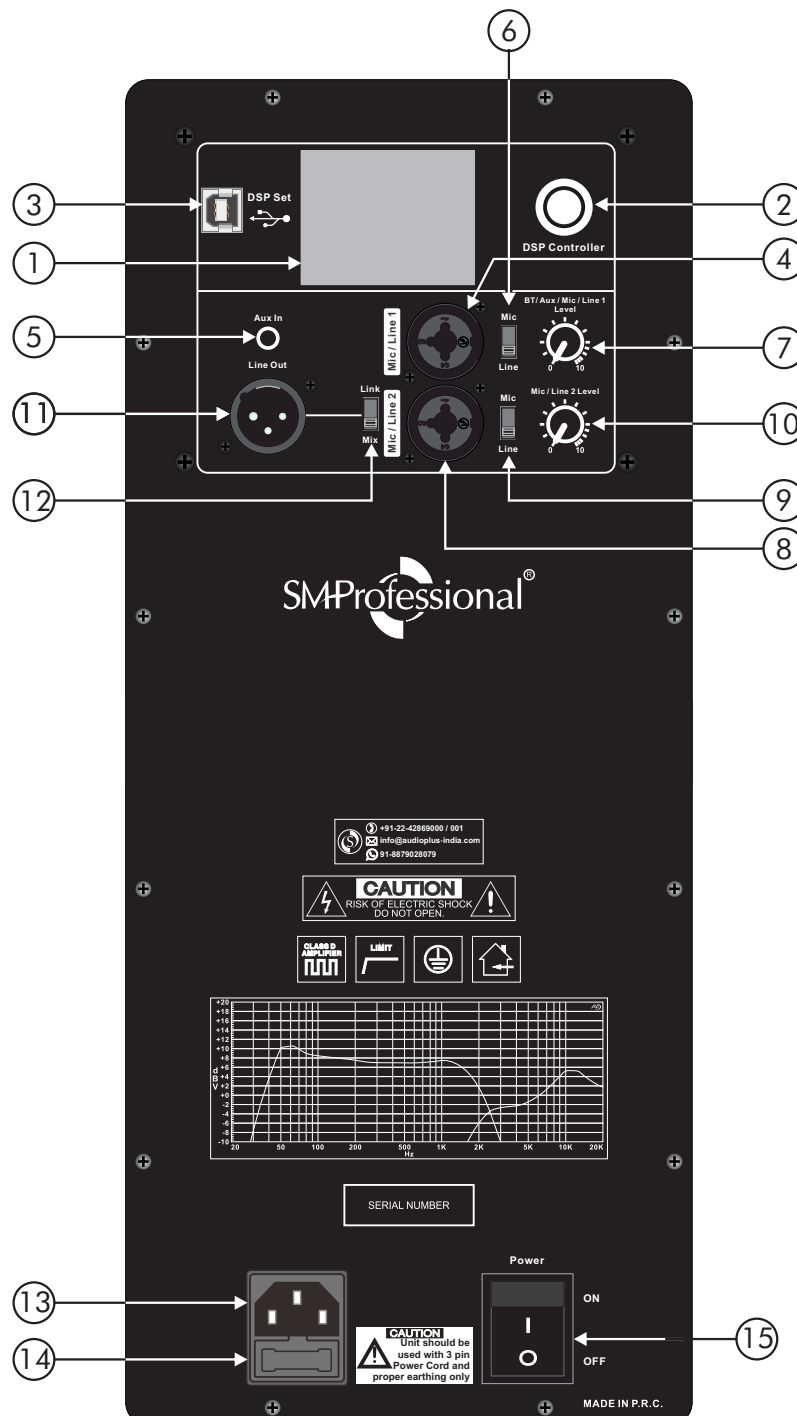
PROTECTION SYSTEM

The speaker is equipped of a exclusive system, which protects the loudspeakers against overheating, ensuring the maximum reliability in all professional applications. In addition, a sophisticated system incorporated in the amplifier handles the limiter circuits and the protection against overheating and short circuits.

2. Features

- High-performance 2-way bi-amplified active loudspeaker design.
- Powered by an efficient Class-D amplifier for reliable performance.
- Integrated LF and HF drivers deliver high SPL with wide dispersion.
- Five onboard DSP presets: Flat, Speech, Music, Live, and Club.
- Adjustable Low-Cut filter with four frequency options for subwoofer integration.
- Built-in delay feature for optimized performance in multi-speaker setups.
- Built-in soft clip limiter for enhanced speaker protection.
- Bluetooth connectivity with True Wireless Stereo (TWS) pairing capability.
- Equipped with one 3.5 mm input and two combo (XLR/TRS) inputs with Mic/Line selection.
- XLR line output with selectable Link Out and Mix Out modes.
- Durable molded plastic enclosure with wood grain finish.
- Integrated pole-mount socket for stand mounting.
- Supports three mounting modes: PA, Floor Monitor, and Wall Mount.
- Ergonomically designed handles for easy transport.

3. Rear Panel Clio 104 & Clio 126 Commands And Functions



- 1) **Display:** A 2.44" LCD display used to display the DSP information such as modes, EQs, etc.
- 2) **DSP Preset Controller:** Use this knob to access the DSP features on the screen.
 - Press the knob for selecting a feature.
 - Rotate the knob clockwise to go to next option.
 - Rotate the knob counterclockwise to go to previous option.
- 3) **DSP interface port:** Use this port to connect the speaker to a laptop or PC to access the preset-editing program.
- 4) **Mic/Line A:** This combo XLR jack input accepts both line and mic signals from various sources as per Mic/Line A switch selection.
- 5) **Aux In:** This is a stereo EP jack input to connect devices such as CD players, media players.
- 6) **MIC/Line A Input Selection:** Use this to switch the input sensitivity between mic and line. The mic mode is ideal to connect a dynamic microphone.
Note: Do not use a microphone in the Line mode.
- 7) **Mic/Line A/Aux In/ Bluetooth Level control:** Use this rotary knob to adjust the volume level of MIC A/Line A/Aux In/ Bluetooth.
- 8) **Mic / Line B:** This combo XLR-Jack input accepts both mic and line-level signals from various sources as per Mic/Line B switch selection.
- 9) **MIC/Line B Input Selection:** Use this to switch the input sensitivity between mic and line. The mic mode is ideal to connect a dynamic microphone.
Note: Do not use a microphone in the Line mode.
- 10) **Mic / Line B Level Control:** Use this rotary knob to control the volume level of the Mic / Line B input.
- 11) **Line Out:** Use this balanced XLR output to connect or link an additional speaker.
- 12) **Link/Mix Out Selection:** Use this switch to toggle between Link Out or Mix Out.
Link Out: Provides a direct, unprocessed pass-through of the input signal for daisy-chaining additional speakers without any DSP or mixing applied.
Mix Out: Provides a summed and fully processed output of all input signals, including internal DSP and level control, for routing to additional speakers or external systems.
- 13) **Power Inlet Socket:** Use the supplied cord to power the speaker. Kindly check and match the voltage requirement indicated on the rating plate of the unit. Connect the power cord only to a mains socket outlet with a protective earthing connection.
- 14) **Fuse Carrier:** Houses a fuse to protect the unit from unwanted power surges.
- 15) **Power Switch:** Use this switch to turn the speaker ON or OFF.

4. Bluetooth Connectivity Guidelines

1. Disconnection Conditions

The speaker will automatically disconnect if the connected device moves out of the effective Bluetooth range. Disconnection will also occur if Bluetooth is turned off on the connected device.

2. Line-of-Sight Requirement

Ensure that there are no physical obstructions between the Bluetooth transmitter (e.g., a mobile phone, PC, or laptop) and the Clio 104/Clio 126 receiver.

3. Optimal Performance Recommendation

Maintain a clear, unobstructed path between the transmitting device and the speaker to ensure stable connectivity and optimal performance.

Accessing the Bluetooth Function

- 1. Switch ON the device; the display will show **“SMProfessional”**.
- 2. Press the **DSP Preset** button to enter the Main Menu.
- 3. Navigate to **Setup** from the Main Menu.
- 4. Select **Bluetooth** to access Bluetooth settings.

Pairing a Bluetooth Device

- 1. Set **Bluetooth from OFF to ON**: using the DSP Controller button.
- 2. When enabled, the letter **“C”** will blink, indicates pairing mode.
- 3. Select **“Clio 104”** & **“Clio 126”** from the Bluetooth device list on your mobile device, laptop, or tablet.
- 4. Once paired, **“C”** will remain steady, confirming successful connection.

True Wireless Stereo (TWS) Functionality

1. Overview

True Wireless Stereo (TWS) technology enables two Clio series speaker units of the same model to be paired via Bluetooth. This pairing creates dedicated left and right channel, delivering true Stereo sound.

2. Key Benefits

- a) Provides higher overall sound output than a single unit.
- b) Enhances stereo imaging for a wider and more immersive audio experience.
- c) Produces a more natural and acoustically balanced sound.

3. System Requirements

- a) Two Clio series speaker units with TWS compatibility.
- b) Bluetooth-enabled source device (e.g., smartphone, laptop, TV).

4. Compatibility Note

- a) TWS functionality is supported only between two units of the same model.
- b) Refer to the compatibility chart for supported models and pairing combinations.

Configuration	TWS Compatibility
Clio 104 + Clio 104	✓ Compatible
Clio 126 + Clio 126	✓ Compatible
Clio 104 + Clio 126 + Clio 154 + Clio 156 + Clio 158	✗ Not Compatible

How to setup a TWS connection

- Complete the standard Bluetooth device pairing process as per the initial setup instructions.
 - Select the TWS Pairing option on the first speaker.
 - The letter "T" will begin blinking, indicating that the speaker has entered TWS pairing mode.
 - Switch on the second speaker, navigate to the Setup option from the Main Menu.
 - Select Bluetooth under the setup menu.
 - Select **Bluetooth: OFF** and press the DSP controller knob once to turn Bluetooth ON.
 - Select the TWS Pairing option on the second speaker.
 - Press the DSP controller knob to initiate pairing.
 - Once both speakers are successfully connected, the letter "T" will illuminate continuously, confirming an active TWS connection.
- The speakers are now configured as master and slave units, enabling stereo sound output. For optimal audio performance, ensure both speaker units are set to the same volume level. Position the speakers at a suitable distance from each other to achieve enhanced stereo separation. Proper placement improves spatial sound reproduction and provides wider sound dispersion.

5. DSP Control Section

MAIN MENU: The Main Menu consists of the following features, which are explained below:

- | | |
|------------|-------------|
| 1) Setup | 4) EQ |
| 2) Mode | 5) Position |
| 3) Low Cut | 6) Exit |

1 **Setup:** The Setup menu provides various configuration options for controlling and optimizing speaker functionality.

1.1 **LED:** Adjusts the brightness of the LCD display.

1.2 **Bluetooth**

- a) Bluetooth ON/OFF: Enables or disables the speaker's Bluetooth functionality.
- b) TWS Pairing: Activates True Wireless Stereo (TWS) mode for pairing with another compatible speaker.

1.3 **Delay:** Allows adjustment of audio delay when using multiple speaker units placed at different locations, which helps synchronize sound output across all units.

1.4 **Reset:** Restores the speaker to factory default settings.

Note: Changes made through the DSP software controller application.

1.5 **Update:** Used to install the latest firmware updates for the speaker.

1.6 **Exit:** Returns to the main menu from the Setup menu.

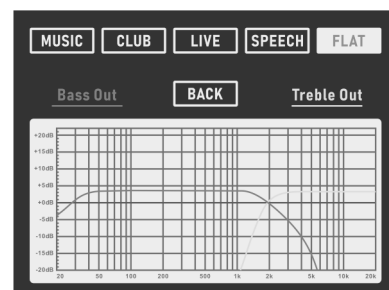
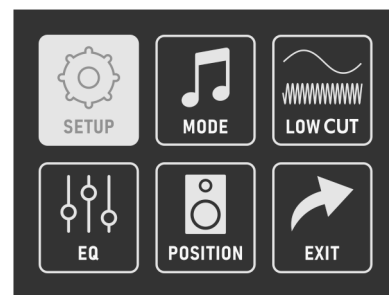
2. Mode

Overview: The Mode menu provides access to built-in DSP (Digital Signal Processing) presets.

Available Presets:

1. **MUSIC:** Optimized for general music playback with balanced output.
2. **CLUB:** Enhances bass and overall loudness for a club-style experience.
3. **LIVE:** Suitable for live performances, offering clear vocals and instrument reproduction.
4. **SPEECH:** Optimized for speech clarity, ideal for presentations and announcements.
5. **FLAT:** Provides a neutral sound profile without additional enhancements.

Usage: Users can select any of the five presets based on the application and their listening preferences.



3. Low Cut

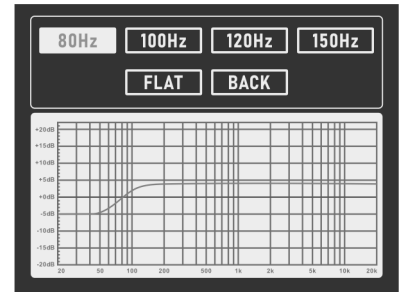
Overview: The Low Cut feature is intended for use when the speaker is paired with a Subwoofer.

Available Options:

1. 80 Hz
2. 100 Hz
3. 120 Hz
4. 150 Hz
5. Flat

Application Guidelines

- When using the speaker as a top unit with a subwoofer, select the appropriate frequency to filter low-frequency signals.
- When using the speaker as a standalone active PA speaker, set the Low Cut option to Flat for full-range output.



4. Equalizer (EQ) Settings

1. **Overview:** The speaker is equipped with a **3-band Equalizer (EQ)** for precise sound adjustment.

2. **EQ Bands**

1. **BASS:** Controls low-frequency output.
2. **MID:** Adjusts mid-range frequencies, primarily affecting vocals and instruments.
3. **TREBLE:** Controls high-frequency output for clarity and detail.

3. **Adjustment Range:** Each band can be adjusted within a range of ± 10 dB for boost or cut.

4. **Usage Guidelines**

1. Increase (**boost**) a band to enhance specific frequency ranges.
2. Decrease (**cut**) a band to reduce unwanted frequencies and balance the sound output.
3. Fine-tuning the EQ allows customization based on the environment and audio preference.



5. Position Settings

1. **Overview:** The Position setting optimizes the speaker's audio performance based on its physical placement and usage scenario.

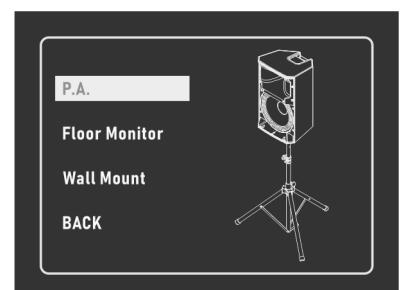
2. **Available Options**

1. **PA (Public Address):** Suitable for standard up right placement and general sound reinforcement.
2. **Wall Mount:** Optimizes sound output when the speaker is mounted on a wall.
3. **Floor Monitor:** Designed for use as a stage monitor placed on the floor and angled towards the performer.

3. **Usage Guidelines**

1. Select the appropriate position setting based on how and where the speaker is installed.
2. Correct selection ensures balanced sound output and improved audio clarity for the intended application.

6. **Exit:** Select Exit to return to the main screen from the current menu.



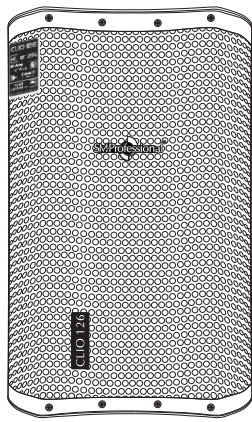
6. DSP Commands & Functions

How to download the Clio Series DSP Controller software.

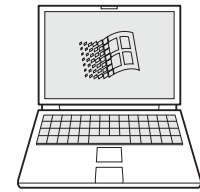
1. Go to <https://www.studiomasterprofessional.com/>
2. Select **Loudspeakers**, under the Clio Series select **Clio 104/Clio 126**.
3. Now navigate to **Downloads** from the Clio 104/Clio 126 page.
4. Select **Software**, download and install the software to your device.

Connecting the Speaker to a PC/Laptop

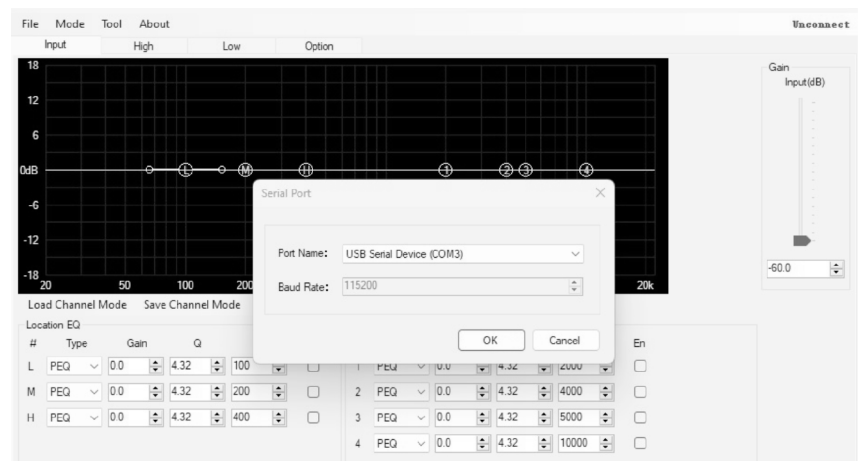
1. Connect the speaker to the PC or Laptop using a **USB Type-B to USB Type-A cable**.



USB Type B (Male) to USB Type A (Male) Cable.



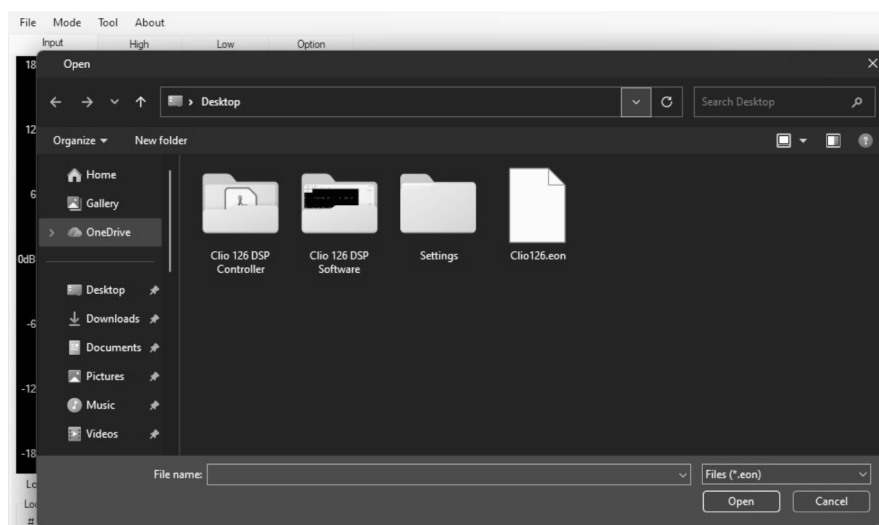
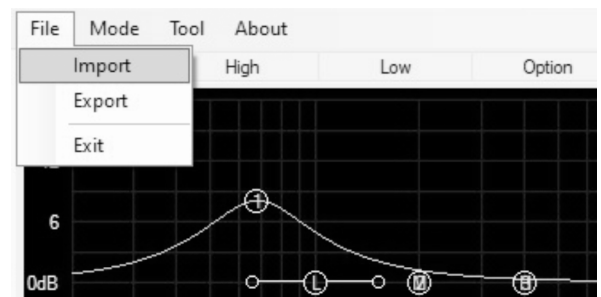
2. Launch the **Clio 104 DSP/**
Clio 126 DSP Controller Application.
3. In the top-right corner, click
"Unconnect."
4. Select the correct **Serial COM Port**
from the list.
5. Click **OK** to establish communication
between the speaker and the
PC/Laptop.



Importing a DSP Preset to the Speaker

Use this function to load an existing DSP preset file into the speaker.

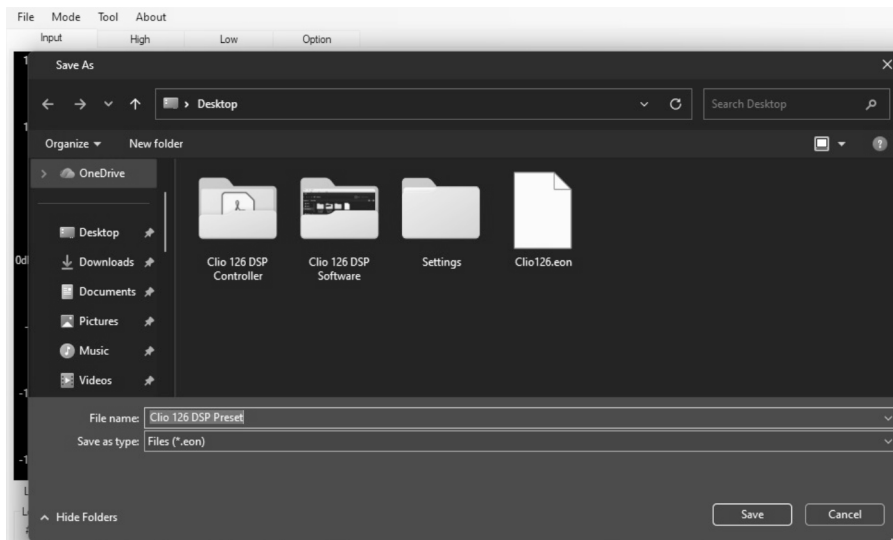
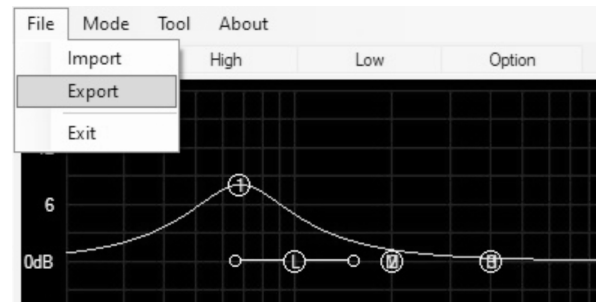
1. From the top menu bar, select **File**.
2. Click **Import**.
3. Browse and select the desired DSP preset file.
4. Click **Open** to load the preset into the software.
5. Go to the **Mode** menu and select **Download** to apply the
preset to the speaker.



Exporting a DSP Preset File

Use this function to save the current DSP settings as a preset file.

1. From the top menu bar, select **File**.
2. Click **Export**.
3. Choose the desired save location.
4. Enter a file name for the preset.
5. Click **Save** to export the DSP preset file.



DSP Processing Features

High-Pass Filter (Hi-Pass)

Allows frequencies **higher** than the selected frequency to pass through.

Low-Pass Filter (Lo-Pass)

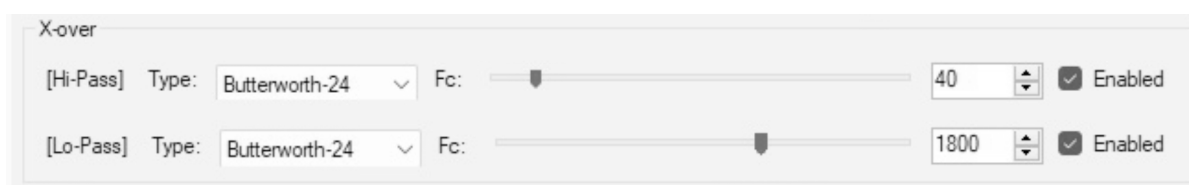
Allows frequencies **lower** than the selected frequency to pass through while blocking higher frequencies.

Filter Type

Selects the crossover filter characteristic, such as:

Butterworth 24 dB

Linkwitz-Riley 24 dB

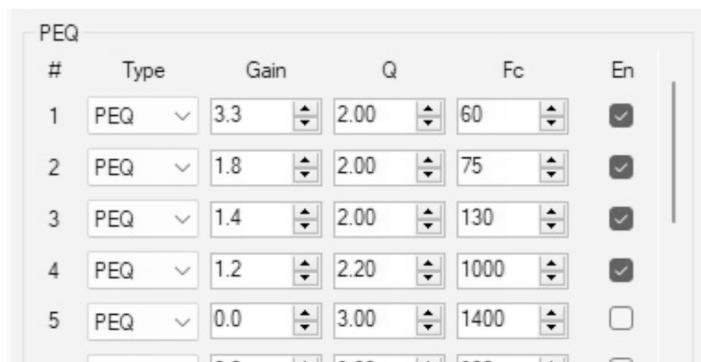


Parametric Equalizer (PEQ)

The PEQ section allows precise adjustment of audio frequencies.

Parameters

- **Gain** – Boosts or cuts the selected frequency level.
- **Q (Quality Factor)** – Controls filter bandwidth or sharpness.
- **Fc (Frequency)** – Sets the center frequency of the filter.
- **En (Enable)** – Activates or deactivates the EQ band.



Compressor Controls

The compressor controls dynamic range by reducing signal peaks.

Parameters

- **Threshold**: Level at which compression begins.
- **Attack**: Speed at which compression starts.
- **Release**: Speed at which compression stops.
- **Ratio**: Amount of compression applied.
- **Hold**: Delay before release begins.
- **Enable**: Turns the compressor ON or OFF.



Limiter Controls

The limiter prevents the output signal from exceeding a defined level.

Parameters

- **Threshold**: Maximum output level allowed.
- **Attack**: Speed at which limiting starts.
- **Decay**: Recovery speed after limiting.
- **Delay**: Time alignment adjustment for the signal.
- **Polarity**: Inverts audio signal phase (+/-).



HIGH (HF) Tab

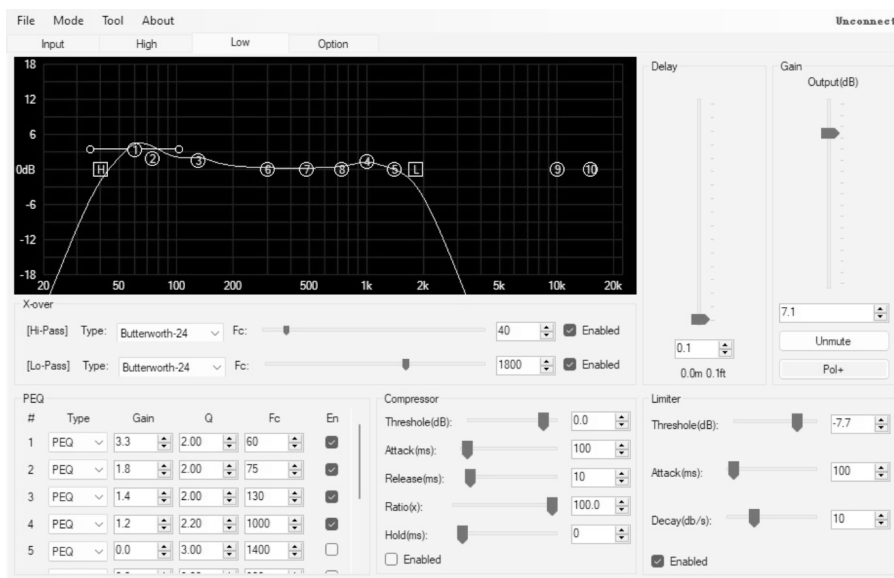
Use this tab to adjust **High Frequency (HF)** parameters.

Refer to the **DSP Processing Features** section for parameter details.



LOW (LF) Tab

Use this tab to adjust **Low Frequency (LF)** parameters. Refer to the **DSP Processing Features** section for parameter details.



OPTION Tab: Noise Gate

The Noise Gate reduces unwanted background noise when no valid audio signal is present.

Parameters

- Threshold: Minimum signal level required to open the gate.
- Attack: Speed at which the gate opens after the signal exceeds the threshold.
- Release: Speed at which the gate closes after the signal drops below the threshold.
- Enable: Activates or deactivates the Noise Gate.



MODE Tab

Save To

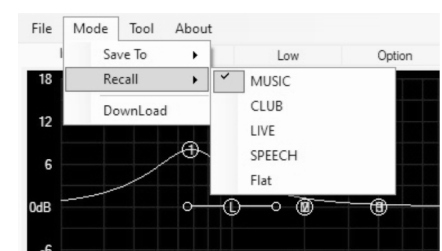
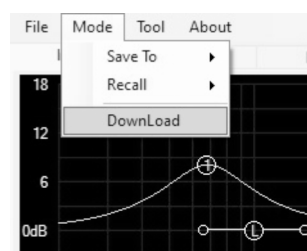
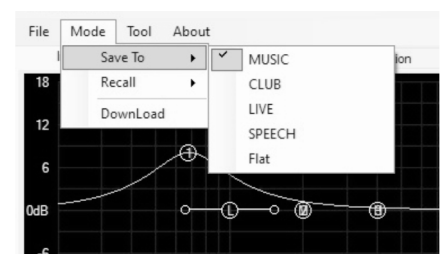
Saves the current DSP settings into one of the available preset memory slots.

Recall

Loads a previously saved preset into the current working settings.

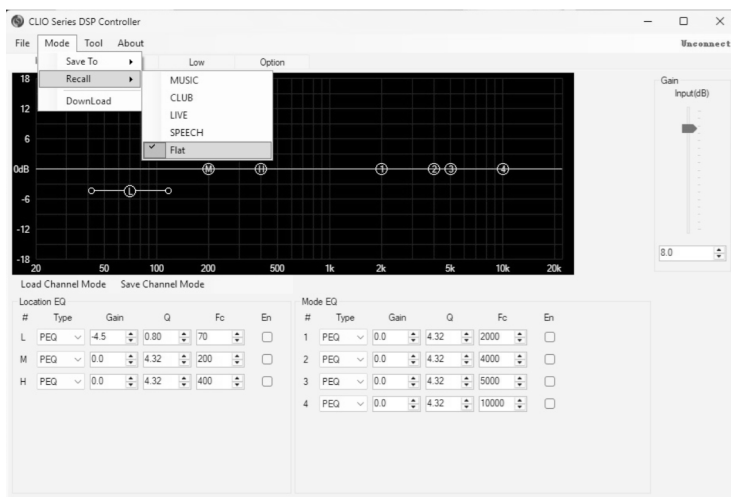
Download

Applies and saves all current DSP changes to the speaker.

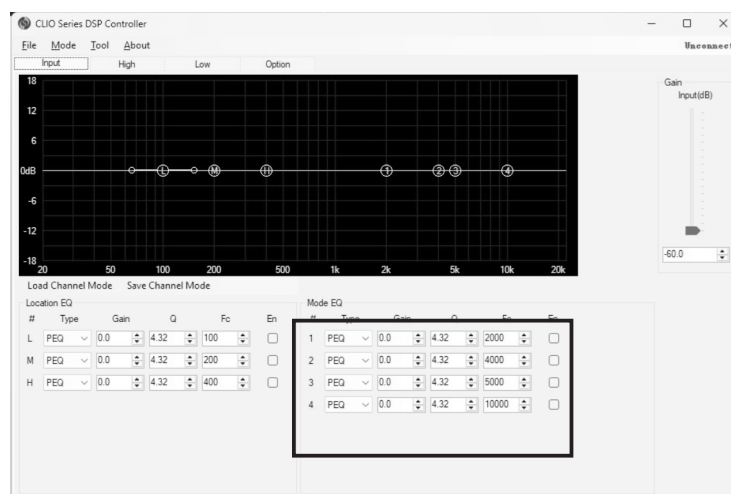


How to Edit a Preset EQ

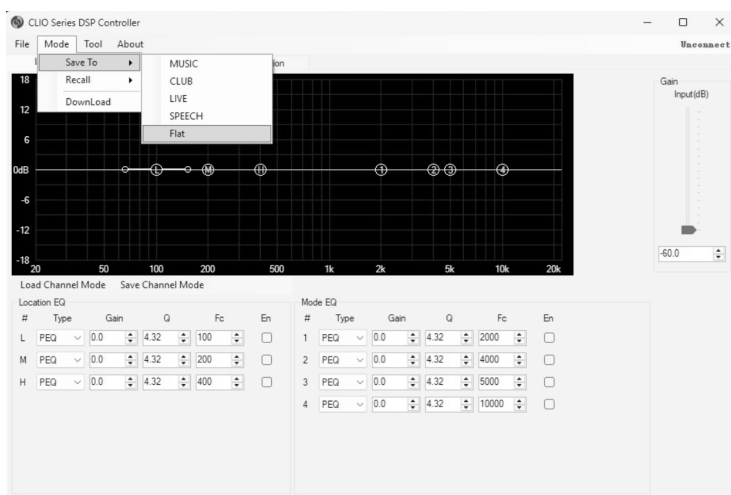
1. Go to **Mode**.
2. Select Recall, then choose the preset you want to edit (for example: **FLAT**, **MUSIC**, **LIVE**, **CLUB**, or **SPEECH**).
3. Navigate to the **Input** tab.



4. Under the **Mode EQ** section, adjust the **PEQ (Parametric EQ)** settings as required.

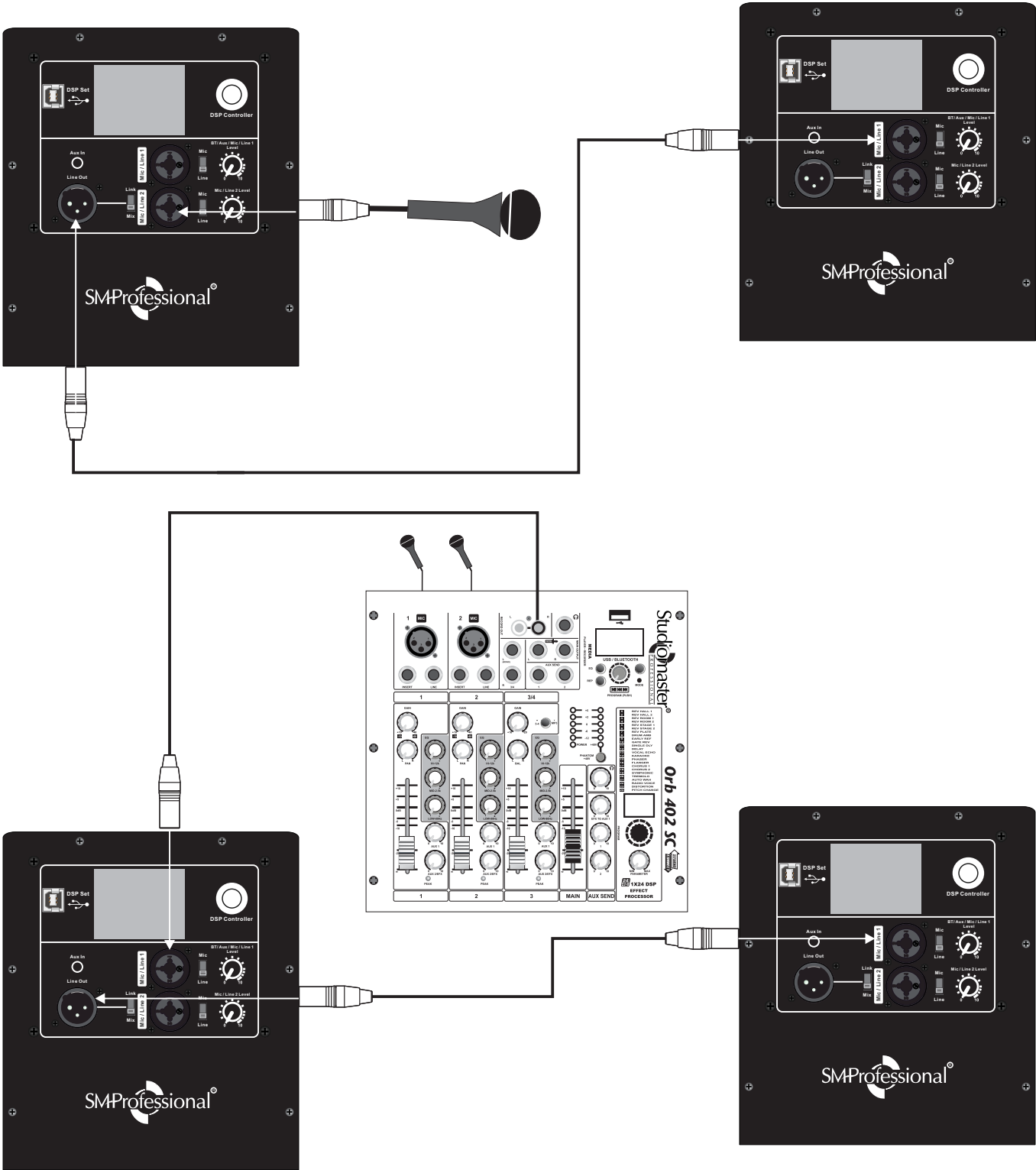


5. After making the desired changes, return to the **Mode** menu.
6. Select **Save To**, then choose the preset location where you want to save the edited EQ.

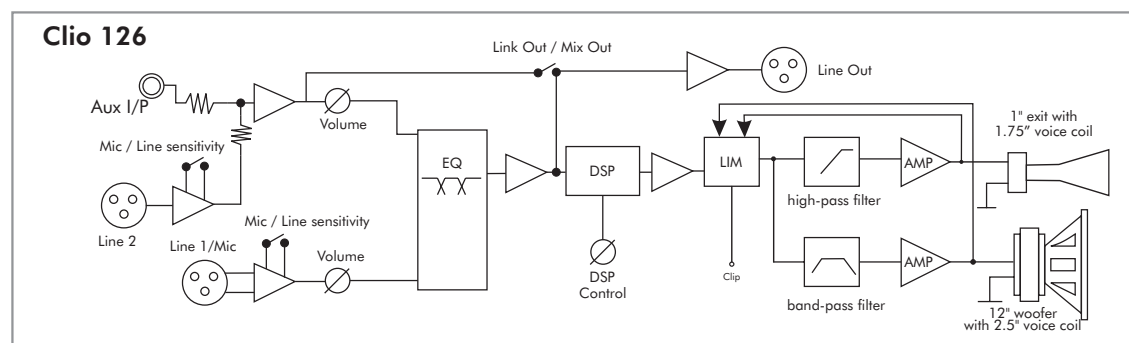


7. Once the preset has been saved, go back to Mode and select **Recall**.
8. Select the saved preset again to load and activate the updated EQ settings.

7. Set up



8. Block Diagram



9. Technical Specifications

Model	Clio 104	Clio 126
System	Bi-Amp	
Amplifier Type	Class D DSP	
Protection	Short Circuit, Open Circuit and Thermal	
RMS Power	300W @ <0.5% Distortion	420W @ <0.5% Distortion
Inputs	1 X 3.5mm EP JACK, 2 x Combi XLR-Jack (Switchable MIC/Line)	
Input Sensitivity Mic	-31dBu	
Line	1.7dBu	
Aux	-4dBu	
Output Connector (Line output)	Balanced XLR	
LF Driver Size	1 x 10" woofer with 2" voice coil	1 x 12" woofer with 2.5" voice coil
HF Driver Size	1" exit with 1.35" voice coil	1" exit with 1.75" voice coil
Frequency Response	55Hz-20kHz ± 3 dB	45Hz-20kHz ± 3 dB
Max SPL	125dB	127dB
Total coverage (Horizontal / Vertical)	100° / 60°	
Limiter	Independent HF and LF	
Main Voltage	230V ~ 50Hz	
Fuse Rating	T 3.15/250V	T 8A/250V
Dimensions (W x D x H) mm	330 x 310 x 560	370 x 350 x 615
Net Weight (Kg)	13	17.5

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