EVOLVE Portable Column Loudspeaker
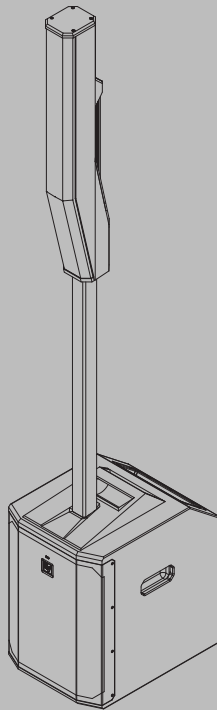
en Installation manual

Table of contents

1   Safety

1.1   Important safety instructions

CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN **AVIS** RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR **WARNING**: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT OVEREXPOSE THIS APPLIANCE TO RAIN OR MOISTURE **AVIS:** RISQUE DE CHOC ELECTRIQUE, NE PAS OUVRIR. **WARNING**: THE MAINS PLUG OR AC INLET IS USED AS A DISCONNECT DEVICE. THE DISCONNECT DEVICE SHALL REMAIN READILY OPERABLE. **WARNING**: CONNECT ONLY TO MAINS SOCKET WITH PROTECTIVE EARTHING CONNECTION. **WARNING**: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) AS THERE ARE NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.	The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
	The asterisk within an equilateral triangle is intended to inform the user to necessary installation or removal instructions regarding equipment or hardware use relating to the system.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. No naked flame sources, such as lighted candles, should be placed on the apparatus.
16. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus should not be exposed to dripping or splashing. Objects filled with liquids, such as vases should not be placed on apparatus.
17. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
18. Minimum 60 cm (2 ft) distances around the apparatus for sufficient ventilation.
19. The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains, etc.
20. To completely disconnect AC power from this apparatus, the power supply cord must be unplugged.

Warning!
This product is not designed to be suspended. Do NOT use handles or any other method to suspend the loudspeaker. Handles on Electro-Voice loudspeakers are intended to only be used for temporary transport by people.
Items, such as fiber rope, wire rope, cables, or other types of materials cannot be used to suspend loudspeaker from the handles.

Caution!
Do not attempt to move this loudspeaker system when it is fully assembled.
You may damage the system or cause personal injury.

1.2 FCC information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Notice!

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

ce matériel est conforme aux limites de dose d'exposition aux rayonnements, FCC / CNR-102 énoncée dans un autre environnement.cette eqipment devrait être installé et exploité avec distance minimale de 20 entre le radiateur et votre corps.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

1.3   Precautions

⚠	If an Electro-Voice loudspeaker is used outdoors on a sunny day, place the loudspeaker in a shaded or covered area. The loudspeaker amplifiers have protection circuits that temporarily shut the loudspeaker off when extremely high temperatures are reached. This can happen on hot days when the loudspeaker is in direct sunlight.
⚠	Do not use Electro-Voice loudspeakers in an environment where temperatures are below 0°C (32°F) or exceed +35°C (95°F).
⚠	Never expose an Electro-Voice loudspeaker to rain, water, or high moisture.
⚠	Electro-Voice loudspeakers are easily capable of generating sound pressure levels sufficient to cause permanent hearing damage to anyone within normal coverage distance. Caution should be taken to avoid prolonged exposure to sound pressure levels exceeding 90 dB.

1.4   Certifications

Brazil:

"Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados"

Mexico:

"La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada"

Singapore:

Republic of Korea:

United Arab Emirates:

1.5   Notices

Old electrical and electronic appliances

Electrical or electronic devices that are no longer serviceable must be collected separately and sent for environmentally compatible recycling (in accordance with the European Waste Electrical and Electronic Equipment Directive).

To dispose of old electrical or electronic devices, you should use the return and collection systems put in place in the country concerned.

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Notice!

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For use in China: CHINA ROHS DISCLOSURE TABLE

针对在中国境内的使用：CHINA ROHS披露表

扬声器

根据**SJ/T 11364-2014**编制的有害物质表						
	Pb (Pb)	Hg (Hg)	Cd (Cd)	Cr 6+ (Cr 6+)	PBB (PBB)	PBDE (PBDE)
电路板	O	O	O	O	O	O
电子组件	X	O	O	O	O	O
换能器	X	O	O	O	O	O
显示屏	X	O	O	O	O	O
电缆和导线	O	O	O	O	O	O
塑料材料	O	O	O	O	O	O
金属材料	X	O	O	O	O	O
木质和纸质材料	O	O	O	O	O	O
涂料与涂层	O	O	O	O	O	O
本表系根据SJ/T 11364的规定编制而成						
O：上述有害物质在所有包含该物质的均质材料中的含量均低于GB/T 26572规定的限值						
X：上述有害物质在特定均质材料中的含量均高于GB/T 26572规定的限值						

关于该类产品生产日期代码的详细说明，请见：
http://www.boschsecurity.com/datecodes/

2 Short information

The following table lists products in a family, with CTN (Commercial Type Number) and identifying product name DESCRIPTION.

CTN	Description
EVOLVE30M-US	Portable column system, US, black
EVOLVE30M-EU	Portable column system, EU AP, black
EVOLVE30M-GL	Portable column system, no BT, black
EVOLVE30M-W	Portable column system, global, white
EVOLVE30M-W-GL	Portable column system, no BT, white
EVOLVE30M-SUBCVR	Soft cover for EVOLVE 30M sub
EVOLVE30M-CASE	Carrying case for EVOLVE 30M system
EVOLVE30M-PL-B	Replacement pole for EVOLVE 30M, black
EVOLVE30M-PL-W	Replacement pole for EVOLVE 30M, white
EVOLVE50M-US	Portable column system, US, black
EVOLVE50M-EU	Portable column system, EU AP, black
EVOLVE50M-GL	Portable column system, no BT, black
EVOLVE50M-W	Portable column system, global, white
EVOLVE50M-W-GL	Portable column system, no BT, white

2.1 Shipping contents

Quantity	Component
1	Column Speaker Array
1	Subwoofer
1	Sub pole (2 sections)
1	Power cord
1	Carrying bag
1	Installation manual
1	Warranty card
1	Safety manual

Tab. 2.1: 2.1 EVOLVE30M-US, EVOLVE30M-EU, EVOLVE50M-US, EVOLVE50M-EU models

Quantity	Component
1	Column Speaker Array
1	Subwoofer
1	Sub pole (2 sections)

Quantity	Component
2	Power cords
1	Carrying bag
1	Installation manual
1	Warranty card
1	Safety manual

Tab. 2.2: 2.1 EVOLVE30M-GL, EVOLVE30M-W, EVOLVE30M-W-GL, EVOLVE50M-GL, EVOLVE50M-W, EVOLVE50M-W-GL models

3 Description

Thank you for choosing an Electro-Voice portable column system. Please take time to consult the manual to understand all the features built into your EV system and fully utilize its performance capabilities.

The EVOLVE portable column loudspeaker is a new entry and form factor in the Electro-Voice portable sound portfolio. Designed to deliver an uncompromising combination of low-profile aesthetics and superior audio performance, the EVOLVE sets a new standard for portable columnar systems.

EVOLVE is designed to quickly and easily be transported and assembled. The compact design of the subwoofer and convenient included carrying bag for the sub pole and column array provide minimal resistance to getting excellent, professional sound anywhere you need it. Installation is made easier via the symmetrical aluminum subwoofer pole with an integrated wire assembly. The connection is secured by the magnetic assisted latching system, which magnetically locks the sub pole in place.

The full-range column array and its six 2.8-inch drivers are directed using custom-designed waveguides for consistent 120° coverage. The ported subwoofer enclosure houses a 10-inch woofer that is supported by 15 mm wood for enhanced stiffness and acoustical performance. The Class-D amplifier provides up to 1000 watts of output power: 500 watts to the subwoofer and 500 watts to the column array. The input panel features EV's industry-leading QuickSmartDSP interface—allowing intuitive navigation of system parameters via an LCD with single-knob control—as well as multiple options for signal routing and inputs.

The new Electro-Voice QuickSmart Mobile application utilizes Bluetooth® Low Energy (BTLE) technology for the wireless configuration, control, and monitoring of up to six EVOLVE systems simultaneously. High-resolution Bluetooth® audio streaming adds convenience for wireless music playback in breakout rooms, intermission, and musical accompaniment. *Bluetooth® is available in select countries*.

Electro-Voice quality and testing procedures far exceed the industry norm to yield efficient and effective electro-acoustic performance; this creates components that deliver an accurate, linear response at the system's highest output levels. When applied to EVOLVE, this engineering philosophy results in a system that brings a new sonic benchmark to the column speaker segment, all packaged in a sleek and portable enclosure that blends into the background in any application from a lounge to a wedding reception.

3.1 System features

– EV Quick**Smart** Mobile application: quickly and wirelessly configure, control, and monitor up to six EVOLVE systems simultaneously, and receive immediate notification during critical performance conditions. *Bluetooth® connectivity is available in select countries.*

– High-quality Bluetooth® audio streaming for background music or musical accompaniment. *Bluetooth® connectivity is available in select countries.*
– Ultra-wide 120° horizontal coverage via custom-designed waveguides and array-formed 40° asymmetrical vertical coverage means all acoustical energy is directed towards both sitting and standing audiences.
– Ideal for portable applications. Light weight and intuitive assembly via the magnet assisted sub pole make a quality performance easier than ever.
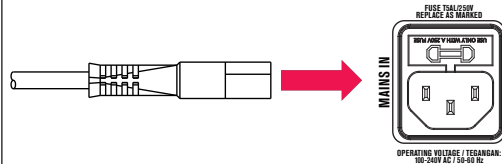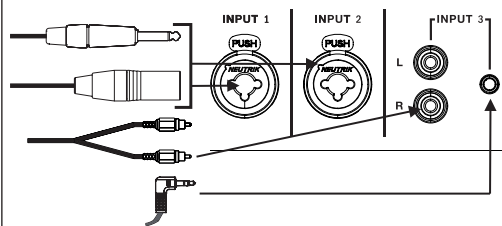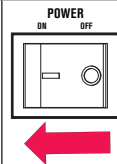
– QuickSmartDSP provides best-in-class processing via EV's signature single-knob user interface with LCD. Easy setup via four presets (Music, Live, Speech, Club), multi-band EQ (low, mid, high), five user-programmable presets (Store and Recall settings), output delay, phantom power, visual monitoring of limiter status, input level control and meters, and master volume control to optimize gain structure.

3.2   Quick setup

Subwoofer

To set up a subwoofer, do the following:

Step	Illustration
Connect the **AC power cord** from a grounded line receptacle to the MAINS IN.	
Connect the **XLR** or **TRS cables** from an audio source to **INPUT 1** or **INPUT 2** or connect **the RCA cable** or **3.5 mm mini jack** from an audio source to **INPUT 3**.	
Adjust the **input gain** to –∞ (infinity).	
Switch **POWER** to ON.	
From the DSP home screen, increase the **input gain** to the desired sound output.	
Adjust the **MASTER VOL** knob to the desired volume.	

4   Installation

Assembling the loudspeaker system

> ⚠ **Caution!**
>
> Do not attempt to move this loudspeaker system when it is fully assembled.
>
> You may damage the system or cause personal injury.

1.   Assemble the pole by connecting the two sections together.
     The pole has magnets (A) at each end. The pole can be inserted on either end.

2.   Place the **column array loudspeaker** on top of the subwoofer pole.

3.   The **column array loudspeaker system** set up is complete.

4.   Place the **subwoofer** on a level and stable surface.

To **assemble the loudspeaker system**, do the following:

5   Amplifier DSP

5.1   Amplifier DSP controls

The amplifier has a combination of controls and connectors to ensure the most versatile loudspeaker system.

Portable column system control and monitoring interface
The portable column system DSP control menu selections are available for the EVOLVE.
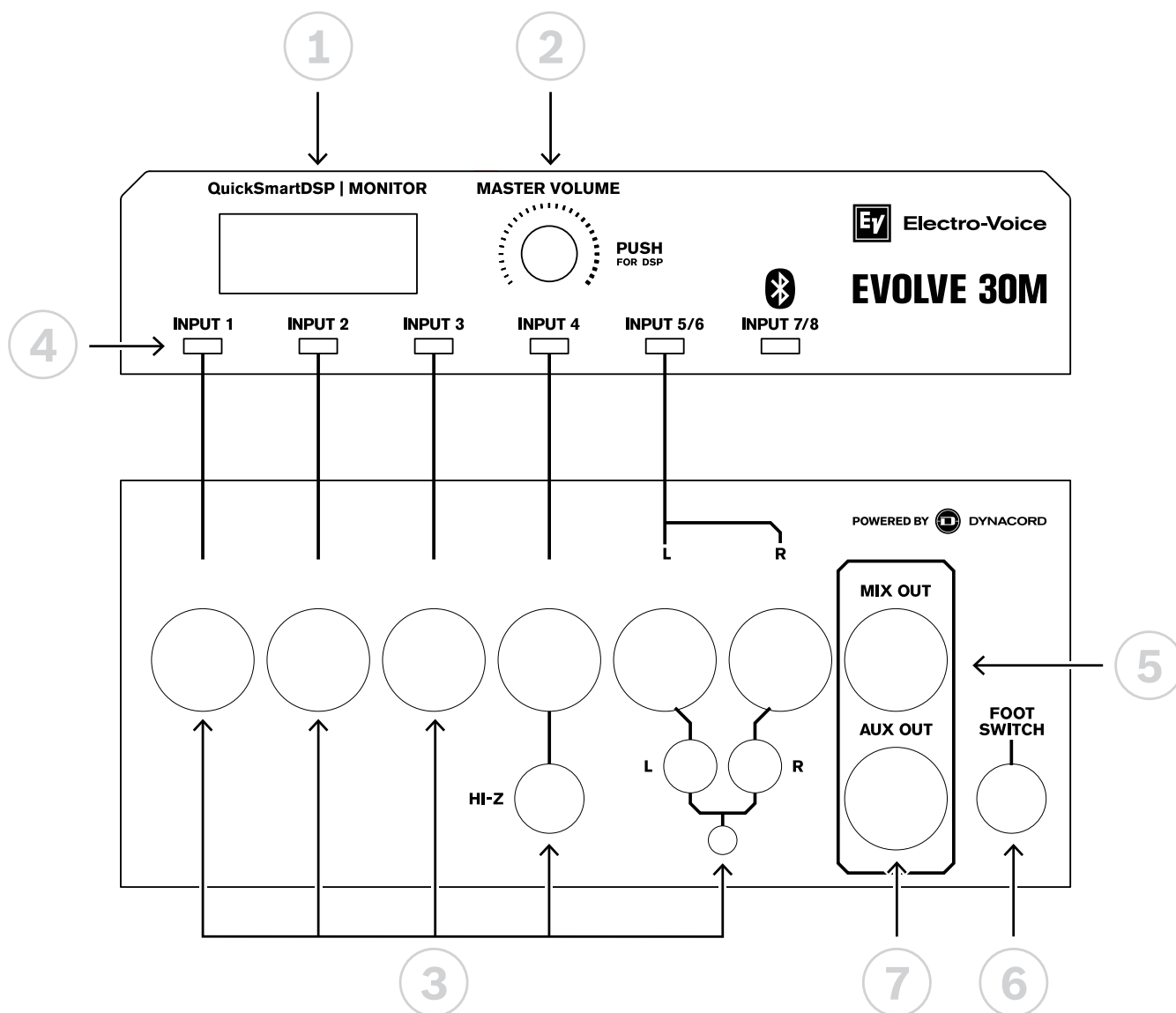
1.   **LCD** – DSP control and monitoring interface.
2.   **MASTER VOL** – Adjusts the sound level.
      DSP – Scroll through the menu and select the available choices. Push the MASTER VOL knob to enter the DSP menu.
3.   **INPUT 1-4,5/6 & 7/8** - Electronically balanced INPUT 1 thru INPUT 4 for the connection of a line level signal source or a microphone. Establishing a connection is possible via TRS or XLR-type plugs. INPUT 4 includes a HI-Z input below the TRS/XLR combo plug for

connection to a high impedance instrument output via a TS plug. Stereo INPUT 5/6 for connection of stereo line level signals. Connection is made using either two XLR-type, RCA, or a single 1/8th inch stereo connector. Input 7/8 is reserved for stereo Bluetooth audio connection.

4.   **INPUT Selection Buttons** - Selects channels INPUT 1 through INPUT 7/8 for channel DSP settings and individual level settings.

5.   **MIX OUT** - The post-fader audio signals of INPUT 1 through INPUT 7/8are mixed and passed to MIX OUT. The ratio of the input signals changes when the level controls INPUT 1 - 7/8 are adjusted. This feature allows the loudspeaker to act as a basic eight-channel mixer that can send the mix to another loudspeaker via the MIX OUT socket.

6.   **FOOT SWITCH** - ON/OFF control of DSP user selectable audio FX.

7.   **AUX OUT** - Auxiliary audio output channel. A separate audio mix of INPUT1 - 7/8 is controlled by individual channel AUX levels adjustable in DSP.

10   **11**
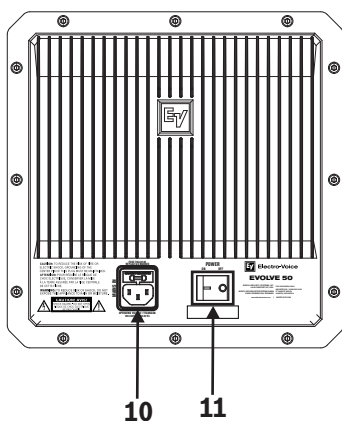
	Notice!
i	Markings and statements on amplifier panel may vary.

8.   **MAINS IN** – The device receives its power supply via the MAINS IN socket. Only the provided power cord may be used. Connect the device only to a mains network, which corresponds to the requirements indicated on the type plate.

9.   **POWER** – AC switch for switching the power ON or OFF. The LCD screen lights up when the power is turned ON, after approximately 3 seconds.
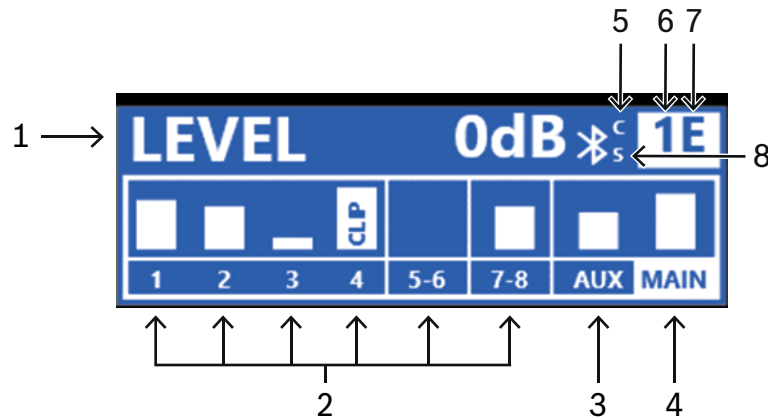
5.2   System status

Normal

Figure 5.1: Normal system status home screen with Bluetooth® status

1. **LEVEL** – Indicates the master gain of the system in dB. The range is from mute to +10 dB, in 1 dB increments.
2. 1, 2, 3, 4, 5-6, 7-8 - VU meter displays the signal level of INPUT1 through 7/8 into the amplifier. Input levels are independent of each other.
3. AUX - VU meter displays the signal level of the AUX output. AUX level is independent of INPUT and MAIN levels.
4. MAIN - VU meter displays the signal level of the MAIN output. MAIN level is independent of INPUT and AUX levels.
5. **C** - Control app; the available options are:
    OFF - DISABLED
    FLASHING - PAIRING MODE
    SOLID - CONNECTED
6. **1** - Indicates the selected store function number. There are five user defined store function numbers available.
7. **E** - Indicates the preset is not saved. When the preset is saved the E is not displayed.
8. **S** - Audio streaming; the available options are:
    OFF - DISABLED
    FLASHING - PAIRING MODE (120s)
    SOLID - CONNECTED

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Notice!
Bluetooth® is available in select countries.
Contact your nearest Electro-Voice dealer or Electro-Voice distributor for more information.

System protection
System protection limiters indicate when a system is exceeding recommended usage by indicating CLIP or LIMIT on the LCD display.

CLIP
CLIP indicates the signal to the loudspeaker is too high, resulting in a clipped signal into the loudspeaker. If CLIP is shown, reduce the input gain knob and/or the signal on the mixer or source equipment.

LIMIT

LIMIT protects the loudspeaker from short-term peaks which can cause distortion. When LIMIT is shown small on the screen, the limiter is active but keeps distortion under control. The large LIMIT indicates the sound is negatively affected. Reducing the output volume (MASTER VOL) is strongly recommended when the large limit indication is shown.

5.3 DSP control menu

MODE		MUSIC (Default)
		LIVE
		SPEECH
		CLUB
SUB LEVEL		0 dB (Default)
		Mute, -80 dB to +10 dB
OUTPUT EQ	63 Hz	0 dB (Default) -6 dB to +6 dB
	100 Hz	0 dB (Default) -6 dB to +6 dB
	160 Hz	0 dB (Default) -6 dB to +6 dB
	250 Hz	0 dB (Default) -6 dB to +6 dB
	400 Hz	0 dB (Default) -6 dB to +6 dB
	630 Hz	0 dB (Default) -6 dB to +6 dB
	1 kHz	0 dB (Default) -6 dB to +6 dB
	1.6 kHz	0 dB (Default) -6 dB to +6 dB
	2.5 kHz	0 dB (Default) -6 dB to +6 dB
	4 kHz	0 dB (Default) -6 dB to +6 dB
	6.3 kHz	0 dB (Default) -6 dB to +6 dB
FX1	Preset	Bypass (Default) EFFECTS 1-49
	Output Bus	25% (Default) [0%:1%:100%]
FX2	Preset	Bypass (Default)

		EFFECTS 50-99
	Output Bus	25% (Default) [0%:1%:100%]
MIX OUT		L + R (Default) R
LED		OFF
		ON (Default)
		LIMIT
		CONTROL APP
INPUT		INPUT 1 INPUT 2 INPUT 3 INPUT 4 INPUT 5
DISPLAY	LCD DIM	ON
		OFF
	BRIGHT	5 (Default)
		1 to 10
	CONTRAST	5 (Default)
		1 to 10
STORE		EXIT, 1, 2, 3, 4, 5, EXIT
RECALL		EXIT, 1, 2, 3, 4, 5, EXIT
BLUETOOTH	CONTROL APP	OFF (Default)
		OFF
	STREAMING	OFF (Default)
		ON
	PAIRING	
RESET		RESET ARE YOU SURE?
		NO (Default)
		YES
INFO		[PRODUCT NAME]
		[FIRMWARE VERSION]
		©2019 Electro-Voice
EXIT		

Tab. 5.3: Portable column system DSP Control Menu

EXIT menu

The **Exit** menu is used to return to the home screen.

i	**Notice!**
	The display returns to the home screen after two minutes of inactivity.

MODE menu

The **Mode menu** is used to configure the type of sound the subwoofer delivers.
– **MUSIC** – is used for recorded music playback and electronic dance music applications. (Default)
– **LIVE** – is used for live sound applications.
– **SPEECH** – is used for spoken word applications.
– **CLUB** – is used for recorded electronic music playback.

SUB LEVEL Menu

The **Sub Level** menu allows independent gain control of the subwoofer output. Changes to this parameter effectively change the crossover of the EVOLVE 50 system. The default setting of 0 dB is recommended for best audio performance.
The range is *MUTE, -80 dB to +10 dB*.
The default is *0 dB*.

OUTPUT EQ Menu

– The **OUTPUT EQ** menu is used to adjust the frequency response of the loudspeaker for different applications or personal preference. There are 11 different EQ filters available centered at the following frequencies. 63, 100, 160, 250, 400, 630, 1.0k, 1.6k, 2.5k, 4.0k, & 6.3k Hz. The range of each filter is -6dB to +6dB. The default value for each filter is 0 dB.

MIX OUT menu

The **Mix Out** menu is used to select which signal of INPUT 5/6 & 7/8 AUX IN should be output at MIX OUT and which signal should be delivered by the loudspeaker.
– L+R: The left and right signals of INPUT 5/6 & 7/8 are summed. The sum is output at MIX OUT and is delivered by the loudspeaker. (Default)
– R: Only the right signal of INPUT 5/6 & 7/8 and the percentage of INPUTS 1-4 panned right is output at MIX OUT. The loudspeaker will deliver only the left signal.

DISPLAY menu

The **Display** menu options are BACK, LCD DIM, BRIGHT, and CONTRAST.

LED menu

The **LED** menu shows power on and indicates limit. Available options for this selection are: ON, OFF, LIMIT or CONTROL APP.
– **ON** - turns the LED on when the power to the loudspeaker is ON. (Default)
– **OFF** - turns the LED off.
– **LIMIT** - turns the LED off under normal operation. The LED brief blinking indicates the limiter is activating. Short-term blinking is not critical because the integrated limiter keeps distortion under control. Constant lighting of the LED indicates the sound is negatively affected. If the LED is constantly lit, check the rear LCD for more information. Reducing the output volume is strongly recommended.
– **CONTROL APP** - indicates if Bluetooth® on the portable column system is trying to pair or is connected to a Bluetooth® enabled mobile device. In pairing mode the LED will flash blue indicating it is ready to pair. The LED is solid blue when it is connected.

The default is *ON*.

LCD DIM Menu

The **LCD Dim** menu is used to dim the display when the display is idle for 30 seconds.

Available options for this selection are: ON or OFF.

The default is *ON*.

BRIGHT Menu

The **Bright** menu is used to determine the brightness of the LCD.

The range is 1 to 10.

The default is *five (5)*.

CONTRAST menu

The **Contrast** menu is used to increase or decrease the visibility of the LCD screen.

The range is 1 to 10.

The default is five.

STORE Menu

The **Store** menu allows you create up to five customized user settings. Available options for this selection are: EXIT, 1, 2, 3, 4, and 5.

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Notice!

The customized user setting name can contain a combination of alphanumeric characters including spaces. The alphanumeric character range is A to Z and 0-9.

The name field length is 12 characters.

Storing customized user settings

To store customized user settings, do the following:

1. From the DSP menu, scroll to STORE**.**
2. Push the MASTER VOL knob to select STORE.
    The store screen appears.
3. Push the MASTER VOL knob to select 1.
    The Enter name for 1 screen appears.
4. Use the MASTER VOL knob to scroll through the characters.
    The characters appear.
5. Push the MASTER VOL knob to select the desired character.
6. Turn the MASTER VOL knob to move to the next character entry.
    Continue selecting characters until the desired name is entered.
7. Use the MASTER VOL knob to scroll to SAVE.
8. Push the MASTER VOL knob to select SAVE.
9. Repeat steps 3 through 8 to store additional customized user settings.
10. Select EXIT to return to the home screen.

RECALL Menu

The **Recall** menu allows you retrieve up to five customized user settings. Available options for this selection are: EXIT, 1, 2, 3, 4, and 5.

Recalling customized user settings

To recall customized user settings, do the following:

1. From the DSP menu, scroll to RECALL**.**
2. Push the MASTER VOL knob to select RECALL.
    The recall screen appears.
3. Push the MASTER VOL knob to select 1.
    The selected item is loaded.
4. Select EXIT to return to the home screen.

BLUETOOTH

The **Bluetooth** menu options are CONTROL APP and STREAMING.

CONTROL APP menu

The **Control App** menu is used to enable the Quick**Smart** Mobile wireless control and monitoring application. Available options for this selection are: ON or OFF.

The default is OFF.

> **Notice!**
> Bluetooth® is available in select countries.
> Contact your nearest Electro-Voice dealer or Electro-Voice distributor for more information.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Bosch Security Systems, Inc. is under license. Other trademarks and trade names are those of their respective owners.

Turning Bluetooth® ON or OFF

To **turn Bluetooth® ON or OFF**, do the following:
1. From the DSP menu, scroll to **CONTROL APP**.
2. Select **ON**.
    OR
    Select **OFF**.

STREAMING

The **Streaming** menu is used to stream audio from your Bluetooth® enabled device to the loudspeaker system. Available options for this selection are: PAIRING, ON or OFF.

The default is OFF.

Pairing the portable column system with your Bluetooth® enabled device

To **pair the portable column system with your Bluetooth® enabled device**, do the following:
1. From the DSP menu, scroll to STREAMING.
2. Select PAIRING.
    PAIRING mode enables 120 seconds of visibility to Bluetooth® enabled devices.
3. On your mobile device, select **EV EVOLVE** to initiate the pairing process.
    Once the device is paired, all device audio will be output through the EVOLVE 50 system.

> **Notice!**
> If connected with a mobile device, notification alerts and ring tones will also be played through the system.
> Disable these notifications or enable *Airplane mode* on your mobile device to prevent unwanted interruptions during audio playback.

Turning streaming ON or OFF

To **turn streaming ON or OFF**, do the following:
1. From the DSP menu, scroll to **STREAMING.**
2. Select **ON**.
    OR
    Select **OFF**.

RESET menu

The **Reset** menu is used to reset the loudspeaker to original factory settings. Available options for this selection are: NO or YES.

The default is NO.

Resetting the system

To **reset the system to original factory settings**, do the following:

1. From the DSP menu, select **RESET**.
    The "RESET ALL SETTINGS?" validation message appears.
2. Select **YES**.
    The system is reset to the original factory settings.

Notice!

The reset menu item is used to revert the loudspeaker to the original factory default settings. All user settings will be deleted. The user customized settings in the STORE and RECALL menus return to <EMPTY>.

INFO menu

The **Information** menu is used to display the product name and firmware version.

6   Pairing the QuickSmart Mobile application

The EV Quick**Smart** Mobile app is available for download for the *iOS* 10 and higher tablets and smart phones from the iTunes App Store or Android Marshmallow and higher tablets and smart phones from the Google Play Store.

	Notice!
	The EV Quick**Smart** Mobile app is designed to only find speakers from Electro-Voice with Bluetooth® enabled. The EV Quick**Smart** Mobile app will not display other types of Bluetooth® devices, e.g. phones, laptops, tablets, or headsets.

	Notice!
	Bluetooth® is available in select countries. Contact your nearest Electro-Voice dealer or Electro-Voice distributor for more information.

Prior to pairing the EV Quick**Smart** Mobile app with loudspeakers by Electro-Voice ensure Bluetooth® is enabled on the smart phone or tablet, and the loudspeaker.

First time pairing:

To pair the loudspeaker with the EV QuickSmart Mobile app, do the following:

1.   Open the EV Quick**Smart** Mobile app.
2.   *Finding nearby speakers* is displayed on the screen
     The EV Quick**Smart** Mobile app is looking for available Bluetooth® enabled Electro-Voice loudspeakers.
3.   The available loudspeakers are displayed on the screen.
     The app will display up to eight available loudspeakers.
4.   Tap the loudspeaker you want to pair with the app.
     The selected loudspeaker will have a red line under it acknowledging it is selected.
5.   Repeat the previous step until all of the desired loudspeakers are selected.
6.   Tap the red CONNECT button.
7.   The app pairs with the desired loudspeaker.
     The app can connect to up to six loudspeakers.

Subsequent pairing:

To pair the loudspeaker with the EV QuickSmart Mobile app, do the following:

1.   Tap the EV QuickSmart Mobile app icon.
2.   *Finding nearby speakers* is displayed on the screen
     The EV Quick**Smart** Mobile app is looking for available Bluetooth® enabled Electro-Voice loudspeakers.
3.   The available loudspeakers are displayed on the screen.
     The app will display up to eight available loudspeakers.
4.   Tap the loudspeaker you want to pair with the app.
     The selected loudspeaker will have a red line under it acknowledging it is selected.
5.   Repeat the previous step until all of the desired loudspeakers are selected.
6.   Tap the red CONNECT button.
7.   The app pairs with the desired loudspeaker.
     The app can connect to up to six loudspeakers.

7   Recommended configurations

7.1   Stereo pair of EVOLVE systems

R	Right
L	Left
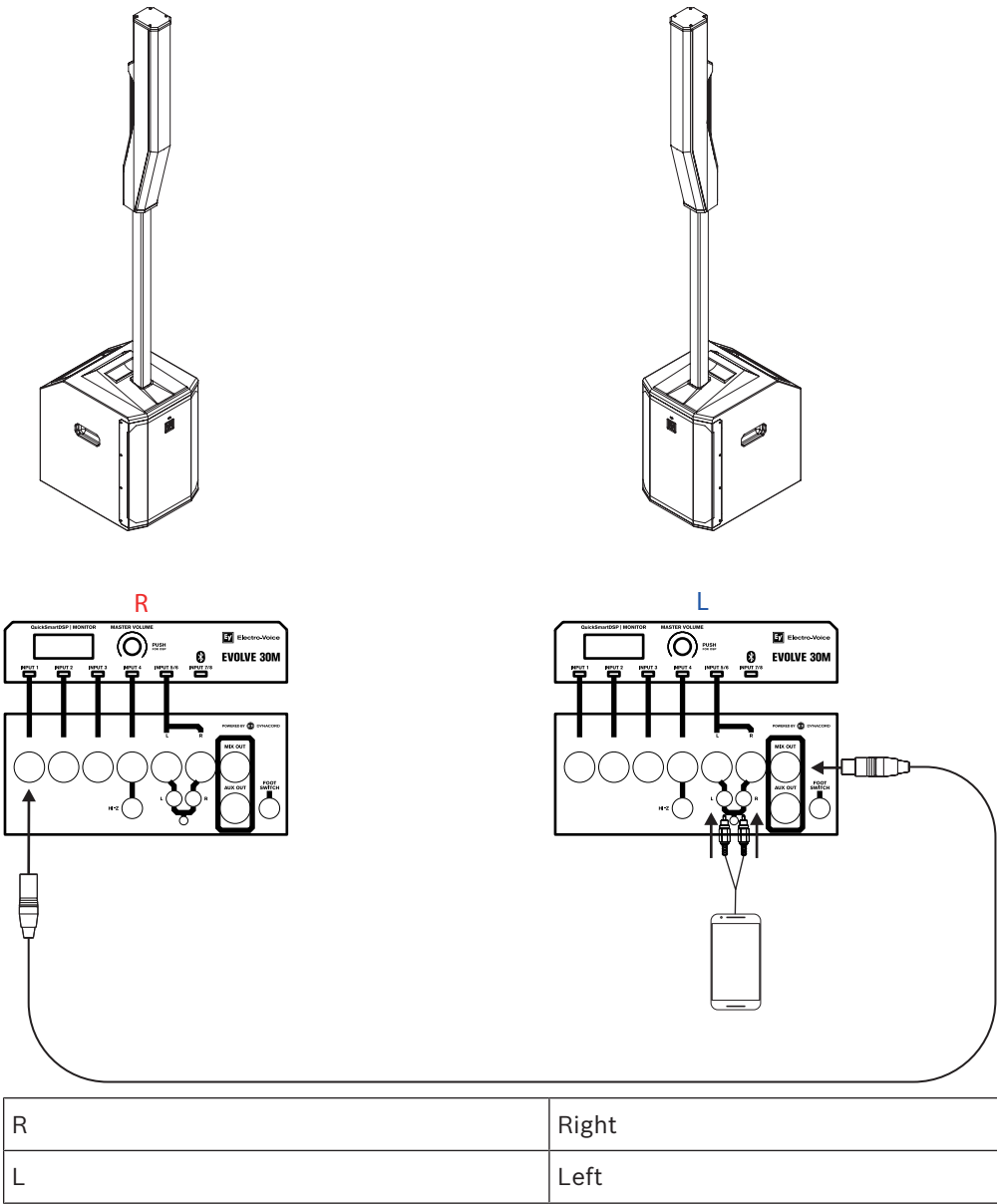
Notice!

The direction of the arrow indicates the signal path.

Mode:	Music
MIX-OUT:	R

Tab. 7.4: DSP settings for the portable column system

7.2 Solo musician performance
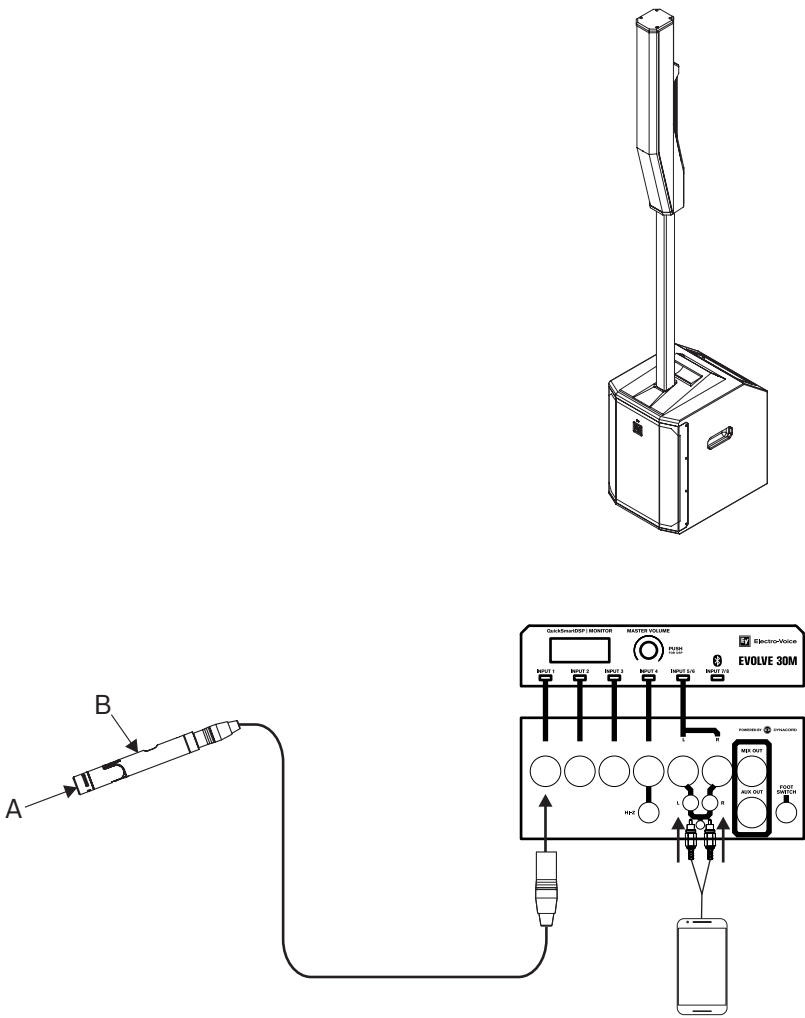
A	Guitar, conga drum, etc.
B	Microphone

> **Notice!**
> The direction of the arrow indicates the signal path.

Mode:	Live

Tab. 7.5: DSP settings for the portable column system

8   Mixer operation

8.1   Mono input

GAIN control

Rotary control for adjusting a MIC/LINE input's sensitivity. These controls let you optimally adjust the incoming signals to the mixer's internal operation level. Slight adjustments can offer the benefits of an improved S/N-ratio and provides you with the full bandwidth of the EVOLVE's outstanding sound capabilities. The following gain setting instruction is to be used as a guide to help achieve a good signal input level:

Set the MASTER volume controls to their minimum values (counterclockwise).

Set the GAIN control and the corresponding channel VOLUME control to their center position. Connect the sound source (microphone, instrument, etc.) to the desired MIC/LINE input.

Start the sound source at the highest volume level to be expected - respectively sing or speak as loudly as possible directly (close up) into the microphone.

While playing the sound source or singing into the microphone, adjust the input level using the GAIN control, so that during the loudest part, the PK LED does not light up. This is the basic channel setting, leaving you with at least 6 dB of headroom, i.e. you have at least a range of 6 dB before signal clipping occurs.

If you intend to make further adjustments to the channel's EQ setting, you should perform steps 4 and 5 again, as changes in the sound shaping section also have an influence on the channel's overall level.

HI/MID/LO controls

The mixer's EQ section allows for a broad difference in the shaping of the incoming audio signal within three frequency bands. Turning one of the EQ level controls to the right enhances/amplifies the corresponding frequency range while turning it to the left lowers/ attenuates the signal of that specific frequency band. Before you begin to alter the sound, all EQ controls should be set to their neutral position, i.e. their marker points straight up (locked in place). Try not to set the EQ controls to extreme positions. Usually, minor changes are sufficient to produce the best results in the overall sound. You should use the natural reproduction as a starting point and rely on your musically trained ear. The moderate use of the MID control is the best remedy to avoid acoustical feedback. You should try to avoid using this frequency range to an extreme level. Lowering the level in this band will provide you with higher output and help reduce feedback. Adjust the LO control to your taste, to add more "punch" to the sound of a kick drum or "body" to the vocals. Use the HI control in the same way to provide cymbals and vocals with more treble for a more transparent sound.

FX control

The FX controls is used to set the amount of effect you require on that channel input to be routed to the integrated FX effects unit. The signal path is split post VOLUME control so that the volume setting also influences the amount of the signal that is fed to the FX unit. Using the FX controls lets you easily assign an effect for groups of musical instruments or vocals. To determine the desired level of the effect, you should start with the controls set at their center and make individual adjustments from there on.

Please monitor the PK LED in the FX channels. The indicator should only light up briefly at the occurrence of high signal peaks. If the indicator is constantly lit, you should lower the send levels of those channels where the program peaks occur. For further information, please read the paragraphs about the FX unit.

AUX control

The AUX control is primarily meant for establishing an independent mix, e.g. for monitor or a second room/zone. The signal routing is always pre VOLUME control.

PK indicator

The peak indicator plays a key role when setting input levels. The PK (peak) LED on the EVOLVE provides a visual indication of the risk of distortion before you hear it through the connected speaker systems. The peak indicator checks the signal level pre and post of the channel's VOLUME control and indicates the maximum of both levels. If the PK LED blinks frequently or lights continuously, the corresponding channel is likely to start clipping and you will need to reduce the volume slightly. The peak LED are triggered at a level of -6 dB below the point of distortion.

If lowering the channel VOLUME is not sufficient to reduce signal peaks, carefully turn the GAIN control down.

Keeping an eye on the indicator during a performance is also a good idea, because some changes in the bands dynamics or even a change in keyboard settings can easily lead to channel clipping, resulting in the degradation of the overall sound.

VOLUME control

The VOLUME control sets the volume of the corresponding channels, resulting in a balanced mix. The control should be positioned initially at "5", leaving you with enough flexibility to balance the mix. The overall volume is adjusted through the use of the master controls. Even though the channel controls offer an additional level of +15 dB, we would like to advise you to exceed the "8" mark only in very few exceptional cases. If the PM 502's summing bus gets "overloaded" with too many "high level" input channels, despite its special gain structure, the summing amplifier could be driven into clipping.

The best signal to noise ratio can be achieved if channel volume and master volume controls are set in the same range.

8.2   Stereo input

HI/MID/LO control

The mixer's EQ section allows for a broad difference in the shaping of the incoming audio signal within three frequency bands. Turning one of the EQ level controls to the right enhances/amplifies the corresponding frequency range while turning it to the left lowers/attenuates the signal of that specific frequency band. Before you begin to alter the sound, all EQ controls should be set to their neutral position, i.e. their marker points straight up (locked in place). Try not to set the EQ controls to extreme positions. Usually, minor changes are sufficient to produce the best results in the overall sound. You should use the natural reproduction as a starting point and rely on your musically trained ear. The moderate use of the MID control is the best remedy to avoid acoustical feedback. You should try to avoid using this frequency range to an extreme level. Lowering the level in this band will provide you with higher output and help reduce feedback. Adjust the LO control to your taste, to add more "punch" to the sound of a kick drum or "body" to the vocals. Use the HI control in the same way to provide cymbals and vocals with more treble for a more transparent sound.

FX control

The FX controls is used to set the amount of effect you require on that channel input to be routed to the integrated FX effects unit. The signal path is split post VOLUME control so that the volume setting also influences the amount of the signal that is fed to the FX unit. Using the FX controls lets you easily assign an effect for groups of musical instruments or vocals. To determine the desired level of the effect, you should start with the controls set at their center and make individual adjustments from there on.

Please monitor the PK LED in the FX channels. The indicator should only light up briefly at the occurrence of high signal peaks. If the indicator is constantly lit, you should lower the send levels of those channels where the program peaks occur. For further information, please read the paragraphs about the FX unit.

AUX control

The AUX control is primarily meant for establishing an independent mix, e.g. for monitor or a second room/zone. The signal routing is always pre VOLUME control.

PK indicator

The peak indicator plays a key role when setting input levels. The PK (peak) LED on the EVOLVE provides a visual indication of the risk of distortion before you hear it through the connected speaker systems. The peak indicator checks the signal level pre and post of the channel's VOLUME control and indicates the maximum of both levels. If the PK LED blinks frequently or lights continuously, the corresponding channel is likely to start clipping and you will need to reduce the volume slightly. The peak LED are triggered at a level of -6 dB below the point of distortion.

If lowering the channel VOLUME is not sufficient to reduce signal peaks, carefully turn the GAIN control down.

Keeping an eye on the indicator during a performance is also a good idea, because some changes in the bands dynamics or even a change in keyboard settings can easily lead to channel clipping, resulting in the degradation of the overall sound.

VOLUME control

The VOLUME control sets the volume of the corresponding channels, resulting in a balanced mix. The control should be positioned initially at "0", leaving you with enough flexibility to balance the mix. The overall volume is adjusted through the use of the master controls. Even though the channel controls offer an additional level of +15 dB, we would like to advise you to exceed the "8" mark only in very few exceptional cases. If the EVOLVE column speaker's summing bus gets "overloaded" with too many "high level" input channels, despite its special gain structure, the summing amplifier could be driven into clipping.

The best signal to noise ratio can be achieved if channel volume and master volume controls are set in the same range.

8.3   FX

FX ON switch (with indicator)

This switch turns the internal FX unit on and the green LED turns on. Please keep in mind that you can also use an external footswitch for turning the FX unit on or off. In this case, the LED also shows the actual operational status of the FX unit. If you want to use a footswitch, the FX ON switch has to be engaged first. The FX unit is activated and you can use the footswitch to switch the selected effect program on or off.

FX to AUX control

This control allows you to add the FX output signal (pre volume control) to the AUX channel.

PK indicator

This indicates to the user that the internal FX unit is on the verge of clipping, e.g. at a level of -6 dB below the risk of overdrive. To achieve an adequate signal to noise ratio, please adjust the FX units' input level as follows:

1.   Establish a "dry" mix - without effect settings - refer to the previous instructions.
2.   Position the FX VOLUME control at the "5" mark.
3.   Turn the FX/PARAMETER rotary control to select the desired FX program preset.
4.   Press the FX ON switch.

5.   Play the sound source connected to the desired input channel and adjust the desired amount of the FX signal, using the FX controls of this input channel. Repeat this step for all input channels that you want to include in your effect mix.

6.   Monitor the PK LED so that it only lights up from time to time during signal peaks. When clipping occurs, reduce the channels FX control level.

7.   Use the FX to AUX control to add the effect mix to the AUX mix.

8.   Use the FX VOLUME control to add the desired amount of the FX signal to the master mix.

Pay attention to the PK indicators when operating your EVOLVE to be able to respond quickly when the signal levels exceed the normal range and start clipping.

VOLUME control

This control is used to determine the amount of effect added to the master mix. If you find that you have to set these controls above the "8" mark, please check if the FX unit's input signals are adjusted properly.

8.4   AUX

Indicators

It is acceptable for the LIM indicator to flicker from time to time because the built in clip limiter prevents distortion. If it is lit continuously, you are at risk of the degradation of your speaker output. In that case, the volume level has to be reduced. The limiter threshold can be edited in the OUTPUT SETTINGS menu, please refer to section Menu.

Below the LIM indicator, the EVOLVE offers a 3-segment LED chain for visual monitoring of the output level of the signal. The meter's 0 dB mark is referenced to a 0 dBu output signal at the mixer output.

VOLUME control

The VOLUME control sets the volume of the summed audio signal at the AUX OUT output. The signal present at this output can be selected in the AUX routing menu, please refer to section Menu.

8.5   MASTER

Indicators

It is acceptable for the LIM indicator to flicker from time to time because the built in clip limiter prevents distortion. If it is lit continuously, you are at risk of the degradation of your speaker output. In that case, the volume level has to be reduced. The limiter threshold can be edited in the OUTPUT SETTINGS menu, please refer to section Menu.

Below the LIM indicator, the EVOLVE column speaker offers a 3-segment LED chain for visual monitoring of the output level of the signal. The meter's 0 dB mark is referenced to a 0 dBu output signal at the mixer output.

VOLUME control

Level controls to adjust the output signals of the left and right master outputs (MASTER A or MASTER B). If post mode is selected for MASTER B (see section Menu) set the MASTER B level control to its middle position for identical levels on MASTER A or B outputs.

8.6   Microphone processing

During operation the audio signal processing can be adjusted by using the switches COMPRESSOR, TALK OVER or MUTE, this settings always affect the input signals of all MIC/LINE channels. The current status is indicated by the corresponding LED next to each button. Advanced microphone processing settings are available in the menu, please refer to section Menu.

	Notice!
i	Effect of MIC PROCESSING
	The AUX-Bus signal is only affected by MUTE, so COMPRESSOR or TALK OVER have no effect on the AUX-Bus signal.

COMPRESSOR

Engage the COMPRESSOR switch to activate the integrated compressor. The compressor reduces the dynamic range of audio signals. Once the signal exceeds a certain threshold, the signal gets compressed, i.e. major input level changes result in minor output level changes. Narrowing the dynamic range often allows for easier recording or mixing the audio signal.

TALK OVER

Engage the TALK OVER switch to activate the integrated ducking facility. The ducking facility reduces the level of the signals at the STEREO inputs whenever a signal is present at the MIC/LINE inputs. If there is no MIC/LINE signal present the STEREO signal automatically returns to its preset level.

MUTE

Engage the MUTE switch to mute all MIC/LINE input signals.

8.7   Equalizer

The Evolve column speaker employs an 11-band equalizer. Eleven frequency bands offering +/-6dB gain/reduction allow the shaping of the overall sound to meet your personal preferences to optimally match it to the acoustic conditions of different locations. Independent graphic equalizers for MASTER A, MASTER B or AUX (each adjustable via hardware controls or the rotary encoder) are available in the menu, please refer to section Menu.

8.8   Display
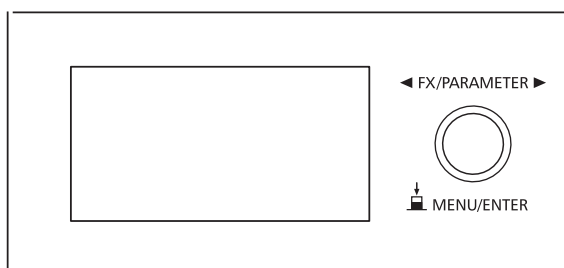
Home screen

The home screen appears after switching the EVOLVE column speaker on. After a few seconds the currently selected effect (number and name) is displayed. If effect parameters have been edited, an "E" is indicated next to the preset number. Turn the FX/PARAMETER rotary control to select another effect.

In the lower part of the display settings of the channels MASTER **A**, MASTER **B** and **AUX** are indicated, please refer to following table.

Icon	Description
/MIC	LO CUT in menu MIC PROCESSING is activated.
POST	The master routing of channel B is set to Post.
M	The channel is set to Mono.

Icon	Description
DLY	The delay of the channel is activated.
MAS. A PRE or MAX. A POST	Indicates the AUX Mode setting of the AUX channel.
Equalizer control icon	The hardware equalizer controls are used to edit the equalizer settings of this channel.
EQ	The equalizer setting of the channel is not set to flat.
LIM	The threshold of the output limiter has been edited.
Speaker icon	Indicates the Amp Routing. If a Dual Amp Routing is selected speakers for output channel 1 or 2 are indicated.

Tab. 8.6: Indicators in home screen

If the screensaver is activated the Dynacord logo and the device name (assigned in the DEVICE SETUP menu) is indicated after some time.

8.8.1   Menu

Press the MENU/ENTER rotary encoder to access the menu.

In menu the MENU/ENTER rotary encoder is used for navigation and for selecting and editing parameters. Turn the MENU/ENTER rotary encoder to the left or to the right to move the cursor in the menu. Press the MENU/ENTER rotary encoder to select the highlighted menu item. The value is shown in inverse font and can be edited by turning the MENU/ENTER rotary encoder. Press the MENU/ENTER rotary encoder again to apply the edited parameter value. Following table lists the content of the menu.

Menu item	Subitems/parameter range (default setting in bold)	Description
EDIT FX	Depends on effect type.	This dialog allows editing effect parameters of the effect unit. Select RESET to reset all parameters to their default values.
AUDIO PLAYER	– Folder/Track name – Progress bar – Buttons for Start/Pause/Back/Forward – REPEAT/RANDOM selection – AUTO PLAY selection	This dialog allows to use the integrated MP3 player. When AUTO PLAY is selected the playback of MP3 files will start automatically when a USB drive is connected.
MIC PROCESSING	– LO CUT: **Off**, 80 Hz, 150 Hz	When the low cut filter is activated, frequencies below 80 Hz (or 150 Hz) are attenuated.
	– COMPRESSOR PRESET: **Soft**, Hard – COMPRESSOR THRESHOLD: The range depends on the selected compressor preset.	The compressor settings allow adjusting the microphone processing to your application.

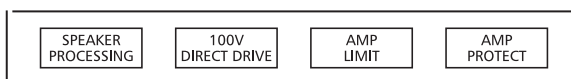| Menu item	Subitems/parameter range (default setting in bold)	Description
	– COMPRESSOR TYPE: 2:1 Ratio, 4:1 Ratio, Limiter, Uplift Soft – COMPRESSOR ATTACK: 1-1000 ms – COMPRESSOR RELEASE: 50-10000 ms – COMPRESSOR MAKEUP GAIN: 0 - +6 dB	
	– TALK OVER PRESET: **Announcer**, Singer, Instructor, Presenter – TALK OVER THRESHOLD: -50 - -10 dB – TALK OVER DAMPING: -100-0 dB – TALK OVER ATTACK: 0-1000ms – TALKOVER HOLD: 0.0-99.9s – TALK OVER RELEASE: 0.1-30.0s	The talk over settings allow adjusting the microphone processing to your application. Please refer to section Microphone processing (TALK OVER) for more details.
SPEAKER PROC	– Low Pass Notch: Flat, Medium, **High**	This menu is used to edit the LPN Speaker Processing filter setting of the integrated power amplifiers. Please refer to section Speaker processing (LPN) for more details. If the DIRECT DRIVE mode is activated, the Low Pass Notch filter is always bypassed.
MASTER A EQ MASTER B EQ AUX EQ	– SLIDERS-LINK – Frequency bands 63 Hz, 160 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6 kHz, 12 kHz	Activate the entry SLIDERS-LINK to edit the levels of the corresponding GEQ bands using the GEQ hardware controls. If not activated, edit the bands in the display using the FX/PARAMETER rotary control.
MASTER ROUTING	– MASTER A: Mono, **Stereo**	When MASTER A is set to Stereo, the MASTER A L/R signal is not changed and outputted in stereo. When Mono is selected the MASTER A L/R signal is summed and outputted in mono at MASTER A L and also MASTER A R.
	– MASTER B: **Pre**, Post; Mono, **Stereo**	When MASTER B is set to Pre, the audio signal is tapped pre MASTER A volume control and therefore not

Menu item	Subitems/parameter range (default setting in bold)	Description
		affected by the MASTER A control's setting. When MASTER B is set to Post, the audio signal is tapped post MASTER A volume control and therefore affected by the MASTER A control's setting. This mode is mainly used for subwoofers or delay lines. When MASTER B is set to Stereo, the MASTER B L/R signal is not changed and outputted in stereo. When Mono is selected the MASTER B L/R signal is summed and outputted in mono at MASTER B L and also MASTER B R.
	– MAS. B Delay: : **0.0**-50 **Meters**	The MASTER B signal can be delayed up to 145.8 ms. The unit can be switched between milliseconds (ms), meters and feet.
OUTPUT SETTINGS	– DIRECT DRIVE: **Off**, On/50Hz HPF, On/70Hz HPF – AMP ROUTING: **MASTER A**, MASTER B, AUX, Dual A - B, Dual A - AUX, Dual B - AUX – AUX Mode: **AUX-Bus**, MAS. A Pre, MAS. A Post Limiters: – MASTER A: -10 - +11 dBu – MASTER B: -10 - +11 dBu – AUX Limiter: -10 - +11 dBu	In this menu you can configure advanced features of the EVOLVE column speaker outputs. Please refer to the corresponding sections for more details: – 100 V Direct Drive – Amplifier routing – AUX sources The audio limiter thresholds can be set independently for the MASTER A, MASTER B or AUX output signals.
DEVICE SETUP 1	– LCD Auto Dim: **Off**-60 Min. – Dim Brightness: 0-**100%**	After the time set here the display brightness is dimmed. The brightness of the display in dimmed mode can be adapted to the installation location.
	– Screensaver: **Off**-60 Min. (default: Off) – Personalize	After the time set here the screensaver is activated. You can personalize the device name shown in the screensaver screen.
DEVICE SETUP 2	– Lock/Unlock: **0000**-9999 – Lock Mode: Custom, Level 1,**2**,3	Enter a 4 digit PIN (password) to lock certain parameters of the EVOLVE column speaker. Please refer to section Locking for more details.

Menu item	Subitems/parameter range (default setting in bold)	Description
	– Factory Reset	Pressing the MENU/ENTER rotary encoder opens a "Reset all settings?" safety dialog box. Select YES to reset the EVOLVE column speaker to its factory settings. Select NO to return to the DEVICE SETUP menu. If the device is locked a factory reset is not possible.
INFORMATION	– Firmware – Mains: Voltage and frequency – Int. Temp: Current and maximum value – Logging	Indicates the firmware version installed, the current supply voltage and frequency and the internal temperature of the device. The entry Logging is for service only.

Tab. 8.7: Menu

8.9 Indicators

Indicator	Description
SPEAKER PROCESSING	This indicator lights up blue when the internal speaker processing of the EVOLVE column speaker is activated in the menu. Please refer to section Speaker processing (LPN) for more details about this mode.
100V DIRECT DRIVE	This indicator lights up green when the 100 V Direct Drive mode is activated in the menu. Please refer to section 100 V Direct Drive for more details about this mode.
AMP LIMIT	This yellow indicator signals that you are operating the EVOLVE column speaker at the internal power amp's limit. Frequent blinking of the LED is acceptable, since the amplifier's incorporated clip limiter prevents distortion. Continuous lighting indicates that you have to be aware of degradation in the output sound. In that case, the MASTER (or AUX) level has to be reduced. The LIMIT LED also lights up if the output level is reduced because of high amplifier temperature or too high output current in abnormal load conditions.
AMP PROTECT	This indicator lights up red when one of the EVOLVE column speaker's extensive protection circuits - against thermal overload, HF-induction, Back-EMF, DC at the outputs, and short circuit protection - is activated. When the EVOLVE column speaker is in protect mode, the speaker outputs are disabled to prevent the power amp from being damaged. In this case you

Indicator	Description
	should first check whether the ventilation slots are blocked. Another cause could be that you have connected more than two 8 Ω speaker systems per power output in low-Z mode. Please also disconnect the speakON or Euroblock connectors and check the speaker cables for short circuits.

Tab. 8.8: Front panel indicators

9   Troubleshooting

Problem	Possible cause	Action
1. No sound	Amplifier	Verify all the electronics are on, the signal routing is correct, the source is active; the volume is turned up, etc. Correct/repair/replace as necessary. If there is still no sound, the problem may be wiring.
	Wiring	Verify you have connected the correct cables to the amplifier. Play something at a low level through the amplifier. Connect a test loudspeaker in parallel with the malfunctioning line. If the sound level is gone or is very weak, the line has a short in it (possibly a severe scrape, pinch, or a missed connection). Using the test loudspeaker, move down the line and test each connection/junction until you find the problem and correct it. Observe proper polarity.
2. Intermittent output such as crackling or distortion	Faulty connection	Check all connections at amplifier and loudspeakers to ensure they are all clean and tight. If the problem persists, check the wiring. See problem 1.
3. Constant noise such as buzzing hissing or humming	Defective source or other electronic device	If noise is present, but no program material is playing, evaluate each component as necessary to isolate the problem. Most likely there is a break in the signal path.
	Poor system grounding or ground loop	Check and correct the system grounding, as required.
	Input gain knob is not in the MIC position	Slowly increase the input gain knob level to engage the microphone pre-amp.
4. No sound produced with microphone connected to INPUT 1 or INPUT 2	Microphone requires phantom power.	Use a dynamic microphone that does not require phantom power (+15 V).
	Input gain knob is not in the MIC position	Slowly increase the input gain knob level to engage the microphone pre-amp.
5. Sound is distorted front LED is OFF, LCD screen LIMIT is ON	Excessive input level	Reduce the input level or loudspeaker level knobs to prevent limit.
	Incorrect gain structure or source input (mixing console/ preamp) is overdriven	Verify level controls of the source are properly structured by using the VU meter indicator on the LCD screen. If the VU meter bar is solid or the system indicates LIMIT, the input or source level is too high.

Problem	Possible cause	Action
6. Microphone produces acoustic feedback when input level is amplified	Incorrect gain structure	Reduce the microphone levels at the mixing console or input source. If the microphone is connected directly to the speaker, reduce the input level on the speaker. Positioning the microphone close to the sound source increases gain-before-feedback. See problem 6.
	MODE is set to MUSIC	Change the MODE to LIVE or SPEECH.
	Microphone position is too close to the front of the loudspeaker	Whenever possible setup the loudspeakers so the microphone is behind them. If using the loudspeaker in a monitor position, aim the loudspeaker to the back of the microphone.
7. DSP menu is locked	The Menu Lock function has been turned on.	Press and hold the MASTER VOL knob for 5 seconds.
8. Quick**Smart** Mobile app does not detect the loudspeaker	Enable Bluetooth®	Ensure Bluetooth® is enabled on the loudspeaker.

If these suggestions do not solve your problem, contact your nearest Electro-Voice dealer or Electro-Voice distributor.

10 Technical data

Frequency response (-3 dB)[1]:	43 Hz-20 KHz
Frequency range (-10 dB)[1]:	37 Hz-20 KHz
Maximum SPL[2]:	122 dB
Coverage (H x V):	120° x 40°
Amplifier rating:	1000 W
LF channel rating:	500 W
HF channel rating:	500 W
Crossover frequency:	200 Hz
Connectors:	6x XLR/TRS combo jack Input 1x 3.5 mm Input 1x Stereo RCA-type Input 1x 1/4" TRS Hi-Z input 1x 1/4" TRS Foot switch 1x XLR MIX Output 1x XLR AUX Output
Enclosure:	Sub: 15 mm plywood Column: Composite Pole: Aluminum
Grille:	Steel with black or white powder coat
Color:	Black or white
Dimensions (HxWxD): mm (in)	Sub: 530 x 345 x 471 (20.9 x 13.6 x 18.5) Column: 825 x 102 x 172 (32.5 x 4.0 x 6.9) Pole: 929 x 48.5 x 55 (36.6 x 1.9 x 2.2)
Net weight:	Sub: 44.66 lb (20.3 kg) Column: 10.34 lb (4.7 kg) Pole: 2.75 lb (1.25 kg) Sub cover: 0.9 lb (0.4 kg) Bag for column and pole: 1.87 (0.85 kg)
Shipping weight:	Sub box: 50.71 lb (23 kg) Column box: 18.30 lb (8.3 kg)
Power consumption[3]:	100-240 V AC, 50-60 Hz, 1.5-0.6 A

[1]Full-space measurement using music DSP preset.
[2]Maximum SPL is measured at 1 m using broadband pink noise at maximum output.
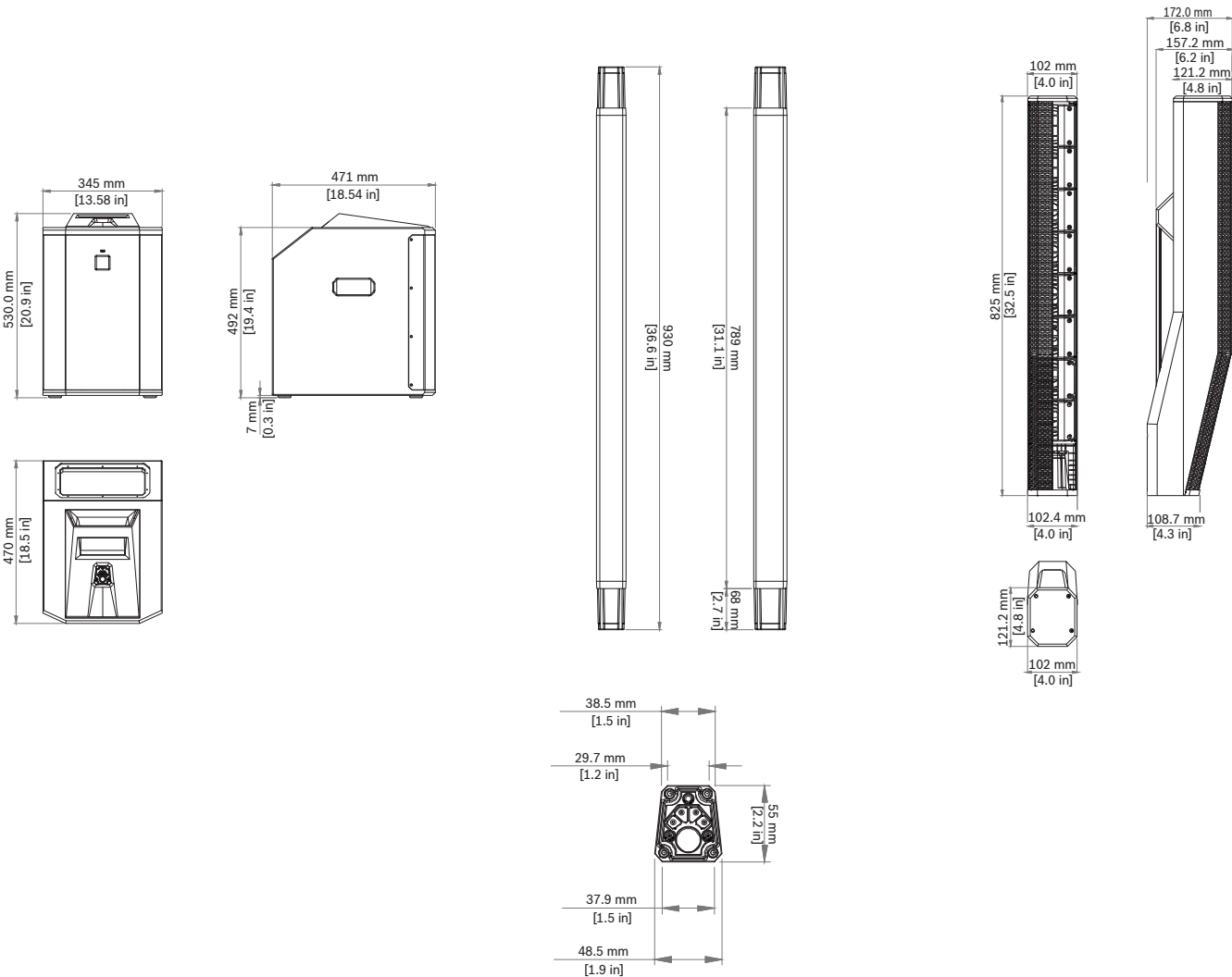[3]Current rating is 1/8 power.

10.1 Dimensions

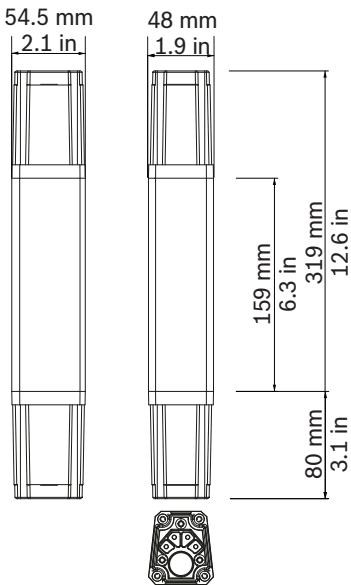**Figure 10.1: Dimensions EVOLVE (subwoofer left, spacer center, and column right)**

Figure 10.2: Dimensions EVOLVE short pole
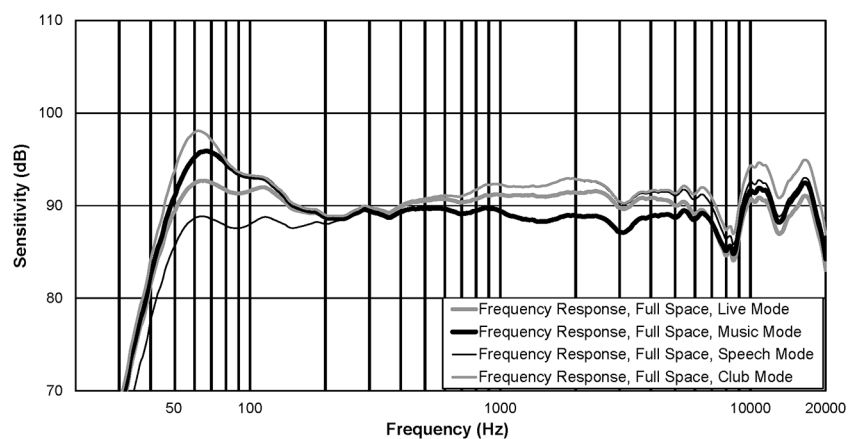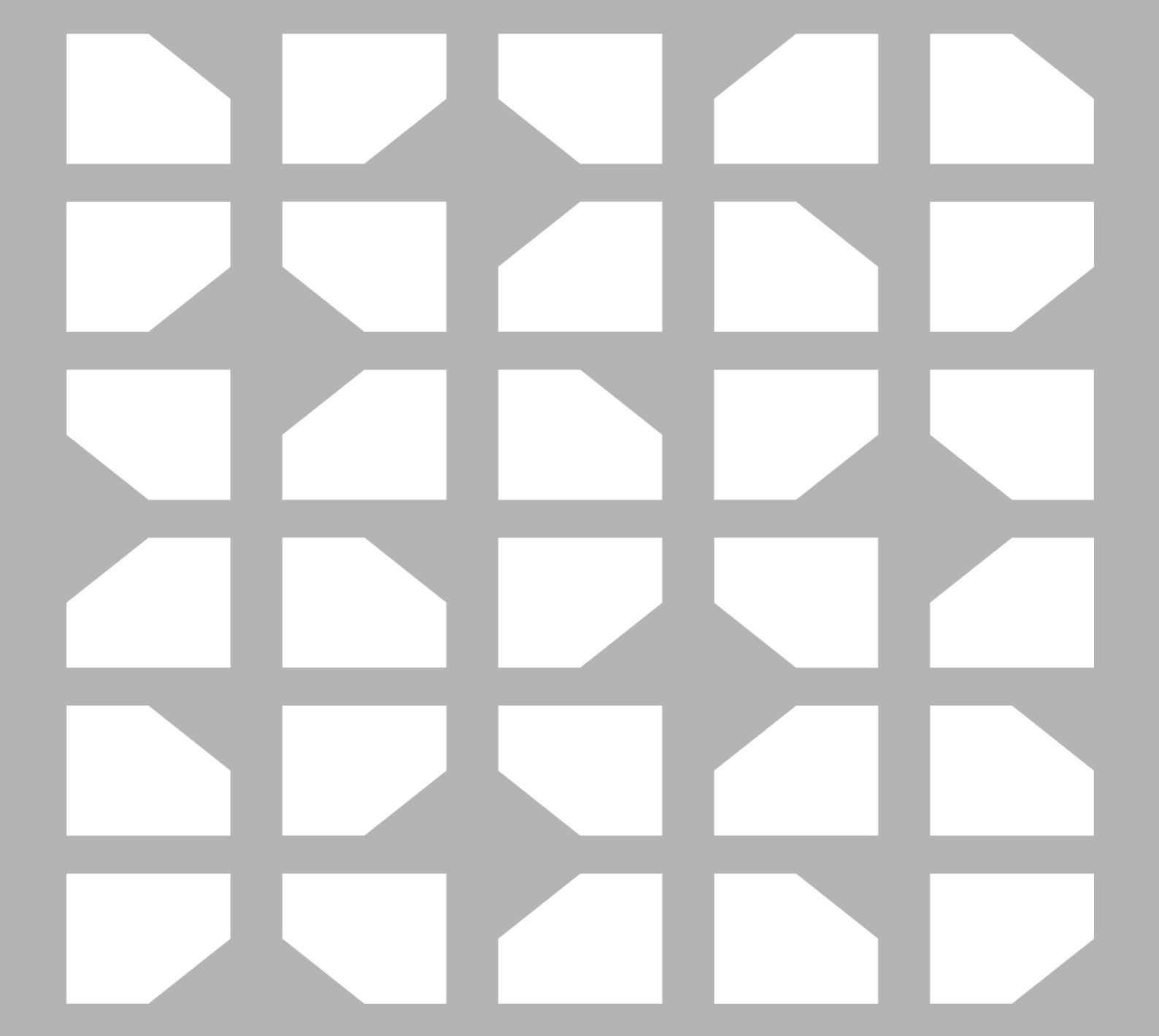
10.2 Frequency response

Figure 10.3: Frequency response EVOLVE (Live Mode, Music Mode, Speech mode, and Club Mode)