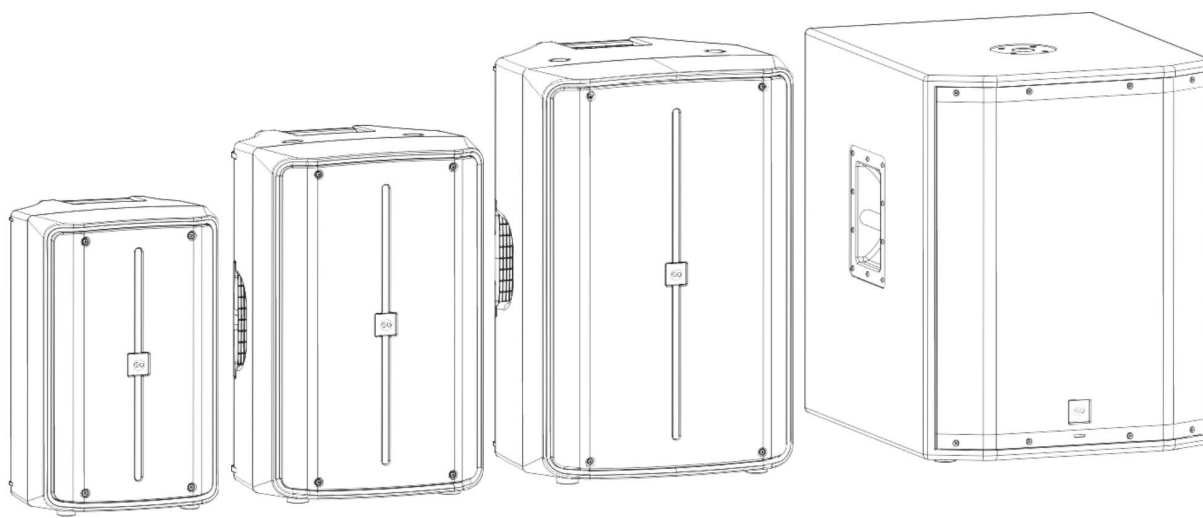




ECL SERIES

Active Loudspeakers and Subwoofer

ECL10.2 · ECL12.2 · ECL15.2 · ECL118S



ECL10.2

ECL12.2

ECL15.2

ECL118S

USER MANUAL

English

Read the safety information before use.

Important Safety Information

Read this section completely before connecting or powering an ECL Series loudspeaker or subwoofer. Keep this manual in a safe place and follow all warnings and operating instructions.

Symbols used on the product

Symbol	Meaning
Lightning flash in a triangle	Uninsulated dangerous voltage inside the enclosure may present a risk of electric shock.
Exclamation point in a triangle	Important operating and maintenance instructions accompany the product.
WARNING	A hazard that can cause fire, electric shock, injury, or hearing damage.
CAUTION	A condition that can damage the product or other equipment.

Important safety instructions

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 ventilation openings. Install according to the manufacturer's instructions.
8. Do not install near radiators, heat registers, stoves, or other equipment that produces heat.
9. Do not defeat the safety purpose of a polarized or grounding plug. A polarized plug has two blades, one wider than the other. A grounding plug has two blades and a third grounding prong. If the supplied plug does not fit the outlet, consult an electrician.
10. Protect the power cord from being walked on or pinched, especially at plugs, outlets, and where it exits the apparatus.
11. Use only attachments and accessories specified by the manufacturer.
12. Use only a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. Move a cart and apparatus carefully to prevent tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods.
14. Refer all servicing to qualified personnel. Service is required after damage to the cord or plug, liquid spills, objects entering the enclosure, exposure to rain or moisture, abnormal operation, or a fall.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Safety Precautions

Electrical safety and servicing

- Use only the supplied power cord and the voltage specified on the product's rating label. Check the voltage selector before connecting AC power.
- Keep the power cord away from heat. Do not bend it excessively, place heavy objects on it, or route it where someone could trip over it. Hold the plug, not the cord, when disconnecting power.
- Keep the AC outlet accessible. Do not handle a plug with wet hands, use the unit in damp conditions, or place liquid-filled containers on it.
- Do not open, disassemble, or modify the enclosure. There are no user-serviceable parts inside. Disconnect AC power before any service; fuse replacement must use the same type and rating.
- If the cord is damaged, sound stops unexpectedly, smoke or an unusual odor appears, or the unit is dropped or damaged, switch it off, unplug it, and have qualified personnel inspect it.

Installation and handling

- Use two or more people when lifting or moving the unit. Disconnect all cables before moving it.
- Place the unit on a stable surface. Use suitable, correctly rated mounting accessories. Never use the carrying handles to suspend a loudspeaker.
- Keep ventilation openings clear and allow at least 1 ft (30 cm) of space at the sides, rear, and above. Do not use the unit in a confined or poorly ventilated location.
- Avoid excessive dust, vibration, direct sunlight, extreme temperatures, and storage in a hot vehicle. Position the unit so its ventilation openings remain unobstructed.
- Keep fingers and foreign objects out of vents and ports. If an object enters the enclosure, switch off and unplug the unit, then contact qualified service personnel.
- Do not lean on the enclosure, place heavy objects on it, or apply excessive force to controls and connectors.

Connections and hearing protection

- Switch off all equipment before connecting cables. Set all volume controls to minimum before switching the system on or off. Use cables and accessories appropriate for the connected equipment.
- Switch powered loudspeakers on last and off first. Raise levels gradually. Avoid setting all equalizer controls and level controls to maximum.
- Do not operate with distorted sound or at a high, uncomfortable volume for extended periods. This can damage equipment and cause permanent hearing loss. If ringing or hearing loss occurs, consult a physician.
- Nearby phones, radios, televisions, or other electronic equipment may cause noise. Move them farther away if interference occurs.

Air movement from the bass-reflex ports during bass-heavy material is normal. Switch off the unit when it is not in use. The manufacturer is not responsible for damage caused by improper use or modification.

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About this manual

This manual covers the ECL10.2, ECL12.2, and ECL15.2 active full range loudspeakers and the ECL118S active subwoofer. Use the sections for your model when making connections or adjusting controls.

The numbered rear-panel drawings correspond to the control descriptions on the following pages. SBT wireless audio, TWS, microphone inputs, equalization, and DSP presets apply to the full range loudspeakers.

1. Introduction and Setup

1.1 Overview

Thank you for choosing Sound Barrier. The ECL Series combines powered full range loudspeakers with a dedicated powered subwoofer. This manual explains the controls, wired and wireless connections, safe setup, and routine operation of each model.

Model	Configuration
ECL10.2	10-inch two-way active loudspeaker
ECL12.2	12-inch two-way active loudspeaker
ECL15.2	15-inch two-way active loudspeaker
ECL118S	18-inch active subwoofer

1.2 Positioning and AC power

Place the equipment securely and keep ventilation openings clear. The enclosures have 35 mm pole-mount sockets; the ECL12.2 and ECL15.2 also have flying points. Any suspended installation must use suitable rated hardware and qualified personnel. Never suspend the cabinet from its handles.

Before connecting power, switch the unit off and check that the voltage selector matches the local supply and the product's rating label. This is a manually selectable supply. Do not assume that the voltage changes automatically.

1.3 Basic connection and startup

1. Turn off the source equipment and all powered loudspeakers. Set all level controls to minimum.
2. Connect a mixer or other line-level source to a full range loudspeaker input and select LINE. For a dynamic microphone, connect the microphone and select MIC. The ECL118S inputs accept line-level signals only.
3. If using an ECL118S, connect the source to INPUTS 1 and 2 as required, then connect its XLR outputs to the full range loudspeakers. Select CROSSOVER or LINK as described in Section 4.1.
4. Connect the supplied AC cords to correctly rated outlets. Switch on the sources and mixer first, then the powered loudspeakers and subwoofer.
5. Start the source and increase its level and the relevant speaker controls gradually. Reduce levels if clipping or distortion occurs.
6. For shutdown, reduce levels, switch off the powered loudspeakers and subwoofer first, then switch off the source equipment.

1.4 DSP and equalization

On the full range models, the DSP PRESETS button selects Flat (Standard), Vocal Boost, Live, or Monitor (Stage Monitor). The HI and LO controls adjust the overall treble and bass. Make moderate adjustments and listen for distortion or feedback.

2. Full Range Loudspeaker Rear Panel

ECL10.2 · ECL12.2 · ECL15.2

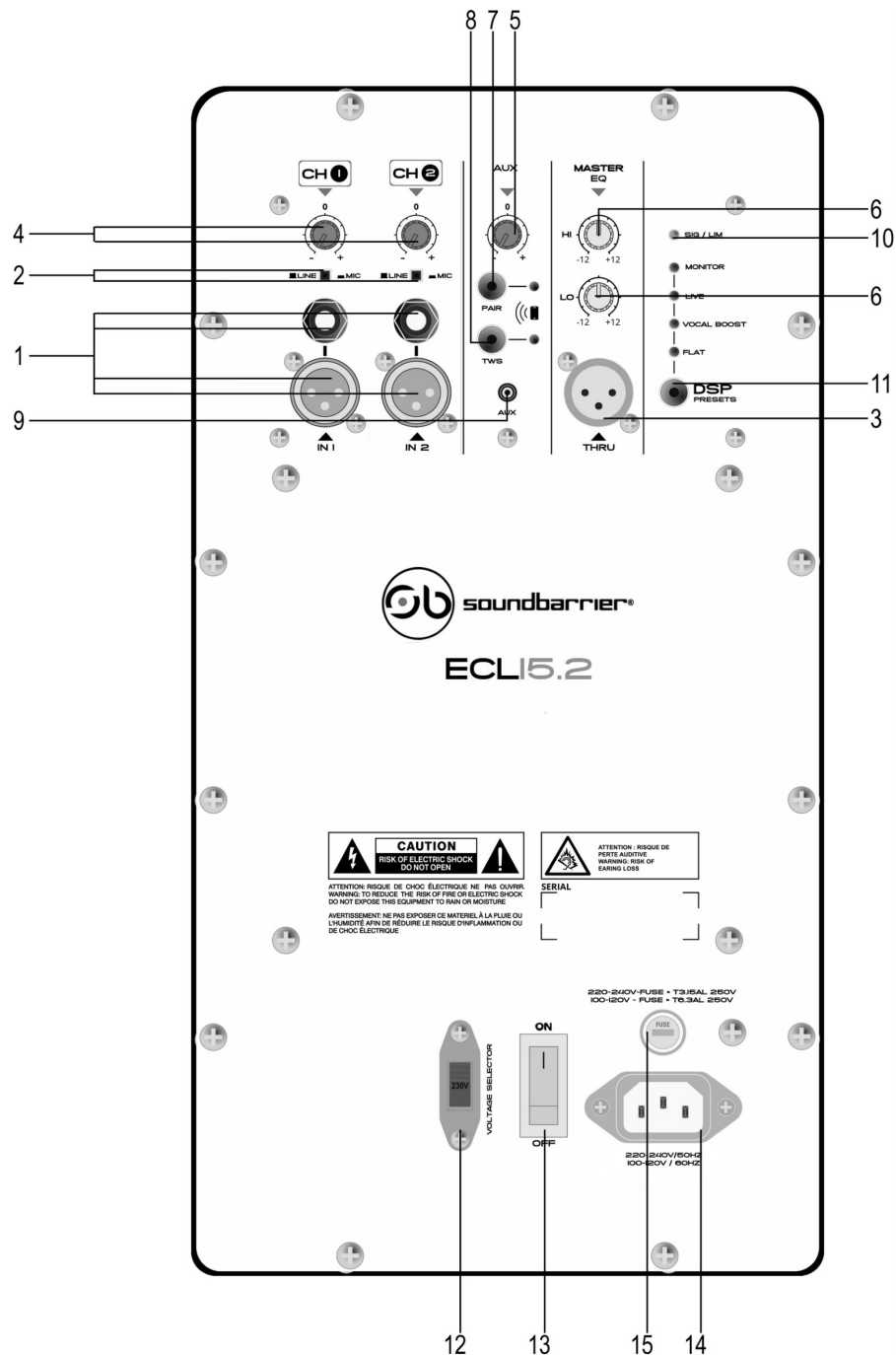


Figure 1. Full range loudspeaker rear panel with numbered controls

See Section 2.1 for the numbered control descriptions. The ECL15.2 panel is shown.

2.1 Controls and connections

No.	Control or connector	Function
1	MIC / LINE inputs	XLR and ¼-inch inputs for a dynamic microphone or an external source such as a mixer, player, laptop, or audio interface.
2	MIC / LINE switches	Select MIC for a microphone's low signal level. Select LINE for a line-level source. Reduce the channel level before changing the setting.
3	THRU / line output	Balanced XLR output for sending audio to another active loudspeaker or amplifier.
4	Channel volume	Adjusts the level of Channel 1 or Channel 2.
5	SBT / AUX volume	Adjusts wireless playback level. The illustrated panel labels this control AUX; the pairing instructions refer to the same control.
6	MASTER EQ HI / LO	Adjusts the overall high-frequency (treble) and low-frequency (bass) response.
7	PAIR	Pairs a compatible host device for SBT wireless audio. Hold for 2 seconds to begin pairing. See Section 3.
8	TWS	Links two ECL full range loudspeakers for True Wireless Stereo playback. See Section 3.
9	AUX input	3.5 mm mini-jack input for a compatible audio source.
10	SIG / LIM indicator	Shows signal activity and limiting. If limiting or distortion occurs, reduce the source and speaker levels. Continued clipping can damage the internal amplifier or cause the AC fuse to fail.
11	DSP PRESETS	Selects Flat (Standard), Vocal Boost, Live, or Monitor (Stage Monitor).
12	Voltage selector	Set to the correct AC supply voltage before connecting power. Follow the voltage and frequency marked on the product.
13	Power switch	Turns the loudspeaker on or off.
14	AC power inlet	Connect the supplied AC power cord here.
15	Fuse holder	Holds the fuse protecting the AC supply circuit. Disconnect power before service. Replace only with the same type and rating. If a replacement fuse fails, stop using the unit and contact qualified service personnel.

WARNING: Disconnect the AC plug before servicing. Do not open the enclosure or bypass the fuse.

3. SBT Wireless Audio and TWS

3.1 SBT wireless audio

Sound Barrier Technology (SBT) enables compatible host devices, such as smartphones, laptops, and turntables, to pair and stream audio wirelessly over short distances. Products featuring SBT do not utilize the patented Bluetooth SIG technology.

1. Turn on the Bluetooth function on the host device and set the loudspeaker's AUX level to minimum.
2. Hold the loudspeaker's PAIR button for 2 seconds. The blue PAIR LED should flash rapidly.
3. Refresh the host device's available-device list. Select ECL 10.2, ECL 12.2, or ECL 15.2, as appropriate for your model, and connect.
4. The blue PAIR LED remains steadily lit when the connection is established.
5. Start playback on the host and make sure its volume is above minimum. Slowly raise the loudspeaker's AUX level until the desired listening level is reached.

3.2 True Wireless Stereo

A single ECL loudspeaker combines the left and right channels of a wireless stereo signal. With two ECL full range loudspeakers, TWS allows wireless stereo playback from the same host device. Both loudspeakers must be connected to AC power and switched on.

NOTE: The loudspeaker paired to the host first becomes the left stereo speaker.

1. Pair the first loudspeaker to the host as described in Section 3.1. This is the left speaker.
2. Switch on the second loudspeaker and set its AUX level to minimum.
3. Hold PAIR on the second loudspeaker for 2 seconds. Its blue PAIR LED should flash rapidly.
4. Press TWS once on each loudspeaker. Both green TWS LEDs should flash rapidly.
5. Press TWS once more on the first loudspeaker. Both green TWS LEDs should remain steadily lit. The second loudspeaker's blue PAIR LED should turn off.
6. Start playback on the host and confirm that its volume is above minimum. Slowly raise the AUX level on both loudspeakers. The host device controls the playback volume for both.

SBT and TWS are available on ECL10.2, ECL12.2, and ECL15.2. The ECL118S uses wired line-level connections.

4. ECL118S Rear Panel

ECL118S active subwoofer

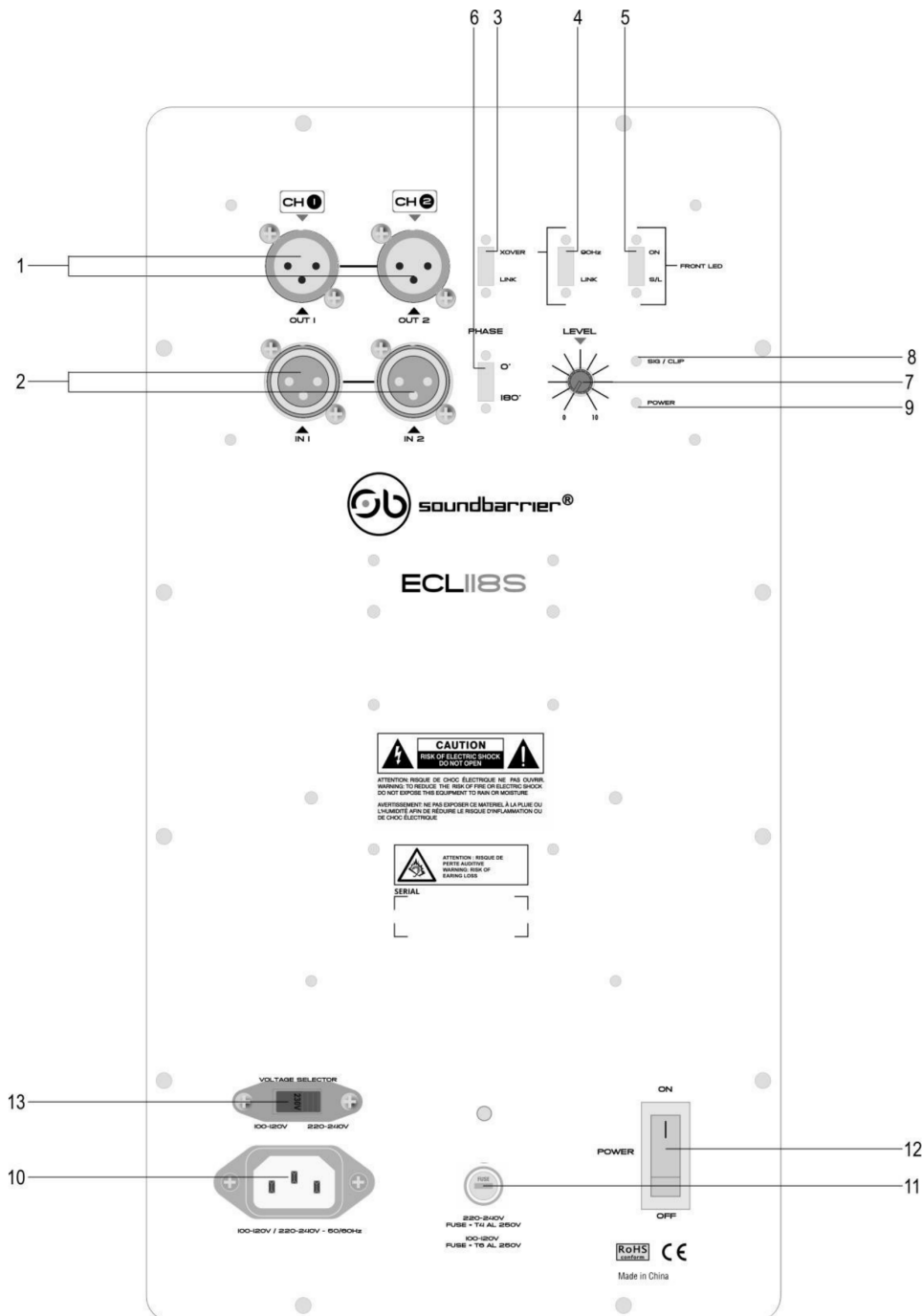


Figure 2. ECL118S rear panel with numbered controls

See Section 4.1 for the numbered control descriptions.

4.1 Controls and connections

No.	Control or connector	Function
1	OUTPUTS 1 and 2	Balanced XLR outputs. In CROSSOVER mode, they send the high-pass-filtered signal to full range loudspeakers. In LINK mode, they pass the input signals directly to the outputs.
2	INPUTS 1 and 2	Balanced XLR / TRS combination inputs for line-level signals from a mixer or another suitable source. The source may be stereo or mono.
3	CROSSOVER / LINK	Selects filtered output through the internal crossover or direct input-to-output linking.
4	90 Hz / 120 Hz crossover	Selects the crossover point. In CROSSOVER mode, the outputs feed the higher frequencies to the full range loudspeakers; the subwoofer reproduces the lower frequencies.
5	Front LED mode	ON: the front LED indicates power. S/L: the front LED indicates signal / limiting; reduce levels if it turns red or the sound distorts.
6	PHASE 0° / 180°	Selects normal polarity (0°) or reversed polarity (180°) for the subwoofer signal.
7	LEVEL	Adjusts the level of the subwoofer's internal loudspeaker.
8	SIG / CLIP indicator	Blue indicates an incoming signal. Red indicates clipping; reduce the signal level and the subwoofer level.
9	POWER indicator	Indicates that AC power is connected and the unit is switched on.
10	IEC AC power inlet	Connect the supplied AC power cord here.
11	Fuse holder	Holds the main AC fuse. Disconnect power before service. Replace only with the same type and rating. Repeated failure requires qualified service.
12	Power switch	Turns the subwoofer on or off.
13	Voltage selector	Set to the correct AC supply voltage before connecting power. Follow the voltage and frequency marked on the product.

Using the crossover outputs

Connect the ECL118S outputs to the LINE inputs of the full range loudspeakers. Select CROSSOVER and choose 90 Hz or 120 Hz to divide the frequency range between the subwoofer and the full range system. Select LINK when an unfiltered signal is required at the outputs.

5. Specifications

5.1 Full range loudspeakers

Specification	ECL10.2	ECL12.2	ECL15.2
RMS power	225 W LF + 75 W HF	300 W LF + 100 W HF	300 W LF + 100 W HF
Peak power	900 W LF + 300 W HF	1,200 W LF + 400 W HF	1,200 W LF + 400 W HF
Amplifier design	LF Class D HF Class AB	LF Class D HF Class AB	LF Class D HF Class AB
Frequency range	60 Hz–20 kHz	55 Hz–20 kHz	45 Hz–20 kHz
Maximum SPL	123 dB	125 dB	126 dB
LF driver	10-inch woofer 1.5-inch voice coil	12-inch woofer 2-inch voice coil	15-inch woofer 2.5-inch voice coil
HF driver	1-inch exit 1-inch voice coil Compression driver	1-inch exit 1.35-inch voice coil Compression driver	1-inch exit 1.35-inch voice coil Compression driver
Driver impedance	LF 4 Ω / HF 8 Ω	LF 4 Ω / HF 8 Ω	LF 4 Ω / HF 8 Ω
Wired inputs	Balanced XLR / 6.35 mm TRS; 3.5 mm AUX	Balanced XLR / 6.35 mm TRS; 3.5 mm AUX	Balanced XLR / 6.35 mm TRS; 3.5 mm AUX
Wired output	Balanced XLR	Balanced XLR	Balanced XLR
Wireless audio	SBT with TWS	SBT with TWS	SBT with TWS
Signal processing	DSP	DSP	DSP
DSP presets	Flat / Vocal Boost / Live / Monitor	Flat / Vocal Boost / Live / Monitor	Flat / Vocal Boost / Live / Monitor
Equalization	Bass and treble	Bass and treble	Bass and treble
Enclosure	HPP molded cabinet	HPP molded cabinet	HPP molded cabinet
Mounting	35 mm pole socket	35 mm pole socket; flying points	35 mm pole socket; flying points
Dimensions	15.6 × 14.4 × 22.2 in 395 × 365 × 565 mm	18.1 × 16.9 × 26 in 460 × 430 × 660 mm	20.9 × 19.7 × 30.1 in 530 × 500 × 765 mm
Weight	26.5 lb / 12 kg	38.6 lb / 17.5 kg	49 lb / 22.2 kg
AC power	100–120 VAC, 60Hz / 220–240 VAC, 50Hz Switchable		

LF = low frequency. HF = high frequency. Driver impedance refers to the internal drivers. Preset names follow the illustrated panel: Flat is Standard; Monitor is Stage Monitor.

5.2 ECL118S subwoofer

Specification	ECL118S
RMS power	600 W
Peak power	2,400 W
Amplifier design	Class D with switching power supply
Frequency range	35–150 Hz
Maximum SPL	125 dB
LF driver	18-inch woofer with 3-inch voice coil
Driver impedance	8 Ω
Inputs	2 balanced XLR / TRS line-level inputs
Outputs	2 balanced XLR line outputs
Output modes	CROSSOVER or LINK
Crossover frequencies	90 Hz or 120 Hz
Phase / polarity	0° or 180°
Indicators	Power and signal / clip; selectable front LED mode
DSP / EQ / wireless	Not applicable
Enclosure	Plywood with black painted finish
Mounting	35 mm pole-mount socket
Dimensions	29.1 × 25 × 30.1 in 740 × 635 × 765 mm
Weight	97 lb / 44 kg
AC power	100–120 VAC, 60Hz / 220–240 VAC, 50Hz Switchable

The internal 8 Ω driver is powered by the built-in amplifier. Connect external source equipment to the line-level inputs and use the XLR outputs for onward connections.

6. Troubleshooting and Maintenance

6.1 Troubleshooting

Symptom	What to check
No sound	Check that the AC cord is secure, the outlet is live, and the unit is switched on. Confirm input connections, source playback, and source volume. Raise the relevant input level from minimum.
Hum or buzz	Check the source and all signal connections. Lower levels before disconnecting or reconnecting a microphone. Try a known-good cable or connector. Move nearby phones or other sources of interference away.
Microphone is quiet or silent	Confirm that the microphone or wireless microphone system is switched on. Select MIC on the relevant full range loudspeaker input. Adjust the speaker channel level and the microphone system's output level.
Microphone feedback or distortion	Reduce the microphone and speaker levels. Move the microphone away from the loudspeaker and out of its direct sound path. Reduce the HI equalizer control if needed.
Intermittent or distorted sound	Reduce input and speaker levels if the SIG / LIM or SIG / CLIP indicator shows overload. Check the source for clipping. Try a known-good cable and confirm that all connections are secure.
No wireless playback	Check the host connection, playback, and volume. Confirm the blue PAIR LED is steady and raise the AUX control gradually. Repeat the pairing procedure in Section 3 if needed.
Only one TWS speaker plays	Confirm power and AUX levels on both speakers. Repeat the TWS procedure in Section 3. Both green TWS LEDs should be steady after linking.

6.2 Cleaning and service

Switch off and unplug the equipment before cleaning. Clean with a dry cloth and keep ventilation openings clear. Do not open the enclosure or attempt internal repairs. Switches, level controls, and connectors wear over time; have defective parts inspected by qualified service personnel.

If a fuse fails repeatedly, or the unit remains faulty after the checks above, stop using it and contact your dealer or qualified service personnel. Provide the model, serial number, and a description of the problem.

WARNING: Stop using and unplug the equipment immediately if it emits smoke or an unusual smell, becomes damaged, or has liquid or foreign objects inside.

7. Warranty

7.1 Warranty Coverage & Registration

This product includes a 1-year standard limited warranty, extended to 3 years total at no additional cost when the product is registered within 90 days of purchase. Proof of purchase is required. Statutory consumer rights are not affected.

Register your product at soundbarrier.com/warranty. For complete warranty details, please visit <http://www.soundbarrier.com/warranty>.