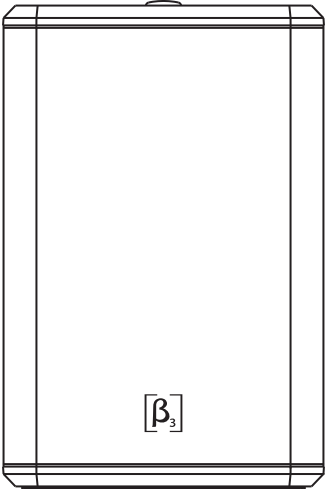


# Beta Three

# MB3 Magic Box

*Three Way Active Portable PA*



# Owner's Manual

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# Section 1: Important Safety Instructions

Read and retain all safety instructions before operating this product. Failure to follow these precautions may result in injury, electric shock, or equipment damage.

## GENERAL WARNINGS

1. **Read and retain** all instructions for future reference.
2. **Heed all warnings** printed on the product and in this manual.
3. **Operate responsibly:** This loudspeaker is capable of producing sound pressure levels that may cause permanent hearing damage. Set levels appropriately.
4. **Do not modify** or attempt to service internal components. Refer servicing to qualified technicians only.
5. **Maintain supervision:** Do not operate unattended in public or unsupervised venues.

## POWER & GROUNDING

1. **Connect power** only to rated voltage: 100 - 240V AC, 50/60 Hz.
2. **Use grounded outlets** and verify proper earth connection before switching ON.
3. **Do not use** damaged cords or plugs. Replace immediately if insulation or connectors are worn.
4. **Route power cables** to prevent tripping, pinching, or strain on the inlet connector.
5. **Disconnect from mains** during lightning storms, long periods of non-use, or before cleaning or service.
6. **Do not overload** wall outlets or power strips; risk of fire or electric shock.
7. **Never defeat** the safety purpose of polarized or grounding-type plugs.

## VENTILATION & ENVIRONMENT

1. **Provide airflow:** Do not block ventilation openings. Maintain at least 50 mm clearance around all sides.
2. **Avoid moisture:** Do not expose to rain, dripping, or splashing.
3. **No objects or liquids:** Do not place containers filled with liquid (e.g., vases, beverages) on or near the product.
4. **Operate within limits:** Ambient temperature 0°C–40°C (32°F–104°F), relative humidity < 85%.

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5. **Avoid heat:** Keep away from radiators, heat registers, stoves, or other equipment that produce heat.

## MECHANICAL & HANDLING

1. **Use correct lifting technique:** This product weighs approximately 7.5 kg. Use two hands when lifting.
2. **Transport securely:** Use padded bags or cases when moving between locations.
3. **Mount safely:** Use only manufacturer-approved stands, pole mounts, or suspension hardware rated for a Working Load Limit (WLL) of at least 10 kg. Verify stability before operation.
4. **Inspect before use:** Check locking pins, handles, and pole sockets for damage or looseness.
5. **Do not stack** multiple units unless specifically permitted by manufacturer instructions.
6. **Keep area clear:** Prevent obstruction around speaker base or stand legs to avoid tipping hazards.

## BATTERY & CHARGING SAFETY

1. **Charge indoors** in a dry environment, between 10°C–30°C (50°F–86°F).
2. **Use only** the supplied AC power cable and charger circuit integrated in the product.
3. **Do not short-circuit** battery terminals or expose to metal objects.
4. **Do not puncture, crush, or incinerate** the internal battery pack.
5. **Unplug during storage:** Store partially charged (40–60%) if unused for more than 3 months.
6. **Dispose responsibly:** Follow local regulations for lithium battery disposal or recycling.

## HEARING SAFETY

1. **High SPL Warning:** Exposure to sound pressure levels above 85 dB SPL can cause hearing loss.
2. **Avoid proximity:** Do not position ears or microphones directly in front of HF drivers at close distance.
3. **Use protection:** Musicians and technicians should wear earplugs during prolonged exposure.

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## MAINTENANCE & SERVICE

1. **Inspect regularly:** Check cables, connectors, and mounting hardware before each use.
2. **Clean externally:** Disconnect power and wipe with a dry, soft cloth. Do not use solvents or sprays.
3. **Service intervals:** Have the product inspected annually by qualified service personnel.
4. **Replace parts:** Only with manufacturer-approved components. Substitutions may impair safety.

## SYMBOLS & MARKINGS

1. CAUTION - RISK OF ELECTRIC SHOCK: Do not remove the cover. No user-serviceable parts inside. Servicing should be performed by qualified personnel only.
2. CAUTION – REFER TO MANUAL: Read all safety and service information before use.



3. WEE DIRECTIVE: Dispose of electronic equipment and batteries through authorized collection points according to local regulations.



## MANUFACTURER RESPONSIBILITY DISCLAIMER

1. BETA THREE is not responsible for damage, malfunction, or injury resulting from improper installation, operation, or maintenance of this product.
2. Use this equipment only as described in the accompanying documentation. Unauthorized modifications, repairs, or the use of accessories not specified by the manufacturer may void the warranty and compromise safety compliance.
3. The operator is responsible for maintaining safe sound pressure levels, stable mounting, and adherence to all applicable electrical and mechanical safety standards in their region.

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## Section 2: Overview

Thank you for purchasing the BETA THREE Magic Box MB3.

This product represents BETA THREE 's commitment to reliable, high-performance sound systems developed for both professional and prosumer users. Each unit is tested and calibrated to deliver consistent acoustic performance in demanding environments.

The BETA THREE Magic Box MB3 is a compact, battery-powered, 3-way active loudspeaker system designed for musicians, performers, and mobile sound applications. It combines lightweight portability with long battery life and flexible placement configurations.

The system provides professional acoustic performance suitable for live sound, rehearsal, and small venue reinforcement.

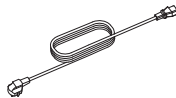
## Section 3: Key Features & Highlights

- **True 3-Way Design:** 8" woofer, 5" midrange, 1" HF coaxial driver.
- **Battery Operation:** Up to 8 hours continuous use (typical).
- **Amplifier Power:** 200 W RMS / 400 W program / 800 W peak.
- **Multiple Inputs:** 3 × XLR/TRS combo, 3.5 mm AUX, Bluetooth playback.
- **Flexible Placement:** Upright, tilt-back, or pole-mount operation.
- **Compact Design:** 7.5 kg enclosure with integrated handle for portability.

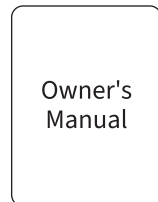
## Section 4: Package Contents



MB3 Magic Box  
Loudspeaker (1 pc)



AC Power Cable (1 pc)



Owner's Manual

NOTE: Optional accessories include padded carry bag; 35 mm speaker stand; sub-top pole.

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# Section 5: System Setup

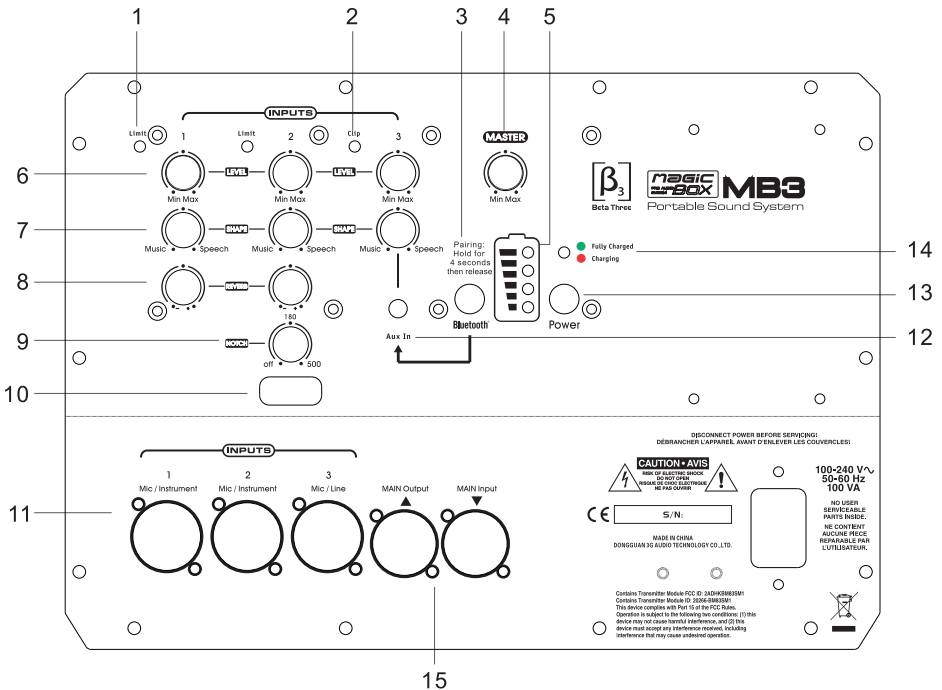
## CONNECTIONS & CONTROLS

### Inputs:

- CH1 to CH3 use XLR/TRS combo inputs (mic or line level). Accepts balanced XLR (microphones) or 1/4" TRS/TS (instruments).
- A 3.5 mm AUX input (sums stereo to mono) allows connection to phones, tablets, or players.
- Bluetooth® input supports wireless playback or TWS pairing with a second MB3 unit.

### Routing & System:

- XLR MAIN IN accepts signal feed from an external mixer or another MB3.
- XLR MAIN OUT (THRU) passes the full mix to another powered speaker for expansion.
- Front panel includes Master volume, DSP section (Reverb, Notch), Shape mode switch (Music/Speech), and battery/charge indicators.
- Rear panel includes Power switch and IEC mains inlet.

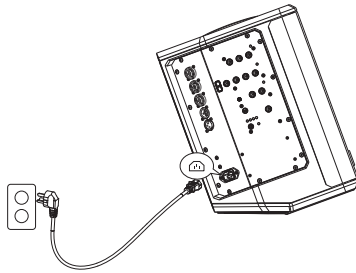


No.	Control / Connector	Function
1	<b>LIMIT Indicator</b>	Lights when internal limiter is active. Indicates output protection.
2	<b>CLIP Indicator</b>	Warns of input overload. Reduce gain if lit continuously.
3	<b>Bluetooth® Button</b>	Press and hold 4 seconds to enter pairing mode. Blue LED flashes while pairing.
4	<b>MASTER</b>	Controls overall output level.
5	<b>POWER LED</b>	Illuminates when the unit is ON.
6	<b>LEVEL (CH1-CH3)</b>	Adjusts input gain per channel. Turn clockwise to increase.
7	<b>SHAPE Switch</b>	Selects EQ preset: Music for full-range playback, Speech for vocal clarity.
8	<b>REVERB Knob</b>	Adds adjustable ambience to CH1-CH2. Increase until the vocal sits comfortably; too much reduces intelligibility. Set to minimum for dry signal.
9	<b>NOTCH Filter</b>	Sweep to locate the feedback frequency, then cut until ringing stops. Reposition microphones first; apply Notch as the final corrective step.
10	<b>MIC/INST Switch</b>	Selects input sensitivity for CH1-CH2(Mic or Instrument).
11	<b>CH1-CH3 Combo Inputs</b>	Accepts XLR or ¼" TRS plugs. Use CH1/CH2 for mic/instrument; CH3 for line-level.
12	<b>AUX IN (3.5 mm)</b>	Connect stereo device; summed to mono internally.
13	<b>POWER Switch</b>	Turns the unit ON or OFF.
14	<b>CHARGE Indicator</b>	Green = battery full, Red = charging.
15	<b>MAIN IN / MAIN OUT (XLR)</b>	Link from or to another device.MAIN OUT passes full-range mix.

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## CONNECTING POWER

- **Connect Power:** Insert AC cord firmly into the inlet; verify ground continuity.
- **Switch ON:** Use the power switch on the rear panel. Power LED will illuminate.
- **Operating Time:** Up to 8 hours depending on playback level.
- **Charging:** Connect AC mains. Indicator lights RED during charging, GREEN when full.
- **Battery Maintenance:** Charge monthly when not in use to preserve battery health.



## CHARGING THE BATTERY

- **Quick Charge:** Connect AC power. The charge indicator shows progress. You can operate at moderate levels while charging.
- **Battery Life Indicator:** A multi-segment LED indicates approximate remaining capacity. For best life, avoid deep discharge and high-heat environments.

## CONNECTING SOURCES

### Channels 1 & 2 — Microphone / Instrument Inputs

1. Connect a microphone or instrument to the **CH 1** or **CH 2 XLR/TRS combo** socket.
    - Use XLR for microphones.
    - Use ¼" TRS/TS for guitars, keyboards, or other instruments.
  2. **Select Mic or Instrument** using the input toggle switch (located beside each input).
  3. Gradually **raise LEVEL** while speaking or playing. Stop when the **CLIP LED** flashes only on peaks.
  4. Adjust **REVERB** and **NOTCH** controls for each channel:
    - **REVERB** adds ambience for vocals or instruments.
    - **NOTCH** attenuates narrow feedback frequencies—use when microphones are close to speakers.
-

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5. Use the **SHAPE** switch to choose EQ preset:
    - **MUSIC** – Full-range tone for playback or instruments.
    - **SPEECH** – Mid-focused response for clarity in spoken voice.

### Channel 3 — Line / Aux Input

1. Connect a line-level source (mixer, keyboard, or audio player) to **CH 3 XLR/TRS**.
2. Alternatively, use the **3.5 mm AUX input** for smartphones or tablets (stereo summed to mono).
  - Set the device volume around 70 %.
  - Fine-adjust using MB3's MASTER control.

### Bluetooth® Audio

1. Press and hold the **Bluetooth Pair** button for ≈ 4 seconds until the indicator flashes.
2. Open your device's Bluetooth menu and select "**MB3 Magic Box.**"
3. When paired successfully, the indicator stays solid.
4. Playback from your device begins automatically.
  - Set the device volume around 70 %.
  - MB3 supports **A2DP profile** for stereo audio; connected device controls play/pause and track skip via **AVRCP**.

### Linking Multiple Units (Daisy-Chain or TWS)

- Use **XLR MAIN OUT → MAIN IN** to link another MB3 or powered speaker for extended coverage.
- For wireless stereo, pair two MB3 units via **Bluetooth TWS mode** (see Section 6).

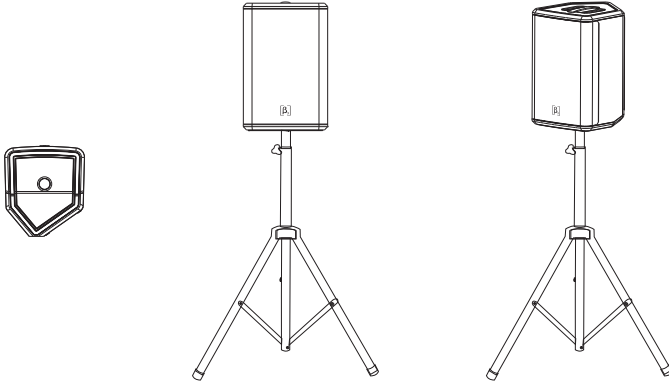
### Connection Checklist

- **Power OFF** before inserting or removing any XLR/TRS plugs.
- Use **balanced cables** for longer runs to minimise hum.
- Avoid using Bluetooth and AUX inputs simultaneously.
- Confirm **CLIP** indicator does not remain lit during operation.

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## USING A SPEAKER STAND

Use a 35 mm stand with a load rating exceeding the MB3 weight. Raise the HF to ~2–2.2 m and angle slightly toward the audience. Ensure the stand is level and stable.

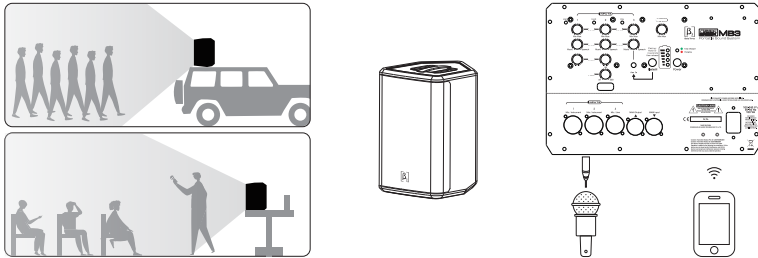


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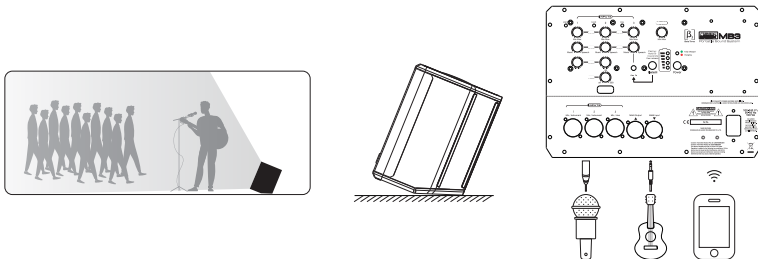
## Section 6: System Configurations

MB3 Magic Box supports multiple placements for optimal coverage and monitoring:

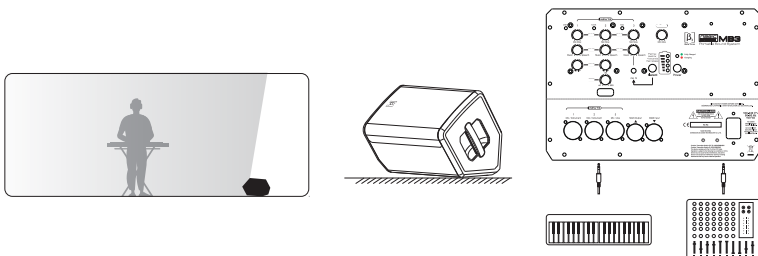
**Elevated Surface** — CH1 vocal mic, CH2 guitar DI; Bluetooth® for background playback. Place on a table/riser; tilt slightly toward the audience.



**Tilt-Back** — monitor orientation for singer-songwriter practice; use Notch to remove feedback.

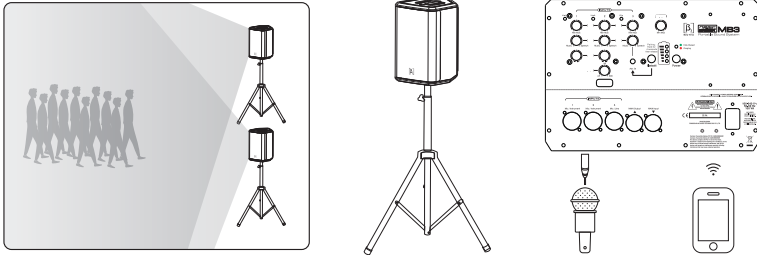


**Monitor** — feed from mixer into XLR MAIN IN; use Master for on-box trim.

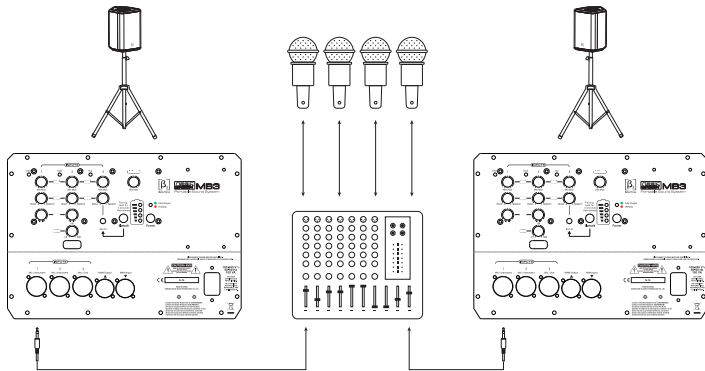


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**Speaker Stand** — stand-mounted coverage for small venues; link a second MB3 via XLR MAIN OUT for wider area.



**General Purpose PA** — stereo via a small mixer (Left to MB3 A, Right to MB3 B) or dual -mono using Main Out daisy-chain.

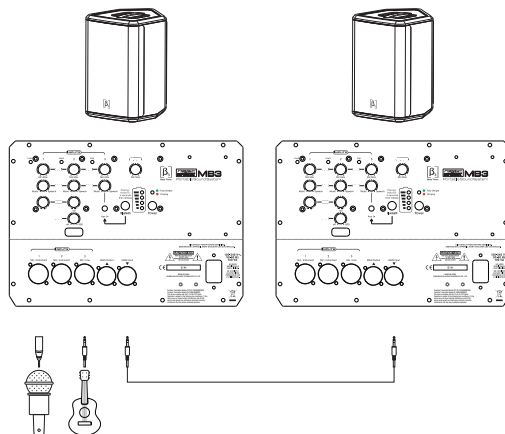


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## Dual Mono / Daisy Chain (XLR Link):

- Connect your microphone or instrument to **MB3 A (Primary Unit)**.
- Use an **XLR cable** from **MAIN OUT** of MB3 A → **MAIN IN** of MB3 B.
- Both speakers will reproduce the same mixed signal (mono).
- Adjust each unit's **MASTER** control for local volume balance.
- When possible, keep XLR cable length below 10 m for lowest noise.

**TIP:** This setup is ideal for covering **wider audience areas** or **larger indoor rooms** without requiring a mixer.



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## TWS Stereo (Bluetooth Wireless)

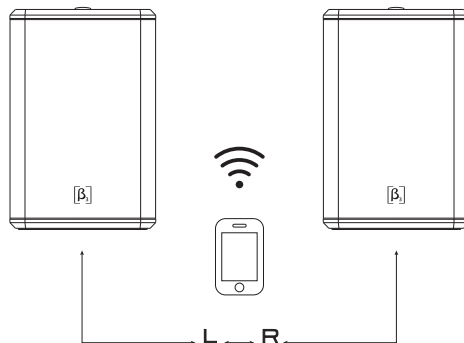
Use this configuration to **create a wireless stereo pair** using two MB3 units.

1. Power ON the Left unit (Primary).
2. Press the Bluetooth button once on the Left unit to turn on Bluetooth.
3. Press and hold the Bluetooth button for 4 seconds until the indicator starts flashing.
4. Now open Bluetooth on your phone (or any Bluetooth device) and search for “MB3”.
5. Tap “MB3” on your phone to connect.
6. When music plays correctly, the Bluetooth connection is confirmed.
7. Power ON the Right unit (Secondary).
8. Press the Bluetooth button once on the Right unit to turn on Bluetooth.
9. Double-press the Bluetooth button on the Left (Primary) unit.
10. Double-press the Bluetooth button on the Right (Secondary) unit.
11. The two units will automatically pair and TWS stereo mode will activate.

**TIP:** This configuration provides **true stereo separation** with wireless convenience — ideal for cafés, home rehearsals, or small events where cables are not practical.

### NOTES:

- Maintain a line-of-sight distance under **10–15 m** between the two units.
- Only MB3 Left unit (Primary) connects to your Bluetooth device; MB3 Right unit (Secondary) receives wirelessly.
- TWS operation supports **SBC / AAC codec, A2DP** and **AVRCP** profiles.



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## Section 7: Care & Maintenance

**Battery Service** — Battery replacement must be performed by qualified personnel or authorized Beta Three service centers only. Do not open or modify the battery compartment. Improper handling may cause fire, explosion, or injury.

**Charging** — Always charge the speaker with the supplied AC power cord. Avoid full discharge storage. Disconnect after charging to prevent standby drain.

**Cleaning** — Wipe the cabinet and grille with a dry, lint-free cloth. Do not use alcohol, solvents, or pressurized air. Keep vent openings free of dust and blockage.

**Thermal / Limiter Protection** — If the protection indicator lights continuously, reduce output level and improve airflow. Avoid covering the rear panel or vents during operation.

**Storage** — Store in a dry, ventilated place between 10–40 °C. Charge the battery every three months during long storage.

## Section 8: Troubleshooting

Issue	Possible Cause / Action
No Power	Verify AC outlet and cable. Confirm rear power switch is ON. Battery may be fully discharged — connect to AC for 15 min and retry.
No Sound	Check input cables and gain controls. Confirm source is active. Raise Master level gradually.
Distorted Sound	Reduce channel gain or input level. Check that clip indicators are not lighting.
Feedback (Howling)	Move microphone behind the speaker, lower mic gain, or apply Notch filter.
Bluetooth Not Pairing	Keep source within 1–2 m. Clear Bluetooth list, re-pair the device. Only one device can be connected at a time.
Battery Not Charging	Verify AC input and switch position. Avoid charging in high temperatures; allow battery to cool before recharging.
Hum or Noise	Use balanced XLR/TRS cables. Keep signal and power cables separated. Avoid daisy-chaining unbalanced cables.

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## Section 9: Specifications

### Acoustic Performance

Frequency Response (-10dB):	65Hz – 18kHz
Maximum SPL (1m):	110dB (Continuous) / 116dB (Peak)
Dispersion (H × V):	90° × 90°

### Transducers

Low Frequency (LF):	1 × 8" driver
Impedance (LF):	2Ω
Power Rating (LF):	100W
Mid / High Frequency (MF / HF):	1 × 5" coaxial driver
Impedance (MF / HF):	4Ω
Power Rating (MF / HF):	50W + 50W

### Inputs & Connectivity

Connector Types:	XLR input, 3.5mm input, XLR output
Input Types:	3 × XLR/TRS inputs, 1 × 1/4" line input, 1 × XLR main input, 1 × XLR main output, Bluetooth input
Input Impedance (Line):	Balanced 2kΩ
Input Impedance (Monitor):	Balanced 2.7kΩ
Input Source EMF (200Hz):	0.87Vrms ±10%
Input Overload Source EMF:	>8 times rated source EMF

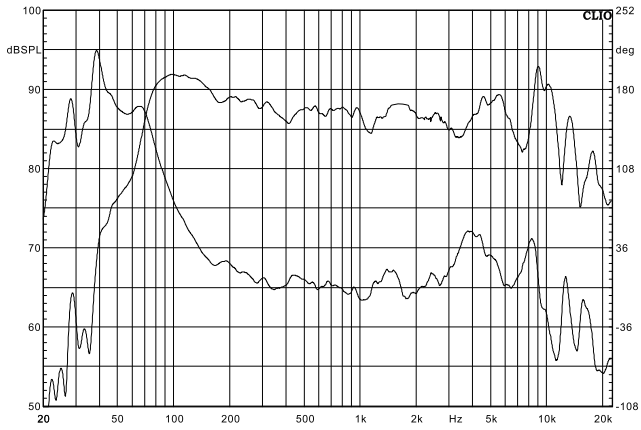
### Electrical and Power

Power Requirement:	100–240V~, 50/60Hz
Power Consumption (Static):	<40W
Cooling Method:	Aluminum back panel

### Mechanical Data

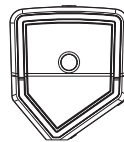
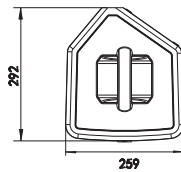
Dimensions (W × D × H):	259 × 292 × 390mm (10.2 × 14.5 × 15.4in)
Packing Dimensions (W × D × H):	360 × 330 × 465mm (14.2 × 13 × 18.3in)
Net Weight (N.W.):	7.5kg (16.5lb)
Gross Weight (G.W.):	8.8kg (19.4lb)
Mounting / Handling:	Handle on top

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Top View

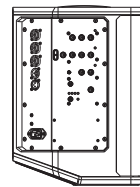
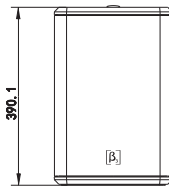
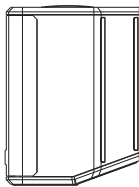
Bottom View



Side View

Front View

Rear View



## Contact Service

If the issue persists after the above steps, disconnect the unit and contact an authorized **BETA THREE Professional Audio Systems** service center or local distributor. Do not attempt to disassemble or repair the product yourself. Unauthorized servicing voids the warranty.



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