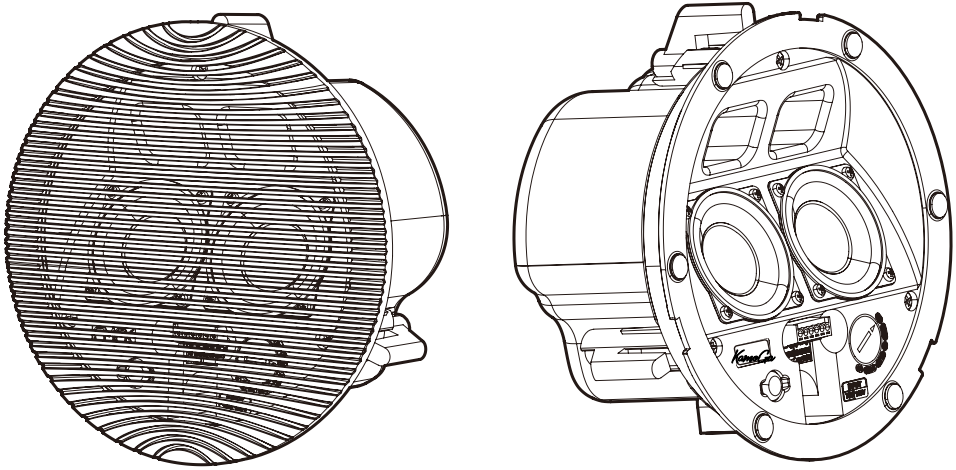
KamoGa

Starlet Eclipse

In-Ceiling Speaker



Thank you for choosing the KamoGa Starlet Eclipse. This user manual covers the safety information, installation and operating instructions, and technical specifications of the KamoGa Starlet Eclipse in-ceiling speaker. Please read this manual carefully before using the product, observe the safety precautions and operate the product correctly. We recommend that you keep this manual for future reference.

User Manual

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Safety Information

Thank you for purchasing this ceiling speaker system. Please read the following safety information carefully before using this product. It is intended to draw your attention to certain operations and precautions. Failure to follow it correctly may result in injury or safety hazards.

Warning:

- This product is intended for indoor use and is not suitable for outdoor environments;
- Do not place open flame sources (such as lit candles) on or near this product;
- When using this product, comply with local and industry regulations. The installer is responsible for ensuring that the speaker installation and the system installation comply with applicable building codes or regulations;
- Unsafe installation or suspension of heavy objects may cause serious personal injury and equipment damage. The installer is responsible for assessing the reliability of the installation method used;
- Do not install this product near any heat source, such as radiators, heat regulators, stoves, or other equipment that produces heat (including amplifiers);
- This product contains small parts that may pose a choking hazard and is not suitable for children under 3 years of age;
- This product contains magnetic materials. If you suspect that it may affect an implanted medical device, consult your doctor or the device manufacturer in advance;
- Do not modify the speaker or its accessories. Unauthorized modifications may adversely affect the safety, compliance and performance of the system;
- The Company accepts no liability arising from improper installation of this product, nor for personal injury or product damage caused by improper installation or by the speaker falling. Cables connected to this product and their routing must comply with local building and safety regulations;
- If water enters the product by accident or any other abnormal condition occurs during use, immediately disconnect the cables connected to the unit and contact your local dealer for advice on how to proceed. Do not disassemble this product yourself; doing so may damage it.

Note: The Company reserves the right to change the design and specifications in the course of product improvement, without further notice.

Warranty Card **QC Passed**

Serial No.:

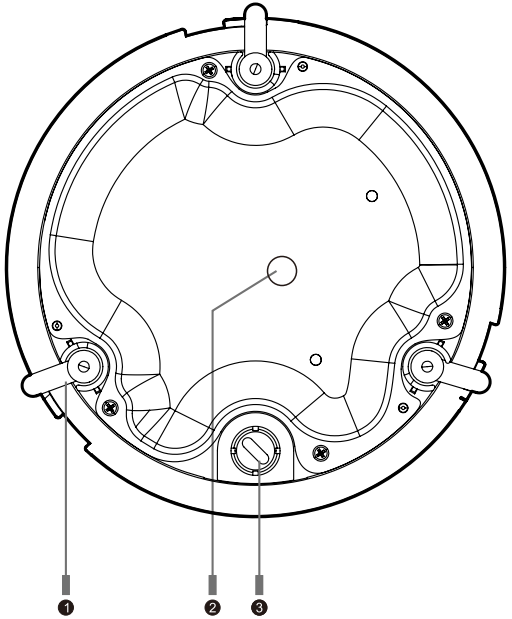
Product: _____ Model: _____

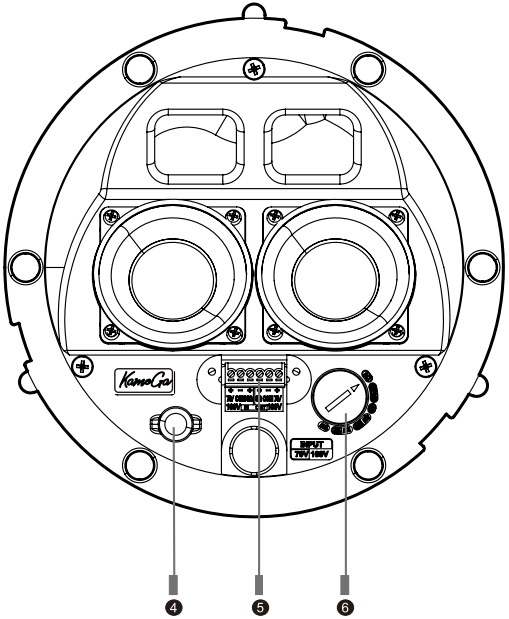
Sold on: _____ Y ____ M ____ D Invoice no.: _____

Customer: _____ Tel.: _____

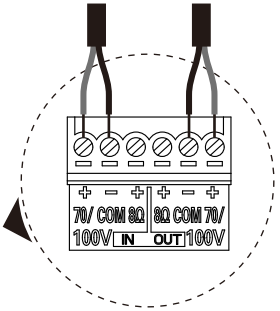
Address (ZIP): _____

Function Description

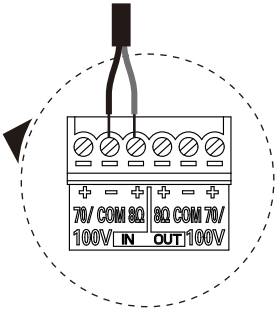




Terminal marking definitions



70/100V



8Ω

❶ Rotating screw clamp ×3 pcs

❷ M8×8 mm threaded safety hole

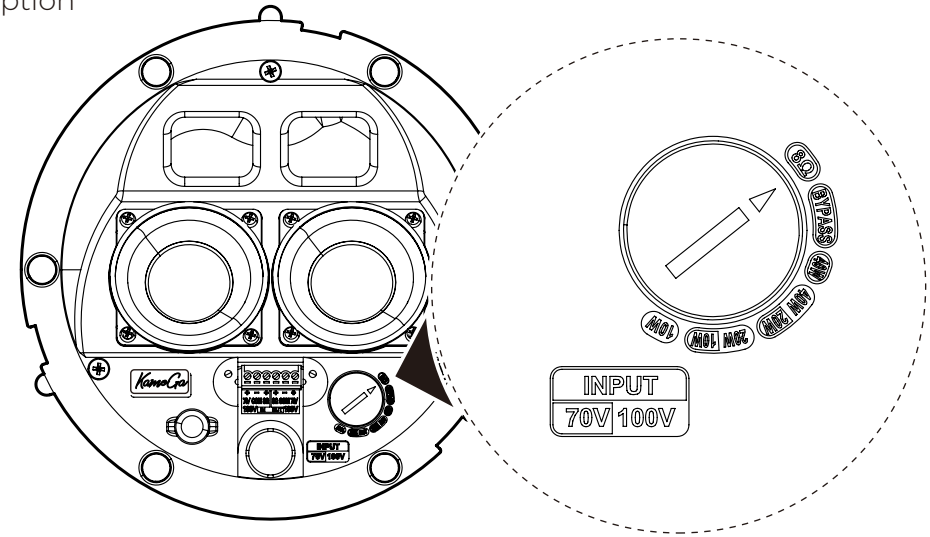
❸ External cable entry hole (horizontal and vertical directions)

❹ Grille safety clip

❺ Ceiling speaker cable terminal (6-pin)

❻ Constant-voltage / constant-impedance selector knob

Function Description



8Ω	With the 70V/100V IN terminals set for 8Ω, the ceiling speaker must be connected to a constant-impedance amplifier with an 8Ω output
BYPASS	Pass-through / bypass position. With the knob in this position, this ceiling speaker produces no sound output
40W	70V/100V IN terminal connected to 70V: ceiling speaker output power 40W
40W 20W	70V/100V IN terminal connected to 100V: ceiling speaker output power 40W
	70V/100V IN terminal connected to 70V: ceiling speaker output power 20W
20W 10W	70V/100V IN terminal connected to 100V: ceiling speaker output power 20W
	70V/100V IN terminal connected to 70V: ceiling speaker output power 10W
10W	70V/100V IN terminal connected to 100V: ceiling speaker output power 10W

Important safety warning:

Constant-voltage / constant-impedance selector operation

1. Factory default: the selector knob is set to the 8Ω position, for connecting a constant-impedance amplifier.
2. When connecting a 70V/100V constant-voltage amplifier:
   - Never use the 8Ω position! Using the 8Ω position by mistake will burn out the speaker driver units!
   - You must switch to the constant-voltage position that matches the system.

Ceiling Speaker Cable Specifications

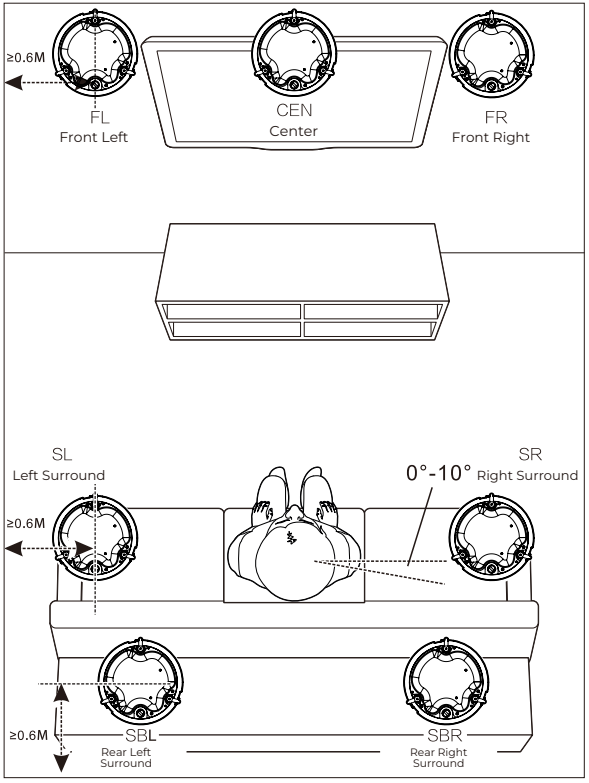
Cable gauge	Recommended length
18AWG (0.82 mm²)	≤ 6 m
16AWG (1.3 mm²)	6 – 9 m
14AWG (2.1 mm²)	9 – 15 m
12AWG (3.3 mm²)	15 – 30 m
10AWG (5.26 mm²)	≥ 30 m

1. Before laying the ceiling speaker cables, select high-quality dedicated speaker cable of the gauge listed in the table above according to the cable length.
2. The selected cables and cable routing method must comply with local building, fire protection and other safety regulations.
3. Leave 600–800 mm of cable at each ceiling speaker installation point so that the installer can make the connections later.
4. Strip 10 mm of insulation from both ends of the cable.

Ceiling Speaker Placement

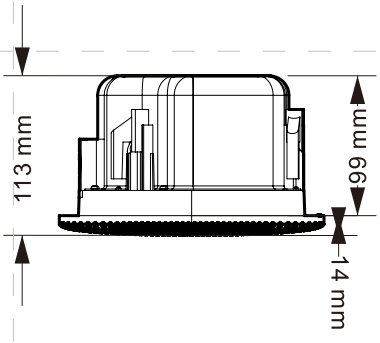
For the best listening experience, reserve the ceiling speaker positions according to the locations shown in the figure and the recommended minimum distances:

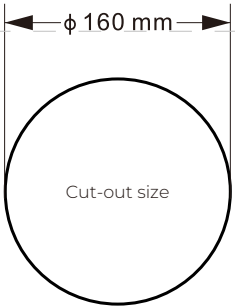
1. In a 7.1-channel system, the left surround (SL) and right surround (SR) speakers should be placed on either side of the main listening area, or up to 10 degrees behind it.
2. Keep the ceiling speakers at least 0.6 m away from side walls and the rear wall.
3. Aim the speaker's horn angle toward the main listening area.

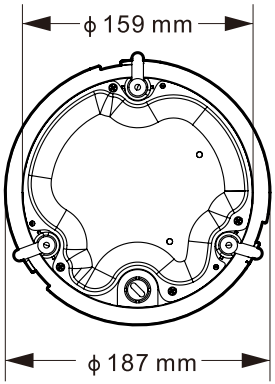


Precautions for Installing the Ceiling Speaker

1. Product outer dimensions and cut-out dimensions





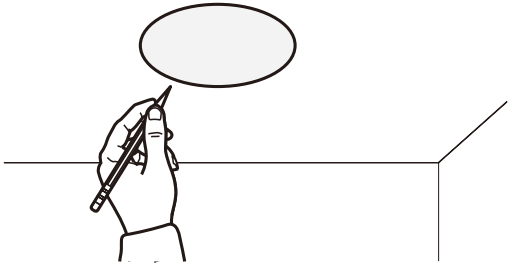


2. Before installing the ceiling speaker, assess the following:

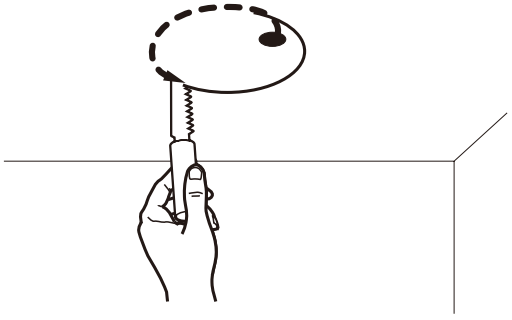
1) Check the ceiling board material to decide on the installation method. Gypsum board, composite board and solid wood board are suitable for cutting a hole and installing the ceiling speaker; especially hard materials such as concrete ceilings and stone-slab ceilings are suitable for installing the ceiling speaker with hanger rods through drilled holes.
2) Before cutting the ceiling, make sure the ceiling board is between 13 mm and 38 mm thick and can support the weight of the speaker.
3) Before cutting the ceiling, make sure the installation space above the ceiling is greater than 120 mm.
4) Before cutting the ceiling, make sure there are no obstacles such as columns, cable troughs or pipes within a 200 mm diameter above the installation point, so that the ceiling speaker can be installed and its locking device can be fully locked in place.

Cutting the Mounting Hole

1. If the precautions above are satisfied, draw the outline of a hole 160 mm in diameter at the speaker installation position.



2. Cut the hole along the outline.

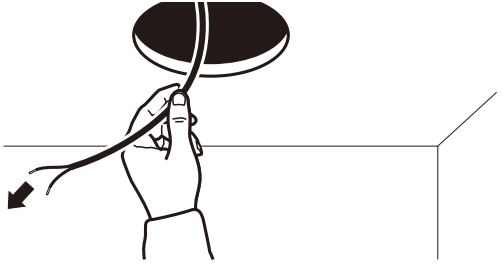


Note: Cutting tools are not supplied with this product; the installer must provide their own.

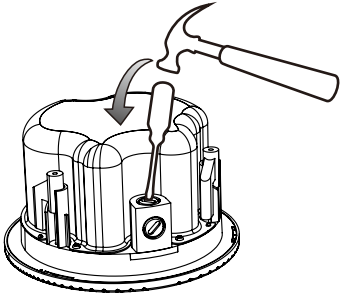
3. Remove the cut-out piece and clear away any torn or rough material around the hole.

Connecting the Ceiling Speaker Cables

1. Pull out the ceiling speaker cable that was left in place beforehand, and check that it is intact and that signal transmission is normal.



2. Knock out the external cable entry hole and thread the cable through. Depending on the space above the ceiling and the direction of the cable run, choose the horizontal or vertical hole to knock out, then pass the cable through the entry hole to prepare for wiring the 6-pin terminal in the next step.

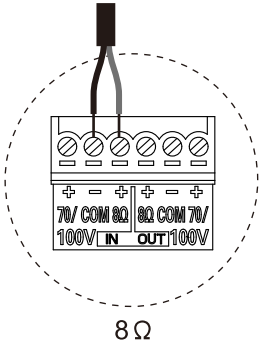


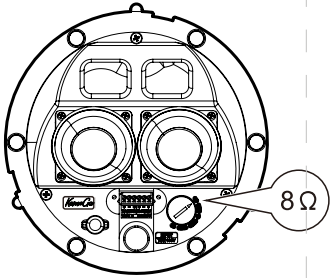
Tip: To protect your audio system equipment and yourself from damage or injury caused by accidental electrical short circuits and voltage fluctuations during installation, switch off power to all audio system equipment before connecting the ceiling speaker cables.

Installation and Wiring

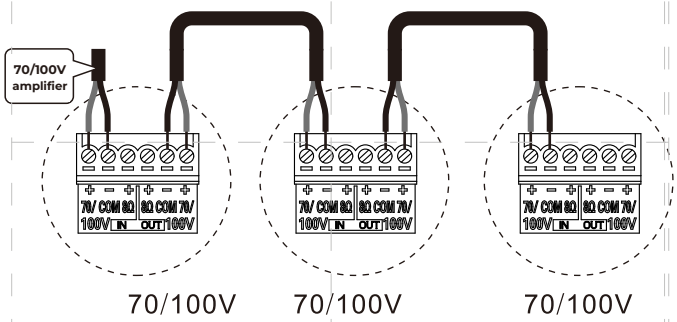
3. Wire the ceiling speaker correctly as shown in the figures below.

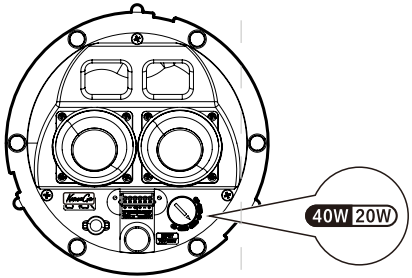
1) When the ceiling speaker is used with a constant-impedance amplifier, connect the cable from the positive (+) terminal of the corresponding channel on the back of the amplifier to the speaker's positive (+8Ω IN) terminal, and connect the cable from the negative (–) terminal of the corresponding channel to the speaker's negative (–COM IN) terminal. Make sure the polarity at both ends matches one to one; otherwise sound localization will be poor and the sound pressure level reduced. Then turn the constant-voltage / constant-impedance selector knob to the 8Ω position.





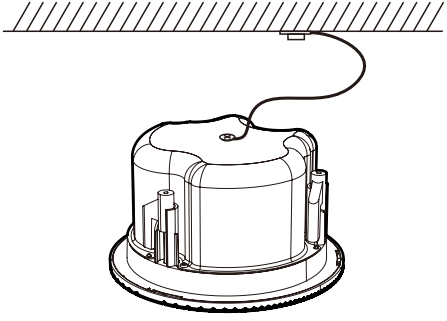
2) When the ceiling speaker is used with a constant-voltage amplifier, connect the cable from the amplifier's rear 100V terminal, 70V terminal or zone terminal (positive +) to the speaker's positive (+70/100V IN) terminal, and connect the cable from the amplifier's rear COM terminal, 0 terminal or zone common terminal (negative –) to the speaker's negative (–COM IN) terminal. Make sure the polarity at both ends matches one to one; otherwise sound localization will be poor and the sound pressure level reduced. Then, according to the output power required from the constant-voltage amplifier, turn the selector knob to the appropriate position (10W / 20W / 40W).



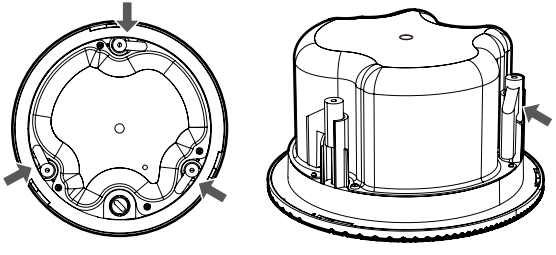


Tip: When wiring, make sure the polarity of the equipment at both ends of the cable matches one to one, and that the wire-harness connectors do not touch each other or the metal parts around the ceiling speaker, to avoid equipment damage or noise caused by short circuits.

4. Attach an M8 safety accessory (not supplied) to the M8 threaded hole on the ceiling speaker and tighten it; then pass a steel wire cable through the M8 safety accessory and secure it to a ceiling joist or other ceiling fixing device to prevent the speaker from falling.

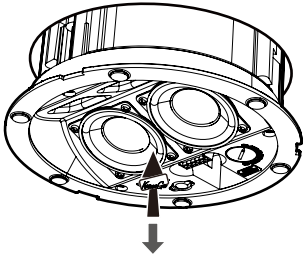


5. Make sure the three rotating screw clamps of the ceiling speaker are in the “ready to install” position.

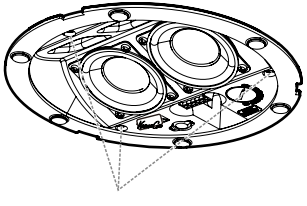


6. Insert the ceiling speaker vertically into the mounting hole cut in the ceiling (speaker face downward), and rotate the speaker so that its sound-emitting face is oriented toward the listening area. Then, using a suitable Phillips screwdriver, tighten the screws on the rotating screw clamps clockwise in turn. During this process the clamps will automatically rotate into the correct position and begin to secure the ceiling speaker. If you feel resistance while tightening and the speaker’s front panel is in close contact with the ceiling, the speaker has been secured successfully.

Insert into mounting recess



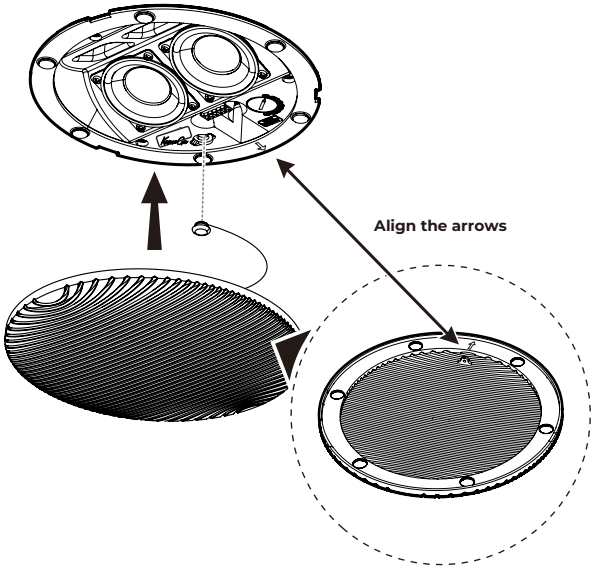
Speaker secured in opening

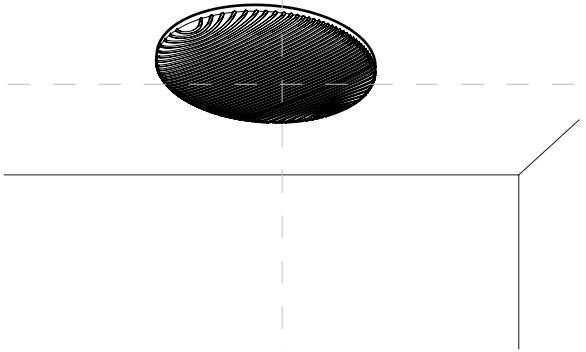


Tighten the screws

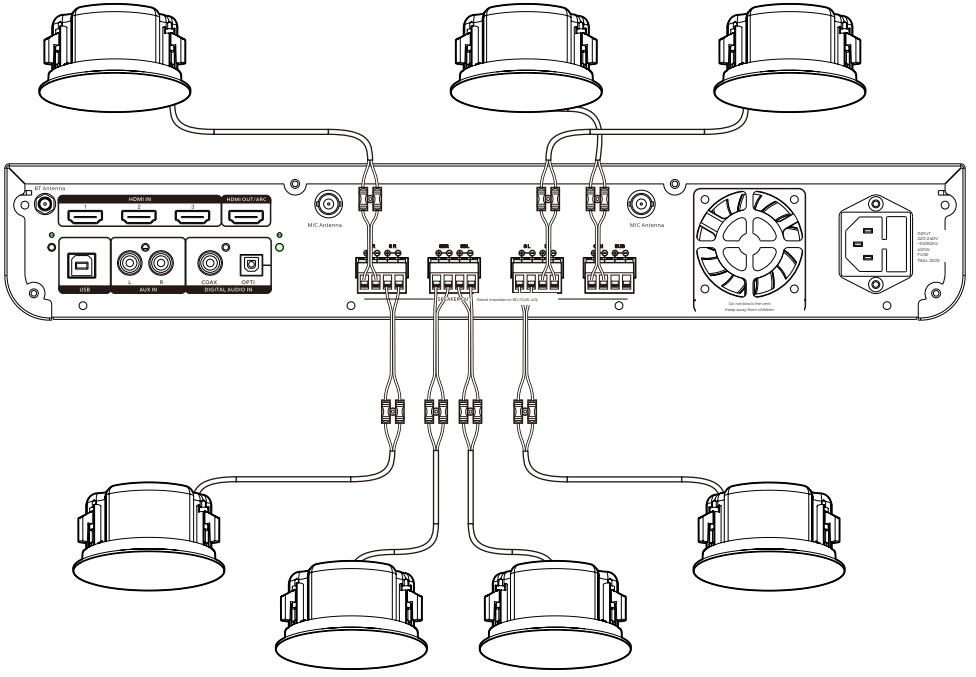
Tip: If using an electric screwdriver, use a low-torque setting. Do not overtighten the screws, to prevent the rotating screw clamps from losing their holding force.

7. Insert the plug of the ceiling speaker grille's safety cord into the safety-clip hole of the ceiling speaker; then align the arrow mark on the back of the grille with the arrow mark on the front housing, and the grille will be held in place magnetically on the speaker's front panel.





8. When the selector knob is set to 8Ω, wire and secure the other ceiling speakers in sequence as shown in the figure below.



KamoGa 12-Month Warranty

Your KamoGa Starlet Eclipse is covered by a 12-month warranty from the date of purchase, provided by Thunderstone Technology (S) Pte Ltd, Singapore.

- Within 12 months of purchase, if a performance fault occurs and is confirmed by our service centre, the product will be repaired free of charge.
- Please keep your proof of purchase and the warranty card stamped by your dealer; they are required for warranty service.
- This warranty card must not be altered; otherwise it will be treated as invalid.
- We recommend keeping the original packaging for at least 30 days to protect the product if it needs to be returned for service.

Service & Support

For warranty claims, technical support or installation advice, please contact your KamoGa dealer or:

Thunderstone Technology (S) Pte Ltd

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Not Covered by Warranty

- Products outside the 12-month warranty period.
- Faults caused by unauthorised repair, misuse, collision, negligence, abuse, liquid ingress, accident, alteration, disassembly or the use of non-original accessories.
- Products whose labels, serial numbers or anti-counterfeiting marks have been removed or altered.
- Damage caused by installation, use, maintenance or storage that does not follow this manual.
- Damage caused by force majeure.
- Products whose model does not match the model on the warranty card, or where the card has been altered.

Basic Troubleshooting

Common Faults and Remedies

This unit is simple and easy to operate, but faults can occasionally occur because of improper use. If you encounter a fault during use, first refer to the table below to resolve it; if that does not help, please consult your local distributor or an authorized service point. Do not open the unit yourself! Doing so will void the warranty!

If the fault is	Please check whether
Speaker produces no sound	1. Check whether the cables connecting the ceiling speaker and the amplifier have come off or are loose. 2. Check the settings on your amplifier; see the amplifier user guide for setup instructions. 3. Check whether the audio source has no output. 4. Check whether the cable between the amplifier and the audio source device is damaged, or whether the cables connecting the two are disconnected or loose.
Only one speaker produces sound	1. Check that the cables connecting the other ceiling speakers and the amplifier have not come off or become loose. 2. Disconnect the cable of the speaker that is producing sound from the amplifier, and connect the other speakers to the working amplifier output terminal one by one. If the other speakers sound OK, your amplifier needs servicing; please contact the amplifier service provider. 3. Disconnect the cable of the speaker that is producing sound from the amplifier, and connect the other speakers to the working amplifier output terminal one by one. If none of the other speakers produce sound, your speakers need servicing; please contact the speaker service provider. 4. Check whether the audio source is mono. 5. If these diagnostic methods do not solve the problem, replace the speaker wiring and reinstall it.
Speaker emits noise or abnormal sound	1. Make sure the selected cables meet the installation specifications, and that the cable routing complies with local building, fire protection and other safety regulations. 2. Make sure the speaker and amplifier wiring is good and secure, and that the wire harness does not touch other nearby components. 3. Rule out noise in the audio source. 4. Make sure the cable between the amplifier and the audio source device is of good quality and not loose.

Technical Specifications

Model	KamoGa Starlet Eclipse
Type	In-ceiling speaker, 20° twin tilted drivers
Frequency range (–3 dB)	210 Hz – 20 kHz
Frequency range (–10 dB)	189 Hz – 20 kHz
Sensitivity (SPL / 1 W / 1 m)	90 dB ± 3 dB
Driver units	2 × 2"
Rated / peak power	40 W / 60 W
Transformer taps	8 Ω, bypass
70 V taps	10 W, 20 W, 40 W
100 V taps	10 W, 20 W, 40 W
Rated impedance	8 Ω (transformer bypassed)
Product dimensions	ø187 × 113 mm
Cut-out size	ø160 mm
Net weight	1.35 kg / pc
Mounting	Ceiling board / suspended ceiling
Ceiling board thickness	13 – 38 mm
Accessories	User manual × 1

Environmental Information

This product must not be disposed of as household waste. Please take it to an appropriate collection point for the recycling of electrical and electronic equipment.

Proper disposal and recycling help protect the natural environment and human health. For more information, contact your local authority or your KamoGa dealer.

Thunderstone Technology reserves the right to change the design and specifications in the course of product improvement, without further notice.

Systems distributed by Thunderstone Technology (S) Pte Ltd · 61 Ubi Road 1 #01-15/16 Singapore 408727 · +65 6702 6577 · www.thunderstonektv.com

KamoGa

KamoGa Starlet Eclipse · In-Ceiling Speaker

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