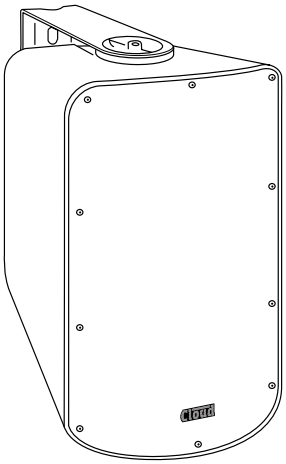
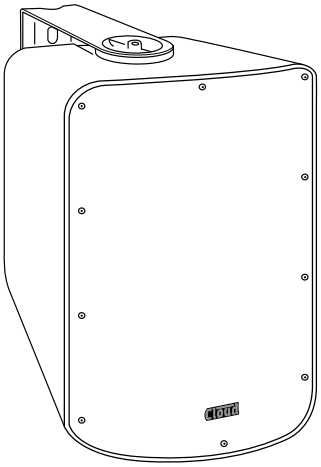
CS-S Series

Active Surface Speakers



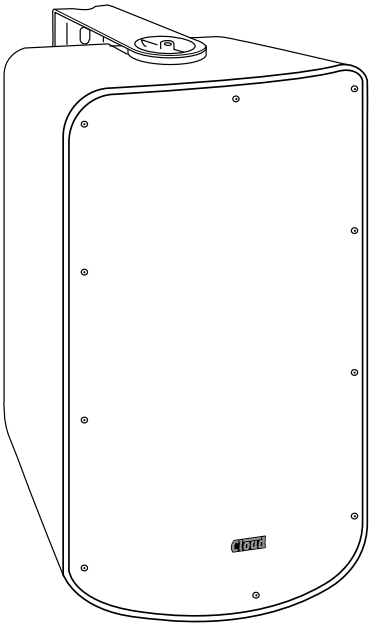
CS-S8A
CS-S8AD

8" SURFACE MOUNT LOUDSPEAKERS



CS-S10A
CS-S10AD

10" SURFACE MOUNT LOUDSPEAKERS



CS-S12A
CS-S12AD

12" SURFACE MOUNT LOUDSPEAKERS

Installation Guide

WARNING:

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

	WARNING: SHOCK HAZARD – DO NOT OPEN AVIS: RISQUE DE CHOC ELECTRIQUE – NE PAS OUVRIR
	The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert you to the presence of uninsulated dangerous voltages within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.
	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.

CONTENTS:

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 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 are provided for your safety. When 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 sold with the apparatus, when a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this 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.

The mains plug is used as the disconnect device and it should remain readily accessible during intended use. In order to isolate the apparatus from the mains, the mains plug should be completely removed form the mains outlet socket.

Le prise du secteur ne doit pas être obstruée ou doit être facilement accessible pendant son utilisation. Pour être complètement déconnnecté de l'alimentation d'entrée, la prise doit être débranchée du secteur.

This apparatus is of Class 1 construction and must only be connected to a mains outlet socket with a protective earthing connection.

Terminals marked with the ϟ symbol may use Class 2 Wiring, but voltages at these terminals may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to these terminals requires installation by an instructed person or the use of pre-made leads or cords.

CAUTION - Installation

The speaker must be installed by a qualified speaker technician.

CAUTION - Installation

Do not perform servicing unless you are qualified to do so. The speaker contains no user-serviceable parts. Refer servicing to qualified personnel.

CAUTION - Installation

Be aware of the weight of the speaker and bracket. Ensure that a safety factor of at least 2x is used when specifying the bracket fixings.

WEIGHTS OF SPEAKERS AND ACCESSORIES:

Speakers:

Model	Net weight
CS-S8A	8.8 kg (19.7 lb)
CS-S8AD	8.8 kg (19.6 lb)
CS-S10A	10.9 kg (24.5 lb)
CS-S10AD	10.9 kg (24.5 lb)
CS-S12A	16.1 kg (36.0 lb)
CS-S12AD	16.1 kg (36.0 lb)

Accessories:

Accessory	Net weight
CS-810BKT	2.1 kg (4.6 lb)
CS-12BKT	2.7 kg (6.1 lb)

Important - re weatherproofing

Cloud CS-SnA and CS-SnAD speakers are suitable ONLY for internal installation. They are not designed for external applications. The optional Cloud CS-S-IP66 plate is ONLY suitable for passive versions of the CS-S range and no attempt should be made to fit this accessory to CS-SnA or CS-SnAD versions.

OVERVIEW

Introduction

The Cloud CS-S loudspeakers are intended for internal installation in leisure and hospitality venues, and are suitable for live sound, presentation and network applications. They are high quality, two-way units using Dual Concentric drivers, and are suitable for music reproduction at a higher sound level than normal "background music" speakers. The Dual Concentric design delivers even dispersion in the horizontal and vertical planes, providing excellent off-axis performance.

Applicable models

This Installation Guide covers the CS-S versions listed below. These versions are all "active", that is, they have an integral mains-powered power amplifier and associated electronics. The amplifier design is highly efficient, and will adopt a very-low-power "quiescent" state if no input signals are detected for 30 minutes, thereby minimising power consumption.

All models have two inputs for mono or stereo operation, and a balanced analogue Link output for connection to another speaker.

- CS-S8A: 8" LF driver, analogue mic and line level inputs
- CS-S8AD: 8" LF driver, suitable for connection to Dante™ networks
- CS-S10A: 10" LF driver, analogue mic and line level inputs
- CS-S10AD: 10" LF driver, suitable for connection to Dante™ networks
- CS-S12A: 12" LF driver, analogue mic and line level inputs
- CS-S12AD: 12" LF driver, suitable for connection to Dante™ networks

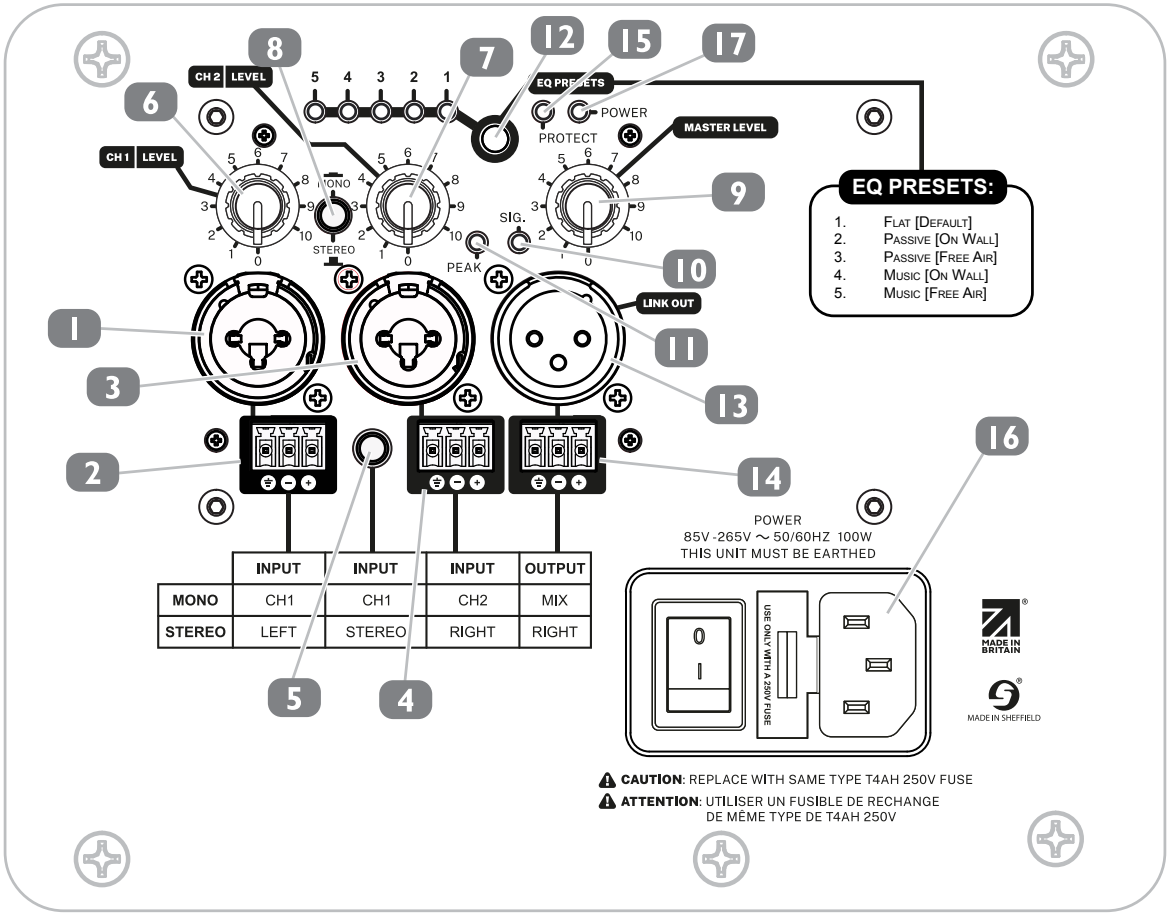
NOTE: The model number of all versions will have an additional suffix 'B' or 'W', denoting the finish colour of black or white.

NOTE: Passive versions of the CS-S range will either have no letter following the driver size number (low-impedance operation), or a 'T' (100/70 V-line operation with low-impedance option). The installation and operation of these is covered in a separate Guide.

Connections and Controls

All connections, indicators and controls are on the rear panel of the speaker cabinet. The CS-SnA and CS-SnAD versions have significantly different rear panels, although some features are common. The two rear panels are described in detail on the following pages, separately.

CS-SnA versions – rear panel description



CS-SnA speakers have two separate input channels which may be used in various ways to suit the requirements of different installations. The speaker may be supplied with one of the following:

- a single mono audio feed
- two independent mono audio feeds, e.g., background music and announcements
- a stereo audio feed which is to be reproduced by the speaker in mono, with L & R channels summed
- a stereo audio feed, where the speaker reproduces the L channel and the R channel is available at the Link output for connection to separate speaker

The inputs can accept either line or mic level signals. If the speaker is to be one of a stereo pair, connect the left channel to Channel 1. Each channel has four input connector options (1, 2 & 5 below); use the one that is most convenient for the installation. Do not attempt to simultaneously apply audio signals to two different input connectors for the same channel.

1. Ch 1 Input (a) – "Combo" XLR3F/TRS jack connector for Channel 1 input. The input is electronically balanced. The Combo can be used with either an XLR3M plug, or a 6.35 mm 3-pole (TRS) jack plug.

Combo wiring is as per the table below:

USE	XLR PIN	TRS connection
Signal ground	1	Sleeve
Signal '+' (hot)	2	Tip
Signal '-' (cold)	3	Ring

2. Ch 1 Input (b) – 3-pin 3.5 mm-pitch Euroblock connector, alternative connector for Channel 1 input. The input is electronically balanced. A mating connector is supplied.

Euroblock wiring is as below (pins 1 to 3 are left to right):

PIN	USE
1	Signal ground
2	Signal '-' (cold)
3	Signal '+' (hot)

3. Ch 2 Input – "Combo" XLR3F/TRS jack connector for Channel 2 input, wired as Item 1 above.

4. Ch 2 Input - 3-pin 3.5 mm-pitch Euroblock connector, alternative connector for Channel 2 input, wired as Item 2 above. A mating connector is supplied.

5. 3.5 mm TRS jack socket. Alternative connector to XLR and Euroblock options. This single socket provides inputs to both channels, and is unbalanced:

PIN	USE
Tip	Channel 1 i/p
Ring	Channel 2 i/p
Screen	Signal ground

6. **CH 1 LEVEL** – controls the input level of the signal connected to Channel 1.

7. **CH 2 LEVEL** – controls the input level of the signal connected to Channel 2.

8. **MONO/STEREO** – push-button switch, selects the speaker's mode of operation. Press in for mono operation, out for stereo. The switch determines the configuration of the two inputs and the Link output.

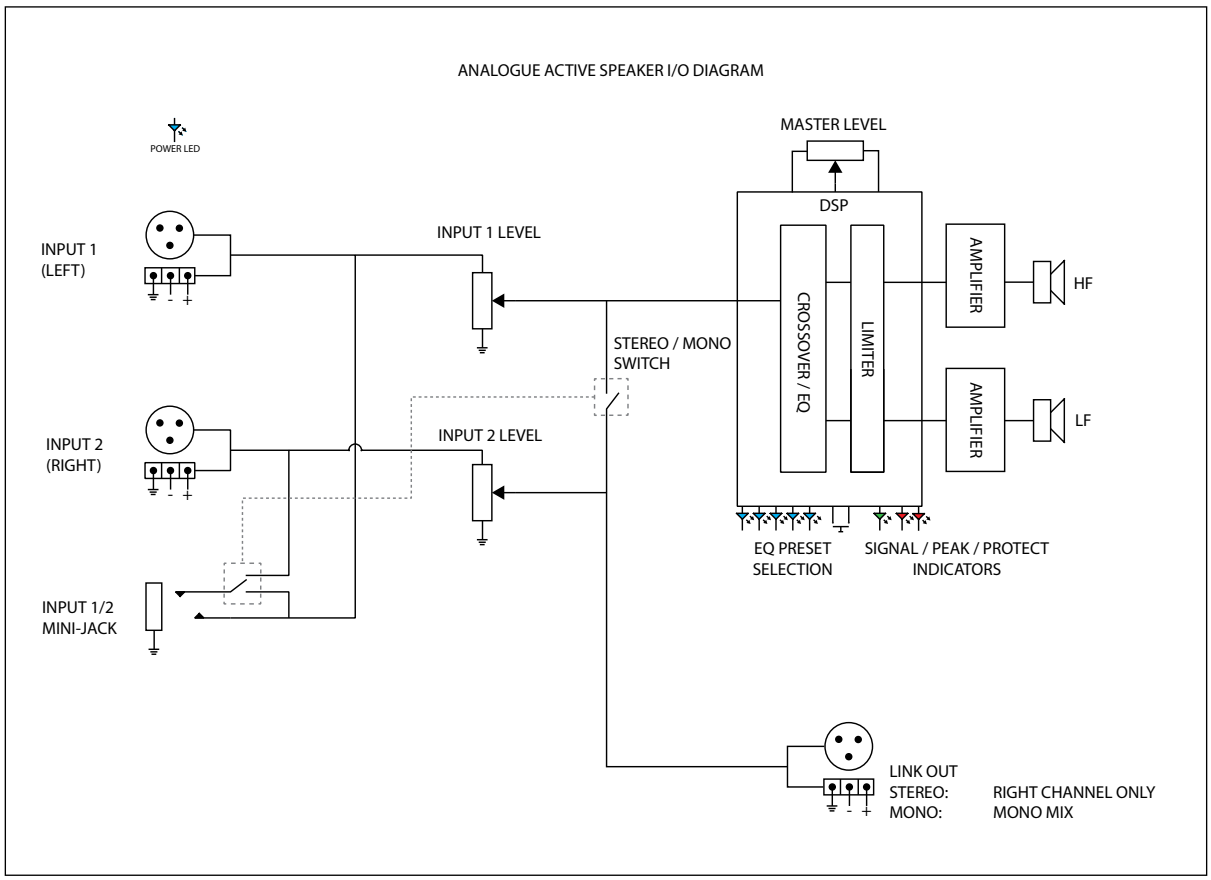
8.1 With **MONO** mode selected, the inputs to Channels 1 and 2 are summed together and reproduced by the speaker. The mono sum is also available at the Link output. Use this mode if

i) the audio feed is a single mono source (connect to Input 1), or

ii) there are two independent mono sources (connect one to Input 1, the other to Input 2). Also use this mode if "daisy-chaining" multiple speakers together: the Link output facilitates easy connection to the next speaker in the chain, or

iii) the audio feed is stereo, but the speaker needs to reproduce their L+R mono sum.

8.2 With **STEREO** mode selected, only the input to Channel 1 is reproduced by the speaker. An input to Channel 2 will be routed internally to the Link output for feeding a second speaker. Use this mode if the audio feed is a stereo source, in which case connect the left channel to Input 1 and the right to Input 2. The Link output will then carry the right channel, for connection to another speaker.



9. **MASTER LEVEL** – the speaker's output volume control.

10. **SIG** – green LED, lights when a signal is detected at either input. The actual detection level will be affected by the setting of the **CH1** and **CH2 LEVEL** controls.

11. **PEAK** – red LED, lights when the input signal is too high. In this case, distortion may occur. Adjust the **CH1** and/or **CH2 LEVEL** controls to ensure that PEAK does not illuminate with normal programme material.

12. **EQ PRESETS** – the internal amplifier is equipped with an equalisation (EQ) section which has five factory-determined frequency responses to suit different types of installation and programme. The default preset is #1. Press the **EQ PRESETS** button to step through the others: the associated blue LEDs indicate which is active.

PRESET	NAME	USE	INSTALLATION
1	Flat (Default)	Flat response (no colouration)	Default
2	Passive (On Wall)	Neutral sound with some LF boost	Use when speaker is installed against a wall
3	Passive (Free Air)		For free space applications: use when speaker is not mounted against a wall
4	Music (On Wall)	Increased LF response to suit music program at higher level	Use when speaker is installed against a wall
5	Music (Free Air)		For free space applications: use when speaker is not mounted against a wall

13. **LINK OUT** - latching XLR3M connector. Connect additional CS-SnA speakers here, for stereo use or "daisy-chain" linking. **LINK OUT** carries an audio output which is derived post the **CH1** and **CH2 LEVEL** controls. The signal available here is determined by the setting of the **MONO/STEREO** button [8]: see table below. The output is electronically balanced.

MODE	LINK OUT SIGNAL
Mono	Mono mix of CH1 and CH2 inputs
Stereo	CH2 input only

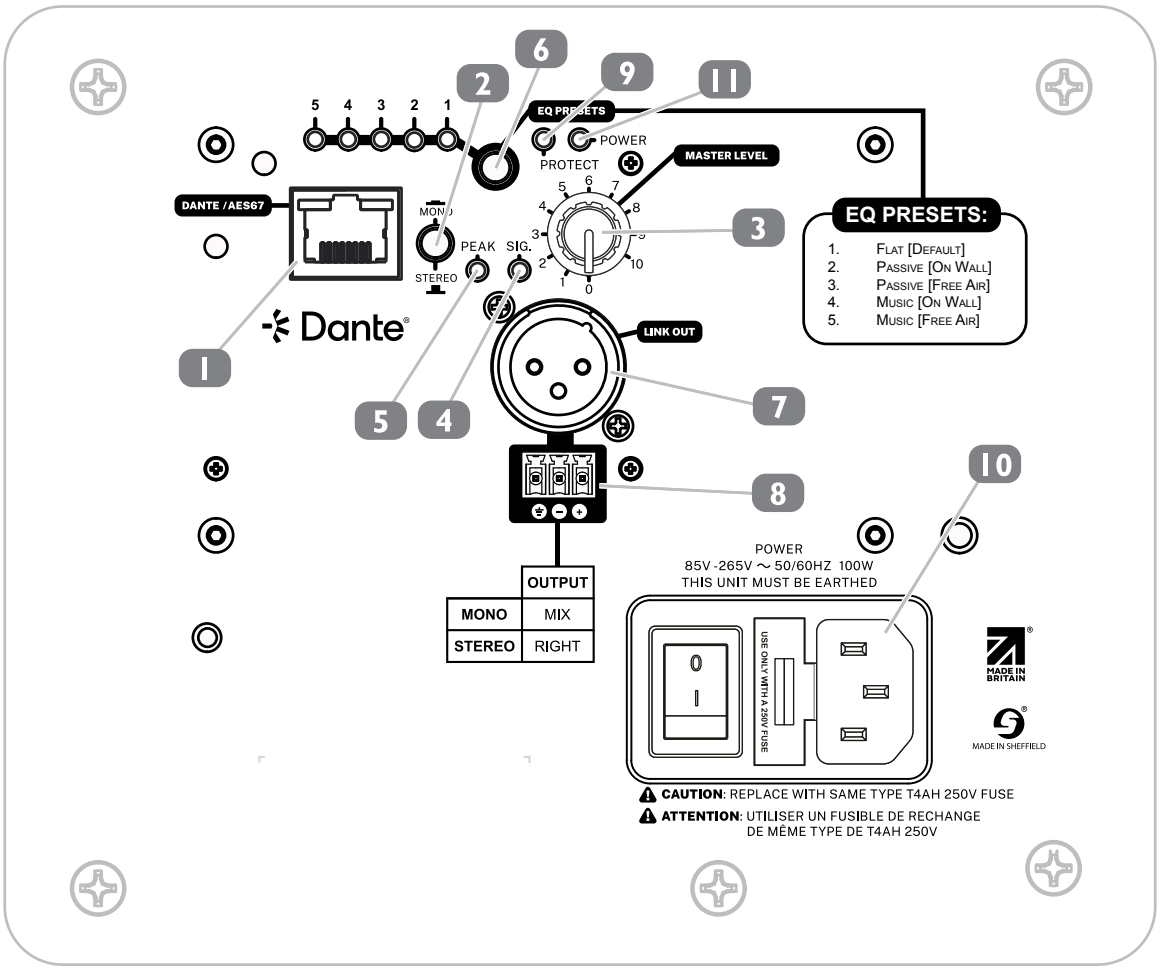
14. **LINK OUT** - 3-pin 3.5 mm-pitch Euroblock connector, alternative connector for the link facility. The output is electronically balanced. A mating connector is supplied. Wiring is as below:

PIN	USE
1	Signal ground
2	Signal '-' (cold)
3	Signal '+' (hot)

15. **PROTECT** – the amplifier is fitted with protection circuitry which will shut it down if a fault condition arises. The red **PROTECT** LED will illuminate if this occurs. Fault monitoring includes DC protection (detection of DC at the amplifier output), thermal overload and excessive output current. If the protection is triggered by DC detection, the speaker will need to be power-cycled to reset it. Other faults will self-clear when the conditions causing the fault subside. Note that the **PROTECT** LED also lights when the amplifier enters its power-saving mode (when no input signals have been detected for 30 minutes): this does not indicate a fault state. The amplifier will "wake up" from power-saving mode as soon as an input signal is detected again.

16. **POWER** – AC mains input. Standard IEC socket with integral on/off switch and fuse. The fuse is rated at 4 A, 250 V, type T4AH. Only replace the fuse with one of identical type.

17. **POWER** – blue LED, illuminates when the speaker is powered on.

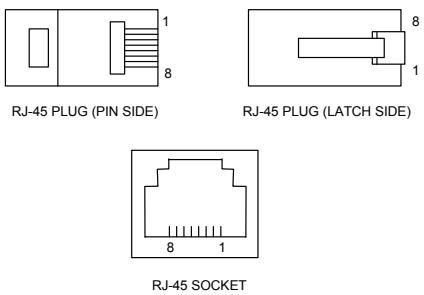


CS-SnAD speakers are designed for direct connection to a Dante™ AoIP network. Dante™ networks are based on Ethernet technology and use Cat 5/Cat 6 UTP cable for audio distribution. Network configuration is via Dante Controller software.

NOTE: A description of Audinate Dante Controller software and instructions for its use, and the subject of Dante/AES67 compatibility are beyond the scope of this Guide. It is assumed that the installer has a working knowledge of Dante Controller.

1. **DANTE/AES67** – standard latching RJ45 Ethernet socket: connect the CS-SnAD speaker to a Dante™ network here. When the speaker is powered and connected, and the network operational, it will appear on Dante Controller as a 2ch receiver, with the name "CS-S-AD".

   If pre-terminated Ethernet cables are not being used, the RJ45 connector should be wired as per the table below:



RJ45 PIN	CAT 5/6
1	White + Orange
2	Orange
3	White + Green
4	Blue
5	White + Blue
6	Green
7	White + Brown
8	Brown

2 **MONO/STEREO** – push-button switch, selects the speaker's mode of operation. Press in for mono operation, out for stereo. The switch determines the configuration of the two Dante™ input channels and the Link output.

2.1 With **MONO** mode selected, inputs on the two Dante™ channels are summed together and reproduced by the speaker. The mono sum is also available at the Link output. Use this mode if

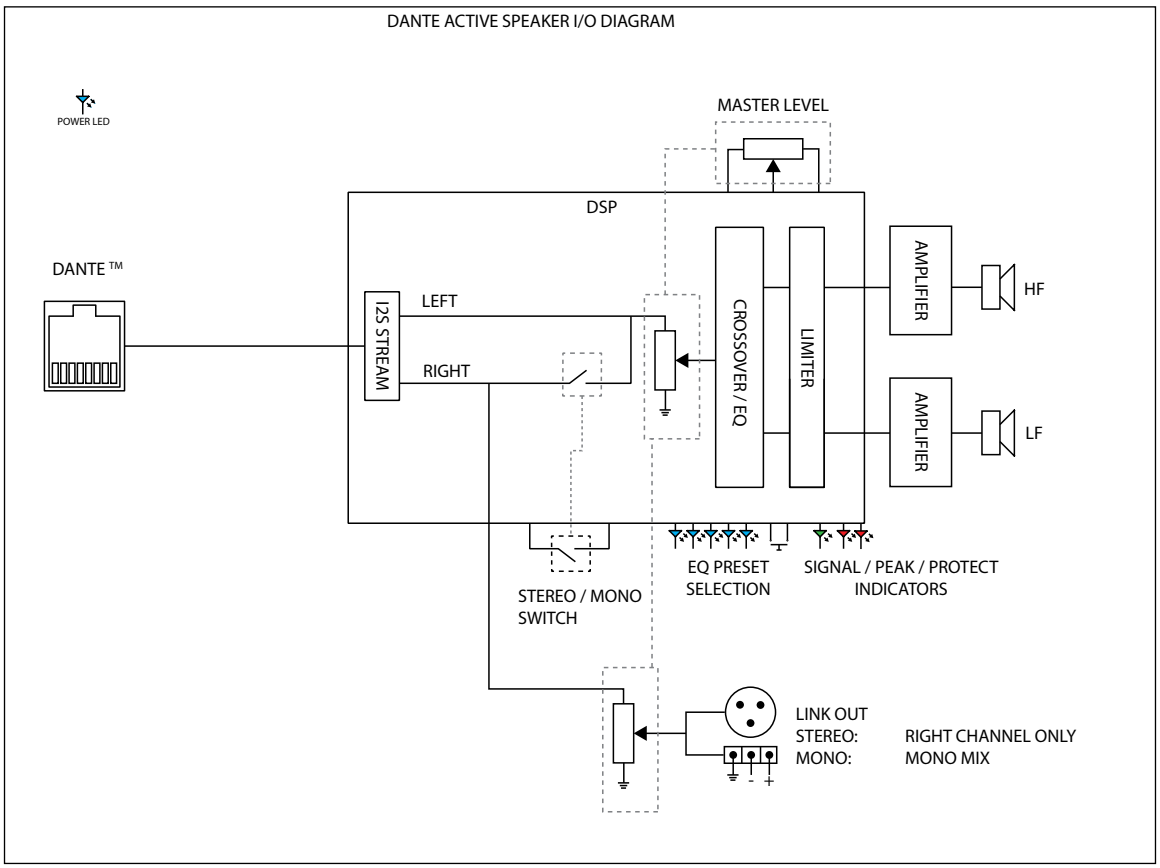
i) the audio feed only uses the left channel of a Dante™ stereo pair, or

ii) there are two independent mono sources, one on each channel, or

iii) the audio feed is stereo, but the speaker needs to reproduce their L+R mono sum, or

iv) multiple speakers are to be "daisy-chained" together. The Link output facilitates easy analogue connection to a CS-SnA speaker, which can be the next speaker in the chain. Multiple speakers wired in this way only require a single CS-SnAD version, and only present a single Dante™ receiver on the network.

2.2 With **STEREO** mode selected, only the left channel of the Dante™ stereo pair is reproduced by the speaker. The right channel will be routed internally to the Link output for feeding a second speaker. Use this mode if the audio feed is a stereo source. The Link output will then carry the right channel as an analogue signal, for connection to a CS-SnA speaker.



3. **MASTER LEVEL** – the speaker's output volume control.

4. **SIG** – green LED, lights when a signal is detected on either Dante™ input channel.

5. **PEAK** – red LED, lights when the input signal is too high. In this case, distortion may occur. Reduce the audio level at its source to ensure that **PEAK** does not illuminate with normal programme material.

6. **EQ PRESETS** – the internal amplifier is equipped with an equalisation (EQ) section which has five factory-determined frequency responses to suit different types of installation and programme. The default preset is #1. Press the EQ PRESETS button to step through the others: the associated blue LEDs indicate which is active.

PRESET	NAME	USE	INSTALLATION
1	Flat (Default)	Flat response (no colouration)	Default
2	Passive (On Wall)	Neutral sound with some LF boost	Use when speaker is installed against a wall
3	Passive (Free Air)		For free space applications: use when speaker is not mounted against a wall
4	Music (On Wall)	Increased LF response to suit music program at higher level	Use when speaker is installed against a wall
5	Music (Free Air)		For free space applications: use when speaker is not mounted against a wall

7. **LINK OUT** - latching XLR3M connector. Connect additional CS-SnA speakers here, for stereo use or "daisy-chain" linking. **LINK OUT** carries an analogue audio output which is derived from the two-channel Dante™ input stream. The signal available here is determined by the setting of the **MONO/STEREO** button [2]: see table below. The output is electronically balanced.

MODE	LINK OUT SIGNAL
Mono	Mono mix of L and R channels
Stereo	R channel only

8. **LINK OUT** - 3-pin 3.5 mm-pitch Euroblock connector, alternative connector for the link facility. The output is electronically balanced. A mating connector is supplied. Wiring is as below:

PIN	USE
1	Signal ground
2	Signal '-' (cold)
3	Signal '+' (hot)

9. **PROTECT** – the amplifier is fitted with protection circuitry which will shut it down if a fault condition arises. The red **PROTECT** LED will illuminate if this occurs. Fault monitoring includes DC protection (detection of DC at the amplifier output), thermal overload and excessive output current. If the protection is triggered by DC detection, the speaker will need to be power-cycled to reset it. Other faults will self-clear when the conditions causing the fault subside. Note that the **PROTECT** LED also lights when the amplifier enters its power-saving mode (when no input signals have been detected for 30 minutes): this does not indicate a fault state. The amplifier will "wake up" from power-saving mode as soon as an input signal is detected again.

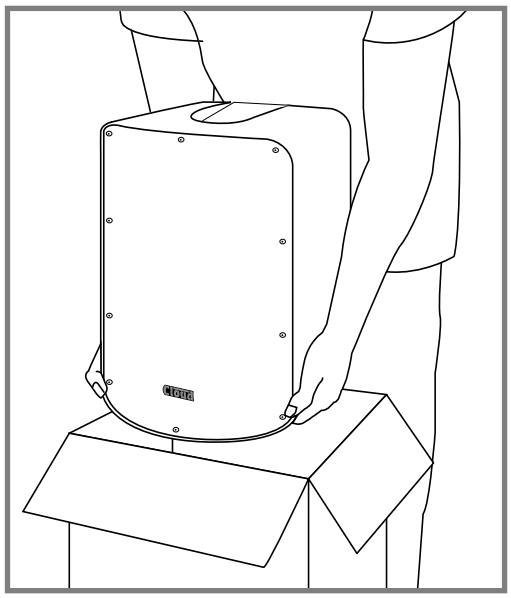
10. **POWER** – AC mains input. Standard IEC socket with integral on/off switch and fuse. The fuse is rated at 4 A, 250 V, type T4AH. Only replace the fuse with one of identical type.

11. **POWER** – blue LED, illuminates when the speaker is powered on.

INSTALLATION

Step 1

Remove speaker from shipping carton.



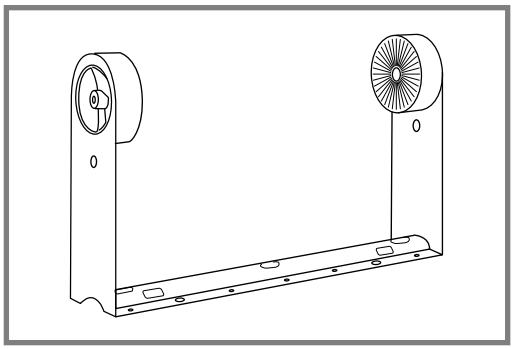
Installation with the standard bracket

Several mounting options are available for CS-S8/10/12 speakers. The most usual method will be on-wall mounting using the optional Cloud mounting brackets. The brackets are:

- CS-810BKT for versions CS-S8A, CS-8AD, CS-10A and CS-S10AD
- CS-12BKT for versions CS-S12A and CS-S12AD

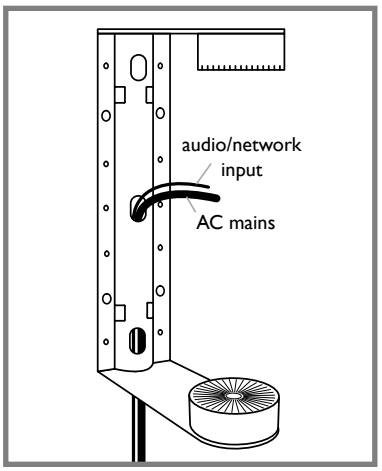
Step 2:

Brackets will be packed and shipped separately. Unpack the bracket.



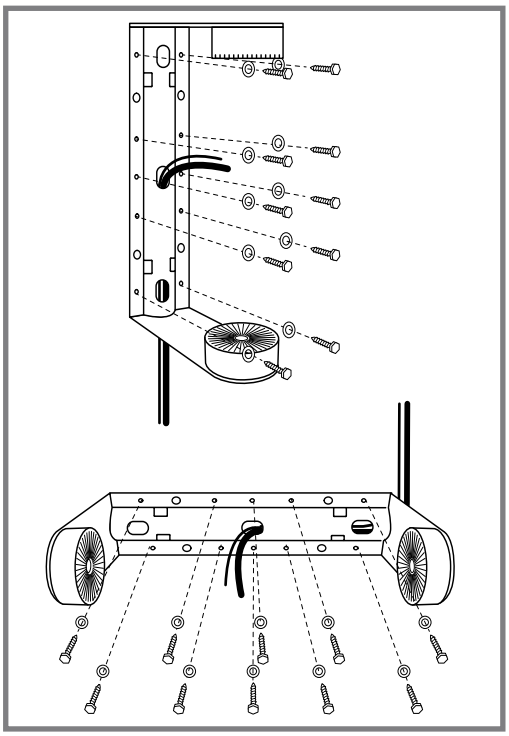
Note the bracket's main rear strut is dished for cable management. The cables for AC mains, and audio input(s) or Dante™ network should be approximately in position before the bracket is fixed to the wall. (Note that an additional audio cable will be needed if the speaker's Link feature is to be used.) The cables can then be passed behind the rear strut and brought through one of large holes prior to the bracket being fixed. Cut the cable(s) to an appropriate length.

Note re AC Mains supply: Cloud recommends that 3-core cable rated at 10 A (1.00 mm^2) is installed for the speaker's AC mains supply.



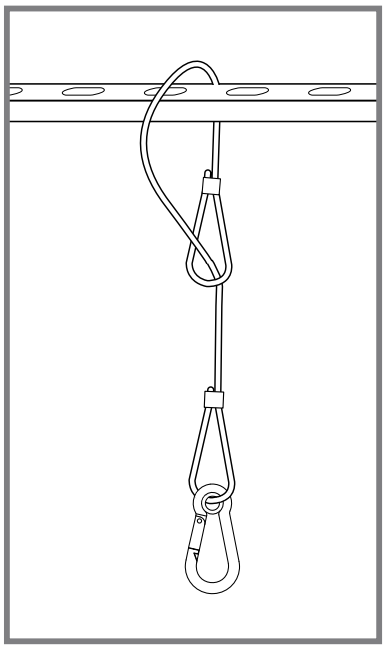
Step 3:

The speaker may be installed either vertically or horizontally. Fix the bracket to the wall accordingly, using the ten fixing holes. Only use fixings appropriate for the wall material and observe the safety factor and the weight of the speaker and bracket combination given in the tables on page 4.

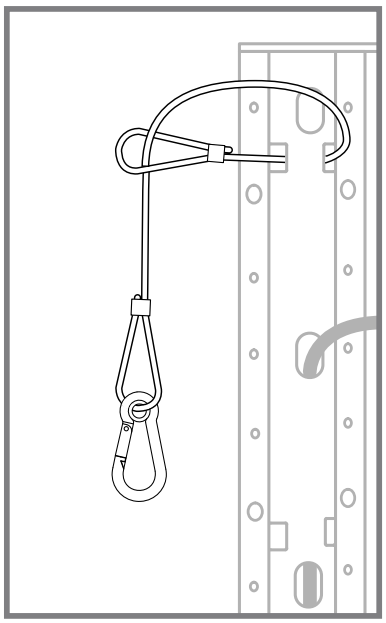


Step 4:

A stainless steel wire safety cable is supplied with the bracket. The looped end should ideally be attached to a convenient, substantial anchor point that is part of the building structure. It may be necessary to fit a dedicated bolt or similar to a suitable part of the structure in order to obtain a safe fixing.

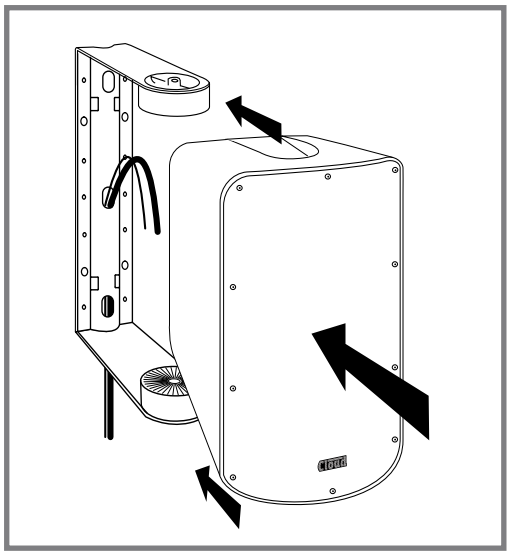


If no such fixing point is available, feed the looped end through two of the rectangular slots in the bracket's rear strut and pass the other end through the loop.



Step 5:

The speaker should now be fitted to the bracket. Push the rear of the cabinet squarely between the bracket's clamps and continue pushing until the clamps lock into place. The speaker can now be freely rotated to allow access to the rear panel.



Step 6:

Fit connector(s) to the cable(s) as detailed below.

'A' and 'AD' VERSIONS:

AC mains: The AC input requires a standard IEC mains connector. A UK-type mains lead is supplied with the speaker; use this if a 13 A socket is available at the speaker's location. If a longer cable run is needed, fit a wireable IEC connector (not supplied) to the installed AC cable. The speaker should be earthed – always connect all three cores of the AC cable.

'A' MODELS ONLY:

Audio inputs: Four input options are available: i) the 3-pin 5 mm-pitch Euroblock **INPUT** connectors, ii) the XLR3F pins of the corresponding Combo connectors, iii) the 6.35 mm TRS jack socket pins of the corresponding Combo connectors, iv) a 3.5 mm 3-pole jack socket. Mating Euroblock connectors are supplied with the speaker. Connect a single mono audio feed to **INPUT 1**. If a stereo audio feed is in use, connect the left channel to **INPUT 1** and the right channel to **INPUT 2**. See pages 6 and 7 for connection details.

Link output (if required): Use either the 3-pin 5 mm-pitch Euroblock **LINK OUT** connector or the corresponding XLR3M connector. A mating Euroblock connector is supplied with the speaker. See pages 6 and 7 for connection details.

'AD' VERSIONS ONLY:

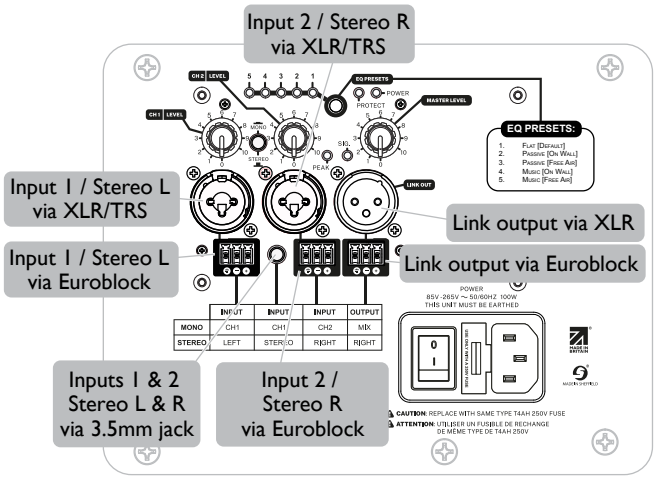
Network connection: Connect the speaker to a Dante™ network at the **DANTE/AES67** RJ45 socket. Pre-made network cables may be used if length permits; otherwise, terminate the installed network cable with a standard 8-pin RJ45 connector. See page 10 for pinout details.

Link output (if required): Use either the 3-pin 5 mm-pitch Euroblock **LINK OUT** connector or the corresponding XLR3M connector. A mating, locking-type Euroblock connector is supplied with the speaker. See page 12 for connection details.

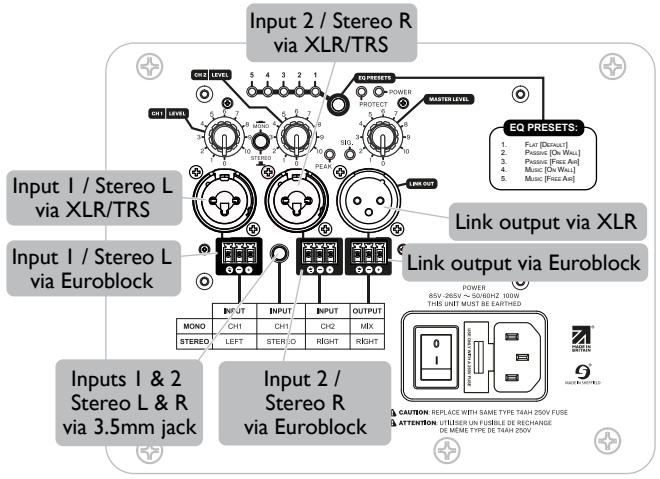
Step 7:

Plug in the rear connectors that were wired in Step 6.

CN-SnA versions



CN-SnAD versions



Euroblock connectors may be locked in place by tightening the two locking screws. The XLR socket is latching.

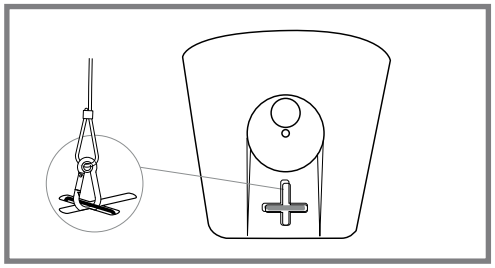
Step 8:

On both 'A' and 'AD' versions, ensure that the **MONO/ STEREO** selector is set correctly for the mode of operation to be used, and that the **EQ PRESET** most appropriate for the installation is selected. (This is most likely to be Preset 2 or 4 for an on-wall bracket mounting.) When the speaker is powered, the preset in use is confirmed by one of five LEDs.

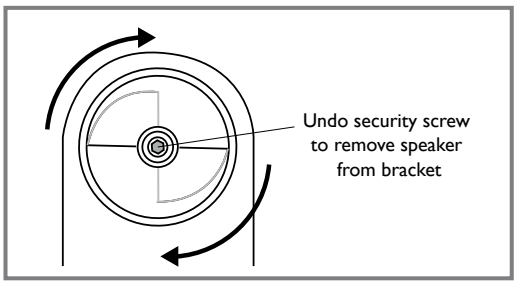
We suggest that the **LEVEL** control(s) and the **MASTER LEVEL** control are set to '7' at this point in the installation. Note the location of the controls as they may need adjusting during audio testing once the speaker is locked in its final position.

Step 9

Secure the safety cable's carabiner hook to the locking loop on the rear of the cabinet



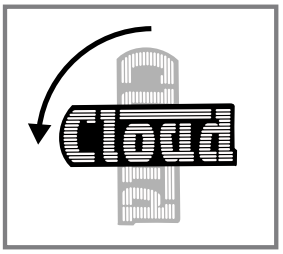
The speaker may now be rotated to its desired position. Lock it in place by tightening the two bracket clamps.



NOTE: the clamp design is a security feature. Once tightened, they can only be loosened by undoing the central screw with a 5 mm a/f hex key.

Step 10

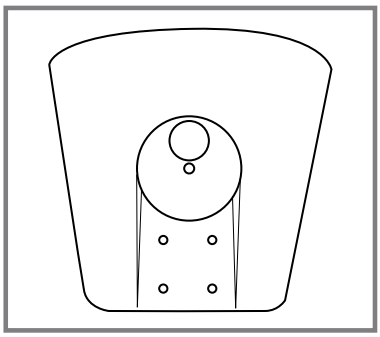
If necessary, rotate the Cloud badge on the front grille to suit the final orientation of the speaker.



Other installation options

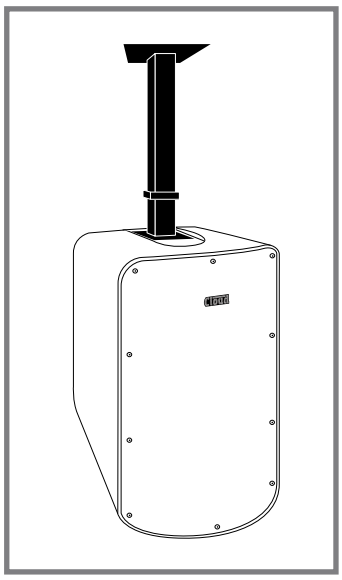
Ceiling mounting

Various OEM top-mount brackets may be used to "hang" CS-S8/10/12 speakers in a vertical orientation using the four M6 tapped sockets on the bottom of the cabinet. In such an installation, the speaker would be "upside-down" relative to the rear panel silk- screening, but poses no issues for normal speaker operation.



Cloud has tested and approved the Powerdrive CMT60 Bracket for this purpose, for loads up to 18 kg.

See https://mypowerdrive.com/products/top-mount-ceiling-bracket-cmft60-b?id=1737 for more information.



Powerdrive can also supply various other mounting solutions which use these M6 mounting points.

See https://mypowerdrive.com/ for more information.

Pole/spigot mounting

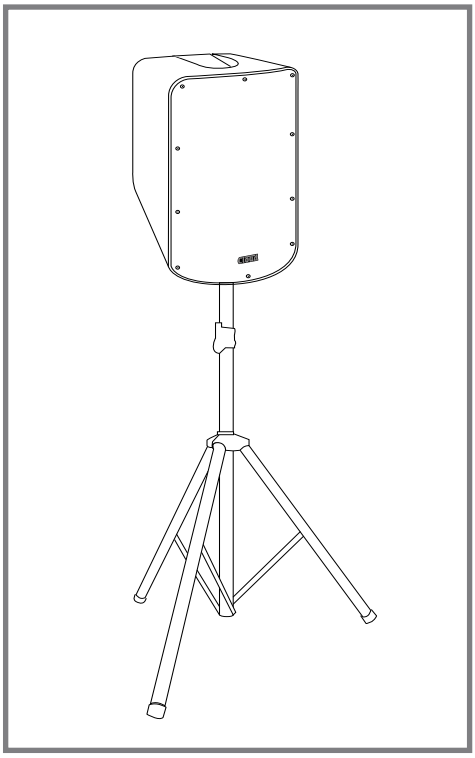
CS-S8/10/12 speakers have a standard 35 mm "top hat" mounting socket in both top and bottom of the cabinet. These allow the speakers to be mounted in vertical orientation on a variety of OEM wall brackets fitted with 35 mm spigots.

Some bracket designs utilise both sockets, others only the bottom socket.

Cloud approve the Powerdrive WHU-35B bracket for this purpose. See https://mypowerdrive.com/products/bottom-mount-wall-bracket-35mm-spigot-whu35-b?id=2144 for more information.

Free-standing use

The bottom "top hat" socket may also be used with most standard OEM tripod floor stands with a 35 mm spigot, greatly increasing the speakers' versatility.



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