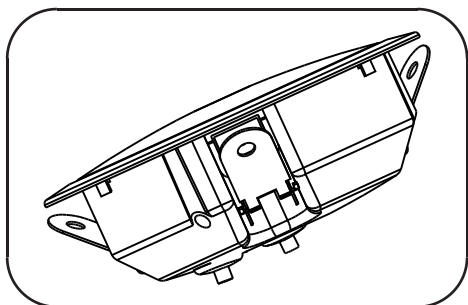




CEILING SPEAKER INSTRUCTION MANUAL



User Manual



CSL-6106(EN54-24)

CSL-6112(EN54-24)

CSL-6120(EN54-24)

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Thank you for purchasing SHOW CEILING Speaker
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.



1. SAFETY PRECAUTIONS

INSTRUCTION MANUAL

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.



WARNING

- Use only the specified amplifier output voltage and impedance, as exceeding the specified limits could result in fire or other failures (high-impedance version).
- To avoid accidental air explosions, do not use the unit around gasoline, thinner or other combustibles.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Protect the unit from exposure in snowy areas, as the weight of snow build-up could cause the speaker to fall, resulting in personal injury.
- Do not use other methods than specified to mount the bracket. Extreme force is applied to the unit and the unit could fall off, possibly resulting in personal injuries.
- Tighten each nut and bolt securely. Ensure that the bracket has no loose joints after installation to prevent accidents that could result in personal injury.
- Avoid mounting the unit in locations exposed to constant vibration. The mounting bracket can be damaged by excessive vibration, potentially causing the speaker to fall, which could result in personal injury.
- To avoid electric shocks, be sure to switch off the amplifier power when connecting the speaker.
- Avoid installing the unit in humid or dusty locations, or in locations exposed to heaters, solvents, acid, alkali, smoke, steam or direct sunlight (except outdoor-use versions), as excessive exposure to these factors could result in speaker failure, fire or electric shock.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Do not stand or sit on, nor hang down from the unit as this may cause it to fall down or drop, resulting in personal injury and/or property damage.

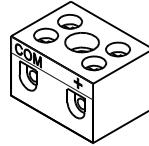


CAUTION

2. HOW TO USE

2.1. Handling Precautions

- Be sure to note the following polarities when multiple speakers are used in the same location. Incorrect connections could result in no bass output or decreased volume.
Connect the correct (+) and (com)polarity terminals as per mark
- To avoid amplifier failure, do not simultaneously connect both low- and high-impedance speakers to the amplifier. Ensure that only one type is connected.
Notes: (1) "Low-impedance" refers to speakers having no built-in matching transformer.
(2) "High-impedance" refers to speakers having a built-in matching transformer.
- Ensure only the specified line voltage (amplifier output voltage) is used for the high-impedance speakers. The line voltage is indicated on the name plate as [70/100 V LINE]. If an unspecified line voltage is connected, fire or equipment failure could result.



2.2. Connections

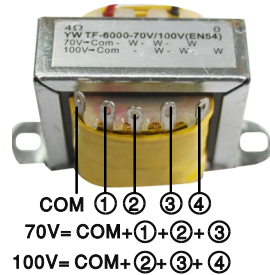
The total rated input of all connected speakers must be equal to or smaller than the amplifier output. If the total speaker input rating is greater than the amplifier output, the amplifier could fail. Connect all speakers in parallel.

2.3. Impedance Selection

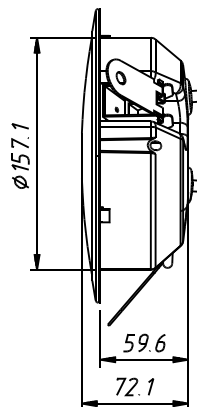
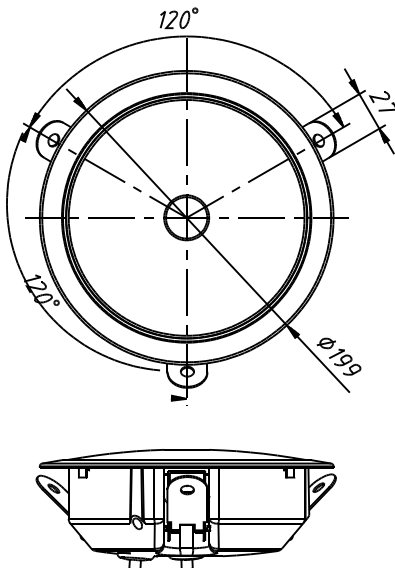
Select different connection terminals with different impedance change directly the connection cable of the transformer, please follow below direction

- Notes: (1) Speakers are factory-preset for the highest rated input of two line voltages (i.e. 100 V line in the case of the 70/100 V line version).
(2) The speaker's rated input and impedance are indicated on the name plate.

Speakers are designed to select either of the two line voltages (rated amplifier output voltage). Check to confirm the line voltage to use, and select the line voltage impedance specified on the name plate.

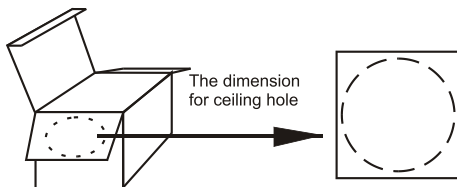


3. DIMENSIONAL DIAGRAM



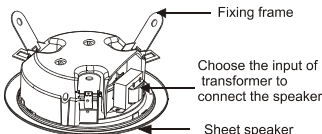
4.INSTALLATION NOTICE:

- (1).Drill a round hole into the ceiling in accordance with the ceiling drilling picture on the attached cove in the inner box.
(See picture A)



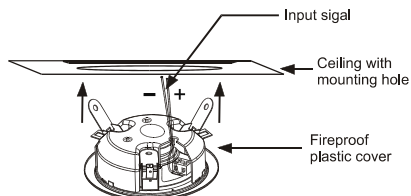
Picture A

- (2).Connect the electric wire to facility then choose the required input voltage and output power. (See picture B)



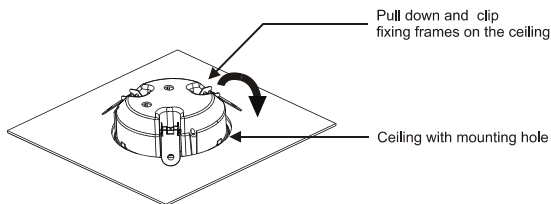
Picture B

- (3).After connecting the speaker, pull the three fixing frames on speaker vertically, then pushit into the round hold on ceiling for fixing.(See picture C)



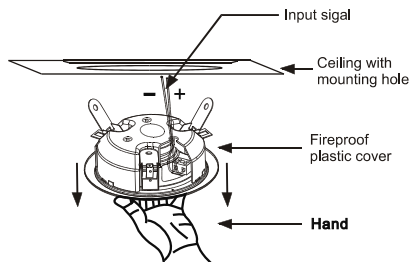
Picture C

- (4).The speaker is fastened to the ceiling after pulling down and clipping fixing frames to the lowest. (See picture D)
Please refer to specifications and instructions of the product for more details.



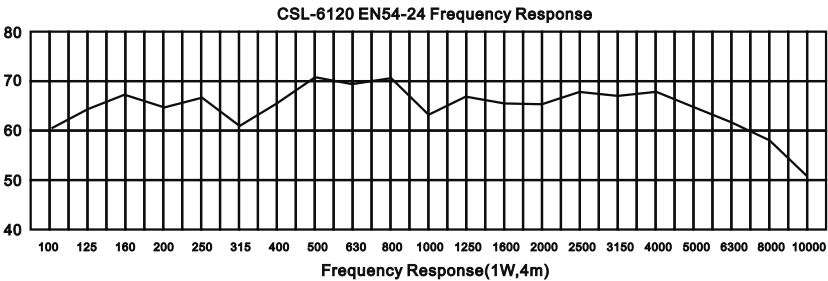
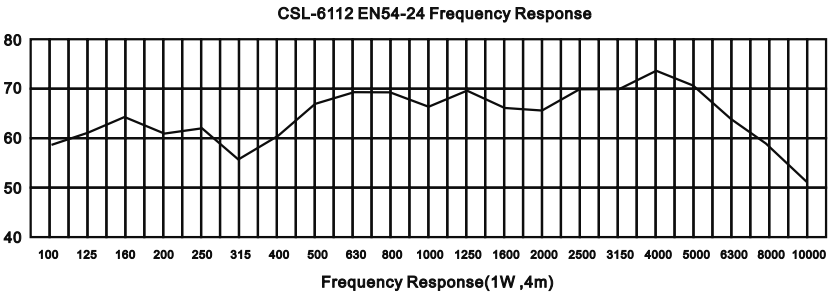
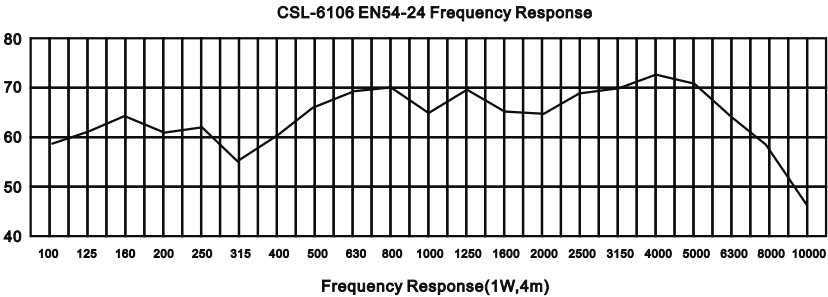
Picture D

- (5).Hold the ceiling speaker with a hand and avoid it falling down
Move the three fixing frames up, then pull the ceiling speaker out off ceiling hole.



Picture E

5 . FREQUENCY RESPONSE



6. SPECIFICATION

Model	CSL-6106	CSL-6112	CSL-6120
Standards	Certified to the European Standard EN 54-24:2008 Loudspeaker for voice alarm systems for fire detection and fire alarm systems Certification Cation NO.1438-CPR-1083		
Environmental Type	TYPE A (Indoor applications)		
Built-in speaker	6.5" full range paper speaker	6.5" full range paper speaker	6.5" full range paper speaker
Rated Noise Power	6 W (70V/100V Line)	12 W (70V/100V Line)	20 W (70V/100V Line)
Rated Impedance	70 V line:3333 Ω (1.5W) 817 Ω (8W) 1667 Ω (3W)	70 V line: 1667 Ω (3W) 833 Ω (6W) 408 Ω (12W)	70 V line: 1000 Ω (5W) 500 Ω (10W) 250 Ω (20W)
	100 V line:8667 Ω (1.5W) 3333 Ω (3W) 1667 Ω (6W)	100 V line:3333 Ω (3W) 1667 Ω (6W) 833 Ω (12W)	100 V line:2000 Ω (5W) 1000 Ω (10W) 500 Ω (20W)
Sensitivity	92dB (1 W, 1 m) (500 Hz - 5 kHz, pink noise) 79 dB (1 W, 4 m) (100 Hz - 10 kHz, pink noise) according to EN 54-24 92 dB (1 W, 1 m) (100 Hz - 10 kHz, pink noise) converted based on EN 54-24	93 dB (1 W, 1 m) (500 Hz - 5 kHz, pink noise) 80 dB (1 W, 4 m) (100 Hz - 10 kHz, pink noise) according to EN 54-24 93 dB (1 W, 1 m) (100 Hz - 10 kHz, pink noise) converted based on EN 54-24	92 dB (1 W, 1 m) (500 Hz - 5 kHz, pink noise) 79 dB (1 W, 4 m) (100 Hz - 10 kHz, pink noise) according to EN 54-24 92 dB (1 W, 1 m) (100 Hz - 10 kHz, pink noise) converted based on EN 54-24
Frequency Response	110 Hz - 20kHz	110 Hz - 20kHz	95 Hz -20 kHz
Maximum Sound Pressure Level	85 dB (6 W, 4 m) (100 Hz - 10 kHz, pink noise) according to EN 54-24 97 dB (6 W, 1 m) (100 Hz - 10 kHz, pink noise) converted based on EN 54-24	88 dB (12 W, 4 m) (100 Hz - 10 kHz, pink noise) according to EN 54-24 98 dB (12 W, 1 m) (100 Hz - 10 kHz, pink noise) converted based on EN 54-24	91 dB (20 W, 4 m) (100 Hz - 10 kHz, pink noise) according to EN 54-24 101dB (20 W, 1 m) (100 Hz - 10 kHz, pink noise) converted based on EN 54-24
Coverage Angle (-6dB)	500 Hz: 180°, 1 kHz: 180°, 2 kHz: 150°, 4 kHz: 55°, according to EN 54-24	500 Hz: 180°, 1 kHz: 180°, 2 kHz: 150°, 4 kHz: 55°, according to EN 54-24	500 Hz: 180°, 1 kHz: 180°, 2 kHz: 150°, 4 kHz: 55°, according to EN 54-24
Weight	0.88 kg (bracket, fire dome included)	0.96 kg (bracket, fire dome included)	1.10 kg (bracket, fire dome included)
199 Dimensions	Ø 199 x 13mm (exposed section) + 74(D) mm	Ø 199 x 13mm (exposed section) + 74(D) mm	Ø 199 x 13mm (exposed section) + 74(D) mm
Speaker Component	16.5 cm (6.5) cone-type"		
Dimensions for Fixing Hole	Ø 178 (mounting hole) x 30 (maximum ceiling thickness) mm (Ø7 x 1.18)"		
Applicable Cable	Solid wire: Ø 0.8 mm (18 AWG)		
Connection	Screw connector (steatite terminabx2l) bridging		
Finish	Baffle: steel, white or equivalent color), paint Grille: steel net, off-white or equivalent color), paint Dome mounting bracket:, trivalent chromate treatment plating Fire dome is made of 5VB plastic		

Instruction of maintenance:

1. Please refer to installation drawing and operate according to safety instruction;
2. Keep speaker clean, you can use a clean cloth to wipe the dust on the speaker or use hair dryer to blow.
It's forbidden to use dissolvent, such as un-pure toluene, alcohol or other dissolvent with strong volatility.
3. Fuse: please select the required type fuse (250V#130 ℃.1A)
4. The speaker should avoid fire. It should not be exposed to the rain, it's also forbidden to use it in the wet environment. If long time no use, please keep it properly.
5. The design and specifications are subject to change without notice for improvement.
6. The specifications data was measured in an anechoic chamber, according to EN 54-24



1438

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1438-CPR-1083**

EN 54-24: 2008

**Loudspeaker for voice alarm systems for the detection and fire alarm
systems for buildings**

**CSL-6106
CSL-6112
CSL-6120**

Type A

Technical information available in paragraphs 2,3,4,5 and 6 of this manual