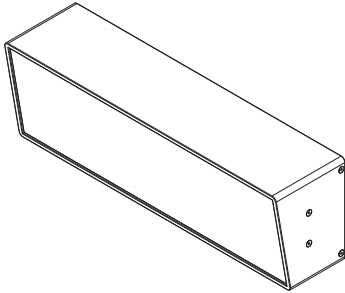


Home Cinema and Commercial Sound Systems

C6/SUB208S/SUB408S

C6B/SUB208SB/SUB408SB

User' manual



C6

P/N:
060200000176000
060200000188000(Black)

The C6, SUB208S and SUB408S Home Cinema system loudspeakers feature a unique design with a high-quality finishing and a superior sound performance. The high SPL capability, sound quality and flexible installation make them ideal for any home cinema configuration and size.

The C6 loudspeaker has been specifically designed for home theater use. The stylized design, the high quality non-glossy lacquer finishing, the high SPL and a superb sound quality allow it to be used on all the functions: Left, Center, Right, Surround and Ceiling.

The baffle is tilt 10° and permit a flat mounting on the wall or ceiling while focusing the sound to the listening area. It can be placed horizontal, vertical or on the ceiling with the same bracket. For a better integration in the room decoration, the loudspeaker distance to the wall is only 1 cm and the bracket is almost invisible. It can be used as well with a pole.

The C6 cabinet is made of 9mm MDF with double thickness baffle and use an accurate designed bass reflex system for an extended bass frequency response with a coaxial 6.5" woofer and 1" compression driver for clear and powerful sound reproduction free of phase problems.

Acoustics

Power: 60W(AES);120W Program, 240W Peak

Impedance: 8Ω

Sensitivity: 92dB SPL 1W/1m half space (1)

Max. SPL: >120dB Peak@1m

Frequency response:

65Hz-15kHz (-6dB), 60Hz-18kHz (-10dB) (2)

Beam aperture -3dB:

100° ±30° 600Hz-3.5kHz, 60° ±30° 3.5kHz-14kHz

Beam aperture -6dB:

120° ±30° 600Hz-3.5kHz, 90° ±30° 3.5kHz-20kHz

Maximum listener distance:8m (3)

Recommended amplifier:150W / 8 Ω

Recommended Xover freq.:70Hz

Speaker components:

1 x Coaxial 6.5" woofer 1" comp. driver

Cabinet

CNC made 9mm MDF, smooth non-glossy white or black painting

Connectors

2 x Push terminals for input and stack output

Mounting

Wall / Ceiling:

4 x M6 Screws on left and right faces for vertical or horizontal mounting by hidden bracket

Pole:

4xM6 insertion points on left and right faces for pole adaptor

Size / Package Size:

W654xH214xD168 / W750xH311xD277

Net Weight / Gross Weight

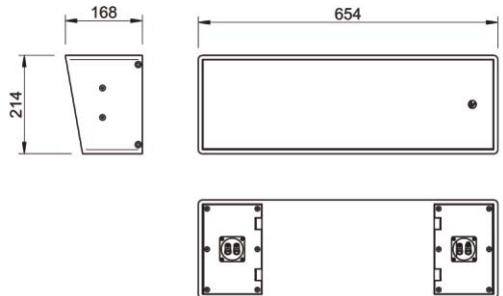
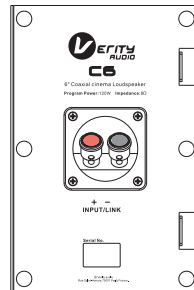
9.3kg / 14.3kg

1):Measured half space at 2m scaled to 1m full space

2):Measured half space at 4m, curve smoothed 1/3 oct

3):In accordance with **Dolby®** SPL requirements

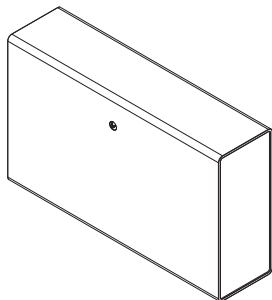
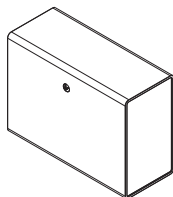
Connection panel



SPECIFICATIONS

SUB208S

P/N:
060200000162000
060200000187000(Black)



SUB408S

P/N:
060200000163000
060200000186000(Black)

The C6, SUB208S and SUB408S Home Cinema system loudspeakers feature a unique design with a high-quality finishing and a superior sound performance. The high SPL capability, sound quality and flexible installation make them ideal for any home cinema configuration and size.

The SUB208S and SUB408S are composed of two and four 8" drivers respectively and use an innovative symmetrical configuration of the drivers and ports that allow a flat design and a practically vibration free cabinet. The main benefits of the symmetrical flat design are to avoid the comb filtering produced by the rear wall sound reflections, and the absence of vibration of the cabinet panels due to action-reaction movements, allowing the SUB208S and SUB408S deliver the most clear, balanced and undistorted sound. The flat design (only 240mm deep) allow the SUB208S to be mounted on a wall. The vibration free cabinet avoid the problems of sound transmission to other rooms by the building structure.

The heavy braced cabinets are made of 15 and 18mm MDF respectively, with double thickness baffle to improve its sound performance by making its structure very rigid and avoiding undesired cabinet vibrations.

Acoustics

Power(AES)

SUB208S: 700W/1400W(Program)
SUB408S: 1400W/2800W(Program)

Impedance:

SUB208S:4Ω/SUB408:8Ω

Sensitivity (1):

SUB208S:92dB SPL 1W/1m half space
SUB408S:94.5dB SPL 1W/1m half space

Max. SPL:

SUB208S:>126.5dB Peak@1m

SUB408S:>132dB Peak@1m

Frequency response(2):

SUB208S:48Hz-1.1kHz (-6dB), 40Hz-1.5kHz (-10dB)

SUB408S:33Hz-250Hz (-6dB), 30Hz-350Hz (-10dB)

Directivity: Omnidirectional in the usable range

Speaker components:

SUB208S:2 x 8" European Ferrite driver

SUB408S:4 x 8" European Ferrite driver

Cabinet

CNC made SUB208S 15mm/SUB408S 18mm MDF,
smooth non-glossy white or black painting

Connectors

2x Euroblock 42A rated with locking screws

Mounting

On floor/On Wall:

SUB208S:8-M8 insertion points on rear face for wall bracket

SUB408S:4-hanging slots on rear face for wall bracket

Size / Package Size:

SUB208S:W580xH420xD240 / W673xH517xD337

SUB408S:W940xH560xD240 / W1036xH657xD337

Net Weight / Gross Weight

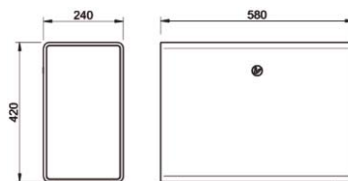
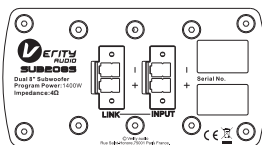
SUB208S:21kg / 27kg

SUB408S:44kg/54.5kg

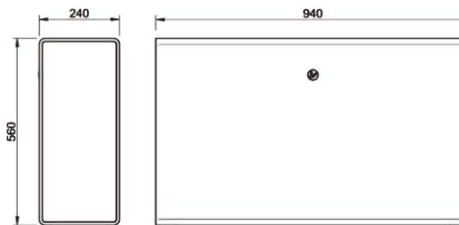
1):Measured half space at 2m scaled to 1m full space

2):Measured half space at 4m, curve smoothed 1/3 oct

Connection panel(SUB208S&408S)



SUB208S

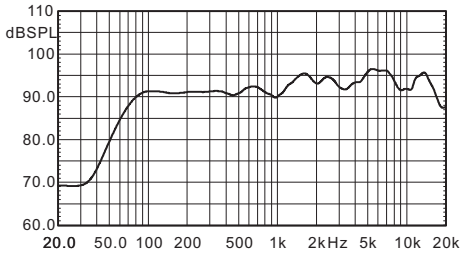


SUB408S

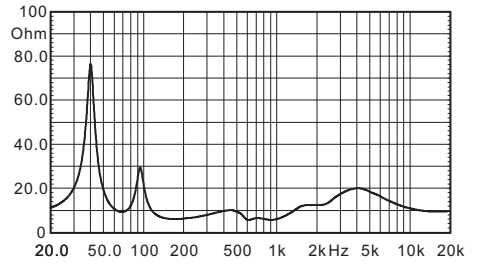


C6 CURVES

SPL @4m scaled to 1W/1m half space

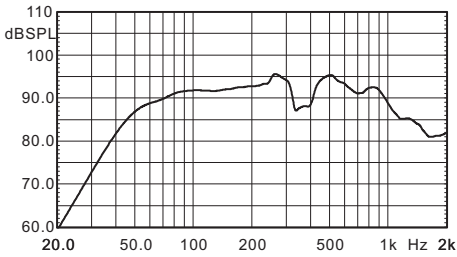


Impedance

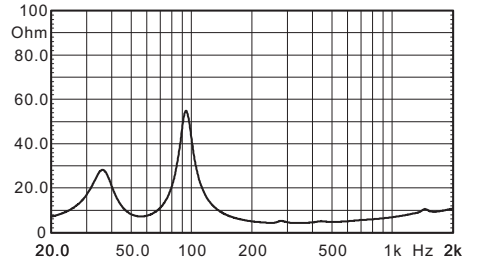


SUB208S CURVES

SPL @4m scaled to 1W/1m half space

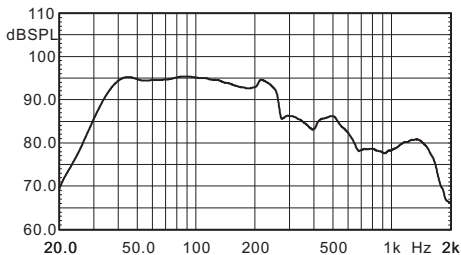


Impedance

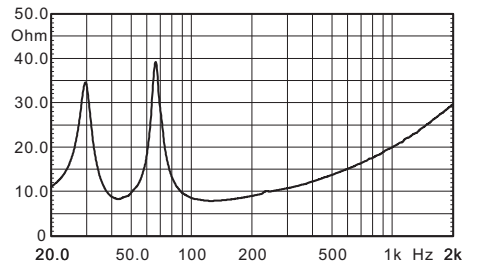


SUB408S CURVES

SPL @4m scaled to 1W/1m half space



Impedance



CONFIGURATIONS

A bit of history

The sound cinema started on late 30s with only one loudspeaker on the center of the screen. Different recording systems were used and the optical track on a 35mm film was finally standardized. During the 50s and 60s special expensive 70mm films with 6 magnetic tracks were recorded. The screen was filled with 5 channels (left, center left, center, center right and right) and the 6th channel was for surrounding effects. Later, in the 70s, dolby introduced a second optical track on the 35mm films: the dolby stereo. A matrix technology permitted to get 4 channels from the 2 optical tracks. Left, center, right and surround. With the introduction of digital technology early 90s, different systems reach to record 6 sound channels. A sub bass LFE (low frequency effects) was added: the .1 of the 5.1 loudspeakers configuration. At present, the digital technology for video and audio recording has no limitation of the number of sound channels. The latest one, dolby atmos, allow until 128 sound tracks that are mixed, processed and directed to the loudspeakers depending on the number and position of them.

Configurations numbering

The first number of the different configurations mean the number of front and surrounding loudspeakers. The second is the number of LFE loudspeakers (also called subwoofer despite his main function in home cinema is not the same as the subwoofer in hi-fi systems). And the third is the number of overhead loudspeakers. So, a 7.2.4 configuration mean: screen Left, Center and Right, surround Left, Right, Rear left and Rear right, 2 LFE and 4 overhead loudspeakers.

Loudspeakers acronym

There is a standard acronym to identify easily the different loudspeakers. This is a list of the main ones:

C	Screen center
L	Screen left
R	Screen right
Ls	Left surround
Rs	Right surround
Lrs	Left rear surround
Rrs	Right rear surround
Ltf	Left top (overhead) front
Rtf	Right top (overhead) front
Ltr	Left top (overhead) rear
Rtr	Right top (overhead) rear

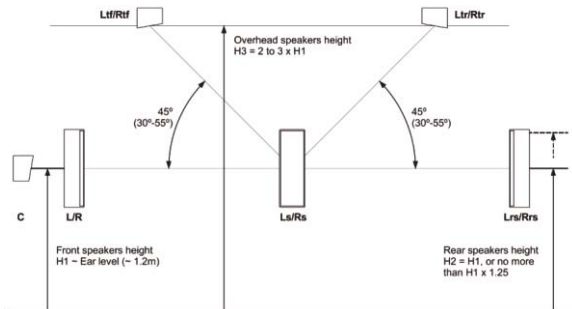


fig 1 - Vertical layout

Loudspeakers placement

The placement details in this section are accordingly with the dolby atmos recommendations based in the standards ITU-R BS.775-3 and ITU-R BS.1116-1

The best position for the front and surrounding loudspeakers is at the ears level of the audience. This mean the C6 cabinet center must be at around 1.2m from the floor. The rear surround loudspeakers could be placed 1.25 times higher than the front ones, so is at 1.5m.

The overhead loudspeakers must be at a height of 2 to 3 times the height of the front ones, so is between 2.4 and 3.6m, that is usually the height of the ceiling in homes.

The SUB208S or SUB408S placement could be at any place on the front of the audience and against a wall for a smooth and linear bass reproduction.

Generally, it is better not to place it on symmetry axes of the room, like the center of the front wall. If two or more SUB are used, not place them symmetrically to the room, so is, on the front wall at the same distance of the left and right walls. This is to minimize the effects of the room reflections.

Loudspeakers but C and LFE should be added to the system by pairs and placed as symmetrically as possible to the axis from the listening position to the screen.

It is important to understand that to get the best sound experience, the sound should come from symmetrically placed loudspeakers. No matter if there are distance differences, because the sound level can be compensated by the processor, but the angle should be the same for the left and right loudspeakers.

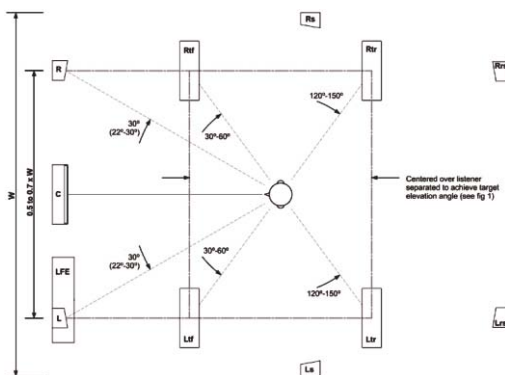


fig 2 - Horizontal layout

Typical configurations

Below are the placement drawings for some standard setups. For non-overhead loudspeaker configurations simply not consider them.

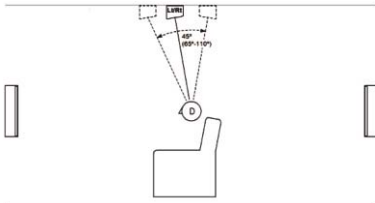


Fig 3 - x.x.2 Overhead position

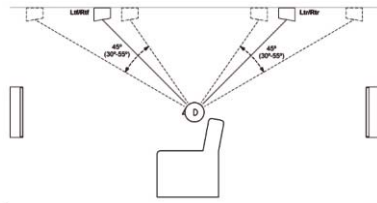


Fig 4 - x.x.4 Overhead position

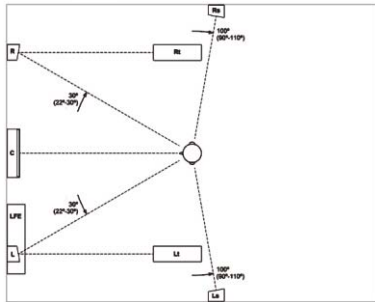


Fig 5 - 5.1.2 Layout

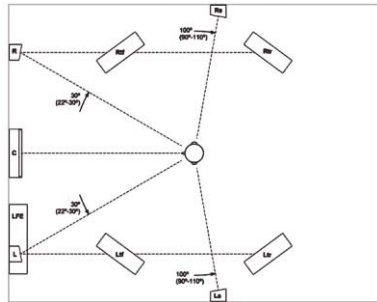


Fig 6 - 5.1.4 Layout

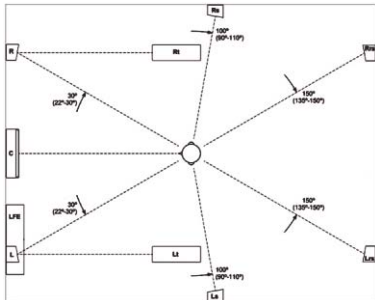


Fig 7 - 7.1.2 Layout

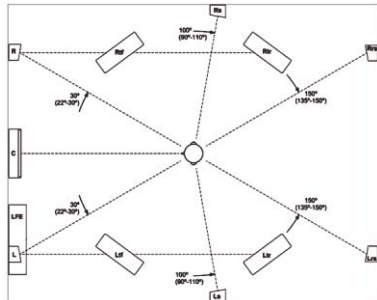


Fig 8 - 7.1.4 Layout

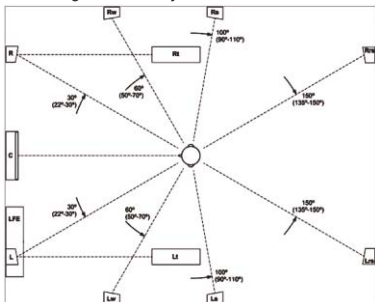


Fig 9 - 9.1.2 Layout

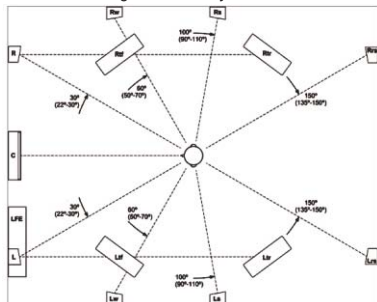


Fig 10 - 9.1.4 Layout

Speaker level calibration

Each full range speaker should be calibrated to get the same SPL at the central listening position. The target SPL can range from 79 to 82dB when driving with pink noise with an RMS level of -20dB relative to full scale.

Set the crossover frequency to 70Hz and calibrate the subwoofer level at the central listening position for redirected bass content from the full range loudspeakers to the same level of those calibrated before.

If you use the autocalibration setup included in your AVR or processor, please double check manually the levels on the subwoofer and overhead loudspeakers.

INSTALLATION

C6

Placement

The C6 Home Cinema system loudspeaker can be placed on pole, on shelf, on wall or on the ceiling. On wall the position could be horizontal or vertical, depending on the room and installation conditions.

The C6 aperture angle of the sound beam is great and the cabinet not need to be precisely focused to the listening point. It can be installed with the tilt baffle facing the listening point and keep flat against the wall.

Wall/ceiling installation

Use the appropriate screws or anchors to fix the supplied wall bracket to the wall or ceiling. Place it horizontally or vertically as you need.

Place the C6 on the bracket and fix it with only 2 M6 screws to allow to rotate the cabinet for an easy cable connection.

Use 2 more M6 screws to finish the installation. Double check the screws are enough tighten.

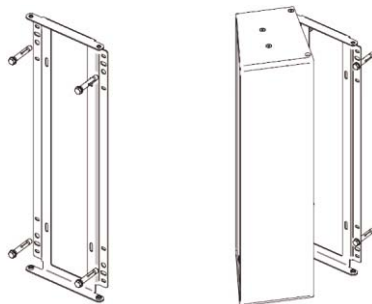
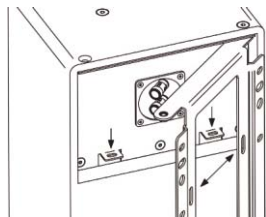


Fig 11 – Wall bracket install



When using the wall bracket it is recommended to use safety cables attaching them in the holes of the cabinet and bracket for this purpose.

Fig 12 – Safety cables place

Pole installation

A pole adaptor can be fixed on the left or right side of the C6. Only vertical loudspeaker position is possible with a pole. Remove and use the 2 M6 screws that are in the faces to do it.

SUB208S / SUB408S

Placement

The SUB208S and SUB408S can be placed on the floor or hung on a wall. In any case there must be at least 25cm of free space in front of both radiating faces. When used on the floor, place the subwoofer as close as possible to a wall.

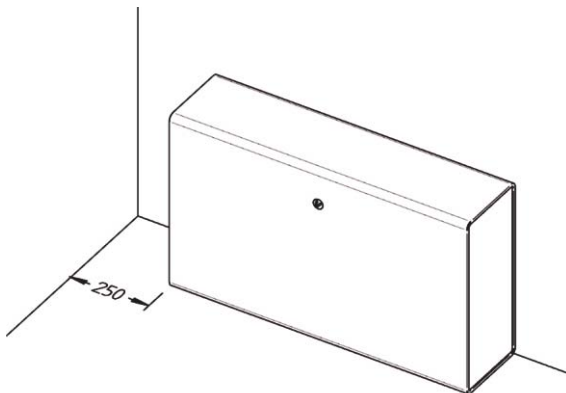


Fig 13 – Subwoofer minimum wall distance

SUB208S Wall mount

The SUB208S wall bracket is composed of two identical pieces. Use the appropriate screws or anchors to fix them to the wall. Take care to place the two brackets with the flange facing up, perfectly leveled and at the distance of 380mm between the center points. You can use the included template to facilitate the installation.

The SUB208S can be hung face up or face down to facilitate the wiring depending if the cables come from the floor or from the ceiling. For a face up installation use the 4 insert points with M6 screws on top of the rear face to attach the 2 small omega shaped plates on the bracket. For a face down installation use the 4 on the bottom.

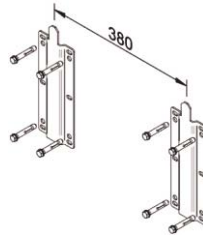


Fig 14 – SUB208S brackets

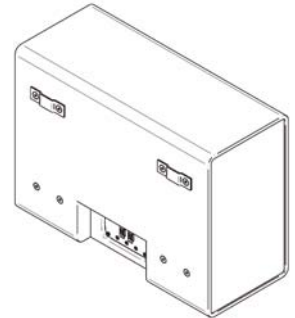


Fig 15 – Face up omega plates

SUB408 Wall mount

The SUB408S wall bracket is composed of two identical pieces. Use the appropriate screws or anchors to fix them to the wall. Take care to place the two brackets with the flanges facing up, perfectly leveled and at the distance of 700mm between the center points. You can use the included template to facilitate the installation.

The SUB208S can be hung face up or face down to facilitate the wiring depending if the cables come from the floor or from the ceiling.

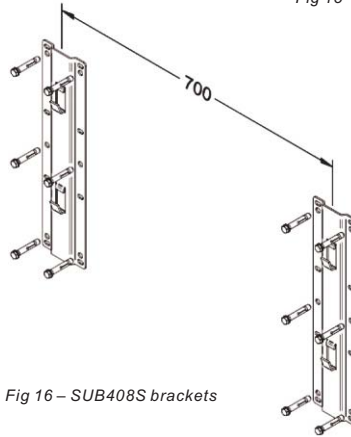


Fig 16 – SUB408S brackets

WIRING

The C6 have two sets of push terminals to connect the cables, one on each side of the rear face. Can use any of them or the signal input. The other can be used to parallel connect a second C6 to the same channel. Use the red one for + connection and the black one for – connection.

The SUB208S and SUB408S use a high current Euroblock connector for the signal input. Two locking screws avoid it be accidentally unplugged.

Use a cable with the appropriate gauge to connect the subs to the amplifier. As a rule, use 2x2.5mm² cable for lengths up to 10m and 2x4mm² cable for longer lengths.

You can use the stack output connectors for a parallel connection of another subwoofer.

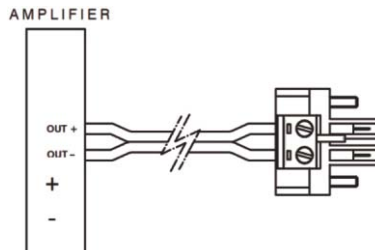


Fig 17 – Euroblock connector

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Verity Audio reserves the right to make any changes to the product specifications without prior notice.
Final specifications to be found in the user manual.

