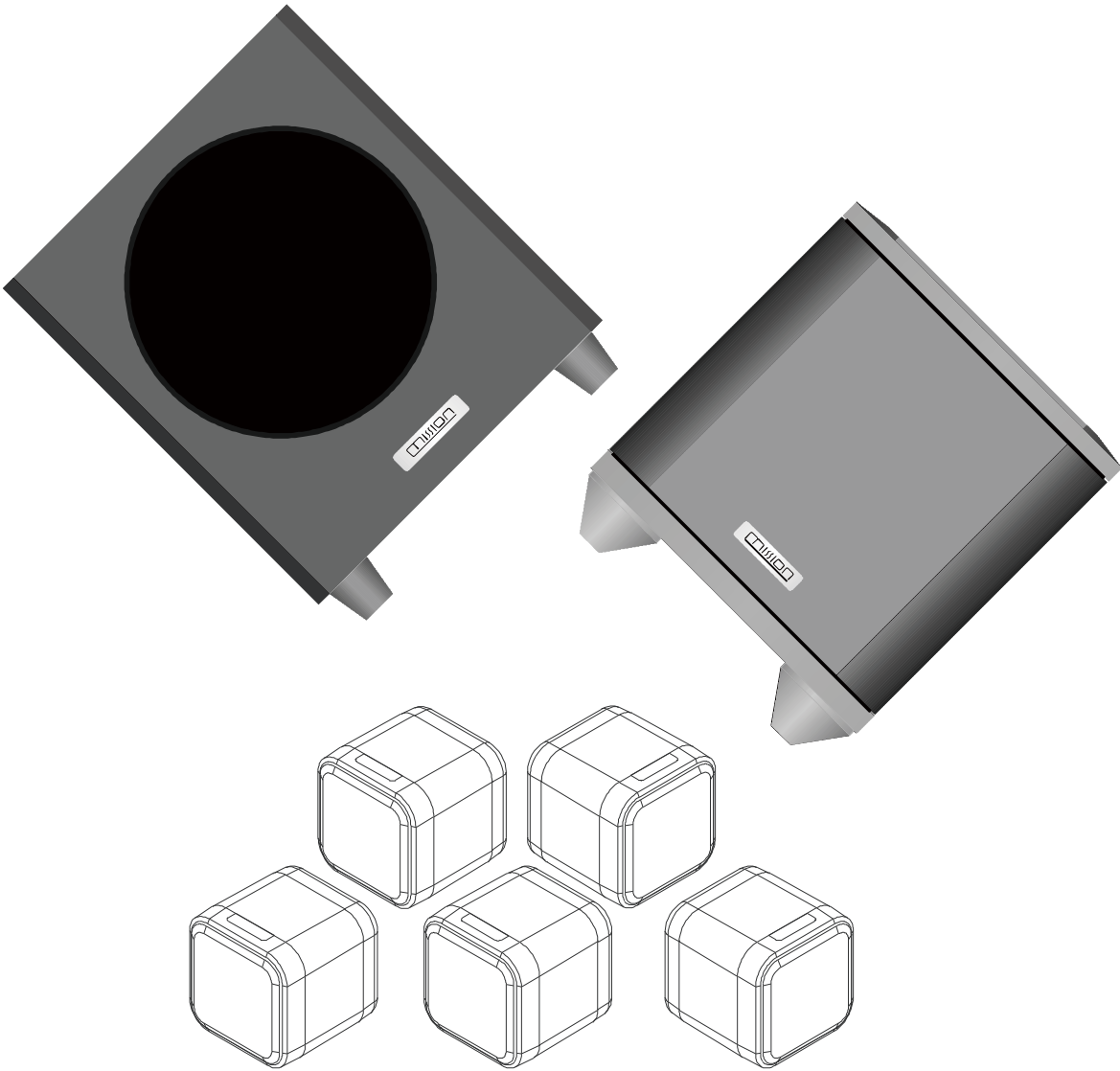


SUBWOOFER SPECIFICATION

ITEM	M-CUBE+	M-CUBE+SE
General Description	Active closed-box subwoofer system	
Enclosure Type	Closed box	Closed box
Transducer Complement	1 x 8inches (200mm) long throw bass driver	
Input Sensitivity	200mV for maximum output	
Amplifier Power Output	100W	70W
Peak Power Output	200W	150W
Peak SPL	108dB	108dB
Frequency Response	35Hz - 120Hz	35Hz - 120Hz
Bass Extension (-6dB)	30Hz	30Hz
Crossover Frequency	100Hz-150Hz	No
Signal-to-noise Ratio(s/n)	≥85dB	≥86dB
Special Features	Phase inversion, high pass output, low pass filter frequency adjustment auto on/off	
Cabinet Volume	20L	24L
Dimension (H x W x D)MM	(278+40) x 274 x 274	(298+30) x 268 x 294
Carton Size (L x W x H) MM	390 x 390 x 525	
Net Weight (kg)	12.0kg	12.4kg
Gross Weight (kg)	14.0kg	14.6kg
Finish Color	Gray & white	Black & white
Power Requirements	AC 100V-120V~/60Hz / 220V-240V~50/60Hz	
Standard Accessories	Power cord, floor spikes, user manual, guarantee certificate	

M-CUBE+
M-CUBE+SE



IAG-House,13/14 Glebe Road. Tel: +44(0)1480452561
Huntingdon,Cambirdgeshire. Fax:+44(0)1480 413403
Pe29 7DL. UK www.mission.co.uk



IMPORTANT SAFETY INFORMATION



CAUTION!
RISK OF ELECTRIC SHOCK
DO NOT OPEN



TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-REMOVEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED PERSONNEL

ADVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE- NE PAS OUVRIR



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

WARNING: TO REDUCE THE RISK OF FIRE OF ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with cloth.
- Do not block any ventilation openings.
- Install in accordance with the manufacturer’s instructions.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the polarised or grounding plug. A polarised plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer.



Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Unplug the apparatus during lightning storms or when unused for long periods of time.

Refer all servicing to qualified 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 exposed to rain or moisture, does not operate normally, or has been dropped.

CAUTION:These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

WARNING:To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.

WARNING: The mains plug/appliance coupler is used as disconnect device shall remain readily operable.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

Do NOT place heavy objects on top of loudspeaker cabinets. If you play them with the grilles removed be careful to protect the drive units from children and pets.

DO NOT change any connections to the subwoofer or your system without first switching of the power.

DO NOT use your amplifier or receiver at its maximum volume setting. This will produce high levels of distortion which may damage your loudspeakers and subwoofer. Allow your amplifier a little headroom so that it can operate without stress.

DO turn down the volume control on your amplifier or receiver before turning the equipment on or off. This will protect your subwoofer against switching 'thumps and other spurious signals.



IAG-MISSION

Correct disposal of this products. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.



This equipment is a Class II or double insulated electrical appliance. It has been designed in such a way that it does not require a safety connection to electrical earth.

Satellite Specifications

General Description	Wide bandwidth bookshelf / surround speaker
Enclosure Type	Closed box
Transducer Driver	3 inches
AV shield	No
Sensitivity (2.83V@1M)	85dB
Recommended Amplifier Power	40-80W
Nominal Impedance	4Ω
Minimum Impedance	3.6Ω
Frequency Response (+/-3dB)	150Hz - 20kHz
Bass Extension (-6dB)	110Hz
Cabinet Volume (in litres)	0.52L
Dimension (H x W x D) MM	100 x 100 x 103
Carton Size (L x W x H) MM	Packed with subwoofer
Net Weight (Kg)	0.8 x 5 = 4kg
Gross Weight	packed with subwoofer
Finish Color	Black & silver
Standard Accessories	Desk stand, user manual, guarantee certificate

LFE

The low frequency effects channel was designed as an additional bass channel with its own dedicated subwoofer. In practice, however, if all the speakers are set to small, the LFE channel will be combined with the bass from other channels and all this feeds into the subwoofer. When you set the LFE level from your AV processor, use care with this setting as the LFE channel may contain powerful low frequencies which, although normal in a cinema, may overload a domestic subwoofer.

If during a programme, you hear popping or thumping noises coming from the subwoofer, immediately turn the AV processor's volume level down and then reduce the LFE level. If this does not cure the problem, reduce the volume level at the subwoofer.

Please read the relevant sections of your AV amplifier manual and familiarize yourself with various issues. If you are unsure, consult your dealer for help.

Troubleshooting *Before investigating a problem, always switch off the system at the mains.*

If your system is not working properly please work through this checklist before returning a unit to your dealer.

Symptom	Possible Cause
No Sound	System not switched on; Speaker cables shorting terminals out; Wrong source selected
Sound lacks bass content Bass reproduction indistinct	Front Loudspeakers out of phase; Check all system connections and rectify. Subwoofer not switched on; Subwoofer phase incorrect; Subwoofer crossover control too low
Excessive bass distortion at low volumes	Subwoofer level set too high; LFE level set too high; Subwoofer incorrectly wired
Excessive or distorted bass at high levels	System level set too high; Bass control set too high; Subwoofer too close to room corner
Distorted/rattling sounds at high levels	System level too high; Objects on speaker/subwoofer; Objects too close to subwoofer
Popping or thumping from the subwoofer	System level set high; Subwoofer level set too high; LFE levels set too high
Indistinct sound; Poor localization of effects; Poor localization of dialogue	One or more loudspeakers is out of phase; Check all system connections and rectify.(Read the manual for connection procedure)
Television picture color is distorted	Subwoofer too close (Switch off system and TV, Move units away, Wait 15 mins; Switch on)

Service and warranty

Care and maintenance

The satellite speakers are designed without grilles to enable optimum dispersion from the advanced drive units. Take care not to touch, push or damage the drive units.

The loudspeaker cabinets can be cleaned with a damp cloth or a spray furniture polish and a soft cloth. Apply the spray very sparingly to the cloth and then polish the cabinet. Never apply spray directly to the cabinet.

Guarantee & service

In the unlikely event that your unit develops a fault you should return it to your Mission dealer using the original packing to ensure safe shipping.

The terms of your guarantee may vary in different countries but in all cases the guarantee excludes:

All damage caused through accident, moisture, wear and tear, neglect, incorrect installation, adjustable or repair by unauthorized personnel. Liability for damage or loss occurring in transit to or from the purchaser.

Welcome to Mission!

The M-CUBE+ & M-CUBE+SE System is the latest in a long of distinguished Mission loudspeakers. These technologically advanced loudspeakers will complement the finest electronics and home decoration. The MCUBE+ & M-CUBE+SE System incorporates purpose-designed full range drive units that outperform conventional bass and treble units, and work with your room acoustics to create an immersive audio-visual experience.

General Information

Please read these instructions carefully before installing your loudspeakers. A few minutes studying this manual will ensure superb performance from your loudspeakers system for many years to come.

Please pay attention to all cautions printed on the pages marked with this symbol



Unpacking Your Loudspeakers

Carefully remove each loudspeaker from its packing carton. Be especially careful removing polythene bags. DO NOT attempt to lift the loudspeaker by the polythene bag. When lifting the subwoofer from carton, support it from the bottom. The unit is heavy. If you can't manage easily, get someone to assist you. Check each unit and in the event of damage, contact your dealer. Retain the packing for future use. If you decide to dispose of the packing, please do so with regard to any recycling regulating in your area. Retain the instructions, if you pass a product to a third party, please include the instructions.

Introduction

The M-CUBE+/M-CUBE+SE system consists of
5pcs satellite speakers
1pcs subwoofer (M-CUBE+/M-CUBE+SE)

Ancillary equipment

The system is compatible with most modern audio-visual equipment – but a loudspeaker is only as good as the signal it gets. Your amplifier should have ample reserves of power – a low powered amplifier could easily run out of steam and the resulting distortion is unpleasant to listen to and could damage your speakers.

A large amplifier will usually sound better and enhance the reliability and performance of your loudspeakers. Always turn down the volume if the music starts to sound distorted.

Installing the subwoofer Preliminaries

Open the carton and remove all the top packing pieces. Lift the subwoofer out taking caring not to damage the cabinet. DO NOT lift the subwoofer out of the carton using the protective bag. The unit is heavy; if you cannot manage it easily, get assistance.

Retain the packing materials. If you decide not to keep the packing, please dispose of it having regard to any recycling regulations in your area. Please retain the user manual. If you transfer this equipment to a third party, please ensure all the instructions are passed on with the product.

Power connections

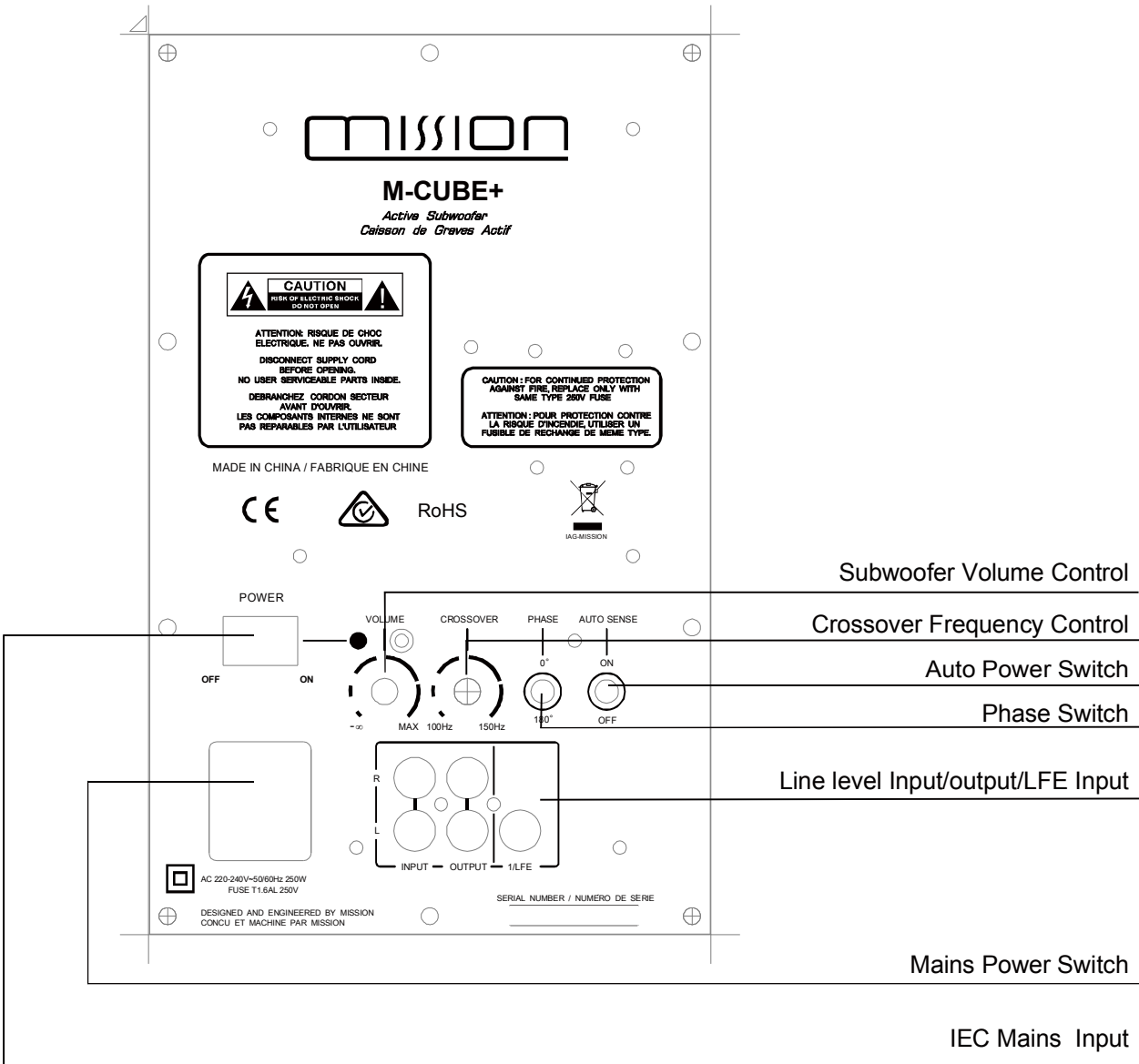
The subwoofer is factory set to operate from the mains voltage marked on the amplifier panel. Before connecting check the voltage is correct for you mains supply:

- 230 volt products -220 volts to 240 volts
- 115 volt products -110 volts to 120 volts

if you move to an area with different mains supply, consult your Mission dealer fo advice.

Subwoofer rear panel connections

1) M-CUBE+ Subwoofer rear panel connections



Operation

Setting up the system

- Set the subwoofer power switch to OFF
- Turn the system volume control to minimum
- Re-check all system connections
- Connect the supplied subwoofer power cable to the IEC power socket on the subwoofer and connect the mains plugs into the wall socket
- Set the subwoofer control midway(12 o'clock)
- Switch on the mains power

Fine tuning

Switch on the subwoofer power switch. Check that power indicator on the cabinet glows. Now switch on the system. Play a programme with extended bass and set the system volume to a reasonable level. Adjust the subwoofer volume control to produce the desired level of bass.

Phase switch: If the bass is indistinct or lacks depth, the phase switch may need adjustment. Set the switch to 0° and listen carefully to some music with extended bass. If there is insufficient bass output set the phase switch 180°. Select the position which produces the most natural, extended bass.

Crossover frequency: This adjusts the blend between the subwoofer and the satellite speakers and enables you to set the system for optimum upper bass performance. (NOTE: The M-CUBE+SE has no "Crossover frequency")

Set the crossover frequency to maximum (150Hz) for the supplied satellite speakers. If the upper bass is too strong and voices sound indistinct, reduce the crossover frequency setting until the desired level of clarity is reached.

AUTO SENSE on/off: In normal mode the subwoofer is permanently on. This may result in low level hum or noise if the rest of the system is switched off and the subwoofer is left switched on. Setting the AUTO switch to ON automatically turns the subwoofer on when a signal is detected at any of the inputs and turns it off (Standby Mode) after a period of inactivity. We recommend the AUTO switch be set to ON for normal operation.

In AUTO mode the indicator on the subwoofer will always be illuminated even when in standby to show the unit is still powered. If your subwoofer is disconnected from the mains or the power switch is 'off', the indicator will be extinguished. When the system is not in use for extended periods, we suggest you switch off the subwoofer to protect it from switching noises caused by domestic appliances etc.

Home theater subwoofer positioning

As the ear is unable to detect the direction from which deep bass originates, this allows freedom in positioning the subwoofer. Varying the distance from the wall alters the amount of bass. Some prefer to place the subwoofer against a room corner. This arrangement gives more bass at the possible expense of clarity.

Loudspeaker sizes

Many digital AV processors require you to specify the size of the speakers in each channel. The choice is normally 'Large' or 'Small'. You must set the front, centre and surround speakers to 'Small'. This will direct all the bass from your amplifier to the subwoofer for optimum performance.

Set the crossover frequency on your AV processor and the subwoofer to 120Hz or 130Hz.

Setting levels

Once the loudspeaker settings have been finalized, put the AV amplifier into its 'test' mode(see your processor instructions). Adjust the levels until all channels are equally loud.

You may need to adjust the subwoofer output level. Avoid setting too high a level or you will swamp the sound with bass which is tiring to listen to and may limit the subwoofer's ability to respond to heavy bass transients. Set a sensible level going into subwoofer. The subwoofer volume control should be between 12 o'clock and 3 o'clock.

Positioning Your Loudspeakers

Before connecting your system consider where you will place the speakers in the room. Before making a final decision please experiment until you find the most suitable position.

5.1 system positioning

Place the front speakers as indicated in the diagram. Always place the satellite speakers close to or against a wall or corner. This will help integrate the sound output with your room.

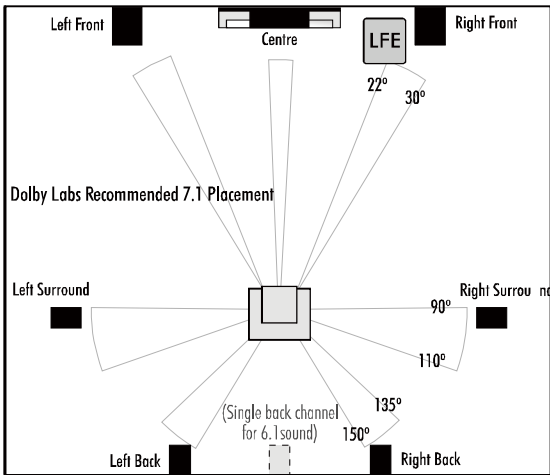
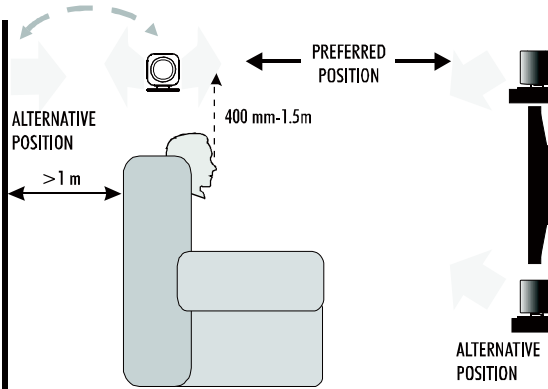
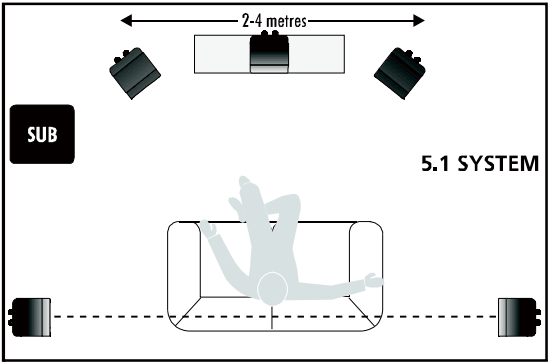
Angling the satellite speakers partly towards you may improve clarity. The satellites can easily be wall or shelf mounted using the M-Cube+ wall brackets or desk stands. The shelves and brackets are sold separately.

The center speaker can be placed above or below the TV screen. All the passive speakers may be placed near to a conventional CRTTV.

The surround speakers should be placed between 400 MM and 1.5M above ear level and preferably on the side walls but always behind listeners. If the distance between the side walls is great, you could use a high stand to mount the surround loudspeakers.

If mounting the surrounds on the side walls is not feasible they may be mounted on the rear walls between 2.5-3.5 meters apart, central to the listening position and 400 MM -1.5 M above ear level.

Place the subwoofer close to the wall, leaving just enough space to operate the controls and mains switch. Room positioning is not critical but we recommend that it is placed in the front of the listening seat. Never operate the subwoofer within 450 MM of a conventional TV, LCD and plasma screen may be affected. Ensure that there is main point close by.

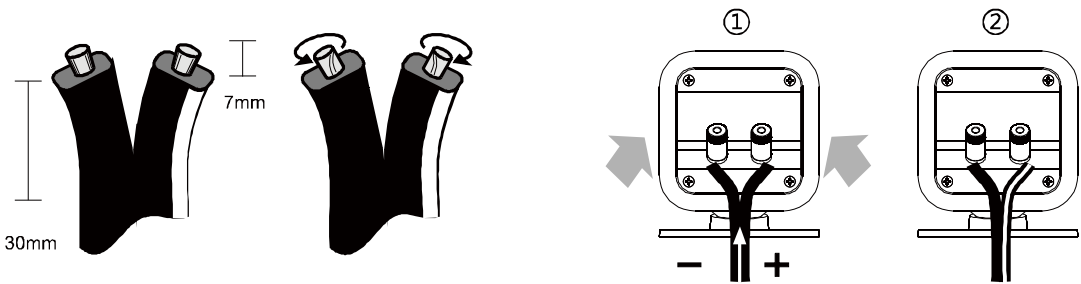


Multi-channel room placement

The diagram shows the Dolby labs recommended positions for multi-channel operation.

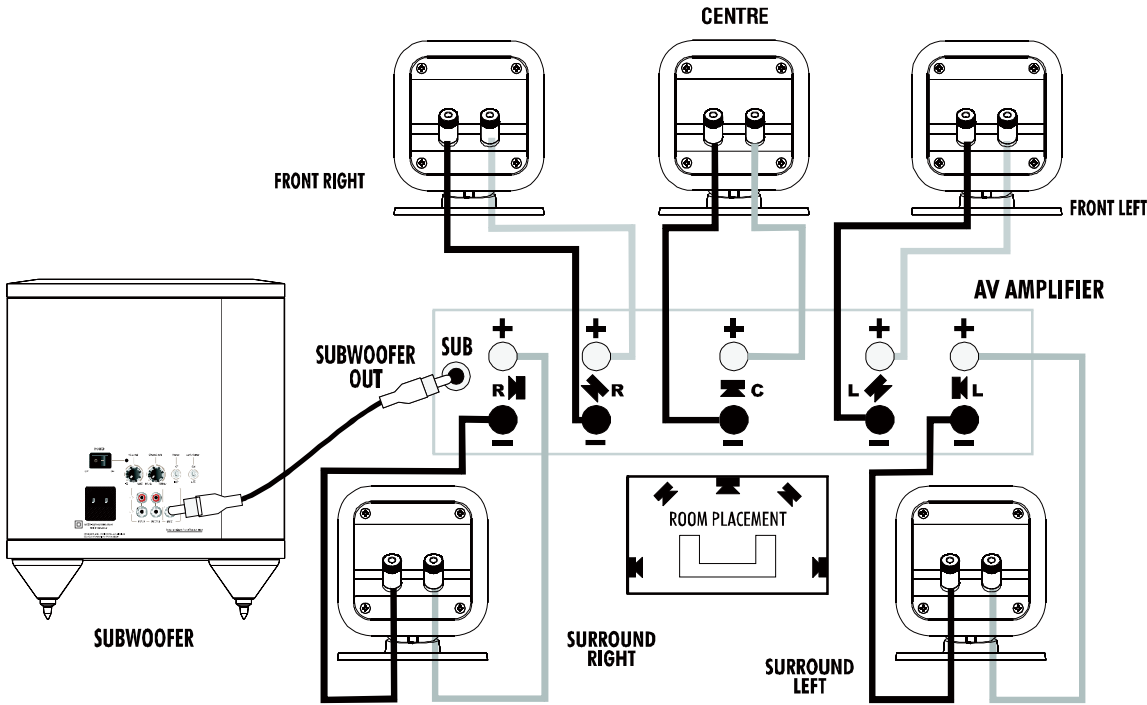
For 5.1 channel operation use the satellites in the front and surround positions with Subwoofer in the LFE position. If you have a 7.1 channel processor/amplifier you can enhance the system further by buying one of the large loudspeakers from the Mission range to use as front channel speakers and use satellite units as back channels.

Connecting The Passive Loudspeakers



You will need to purchase a suitable length of speaker cable. You are advised to buy quality loudspeaker cable rather than low-cost “bell” or “zip” wire. Your dealer will be pleased to advise you. Connect the loudspeakers as shown in the connecting diagram. Ensure that the red speaker terminal is wired to the RED(+) amplifier output terminal and that the black speaker terminal is wired to the black(-) amplifier output terminal. It is convenient to use the striped core to connect the positive +RED terminal.

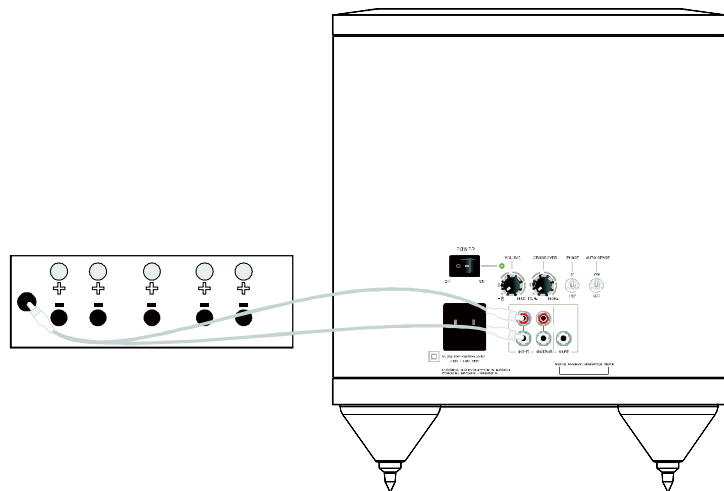
Standard System Connections



Your subwoofer has been designed for optimum performance with a digital processor. If your AV processor has a line level or LFE subwoofer output you should use this connection. You will need to purchase a single screened RCA phono lead from your dealer. Connect this lead to the LFE input of the subwoofer as shown.

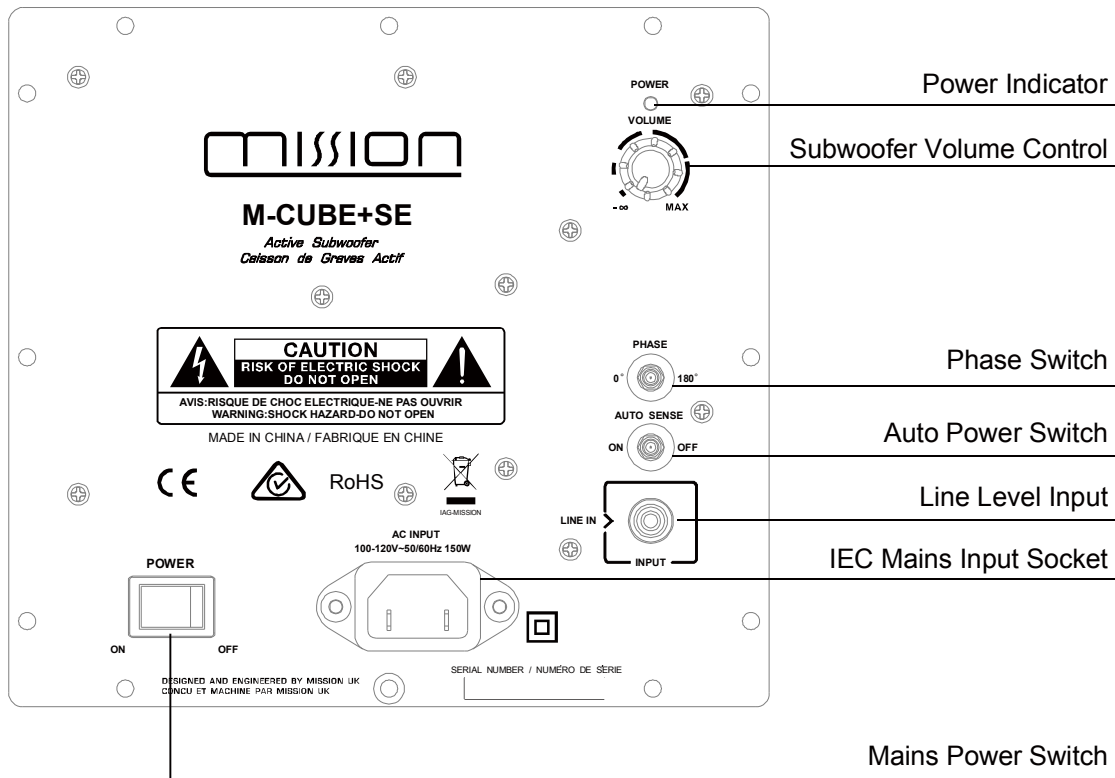
Alternative subwoofer connection

You may use a spilt mono lead from the processor to both inputs of the subwoofer. In this case the input level at the subwoofer.



It is essential that you connect all the loudspeakers correctly with stripe core connected to the positive(+) terminals and the plain core connected to the (-) terminals in all cases. If one or more loudspeakers are incorrectly connected(out of phase),the definition will poor and the bass will be indistinct.

M-CUBE+SE Subwoofer rear panel instruction



To connect the subwoofer to a standard Digital Home Theater Processor/Amplifier you should purchase a single RCA phono lead.

The cable should be a high quality unit and well screened to avoid hum and noise problems.

The lead should be long enough to reach the subwoofer without being stretched taut. Your Mission dealer will be pleased to supply you with a suitable cable.