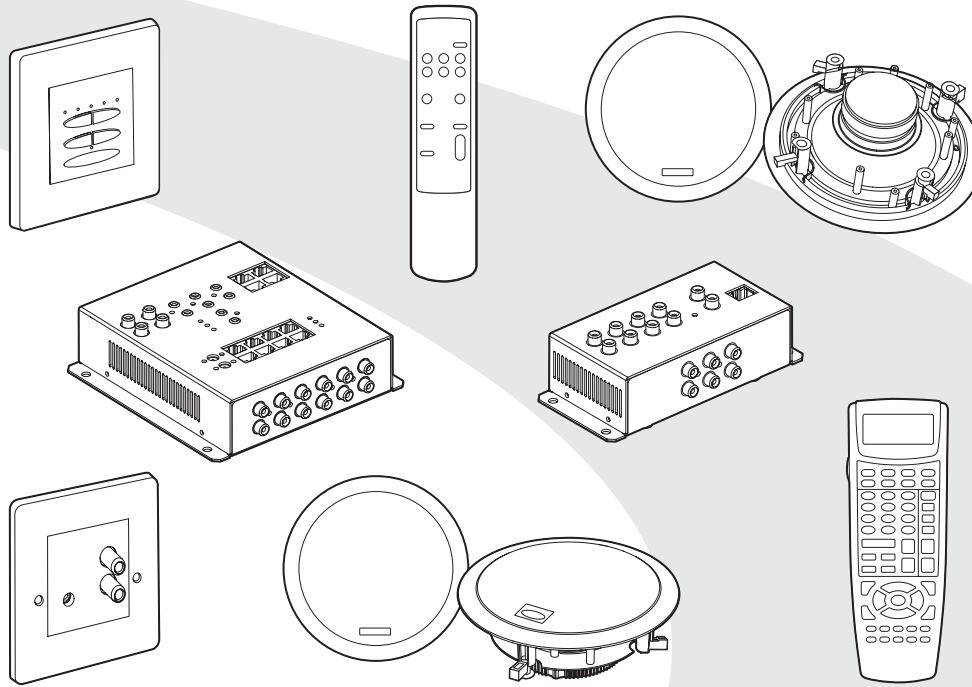


**OPUS**<sup>TM</sup>



# Opus 300 Multi-Room System Installation Guide

La version française de ce manuel est disponible sur le site:

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**Note: All diagrams and instructions in this guide refer to the EU version of the WCU300 keypad.**

# Important safety instructions

For safety reasons please read the following instructions and important safety information carefully before attempting to connect the Opus 300 Multi-Room System to the mains.

## Warning

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

## Caution

Use of controls or adjustments or performance of procedures other than those specified in this guide may result in hazardous radiation exposure.



To reduce the risk of electric shock, do not remove any covers. There are no user-serviceable parts inside. Please refer all servicing to an authorised servicing agent.



The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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.

## Approvals



The Opus Multi-Room System complies with the European Low Voltage (73/23/EEC) and Electromagnetic Compatibility (89/336/EEC) Directives when used and installed according to this instruction manual.



The crossed-out wheeled bin is the European Union symbol for indicating separate collection for electrical and electronic equipment. This product contains electrical and electronic equipment which should be reused, recycled or recovered and should not be disposed of with unsorted regular waste. Please return the unit or contact the authorised dealer from whom you purchased this product for more information.

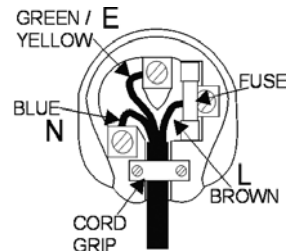
## Plug Fitting Instructions (UK only)

The cord supplied with this appliance is factory fitted with a 13A mains plug fitted with a 13A fuse inside. If it is necessary to change the fuse, it is important that a 13A one is used. If the plug needs to be changed because it is not suitable for your socket, or becomes damaged, it should be cut off and an appropriate plug fitted following the wiring instructions below. The plug must then be disposed of safely, as insertion into a 13A socket is likely to cause an electrical hazard. Should it be necessary to fit a 3-pin BS mains plug to the power cord the wires should be fitted as shown in this diagram. The colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug. Connect them as follows:-

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter 'N' or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter 'L' or coloured RED.

The wire which is coloured GREEN/YELLOW must be connected to the terminal which is marked with the letter 'E' or coloured GREEN.



Note - If a 13 Amp (BS 1363) type of plug is used a 13 Amp fuse must be fitted, either in the plug or adaptor, or on the distribution board.

# Important safety instructions continued

**Read Instructions** - All the safety and operating instructions should be read before the product is operated.

**Retain Instructions** - The safety and operating instructions should be retained for future reference.

**Heed Warnings** - All warnings on the product and the operating instructions should be adhered to.

**Follow Instructions** - All operating and use instructions should be followed.

**Cleaning** - Unplug all system components from the wall outlet before cleaning any part of the system. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

**Attachments** - Do not use attachments which are not recommended by Opus Technologies as they may cause hazards.

**Water and Moisture** - Do not use this product near water - for example, near a bath tub, wash bowl or kitchen sink; in a wet basement, or near a swimming pool etc.

**Wall or Ceiling Mounting** - Speakers should be mounted to a wall or ceiling only as recommended by the manufacturer. Installers should also ensure that all building regulations are strictly adhered to as cutting a hole for a loudspeaker may affect the fire rating of a ceiling or wall.

**Accessories** - Do not place this product on an unstable surface, stand, bracket or table. The product may fall, causing serious injury to child or adult, and serious damage to the product. Use only a surface, stand bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer. A product and stand combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the combination to overturn.



**Ventilation** - Slots and openings in the cabinets/enclosures are provided for ventilation and to ensure reliable operation of the product and to protect them from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a soft surface. The MCU should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to. For all components, the manufacturers instructions on ventilation must be adhered to.

**Power Sources** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power or other sources, refer to the operating instructions. This apparatus shall be connected to a mains socket outlet with a protective earthing connection.

**Grounding or Polarization** - 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. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

**Power-Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product. The mains plug is used as the disconnect device and shall remain readily operable.

**Protective Attachment Plug** - The product is equipped with an attachment plug having overload protection. This is a safety feature. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

**Lightning** - For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

**Overloading** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

**Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

**Servicing** - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to an authorised service agent.

**Lithium Battery** - This product is equipped with a lithium battery that is NOT to be replaced by the user. CAUTION - Danger of explosion if battery is incorrectly replaced. To be replaced only with the same or equivalent type by qualified service personnel.

**Damage Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

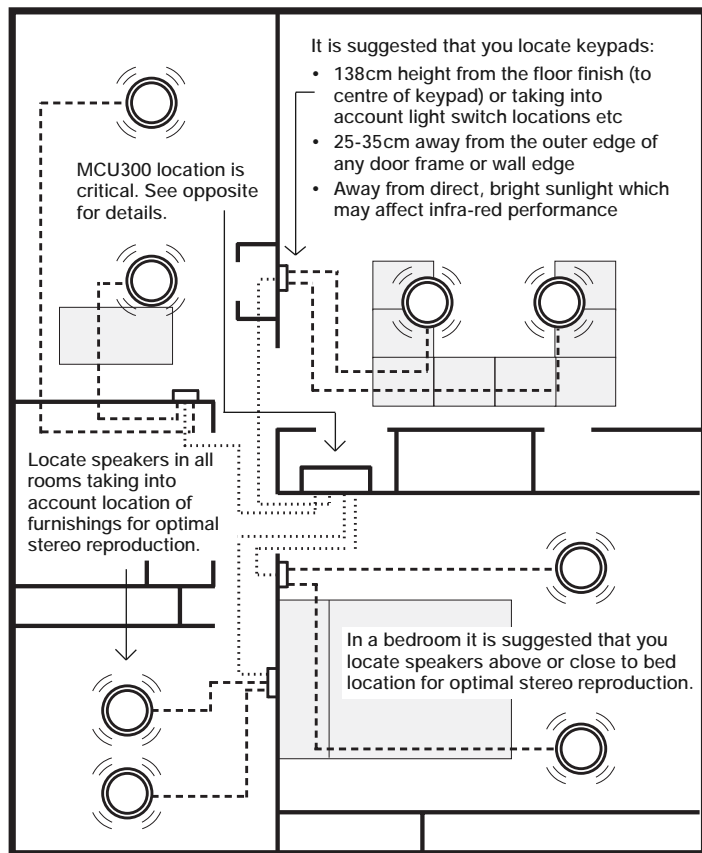
- a) When the power-supply cord or plug is damaged.
- b) If liquid has been spilled, or objects have fallen onto the product.
- c) If the product has been exposed to rain or water.
- d) If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- e) If the product has been dropped or damaged in any way.
- f) When the product exhibits a distinct change in performance - this indicates a need for service.

**Replacement Parts** - When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorised substitutions may result in fire, electric shock, or other hazards.

**Safety Checks** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

**Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

# Planning your system



When installing your Opus multi-room entertainment system, consideration should be given to detailed advance planning. We strongly suggest you read this entire manual before commencing any work.

## MCU300 A-BUS® Master Control Unit

The MCU300 is located alongside source components which means you have two MCU300 location options:

1. Locate MCU300 and source components in any convenient discreet location with adequate ventilation within the home (such as an under-stair cupboard, service room or cabinet), or ...
2. If it is desired to use the same sources for the Opus system as are being used by a conventional stereo or surround sound system it is possible to route source equipment through the MCU300 for output through existing hi-fi or home cinema amplifiers whilst also distributing them to the rest of your home via the Opus system.

Should this be required, your existing audio source equipment would be first connected to the MCU300 and then routed from the six loop out sockets on the MCU300 to the amplifier/receiver in your system via high quality audio interconnect cable terminated at each end by phono/RCA plugs.

Similarly video source equipment may be connected to the VSU300 and then routed from the six loop out sockets on the VSU300 to the AV receiver in a home cinema setup using phono/RCA cables designed for video use.

For this configuration the MCU300 should be located behind your existing system.

The MCU300 is compact and can be mounted either horizontally, or vertically, such as on a wall, and is powered by a dedicated power supply (Opus PSU).

Try to ensure that the MCU300 and it's source components are powered from the same set of mains outlets.

## **VSU300 Video Switching Unit**

The VSU300 video hub works in conjunction with the MCU300 to provide video signals to all connected zones, via 75 Ohm video cabling (RG6/CT100 co-axial cabling can be used). Up to six video input sources and a CCTV input may be connected and distributed, with their corresponding audio signals routed through the MCU300 as one of its dedicated six inputs.

The VSU300 may be mounted either horizontally or vertically in the same manner as the MCU300, and power is provided by the MCU300 via a Cat-5e patch cable, so no extra power supply or mains socket is required.

When deciding upon a location for the MCU300 and VSU300 units consideration should be given to space constraints, and power points for the source equipment and MCU300, as well as integration into any existing setups.

## **WCU300 A-BUS® Wall Control Unit**

Simple and intuitive control is provided by the WCU300 A-BUS keypad.

Housed in a stylishly designed casing, the WCU300 fits into any wall and is available with different finishes to compliment various decorative schemes. Control of your source equipment, volume, bass, treble and other functions can be performed by the WCU300.

Each WCU300 may be used as a main zone or sub-zone controller, with the only difference being that the sub-zone must listen to/watch the same source as the main zone.

Should extra amplification or an active subwoofer be required (to provide more bass), a line level pre-amp output is provided on the back of the WCU300.

## **AMR650 / OS165CC in-ceiling speakers**

When placing the ceiling-mounted speakers, thought should be given to positions which give the best desired sound coverage throughout a room, while not interfering with existing or planned light fittings or joists.

It is advisable to plan all aspects of installation in advance of work beginning, preferably with the house/flat building schematics if available.

## **CCTV system connection**

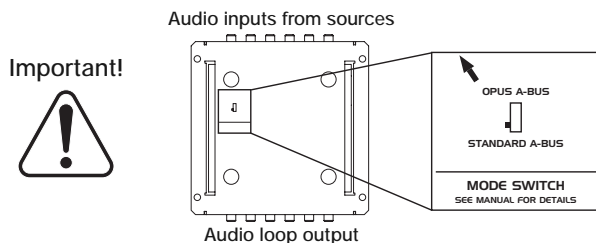
It is possible to connect a CCTV camera to your multi-room system. Refer to the section on 'Advanced system options' for details. Please note that extra cabling will be required in addition to that explained in the installation notes.

# Pre-installation notes

Please read these notes before commencing installation.

## MCU300 A-BUS Wall Control Unit

A-BUS is a standard that allows some compatibility between different manufacturers A-BUS multi-room products. The MCU300 can be switched between Opus A-BUS or Standard A-BUS mode. The Opus A-BUS position is for use with our own Opus WCU300 keypad and gives extra functions. When used with other manufacturers A-BUS keypads it should be set to Standard A-BUS or they will not work. The switch is located on the rear of the MCU300 (see below).



Fix to a hard surface such as a cupboard surface, not to carpet or a soft-lined surface, as this will inhibit airflow through the unit. Do not situate in close proximity to any installation which will produce excessive electrical noise such as dimmer racks etc (these may interfere with the unit). Situate within three metres of a power socket.

## VSU300 Video Switching Unit (where specified)

Locate in close proximity to the MCU300 (maximum of five metres away). Fix to a hard surface such as a cupboard surface, not to carpet or a soft-lined surface, as this will inhibit airflow through the unit.

Do not situate in close proximity to any installation which will produce excessive electrical noise such as dimmer racks etc; these may interfere with the unit.

## Wiring to zones

Run a Cat-5e cable from the MCU300 to each wall control unit.

Fit a single-gang back box for each WCU300.

Run two standard speaker cables from the WCU300 to mounted loudspeakers. If video is required, run 75 Ohm video cable (CT100/RG6 high-quality co-axial cable) from the VSU300 main zone connection either directly to the video display, or to a wall-mounted panel fitted with a suitable phono/RCA connector.

## Cabling tips

Cat-5e cable should be run through the installation in electrical conduit, either metal, non-metallic, rigid or intermediate, wherever possible. Should conduit not be available or impractical, cabling running through frames or beams must be a minimum of 25mm/1 inch from the nearest edge of that structure. If the frame or beam is metallic, then the cable should be protected by a bush or grommet.

When routing cables around the installation, care must be taken to prevent kinking and trapping. Any cable ties used must not be tightened any more than is necessary to hold the cable in place.

Always re-check the colour code of the Cat-5e cable connections to ensure they are correct.

## WCU300 A-BUS Wall Control Unit

The WCU300 EU version should be fitted into a standard single UK (square) 47mm deep back-box (the stainless steel/silver WCU300 EU should be fitted into a 50–60mm deep back-box/patress).

The WCU300 CU version should be fitted into a standard single US J-box.

The Cat-5 cable running from the MCU300 is terminated at the 8-way colour-coded punch down connection on the rear face of the WCU300.

Speaker cable is connected via screw terminals on the rear of the WCU300.

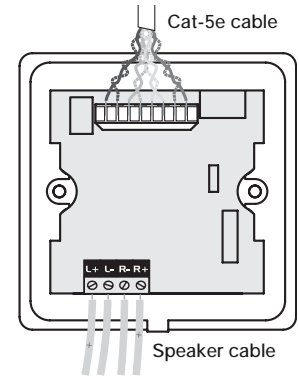
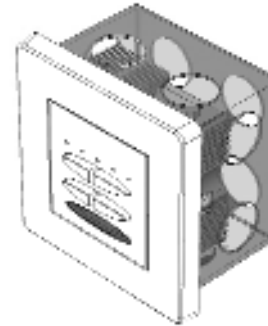
It is recommended the WCU300 should be positioned at a height of 138cm from the floor finish (to centre of keypad) or taking into account light switch locations etc.

It should also be placed 25-35cm away from the outer edge of any door frame or wall edge.

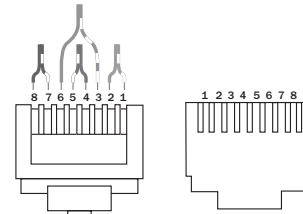
Locate away from direct, bright sunlight which may affect infra-red performance.

Full instructions for installing your WCU300 are supplied with the keypad.

WCU300 EU version

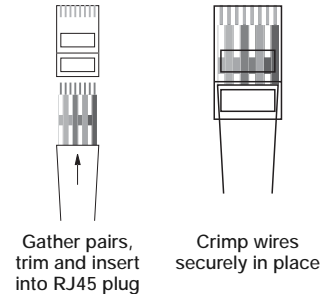


EIA/TIA 568A wiring standard



Plug view from contact end

View into socket



Gather pairs, trim and insert into RJ45 plug

Crimp wires securely in place

Wire colours:

- |                 |                |
|-----------------|----------------|
| 1. Green/White  | 5. Blue/White  |
| 2. Green        | 6. Orange      |
| 3. Orange/White | 7. Brown/White |
| 4. Blue         | 8. Brown       |

# Pre-installation notes continued

## AMR650 / OS165CC in-ceiling speakers

Standard installation would specify AMR650/OS165CC ceiling mounted speakers which are matched to the Opus 300 system for optimum audio performance. However, virtually any customer-specified speaker units may be used.

Where ceiling or wall-mounted speakers are used, care should be taken to ensure that all building regulations are followed.

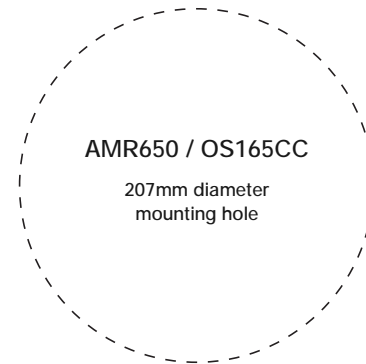
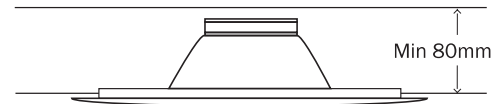
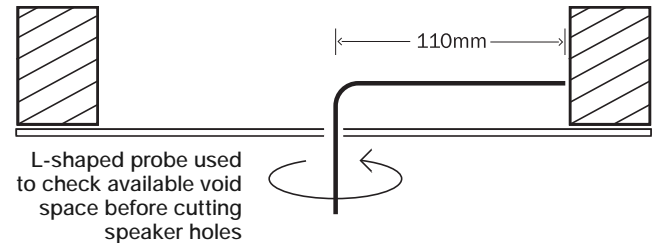
When mounting speakers flush to a ceiling or wall, ensure that enough depth/clearance is available in the respective cavity. A clearance of at least 80mm is necessary when mounting pairs of AMR650/OS165CC speakers.

When deciding upon a ceiling or wall placement, care should be taken to avoid joists, load bearing beams etc.

Before cutting ceiling loudspeaker holes it is suggested that the area is tested for clearance by making an L-shaped probe from strong wire (eg a coat hanger), drilling a small hole in the target area, inserting the probe and slowly turning. Any obstructions will be immediately obvious, so that the target area can be moved to a more suitable position.

Also, locate loudspeakers taking into account location of furnishings for optimal stereo reproduction.

Full details of installation, connection, operation and special features can be found in the guide that accompanies the speakers.



# Audio connections

## PSA65U power supply to MCU300

For each MCU300 with up to four main zones connected (and no sub-zones) one PSA65U is required.

Sub-zones require a separate PSA65U power supply.

For each MCU300 (with both main and sub-zones connected) two PSA65U power supplies are required.

## MCU300 to WCU300

Using a single Cat-5e cable, connect each WCU300 to the MCU300 via an RJ45 plug using the EIA/TIA 568A wiring standard (see page 9) at the MCU300, and an eight-way colour-coded connection at the keypad.

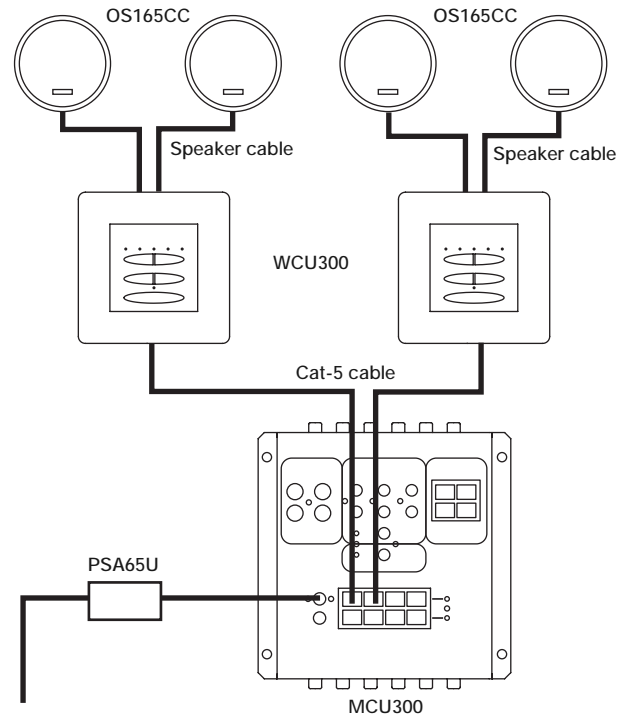
The Cat-5 connection from MCU300 to WCU300 should not exceed 30m/100 ft.

Sub-zones connections are made in the same way as main zone connections but from the sub-zone sockets (see later section).

## WCU300 to OS165CC or other loudspeakers

Connect the WCU300 to a pair of speakers with two runs of standard high-quality speaker cable.

Connections for one MCU300 with two main zones attached:



# Video connections

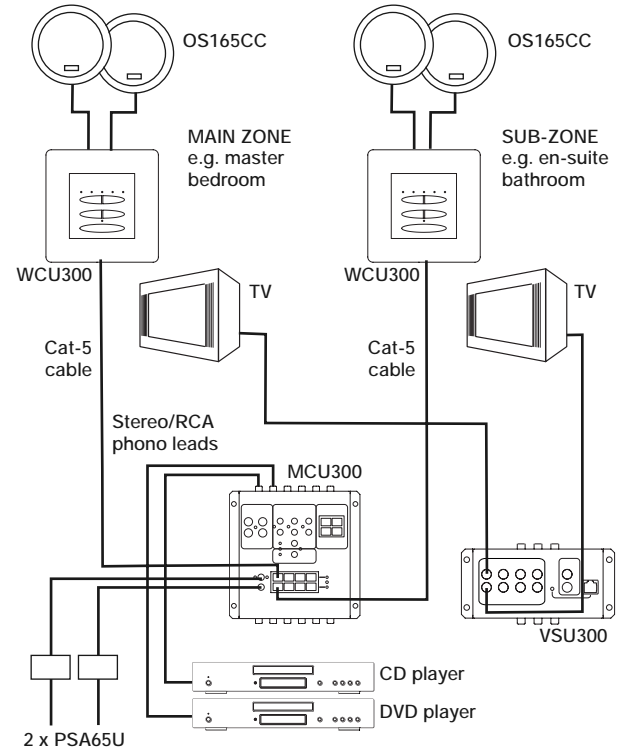
## Where a VSU300 video switcher has been specified

The VSU300 is linked to the MCU300 via a Cat-5e patch cable (supplied with the VSU300), connected to the expansion sockets on both units. This provides power, and input switching commands direct from the system remote control or WCU300.

Main video displays are connected to the VSU300 at the 'main zone' sockets via high quality 75 Ohm video cable (CT100/RG6 high-quality co-axial cable) terminated at the VSU300 by a phono/RCA plug. No external power is required by the VSU300 it is powered by the MCU300.

Sub-zone video displays are connected in the same way, but to the four sub-zone sockets on the VSU300.

Connections between MCU300 and VSU300 with two main zones and a sub-zone attached:



# Source connections

## Audio source connections

It is possible to connect a total of six audio source components to the MCU300. The connections are made from a line level output on the source equipment to one of the six inputs on the MCU300 using RCA/phono to RCA/phono cables.

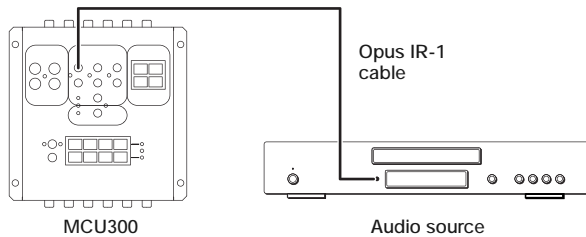
## Video source connections

When using a VSU300 each of the six sources can also supply video.

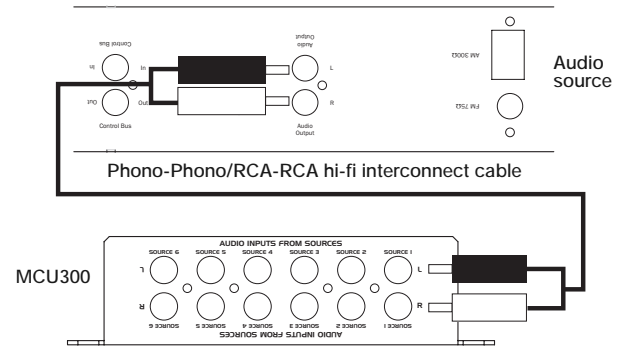
The connections are made from a composite video output on the source equipment to one of the six inputs on the VSU300 using good quality 75 Ohm RCA/phono to RCA/phono video cables.

## Remote control of source equipment through the WCU300

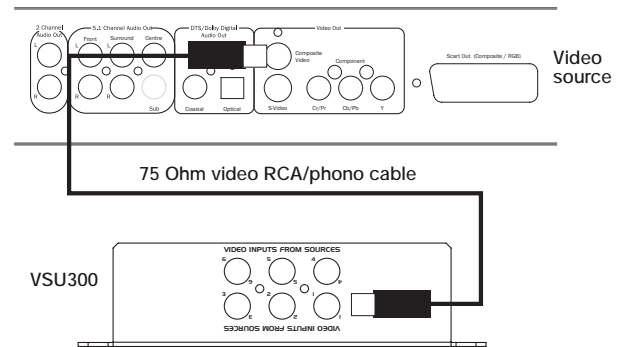
For remote control of the source equipment, six routed IR outputs are provided. Individual IR emitters are plugged into the appropriate IR output (corresponding to the respective audio input) the other end is stuck to the IR receiving window of the source equipment:



Detail of audio connections between a tuner and MCU300:



Detail of video connections between a DVD player and VSU300:



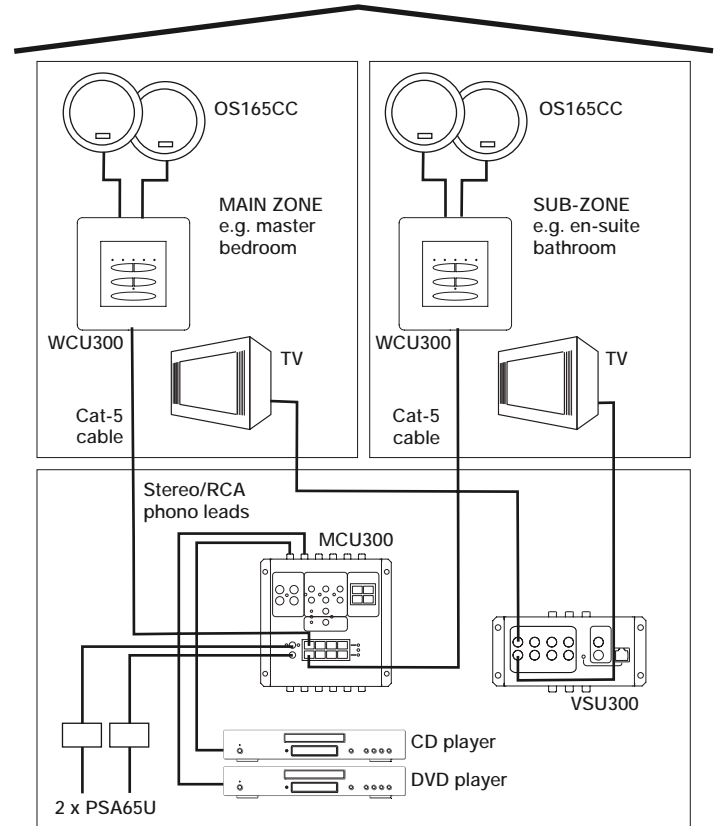
# Sub-zones

## Sub-zone connections

One MCU300 hub supports four main-zones and four sub-zones (eight rooms in total). Each sub-zone output is tied to a main zone output and always receives the same source as its main zone (A2 sub-zone output always receives the same source as A1, B2 always follows B1 etc).

Sub-zones are used for instances such as en-suite bathrooms (the bedroom being a main zone) where it is desired to have an area that automatically follows the same source as another but can be independently turned on and off, has individual bass and treble etc.

Any main zone can have a sub-zone.



# Advanced system options

**Note:** Full details of installation, connection, operation and special features can be found in the guide that accompanies the LIM300 module.

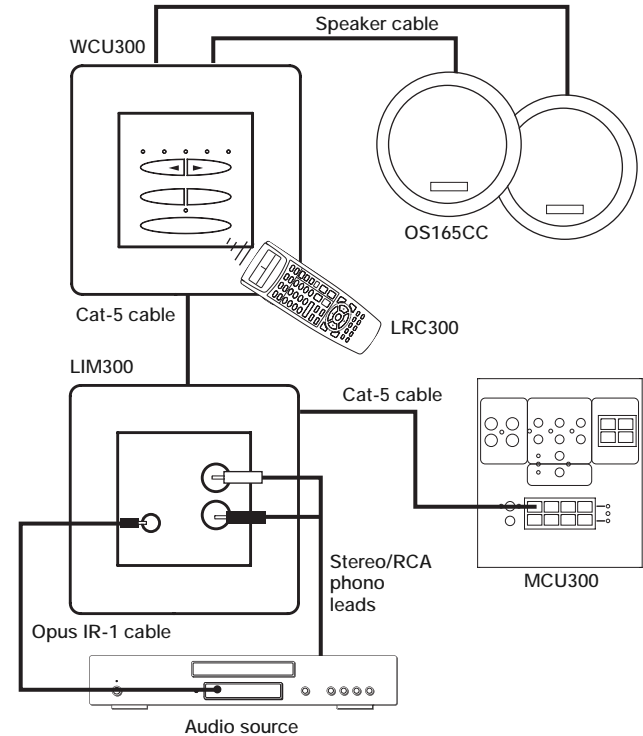
The LIM300 Local Input Module (LIM) is an optional in-wall module that allows the user to add additional local sources to those distributed by the MCU300.

The local source may only be heard in the room where it is connected and the corresponding sub-zone (if connected) and is not distributed to other rooms. LIM300s can be fitted in as many rooms as are desired.

The LIM300 connects between the MCU300 audio hub and a WCU300 keypad using Cat-5/5e wiring. Each main zone can support two LIM300s, giving you the option of listening to one or two local sources (eg. Playstation, MP3 player). Each local source can be controlled through the Opus remote and/or keypad.

**Note:** The MCU300 and WCU300s must be in Opus A-BUS mode in order to use an LIM300.

**Note:** If you are running a sub-zone, this must always be wired via the LIM300 in the same way as the main zone.



# Advanced system options continued

## AMR650 Active Speakers

The AMR650 active speakers can be used where it is not desired to have a keypad fitted in the wall. The AMR650 active speakers feature an IR receiver and amplifier in one of the speakers and like the WCU300 keypad do not require mains power.

1. Using a single Cat-5e cable, connect the AMR650-A to the MCU300/VSU300 via an RJ45 plug at the MCU300, and the eight-way colour-coded punch down connection at the AMR650.

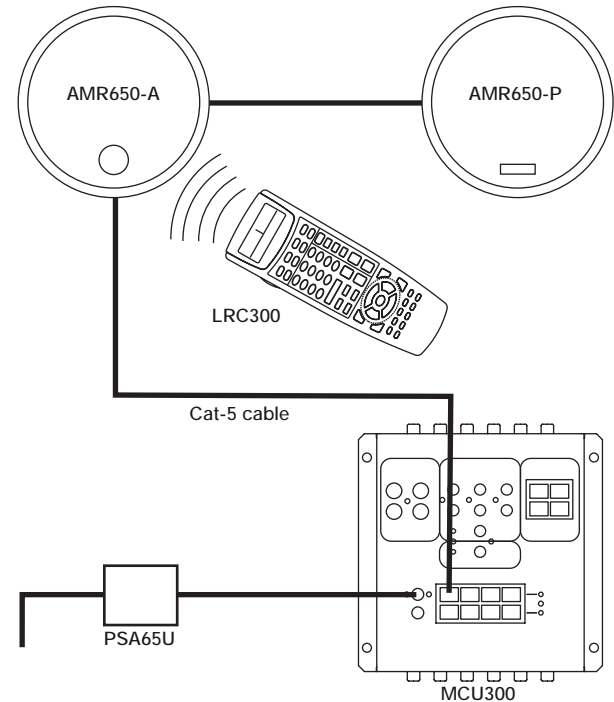
The RJ45 hub connection should be wired to EIA/TIA568A standard as shown in the wiring guide on page 6.

The Cat-5 connection from MCU300 to the AMR650-A should not exceed 30 m/100 ft.

2. The AMR650-A is then connected to the AMR650-P using either Cat-5e cable terminated at eight-way colour-coded punch down connections (all eight cores must be connected) or using a run of standard speaker cable.

Only one method of connection between the active and passive speaker is necessary.

Full details of installation, connection, operation and special features can be found in the guide that accompanies the AMR650 speakers.



## Connecting an external amplifier/active subwoofer to your system

Should extra amplification power, or, an active subwoofer be required, a line level pre-amp output is provided on the back of the WCU300.

Using high-quality audio interconnect cable, an external power amplifier may be connected to the WCU300 pre-amp output screw terminals.

A fader function on the WCU300 can be used to adjust the level between the speakers connected to the WCU300 and the external amplifier/active subwoofer, so that the balance between the two can be adjusted.

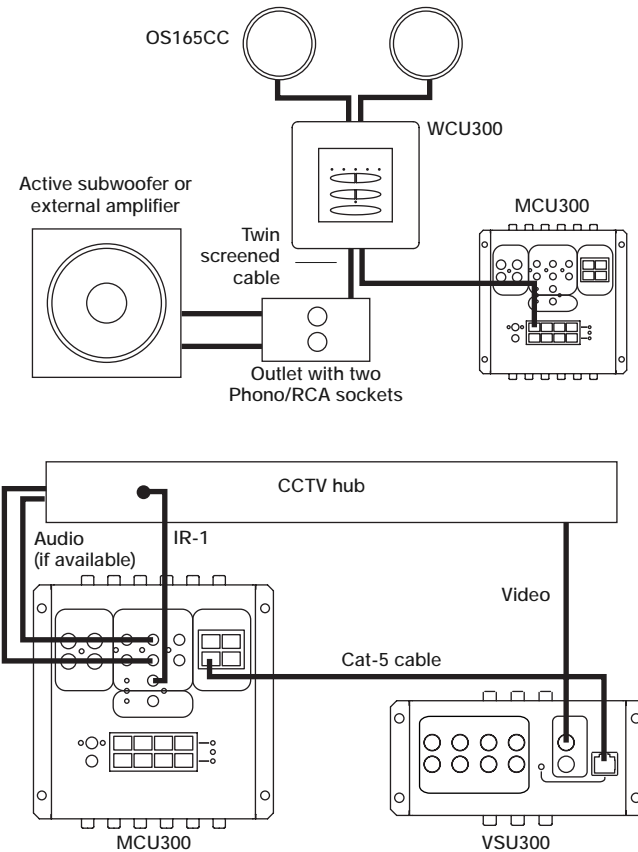
## CCTV

A CCTV system may be connected to the Opus 300 Multi-Room system.

Connect the monitor/TV video signal output to the VSU300 at the CCTV IN socket located on the top surface of the unit allowing the live video feed to be viewed in all connected zones.

If sound is also required, the audio signal output of the CCTV system may be connected to the EXT/CCTV inputs on the MCU300.

If the CCTV system is to be remote controlled connect an IR-1 infra-red emitter to the ALL COMMANDS output on the MCU300 and stick the emitter over the IR receiver of the CCTV system. This will allow the user to control the CCTV system from any room in the house.



# Larger systems

## Linking units

For large installations which require more than four main zones and four sub-zones, an MCU300 'linking' facility is provided. Units are linked via a Cat-5e patch cable to the 'Hub Link' in and out sockets on the top right hand corner of each MCU300.

In order to share audio input sources with the first MCU300, the second may be joined using Opus C39 audio couplers (see diagram). These double-ended phono plugs simply connect the 'Loop out' sockets of the first MCU300, to the 'Audio input' sockets of the second, allowing both to access the same sources and distribute them to all available zones.

Up to four MCU300s may be linked together in this way, providing audio for a maximum of 16 main zones for the MCU300, or 16 main zones and 16 sub-zones for the MCU300.

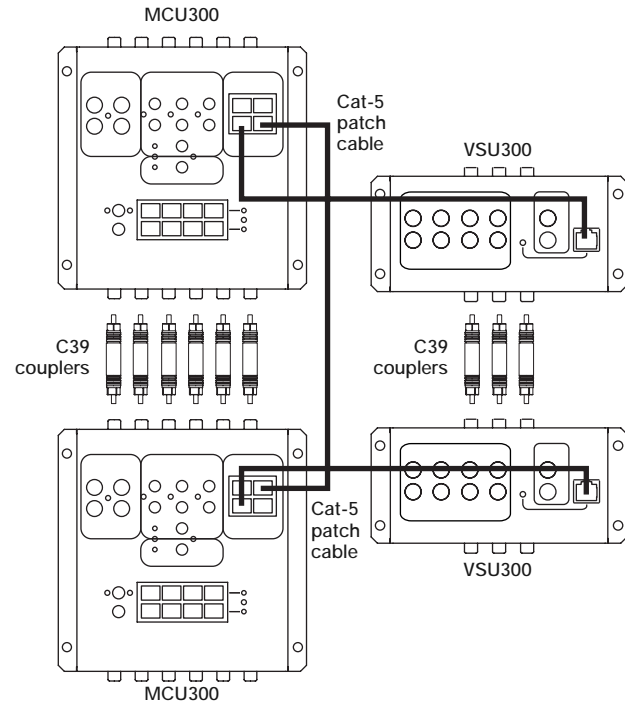
## VSU300 linking

Should video also be required in more than the four main zones and four sub-zones provided by the VSU300, then these units may also be linked. Each VSU300 must be connected to a corresponding MCU300 via the Cat-5e patch cable, in order to provide power and switching commands.

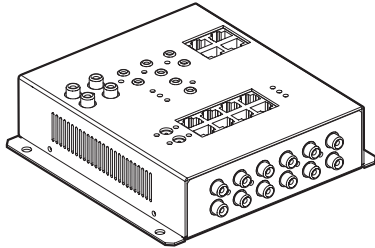
Video input sources may then be shared between both VSU300 units by using Opus C39 couplers (see diagram). These double-ended phono plugs simply connect the 'Loop out' sockets of the first VSU300 to the 'Video input' sockets of the second, allowing both to access the same sources and distribute them to all available zones.

Up to four VSU300s may be linked together with the corresponding four MCU300s in this way, providing video for a maximum of 16 main zones for the MCU300.

Connections between MCU300 and VSU300 to allow eight main zones and eight sub-zones:

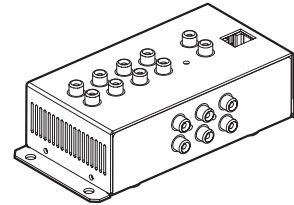


# System specifications



## MCU300

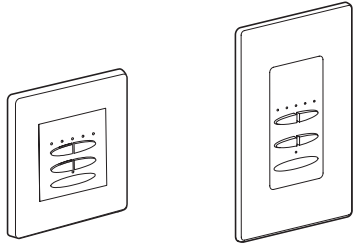
No. of source inputs	6
No. of loop outputs	6
No. of external inputs/loop outputs/CCTV	1
No. of zones per hub	4 main + 4 sub
System zone maximum (4 chained MCU300s)	16 main + 16 sub
Frequency response	20kHz – 20kHz
Trigger output	12V @ 100mA
Required power input	24V dc (via supplied PSA65U)
<b>Note:</b> Second PSA65U required for sub zone power	
Dimensions (W x D x H)	165 x 172 x 48
Weight (net)	1.14kg / 2.5 lbs



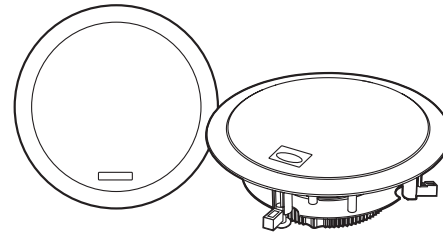
## VSU300

No. of source inputs	6
No. of loop outputs	6
Source input specification	75 Ohm, composite video
Video bandwidth	10MHz
Maximum cable run to zone	50m / 150ft
Recommended cable type to zone	RG6/CT100 75 Ohm co-axial
Required power input	Powered by MCU300
Dimensions (W x D x H)	165 x 74 x 44mm
Weight (net)	0.6kg

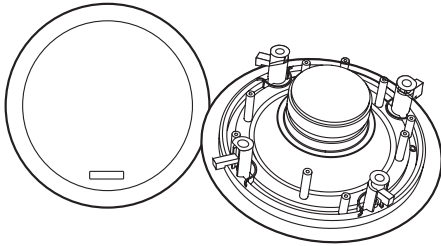
## System specifications continued



<b>WCU300</b>	<b>EU version</b>	<b>CU version</b>
Frequency response	20Hz–20Hz	
Volume control range	- 80dB 32 steps	
Bass control range	+/- 16dB 2dB steps	
Treble control range	+/- 16dB 2dB steps	
Balance control range	+/- 40dB 9 steps both ways	
IR pass-through	34–40 kHz and 54–58 kHz modulation	
Required power input	Powered from MCU300 via Cat-5 cable	



<b>AMR650</b>	
Frequency Response	60Hz - 20kHz (+/- 2dB)
THD	<0.25% @ 5W, 1kHz
Signal/Noise ratio	> 80dB
Input impedance (local input)	33K Ohms
Volume control range	0 to -78dB in 31 steps
Pre-amp output	Variable, following volume setting
IR passthrough	34-40kHz and 54-58kHz frequencies supported
Speaker impedance	4 Ohms
Power requirement	+24V DC @ 1A max from hub
Weight (AMR650-A)	1.4kg / 3.1lbs
Weight (AMR650-P)	1.1kg / 2.4lbs
Dimensions	240 x 75 mm, 9.4 x 3 inches



### OS165CC

Frequency response	58Hz–20Hz +/- 3dB
Sensitivity	90dB SPL @ 1 watt/1 metre
Nominal impedance	4 Ohms
Power handling	15–80 watts
Enclosure type	In-ceiling infinite baffle
Drive components	1 x 1.3cm tweeter, 1 x 16.5cm woofer
Crossover frequency	4.5kHz
Mounting depth required (min)	75mm
Cutout dimensions	207mm
Recommended back air or volume	22 litres
Weight	1.5kg

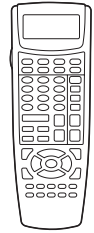
### SRC300

Battery	2 AA/LR6 alkaline batteries
Dimensions (W x H x D)	43 x 18 x 182mm (approx)
Weight	112g (inc batteries)



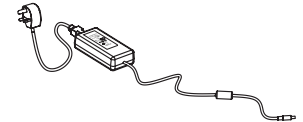
### LRC300

Battery	4 AAA/LR03 alkaline batteries
Dimensions (W x H x D)	65 x 25 x 190mm (approx)
Weight	200g (inc batteries)



### PSA65U

Input	100-240V AC 50/60Hz
Output	24V DC @ 2.5A
Efficiency	80%
Line/load regulation	5%

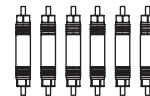


### Approvals

UL, CE, T Mark, TUV, FCC Class B, EN 55022B, EN 5008-1 1997, EN 61000-4-2/3/4/5/6, Level 2, EN 61000-4-11

### C39

Coupler length	39mm
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# FAQs

## 1. What entertainment equipment can I connect?

The Opus 300 system is compatible with almost any type of hi-fi or video separate.

## 2. What is the difference between a main zone and a sub-zone?

A sub-zone can only listen to the same audio source as is being listened to in the main zone. The sub-zone has independent power, volume and tone controls from the main zone.

## 3. How many rooms can a system serve?

Each MCU300 supports 4 main + 4 sub-zones. 4 MCU's can be chained together supporting up to a maximum of 16 main zones and 16 sub-zones. If a larger system is required it is possible to have two or more separate systems running independently giving unlimited expandability.

## 4. Can I use any Cat-5e cable?

Any type of Cat-5e can be used.

## 5. Do I have to use Opus speakers?

No, but it is highly recommended as the Opus speakers are optimised and impedance matched to the keypad amplifiers.

## 6. How many remote controls can the system have?

There is no limit to the amount of remotes you can have. If required you can have a remote in each room.

## 7. What advice can you give for keypad location?

When locating a keypad you should avoid putting in direct sunlight or in close proximity to Plasma screens. Care should also be taken locating it near to devices that produce electrical noise such as mechanical dimmers. Positions of other wall controls/light switches should also be considered.

## 8. Is there a maximum cable run from MCU to each WCU?

Yes, the maximum cable run is 30 metres / 100 feet.

## Limited warranty

Opus Technologies warrants this product to be free from defects in materials and workmanship (subject to the terms set forth below). Opus Technologies will repair or replace (at Opus Technologies' option) this product or any defective parts in this product. Warranty periods may vary from country to country. If in doubt consult your dealer and ensure that you retain proof of purchase.

To obtain warranty service, please contact the Opus Technologies authorised dealer from which you purchased this product. If your dealer is not equipped to perform the repair of your Opus Technologies product, it can be returned by your dealer to Opus Technologies or an authorised Opus Technologies service agent. You will need to ship this product in either its original packaging or packaging affording an equal degree of protection.

Proof of purchase in the form of a bill of sale or receipted invoice, which is evidence that this product is within the warranty period, must be presented to obtain warranty service.

This Warranty is invalid if (a) the factory-applied serial number has been altered or removed from this product or (b) this product was not purchased from an Opus Technologies authorised dealer. You may call Opus Technologies or your local country Opus Technologies distributor to confirm that you have an unaltered serial number and/or you purchased from a Opus Technologies authorised dealer.

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