Installation Amplifiers

Owners Manual

MONITOR AUDIO

Contents

Introduction

Introducing the Monitor Audio Installation Amplifiers, built to do more and use less space, featuring cutting-edge technology for the best sound performance in any installation project. The multi-channel amplifiers can be used in a wide range of applications in residential and commercial properties with power up to 2000 watts. Audio channels can be grouped or bridged for flexible installations, configurable up to 12 channels.

We have selected the world renowned Hypex amplifiers to guarantee reliability and the great sound quality you'd expect from Monitor Audio, reduced into slim 1U and 2U high cases that universally fit into most racks whilst delivering 93% energy efficiency.
All amplifiers feature full connectivity with simple wired voltage trigger or signal sense.
'Connect' amplifiers include more complex DSP and IP control, offering wider flexibility and integration.

Connections Overview

IA150-2

FRONT PANEL

1. Power Button
2. Channel Indicator LED

REAR PANEL

3. Left Channel RCA Input/ Output
4. Volume Level Control
5. Right Channel RCA Input/ Output

6. Trigger Input/Output
7. Auto On Switch
8. Bridge On/Off Switch
9. Speaker Block Connector
10. AC Fuse Holder
11. Power Cord Connection

IA60-12
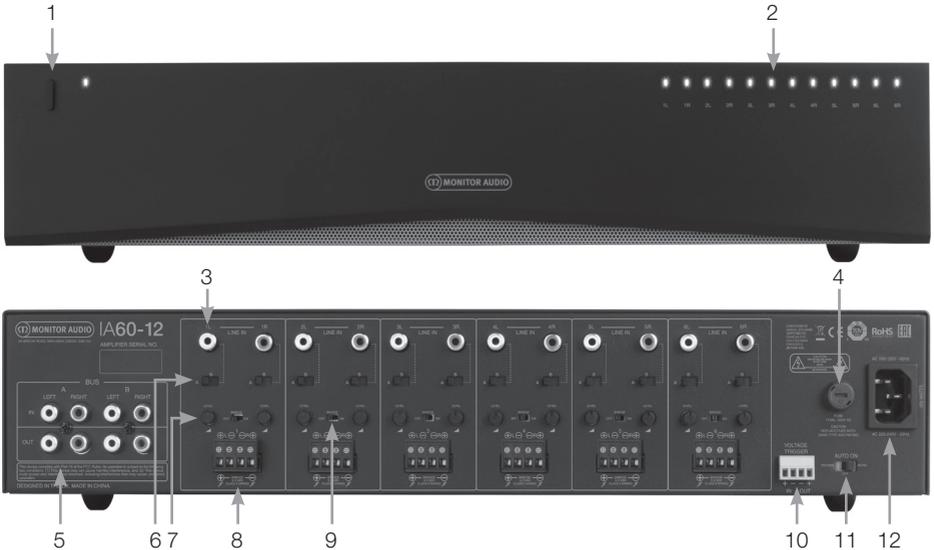
FRONT PANEL

1. Power Button
2. Channel Indicator LED

REAR PANEL

3. Channel RCA Inputs
4. AC Fuse Holder
5. Bus RCA Inputs/Outputs
6. Channel Input Switch
7. Volume Level Control

8. Speaker Block Connector
9. Bridge On/Off Switch
10. Trigger Input/Output
11. Auto On Switch
12. Power Cord Connection

IA200-2C

FRONT PANEL

1. Power Button
2. Channel Indicator LED
3. Output Volume Control

REAR PANEL

4. IR Control Input and Output
5. IR Status LED
6. Channel RCA Inputs/ Outputs
7. Voltage Trigger Input/Output
8. Ethernet (RJ-45) Connection
9. Speaker Block Connector
10. AC Fuse Holder
11. Power Cord Connection

IA150-8C

FRONT PANEL

1. Power Button
2. Channel Indicator LED
3. Output Volume Control

REAR PANEL

4. IR Control Input/Output
5. IR Status LED
6. Ethernet (RJ-45) Connection
7. Voltage Trigger Input/Output
8. Speaker Block Connector
9. Channel RCA Inputs/ Outputs
10. AC Fuse Holder
11. Power Cord Connection

IA800-2C

FRONT PANEL

1. Power Button
2. Channel Indicator LED
3. Output Volume Control

REAR PANEL

4. Speaker Block Connector
5. Channel RCA Inputs/ Outputs
6. Voltage Trigger Input/Output
7. IR Control Input/Output

8. IR Status LED
9. Ethernet (RJ-45) Connection
10. AC Fuse Holder
11. Power Cord Connection

Connection Descriptions

AC Fuse Holder
This compartment houses the amplifier's internal fuse, should the fuse ever require changing the compartment can be opened by inserting a flat headed object such as a screwdriver and turning anti-clockwise. Refer to the information printed on the product below the fuse holder for the correct fuse specification.

Power Button
This is the main power switch for the amplifier. Please ensure the amplifier is turned off if not used for long periods of time.

Output Volume Control
'Connect' models only.
Use a small flat headed screwdriver to increase or decrease the volume of the output. This is linked to the "Output Volume" on the web portal. Refer to page 10. Turn anticlockwise if clipping/ distorting (as indicated by the channel LED on the front), or clockwise for more volume.

Channel RCA Inputs
Stereo left and right RCA connectors for connecting audio sources. Models with an increased number of channels such as the IA60-12 will feature more inputs for the number of output channels available.

Channel RCA Outputs
Stereo left and right RCA connectors for connecting to external playback devices such as active subwoofers or to additional amplifiers.

Volume Level Control
IA150-2 and IA60-12 only.
Used to increase or decrease the output volume. Reduce if the speakers are clipping, increase if the output volume is too quiet.

Ethernet (RJ-45) Connection
'Connect' models only.
Used to make connection to a wired network. Once connected amplifier will become visible on the network to other devices. Refer to page 8 on how to setup your 'Connect' amplifier.

Voltage Trigger Input and Output
Trigger connection can be made to the input/ output of another device. When using the input the amplifier will switch on and off with the connected device. A device connected to the output of the amplifier will switch on and off with the amplifier.

Auto On Switch

IA150-2 and IA60-12 only.
There are three settings; Voltage, Audio and Off. In the Voltage setting the Trigger method will be used to wake up the amplifier from standby. In the Audio setting the amplifier will wake from standby when an audio signal is present. It will return to standby when no signal is present for 10 minutes. In the Off setting the amplifier can only be switched On and Off manually.

Bridge Switch

IA150-2 and IA60-12 only.
Switch On or Off Bridge mode, with this activated two outputs are combined to produce more output power.

Bus RCA Inputs

IA60-12 only.
Stereo left and right RCA inputs for connecting audio sources. Unlike the Channel RCA connectors the Bus RCA inputs can be routed to multiple output channels.

Bus RCA Outputs

IA60-12 only.
Stereo left and right RCA outputs. This can be used if you wish to daisy chain the Bus Input signal to external devices/ additional amplifiers.

Bus Switch

IA60-12 only.
Select the audio source input for the channel on the amplifier.

Speaker Block Connector

Accepts up to 12 gauge cable for connecting speakers, please refer to the next column of this page.

IR Input

Connect an infrared receiver to this input to control the amplifier using programmable remotes. Please refer to page 12 for discreet commands/ Hex codes.

IR Output

For use with an infrared repeater or linking to the IR input on other amplifiers, this will allow multiple devices to receive the same command from a single remote command. For example a single power On/ Off command could be used for an entire rack of installation amplifiers rather than individually.

LED Indicators

Power LED (Orange LED):
LED Dim Orange - standby mode
LED Bright Orange - power on
Flashing Bright Orange LED - identification mode or updating
Channel LED (Orange/ White Dual LED):
LED Off - no signal present
Orange LED - signal present
White LED - channel is clipping or the amp has gone into protection mode
Flashing White LED - thermal protection

If experiencing clipping or thermal protective LED patterns decrease the volume, if the issue remains please refer to the troubleshooting section on page 12.

Connecting your Speakers

All amplifiers feature speaker block connectors for a secure and safe connection to your speakers, these blocks are removable for easy access. Using a flat headed screwdriver loosen the screw heads at the top of speaker block and insert speaker cable up to 12 gauge into the front openings. Tighten the screw heads to clamp the speaker cable in place.
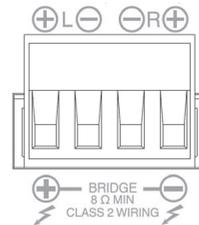
Bridging Channels

⚠️ **WARNING: The minimum speaker impedance for bridged operation is 8 Ohms. Do not connect any speakers in bridged mode that are less than 8 Ohms nominal impedance.**

1. Set the zone's BRIDGE switch to the ON position, refer to the Connections Overview section.

2. Connect the speaker's "+" lead to the left channel connector marked "+" and the speaker's "−" lead to the right channel connector marked "+". The "-" outputs are not used.
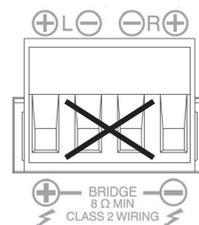
Feet

Every amplifier model is supplied with four rubber feet for when used out of a rack. To attach the feet simply screw them into the four threaded inserts on the base of the amplifier.

Rack Mounting your Amplifier

Every amplifier model is supplied with rack bracket fixings for mounting the amplifier in standard 19" racks. To fit the brackets, simply remove the 4 screws on each side of the amplifier towards the front. Place the brackets over the holes that have been revealed and use the same screws to attach the brackets.
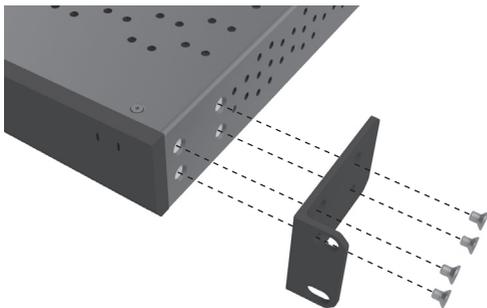
Powering the Amplifier

All models are supplied with an IEC mains cable. Each time the amplifier's mains cable is initially plugged in and the power switch is turned ON, all channel outputs are disconnected for approximately 12 seconds and all Channel Indicator LEDs will illuminate briefly while the amp boots up.

NOTE: Do not switch on the power at the wall outlet until all system connections have been made.

Connecting to a Network

NOTE: This section applies to 'Connect' models only.

1. Connect the amplifier to a network switch using an ethernet cable. Make sure the computer and amplifier are on the same network.

2. Turn on the amplifier.

3. The amplifier will be issued an IP address by the DHCP Server.

4. Run an IP address finding application such as 'Advanced IP Scanner' (Windows only), which is available for free download from here: https:/ / www.advanced-ip-scanner.com

5. Launch 'Advanced IP Scanner' (or a preferred application) and enter your networks IP range (managed by your router) into the search bar at the top. Click on Scan to search.

6. The IP address of the amplifier in the list will have a drop down option that when double clicked will take you to the amplifier's web setup .

   Alternatively, all network IP addresses will be accessible from your Router configuration page.

   Once the amplifier's IP address is known it can be entered into a web browser of your choice to open access the web portal.

Configuring your 'Connect' Amplifier Using the Web Portal

Basic Settings

Here the most basic general amplifier settings can be edited and saved. The following section will take you through each of the functions on this tab.

⚠️ **NOTE: Some changes made in the web portal will not be visible until the page is manually refreshed or you navigate to one of the other pages.**

Information
Here you can add a name for the amplifier and enter the installation details for future reference. The amplifier model, firmware version and serial number are displayed here, these are non-editable.

Network
IP Address – Shows the current IP address used when DHCP is ON. When DHCP is set to OFF this allows you to enter a desired static IP address.

IP Subnet Mask – Shows current IP Subnet Mask used when DHCP is on. When DHCP is set to OFF this allows you to enter a desired IP Subnet Mask.

⚠️ **NOTE: If changing the IP address or the Subnet Mask, the new IP address will need to be entered into the web browser to see the amplifier's web portal again.**

Identification Mode
When this option is switched ON the front power LED will start flashing. This is useful for identifying which amplifier is being configured when using multiple amplifiers.

Print
Press this to open a printable page with all current amplifier settings.

Power ON
Here you can select from a selection of Power On Methods (described below) for what best suits your installation. Also a powering On delay can be set from 0-20 seconds, this is useful when you want a series of amplifiers to switch On in a specific sequence.

Power Button – Turn off signal sense and voltage trigger detection. The power state is controlled by the power button on the unit only.

Audio – This mode uses signal sense to turn the amplifier on. Additionally, communication over the network is still possible. In this mode the amplifier will consume up to 2W in standby.

Voltage Trigger – Turn amplifier on with 12v Voltage Trigger.

Audio Green – This mode uses signal sense to turn the amplifier on. Network communication is turned off when in standby, to communicate with the amplifier it needs to be woken from standby. In this mode the amplifier will consume up to 0.5W in standby.

Voltage Green – This mode uses the voltage trigger to turn the amplifier on and off. Network communication is turned off when in standby, to communicate with the amplifier it needs to be woken from standby. NOTE: In this mode the amplifier will consume up to 0.5W in standby.

Power Mode	Power in Standby	Network Communication in Standby
Power Button	N/A	N/A
Audio	2W	Yes
Voltage Trigger	2W	Yes
Audio Green	0.5W	No
Voltage Green	0.5W	No

Save & Restore
Here all settings can be saved to a file, which can then be used to restore the settings from if required.

Load Global Preset
Active Global Preset – Show current active Global Preset (this displays the name of the currently active global preset, this is not a text input box) – with reset button to reset current active preset to default settings.

Select Global Preset – Selects which preset you wish to edit and implement from drop down menu.

The load button next to the drop down menu will activate the selected preset and restart the amplifier after confirmation from the pop-up prompt. The active global preset will change when the web page has been refreshed.

Edit Preset name – Text field to edit name of the preset currently selected from drop down menu.

Import/ Export Global Preset
All Presets – Import/ Export all Global Presets to/ from a file.

Single Preset – Import/ Export a single global preset from menu to/ from a file.

Duplicate Global Preset
Copy Global Preset 'X' to Global Preset 'Y'. Both of which are selectable from the drop down menus.

Reset
Factory Reset – Reset button will reset all settings and all presets (global & DSP) to original factory settings. When pressed the power LED on the amplifier will flash, followed by restarting.

Update
Firmware Update - This button will install firmware (.bin file) chosen by the user. If the update is successful a notification will appear in the web portal. Follow the prompts to then restart the amplifier and return to the 'Basic Setting' page. The latest firmware will be available for download on our website: **monitoraudio.com**

NOTE: We recommend checking your firmware each installation. The latest firmware can be found on our website: monitoraudio.com

Input/ Output Settings

Here you can configure the routing for each input to a selected output. Individual trim level, mode, gain offset and volume parameters can also be set. This is also where you can activate amplifier modes such as 70V line (IA800-2C only) or bridge.

⚠ **NOTE: Some changes made in the web portal will not be visible until the page is manually refreshed or you navigate to one of the other pages.**

Input Setup
Here it shows all available input channels. Each input name can be customised and the trim level can be adjusted for each channel by +/ - 6dB. Trim Level is the input level before being amplified.

Output Setup
Channel – Select an output channel to edit. When a channel is selected from a drop down menu its equivalent channels will also show on the other drop down. (i.e. if 1 LEFT is selected on the left hand drop down, 1 RIGHT will appear in the right hand drop down).

Output Name – Text Input for channel output name.

Stereo/ Mono – Stereo/ Mono selection for each channel. With Mono selected L & R input channels are summed to mono on selected outputs.

DSP Preset – Selects saved DSP Preset to apply to output channel. This will always be individually selectable on each channel, never linked between stereo pairs.

Control Zone – Select A, B, C, D, … (Number of groups = number of output channels). This groups the settings Output Volume, Turn On Volume and Mute across channels which have the same Control Zone selected. For controlling several channels as a single zone.

Amp Mode – Select between Stereo and Bridged Mode. Also used to select 70V mode on IA800-2C.

Output Volume
Channel – Select output channel to edit. When a channel is selected from a drop down menu its equivalent channels will also show on the other drop down as above. The following options control the selected channel output:

- Output Volume - this is linked to the control dial on the front. Adjusting the dial on the front changes the value on the web page (once refreshed). the dial will not change when adjusted on the web page.

- Turn On Volume

- Mute

Control Zone – Select Control Zone. The following options control the selected zone output:

- Maximum Volume

- Gain Offset

Output Source
Channel – Select output channel to edit routing. When a channel is selected from a drop down menu its equivalent channels will also show on the other drop down as above.

Source 1 – Select Primary input source to be routed to selected channel.

Primary source is always stereo linked so for example if 1L is selected for the left channel, 1R will automatically be selected for the right channel

Source 2 – Select secondary input source to be routed to selected channel.

Secondary source can be individually selected and doesn't have to be stereo linked.

Source Select – Select between Priority Source 2, Source 1 Only, or MIX.

By doing this either Source 1, Source 2 or a MIX (of source 1 and 2) will be routed to the selected output channel. Default: Source 1.

DSP Configuration

On the DSP configuration tab final adjustments can be made to the sound using a 10 band parametric EQ, these can then be saved as presets, which can be exported and imported.

⚠ **NOTE: Some changes made in the web portal will not be visible until the page is manually refreshed or you navigate to one of the other pages.**

Allocate Preset
Output Channel – Select channel to edit and select output DSP Preset. When a channel is selected from a drop down menu its partnering channel will also show on the other drop down as opposite.

Output Name – Text Input for channel name. If it is changed here, then it will also change on the Input/ Output settings page.

DSP Preset – Selects saved DSP Preset to apply to output channel. This will always be individually selectable on each channel, never linked between stereo pairs.

Test Signal
Output Channel – Select output channel to route test signal to. When a channel is selected from a drop down menu its equivalent channels will also show on the other drop down as above.

Stimulus – Select Pink Noise or any input channel to route to selected output temporarily.

Volume Level – Volume level of stimulus of selected channel in dB.

On/ Off – Turn selected stimulus on or off. Defaults to off when exiting DSP Configuration page.

Import/ Export Preset
All Presets – Import/ Export all DSP Presets to/ from a file.

Single Preset – Import/ Export currently selected DSP Preset to/ from a file.

Duplicate Preset
Copy DSP Preset 'X' to DSP Preset 'Y'. Both of which are selectable from the drop down menus.

Select/ Rename DSP Preset
Select DSP Preset – The selected preset will automatically store any changes to EQ settings made in the settings below.

Edit Preset Name – Text entry field to change preset to a custom name.

Reset – Reset all names and settings of currently selected preset to default.

EQ Graph
Shows curve of EQ settings.

EQ Parameter
10 bands of parametric EQ each with the following configurable settings:

EQ – On/ Off – Used to switch on the frequency band to activate the parameter changes applied.

EQ Frequency – This is the centre point in the frequency bandwidth at which the changes are applied.

EQ – Q –The Q factor controls the bandwidth that will be boosted by the equaliser (number range between 0.3-24). The lower the Q factor, the wider the bandwidth (and the more frequencies either side of the centre point will be affected). The higher the Q factor, the narrower the bandwidth (and the fewer frequencies will be affected).

EQ – Gain +/ - dB – The increase or decrease in gain/ volume at selected frequency.

Tilt Control
This is were a gain change can be set to remain constant from below or above a set frequency. Apply a Tilt EQ Filter to low or high frequencies using the following configurable settings:

Tilt On/ Off – Used to switch on the High or Low Tilt EQ Filter to activate the parameter changes applied.

Frequency – Frequency start point of Tilt Filter adjustment.

Gain – The increase or decrease in gain/ volume.

Crossover
This is were High Pass (HP) or Low Pass (LP) crossover filters can be applied. This is useful when using passive subwoofers (a LP filter will be used) or small satellites that cannot handle low frequencies (HP filter). Set Low Pass and High Pass Filters using the following configurable settings:

Crossover On/ Off – Used to switch on the High or Low Pass Filter to activate the parameter changes applied.

Cut off Frequency – Set the -6dB point of each HP & LP Crossover Filter.

Filter Type – Selectable between 6, 12, 18, 24 dB per octave for each HP & LP Crossover Filter. The greater the figure the steeper the cut off angle of the slope.

Delay
Text entry fields to select delay in either milliseconds, feet or metres.

When a number is entered for one unit, the other two units are automatically calculated.

Limiter
Level – Level of limiter selectable between Off, -3dB, -6dB, -9dB. This is designed to limit the level of a signal above the threshold set, preventing any additional gain above this point and potential damage to the speakers.

Infrared Remote Codes

'Connect' models only.
'Connect' amplifiers have an IR input and output for use with universal remote controls. The commands for the amplifiers follow the standard NEC protocol and can be downloaded from: **monitoraudio.com**

Troubleshooting

Fault LED Indicators:
White LED - channel is clipping/ in protection mode
When the input signal is too high the channel LED's will illuminate solid white. If this happens decrease either the trim level on the amp or decrease the volume of the audio source.

Flashing White LED - thermal protection
If this happens we would recommend switching off the amplifier and leaving it to cool down to room temperature before powering back On.

Other faults:
No Power
If there is no power to the amplifier check the fuse inside the plug (if applicable) and the amps internal fuse, refer to the Connections Overview on page 3.

No Sound
Ensure to check all connections and cables, if the amp is a 'Connect' model ensure channels are routed correctly and not muted.

If the amplifier is configured in bridge mode ensure the switch/ settings and wiring are correctly configured.

If it still does not output a signal or the fault mode is still present, please contact your local dealer/ distributor or Monitor Audio immediately.

Guarantee

Both the craftsmanship and the performance of this product is guaranteed against manufacturing defects for the period of **five** years from the date of purchase (see conditions in the Important Safety Instructions booklet), provided that the product was supplied by an authorised Monitor Audio retailer under the consumer sale agreement.

To help us find your warranty details within our customer database, should the need arise, please take a few minutes to register your product(s) online at: **monitoraudio.com**

Owner Information

Product Details

Model: _____

Product Serial No: _____

Date of Purchase: _____

Dealer Details

Dealer Name: _____

Address: _____

_____

Post code: _____

E-mail address: _____

Specifications

Model:		IA150-2	IA60-12	IA200-2C	IA150-8C	IA800-2C
Connect' IP control		N/A	N/A	Yes	Yes	Yes
Channel Number		2 (One Stereo Pair)	12 (6 Stereo Pairs)	2 (One Stereo Pair)	8 (4 Stereo Pairs)	2 (One Stereo Pair)
Power (Watt/ Channel)	4 Ohms	150W	60W	200W	150W	800W
	8 Ohms	100W	45W	150W	140W	500W
	Bridge (8 Ohms)	320W (1CH)	100W (6CH)	470W (1CH)	300W (4CH)	2000W (1CH)
	70V	N/A	N/A	N/A	N/A	800W (2CH)
Input Impedance		20K Ohms				
Output Impedance (Loop RCA)		600 Ohms				
Input Sensitivity		100mV/1W - 1000mV Full power	100mV/1W - 700mV Full power	100mV/1Watt - 1230mV Full power	100mV/1Watt - 1140mV Full power	100mV/1Watt - 2200mV Full power
Maximum Input Voltage (RMS)		2.9V				
Signal to Noise (SN:R)		-100dB (20Hz - 20kHz)				
Frequency Response (-3dB)		5Hz - 50kHz				
Total Harmonic Distortion (THD + N@1 kHz)		0.03% @ 1W				
Rack Height		1U	2U	1U		2U
Dimensions - No Feet (H x W x D)		42.4 x 438 x 427mm 1 11/16 x 17 1/4 x 16 13/16"	86.8 x 438 x 427mm 3 7/16 x 17 1/4 x 16 13/16"	42.4 x 438 x 427mm 1 11/16 x 17 1/4 x 16 13/16"		86.8 x 438 x 438mm 3 7/16 x 17 1/4 x 16 13/16"
Dimensions - With Feet (H x W x D)		52.8 x 438 x 427mm 2 1/16 x 17 1/4 x 16 13/16"	97.2 x 438 x 427mm 3 13/16 x 17 1/4 x 16 13/16"	52.8 x 438 x 427mm 2 1/16 x 17 1/4 x 16 13/16"		97.2 x 438 x 438mm 3 13/16 x 17 1/4 x 16 13/16"
Width Including Rack Brackets		482mm 19"				
Weight		5.29 Kg (11lb 10oz)	7.34 Kg (16lb 2oz)	5.3 Kg (11lb 10oz)	7.45 Kg (16lb 6oz)	9.2 Kg (20lb 4oz)
IP Communication		N/A	N/A	TCP/IP (RJ-45 10/100 Base T)		
Mains Operating Voltage		100-120V@ 60Hz, 220-240V@50Hz				
Fuse Rating		5A (T5AL ~ 250VAC)	10A (T10AL ~ 250VAC)	5A (T5AL ~ 250VAC)	10A (T10AL ~ 250VAC)	100-120VAC: T15AL/250V AC 220-240VAC: T10AL/250V AC
Standby Power Consumption		<0.5W (green mode)				
Networked Standby Power Consumption		N/A		<2W		

Monitor Audio reserves the right to alter specifications without notice.

MONITOR AUDIO