

ARCAM

OWNER'S MANUAL

A50 Signature

John Deane



Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Clean only with a dry cloth.
6. Do not block any ventilation openings. Install this apparatus in accordance with the manufacturer's instructions.
7. Do not install this apparatus near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.
8. 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 is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
9. Protect the power cable from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
10. Use only attachments/accessories specified by the manufacturer.
11. This equipment is designed for use in moderate climates with a maximum temperature of 35°C.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
15. To disconnect this apparatus from the AC mains completely, disconnect the power-supply cable from the AC receptacle.
16. The mains plug of the power-supply cable shall remain readily operable.
17. This apparatus is intended to be used only with the power supply and/or charging cable provided by the manufacturer.



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

- Do not use this apparatus near water.
- Do not expose this apparatus to dripping or splashing, and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.

CAUTION	
RISK OF ELECTRIC SHOCK. DO NOT OPEN.	
	THIS SYMBOL ON THE PRODUCT MEANS THERE IS UNINSULATED, DANGEROUS VOLTAGE WITHIN THE PRODUCT ENCLOSURE THAT MAY PRESENT A RISK OF ELECTRICAL SHOCK.
	THIS SYMBOL ON THE PRODUCT MEANS THERE ARE IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THIS GUIDE.

Visit the product page at [ARCAM.co.uk](https://www.arcam.co.uk) and download the Safety Sheet for a full list of safety instructions.

Class II Product

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 ("ground" in the U.S.).

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The “A” in ARCAM stands for Amplification - this is our core competence.

ARCAM has been producing specialist Hi-Fi and home cinema products offering state of the art sound quality for 50 years.

The A50 Signature is the latest in a long line of amplifier design and manufacture, going back to our first product in 1976 - the A&R Cambridge A60 amplifier.

These amplifiers are designed to provide you with reliable amplification for decades to come, all with exceptional musicality so you get the most enjoyment from your music.

In the unlikely event of a fault, or you require technical assistance, please contact our dedicated support team:

luxurysupport@harman.com,
+44 1707 668012
+1 888 691 4171

Or, if you simply require further information about ARCAM products, our network of dealers will be happy to help you. Further information can also be found on the ARCAM website at ARCAM.co.uk.

Placing The Unit

- Place the amplifier on a level, firm surface, avoiding direct sunlight and sources of heat or damp.
- Do not place the A50 Signature on top of a power amplifier or other source of heat.
- The A50 Signature is designed to run warm during normal operation. Do not place the amplifier in an enclosed space such as a bookcase or closed cabinet unless there is good provision for ventilation.
- Do not place any other component or item on top of the amplifier as this may obstruct airflow around the heat-sink, causing the amplifier and the other item to become too hot.
- Make sure the remote-control receiver to the right of the front panel display is unobstructed, otherwise this will impair the use of the remote-control.



The A50 Signature is designed to run warm in normal use, however extended use at high volume levels can result in the amplifier casework becoming hot to the touch.

When there is no audio input and no user operation, within 20 minutes, the unit will enter standby mode. This product offers the user the option to deactivate power management functions. Note that doing this will increase the energy consumption of the product.

Package contents

- ARCAM A50 Signature Integrated Amplifier
- IR Remote Control
- 2x AAA Batteries for the remote control
- Region specific power cable(s)
- Safety and Compliance booklet
- Quick Start Guide

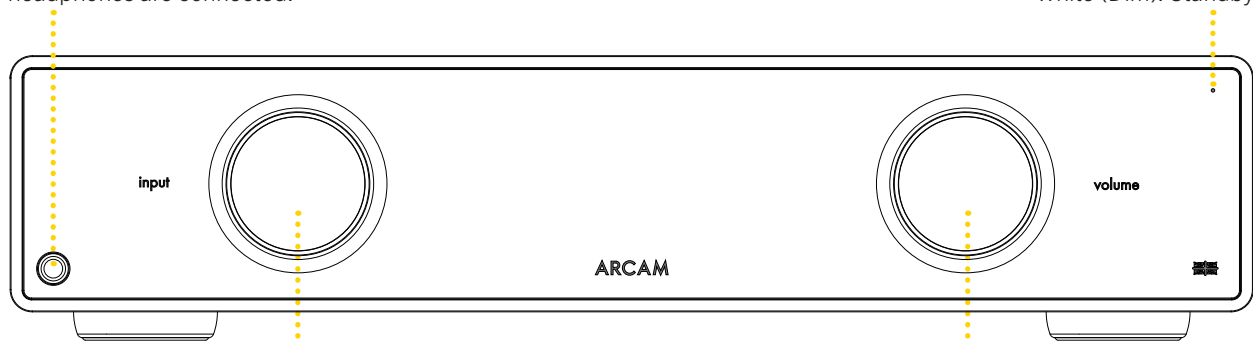
Front Panel

Wired Headphone Output (3.5mm)

Connect wired headphones for private listening. Speaker outputs are muted when headphones are connected.

Power LED

White: On
White (Dim): Standby



Rotate: Input Carousel

Push: Select

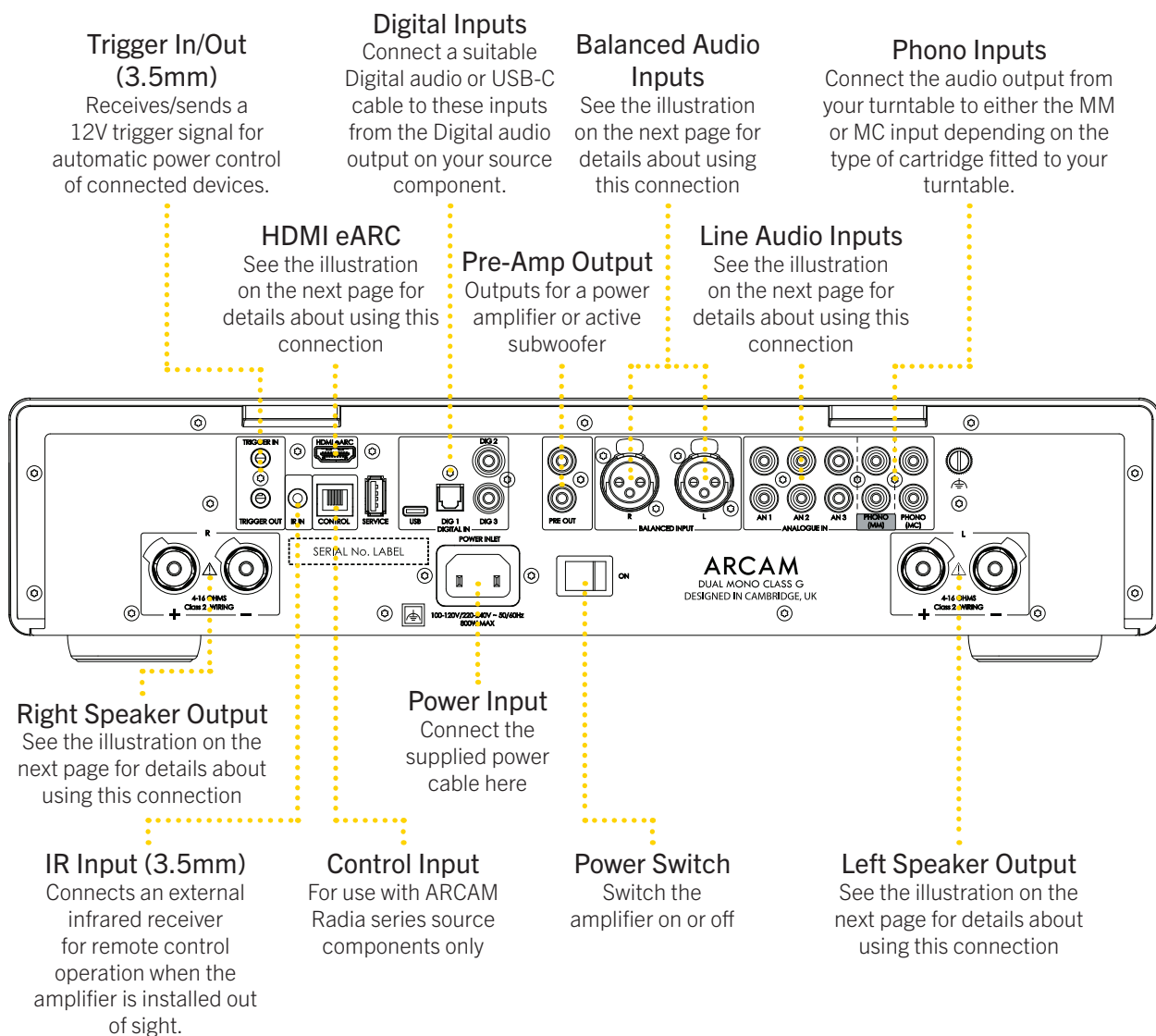
Push and Hold: Rename current input

Rotate: Volume Control

Push: Mute/Unmute or wake up

Push and Hold: Standby

Rear Panel



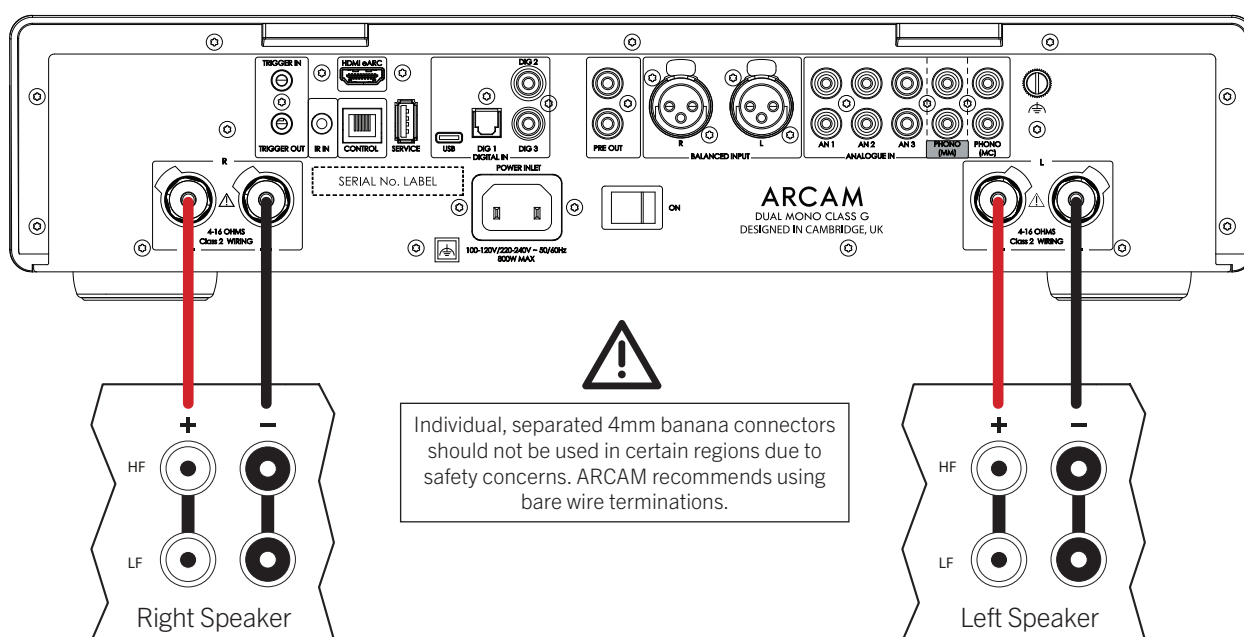
Connecting Loudspeakers

Step 1, ensure power is disconnected from the amplifier.

Step 2, using speaker cables, connect the red positive terminal of the right speaker output (R+) on the amplifier to the positive (+) terminal of your right speaker.

Step 3, connect the black negative terminal of the right speaker output (R-) on the amplifier to the negative (-) terminal of your speaker.

Step 4, repeat the process for the left speaker, using the terminals labelled L+ and L- and on the amplifier.

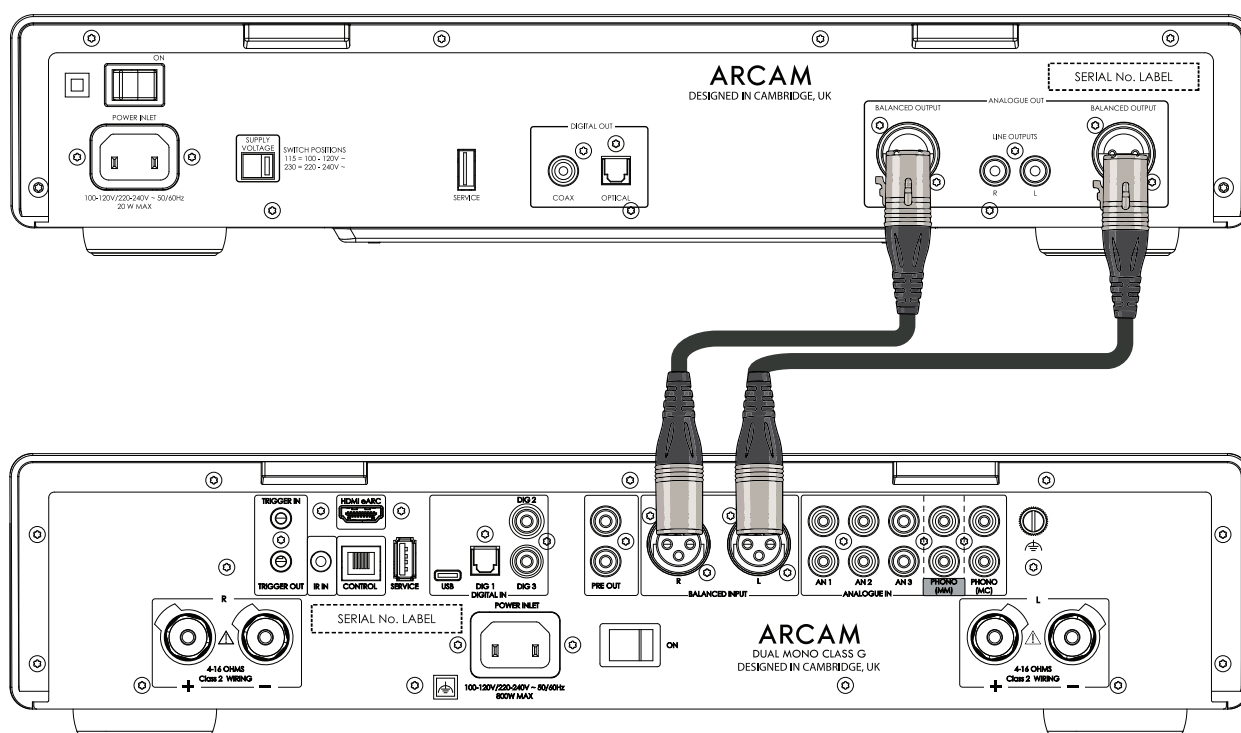


Top Tips

- Check all connections thoroughly. Ensure that exposed wires or cables are not touching each other or the amplifier's chassis (which can cause a short circuit), and that you have connected the positive (+) and negative (–) terminals correctly. Be sure to check the wiring for both the amplifier and the speakers.
- After making connections: switch the amplifier on with no input and reduce the volume to minimum. Select a source signal, and then slowly increase the volume to a suitable listening level to avoid loud sounds or product damage in the event of incorrect connection.
- If you are unsure as to how your system should be connected, please contact your ARCAM dealer who will be happy to help you.

Connecting to a source component via XLR

- Step 1, ensure power is disconnected from the amplifier and source.
- Step 2, using the first of a pair of XLR analogue interconnect cables, connect the right (R) terminal of the balanced analogue output on the source to the right (R) terminal of the balanced XLR input on the A50 Signature.
- Step 3, using the second XLR cable, connect the left (L) terminal of the balanced analogue output on the source to the left (L) terminal of the balanced XLR input on the A50 Signature.

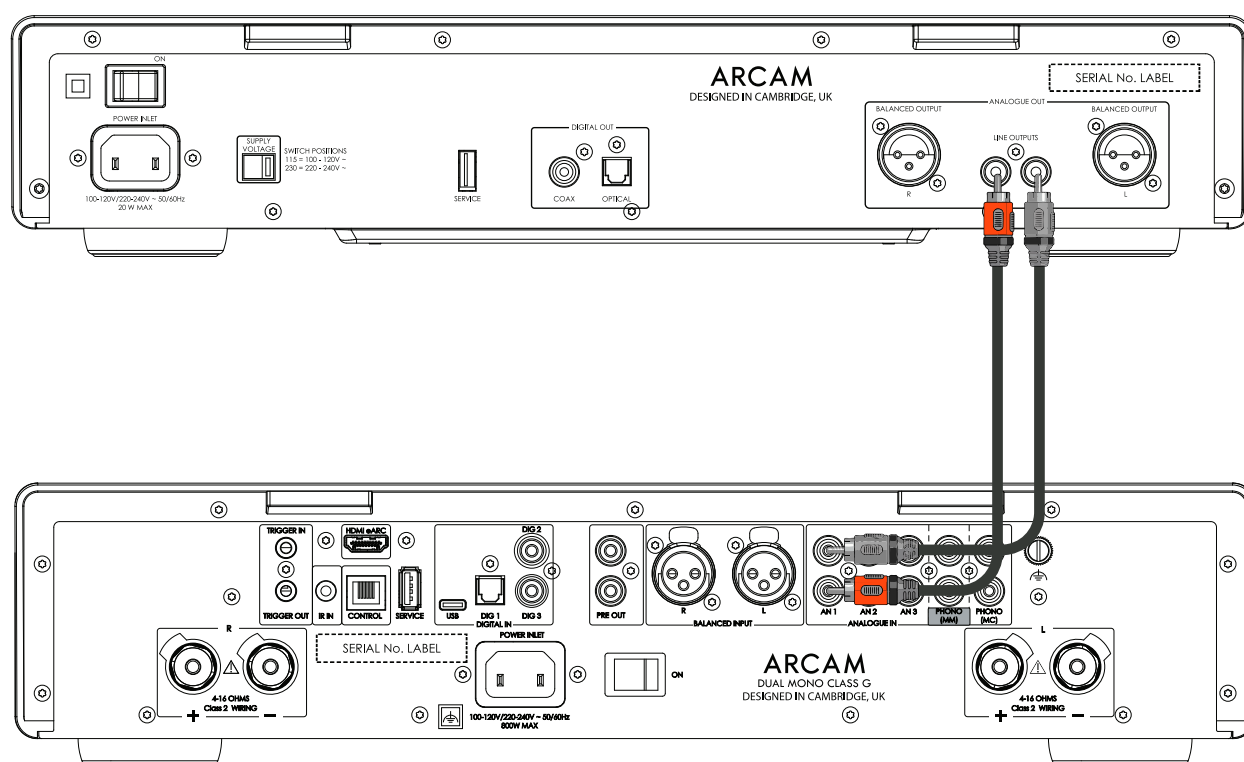


Top tips

- After making connections: switch the amplifier on with no input and reduce the volume to minimum. Select the input, and then slowly increase the volume to a suitable listening level whilst playing a CD. This technique will avoid loud sounds or product damage in the event of incorrect connection.
- If you are unsure as to how your system should be connected, please contact your ARCAM dealer who will be happy to help you.

Connecting to a source component via RCA

- Step 1, ensure power is disconnected from the amplifier and source.
- Step 2, using analogue interconnect cables, connect the right (R), red terminal of the analogue output on the CD player to the right (R), usually red terminal of the required input on the A50 Signature.
- Step 3, connect the left (L), white terminal of the analogue output on the CD player to the left (L), usually white terminal of the same input on the A50 Signature.

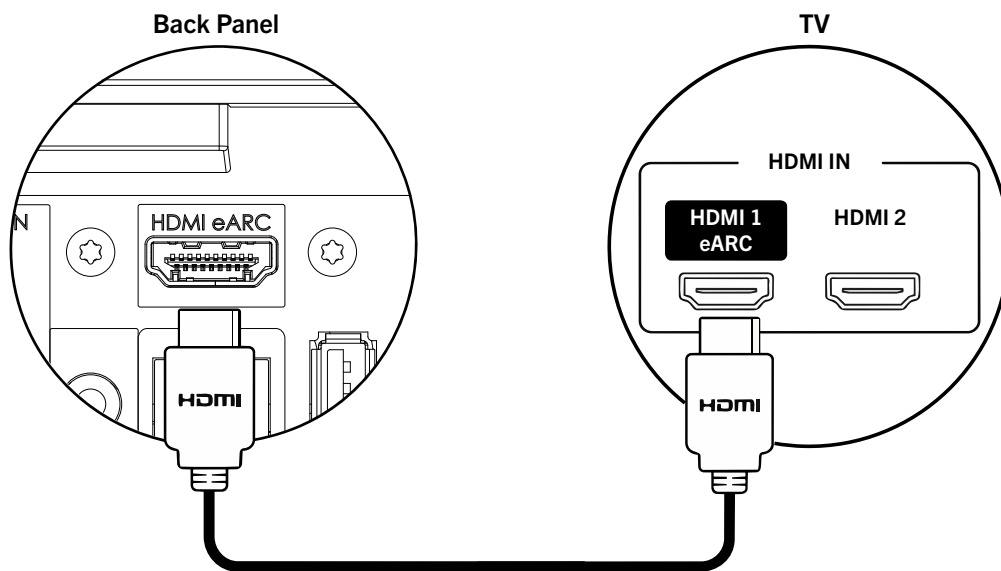


Top tips

- After making connections: switch the amplifier on with no input and reduce the volume to minimum. Select the CD input, and then slowly increase the volume to a suitable listening level whilst playing a CD. This technique will avoid loud sounds or product damage in the event of incorrect connection.
- If you are unsure as to how your system should be connected, please contact your ARCAM dealer who will be happy to help you.

Connecting to a TV by HDMI

Using a compatible HDMI cable, connect the **HDMI eARC** connector to the **HDMI** input on your television labelled **eARC** or **ARC**. When connected to an **eARC** or **ARC**-compatible television, the amplifier automatically enables the **HDMI** input, allowing audio from the TV to be output through the A50 Signature and your speakers.



Bluetooth Operation

Connecting your phone or tablet:

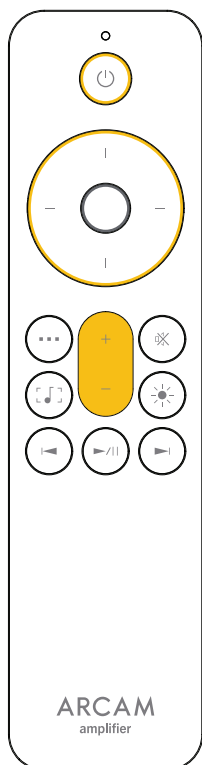
- To pair your Bluetooth source device, select the **Bluetooth** input, open the Bluetooth settings on your source device, and scan for **A50 #####** from the list. Each product has a unique ID.
- By default, the amplifier does not need to be on the Bluetooth input for Bluetooth pairing of a source device. To switch off the Bluetooth network, please go to **BT Settings Menu → BT Autoswitch → OFF** and choose a non-Bluetooth input
- The Amplifier can recall 5 device pairings. If 5 are in memory already, the oldest will be replaced
- To listen to an Auracast broadcast, navigate to the **Auracast** input.
- Because portable devices often have a volume slider, there is a maximum volume setting in the amplifier to prevent excessive volume output being selected accidentally. The setting is in the **BT Settings Menu**. The default is 40.

Connecting your wireless headphones:

- To pair Bluetooth headphones, press  on the remote control.
- When you see **Audio Output**, press the left or right cursor buttons on the remote control to see options. Paired Headphones will be listed, or select **Pair New BT Sink** to pair to a set of headphones for the first time. Your headphones must be in pairing mode to be discovered and paired.
- Use the navigation buttons on the remote to identify and select your headphones from the list of discovered devices.
- To transmit an Auracast broadcast, select **Auracast** from the **Audio Output** options.

Note: Bluetooth or Auracast outputs cannot be used at the same time as the Bluetooth or Auracast inputs.

Remote Control



	Toggle Standby Operation
	Left/Right: Input List Press the middle button to select Menu Navigation
	Volume Control
	Mute On or Off
	Settings Menu
	Audio Output Menu
	Display On or Off
	Transport Keys (Play/Pause, Skip back/forward)

Note: Incorrect use of batteries can have hazardous results. Do not mix old and new batteries together. Do not use non-identical batteries together. Although they may look similar, different batteries may have different voltages. Ensure the batteries are inserted in the correct direction.

Remove batteries from equipment that is not going to be used for a month or more. When disposing of used batteries, please comply with governmental or local regulations that apply in your country or area.

Alternative Codes

The A50 Signature and it's remote control can be configured to use an alternative set of remote control codes when the default codes operate more than one device (such as an ARCAM AVR) which can be inconvenient. The System Code will need to be changed in both the A50 Signature and the remote control to have the desired effect.

To change the System Code in the A50 Signature, refer to the System Code option in the **System Settings Menu**.

To change the System Code in the remote control, follow these steps:

- Press and hold the **POWER** and **OK** key for 3 seconds. LED on the remote will now stay lit.
- The navigation keypad is now used to select an alternative function for the remote.
- **UP** – Sets the system code of all keys to code 19. LED will flash TWICE.
- **LEFT** – Sets the System Code of all keys to code 16 (default setting). LED will flash ONCE.

Power

- The power switch on the rear panel switches the amplifier on or off. When you have finished making connections, switch the amplifier on.
- Press the volume encoder to turn on the amplifier from standby.
- Press and hold the volume encoder to put the amplifier into standby.

Auto Standby

This amplifier is designed to enter standby automatically within 20 minutes with no audio playing and no user interaction. This is to meet international power consumption regulations. Change the ECO Timer to off in the menu. For more information on the menu, see page 14.

Selecting Inputs

Audio inputs can be selected using either:

- The INPUT selector on the front panel. Rotate the dial to the input and press to select.
- Using the left and right navigation buttons on the remote control. In each case, the source name corresponds to the labelled input sockets. Press the centre button to select.

The inputs are:

- Phono MM and Phono MC
- Analogue 1, Analogue 2, Analogue 3 and Balanced
- Digital 1, Digital 2, Digital 3, HDMI, and USB-C
- Bluetooth and Auracast

Note: The digital inputs (including HDMI and USB-C) only support stereo (PCM) audio. Multichannel audio or encoded audio of any type is not supported.

Phono Inputs

For the playback of vinyl, the A50 Signature includes Phono Inputs to work with either an MM (Moving Magnet) or MC (Moving Coil) cartridge on a turntable. Check the type of cartridge fitted to your turntable and then connect your turntable to the corresponding input.

NEVER connect anything other than a turntable through these inputs. This can result in serious damage to both your amplifier and speakers and will not be covered under warranty.

Both inputs include adjustment options to fine tune the performance of vinyl playback through the A50 Signature's internal phono inputs.

- To adjust the MC Load Impedance: Navigate to:
Audio Menu → MC Load → 470 ohm/220 ohm/100 ohm/70 ohm.
- To adjust the MM Load Capacitance: Navigate to:
Audio Menu → MM Load → 50pF/150pF/270pF

Service USB

The Service USB socket (Type A) on this amplifier is only intended for software updates. It is not an audio input.

Headphones

The headphone socket (PHONES) accepts headphones fitted with a 6.3mm stereo jack. By default, the pre-amp outputs and speakers are muted when the headphones are plugged in.

Note: the speakers and pre-amp outputs can be configured to remain active when headphones are connected using the **Headphone Override** function in the setup menu.

Audio Menu

Press the  on the remote control.

Use the the navigation buttons on the remote control find and change a desired option. Use the select button to save the new setting.

Menu Option	Description	Default
Audio Output	Selects the output to be used. Options are “ Default ” (= Speakers), Auracast , Paired BT Sink devices or Pair New BT Sink (to make a connection to a Bluetooth audio output for the first time). This option is hidden when either the Bluetooth or Auracast inputs are selected.	Default
Balance	Selects whether audio is weighted to either of the left or right speakers.	0
DAC Filter	Selects between a number of digital filters that are used in the DAC.	Apodizing
Digital PLL	Change the tolerance of the digital audio clock synchronisation. Press left or right cursor keys to navigate to the input you want to change. Press the select key to toggle between the Normal or Wide options.	Normal
MC Load	Adjust impedance in the MC (Moving Coil) input.	470 ohm
MM Load	Adjust capacitance in the MM (Moving Magnet) input.	50pF

DAC filters

The A50 Signature has the option to select between a number of digital filters that are used in the digital to analogue conversion process. Digital filters are required to minimise unwanted distortion in the output but no filter is perfect, there are always compromises between a few parameters:

- Frequency response - audio level across audible frequencies. Ideally, this does not vary significantly between 20 Hz and 20 kHz.
- Phase - The time delay introduced between reproducing different audible frequencies. Ideally, this would be as low as possible (linear phase).
- Ringing - Additional audio artefacts that precede (pre) or follow (post) the audio. Ideally, these should be as low level and last for as short a time as possible.

The following filters are available for selection in the A50 Signature:

Apodizing - A compromise between frequency response, phase, and ringing. Very slight reduction in output level of the highest frequencies. Pre and post ringing are equal and low in level.

Minimum Phase Fast - Preserves output level to 20 kHz with no pre-ringing but the most post ringing and the phase response varies at higher frequencies.

Minimum Phase Slow - No pre-ringing and reduced post ringing but at very high frequencies there is a measurable reduction in output level and phase shifts can be introduced.

Linear Phase Fast - Preserves output level to 20 kHz with minimal high frequency phase shifts but there are higher and equal levels of pre and post ringing.

Linear Phase Slow - Pre and post ringing are equal, very short, and low in level with no phase shifts, but there is a measurable reduction in output level of very high frequencies.

Digital PLL

Normal is appropriate for almost all sources. Select **WIDE** only if noises or signal interruptions occur (most likely from high jitter sources such as TVs, and set-top boxes).

Settings Menu

Press the  on the remote control.

Use the the navigation buttons on the remote control find and change a desired option. Use the select button to save the new setting.

Menu	Menu Option	Description	Default
System Settings Menu	Streamer Input	Select the input that an ARCAM Radia streamer is connected to.	None
	Halo Brightness	Select the brightness of the dial illuminations.	Full
	Output Override	Select whether speakers switch off or remain active when wired headphones are connected. Off (speakers muted) / On (speakers unmuted).	Off
	HDMI Autoswitch	Allows a connected TV to automatically power on the amplifier and select the HDMI input when audio starts.	On
	Hide/Show Inputs Analogue 1 < • Show >	Option to hide unused inputs from the input list. Press left or right cursor keys to navigate to the input you want to change. Press the select key to toggle between the Show or Hide options.	Off
	Processor Mode	Select an analogue input for fixed volume.	Off
	Processor Volume	Set the fixed volume for the Processor Mode input set above.	25
	Pre-Amp Mode	Disables the internal power amplifier.	Off
	Eco Timer	Enables or disables the auto standby timer. On = 20 Minutes to Standby with no output or interaction.	On
	IR System Code	Change the IR code set if the amplifier remote commands conflict with another device in your home. This setting will also need to be separately changed in the remote handset.	16
	Software Version	Displays the software versions of the amplifier.	
	Reset to Factory Defaults	Reset the amplifier to factory defaults. Press Select to initiate the reset.	
	USB Software Update	Initiate an update of the amplifier software by USB. Press Select to initiate the USB. A USB must be present in the SERVICE USB socket with the amplifier software stored on it for the update to occur.	
BT Settings Menu	BT Autoswitch	Enables or disables the automatic switching of the Bluetooth input when music is played from a connected device.	On
	BT Max Volume	Set the maximum volume for the Bluetooth Input.	40
	Clear Bluetooth Device List	Clear the memory of paired devices from the amplifier. Press Select to delete pairings.	

Processor Mode

Processor Mode will fix the volume for one input. It can be assigned to any analogue input (excluding Phono). This allows the amplifier to be used in conjunction with an AV Amplifier or AV Processor in a combined home cinema and two channel system. Set the volume to match other speakers connected to the source amplifier or processor using the **Processor Volume** setting.

Troubleshooting

Problem	Check the following
No sound from Bluetooth headphones	Check the headphones have not connected to another device like a phone or tablet before the amplifier could connect to them. If your headphones have a power saving auto mute function when removed from the head (head detection), they may need to be unmuted to restore sound when refitted.
No Sound	Is the amplifier correctly plugged in and switched on? Are the speaker cables connected correctly at both ends? See “Connecting Speakers” on Page 7 of this owner’s manual. Is the audio source correctly connected, with the correct input selected? Is the amplifier muted? Is Pre-Amp Mode enabled in the settings menu? With speakers directly connected to the amplifier, Pre-Amp Mode should be set to the default setting. Default is Off. Is the amplifier in protection mode (as described below)?
Sound cuts out unexpectedly	The amplifier may enter a protection mode. The front panel display indicates the fault type: ● FAULT DC OFFSET: The amplifier detected an overload. Power off and reduce the volume after turning back on. ● FAULT SHORT (CIRCUIT): The amplifier detected a speaker short circuit. Inspect all the speaker cables to make sure none of them are shorted together. This fault is more common when exposed wires are being used to make speaker connections. ● FAULT OVER TEMP: The internal temperature of the unit reached an unsafe level. Allow the amplifier to cool. In protection mode, the amplifier will turn itself off and power to the speakers will be removed. To continue using the amplifier, the fault must be treated, and the amplifier must be turned OFF then back ON from the power switch on the rear panel.
The amplifier does not respond to the remote control	Does the light at the top of the remote control flash when the button is pressed? If not, replace batteries in the remote control. Are you pointing the remote control towards the amplifier window without obstruction?
The front panel display is blank	Is the display dimmed to “Off”? Press  on the remote control to change the display brightness. Is the amplifier correctly plugged in and switched on? Is the amplifier in standby?
Hum on an analogue input	Are all cables making a good connection? Try disconnecting the cable from the input and plug it fully in again (turn the power off before doing this). If the Hum stops when the cable is removed, replace the cable with another. If the hum originates only when one particular source device is connected, check with the supplier or manufacturer of that device, it may have a fault.

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Specifications

Continuous power output (0.5% THD) 2 channels driven		
8Ω, 20Hz - 20kHz – Power Output	150W	
4Ω, 1kHz, – Power Output	220W	
Harmonic distortion, 80% power, 8Ω at 1kHz	0.002%*	
Analogue Inputs		
Number of Inputs	3 (RCA pairs), 1 (XLR pair)	
Phono Inputs	MM and MC	
Frequency Response	20Hz—20kHz ± 0.2dB	
Signal/noise ratio (A-wtd, ref. 50W, 1V input)	106dB	
Digital Inputs		
Number of Inputs	1x HDMI eARC/ARC, 2x Coaxial (RCA), 1x Optical (Toslink), 1x USB-C	
Supported Sample Rates (kHz)	USB-C Only	384, 352.8, 192, 176.4, 96, 88.2, 48, 44.1
	Other digital inputs	192, 176.4, 96, 88.2, 48, 44.1
Bit depths (bit)	32, 24, 16	
Frequency response (filter 1)	20Hz—20kHz ± 0.2dB*	
Signal/noise ratio (A-wtd, ref. 50W, 0dBFS)	110dB*	
Headphone Output		
Maximum output level (RMS) into 32Ω/300Ω	2.5V/5V	
Load range	16Ω - 2kΩ	
Wireless Specifications		
Bluetooth Version	5.4; A2DP Sink/Source, AVRCP, BLE, SBC, AAC, aptX, aptX HD and aptX Lossless, LE Audio, Auracast	
Bluetooth Transmitter Frequency and Power	2,400 MHz to 2,483.5 MHz: <20dBm	
General		
Mains voltage	100V or 110–120V or 220–240V, 50–60Hz	
Power consumption (maximum)	800W*	
Power consumption (standby)	<0.5W	
Dimensions W x D (including speaker terminals) x H (including feet)	431 x 344 x 99mm	
Weight (net)	11 kg	
Weight (packed)	15.2 kg	
Supplied accessories	Mains lead(s)	
	Remote control with 2 x AAA batteries	
	Quick Start Guide	
	Important Safety Instructions	



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