



Since Peter Walker founded the business in 1936, all QUAD products have displayed originality in design, born from a full and proper understanding of every aspect of sound reproduction. A world leader in audio amplifier and electrostatic speaker design, QUAD has, over the years, made a major contribution to the improvement of sound quality. This contribution has been recognized by awards from around the world including the Queen's Award for Technological Achievement in 1978 - the only one ever presented to an audio hi-fi equipment manufacturer.

For many people, buying their first QUAD sound system can be a life changing experience. They enjoy the confidence of knowing that the complete system has been engineered to achieve optimal performance, free from compatibility problems.

They relax in the knowledge that QUAD's legendary service department will give support throughout the system's useful life. They derive pleasure from knowing that QUAD is a company of individuals who care about both the design and construction of their products, while sharing their love of music. These are just some of the reasons why we now serve the children, and even grandchildren of our first customers.

QUAD





A Brief History of QUAD

1936: The company founded by Peter J. Walker in London was initially called S.P. Fidelity Sound System. This actual document marked the company's beginnings.

1936: To avoid confusion with a firm of similar name, the company title was changed to the Acoustical Manufacturing Company.

1941: The company moved from London to Huntingdon after being bombed out of London in World War II.









1949: QA 12P Mono Valve amplifier

The company's first successful commercial product, for public address and domestic use, costing around £30. This amplifier's sound quality reproduction was to a very high standard compared to other products on the market at the time, and was thus adopted for use by the BBC.



1949: Acoustical Corner Ribbon Loudspeaker. Peter's first commercially successful domestic loudspeaker

"One of the most advanced designs so far made available to the public anywhere in the world."

-G. Howard-Sorrel, The Gramophone



1951: Acoustical QUAD I Mono Amplifier, Control Unit and HR I Tuner

QUAD (Quality Unit Amplifier Domestic) was first introduced and adopted a totally recognisable styling that continued virtually unchanged in all the company's control units until 1968.

1953: QCII Control Unit & 22 Power Amplifier

The QUAD II was launched bringing the value series to its final form and ushering in the first Golden Age of QUAD.

More than 80,000 were sold, in virtually every country in the world.



1957: QUAD Electrostatic Loudspeaker (ESL57)

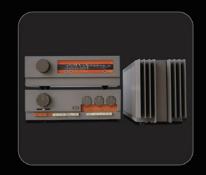
"One of the most important speaker of the 20th century..."

-Sound & vision



1967: 303 Power Amplifier / 33 Pre-amp / FM3 Tuner

An unconventional yet completely 'right' amplifier design, the 33/303 won a Council of Industrial Design Award in 1969.



1975: 405 Current Dumping Power Amplifier

The new Current Dumping, iconic 405 Power Amplifier really was revolutionary - it was small, neat and cool-running, yet produced a generous 100W output. The QUAD 405 and 405-2 would account for sales of over 164,000 units.





1978: Queen's Award for Technological Achievement

The only Queen's Award for Technology ever presented to an audio Hi-Fi equipment manufacturer; Peter's company was honoured with this royal award.



1981: QUAD ESL63

Point-source Electrostatic Loudspeaker

"If you value clarity, transparency and evenness of mid-range, then my experience is that you should probably look no further other than QUAD ESL63."

-Tony Faulkner, leading classical recording engineer.



1983: The company name was officially changed to QUAD Electroacoustics Ltd.

The QUAD slogan "For the closest approach to the original sound" summed up Peter's goal.



1996: QUAD 77 Series

The 77 Series featured an innovative and advanced two-way remote control with intelligent software interface, years ahead of its time.

2000: QC24 Control Unit

"It is so much better in terms of high fidelity, in its purest sense. It reminded me how QUAD retained an almost unique grip on the concept."

-Noel Keywood, Hi-Fi World



2002 & 2003: QUAD 11L

What Hi-Fi Awards

- -Product of the Year 2002
- -Product of the Year 2003







2004: L Series Speaker Package

What Hi-Fi Awards

-Product of the Year







2005: ESL 2805 / 2905

Hi-Fi Choice

-Gold Award 2008

(Best Loudspeakers £2,000-£5,000)







2012: ESL 2812 / 2912

The latest version of the highly acclaimed ESL Series.

What Hi-Fi? - 5-star Award, 2013 Hi-Fi News - Highly Commended, 2013 STEREO Magazine - Outstanding, 2014







2014: Vena Integrated Amplifier

"QUAD's entry into the ultra-contemporary would of all-singing-all-dancing digital-embracing integrated amplifiers, the chic Vena, offers more than a whiff of retro."

-Ken Kessler, Hi-Fi News





2016: Artera Play & Artera Stereo

Hi-Fi News - Outstanding Product, 2015

Hi-Fi World

-5 Globes Outstanding Among The Best, 2016







2017: Artera Solus Integrated Amplifier

Hi-Fi News

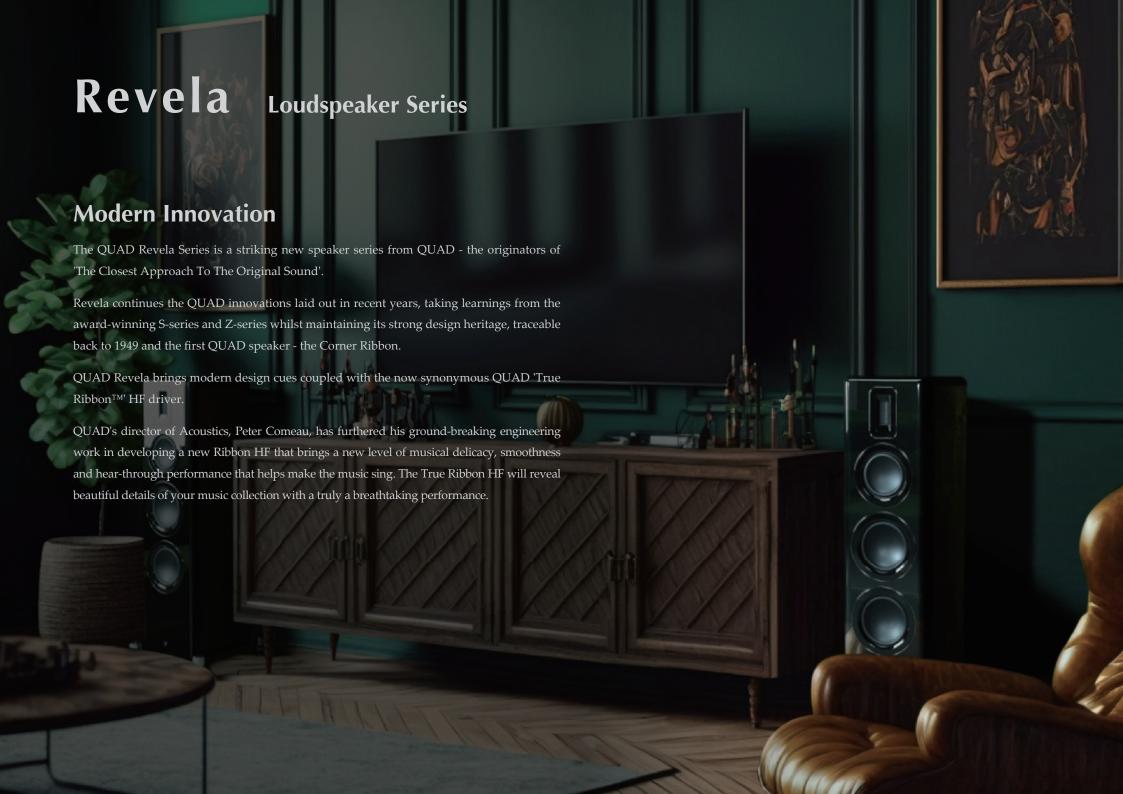
- Year Best Hi-Fi Products, 2018

Hi-Fi World

-5 Globes Outstanding Among The Best, 2019













Model	QUAD Reveia 1	QUAD Reveia 2	Model	QUAD Reveia Statiu
General Description	Bookshelf	Floor-standing	General Description	Speaker stand
Enclosure Type	Bass reflex	Bass reflex	Measurement	
Transducer Complement	2-way	3-way	Height	590mm
Bass Driver	165mm advanced fibre cone	2 x 165mm advanced fibre cone	Top Effective Size (W x D)	159 x 196mm
Midrange Driver	-	150mm advanced fibre cone	Base (W x D)	350 x 280mm
Treble Driver	27 x 60mm true ribbon	27 x 60mm true ribbon	Materials	
AV Shield	No	No	Columns	Birch plywood piano finish
Sensitivity (2.83V @1m)	86dB	89dB	Base Plate	High carbon steel tube
Recommended Amplifier power	30-120w	20-200w	Base Spikes	Hardened high carbon steel
Peak Power Handling	120w	200w	Package Quantity	Pair
Peak SPL	102dB	110dB	Optional For	QUAD Revela 1
Nominal Impedance	6 Ω	6Ω	Dimensions	
Minimum Impedance	4.1 Ω	3.9Ω	Height (on plinth & spikes)	590mm
Frequency Response (+/-3dB)	54Hz - 24kHz	40Hz - 24kHz	Width	350mm
Bass Extension (-6dB)	40Hz	35Hz	Depth	280mm
Crossover Frequency	2.9kHz	650Hz - 3.8kHz	Carton Size	650mm x 580mm x 280mm
Cabinet Volume (in litres)	17.6L	14.8L/28.5L	Net Weight	15.8 kg/pcs
Dimensions			Gross Weight	18.4 kg/ctn
Height (on plinth & spikes)	395mm	962mm	Finish	Piano Black
Width	246mm	350mm		
Depth	386mm	320mm		
Carton Size	650mm x 400mm x 515mm	440mm x 410mm x 1076mm		
Net Weight	24.6kg/ctn	31.8kg/ctn		
Finish	Piano Walnut / Piano Black, Piano Black	Piano Walnut / Piano Black, Piano Black		
Standard Accessories	User manual, certificate, rubber feet	User manual, certificate, spike seat		



ESL2812 & ESL2912 Electrostatic Loudspeakers

PRECISION ENGINEERING

To begin with, QUAD's engineers evaluated the power supply for the EHT voltage. Creepage, the possibility of charge flowing across the PCB between components, was eliminated by a new PCB layout which ensured optimum insulation and distance between contacts and a symmetrical layout for the components. This new layout also provides a means to superior cable dressing, again reducing the effects of creepage, particularly in high humidity environments.

Component changes have also been introduced, including such audiophile components as Vishay resistors and Murata capacitors. Although not in the signal path, as such, these components have a direct effect on the consistency of the EHT supply and signal purity is created in the reproduction of music as a result.











Model	ESL2812	ESL2912
Format	Floor Standing Dipole With 3° Fixed Tilt	Floor Standing Dipole With 3° Fixed Tilt
Туре	Multiple Electrostatic Drive Membranes	Multiple Electrostatic Drive Membranes
Time Delay	Progressive Concentric Rings	Progressive Concentric Rings
Chassis Structure	Heavy Duty Composite Aluminium / Steel	Heavy Duty Composite Aluminium / Steel
Panel Elements	4	6
Maximum Output	2 N/m ² at 2m On Axis	2 N/m ² at 2m On Axis
Sensitivity	1.5 mbar Per Volt Referred To 1m	1.5 mbar Per Volt Referred To 1m
	(86dB/2.83V rms Equivalent)	(86dB/2.83V rms Equivalent)
Nominal Impedance	8 Ohms	8 Ohms
Impedance Variation	4 - 15 Ohms	4 - 20 Ohms
Maximum Input	Continuous Input Voltage (rms): 10V	Continuous Input Voltage (rms): 10V
	Programme Peak For Undistorted Output: 40V	Programme Peak For Undistorted Output: 40V
	Permitted Peak Input: 55V	Permitted Peak Input: 55V
Frequency Response	37Hz - 21kHz (-6dB)	32Hz - 21kHz (-6dB)
	33Hz - 23kHz (useable)	28Hz - 23kHz (useable)
Distortion (100dB @ 1m)	Above 1000Hz <0.15%	Above 1000Hz <0.15%
	Above 100Hz <0.5%	Above 100Hz <0.5%
	Above 50Hz <1.0%	Above 50Hz <1.0%
AC Input	220 - 240V, 110 - 120V, 100V	220 - 240V, 110 - 120V, 100V
Power Fuse	63mA anti-surge, 200 - 240V	63mA anti-surge, 200 - 240V
	100mA anti-surge, 100 - 120V	100mA anti-surge, 100 - 120V
Power Consumption	6W	6W

Z Series Loudspeaker Range

NEW FLAGSHIP RIBBON LOUDSPEAKERS

Unlike conventional dome treble units, where the voice coil 'motor' is attached separately to the diaphragm, Z Series ribbon is both the diaphragm and the motor system. The result is a unique combination of delicacy, smoothness and hear-through performance that helps make music sing. In the Z Series floorstanders this advanced ribbon unit is married to an equally high performance midrange driver with a unique double-roll-surround especially designed to control edge breakup and give equal transparency to the all important vocal range.

Both midrange and bass drivers feature QUAD 's woven Kevlar® cone geometry, now matched by the double-roll-surround for the same smoothness and clarity offered by the ribbon treble unit. The bass section, similar to the original Corner Ribbon, utilizes an acoustic filter bass reflex system that maintains the natural and unforced reproduction right down to the lowest frequencies of a symphony orchestra.

We don't need to describe the skilfully hand veneered cabinets as one look at the images, here, will give you a taste of how the Z Series furniture quality woodwork will look in your living room. Quad Z Series – beautiful performance and looks combined, for 'The Closest Approach To The Original Sound'.

Z-2 bookshelf

Z-3 floor-standing





Z-4 floor-standing











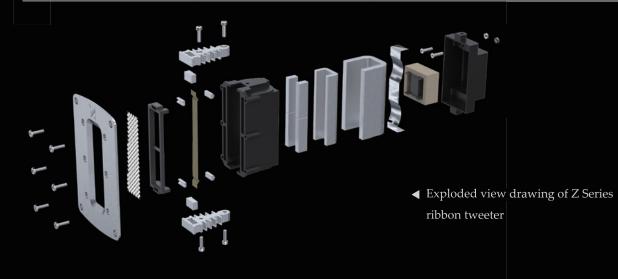








Model	Z-1	Z- 2	Z -3	Z-4	Z-C
General Description	bookshelf	bookshelf	floor-standing	floor-standing	centre speaker
Enclosure Type	bass reflex				
Transducer Complement	2-way	2-way	3-way	3-way	2-way
Bass Driver	150mm glass fibre	175mm glass fibre	2 x 175mm glass fibre	3 x 175mm glass fibre	2 x 150mm Woven Kevlar
Midrange Driver			150mm glass fibre	150mm glass fibre	
Treble Driver	90 x 12mm true ribbon				
Sensitivity (1W @ 1m)	86dB	84dB	89dB	90dB	91dB
Recommended Amplifier Power	20-100W	30-120W	40-120W	40-120W	40-200W
Peak Power Handling	100W	120W	120W	120W	150W
Peak SPL	102dB	102dB	110dB	115dB	102dB
Nominal Impedance	8Ω	8Ω	6 Ω	4 Ω	8Ω compatible
Minimum Inpedance	4.6 Ω	4.6 Ω	3.8Ω	3.6 Ω	4.0 Ω
Frequecy Response (+/-3dB)	56Hz - 20kHz	50Hz - 20kHz	50Hz - 20kHz	47Hz - 20kHz	65Hz - 20kHz
Bass Extension (-6dB)	48Hz	45Hz	45Hz	40Hz	60Hz
Crossover Frequency	3.4kHz	3.4kHz	450Hz 3.6kHz	300Hz 3.5kHz	2.7kHz
Dimensions (H on plinth &	383 x 219 x 283mm	421 x 243 x 329mm	965 x 267 x 340mm	1175 x 267 x 340mm	232 x 545 x 275mm
spikes x W x D) mm					
Net weight	8.5kg each	10.5kg each	21.5kg each	26.5kg each	11kg each



S Series

THEN AND NOW

QUAD S Series combines advanced Kevlar®-coned bass/midrange drivers with a specially designed ribbon tweeter, supplying effortless sonic expression to capture all the nuances and passion of the original performance. Through our extensive and innovative approach to loudspeaker design on the floorstanders of S Series, ABRs or auxiliary bass radiators have been implemented, and offer many benefits when compared with conventional bass reflex ports.

THE FINISHING TOUCH

Beautifully presented with rounded top edges at the front and rear, each speaker cabinet uses a sandwich construction of alternate layers of MDF and high-density particleboard to reduce panel resonance below the level of audibility. Aesthetically, the look is classically QUAD yet subtly updated, available in a choice of black or sapele mahogany wood veneers and premium hand-lacquered piano white and piano black choices.

S-1 bookshelf







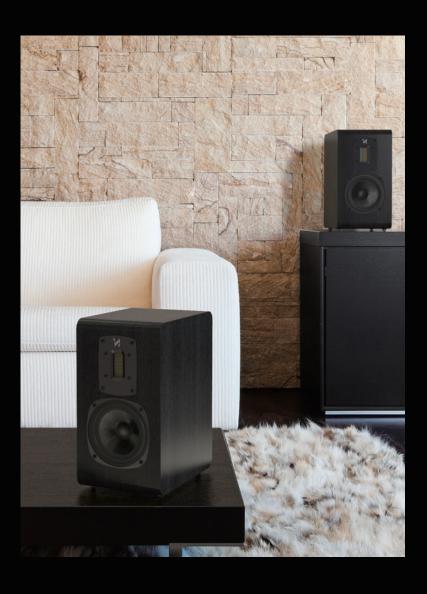
S-2 bookshelf





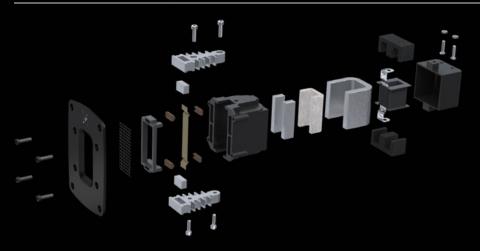
S-5 floor-standing





SPECIFICATIONS

SPECIFICATION:	S				010	© II ©
Model	S-1	S-2	S-4	S-5	S-C	S-C2
General Description	bookshelf	bookshelf	floor-standing	floor-standing	centre speaker	centre speaker
Enclosure Type	vented box	vented box	ABR	ABR	vented box	vented box
Transducer Complement	2-way	2-way	3-way	3-way	2-way	2-way
ABR			3 x 125mm	3 x 165mm		
Bass Driver	100mm Woven Kevlar	125mm Woven Kevlar	2 x 125mm Woven Kevlar	2 x 165mm Woven Kevlar	2 x 100mm Woven Kevlar	2 x 125mm Woven Kevlar
Midrange Driver			100mm Woven Kevlar	125mm Woven Kevlar		
Treble Driver	45 x 12mm true ribbon	45 x 12mm true ribbon	45 x 12mm true ribbon	45 x 12mm true ribbon	45 x 12mm true ribbon	45 x 12mm true ribbon
AV Shield	No	No	No	No	No	No
Sensitivity (2.83V @ 1m)	84dB	87dB	88dB	90dB	86dB	89dB
Recommended Amplifier Power	25-150W	25-150W	25-175W	25-175W	25-150W	25-150W
Peak SPL	105dB	108dB	110dB	112dB	107dB	110dB
Nominal Impedance	8Ω	8 Ω	8Ω	8Ω	8Ω	8Ω
Minimum Inpedance	4.2 Ω	4.5 Ω	3.5Ω	3.2 Ω	4.4Ω	5.6 Ω
Frequecy Response (+/-3dB)	58Hz - 20kHz	48Hz - 22kHz	44Hz - 23kHz	42Hz - 23kHz	65Hz - 20kHz	55Hz - 20kHz
Bass Extension (-6dB)	55Hz	37Hz	37Hz	35Hz	60Hz	50Hz
Crossover Frequency	3.2kHz	3kHz	520kHz / 3.9kHz	570kHz / 3.2kHz	2.8kHz	3kHz
Cabinet Volume (in litres)	10.7L	8.15L	47L	72.4L	12.8L	15.8L
Dimensions — — — — — — — — — — — — — — — — — — —	285 x 156 x (240 + 30)mm	330 x 180 x (260 + 30)mm	(870 + 55) x180 x (300 + 30)mm	(1070+55) x 205 x (330 + 30)mm	160 x 400 x (200 + 30)mm	190 x 460 x (280 + 30)mm
(H on plinth $x W x D$ with terminals) mm						
Net weight	5.2kg each	6.1kg each	20.5kg each	25.32kg each	6.7kg each	9.5kg each



◄ Exploded view drawing of S Series ribbon tweeter

Artera Series

CLASSICS FOR THE MODERN AGE

QUAD gave its team of designers and engineers a specific brief for Artera Series: combine the qualities that have made QUAD Britain's most revered hi-fi marques for many decades with fresh industrial design and the very latest high-performance audio technologies.

Artera's crisp, clean aesthetic both evokes QUAD's past and looks forward to the future, with a textured aluminium front panel, thick glass top plate and CNC-routed heat sinks on either side.

The housing provides a rugged structure that resists interference from external vibrations, while the fascia of each player incorporates an intuitive touch-sensitive control, contributing greatly to its sleek design.

The Artera's complete range includes 5 models:

Artera Solus Play (wireless streaming integrated amplifier / DAC / Preamplifier / CD Player),

Artera Solus (Bluetooth aptX / CD player / DAC / preamp / integrated amplifier),

Artera Pre (analogue preamplifier),

Artera Stereo (power amplifier), and

Artera Play+ (Bluetooth aptX / CD player / DAC / preamp).



▲ QUAD Artera Play+ CD player / DAC / preamp, paired with Artera Stereo power amplifier



Artera Play+ (Bluetooth aptX / CD Player / DAC / Preamp)



Artera Solus (Bluetooth aptX / CD Player / DAC / Preamp / Integrated Amplifier)



Artera Stereo (Power Amplifier)

	N = N	- N	
	100	10 10	4.5
Model	Artera Play+	Artera Solus	Artera Stereo
CD	✓	✓	×
Preamp	✓	✓	×
ESS ES9018 32bit DAC	✓	✓	×
Up to 384kHz Sample Rate via USB	B ✓	✓	×
4 User Selectable Filters	✓	✓	x
HID Mode	✓	✓	x
Standby Trigger	✓	✓	✓
Bluetooth aptX	✓	✓	×
Amplifier	×	✓	/
Current Dumping Topology	×	×	/
Class AB Topology	×	✓	×
140W RMS x 2 (8 Ohms)	×	×	/
75W RMS x 2 (8Ohms)	×	✓	×
Inputs			
2 x Opt TOSlink	✓	✓	×
2 x Digital RCA	✓	✓	×
2 x Analogue RCA	✓	✓	/
2 x Balanced XLR	×	×	/
USB B (PC / MAC)	1	✓	×
Outputs			
1 x Digital RCA	√	✓	×
1 x Opt TOSlink	√	✓	×
2 x Analogue RCA	✓	✓	×
2 x Balanced XLR	✓	✓	×
6.3mm Headphone Jack	✓	✓	×
2 x Speaker Binding Post Terminals	×	✓	✓

Artera Solus Play

Wireless Streaming Integrated Amplifier / DAC / Preamplifier / CD Player

OVERVIEW

The QUAD Artera Solus Play is the latest addition to the best-selling QUAD Artera series. It also heralds the arrival of wireless audio streaming and multi-room technology to the established QUAD Artera portfolio. Based on the recently upgraded and richly specified Artera Solus, the QUAD Artera Solus Play incorporates the acclaimed DTS Play-Fi® platform for high resolution wireless audio streaming.

With DTS Play-Fi® Technology, music can be streamed over your wireless network in high resolution format and can be easily expanded to an ultimate multi-room system if required. You can stream from any source on your wireless network, including smart-phones, tablets or PCs as well as a NAS Drive. All of this is in addition to traditional hi-fi functionality of the Artera Solus Play as an all-in-one Bluetooth aptX receiver / CD player / DAC / Preamp and integrated amplifier.

The DTS Play-Fi® platform offers a wealth of music options from around the globe. Spotify, Tidal, Qobuz, HD Tracks, Deezer, Amazon Music, Napster, KKBox and Sirius XM, to name a few. Browse a radio guide with thousands of stations and podcasts, or stream from a home media server with DLNA compatibility.

QUAD Artera Solus Play borrows more than just looks from its sibling, the Artera Solus - utilising much of the same high-specification design, including the ESS ES9018 from the Sabre32 Reference DAC as well as the aptX Bluetooth connectivity, it has all the pure musicality of QUAD coursing through its very versatile circuitry.

There is also a smattering of both digital and analogue connections, including a headphone socket. So, however you want to enjoy your music, analogue or digital, the QUAD Artera Solus Play will have you connected and ready to play... just add speakers.



KEY FEATURES

- ► All-in-one compact multi-source music playback system
- ► CD Player, DAC, Pre-Amp, Integrated amplifier, Bluetooth receiver and wireless audio streamer
- ► ESS Sabre32 ES9018 Reference DAC as seen in the award-winning QUAD ARTERA SOLUS and ARTERA PLAY+
- ▶ Play from any Bluetooth® device - high quality Bluetooth aptX receiver
- ► Class AB power amplification: 2x 75W into 8 ohms
- ► User-selectable digital filters
- ▶ Dedicated current-feedback headphone amp
- ▶ Dual operational modes: Integrated Mode; Pre amp Mode
- ► Separate pre-power sections for flexibility of operation
- ► Automatic equipment activation via 12V trigger
- ► Auto standby function

► Wi-Fi® Technology

DTS Play-Fi streams music over standard Wi-Fi networks, delivering perfectly synchronized audio, with no lag and zero loss in sound quality.

▶ Any Operating System

Fully compatible with all operating systems: Apple iOS, AndroidTM, Windows® PC, and Fire OS.

▶ Easy Setup

No logins, no complicated computer-based setups. Just download the app and within minutes, you're ready to listen.

▶ DTS Play-Fi App

Simply download the free app and immediately send songs via Wi-Fi to any speaker in any room of the house.

▶ Ethernet Connection

Wired internet connection for high bandwidth applications



—Artera Solus Play—
CD Player, DAC, Pre-Amp with Integrated Amplifier
DSD (up to DSD256 Compatible) / Bluetooth® 4.2, aptX LL /
DTS Play-Fi Technology
ALAC, WAV, FLAC, AIFF, WMA, MP3, AAC, AAC-
HE, AAC+, DSD64, DSD128, DSD256
ESS ES9018 32bit DAC
USB B (PC / MAC)
2 x Optical TOSlink, 2 x RCA (DIG1, DIG2)
1 x Optical TOSlink, 1 x RCA (DIG)
2 x RCA (AUX1, AUX2)
2 x RCA, 2 x Balanced XLR, 6.3mm Headphone Jack
1 Pair Speaker Terminals
44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz, 384kHz
44.1 - 192kHz (Digital Inputs / Outputs)
<0.5W
0 - 2.3 Vrms (Pre Outputs)
0 - 4.6 Vrms (Balanced Outputs)
20Hz-20kHz, 1kHz (± 0.2dB)
< 0.002% (@1kHz, BW=20Hz-20kHz)
>103dB (1kHz)
> 110dB (A-weighted, ref. 1V)
>100dB (1kHz)
2 x 75W (8 Ω)
± 0.5dB (20Hz-20kHz, 1kHz)
< 0.003% (@1KHz, 50W/8Ω, BW=20Hz-20kHz)
> 108dB (A-Weighted, ref. 75W)
>82dB (A-Weighted, ref. 1W)
>98dB
220V-240V~50-60Hz
100V-120V~50-60Hz
320 x 320 x 105mm
11.5 kg

Artera Solus **Integrated Amplifer**

MUTLI-TALENTED ARTERA GOES SOLUS

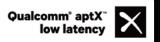
It's a long way from 'classic QUAD' but this slick all-in-one system sees the company's traditional values brought up to date to impressive effect. The QUAD Artera Solus combines a CD transport, preamplifier, power amplifier and DAC in a single compact chassis, with extensive connectivity options including Bluetooth wireless streaming.

At the heart of the Artera Solus is the ESS 9018 Sabre32 Reference DAC. A favourite amongst audiophiles and live sound engineers alike, the eminent 32-bit, eight-channel hybrid multi-bit Delta-Sigma DAC chipset. Using the critically acclaimed ESS patented 32-bit HyperStream® DAC architecture and Time Domain Jitter Eliminator, this DAC delivers a DNR of up to 127dB and THD+N of -120dB, a performance level that will satisfy the most demanding audio enthusiasts.

This means, the Artera Solus will playback PCM 32-bit / 394kHz digital media files. As well as DSD 64 / 128 / 256 high resolution audio file formats.























ANALOGUE HEART, DIGITAL MIND

The QUD Artera Solus is a tremendous one-box system and an absolute steal. Compact, sturdy and boasting a sound that's not just rich but powerful, it makes a compelling case for itself at the price.



Digitally controlled in the analogue domain



Class AB / power-amp dual-mono setting



Very capable of handling difficult loads (2x75w @80hms)



ESS Sabre32 DAC



Complementary Feedback Topology



Independent low noise power supplier



PCM 32-bit / 384kHz digital media files



DSD 64/128/256 high resolution audio file formats



Model	Artera Solus
General Description	CD Player, DAC, Pre-Amp
	with Integrated amplifier
Key Technology & Features	DSD (up to DSD256 Compatible)
	Bluetooth® 4.2, aptX LL
Audio File Formats	ALAC, WAV, FLAC, AIFF, WMA, MP3, AAC, AAC-
50.5	HE, AAC+, DSD64, DSD128, DSD256
D/A Converter	ESS ES9018 32bit DAC
USB Input	USB B (PC / MAC)
Digital Audio Inputs	2 x Optical TOSlink, 2 x RCA (DIG1, DIG2)
Digital Audio Outputs	1 x Optical TOSlink, 1 x RCA (DIG)
Analogue Inputs	2 x RCA (AUX1, AUX2)
Analogue Outputs	2 x RCA, 2 x Balanced XLR, 6.3mm Headphone Jack
Speaker Outputs	2 x Speaker Binding Post Terminals
Sample Rate (USB B)	44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz
	192kHz, 384kHz
Sample Rate (Digital Inputs / Outputs)	44.1 - 192kHz
Standby Power Consumption	<0.5W
Output Level (1kHz) Variable Output	0 - 4 Vrms (Pre Outputs)
	0 – 8 Vrms (Balanced Outputs)
Frequency Response	20Hz-20kHz, 1kHz (± 0.2dB)
Total Harmonic Distortion	<0.002% (20Hz-20kHz)
Signal to Noise Ration(S/N)	>103dB (1kHz)
	>110dB (A Weighted, 1kHz)
Channel Separation	>100dB (1kHz)
Rated Power Output	$2 \times 75W (8 \Omega)$
Frequency Response	± 0.5dB (20Hz-20kHz, 1kHz)
Total Harmonic Distortion	<0.009% (10W 20Hz-20kHz)
Signal to Noise Ration(S/N)	>100dB (A Weighted, ref.75W)
Channel Separation	>82dB (A Weighted, ref.1W)
Dynamic Range A-wtd	>98dB
Power Requirement	230V~50-60Hz
	115V~50-60Hz
	100V~50-60Hz
Dimensions (W×D×H)	320 x 320 x 105mm
Net Weight	11.84kg

Artera Play+ CD Player / DAC

ARTERA PLAY GETS UPGRADED

New version of the CD player/ DAC / preamp from QUAD's Artera Series adds features and improves performance, whilst also lowering the price. With analogue, digital and aptX Bluetooth inputs also included, this is a component of considerable versatility. Just add a power amplifier and speakers to complete the system.

The inclusion of aptX Bluetooth enables users to pair smartphones, tablets and computers and stream music wirelessly. Also new is a front-mounted headphone output, positioned discreetly beneath the fascia and coupled to dedicated circuitry that is designed to do justice to even the most capable of cans.

At its heart nestles an ESS Sabre32 Reference - the eminent 32-bit, eight-channel hybrid multi-bit Delta-Sigma DAC chipset - expertly implemented by QUAD's renowned electronics engineers. External sources benefit from this DAC's exceptional quality via a range of digital inputs, handling PCM data up to 32-bit/384kHz as well as DSD64/128/256.

For CD replay, a slot-loading mechanism buffers data from the disc before feeding it to the asynchronous DAC section. Four digital filter options enable users to tailor the sound from both CDs and external digital sources, to suit personal taste and the nature of the source material.













In comparison to the original Play, the Play+ improves the post-DAC analogue filter circuit with a refined topology and superior op-amps that were carefully selected for their synergy with the ESS Sabre32 DAC. The power supply circuitry has also been redesigned, with a larger toroidal transformer and independent low-noise power supplies feeding all critical stages to keep interference to a minimum. These changes contribute to greater sonic clarity and expression, with increased dynamic headroom and crisp, engaging musicality.

The Play+'s preamp section mixes minimalist design with high-quality components to ensure short, direct signal paths that preserve sonic purity. Volume is digitally controlled in the analogue domain, feeding single-ended RCA and balanced XLR analogue outputs. The signal path between the DAC and XLR output is a further improvement over the original Play, the four-channel volume control and fully symmetrical topology ensuring the Play+ makes the most of the performance advantages that balanced XLR connection to a power amp can bring.

	N	
Model	Artera Play+	
General Description	CD Player, DAC, Pre-Amp	
Key Technology & Features	DSD (up to DSD256 Compatible)	
	Bluetooth® 4.2, aptX LL	
Audio File Formats	ALAC, WAV, FLAC, AIFF, WMA, MP3, AAC, AAC-HE, AAC+,	
	DSD64, DSD128, DSD256	
D/A Converter	ESS ES9018 32bit DAC	
USB Input	USB B (PC / MAC)	
Digital Audio Inputs	2 x Optical TOSlink, 2 x RCA (DIG1, DIG2)	
Digital Audio Outputs	1 x Optical TOSlink, 1 x RCA (DIG)	
Analogue Inputs	2 x RCA (AUX1, AUX2)	
Analogue Outputs	2 x RCA, 2 x Balanced XLR, 6.3mm Headphone Jack	
Sample Rate (USB B)	44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz, 384kHz	
Sample Rate (Digital Input / Outputs)	44.1 - 192kHz	
Standby Power Consumption	<0.5W	
Output Level (1kHz) Variable Output	0-4 Vrms (Pre Outputs)	
	0-8 Vrms (Balanced Outputs)	
Frequency Response	20Hz - 20kHz, 1kHz (± 0.2dB)	
Total Harmonic Distortion	<0.002% (20Hz - 20kHz)	
Signal to Noise Ration (S/N)	>103dB (1kHz)	
	>110dB (A Weighted, 1kHz)	
Channel Separation	>110dB (1kHz)	
Power Resquirement	230V~50-60Hz	
	110V~50-60Hz	
	100V~50-60Hz	
Dimensions (W×D×H)	320 x 320 x 105mm	
Net Weight	9.04kg	

Artera Pre Analogue Preamplifier

OVERVIEW

The QUAD Artera Pre is a pure analogue preamplifier, combining innovative modern British design with the QUAD sound signature traditions, characterized by the pure analogue signal. The Artera Pre mixes minimalist design with high-quality components to ensure short, direct signal paths that preserve sonic purity.

STYLING

QUAD's designers recognised that there is no need for the usual bewildering duplicity of controls on the front panel as most commands will, in any case, be carried out using the remote control.

Artera Pre's fascia therefore concentrates only on the functions needed – Standby/on, Select and Volume control with a neat, crisp display that shows input selection and menu functions. In this way Artera Pre not only exhibits a beautiful aesthetic but also encourages anyone to start playing music without the hindrance of complicated and unnecessary controls.







A CLASSIC FOR THE MODERN AGE

- ► The volume is digitally controlled in the analogue domain
- ► The sensitivity of each input can be adjusted +/-8dB
- ► Versatile in application AUX3 can be configured for 'AV Bypass' for use with AV processor
- ► The return of the classic QUAD 'TILT' tone control allowing subtle changes to the overall frequency response to suit your own preference
- ▶ Different EQ filters settings can be assigned to each input, featuring changes to the overall balance of the sound, bass cut and bass boost
- ► Low noise Class A phono stage which can be configured for moving magnet or moving coil

ANALOGUE INPUTS

- ▶ Unbalanced RCA: 3 x AUX
- ▶ Balanced: 1 x XLR
- ▶ 1 x phono MM/MC

ANALOGUE OUTPUTS

- ▶ Unbalanced RCA: 1 x PRE, 1 x AUX
- ▶ Balanced: 1 x XLR
- ▶ 1 x 6.35mm Class-A headphone jack



Model	Artera Pre
Analogue Inputs	3 x RCA (AUX1, 2 & 3), XLR, Phono MM/MC
Analogue Outputs	1 x RCA (PRE OUT), 1 x RCA(AUX), 1 x XLR
	1 x 6.35mm Headphone Jack
Gain (max.) , Volume = 100	+8dB (Line/XLR)
	+53.5dB (Phono MM)
	+73.5dB (Phono MC)
Input Sensitivity (Vol = 84, Vout = 0dBu)	775mV (Line/XLR)
	4.1mV (Phono MM)
	410uV (Phono MC)
Input Impedance	10K (Line/XLR)
	47K//100pF (Phono MM)
	100R//1.7nF (Phono MC)
Max. Output Level (THD < 0.1%)	2.3Vrms (RCA)
	4.6Vrms (XLR)
Input Headroom (THD < 0.1% , Vol = 50)	4.1Vrms (RCA)
	8.2Vrms (XLR)
	62mV (Phono MM) / 6.2mV (Phono MC) @ 1kHz
Frequency Response	20Hz-20kHz (± 0.2dB)
Total Harmonic Distortion	<0.002% (20Hz-20kHz)
S/N Ratio (Vout = 0dBu)	>110dB(A) (Line/XLR)
	>80dB(A) (Phono MM)
	>76dB(A) (Phono MC)
Channel Separation	>100dB (10kHz)
Output Impedance	120 Ohms (RCA)
	100 Ohms (XLR)
Standby Consumption	<0.5W
AC Mains Supply Requirement	230V ~ 50-60Hz
(Factory set)	115V ~ 50-60Hz
	100V ~ 50-60Hz
Dimensions (W×D×H)	320 x 320 x 105mm
Net Weight	7.8kg

Vena II Integrated Amplifier

VENA EN VOGUE

The multi award-winning QUAD Vena integrated amplifier has set a benchmark in its category over the last few years and now 2019 sees the introduction of a new version of this market leading classic. The Vena II retains all the engineering and characteristics that earned its predecessor multiple accolades, but adds sound quality improvements, new inputs and more connectivity to the package.

Vena II features developments in both the analogue and digital spheres, adding an upgraded DAC (ESS ES9018K2M) for even purer reproduction of digital sources, and a MM phono stage. The USB audio input is upgraded to 384kHz 24bit PCM and now accepts DSD up to DSD 256. Vena ll also adds a dedicated headphone amplifier.

The Vena II is an exceptionally neat and convenient way to bring true high-fidelity sound to the varied nature of modern music collections – from vinyl and CD to digital streaming and hi-res files – via all manner of play- back devices. Smart aesthetics are important to today's music lovers. The Vena II 's small footprint (compared to many amps in its class) allows flexible positioning and ensures the amp slips tidily into a range of environments.



 ${\color{blue}\blacktriangle}$ Vena II integrated amplifier, paired with S1 bookshelf speakers in black oak finish



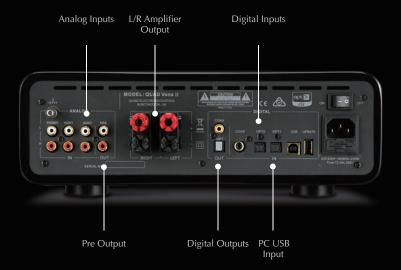














Gloss Black



Sapele Mahogany



Gloss White



Lancaster Grey



Silver



Model	Vena II
Preamplifier Section	
1177	F20 V
AUX Input Impedance	520mV
Output Voltage	47kΩ (unbalanced)
Inputs	2 x AUX, 1 x RCA (phono MM)
Outputs	1 x RCA (pre-out)
Frequency Response	±0.5dB (20Hz-20kHz, ref. 1kHz)
Total Harmonic Distortion (THD)	<0.002% (ref. 1kHz)
Signal-To-Noise Ratio (S/N)	>112dB (ref. 1 kHz)
Crosstalk @1K	>110dB (ref. 1 kHz)
Power Amplifier Section	
Input Sensitivity	520mV (RCA AUX-in), 5mV (phono MM)
Rated Power Output	45W (8 Ω loading), 65W (4 Ω loading)
Gain	29dB
Frequency Response	±0.5dB (20Hz-20kHz, ref. 1kHz)
Total Harmonic Distortion (THD)	<0.002% (ref. 1kHz)
Signal-To-Noise Ratio (S/N)	>108dB (A weighted, ref. 45W)
Crosstalk @1K	>80dB (ref. 1W)
Digital Section	
DAC	ESS Sabre32 ES9018K2M chip
Sampling Frequency	Optical, Coaxial: 44.1kHz -192kHz;
	USB: 44.1kHz - 384kHz(PCM)/DSD64,
	DSD128, DSD256
Digital Input	1 x Coaxial, 2 x Toslink Optical, 1 x USB for PC USB,
	Bluetooth® V4.2, aptX LL
Digital Output	1 x Coaxial, 1 x TOSlink Optical
Mechanical Section	
Dimensions (W X H X D)	(301 x 95 x 313)mm
Metal Enclosure	6.1kg (Net)
Wood Cabinet	7.5kg (Net)
Safety Regulation Conformity	CE

Vena II Play Wireless Streaming Integrated Amplifier

PLAY FOR TODAY

The QUAD Vena II Play is the latest addition to the best-selling QUAD Vena series of integrated amplifiers. It is also heralds the arrival of wireless audio streaming and multi-room technology to the QUAD product portfolio. Based on the recently upgraded and richly specified Vena II, the QUAD Vena II Play incorporates the acclaimed DTS Play-Fi® platform.

With DTS Play-Fi® Technology, music can be streamed over your wireless network in high resolution format and can be easily expanded to an ultimate multi-room system if required. You can stream from any source on your wireless network, including smart-phones, tablets or PCs as well as a NAS Drive.

The DTS Play-Fi® platform offers a wealth of music options from around the globe. Spotify, Tidal, HD Tracks, Deezer, Amazon Music, Napster, KKBox and Sirius XM, to name a few. Browse a radio guide with thousands of stations and podcasts, or stream from a home media server with DLNA compatibility.

QUAD Vena II Play borrows more than just looks from its sibling, the Vena II - utilizing much of the same high-specification design, including the ES9018K2M from the Sabre32 Reference DAC as well the Bluetooth® V4.2, aptX LL connectivity, it has all the pure musicality of QUAD coursing through its very versatile circuitry.

There is also an extensive range of both digital and analogue connections, including an MM phono stage for a turntable. So however you want to enjoy your music, whether from analogue or digital sources, the QUAD Vena II Play will have you quickly connected and ready to play.















Wi-Fi® Technology

Any Operating System

Lossless Audio Streaming

DTS Play-Fi® App









Multi-room

Easy Setup

ESS Sabre32 DAC

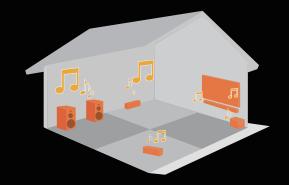
Ethernet Connection

WIRELESS STREAMING TECHNOLOGY

What is DTS Play-Fi®?

DTS Play-Fi is premium whole-home wireless audio, now available from the largest ecosystem of brands in the world. Stream your favorite content with astounding audio quality, from every device that you've got.

All DTS Play-Fi products are seamlessly interoperable, so you can find the perfect speaker for every room, and know that they will all make beautiful music together.











Whole home audio, made easy:

DTS Play-Fi sends audio from mobile devices to speakers throughout the home using a proprietary streaming, synchronization, and authentication technology.

Freedom of choice, at last

Every single DTS Play-Fi product works perfectly with all the rest, regardless of brand, so you get a huge range of options to customize your home, and one simple, elegant listening experience.

DTS Play-Fi offers an unparalleled selection of audio products for your home, from compact battery-powered speakers to powerful soundbars, built by the most respected audio brands in the business. No more compromising your style or taste to get a high-quality wireless audio solution.



An endless supply of music

DTS Play-Fi comes with a wealth of music options from around the globe. Spotify, *Pandora, Deezer, Napster, KKBox and Sirius XM, to name a few. Browse a radio guide with thousands of stations and podcasts, or stream from a home media server.

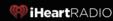
Stay tuned, because new services are added all the time.

* Pandora is enabled for select Play-Fi products only.











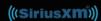






















Critical Listening

Want to sit down in a specific room and appreciate the fine subtleties of your high resolution audio collection? DTS Play-Fi has you covered.

Critical Listening mode allows you to send your high resolution audio files to your premium DTS Play-Fi product with no transcoding or downsampling, no wires necessary.

KEY FEATURES

- ► Integrated Amplifier 2x 45W RMS (8 Ω) / 2x 65W RMS (4 Ω)
- Wi-Fi® Technology DTS Play-Fi streams music over standard Wi-Fi networks, delivering perfectly synchronized audio, with no lag and zero loss in sound quality
- ► Any Operating System Fully compatible with all operating systems: Apple iOS, AndroidTM, Windows® PC, and Fire OS
- ► Easy Setup No logins, no complicated computer-based setups. Just download the app and within minutes, you're ready to listen
- ▶ DTS Play-Fi App Simply download the free app and immediately send songs via Wi-Fi to any speaker in any room of the house
- ► Multi-room Enjoy music in every room of your house all at once, perfectly synchronized, with no lag. You're in control
- ► Lossless Audio Streaming Stream in 24-bit/192kHz with compatible streaming services and files formats
- ► ESS Sabre32 ES9018K2M Reference DAC As seen in the award-winning QUAD Vena II and many high-end audio solutions
- ▶ Ethernet Connection Wired internet connection for high bandwidth applications
- ▶ Play From Any Bluetooth Device High quality Bluetooth® V4.2, aptX LL
- ► Turntable Ready Built-in MM Phono stage
- ▶ 1 x optical / 1x coaxial / 2 x Aux Whole system connectivity
- ▶ NEW LED Volume Indicator Customisable visual volume display
- ▶ Dedicated Spotify connect LED indicator



Model	Vena II Play
DTS Play-Fi Technology	Dual - band 802.11a/b/g/n
	Support the global popular steaming content (Amazon Music, Spotify,
	TIDAL, Juke, BBC, ESPN, KKBox, SiriusXM, Napster, Internet Radio, Deezer,
	iHeartRadio, PANDORA, SOUNDMACHINE, tunein, Qobuz, Qmusic)
	Support Speakers Group
	Support Android/iOS/Kindle Fire/Windows PC
Analogue Pre-Amplifier Section	
Input Sensitivity (AUX)	525mV
Input Sensitivity (Phono, MM)	2.5mV
Input Impedance	10Kohm (AUX) , 47Kohm // 100pF (Phono)
Inputs	2 x AUX , 1x Phono (MM)
Output	1 x Pre-Out (RCA)
Frequency Response	20Hz-20KHz (+/- 0.5dB)
Total Harmonic Distortion (THD)	< 0.002%
Signal To Noise	> 110dB (A-Weighted)
Power Amplifier Section	
Rated Power	2 x 45W (8ohm) / 2 x 65W (4ohm)
Frequency Response	20Hz-20KHz (+/- 0.5dB)
Total Harmonic Distortion (THD)	< 0.005% (30W, 80hm)
Signal To Noise	> 108dB (A-Weighted)
Digital Section	
DAC	ESS Sabre32 ES9018K2M chip
Sampling Frequency	Optical, coaxial: 44.1kHz192kHz;
	USB:44.1kHz384kHz(PCM)/DSD64, DSD128, DSD256;
	Ethernet, Wi-Fi: 44.1kHz192kHz
Digital Input	1 x Coaxial, 1 x Toslink Optical
	1 x USB for PC USB
	Bluetooth® V4.2, aptX LL
Size (W X H X D)	301 x 95 x 313 mm
Net Weight	6.1kg

PA-ONE+ Headphone Amplifier

OVERVIEW

A highly versatile and user-friendly valve amplifier that has been designed to be the perfect match for any headphone devotee. Simple and effective with an amazingly wide variety of digital and analogue sources – balanced, RCA, coaxial, optical, USB; making it easy to listen to music without ever having to ponder on decoding different formats.

WHAT'S NEW?

- ► Re-engineered board for improved output power -500mW into 32ohms, wider frequency response and vastly improve S/N ratio.
- ▶ Improved DAC now with ESS Sabre 9018 K2M DAC for PCM playback up to 384 kHz and DSD256.
- ▶ Redesigned internal QUAD valve circuitry for more efficient performance.
- Updated Lancaster Grey finish.

VALVES:

- ▶ 2 x 6SL7 amplification valves.
- ▶ 2 x 6SN7 amplification valves.



▲ PA-ONE+ headphone amplifier, paired with ERA-1 planar diaphragm headphones

ANALOGUE CONNECTIONS:

- ► Gold plated RCA input.
- ► 6.3mm headphone jack.
- ► 4-pin XLR balance headphone input.
- ► 3-pin XLR balance input.
- ► Gold plated RCA Pre-out (use as Pre-amp)

DIGITAL CONNECTIONS:

- ▶ USB input with PCM playback up to 384 kHz and DSD256.
- ► Gold plated coaxial input, optical input.

STYLING:

► Modern Lancaster Grey finish.







Model	PA-ONE+
Input Impedance	50kΩ
Output Power	500mW (@ 32Ω)
Output Impedance	$32\Omega \simeq 300\Omega$
Input Sensitivity	300mV
Frequency Response	20Hz~20kHz (+0dB,-0.5dB)
Distortion	0.5% at 1kHz
Channel Balance	±0.5dB
S/N Ratio	90dB
Vacuum Tubes	2x 6SL7, 2x 6SN7
Digital Input Sampling Frequencies	44.1kHz-192kHz, 384kHz(USB), DSD256(USB)
Input Jack	3-pin balance, 1xRCA, 1xUSB, 1xCOAX, 1xOPT
Output Jack	1xstandard headphone jack ;
	4-pin balance headphone jack; 1xRCA output
Size $(W \times D \times H)$	180mm x 260mm x 170mm
Net Weight	6.5kg

VA-ONE+ Integrated Valve Amplifier with DAC & Bluetooth

OVERVIEW

A flexible integrated amplifier with phono stage, hi-resolution DAC and Bluetooth aptX receiver. The VA-ONE+ fuses classic valve topology in more compact form, with all the convenience of digital audio.

WHAT'S NEW?

- ▶ Improved DAC now with ESS Sabre 9018 K2M DAC for PCM playback up to 384 kHz and DSD256.
- ▶ Bluetooth aptX receiver.
- ▶ Redesigned internal QUAD valve circuitry for more efficient performance.
- ▶ Updated Lancaster Grey finish.

VALVES:

- ► ECC83 high impedance triode in pre-amp section.
- ► ECC82 twin triode driver and phase splitter stage.
- ▶ 4 x EL84EH pentodes in push-pull configuration at output stage.
- ▶ 15W RMS per channel into nominal 6 ohms.
- ► 12W RMS per channel in to 4 ohms.



▲ VA-ONE+ integrated valve amplifier, paired with S2 bookshelf speakers

ANALOGUE CONNECTIONS:

- ► Gold plated RCA connections.
- ► 6.35mm headphone connection.

DIGITAL CONNECTIONS:

- ▶ USB B input with PCM playback up to 384 kHz and DSD256.
- ► Coax input, optical input.
- ▶ Bluetooth aptX receiver.

STYLING:

► Modern Lancaster Grey finish.







Model	VA-ONE+
Rated Power Output	$2 \times 15 W$ RMS $(6 \Omega) 2 \times 12 W$ RMS (8Ω)
Frequency Response	20Hz - 50kHz (-3dB)
Total Harmonic Distortion	0.50%
Signal-to-noise Ration (S/N)	90dB
Input Impedance	50kΩ
Digital Input Sampling Frequencies	44.1kHz-192kHz, 384kHZ (USB), DSD256 (USB)
Valves	1 x ECC83, 2 x ECC82, 4 x EL84EH
Input Jack	1 x RCA, 1 x OPT, 1 x COAX, 1 x USB B, Bluetooth (aptX)
Output Jack	2 x Speaker Terminal, 1 x 6.35mm Headphone Jack
Size (W×D×H)	180mm x 285mm x 164mm
Net Weight	9.8kg

ERA-1 Planar Diaphragm Headphones

A NEW ERA

QUAD has drawn upon its expertise with electrostatic loudspeakers to design its first-ever pair of headphones – the ERA-1.

To ensure a natural sound in keeping with the company's heritage, QUAD's engineers have developed a planar magnetic driver delivering fast, open and transparent performance, similar in quality to the famous ESLs.

Most headphones use mass-produced dynamic cone drivers, the limitations of which can hamper transient response and cause an uneven frequency response. QUAD's cutting-edge planar magnetic technology delivers a more natural and accurate sound, ensuring you hear every nuance of a recorded musical performance.

The QUAD ERA-1 incorporates an ultra-thin, electrically active diaphragm – thinner than a human hair yet extremely strong and highly elastic, weighing less than the volume of air it displaces. This is fused with a precisely arranged magnet array, designed to maximise sensitivity and consistency of the applied force over the driver area.



▲ ERA-1 planar diaphragm headphones, paired with PA-ONE+ headphone amplifier

















PLUG YOUR EARS INTO THE MUSIC

Patented nonlinear vibration suppression technology allows the driver's effortlessly extended frequency response to be heard unsullied, ensuring perfect clarity. The metal cavity behind the driver is specially designed for optimal acoustic performance, and the drivers themselves are closely matched to ensure spacious, three-dimensional stereo imaging. The result is that ERA-1 provides a musically engaging, dynamic and effortless sonic performance that suits all types of music.

High-resolution sound, teeming with musical expression – the ERA-1 headphones submerge you in the performance of your favourite musicians with direct and engaging intimacy. Once again, QUAD delivers 'the closest approach to the original sound', bringing you up close and personal to the music you adore with beguiling clarity and definition.





Model	ERA-1	
Туре	Planar Diaphragm Headphones	
Impedance	20 Ω ±15% @1,000Hz	
Sensitivity	108 ±3 (dB/Vrms or 92dB/mW @1000Hz)	
FrequencyResponse Range	10~40,000Hz	
THD	≤0.2% @1,000Hz 1mW	
Rated Input Power	100mW	
Max Input Power	300mW	
Channel Balance	alance ≤2dB @100Hz~5kHz	
Accessories	1 * synthetic leather ear cushion, 1 * genuine sheep	
	skin ear cushion, 1 * Y-cable, 1* EVA carrying case	







