



Images for illustrative purposes only

Pioneer components are designed for a very select group of users—those who settle for nothing less than the best in audio and video entertainment. The state-of-the-art performance and specifications of these high-end integrated amplifiers are the results of uncompromising standards of engineering and manufacturing, painstaking selection of parts and devices, and careful testing of each component.

The integrated amplifiers are laden with the latest High-Fidelity Class D amplifier and latest features such as fully-balanced preamplifier circuitry, 384 kHz/32-bit USB-DAC for asynchronous transfer, and analogue balanced input (XLR3), to offer quality sound reproduction close to the original performance.

This Product Reference Guide introduces the technologies and features that give the special qualities to the Pioneer integrate amplifiers. We hope the information will help enrich your home entertainment experience.

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* New features in blue

Applicable models displayed in icons:

A-70DA ----- A-70DA-K/-S

A-50DA ----- A-50DA-K/-S

Unchanging Philosophy in New Style

A-70DA A-50DA

In developing 2-channel amplifiers for the digital audio age, Pioneer came up with a further evolved compact circuit structure based on its Direct Energy Design—tailored to reproduce the closest original performance intended by the artist. The shorter signal paths and power train helps reduce signal loss, resulting in minimum effect to the sound quality.



The Latest High-Fidelity Class D Amplifier

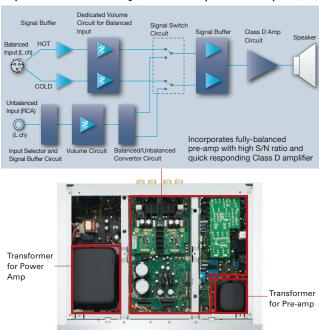
A-70DA A-50DA

Preamplifier with Fully-Balanced Circuitry A-70DA

Pioneer has considerable advantage over other manufacturers with unrivalled experience in digital amplifiers. Through extensive research, development, and component reviews, the latest High-Fidelity Class D amplifier on the power amplifier part achieved improved transmission efficiency, to reproduce a more expressive fine sound. The High-Fidelity Class D amplifier downsized the circuit and heat sink by introducing the "Direct Power FET" with a high-efficiency drive for the output element, and significantly reduced electric signal loss and resonance noise. The High-Fidelity Class D amplifier also enabled the installation of a large-capacity power supply, which enhances the rapid production and control of the quick-responding sound unique to the Class D amplifier, allowing you to enjoy "dynamic low pitch" music.

The preamplifier part is equipped with a full-balanced circuitry which enables high-resolution sound reproduction. The signals from the analogue balanced input are sent with high-grade balanced transmission, while directly delivering to the input stage of the High-Fidelity Class D amplifier. The result is clear audio reproduction with reduced noise and clear sound. You can also enjoy high-grade balanced connection with balanced output components, such as Pioneer's N-70A network audio player and U-05 USB DAC.

Fully-Balanced Transmission Image from Balanced Input to Class D Amplifier (L ch)



Direct Energy Amplifier

A-70DA A-50DA

Pioneer's "Direct Energy" concept is pursued to the utmost, with optimised power supply/output circuit blocks, as well as parts layout to reproduce clearer sound with reduced distortion. The resulting excellent signal transfer and high S/N ratio bring out the best musical reproduction from the integrated amplifier.

Isolated Power Supply

A-70DA A-50DA

The windings for the power amplifier, pre-amplifier, and controls are each separated inside the power transformer to cut out noise interference. This allows even more realistic amplification of the audio signals.

Twin Large Transformers in Shield Cases

A-70DA

The integrated amplifier comes with independently installed twin large transformers — for the power amp and the pre-amp. Usually, noise generated in the secondary side will be transmitted to the primary side. Independent transformers help keep the noise in the small signal area from transferring to the primary side of the power amp block, where it can significantly affect sound quality. The transformers are shielded in separate blocks with infill to minimise leakage flux from the transformer.

Clean Ground Construction

A-70DA A-50DA

The unit's circuit design is based on the clean ground concept, with the shortest and simplest signal paths. The result is reduced distortion with minimum signal interference for improved sonic clarity.

Source Direct Mode

A-70DA A-50DA

The integrated amplifiers feature Source Direct Mode, which bypasses all other circuits except for the volume to offer a pure listening experience suitable for musical content. The mode is not just a simple switching, but is finely tuned to enhance the musicality.

ESS SABRE³² Ultra DAC

A-70DA A-50DA

High-performance 8ch ESS SABRE³² Ultra DAC is adopted on both models. It features low noise and high S/N ratio that



enable 4ch parallel drive for each channel at maximum 384 kHz. The result is clear and open, yet solid sound with superior audio quality.

ESS SABRE³² Ultra DAC



384 kHz/32-bit USB-DAC for Asynchronous Transfer A-70DA A-50DA

The integrated amplifiers allow direct USB connection with a PC, without having to access the home network. What's more, the signal transfer is done with USB asynchronous transfer mode, which controls the transfer process by using its high-accuracy clock instead of syncing with the clock on the PC-side, ensuring high-quality sound reproduction. This eliminates jitter, reproducing master quality sound with extremely precise audio signals. In addition to 11.2 MHz DSD, the unit supports LPCM with sampling frequency of 44.1, 48, 88.2, 96, 176.4, 192, 352.8, and 384 kHz, and quantization bit rate of 16, 24, and 32 bits.



Three Chamber Construction

A-70DA A-50DA

The analogue audio block and the main block are separated and insulated from one another by a three-chambered structure to prevent interference between the blocks. The result is improved operating characteristics, allowing accurate reproduction of even the most delicate signals.

Three Chamber Construction



Rigid Under Base

A-70DA

The unit adopts the Rigid Under Base, Pioneer's high-quality sound technology for 2-channel components, which works to eliminate external vibrations. The solid, 4.6 mm-thick base provides low centre of gravity with enhanced stability.

Rigid Under Base (A-70DA)



Trans-Stabilizer

A-70DA A-50DA

The trans-stabilizer construction of the chassis dampens unwanted vibration from the transformer to provide steady audio performance.

Pioneer-Exclusive Electrolytic Capacitor

A-70DA

The main capacitor, which determines an amplifier's audio quality, was developed in collaboration with Nichikon Corporation. The inside of the capacitor case has a special form to eliminate standing waves. The Pioneer logo on the sleeve shows that it is an exclusive pure audio capacitor.

Pioneer-Exclusive Electrolytic Capacitor (A-70DA)



Analogue Balanced Input (XLR3)

A-70DA

Highly Renowned NEUTRIK terminals are used for analogue balance input (XLR3), achieving high-resolution sound by quality signal transmission to the pre-amplifier with fully-balanced circuitry design. The "hot" function can be switched between pin 2 and 3.



Exclusive Gold-Plated Input Terminals

A-70DA A-50DA

Extra-Large Machine-Cut Speaker Terminals

A-70DA

Large Machine-Cut Speaker Terminals

A-50D/

Large AC Inlet with Polarity Indication

A-70DA

High-grade parts are used for the integrated amplifier's terminals to provide a stable connection for pure sound delivery. Both models feature machine-cut gold-plated brass speaker terminals, extra-large on the A-70DA, and large on the A-50DA, and exclusive gold-plated input terminals. The A-70DA comes with a large AC inlet with polarity indication. Thick speaker cables need to be tightly secured in the terminals, but with continuous wear over the years, resin terminals may deteriorate. Brass speaker terminals are more durable, and are set apart to easily accommodate thick high-grade cables. The speaker terminal has a large resin base for additional safety.

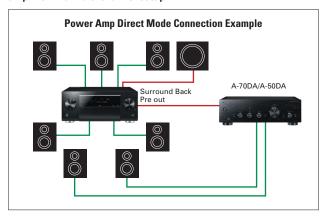
Exclusive Gold-Plated Input Terminals and Large Machine-Cut Speaker Terminals (A-70DA)



Power Amp Direct Mode

A-70DA A-50DA

The integrated amplifiers are equipped with a power amp direct terminal, allowing the components to be used as a power amplifier in a multi-channel setup.



Phono (MM/MC*) Input

A-70DA A-50DA

The components feature a dedicated phono board with integrated power to cut out interference from other circuits. The ground is also dedicated to phono, with a specialised layout for a MC* cartridge. Select parts, such as film chip capacitors and audio relays are used for quality audio performance.





Aluminium Volume Knob

A-70DA A-50DA

Aluminium Panels

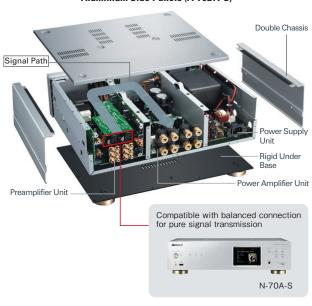
A-70DA A-50DA

The integrated amplifiers feature an aluminium volume knob — machine-cut for A-70DA — with a solid, high-grade feel and style. The Input Selector, Balance, and Bass/Treble knobs are also made of aluminium. The simple aluminium panels also add a touch of elegance to the audio experience. The A-70DA features aluminium panels on all sides apart from the top, with extra-thick 3.5 mm aluminium front panel and 1.8 mm aluminium side panels providing rigidity for a stable performance.

Aluminium Volume Knob & Panel (A-70DA-K)



Aluminium Side Panels (A-70DA-S)



Auto Power Down

A-70DA A-50DA

The integrated amplifier will automatically turn off after being left uncontrolled for a certain time set by the user.

Multifunctional Remote Control

A-70DA A-50DA

You can operate the basic functions of a connected Pioneer network audio player or SACD player with the integrated amplifier's remote control. You will feel the quality every time you use the high-grade remote control.



Attenuator Function

A-70DA

With a standard volume knob, it is quite difficult to fine-tune volume, especially at a low level. By pressing the attenuator button on the front panel, you can make smoother, more subtle volume adjustments across the entire range.

Specifications: Digital Amplifiers

		A-70DA-K/-S	A-50DA-K/-S
Rated Output (Stereo)		90 W+90 W (20 Hz-20 kHz, THD 0.5 %, 4 ohms)	90 W+90 W (20 Hz-20 kHz, THD 0.5 %, 4 ohms)
THD (Rated Output -3 dB, 8 ohms, 1 kHz)		0.02 %	0.02 %
Guaranteed Speaker Impedance		4-16 ohms (A or B)	4-16 ohms (A or B)
		8-32 ohms (A+B)	8-32 ohms (A+B)
		4-16 ohms (Bi-wiring)	4-16 ohms (Bi-wiring)
Frequency Response		5 Hz-20 kHz, ±3 dB	5 Hz-20 kHz, ±3 dB
		20 Hz-20 kHz, ±0.5 dB (RIAA Deviation) MM	20 Hz-20 kHz, ±0.5 dB (RIAA Deviation) MM
		20 Hz-20 kHz, ±0.5 dB (RIAA Deviation) MC	_
Signal-to-Noise Ratio (IHF, A Network, Short Circuited)	SACD/CD, Line 1, Line 2, Network	101 dB	101 dB
	Phono	89 dB (MM: 5 mV input) 74 dB (MC: 0.5 mV input)	89 dB (MM: 5 mV input)
	Power Amp Direct	110 dB	110 dB
Channel Separation	SACD/CD, Line 1, Line 2, Network	90 dB (100 Hz)	90 dB (100 Hz)
		84 dB (1 kHz)	84 dB (1 kHz)
		75 dB (10 kHz)	75 dB (10 kHz)
	Power Amp Direct	95 dB (100 Hz)	95 dB (100 Hz)
		95 dB (1 kHz)	95 dB (1 kHz)
		80 dB (10 kHz)	80 dB (10 kHz)
Audio Input Terminals		Phono MM/MC, Balanced, SACD/CD, Line 1, Line 2, Network, USB, Coaxial, Optical, Power Amp Direct In	Phono MM, CD, Line 1, Line 2, Network, USB, Coaxial, Optical, Power Amp Direct In
Audio Output Terminals		Line 2, Phones	Line 2, Phones
SR In/Out		1/1	1/1
Remote Control Unit		Preset Remote	Preset Remote
Power Requirements		AC 220-230 V, 50 Hz	AC 220-230 V, 50 Hz
Power Consumption		74 W	72 W
Power Consumption During Standby		0.3 W	0.3 W
Dimensions (W x H x D)		435 × 141.5 × 370 mm	435 × 138.5 x 368 mm
Weight		17.2 kg	11.1 kg

Product Sheet

A-70DA-K/-S A-50DA-K/-S



Integrated Amplifier

A-70DA-K/-S





A-70DA-K



A-70DA-S

Experience the high-fidelity amplification created by the A-70DA-K/-S Class D integrated amplifier featuring ESS SABRE³² Ultra DAC, preamplifier with fully-balanced circuitry, and balanced input. The USB-DAC featuring asynchronous transfer supports up to 384 kHz LPCM and 11.2 MHz DSD files, letting you enjoy extremely precise reproduction of Hi-Res Audio sources.

DESIGN & BUILD

- Pure Audio Grade High Efficiency Power MOSFET Amplifier (High-Fidelity Class D Amplifier)
- > Preamplifier with Fully-Balanced Circuitry
- > Separated Construction for Preamp and Power Amp
- > Source Direct Mode
- > Highly Acclaimed ESS SABRE³² Ultra DAC
- > 384 kHz/32-bit USB-DAC for Asynchronous Transfer
- > Shielded Twin Transformer for Preamp and Power Amp
- > Trans-Stabilizer
- > Speaker A. B. A+B Selector
- > Machine-Cut Aluminium Rotary Knob
- > Aluminium Front/Side Panels
- > Auto Power Down
- > High-Grade AC Power Cord

- > Rigid Under Base
- > Aluminium Hair Line Finish Remote Controller

CONNECTIONS

- > Analogue Balanced Input (XLR3)
- > Exclusive Gold-Plated Speaker Terminals (Extra-Large Type)
- > Gold-Plated Analogue Audio Input (Phono MM/MC, SACD/CD, LINE 1, LINE 2, NETWORK, USB, COAXIAL, POWER AMP DIRECT IN)
- > USB Input for Asynchronous Transmission
- > Digital Coaxial Input
- > Digital Optical Input
- > Audio Output (LINE 2, PHONES)
- > SR In/Out
- AC Inlet (Large Type)

SPECIFICATIONS

- ightarrow 90 W + 90 W (20 Hz-20 kHz, THD 0.5 %, 4 ohms)
- > THD: 0.02 % (Rated Output -3 dB, 8 ohms, 1 kHz)
- > Guaranteed Speaker Impedance:
- 4-16 ohms (A or B), 8-32 ohms (A+B), 4-16 ohms (Bi-Wiring)
- > Frequency Response (Measured with DIRECT button switched on): SACD/CD, NETWORK, LINE1, LINE2 5 Hz-50 kHz, ±3 dB
-) RIAA Deviation: PHONO MM 20 Hz-20 kHz, ± 0.5 dB, PHONO MC 20 Hz-20 kHz, ± 0.5 dB
- Signal-to-Noise Ratio (IHF, A Network, Short Circuited) SACD/CD: 101 dB, Phono: 89 dB (MM: 5 mV input)/ 74 dB (MC: 0.5 mV input), Power Amp Direct: 110 dB

- > Channel Separation
 - SACD/CD: 90 dB (100 Hz), 84 dB (1 kHz), 75 dB (10 kHz) Power Amp Direct: 95 dB (100 Hz), 95 dB (1 kHz), 80 dB (10 kHz)
- > Power Requirements: AC 220-230 V, 50 Hz
- > Power Consumption: 74 W
- > Power Consumption During Standby: 0.3 W
- **>** Dimensions (W x H x D): 435 x 141.5 x 370 mm
- > Weight: 17.2 kg



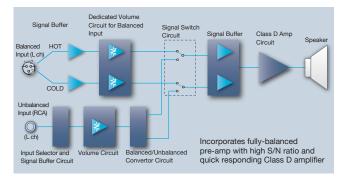
A-70DA-K/SYXE8

The Latest High-Fidelity Class D Amplifier

Pioneer has considerable advantage over other manufacturers with unrivalled experience in digital amplifiers. Through extensive research, development, and component reviews, the latest High-Fidelity Class D amplifier on the power amplifier part achieved improved transmission efficiency, to reproduce a more expressive fine sound. The High-Fidelity Class D amplifier downsized the circuit and heat sink by introducing the "Direct Power FET" with a high-efficiency drive for the output element, and significantly reduced electric signal loss and resonance noise. The High-Fidelity Class D amplifier also enabled the installation of a large-capacity power supply, which enhances the rapid production and control of the quick-responding sound unique to the Class D amplifier, allowing you to enjoy "dynamic low pitch" music.

Preamplifier with Fully-Balanced Circuitry

The preamplifier part is equipped with a full-balanced circuitry which enables high-resolution sound reproduction. The signals from the analogue balanced input are sent with high-grade balanced transmission, while directly delivering to the input stage of the High-Fidelity Class D amplifier. The result is clear audio reproduction with reduced noise and clear sound. You can also enjoy high-grade balanced connection with balanced output components, such as Pioneer's N-70A network audio player and U-05 USB DAC.



Analogue Balanced Input (XLR3)

Highly Renowned NEUTRIK terminals are used for analogue balance input (XLR3), achieving high-resolution sound by quality signal transmission to the pre-amplifier with fully-balanced circuitry design. The "hot" function can be switched between pin 2 and 3.

Twin Transformers in Shield Cases

Twin transformers—for the power amp and the pre amp—help keep the noise in the small signal area from transferring to the primary side of the power amp block, where it can significantly affect sound quality. The transformers are shielded in separate blocks with infill to minimise leakage flux from the transformer.

ESS SABRE32 Ultra DAC

High-performance 8ch ESS SABRE³² Ultra DAC is adopted on the A-70DA-K/-S. It features low noise and high S/N ratio that enable 4ch parallel drive for each channel at maximum 384 kHz. The result is clear and open, yet solid sound with superior audio quality.

384 kHz/32-bit USB-DAC for Asynchronous Transfer

The integrated amplifier allows direct USB connection with a PC. What's more, the signal transfer is done with USB asynchronous transfer mode, which controls the transfer process by using its high-accuracy clock, ensuring high-quality sound reproduction. This eliminates jitter, reproducing master quality sound with extremely precise audio signals. In addition to 11.2 MHz DSD, the unit supports LPCM with sampling frequency of 44.1, 48, 88.2, 96, 176.4, 192, 352.8, and 384 kHz, and quantization bit rate of 16, 24, and 32 bits.

Aluminium Panels and Knobs

Aluminium panels are used on the front and the sides, with extra-thick 3.5 mm front panel and 1.8 mm side panels providing rigidity for a stable performance. The machine-cut aluminium volume knob offers a solid, high-grade feel and style. The Input Selector, Balance, and Bass/Treble knobs are also made of aluminium.









Integrated Amplifier

A-50DA-K/-S





A-50DA-K



A-50DA-S

Experience the high-fidelity amplification created by the A-50DA-K/-S Class D integrated amplifier featuring ESS SABRE³² Ultra DAC, Separated Construction, and aluminium front panel. The USB-DAC featuring asynchronous transfer supports up to 384 kHz LPCM and 11.2 MHz DSD files, letting you enjoy extremely precise reproduction of Hi-Res Audio sources.

DESIGN & BUILD

- Pure Audio Grade High Efficiency Power MOSFET Amplifier (High-Fidelity Class D Amplifier)
- > Separated Construction for Preamp and Power Amp
- > Isolated Power Supply
- > Source Direct Mode
- > Highly Acclaimed ESS SABRE³² Ultra DAC
- > 384 kHz/32-bit USB-DAC for Asynchronous Transfer
- > Trans-Stabilizer
- > Speaker A, B, A+B Selector
- > Aluminium Front Panel and Rotary Knob
- Auto Power Down
- > Hair Line Finish Remote Controller

CONNECTIONS

- > Exclusive Gold-Plated Speaker Terminals (Large Type)
- > Gold-Plated Analogue Audio Input (Phono MM, CD, LINE 1, LINE 2, NETWORK, USB, COAXIAL, POWER AMP DIRECT IN)
- > USB Input for Asynchronous Transmission
- > Digital Coaxial Input
- > Digital Optical Input
- > Audio Output (LINE 2, PHONES)
- > SR In/Out
- > AC Inlet

SPECIFICATIONS

- **>** 90 W + 90 W (20 Hz-20 kHz, THD 0.5 %, 4 ohms)
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- > Guaranteed Speaker Impedance:
 - 4-16 ohms (A or B), 8-32 ohms (A+B), 4-16 ohms (Bi-Wiring)
- Frequency Response (Measured with DIRECT button switched on): SACD/CD, NETWORK, LINE1, LINE2 5 Hz-50 kHz, ±3 dB
- > RIAA Deviation: PHONO MM 20 Hz-20 kHz, ±0.5 dB
- Signal-to-Noise Ratio (IHF, A Network, Short Circuited) SACD/CD: 101 dB, Phono: 89 dB (MM: 5 mV input), Power Amp Direct: 110 dB

- > Channel Separation
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- > Power Requirements: AC 220-230 V, 50 Hz
- > Power Consumption: 72 W
- > Power Consumption During Standby: 0.3 W
- **>** Dimensions (W x H x D): 435 x 138.5 x 368 mm
- > Weight: 11.1 kg



A-50DA-K/SYXE8

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384 kHz/32-bit USB-DAC for Asynchronous Transfer

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Gold-Plated Inputs, Large Machine-Cut Speaker Terminals, and AC Inlet with Polarity Indication

High-grade parts are used for the integrated amplifier's terminals to provide a stable connection for pure sound delivery. The A-50DA-K/-S features machine-cut gold-plated brass speaker terminals, exclusive gold-plated input terminals, and an AC inlet with polarity indication. The durable brass speaker terminals are set apart to easily accommodate thick high-grade cables. The speaker terminal has a large resin base for additional safety.

Aluminium Front Panels and Knobs

Extra-thick 3.5 mm aluminium is used for the front panel, providing rigidity for a stable performance. The aluminium volume knob offers a solid, high-grade feel and style. The Input Selector, Balance, and Bass/Treble knobs are also made of aluminium.





