Images for illustrative purposes only

Audio Technologies

- Phase Control
- Phase Control Plus
- MCACC (Multi-Channel Acoustic Calibration System)
- Standing Wave Control
- PQLS with HDMI (Bit-stream/Multi Surround/2ch Audio)
- Jitter Reduction
- Advanced Sound Retriever
- Auto Sound Retriever
- Sound Retriever AIR
- Auto Level Control

Video Technologies

- Advanced Video Adjust
- Highly-Precise I/P Conversion
- Digital Video Converter
- Advanced Video Parameters
- Deep Color
- x.v.Color

Audio Formats & Licenses

- DTS-HD Master Audio/Dolby TrueHD
- DTS Neural Surround
- SIRIUS Ready

Sophisticated Surround System

- Various Speaker Settings
- Wide Surround
- Dolby Pro Logic IIz
- Virtual Speakers
- Front Stage Surround Advance

Connectivity

- HDMI® (3D, ARC)
- Made for iPod, iPhone, and iPad
- iPod Digital Connection via USB
- iPod/iPhone/iPad Video Playback
- Front USB Input

Network Features

- AirPlay
- DLNA Certified™ (1.5)
- Copyright Protection Content Playback
- High-Quality Audio Streaming
- Internet Radio (vTuner)

Advanced Control

- iControlAV2
- *Bluetooth* Ready
- Air Jam
- AVNavigator
- Wireless LAN Ready
- Multi-Zone
- Control with HDMI
- Power Save
- Auto Power Down

Applicable models displayed in icons:

1021	VSX-1021-K
921	VSX-921-K
821	VSX-821-K
521	VSX-521-K

* New features in blue

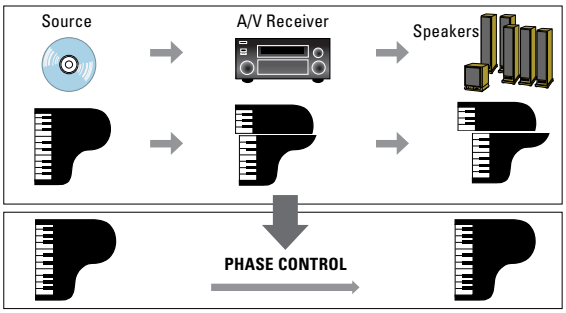
For North America

Phase Control

1021 921 821 521

When amplifying multi-channel audio signals, receivers use a Low Pass Filter (LPF) to process low-frequency signals for subwoofer output. This causes “phase lag” — a delay of approximately 5 msec — of the low-frequency signals compared to the main channel signals. As a result, the delayed bass makes the sound lack synchronization. Pioneer's Phase Control technology effectively eliminates phase lag and significantly improves the multi-channel sound without any extra operation.

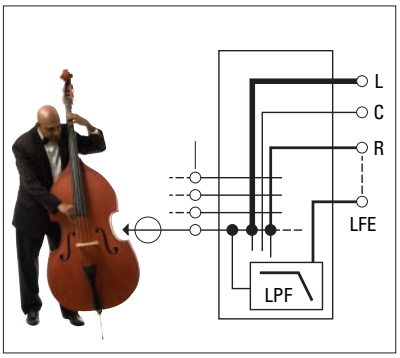
The "Phase Control" Compensates for the Delay of Low-Frequency Sound

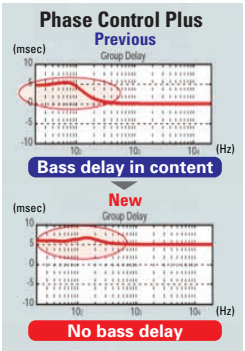


Phase Control Plus

1021

When creating multi-channel content, a Low Pass Filter (LPF) is used to process low-frequency signals, causing phase lag between the main and subwoofer channels. Phase Control Plus allows 0-16 msec manual adjustments (default 6 msec) to the main channel signals to synchronize with low-frequency signals. The result is a more powerful bass and well-balanced multi-channel sound, delivering audio content in superior quality.





MCACC (Multi-Channel Acoustic Calibration System)

921 821 521

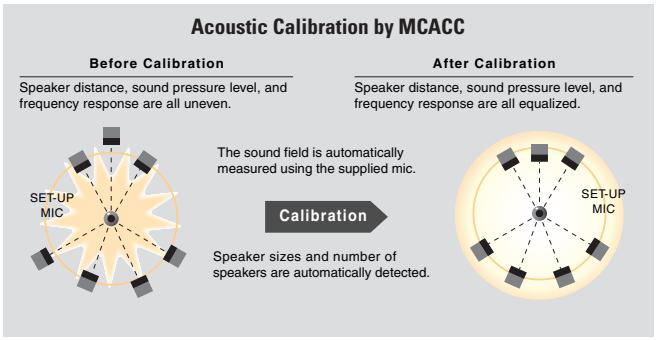
Create the optimum acoustic environment with Pioneer's MCACC, developed with the expertise of professional recording studios. The system — complete with custom microphone — automatically compensates for differences in speaker size, level and distance, and equalizes response.

Multi-channel Acoustic Calibration System

Advanced MCACC 1021

The Advanced MCACC uses a 3D calibration method with even more precise measurements by including the time axis. The A/V receivers also feature a speaker polarity check for detecting misconnected cables, and a reverb measurement display for showing before/after calibration results. The measured data can be saved on your PC via the AVNavigator. The system automatically measures crossover frequency — much easier than the previous manual setting.

Acoustic Calibration by MCACC

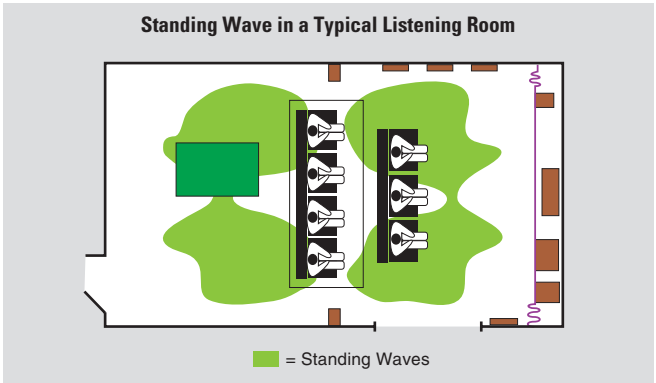


Standing Wave Control

1021

Acoustic standing waves occur when the sound waves from your speaker resonate with those reflected off the walls. Depending on the speaker placement, your listening position or the shape of the room, standing waves have a negative effect on the overall sound, especially in certain lower frequencies. Standing Wave Control effectively decreases resonance and prevents inaccurate EQ-setting calibration.

Standing Wave in a Typical Listening Room



PQLS with HDMI

1021

As shown on right, jitter causes clock timing error and distorts the D/A conversion timing. This is one of the biggest factors for sound degradation during digital transmission, such as decreased sound localization, and happens even with HDMI connection.

On the Blu-ray Disc player, the audio clock goes through algebraic transformation based on the video pixel clock, then transferred. On the A/V receiver, the audio reference clock is regenerated using PLL in the algebraic value which came with the video pixel clock. So the audio reference clock is influenced by both the HDMI receiving chip's PLL performance and the video pixel clock, and can not avoid being regenerated with some jitter.

Pioneer's Precision Quartz Lock System (PQLS) was developed as a solution to this problem. PQLS processes D/A conversion using the high-precision crystal oscillator clock instead of the audio clock regenerated in the HDMI receiving chip, and is free from jitter created during HDMI transmission.

The data from the Blu-ray Disc player is temporarily buffered in the A/V receiver's memory, then sequentially reproduced in sync with the high-precision crystal oscillator clock to prevent flaw. Additionally, the Blu-ray Disc player's data transmission clock is controlled by signals from the A/V receiver to prevent overflow or underflow in the buffer.

Three types of PQLS are available depending on the connected Blu-ray Disc player.

- PQLS 2ch Audio: For CD playback (LPCM).
- PQLS Multi-Surround: For CD/DVD/BD sources, when the Blu-ray Disc player output is set to LPCM.
- PQLS Bit-stream: For CD/DVD/BD sources, all the time.

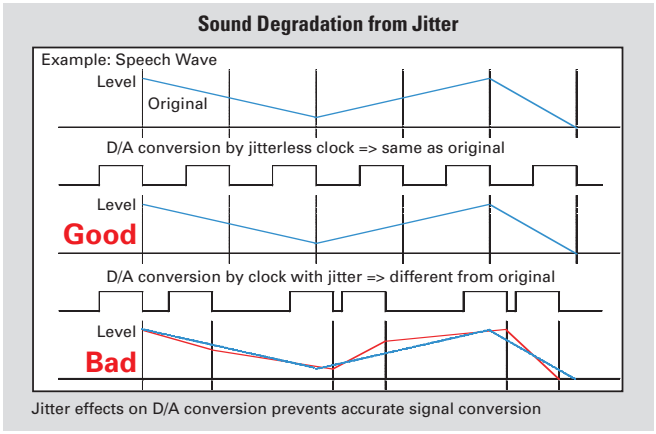
For PQLS to be effective, Control with HDMI needs to be on, and — only for PQLS Multi-Surround — HDMI audio output needs to be set to PCM.

Jitter Reduction

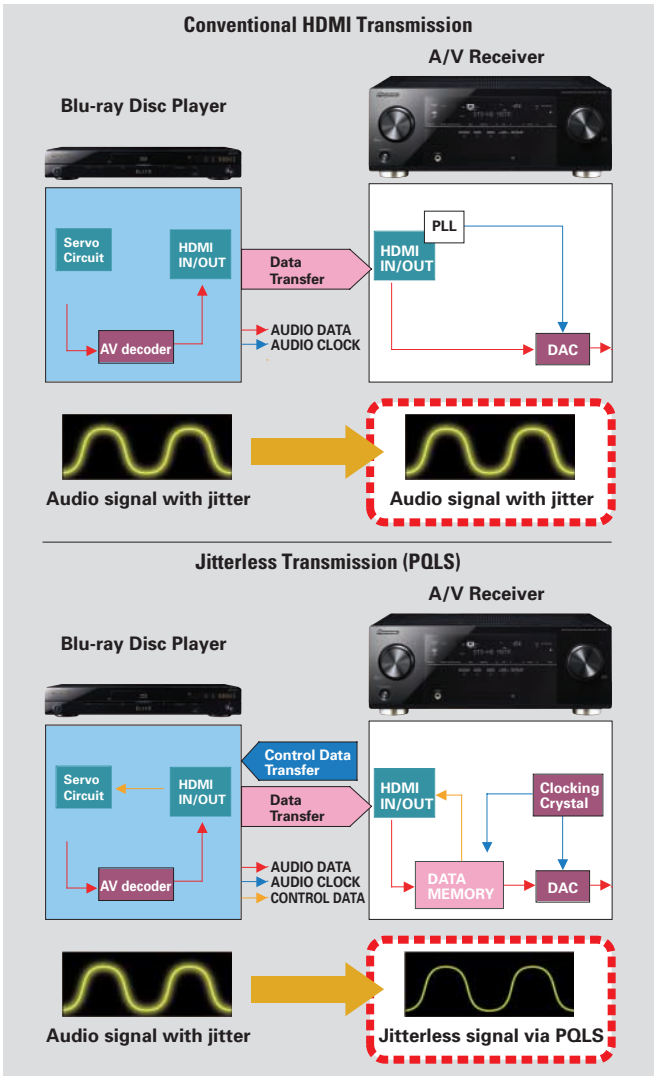
1021

Placing the jitter reduction IC immediately before the DAC helps reduce jitter and phase noise which can affect all input*. In development, knowhow based on Pioneer-exclusive audio technology was concentrated to construct a feedback circuit within the IC, achieving groundbreaking performance. Additionally, it has been fine-tuned to narrow down the corresponding frequency to the range of the audio master clock, thereby making drastic improvements to sound quality.

* Except Pure Direct analog input



Jitter effects on D/A conversion prevents accurate signal conversion



PQLS Backward Compatibility

Blu-ray Disc Players	A/V Receiver
	VSX-1021
BDP-05FD	2ch
BDP-51FD	2ch
BDP-09FD	2ch
BDP-320	2ch
BDP-23FD	Multi
BDP-33FD/BDP-330 BDP-43FD/BDP-41FD BDP-430	Bit-stream

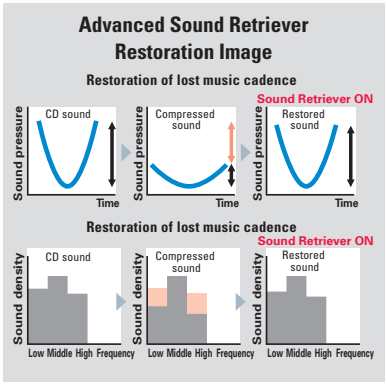
Advanced Sound Retriever

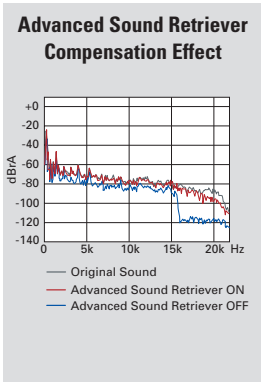
1021 921 821 521

Pioneer's A/V receivers feature the Advanced Sound Retriever, which restores the output of compressed audio — such as WMA, MPEG-4 AAC, and MP3 — to the level of CD sound. The Advanced Sound Retriever creates new signals to restore the minor details left out during the compression process.

Multi-Channel Advanced Sound Retriever 1021

Advanced Sound Retriever for multi-surround sound is compatible with DVD soundtracks featuring Dolby Digital or DTS.

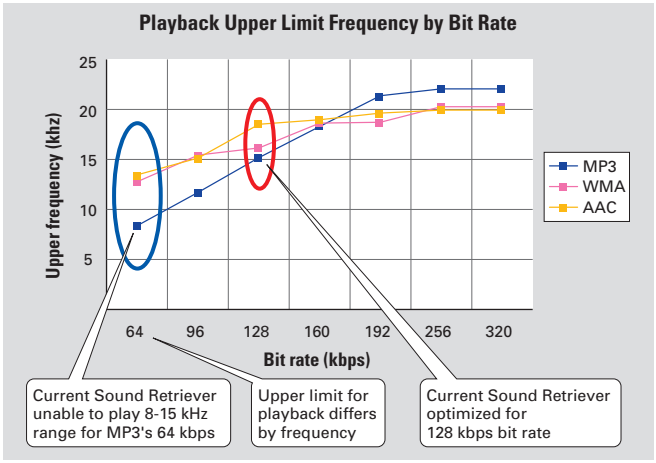


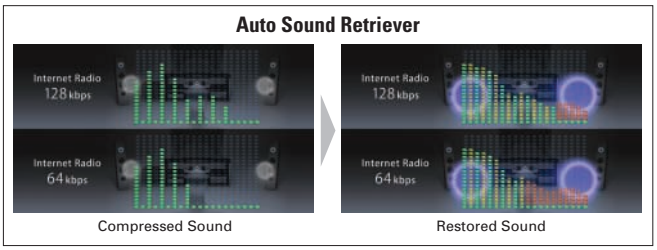


Auto Sound Retriever

1021

Since the Advanced Sound Retriever is designed with an algorithm optimized to process 128 kbps signal, it did not work well with 8-15 kHz high frequencies in 64 kbps signal, which is the bit rate for quite a few internet stations. The newly developed Auto Sound Retriever automatically determines the audio signal's bit rate, and interpolates the data lost during compression. It is especially effective for improving the sound quality of low bit-rate content — an ideal feature when switching between internet radio stations with different bit-rates.



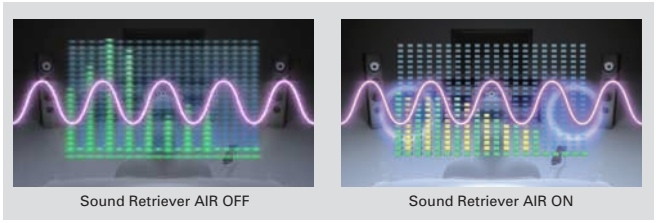


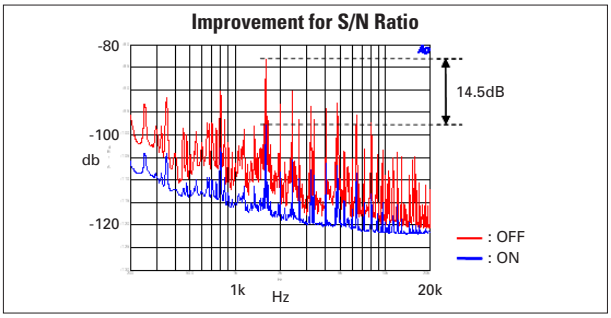
Sound Retriever AIR

1021 921 821 521

When streaming music via *Bluetooth*, the sound quality often suffers due to the compression process. Pioneer's Sound Retriever AIR is the world's first technology for improving the quality of *Bluetooth* transmitted sound. It restores the music cadence lost through compression, and also reduces the noise generated by *Bluetooth* transmission for a better S/N ratio.

* Bluetooth connection by AS-BT100 or AS-BT200 adapter required





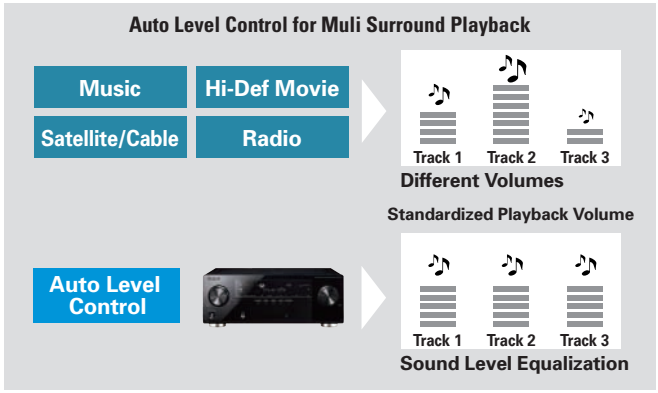
Auto Level Control

1021 921 821 521

Auto Level Control equalizes volume level differences between tracks when playing music from an iPod or other sources.

Multi-Channel Auto Level Control 1021

Multi-channel Auto Level Control supports surround sound playback, maintaining a consistent level and clear audio. The function adjusts low and high frequency sounds, dialogs, surround effects etc. that are difficult to hear in low volume, to optimal levels — an ideal feature for listening at night without disturbing others.



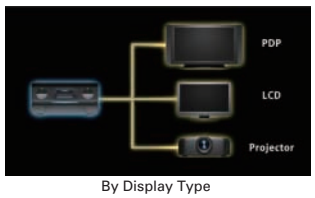
Advanced Video Adjust

1021

Advanced Video Adjust is a new feature which optimizes video signals according to the connected display type, such as plasma display panel, LCD, or projector. Additionally, it automatically adjusts the picture image for the distance of your viewing position, based on MCACC measurement data.

*** Function not available for component/composite analog connection. Video optimization only available for HDMI connection.**

Optimised Image with Advanced Video Adjust



By Display Type

By Distance

Advanced Video Adjust

• PDP Mode 1

Through — PDP Mode 1

Adjusts for optimum image with more detail and less noise

• PDP Mode 2

Through — PDP Mode 2

Adjusts for a more natural image

• LCD Mode

Through — LCD Mode

Adjusts LCD's washed out black for optimum image

• Front Projector Mode

Through — Front Projector Mode

Provides a sharp and vivid image suited for a front projector

* For illustration purpose only

Highly-Precise I/P Conversion

1021

Merely having a high-grade video processor does not guarantee a quality picture — a fine-tuned setup makes the difference. Pioneer engineers have performed rigorous testing to achieve an optimum image from almost any content. This highly-precise conversion is effective for HD as well as SD sources.

PureCinema I/P Conversion

For film content, PureCinema I/P Conversion faithfully reproduces the original material.

Motion Adaptive I/P Conversion

For video content, Motion Adaptive I/P Conversion processes moving images by eliminating conversion errors or noise generation, to deliver high-quality pictures.

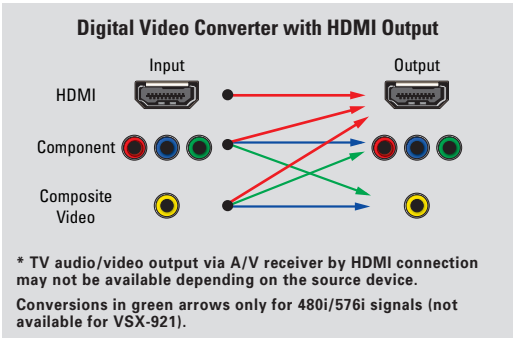
Motion Adaptive I/P Conversion

Conventional I/P Conversion — Motion Adaptive I/P Conversion

Digital Video Converter

1021

Composite or component input video signals can be converted for HDMI output to view on a compatible display. You can also convert from composite to component or vice-versa.



Advanced Video Parameters

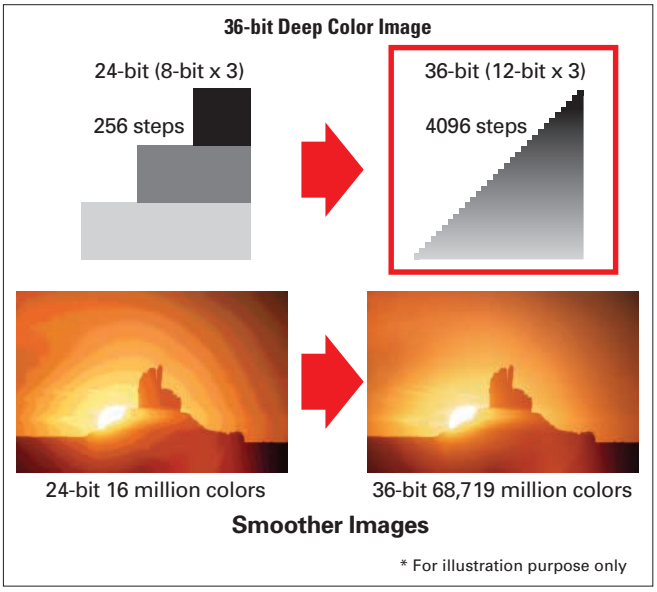
1021

In addition to manual settings, predefined video parameters are available, including Progressive Motion, YNR, Detail, Sharpness, Brightness, Contrast, Hue, Chroma Level, Resolution, and Aspect. The Black Setup parameter corrects the black depth in the brightness signal, and you can select either 0 or 7.5 IRE according to the input signal.

Deep Color

1021 921 821 521

Pioneer A/V receivers support 36-bit Deep Color, featuring smooth gradation steps with more accurate precision of brightness and color information, resulting in superbly detailed, natural color.



x.v.Color

1021 921 821 521

Pioneer A/V receivers support x.v.Color, which almost doubles the range of colors (known as the "gamut") that can be accurately captured, and reproduced on a compatible display, thereby more closely matching the natural characteristics of the human eye.

* "x.v.Color" only available for playback of discs recorded with AVCHD devices.

DTS-HD Master Audio™ and Dolby TrueHD

1021 921 821 521

DTS-HD Master Audio™ and Dolby TrueHD are the highest quality audio formats available, provided by the huge capacity Blu-ray Disc to complement its high-definition videos. These new-generation audio codecs bring you the equivalent of the original soundtrack, just as intended by the creator.

High Definition Audio Formats

DTS-HD Master Audio and Dolby TrueHD provide sound that is bit-for-bit identical to the studio master, delivering sound at extremely high variable bit rates far exceeding standard DVDs.

Comparison of High Definition Audio Formats

Compressed		Uncompressed
Lossless	Lossy	
Dolby TrueHD	Dolby Digital Plus	Linear PCM
DTS-HD Master Audio	DTS-HD High Resolution Audio	Uncompressed 48 kHz/ 16-bit audio format similar to CD, but with higher sampling frequencies and quantization. No decoding required.

DTS Neural Surround™

1021

DTS Neural Surround™ technology encodes surround sound information into 2-channel stereo format, which can be decoded back to 7.1 multi-channel audio on compatible A/V receivers.

SIRIUS Ready

1021 921 821

SIRIUS is a leading provider of satellite radio services in the United States and Canada. Through high power satellites, SIRIUS offers over 130 channels of commercial-free music, news, talk, sports, and children's programs on a monthly subscription basis — with clear sound enabled by digital radio signals.

Various Speaker Settings

1021

Previous A/V receiver models only allowed surround back speakers for a 7.1-channel layout (Fig. 1).
This year's lineup provides more options in terms of speaker placement. Combine front wide speakers (Fig. 2) with Pioneer-original Wide Surround mode to enjoy more spacious sound in the front. Or place front height speakers (Fig. 3) and use Dolby Pro Logic IIz for vertical-spreading sound.

Wide Surround Mode

1021

Pioneer's Wide Surround Mode creates sound with highly dense motion feeling around the front and the sides. Wide Surround Movie provides motion feeling in front, while Wide Surround Music creates a wide-spreading sound field in the foreground.

Dolby Pro Logic IIz

1021 921 821 521

Dolby Pro Logic IIz realizes more spacious surround sound by adding front height channels to the conventional 5.1ch/7.1ch speaker settings. The enveloping sound with additional depth and dimension creates a lifelike listening experience. Dolby Pro Logic IIz does not require special contents, and works with existing soundtracks.

Speaker Layout Examples

Fig. 1

Standard 7.1ch

Fig. 2

Front Wide Speakers + Wide Surround Mode

Fig. 3

Front Height Speakers + Dolby Pro Logic IIz

Virtual Speakers

1021

By turning on both Virtual Height and Virtual Surround Back modes, you can experience a virtual 9.1-channel sound from a 5.1-channel speaker setting. By adding front wide speakers, you can experience virtual 11.1-channel sound from a 7.1-channel speaker layout (Fig. 6).

Virtual Height

If you want to experience vertically falling sound but can not place front height speakers, there's a perfect solution. Pioneer's Virtual Height mode (Fig. 4) creates a height sound image without front height speakers, letting you enjoy enveloping virtual 7.1-channel sound from 5.1-channel speaker settings.

Virtual Surround Back

Want to be thrilled by surrounding sound from behind, but don't have the space for surround back speakers? Then try Virtual Surround Back mode (Fig. 5). It simulates 7.1-channel surround sound, giving the impression that you have surround back speakers when listening to a 5.1-channel source.

Front Stage Surround Advance

1021 921 821 521

With Front Stage Surround Advance, you can enjoy surround sound coming from only the front speakers and the subwoofer. Since wall reflections are not used, the setup is less dependent on the room environment, allowing front alignment of the speakers. Front Stage Surround Advance creates an excellent sound image and natural sound.

Fig. 4 Virtual Height Mode

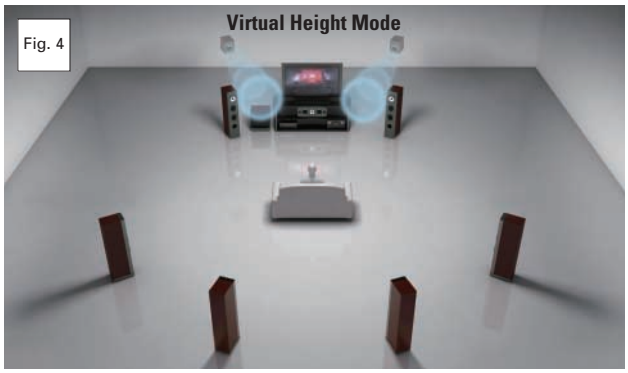


Fig. 5 Virtual Surround Back Mode

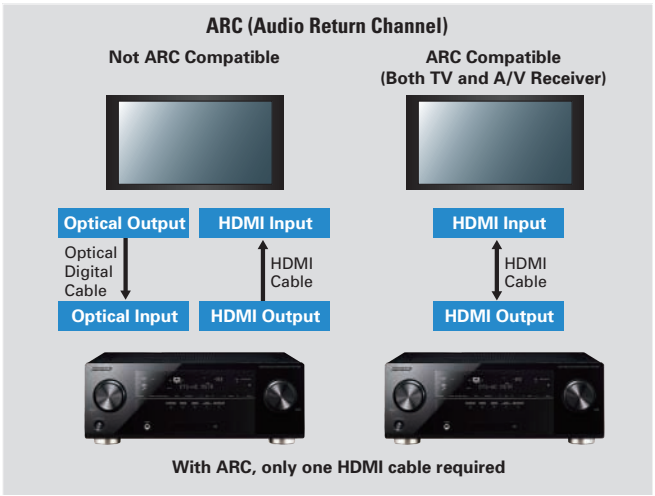
Fig. 6 Virtual 11.1-ch (Front Wide speaker + Virtual Height/ Surround Back)

HDMI® (3D, ARC)

1021 921 821 521

Pioneer's A/V receivers feature 3D technology. You can enjoy the latest 3D Blu-ray Discs and broadcasts by combining the A/V receivers with a 3D compatible Blu-ray Disc player, game console, or tuner (STB) and display via HDMI connection. The Audio Return Channel (ARC) feature allows a TV with built-in tuner to send audio data "upstream" to the A/V receiver via HDMI — so there's no need for a separate audio cable. Enjoy full-digital transfer of high-definition audio as well as up to 1080p video signals by HDMI connection. Multi-channel PCM (192 kHz), lossless bit-stream, and SACD audio* can also be processed by HDMI single-cable connection.

* Only available for VSX-1021-K



Made for iPod, iPhone, and iPad

1021 921 821

The latest A/V receivers are certified "Made for iPod®, iPhone®, and iPad®" products, letting you enjoy music from your iPod/iPhone/iPad. The included cable allows direct USB connection to the front panel, providing battery charge for your devices. The A/V receivers are also compatible with video playback from iPod/iPhone/iPad.

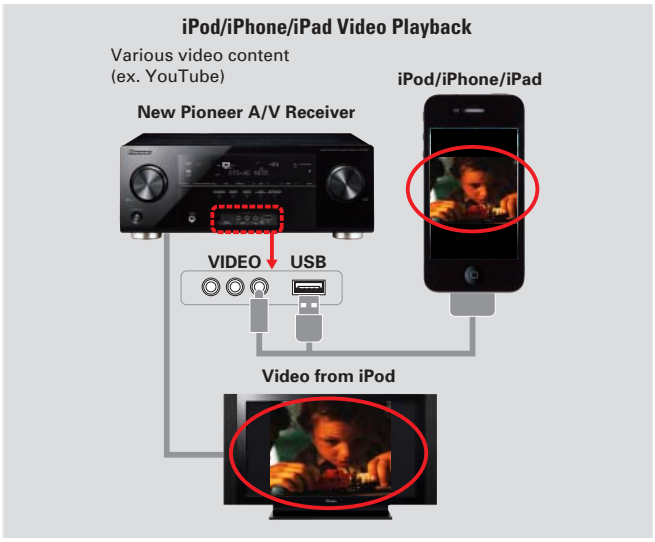
* Available features depend on iPod/iPhone/iPad model

iPod Digital Connection via USB

1021 921 821

Enjoy iPod music via digital connection. The audio signals are directly transferred to the A/V receiver's high-performance DAC, offering superior sound compared to analog connections. What's more, you can operate your iPod with the A/V receiver's remote control.

Functions such as the equalizer cannot be controlled using the pre-main amplifier or receiver, so we recommend you to turn off the equalizer before connecting.
iPod is for legal or rightholder-authorised copying only. Don't steal music.



iPod/iPhone/iPad Video Playback

1021 921 821

The units can play video content from iPod/iPhone/iPad, and you can even watch YouTube video enlarged on your TV screen. In addition to simple 'plug and play' connection using dedicated cables, you can display the album artwork* in color on your TV. The new Cover List feature lets you visually choose an album from thumbnail images. Song titles can be shown in 7 languages*. Your iPad also gets charged while connected.

	iPad	iPhone			iPod	iPod classic	iPod touch				iPod nano					
		iPhone	iPhone 3G	iPhone 4	5th gen.		1st gen.	2nd gen.	3rd gen.	4th gen.	1st gen.	2nd gen.	3rd gen.	4th gen.	5th gen.	6th gen.
VSX-1021	AV	AV	AV	AV	A	AV	AV	AV	AV	AV	A	A	AV	AV	AV	A
VSX-921	AV		AV	AV	A	AV	AV	AV	AV	AV	A	A	AV	AV	AV	A
VSX-821	AV		AV	AV	A	AV	AV	AV	AV	AV	A	A	AV	AV	AV	A

AV = Audio file playback compatible with OSD and remote control. Video file playback requires iPod operation. For VSX-1021-K, video playback also compatible with OSD and remote control.
A = Audio file playback compatible with OSD and remote control.
A/V receivers are also compatible with sampling rate of up to 48 kHz for connections other than iPod/iPhone/iPad.
For information on Apple's iOS version, please visit http://pioneer.jp/homeav/support/ios/na

Front USB Input

1021 921 821

The front panel USB input terminal allows straightforward connection to a USB memory stick. This plug and play connectivity will enable you to easily play MP3/WMA/WAV*/MPEG-4 AAC** music files or watch JPEG pictures*.

* VSX-1021-K only

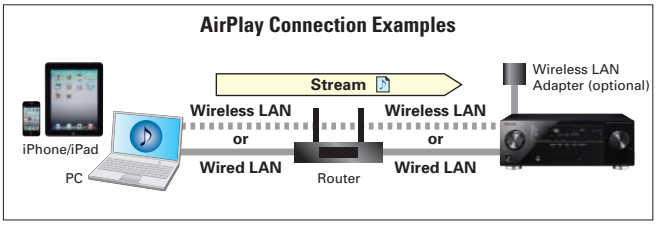
** VSX-921-K/VSX-821-K only

AirPlay Compatible

1021

The A/V receiver is compatible with AirPlay, letting you stream songs from your iTunes 10.1 library via your home network. For iPod touch (2nd, 3rd and 4th generations)/iPhone 4/iPhone 3GS/iPad with iOS4.2 or later, you can directly stream songs from the device to the A/V receiver.

AirPlay

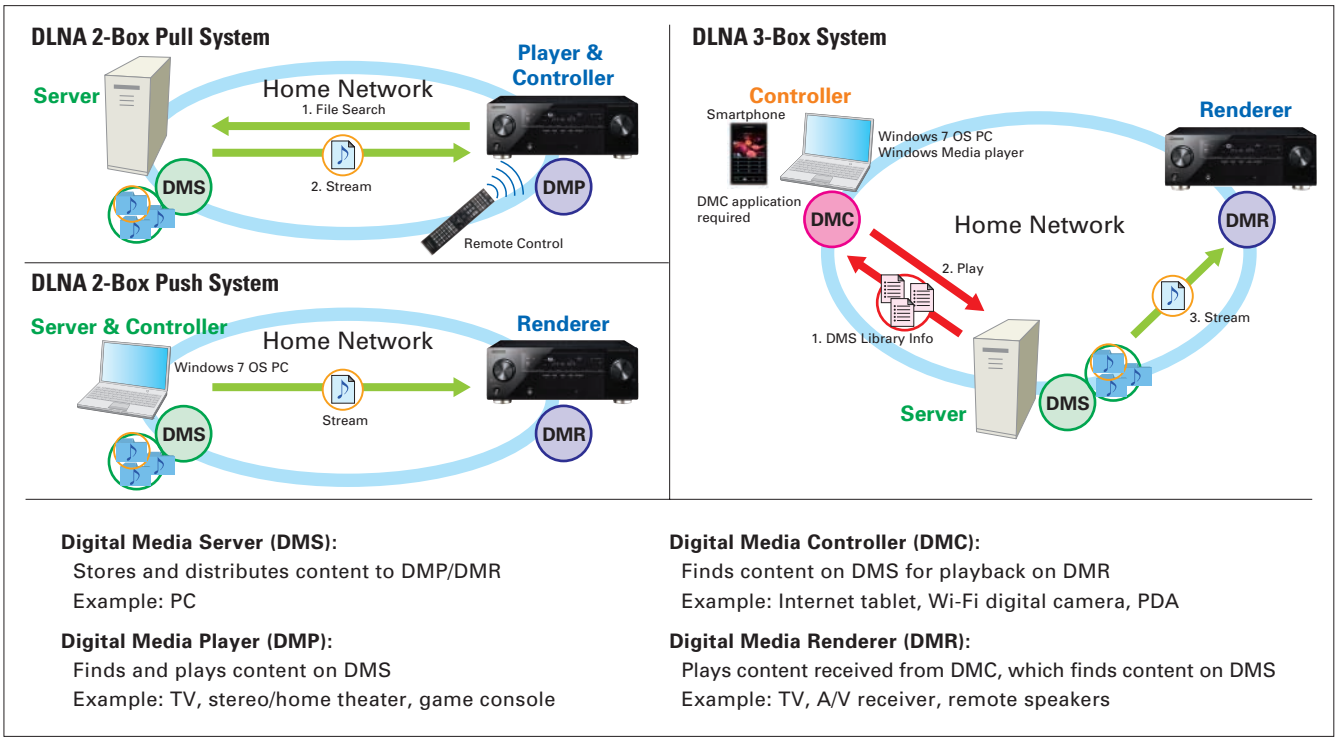


DLNA Certified™ (1.5)

1021

This A/V receiver is DLNA certified (1.5), enabled to work not only as a Digital Media Player (2-Box Pull System) for playing DMS audio files, but also as a Digital Media Renderer (3-Box System) to be remotely controlled by a device such as a smartphone or PC. For example, you can play music content* from a PC in another room, from a separate device in your living room. As a DMR (2-Box Push System), the A/V receiver can also play received audio data when the user controls the DMS.

*** Playback of DRM protected commercial content requiring DTCP-IP link protection is not supported.**



Digital Media Server (DMS):
Stores and distributes content to DMP/DMR
Example: PC

Digital Media Player (DMP):
Finds and plays content on DMS
Example: TV, stereo/home theater, game console

Digital Media Controller (DMC):
Finds content on DMS for playback on DMR
Example: Internet tablet, Wi-Fi digital camera, PDA

Digital Media Renderer (DMR):
Plays content received from DMC, which finds content on DMS
Example: TV, A/V receiver, remote speakers

Copyright Protection Content Playback

1021

The A/V receiver functions as a WMDRM10-ND (Microsoft Windows Media DRM for networked devices), letting you stream protected digital media on your home network.

High-Quality Audio Streaming

1021

The A/V receiver can stream high-quality audio formats with 96 or even 192 kHz sampling frequencies such as FLAC*, WAV, or LPCM. Of course, MP3, WMA, and MPEG4-AAC audio can also be enjoyed on your home network.**

*** Up to 96 kHz**
**** Up to 192 kHz**

Internet Radio (vTuner)

1021

The A/V receiver comes with the vTuner for listening to a multitude of radio programs from around the world on the internet. LAN connection allows radio access without having to use your PC. You can easily browse stations using the remote control. Various categories are available on the vTuner database, offering limitless entertainment. You can even add broadcast stations unavailable on the vTuner list. Access the Pioneer internet radio site from your PC*, and register the desired stations to your favorites list. Then, you can easily tune in to the radio stations from the A/V receiver.

*** Access code required**

iControlAV2 App for iPod touch, iPhone, and iPad

1021

iControlAV2 is an iPod touch/iPhone/iPad application developed by Pioneer, freely downloadable from the App Store.
It comes in two versions — for iPod touch/iPhone and iPad. On a simple and intuitive interface, the application allows you to use your device as a remote for controlling the A/V receiver's functions such as volume, input, mode, balance, level control for woofer and center speakers, PQLS, Phase Control, virtual speakers, and Auto Sound Retriever, as well as basic functions of Pioneer's latest Blu-ray Disc players. Album information and A/V receiver's input/output status can also be displayed. Enjoy smooth control on your device's screen, with support for 8 languages (same setting as your iPod touch/iPhone/iPad). This latest version provides enhanced features, and you can draw EQ curves with your finger. On iPad, all the basic controls are shown on one screen, and you can load and view MCACC measurement data from the A/V receiver. iControlAV2 is compatible with both vertical and horizontal display on iPad.

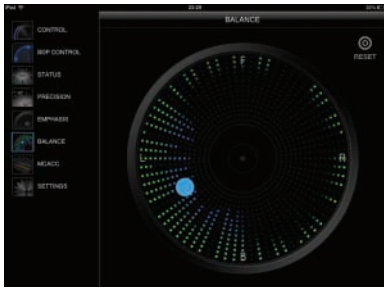
*** A/V receiver needs to be connected to a wired LAN in a wireless LAN network.**

Draw EQ curve with your finger

Finger EQ

iControlAV2 for iPad

Top Menu

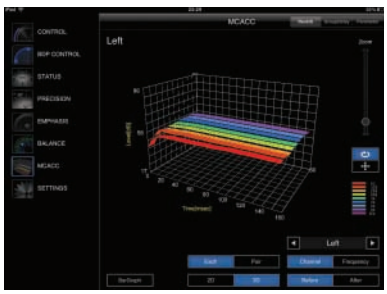


Balance

Control

Emphasis (Dialog)

Emphasis (Bass)



Bluetooth® Ready

1021 921 821 521

By using the AS-BT200 or AS-BT100 optional *Bluetooth* adapter, you can enjoy wireless transmission of audio content from compatible devices such as iPod/iPod touch/iPhone/iPad (with iOS 3.0 or later), mobile phone, or personal computer.

AS-BT200 Optional *Bluetooth* Adapter

– A2DP (Advanced Audio Distribution Profile)
– AVRCP (Audio Video Remote Control Profile)
– Registers up to 8 devices

Bluetooth®

Air Jam App for iPod touch/iPhone/iPad

1021

Discover new songs on your friend's iPhone. Air Jam is an iPod touch/iPhone/iPad application developed by Pioneer, freely downloadable from the App Store. By using the optional AS-BT200 *Bluetooth* adapter, you can stream music from up to 4 iPod touch/iPhone/iPad devices*. Users can add their iPhone song to the playlist for immediate play. The playback history will be saved on each Air Jam app's entry log, so you can easily check song titles and artists. Moreover, the data allows you to access iTunes and YouTube to purchase songs or view video clips, expanding your world of entertainment.

*** Number of connectable devices depend condition**

Operation Compatibility of Bluetooth Adapter

	AS-BT100	AS-BT200
VSX-820/VSX-520	•	• (AS-BT100 equivalent functions)
VSX-920 or above	•	• (AS-BT100 equivalent functions)
VSX-921/VSX-821/VSX-521	•	• (AS-BT100 equivalent functions)
VSX-1021	•	•

The AS-BT200 features the functions of AS-BT100 (previous model) and is also Air Jam ready.

AVNavigator

1021

Pioneer's AVNavigator is a user-friendly support feature for the A/V receiver's wiring and operation. Using the supplied CD-ROM, you can easily set up the A/V receiver straight out of the box. An interactive HTML manual, Wiring Navi, and MCACC application is included in the AVNavigator. It also helps the user with software updates.

Wiring Navi

Start the Wiring Navi on your PC from the CD-ROM. By answering questions about your equipment and terminals, the actual connection image will be displayed. Plug in your equipment and speakers accordingly, including the network connection with your PC, then transmit the setup information to the A/V receiver from your PC. The Wiring Navi is compatible with iPad, and can be downloaded free of charge from the App Store.

Interactive Manual

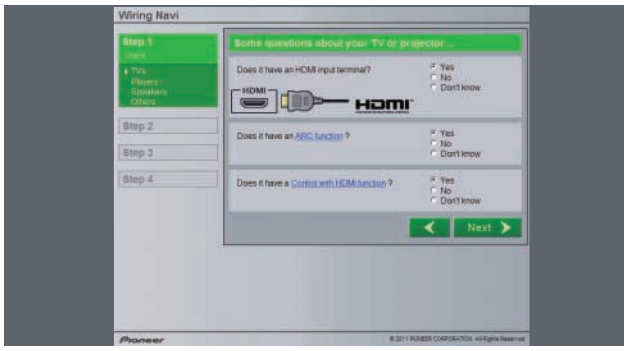
The interactive HTML manual can be browsed on your PC, and clicking on a keyword will send a command to the A/V receiver. It also works the other way – key operation on the remote control or the main unit will display the corresponding manual page on your PC.

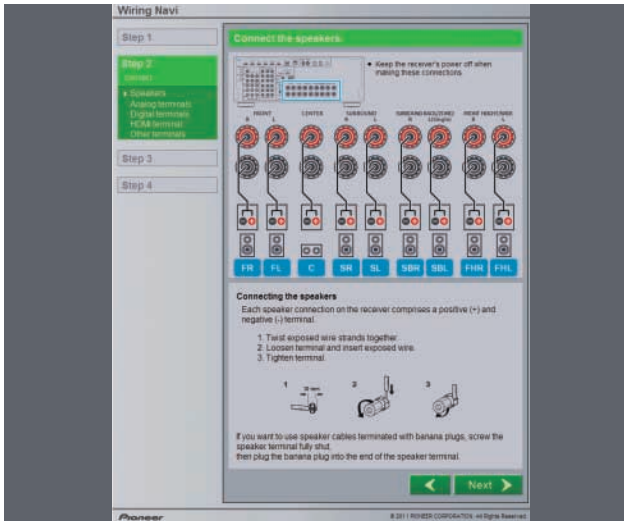
Software Updates

With AVNavigator, you can check the main unit's software updates with one click. If an update is required, AVNavigator will guide the procedure. You can also look for updates on the AVNavigator's software.

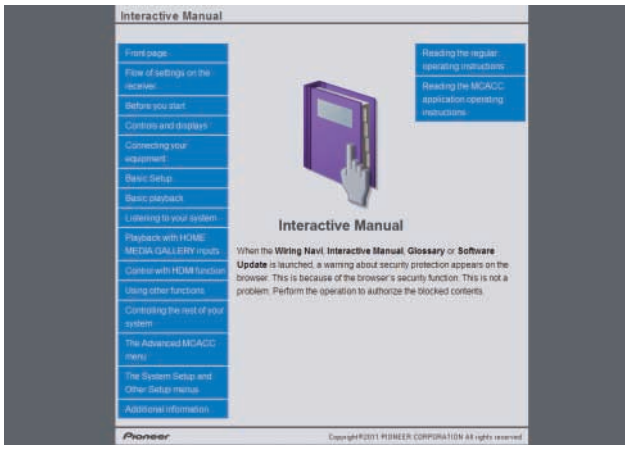
AVNavigator

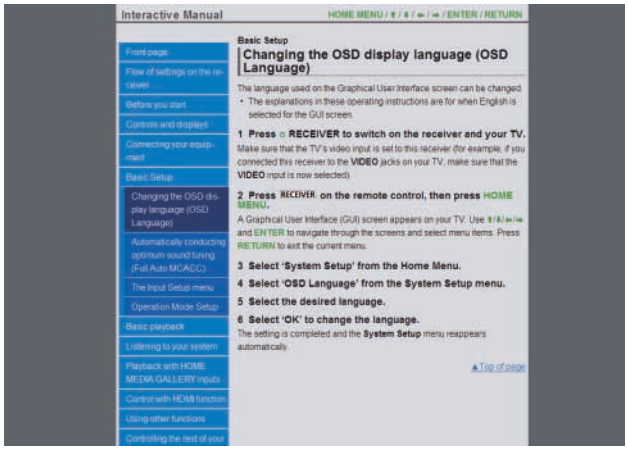
Wiring Navi





Interactive Manual





Wireless LAN Ready

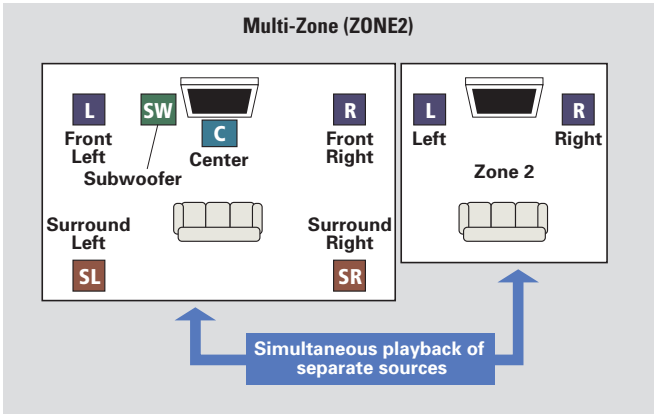
1021

With the optional AS-WL300 wireless LAN converter, you can enjoy wireless LAN connection for the A/V receiver. The AS-WL300 works with power supply from the A/V receiver's dedicated USB terminal, so no AC adapter is required.

Multi-Zone (ZONE 2)

1021

With Pioneer's Multi-Zone, you can play music and movies from different sources in two zones at the same time.



Control with HDMI

1021 921 821 521

HDMI connection with compatible products allows the following linked operations:

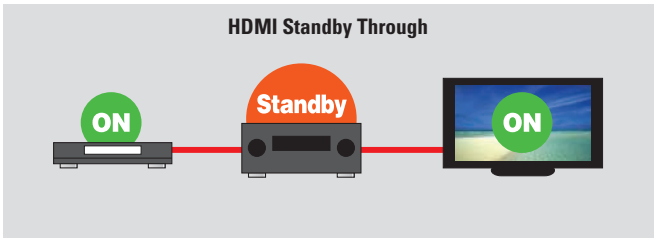
- Volume adjustment/mute of A/V receiver via TV
- Automatic input change when TV channel is switched or playback starts on a player
- Linked power on/off with TV

* For details on compatible TV and components, see http://pioneer.jp/homeav/support/hdmi_cec/

Power Save for HDMI Standby Through

1021

The new power save feature greatly reduces power consumption during stand-by mode of HDMI standby through, for example, when the A/V receiver is placed between the TV and the Blu-ray Disc player.



Auto Power Down

1021 921 821 521

The A/V receiver will automatically turn off after being left uncontrolled for a certain time set by the user.

* For VSX-1021-K, the function works when there is no audio or video input signal.

VSX-1021-K

Made for iPod iPhone iPad

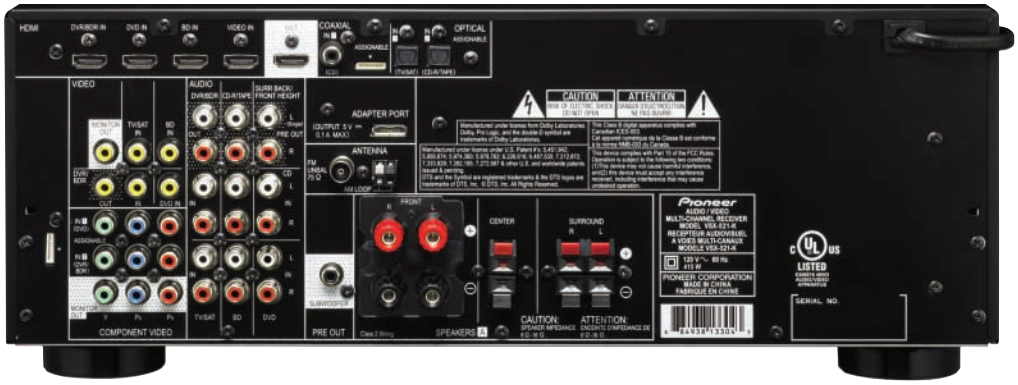
VSX-921-K

Made for iPod iPhone iPad

VSX-821-K

Made for iPod iPhone iPad

VSX-521K



1021

921
821

521

FEATURE COMPARISON AND SPECIFICATIONS: A/V RECEIVERS

	VSX-1021	VSX-921	VSX-821	VSX-521
Audio Technologies				
Phase Control	•	•	•	•
Phase Control Plus	•			
MCACC	• (Advanced)	•	•	•
Standing Wave Control	•			
PQLS with HDMI (Bit-stream/Multi/2ch)	• (Bit-stream/Multi/2ch)			
Jitter Reduction	•			
Auto Sound Retriever	•			
Advanced Sound Retriever	• (Multi)	• (2ch)	• (2ch)	• (2ch)
Sound Retriever AIR	•	•	•	•
Auto Level Control	• (Multi)	• (2ch)	• (2ch)	• (2ch)
Video Technologies				
Advanced Video Adjust	•			
Highly-Precise I/P Conversion	•			
Digital Video Converter	•			
Advanced Video Parameters	•			
Deep Color	•	•	•	•
x.v.Color	•	•	•	•
Audio Formats & Licenses				
DTS-HD Master Audio/Dolby TrueHD	•	•	•	•
DTS Neural Surround	•			
SIRIUS Ready	•	•	•	
Sophisticated Surround System				
Various Speaker Settings	•			
Wide Surround	•			
Dolby Pro Logic IIz	•	•	•	•
Virtual Height	•			
Virtual Surround Back	•			
Front Stage Surround Advance	• (Focus, Wide)	•	•	•
Connectivity				
HDMI Terminals	5 in/1 out	4 in/1 out	4 in/1 out	4 in/1 out
HDMI® (3D, ARC)	•	•	•	•
Made for iPod, iPhone, and iPad	•	•	•	
iPod Digital Connection via USB	•	•	•	
iPod/iPhone/iPad Video Playback	•	•	•	
Front USB Input	•	•	•	
Network Features				
AirPlay	•			
DLNA Certified™ (1.5)	•			
Copyright Protection Content Playback	•			
High-Quality Audio Streaming	•			
Internet Radio (vTuner)	•			
Advanced Control				
iControlAV2	•			
Bluetooth Ready*	•	•	•	•
Air Jam	•			
AVNavigator	•			
Wireless LAN Ready**	•			
Multi-Zone	Zone 2 (AV)			
Control with HDMI	•	•	•	•
Power Save for HDMI Standby Through	•	•		
Auto Power Down	•	•	•	•
Specifications				
Power Output (20 Hz-20 kHz, THD 0.08%, 8 ohms)				
Front	90 W + 90 W	80 W + 80 W	80 W + 80 W	80 W + 80 W
Center	90 W	80 W	80 W	80 W
Surround	90 W + 90 W	80 W + 80 W	80 W + 80 W	80 W + 80 W
Surround Back	90 W + 90 W	80 W + 80 W		
Dimensions (W x H x D)	17-1/8" x 6-5/8" x 14-1/4" 435 x 168 x 362.5 mm	17-1/8" x 6-5/8" x 14-1/4" 435 x 168 x 362.5 mm	17-1/8" x 6-5/8" x 14-1/4" 435 x 168 x 362.5 mm	17-1/8" x 6-5/8" x 14-1/4" 435 x 168 x 362.5 mm
Weight	22 lbs. 10 kg	21 lbs. 2 oz. 9.6 kg	20 lbs. 4 oz. 9.2 kg	19 lbs. 13 oz. 9.0 kg
Power Requirements	AC 120 V 60 Hz	AC 120 V 60 Hz	AC 120 V 60 Hz	AC 120 V 60 Hz
Power Consumption/During Standby (Control with HDMI ON)	550 W/0.2 W (0.3 W)	500 W/0.4 W (1.35 W)	415 W/0.4 W (1.25 W)	415 W/0.4 W (1.25 W)

* With AS-BT200/AS-BT100 optional adapter
** With AS-WL300 optional adapter

"Made for iPod," "Made for iPhone," and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

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The Bluetooth word mark and logo are registered trademarks and are owned by the Bluetooth SIG, Inc. Bluetooth functionality requires a compatible A2DP profile Bluetooth-enabled device. Certain Bluetooth features may not be supported by all compatible Bluetooth-enabled devices, and/or the functionality of such features may be limited in certain devices.

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Phase Control is a trademark placed on a product with Pioneer's Phase Control Technology concept. The technology enables high-grade sound reproduction environment by improving the phase matching for each of the components.