2015-2016 AV RECEIVERS PRODUCT REFERENCE GUIDE

Images for illustrative purposes only

Pioneer SC Series 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 AV receivers are the results of uncompromising standards of engineering and manufacturing, painstaking selection of parts and devices, and careful testing of each component.

The core concept for the SC Series AV receivers is Pioneer's original Multi-Channel Stereophonic Philosophy—faithful multi-channel reproduction of the master sound by equalising the response for all channels, just like stereo sound reproduction. Versatile technologies and know-how have been lavishly incorporated to realise matchless high-quality sound and sophisticated performance. The AV receivers are laden with latest features such as Dolby Atmos®, the Super Resolution technology derived from Pioneer's high-end Blu-ray Disc players, DSD and other Hi-Res audio file playback via Wi-Fi, and the new insulator and other high-grade parts. What's more, this year's lineup includes models upgradable for the DTS:X™ object-based surround sound format.

This Product Reference Guide introduces the technologies and features that give the special qualities to the SC Series AV receivers. We hope the information will help enrich your home entertainment experience.

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Multi-Channel Stereophonic Philosophy

[minamoto]

- Class D (Direct Energy HD) Amplifier
- ESS SABRE^{32} Ultra DAC
- Shielded DC/DC Coils
- New Low ESR Custom Capacitors
- PML MU Capacitors by Rubycon Corporation
- NJM4585 Op Amp by JRC
- Low Leakage Flux Power Transformer

[waza]

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    - Speaker Polarity Check
    - Standing Wave Control
    - Independent Dual Subwoofer Output
    - Subwoofer EQ
    - Full Band Phase Control
    - Precision Distance
    - Reflex Path Distance Adjustment System
    - Bass Management System for Dolby Atmos-Enabled Speakers

[tamashi]

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Audio Technologies

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    - Digital Filter
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- Auto Sound Retriever
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Video Technologies

- Video Scaler with Super Resolution
- Ultra HD (4K/60p/4:4:4/24-bit) Pass-through with HDCP 2.2
- Next Generation Video Standard Ready
- Advanced Video Adjust
- Stream Smoother
- Stream Smoother Link
- Triple HD Video Noise Reduction
- Deep Colour
- "x.v.Colour"

Audio Formats

- DTS:X™ Ready
    - Dialog Control
- Dolby Atmos
- DTS Neural:X™
- DTS Neo:X|11.1
- Dolby Surround
- DTS-HD Master Audio
- Dolby TrueHD
    - Loudness Management
- Hi-Res Audio File Playback via USB/Network
- Multi-Channel Audio File Playback via USB/Network
- Native DSD Playback via USB-DAC with DoP Transmission
- DSD Music File Playback via USB
- DSD Disc (SACD) Playback via HDMI
- Various Music File Playback via USB/Network/HDMI
- Variable File Play Action
- Gapless Playback

Sophisticated Listening Modes

- Virtual Speakers
- Rendering Mode
- 11ch Speaker Configurations
- Pre-Amp Mode
- Advanced Surround Modes
- Extended Stereo
- Front Stage Surround Advance
- Optimum Surround

Connectivity

- USB-DAC
- HDMI® (4K@60, 3D, ARC)
- Made for iPod and iPhone
- Android™ Audio/Video Playback with MHL 2™
- Front USB Input

Network Features

- DLNA Certified™ (1.5)
- Apple AirPlay Certified
- HTC Connect™ Certified
- Compatible with Windows® 8.1/Windows® 8
- Internet Radio (vTuner)
- Spotify® Digital Music-Streaming Service Ready

Advanced Control

- Ready for Start-up Navi App
- Ready for iControlAV5
    - AV SCALER
    - STATUS VIEWER
    - CURSOR
    - SOUND EXPLORER
    - PUSH PLAYER
    - ECO MANAGER
- Built-in *Bluetooth* Wireless Technology
- Built-in AVNavigator
- Built-in Dual Band Wi-Fi
- Powered HDMI ZONE Out (Powered HDZONE)
- Multi-Zone
- Control with HDMI
- Pioneer PC Setup Application
- Network Setup via Web Control
- Standby Pass-Through without CEC
- HDMI Standby Input Switching
- Auto Power Down
- Power Save for HDMI Standby Through
- Simple Overlay OSD
- GUI

Construction

- Advanced Direct Construction
- 3D Space Frame Construction
- Rigid Trans-Stabilizer
- Anti-Standing Wave Insulator
- Separated Pre and Power Amplifier Blocks
- Clean Grounding with Insulated Dual Chassis

* New features in blue

Applicable models displayed in icons:

LX89	··········	**SC-LX89-K/-S**
LX79	··········	**SC-LX79-K/-S**
LX59	··········	**SC-LX59-K/-S**

Multi-Channel Stereophonic Philosophy

`LX89` `LX79` `LX59`

In a multi-channel system, all adjacent channels should be stereophonic—that's the concept of Pioneer's Multi-Channel Stereophonic Philosophy. In a normal stereo reproduction, the same type of speakers are placed at equal distance from the listener, and driven with the same amplifier. Similarly, for an ideal multi-channel reproduction environment, all channels should have the same speakers, placed at equal distance from the listener, and driven by the same amplifier. However, such arrangements are physically and economically difficult in a home setting. For example, it wouldn't be practical to fix the same type as the front speakers on to the ceiling as top speakers. The shape of the room and furniture placement will also limit speaker positions. So Pioneer developed the following three steps to create the ideal reproduction environment within a home.

[minamoto]
Step 1

"Direct Energy Design" technology that realises simultaneous high-power output for all channels.

Selection of optimal parts and incorporation of cutting-edge technology.

[waza]
Step 2

Automate the monitoring methods of professional studios and create the "Ideal Reproduction Environment."

Measure the listening environment's features and compensate the speaker size, distance, frequency characteristic, and phase with DSP technology.
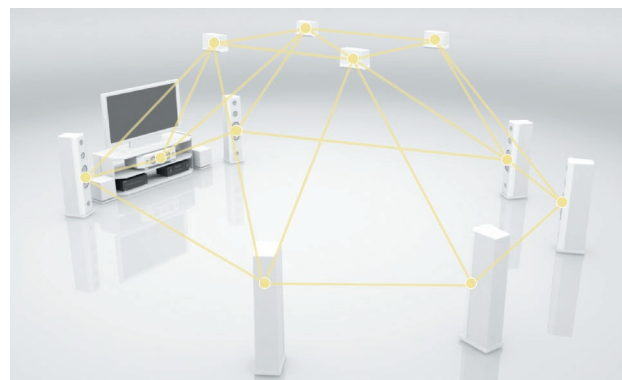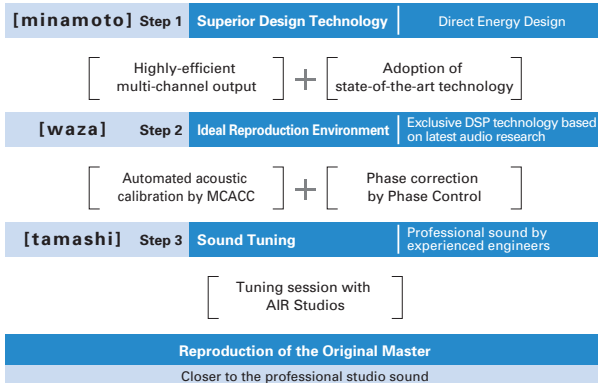
[tamashi]
Step 3

"Sound Tuning" by professional engineers brings out the "master sound."

The master sound made through these steps reproduces audio just as the creator intended, offering an immersive sensory experience. Additionally, with the latest object-based surround sound formats such as DTS:X™ and Dolby Atmos®, you can enjoy incredibly rich multi-dimensional audio in sync with what you see.

Multi-Channel Stereophonic Philosophy

Pioneer's 3-step technology for reproducing studio master sound

[minamoto] Step 1	Superior Design Technology	Direct Energy Design

Highly-efficient multi-channel output	+	Adoption of state-of-the-art technology

[waza] Step 2	Ideal Reproduction Environment	Exclusive DSP technology based on latest audio research

Automated acoustic calibration by MCACC	+	Phase correction by Phase Control

[tamashi] Step 3	Sound Tuning	Professional sound by experienced engineers

Tuning session with AIR Studios

Reproduction of the Original Master
Closer to the professional studio sound

All neighboring speakers connected by a line should produce stereophonic sound

Realistic layout example with furniture (varied speaker distance and type)

Ideal listening environment example after compensation (virtually, same speakers placed at equal distance)

[minamoto]
source/origin/foundation

Class D Amplifier (Direct Energy HD Amplifier)

`LX89` `LX79` `LX59`

The Direct Energy HD (High fidelity class D) Amplifier has further evolved as Class D Amplifier to meet the needs of the latest HD content. With our MOSFET, the Direct Power FET, a simple, high-power solution is provided to fully enjoy today's AV entertainment. The new custom bypass capacitors further enhance the advantages of the Class D amplifier, producing powerful bass while also featuring gentle expressiveness.

Class D Amplifier Assy

Custom Bypass Capacitors

High-Power Simultaneous Multi-Channel Drive

With class AB amplifiers, driving all channels in full power is only possible for a short time, at around 300 W to 400 W power output. Pioneer's Class D Amplifier has plenty of allowance to simultaneously drive 9 channels at 760 W (SC-LX59) to 850 W (SC-LX89) power output, letting you fully enjoy dynamic scenes.

Simultaneous Power Output for Pioneer's Class D Amplifier (9ch)

Pioneer Class D Digital Amp

Pioneer
THD
−67 W
9ch
2ch
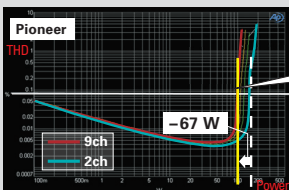
Pioneer—only one keeping up high power with multi-channel output

**Other Models—high power for 2-ch specification, but output drops with actual 9-ch drive**

General Class AB Analogue Amp

Model A
THD
−107 W
9ch
2ch
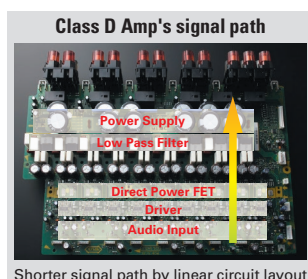

Model B
THD
−146 W
9ch
2ch
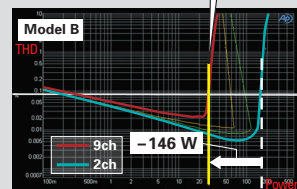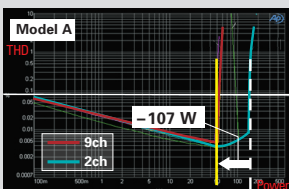
Quick-Response Sound

The Direct Power FET is directly connected to the print circuit board without any wiring. This simple structure maximises audio performance by reduced noise and improved switching, offering a quick-responding sound, perfect for digital content playback.

Silicon | Direct contact with print circuit board | Print circuit board
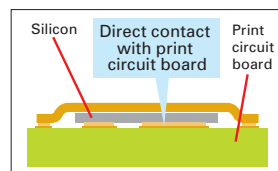
Direct Power FET features a simple structure with superior heat dissipation

High Efficiency

The Class D Amplifier has been designed with a simple structure to take a straight and short signal path, resulting in improved sound quality.
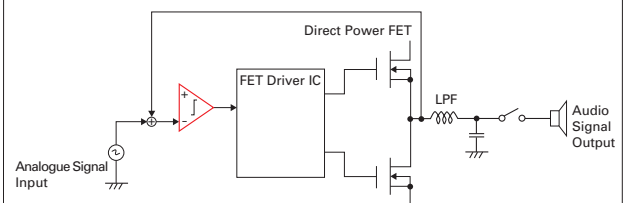
Class D Amp's signal path

Power Supply
Low Pass Filter
Direct Power FET
Driver
Audio Input

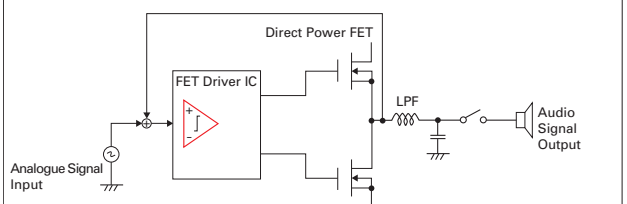Shorter signal path by linear circuit layout

Improved Circuit Design

On the top two models, dedicated ICs are lavishly used on the circuit in pursuit of ideal sound. The operational amplifier IC for processing small signal is set apart from the amplifying section to prevent mutual interference. This allows clear signal to be transmitted to the Direct Power FET. As for the SC-LX59, it adopts a compact integrated IC with space merit. The directly coupled IC reduces signal loss and provides precise signal transmission.

**SC-LX89/SC-LX-79 Amplifier Circuit Configuration**

Direct Power FET
FET Driver IC
LPF
Audio Signal Output
Analogue Signal Input

SC-LX59 Amplifier Circuit Configuration

Direct Power FET
FET Driver IC
LPF
Audio Signal Output
Analogue Signal Input

Low Heat Generation

The simple form of the Direct Power FET has the advantage of improved thermal characteristics. In addition to the upper-side heat dissipation from the heat sink, the circuit board's heat radiation feature is also utilised for downward heat dissipation, providing efficient cooling for a superior performance.

Thermal View Comparison of Top Panel

Class D Amplifier

General Class AB Amplifier
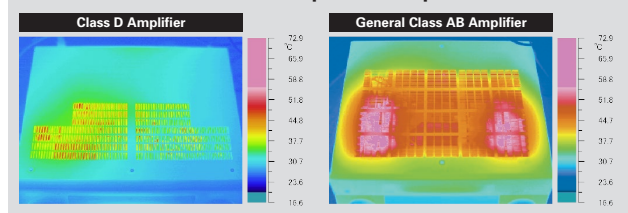
Eco-Friendly

The power consumption of the Direct Energy HD Amplifier is exceedingly lower than analogue amplifiers — letting you save energy without compromising performance.

4

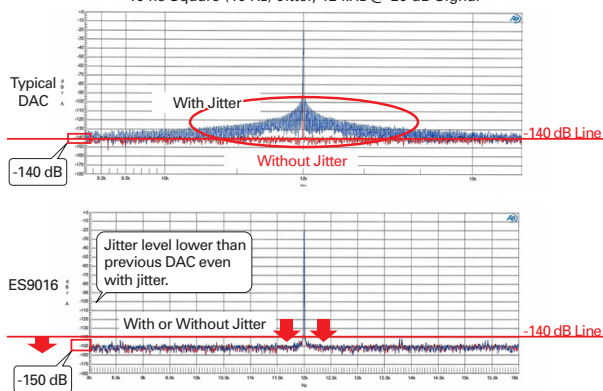## ESS SABRE[32] Ultra DAC

| LX89 | LX79 | LX59 |

The highly acclaimed 192 kHz/32-bit ESS SABRE[32] Ultra DAC (ES9016S) is adopted to deliver exceptional sound, with ultra-low distortion and high signal-to-noise ratio. It offers jitter-free performance for an astounding audio reproduction with rich deep bass, bringing out the full potentials of Pioneer's Direct Energy HD amplifiers.
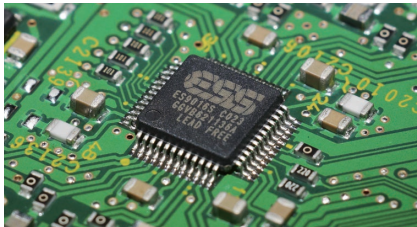
ESS SABRE[32]

ESS DAC SABRE[32] Jitter Reduction Performance
10 ns Square (10 Hz) Jitter, 12 kHz @-20 dB Signal

Typical DAC

With Jitter
-140 dB Line
Without Jitter
-140 dB

ES9016

Jitter level lower than previous DAC even with jitter.
With or Without Jitter
-140 dB Line
-150 dB

Shielded DC/DC Coils

| LX89 |

With proven track record on devices handling minute signals such as high-end digital cameras and ultra-sensitive surveillance cameras, the shielded DC/DC coils contribute to further improving the S/N ratio.

New Low ESR Custom Capacitors

| LX89 | LX79 | LX59 |

Low ESR (Equivalent Series Resistance) custom capacitors are newly adopted to improve the S/N ratio.

PML MU Capacitors by Rubycon Corporation

| LX89 | LX79 | LX59 |

The polymer multi-layer MU capacitors (PML MU) co-developed with Rubycon Corporation provide clear and open high-range sound.
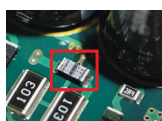
NJM4585 Op Amp by JRC

| LX89 | LX79 | LX59 |

The NJM4585 operation amplifier co-developed with New Japan Radio Co., Ltd. features low distortion and high-resolution reproduction across a wide bandwidth. These selected parts bring out the full potentials of the Direct Energy HD Amplifier.
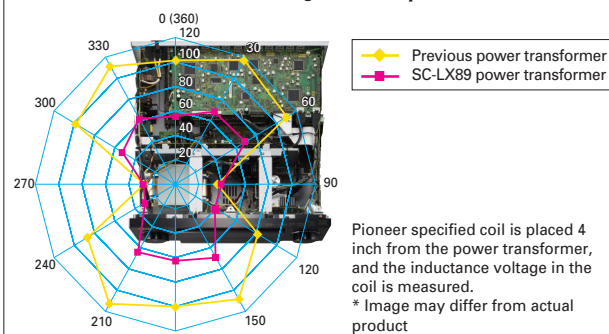

Low Leakage Flux Power Transformer

| LX89 |

The power transformer features minimum leakage flux, ensuring low noise with increased S/N ratio.

Horizontal Leakage Flux Comparison

Previous power transformer
SC-LX89 power transformer

Pioneer specified coil is placed 4 inch from the power transformer, and the inductance voltage in the coil is measured.
* Image may differ from actual product

[waza]
skill/technique/ability

MCACC Pro Auto Room Tuning

`LX89` `LX79` `LX59`

MCACC Pro goes a step further by analysing the phase and group delay characteristics due to network filtering to precisely control phase differences between speakers. This correction is also performed between channels, providing a smooth flow of sound as if all delivered from the same type of speaker. Other features include independent correction for dual subwoofers, and speaker position adjustment in 1-millimeter increments. MCACC Pro corrects phase differences in all ranges and all channels, from phase difference in the original audio material to the sound emitted from the speakers.

Phase Control

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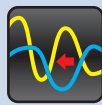
The "Phase Control" Compensates for the Delay of Low-Frequency Sound

Source   AV Receiver   Speakers
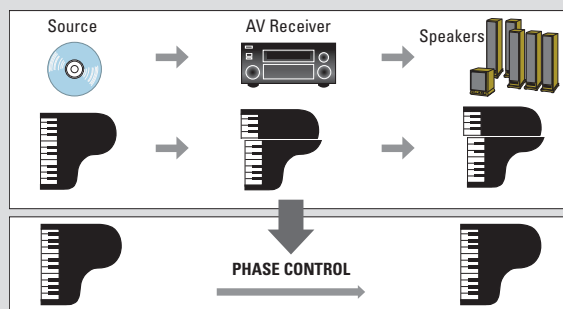
PHASE CONTROL
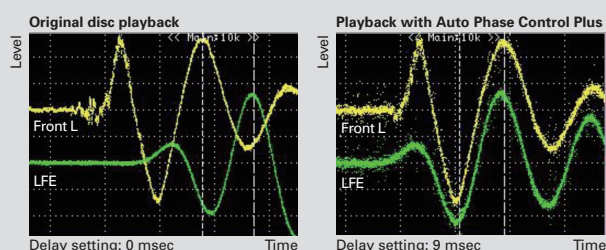
Auto Phase Control Plus

During Blu-ray Disc/DVD/multi-channel file playback, Auto Phase Control Plus makes real-time analysis of the phase difference between the LFE (low frequency effect) and the main signals, and automatically compensates the gap. Elimination of phase lag enhances strong bass and clear high-frequency sound — especially effective for audio content such as live performance and music video clips.

Auto Phase Control Plus

* Effectiveness depends on content

Effect of Auto Phase Control Plus (data comparison)

Original disc playback

Level

《 Main>10k 》

Front L

LFE

Delay setting: 0 msec   Time

Playback with Auto Phase Control Plus

Level

《 Main>10k 》

Front L

LFE

Delay setting: 9 msec   Time

Superior sound provided by compensating the lag in the subwoofer channel on the disc.

Speaker Polarity Check

MCACC Pro will check the speaker polarity for proper connection. "Reverse Phase" will be displayed on the GUI screen if the speaker's wiring (+ and -) is inverted.

Standing Wave Control

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

= Standing Waves
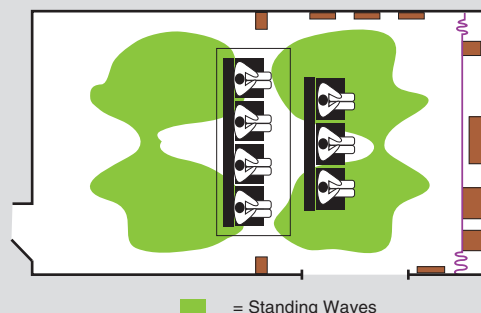
Independent Dual Subwoofer Output

When connecting an additional subwoofer to increase the bass, the two subwoofers may not be at a same distance. In such a case, cancelling out of the bass may occur and prevent you from perceiving the full effect of the additional subwoofer. MCACC Pro supports independent adjustment for each subwoofer, offering optimal performance for a dual-subwoofer setup. You can enjoy free placement of your subwoofers.

Subwoofer EQ

The subwoofer EQ feature allows you to adjust the subwoofer tone. For Auto MCACC, the subwoofer EQ is automatically adjusted with EQ type ALL CH ADJ, while manual adjustment is available with EQ type SYMMETRY and FRONT ALIGN. As with other EQ, the manual adjustment can be done on the AV receiver's GUI.

Full Band Phase Control

The further advanced Full Band Phase Control technology focuses on the group delay in the speaker network filter, and compensates with special digital signal processing (DSP), to adjust the phase of each unit as well as the group delay for each speaker. Full Band Phase Control gives multi-range speakers the sound coherence of full-range speakers, while retaining the wide frequency range advantage.

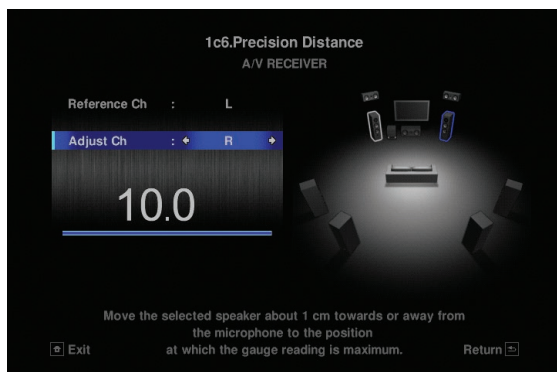Full Band Phase Control Off   Full Band Phase Control On

TWEETER (+)   TWEETER (+)

MIDRANGE (+)   MIDRANGE (+)

WOOFER (+)   WOOFER (+)
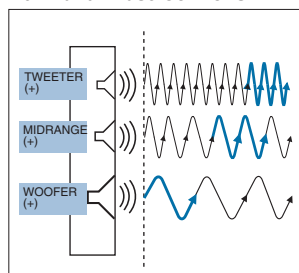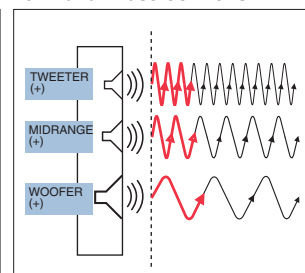
Adjusts group delay for each unit

Precision Distance*

Precision Distance is an innovative feature for making millimeter-level manual adjustments to speaker distance. You can easily duplicate a skilled installer's precise positioning with the help of a level gauge shown on the display.
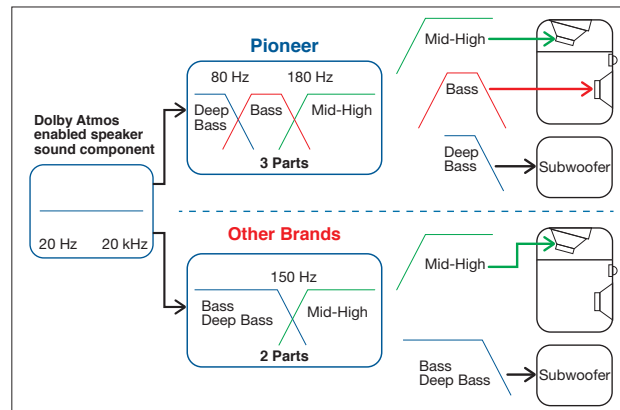* SC-LX89 only

1c6.Precision Distance
A/V RECEIVER

Reference Ch : L
Adjust Ch : ◆ R ◆

10.0

Move the selected speaker about 1 cm towards or away from the microphone to the position at which the gauge reading is maximum.
Exit   Return

For Dolby Atmos Enabled Speakers

Reflex Path Distance Adjustment System

When using Dolby Atmos enabled speakers, the reflex path distance is calculated from the automatically measured direct distance, and the vertical distance between the ceiling and the speaker entered by the user. As a result, the timing of the reflex path's sound is matched with direct sound, allowing accurate reproduction of the sound object's movement effect on Dolby Atmos.

Ceiling

Reflex path distance
Automatically calculated

Distance to ceiling
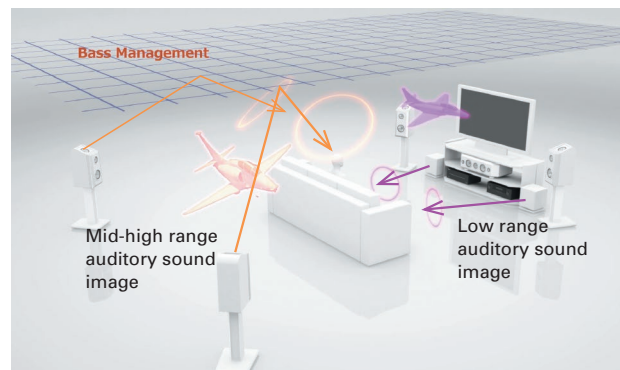Manual input

Direct distance
Automatically measured
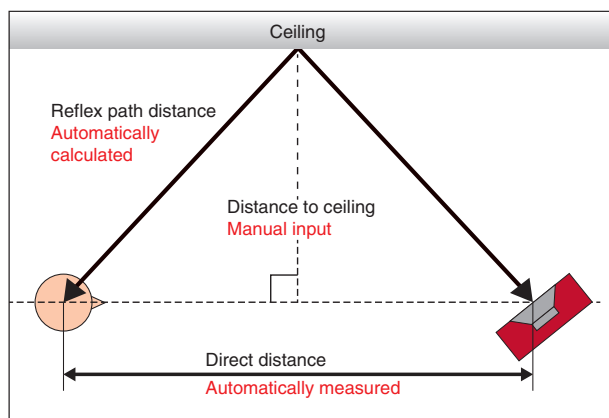
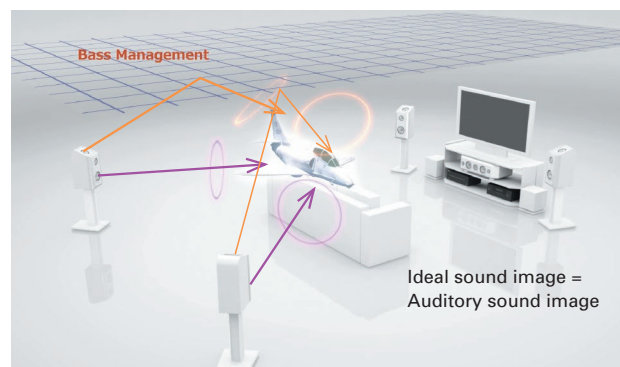## Bass Management System for Dolby Atmos Enabled Speakers

When using Dolby Atmos enabled speakers, the low-frequency components are usually all redirected to the subwoofer. Since this will include frequencies featuring directivity, the resulting sound lacks a seamless feel. MCACC Pro redirects the low frequency component with directionality to the floor speaker below the Dolby Atmos enabled speaker element, and the lower frequency components to the subwoofer. This optimal signal distribution creates superior sound localisation, maximising the advantage of Dolby Atmos content.

Pioneer

Dolby Atmos enabled speaker sound component

80 Hz   180 Hz
Deep Bass   Bass   Mid-High
3 Parts

20 Hz   20 kHz

Other Brands

150 Hz
Bass Deep Bass   Mid-High
2 Parts

Mid-High
Bass
Deep Bass → Subwoofer

Mid-High
Bass Deep Bass → Subwoofer

Without Bass Management No horizontal sound localisation

Bass Management

Mid-high range auditory sound image

Low range auditory sound image

With Bass Management Horizontal sound localisation achieved

Bass Management

Ideal sound image = Auditory sound image

魂 **[tamashi]**
soul/spirit/will

AIR Studios Sound Tuning

LX89 **LX79**

Pioneer has a proven track record of applying its audio expertise to the creation of multi-channel sound environments, collaborating with George Martin's AIR Studios in England on numerous occasions. Established in 1969 in London, AIR Studios is now an acclaimed recording complex, favoured by many of the world's most popular and renowned musical talents. The SC-LX89 and SC-LX79 have received the AIR Studios Monitor certification.

Sound tuning with AIR Studios has been adopted the top model preceding the SC Series. The tuning session requires sound quality that exceeds the previous model. Every time, various requirements on the details of sound are presented, and clearing all the hurdles is a challenging process. As professional engineers, both sides have obsessions and strong feelings on sound, and each tuning session is an intense and serious exchange. The resulting sound is filled with the heart and soul of the engineers, backed by the long history of Pioneer.

http://www.airstudios.com/
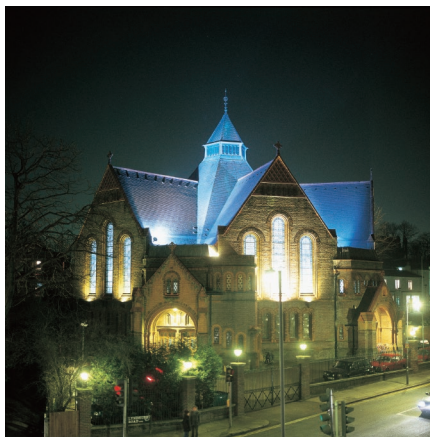
AIR Studios

Studio 6

Audio Scaler

LX89   LX79   LX59

Pioneer's Audio Scaler technology consists of Hi-bit32, Up-Sampling, and Digital Filter. The Hi-bit32 Audio Processing improves resolution and density, while the Up-Sampling reduces noise. Then the Digital Filter creates soft, natural sound and improves transient response and pre-echo effect. The three features integrate to upscale all 2-channel audio content up to 176.4 kHz/192 kHz 32-bit playback—176.4 kHz/192 kHz 32-bit by auto, and selectable from 176.4/192, 88.2/96, 44.1/48 kHz frequency, 32/24-bit rate by manual setting—offering realistic reproduction of the content. The features can be controlled on the Sound Explorer screen of the iControlAV5 app.

Audio Scaler Upscaling
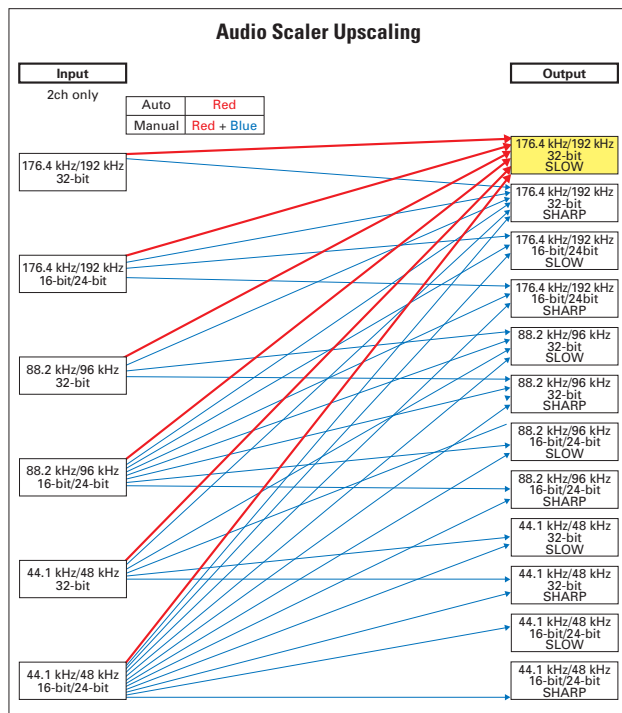
Hi-bit32 Audio Processing

The technology works to create undistorted sound, bringing out the best in the 32-bit DAC. The 32-bit DAC hardware alone does not reproduce better sound. Maximum performance is gained by applying the Hi-bit32 processing to expand signal resolution, creating more detailed, smooth sound, closer to the original analogue signal. Hi-bit32 Audio Processing also increases the sound pressure for a tactile listening experience, and the more channels you have, the more impressive it becomes. It is effective for multi-channel content on DVD/Blu-ray Disc as well as CD audio, and works with any disc player.

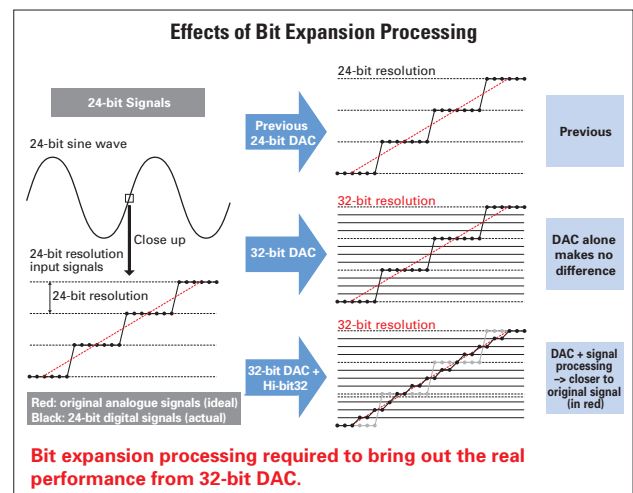**Hi-bit 32 Processing**

Actual Effects
24-bit vs 32-bit signal wave form comparison
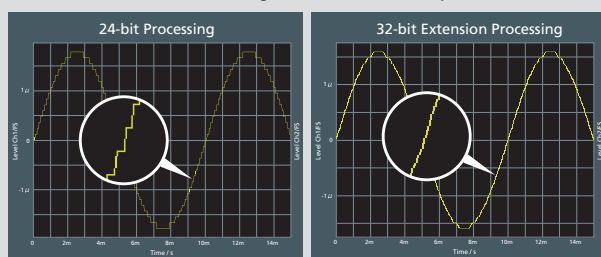
Up-Sampling (192 kHz/32-bit)

The Up-Sampling feature of the Audio Scaler upgrades the sound with reduced noise, providing maximum quality audio playback of up to 192 kHz/32-bit.
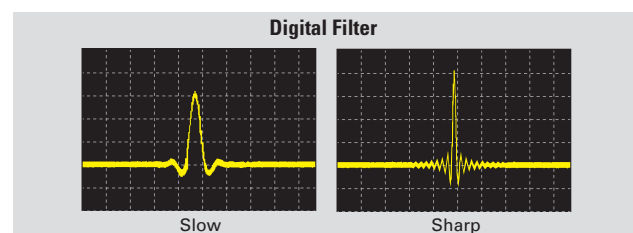
Effects of Bit Expansion Processing

Bit expansion processing required to bring out the real performance from 32-bit DAC.

Digital Filter

The digital filter lets you enjoy two types of sound characters by switching the DAC — "Slow" for soft and warm, and "Sharp" for solid and tight sound.

Digital Filter

Digital Filter

Slow   Sharp

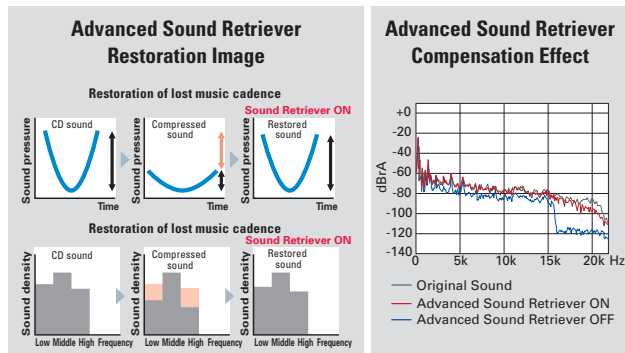### Hi-bit24 Audio Processing

LX89

Combined with the 24-bit DAC, maximum performance is gained by applying the signal processing to expand signal resolution, creating more detailed, smooth sound and increased sound pressure. The technology is effective for multi-channel content on CD/DVD, PC files less than 24-bit and works with any disc player.

Hi-bit 24 Processing

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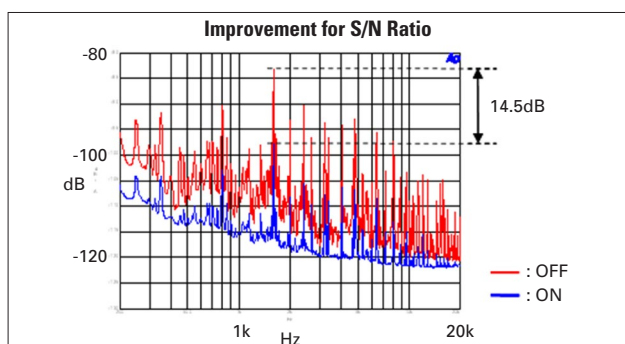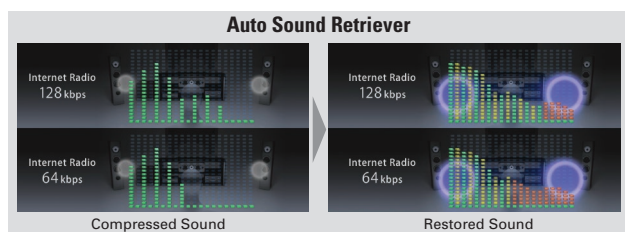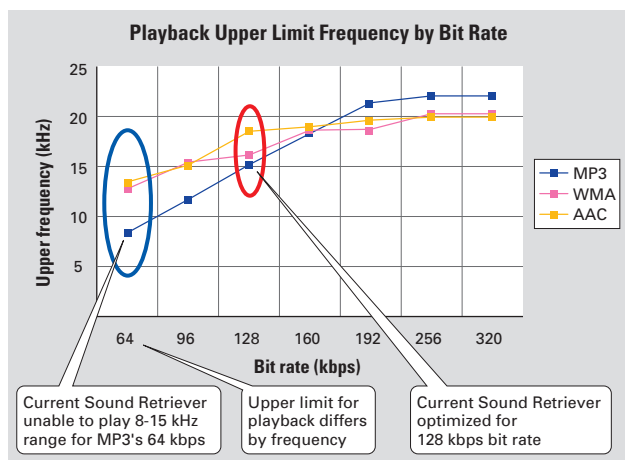## Advanced Sound Retriever

LX89 **LX79** **LX59**

The Advanced Sound Retriever restores the output of compressed audio — such as WMA, MPEG-4 AAC, and MP3 — to the level of CD sound. The technology creates new signals to restore the minor details left out during the compression process. Advanced Sound Retriever for multi-surround sound is compatible with DVD soundtracks featuring Dolby Digital or DTS.

Advanced Sound Retriever Restoration Image

Restoration of lost music cadence

CD sound | Compressed sound | Sound Retriever ON / Restored sound

Sound pressure / Time

Restoration of lost music cadence

CD sound | Compressed sound | Sound Retriever ON / Restored sound

Sound density / Low Middle High Frequency

Advanced Sound Retriever Compensation Effect

dBrA

+0
-20
-40
-60
-80
-100
-120
-140

0   5k   10k   15k   20k Hz

— Original Sound
— Advanced Sound Retriever ON
— Advanced Sound Retriever OFF

Auto Sound Retriever

LX89 **LX79** **LX59**

Since the Advanced Sound Retriever is designed with an algorithm optimised 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.

Playback Upper Limit Frequency by Bit Rate

Upper frequency (kHz)

25
20
15
10
5

64   96   128   160   192   256   320

Bit rate (kbps)

■ MP3
■ WMA
■ AAC

Current Sound Retriever unable to play 8-15 kHz range for MP3's 64 kbps

Upper limit for playback differs by frequency

Current Sound Retriever optimized for 128 kbps bit rate

Auto Sound Retriever

Internet Radio 128 kbps
Internet Radio 64 kbps

Compressed Sound

Internet Radio 128 kbps
Internet Radio 64 kbps

Restored Sound

Improvement for S/N Ratio

-80

-100

dB

-120

14.5dB

1k   Hz   20k

— : OFF
— : ON

Auto Sound Retriever for ARC

LX89 **LX79** **LX59**

With digital broadcast, although images are displayed in high-definition, the audio quality is not as high since they are compressed with various bit rates. By applying Pioneer's Auto Sound Retriever feature to TV broadcast signals, it adjusts the effects according to the bit rate transferred via HDMI's ARC (Audio Return Channel), letting you enjoy digital TV broadcast in high-definition sound via Pioneer AV receiver.

Sound Retriever Link

LX89 **LX79** **LX59**

Through HDMI connection, Sound Retriever Link detects the original audio file information such as source type, codec, and bit rate played on a compatible Pioneer Blu-ray Disc player, and automatically switches to the most suitable Sound Retriever. So there is no need to switch on/off according to the source. Advanced Sound Retriever is selected for Blu-ray Disc and DVD sources, and Auto Sound Retriever is selected for other sources.

* Advanced Sound Retriever is selected for all sources when connected with a non-compatible Blu-ray Disc player.

Sound Retriever AIR
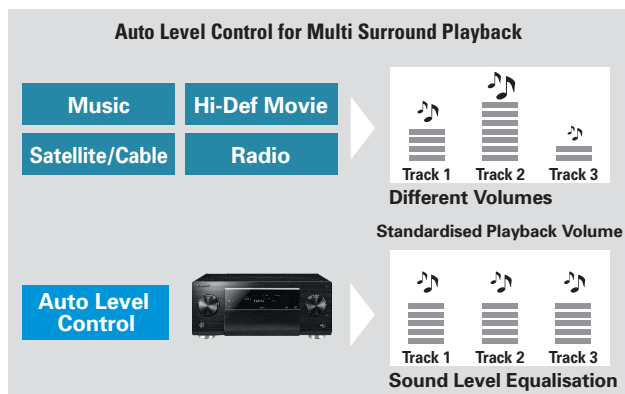
LX89 **LX79** **LX59**

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 resulting in a better S/N ratio.

Sound Retriever AIR OFF

Sound Retriever AIR ON
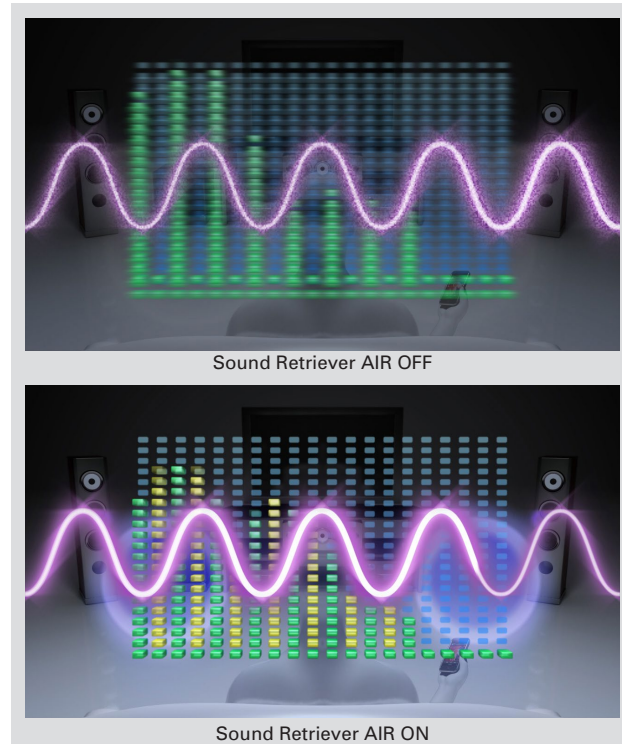
Auto Level Control

LX89   LX79   LX59

Auto Level Control equalises volume level differences between tracks when playing music from an iPod or other sources. Multi-channel Auto Level Control supports surround sound playback, maintaining a consistent level and clear audio. The function adjusts low and high frequency sounds, dialogues, surround effects etc. that are difficult to hear in low volume, to optimal levels — an ideal feature for listening at night without disturbing others.

Auto Level Control for Multi Surround Playback

| Music | Hi-Def Movie |
| Satellite/Cable | Radio |

Track 1   Track 2   Track 3
Different Volumes

Standardised Playback Volume

Auto Level Control

Track 1   Track 2   Track 3
Sound Level Equalisation

PQLS with HDMI

LX89   LX79   LX59

With the precision quartz controller on the AV receiver, Pioneer's Precision Quartz Lock System (PQLS) eliminates distortion caused by timing errors. It controls the amount of audio signals from the AV receiver to the compatible player, giving the best possible digital-to-analogue conversion.

Bit-stream

PQLS Bit-stream

Three types of PQLS are available on the AV receivers.
- PQLS 2ch Audio: For CD playback.
- PQLS Multi-Surround: For CD/DVD/BD playback, when the Blu-ray Disc player output is set to LPCM.
- PQLS Bit-stream: For CD/DVD/BD playback, all the time.

For PQLS to be effective, Control with HDMI needs to be on, and PQLS setting needs to be set to Auto.

Jitterless Transmission (PQLS)

AV Receiver

Blu-ray Disc Player

Servo Circuit   HDMI IN/OUT

Control Data Transfer

Data Transfer

A/V decoder

AUDIO DATA
AUDIO CLOCK
CONTROL DATA

HDMI IN/OUT   PLL

Clocking Crystal

DATA MEMORY   DAC

Audio signal with jitter   Jitterless signal via PQLS

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Video Scaler (1080p to 4K) with Super Resolution
LX89 LX79 LX59

Ultra HD, usually referred to as 4K, is the next generation ultra-high-resolution standard with 3,840 x 2,160 pixels or 4,096 x 2,160 pixels—four times the current HD 1080p standard. By detecting the fine texture in the image and applying appropriate compensation, a more detailed and beautiful image is created. This high-grade HD video is further elevated to an even more detailed, natural and realistic picture with the video scaler featuring super resolution. The AV receiver upscales 1080p video sources up to 4K/60p high-resolution images (4K/60p/4:4:4/24-bit, 4K/24p/4:4:4/36-bit, 4K/60p/4:2:2/36-bit) for viewing on a 4K-compatible display. The AV receivers support 18 Gbps bandwidth, allowing reproduction of 4:4:4 colour format, and are ready to bring out the best from the future generation Ultra HD devices with 18 Gbps transfer capabilities.

4K/60p Ultra HD Upscaling

Super Resolution Processing Image

| Image Analysis |
| Image Adjustment |
| Comparator |
| 1080p → 4K2K |

→ 4K/24p, 60p
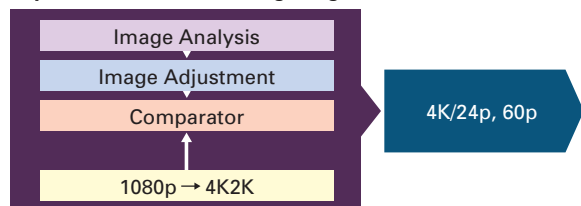
Before processing
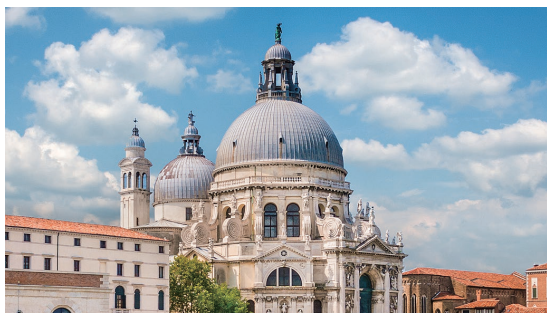
After processing

* For Illustration purpose only

Ultra HD (4K/60p/4:4:4/24-bit) Pass-Through with HDCP 2.2
LX89 LX79 LX59

The feature lets you take advantage of the highest-quality video source, by passing through 4K/60p signals for viewing on a compatible display. The AV receivers support HDCP 2.2, so by connecting to a compatible device, you can enjoy premium content such as 4K videos with digital copy protection.
* Support up to 4K/60p/4:4:4/24-bit on BD, DVD (HDMI IN 1), SAT/CABL (HDMI IN 2), HDMI OUT 1 and HDMI OUT 2.

4K/60p Ultra HD Pass-through

HDCP2.2
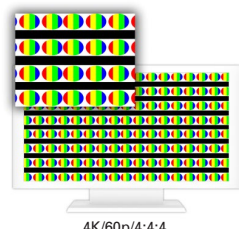
4K/60p/4:4:4
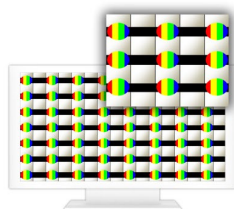
4K/60p/4:2:0

* For illustration purpose only

Next Generation Video Standard Ready
LX89 LX79 LX59

The AV receivers are ready for the next generation video standard HDR (High Dynamic Range) and BT.2020, which were adopted by Ultra HD Blu-ray™. HDR is a technology that drastically expands the brightness peak, providing a higher contrast between light and dark images, which creates even more life-like pictures. BT.2020 is a new colour-recording technology allowing a much wider gamut than the current BT 709 standard, enabling vividly rich colouration.

ITU-R BT.2020

ITU-R BT.709-5
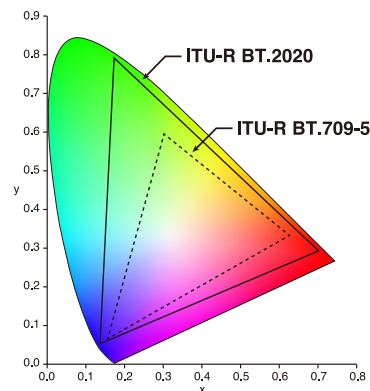
No HDR

With HDR

* For illustration purpose only

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Advanced Video Adjust

`LX89` `LX79` `LX59`

Advanced Video Adjust is a new feature which optimises 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 analogue connection. Video optimization only available for HDMI connection.

Optimised Image with Advanced Video Adjust
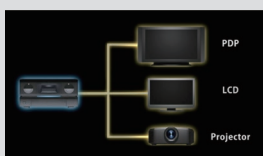
By Display Type   By Distance

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

Stream Smoother

`LX89` `LX79` `LX59`

Stream Smoother is a video adjustment feature for watching network content on your home cinema. It reduces block noise and mosquito noise on low bit rate video content such as YouTube™, offering finer and clearer images.

Stream Smoother OFF   Stream Smoother ON

* For illustration purpose only

Stream Smoother Link

`LX89` `LX79` `LX59`

Through HDMI connection, Stream Smoother Link detects the source type playing on a compatible Pioneer Blu-ray Disc player, and automatically switches Stream Smoother on or off accordingly. So there is no need for manual switching depending on the source. Stream Smoother is turned off for Blu-ray Disc and DVD sources, and turned on for network content to enrich low bit rate video quality.

* When connected with a non-compatible Blu-ray Disc player, Stream Smoother is turned off with "Auto" setting.

Triple HD Video Noise Reduction

`LX89` `LX79` `LX59`

The AV receivers feature three separate noise reduction circuits for enhanced video performance.
- Component Frame Noise Reduction (YNR/CNR): reduces Gaussian noise without blurring the picture
- Block Noise Reduction: reduces block noise found in flat areas
- Mosquito Noise Reduction: reduces noise along the outline of images

The Pioneer-exclusive advanced PureCinema I/P Converter also helps to remove distracting lines during playback.

Triple HD Noise Reduction

Triple HD Video Noise Reductions

Gaussian Noise	Block Noise	Mosquito Noise
Grainy Image	Mosaic-Like Artifacts	Hazy Edge
Clear Image	Clear Image	Clear Image
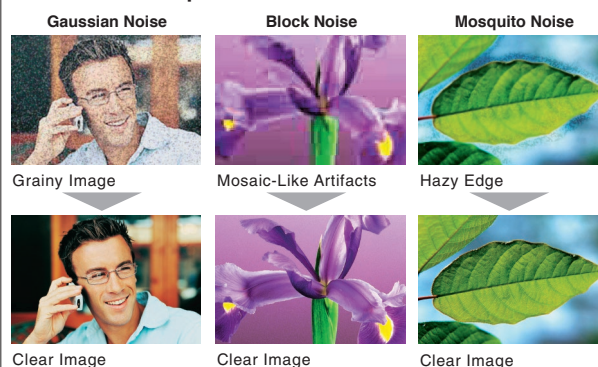
Deep Colour

`LX89` `LX79` `LX59`

Pioneer AV receivers support 36-bit Deep Colour, featuring smooth gradation steps with more accurate precision of brightness and colour information, resulting in superbly detailed, natural colour.

36-bit Deep Colour Image

24-bit (8-bit x 3)   36-bit (12-bit x 3)
256 steps   4,096 steps

24-bit 16 million colours   36-bit 68,719 million colours

Smoother Images
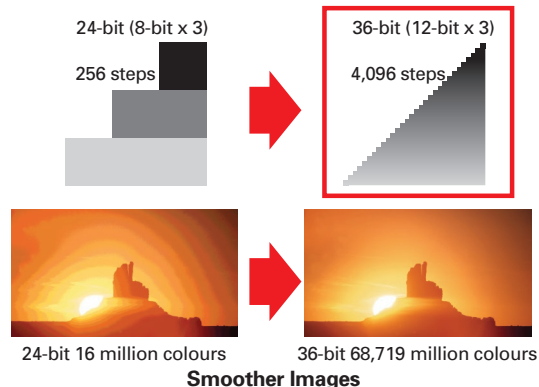
* For illustration purpose only

"x.v.Colour"

`99` `97` `95` `91`

Pioneer AV receivers support "x.v.Colour", which almost doubles the range of colours (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.Colour

* "x.v.Colour" only available for playback of discs recorded with AVCHD devices. "x.v.Colour" and the "x.v.Colour" logo are trademarks of Sony Corporation.

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DTS:X™ Ready

`LX89` `LX79` `LX59`

DTS:X is the next-generation audio codec from DTS that leverages object-based audio to enable new immersive and interactive audio experiences. Since DTS:X can automatically adapt the audio to the existing channels and speaker system, no specific speaker layout is required. Experience an immersive soundscape with incredibly rich and life-like audio. The format is backward compatible with DTS-HD Master Audio, so you can also give new life to your movie collection. With the ideal reproduction environment created by MCACC Pro, and the powerful and precise multi-channel output by the Class D Amplifier, the Pioneer AV receivers maximise the advantages of the DTS:X format.

* DTS:X will be available with firmware update.

Dialog Control

The feature lets you independently control the volume of dialog—a useful feature for people hard of hearing, or for late-night movie viewing.

Dolby Atmos®

`LX89` `LX79` `LX59`

Dolby Atmos is a unique new technology for enjoying the latest surround sound. In a movie cinema, overhead speakers are placed, with a multi-layer approach to the sound design. On top of the conventional channel-based soundtrack, object-oriented mixing is used to layer dynamic sound elements, so regardless of the cinema's speaker setup, independent sound elements can move around freely in a three-dimensional space. Compared to Dolby Digital with discrete channels, Dolby Atmos offers seamless surround sound movement with up to 64 separate speaker output and a sense of height created by the overhead speakers. The sound is completely in sync with the screen view, providing total immersion with unprecedented sound localisation and movement.

This cinema sound experience can be reproduced in your home with Pioneer's Dolby Atmos AV receiver, which not only decodes Dolby Atmos, but also supports up to 7.2.2ch speaker system with a stand-alone AV receiver, and up to 7.2.4ch system by adding an external amplifier.

What's more, with the MCACC Pro room calibration technology, the AV receiver not only adjusts the speaker distance, level, and tones, but also the phase differences for precise sound delivery. When using Dolby Atmos enabled speakers, MCACC Pro calculates the reflex path distance and also uses the Bass Management System to bring out the best from Dolby Atmos. You can fully appreciate the object effects of Dolby Atmos with more clear and accurately positioned cinema sound.
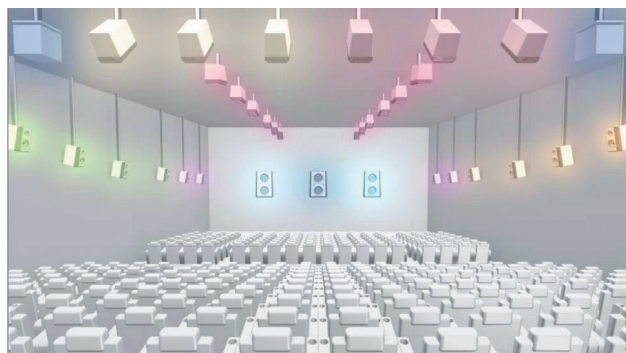
Speaker Layout of a Dolby Atmos Cinema
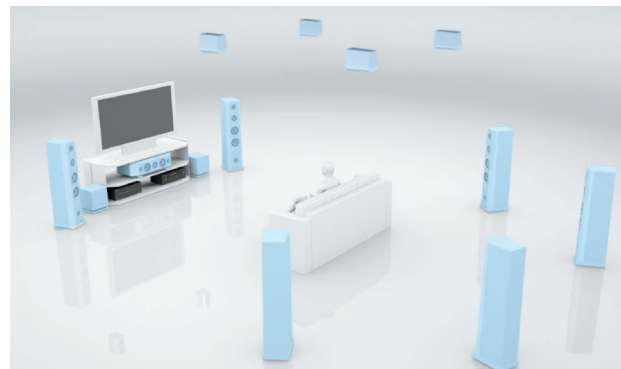
Speaker Layout Example of a Dolby Atmos Home Cinema (7.2.4ch)

DTS Neural:X™

`LX89` `LX79` `LX59`

DTS Neural:X is the latest down/up-mixing and spatial remapping technology built into DTS:X. It provides an up-mx of Neural:X-encoded and non-encoded (PCM) data and can produce up to 11.x channels, letting you enjoy a more realistic atmosphere regardless of the original audio format.

DTS Neo:X Ⅰ11.1

`LX89` `LX79` `LX59`

The AV receivers feature DTS Neo:X 11.1ch surround sound format. Using 5.1ch or 7.1ch soundtracks, the format creates additional height and wide channels, and produces an enveloping a semi-spherical sound field for a lifelike 3D sound for music, games, or movies.

Dolby Surround

`LX89` `LX79` `LX59`

The new surround sound effectively up-mixes legacy channel-based content for reproduction on a Dolby Atmos environment, expanding the original source to fill the speaker layout of a Dolby Atmos system.

DTS-HD Master Audio™

`LX89` `LX79` `LX59`

With DTS-HD Master Audio, you can enjoy sound that is bit-for-bit identical to the studio master. DTS-HD Master Audio delivers audio at extremely high variable bit rates of 24.5 Mbps, which far exceeds standard DVDs. DTS-HD Master Audio offers movies and music in the pure, original state as intended by the artists.

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Dolby TrueHD

`LX89` `LX79` `LX59`

Dolby TrueHD delivers sound that is on par with the original soundtrack, letting you experience the world of true high-definition entertainment from Blu-ray Discs. With lossless encoding in up to 18 Mbps bit rate, Dolby TrueHD creates a synergy with high-definition video to offer you a home cinema experience like never before.

Loudness Management

Loudness Management frees you from annoying volume fluctuations that often occur when switching channels, programs, or input sources, by maintaining a consistent loudness-level. The function turns on/off during content playback, activating or deactivating post processing within the decoder. When the function is turned off, audio is delivered in a lossless mode.

Hi-Res Audio File Playback via USB/Network

`LX89` `LX79` `LX59`

In addition to 5.6/2.8 MHz DSD (Direct Stream Digital) file playback via USB, the Pioneer AV receivers are the first to realize DSD streaming* via wired and wireless network. As for other Hi-Res formats, up to 192 kHz/24-bit WAV, FLAC, AIFF, and Apple Lossless files can be played via USB as well as both wired and wireless network.

* DLNA compatible server or NAS capable of DSD streaming required

The product with this logo is conformed to Hi-Res Audio standard defined by Japan Audio Society. This logo is used under license from Japan Audio Society.

Multi-channel Audio Playback via USB/Network

`LX89` `LX79` `LX59`

Pioneer's AV receivers are the first in the industry to realise multichannel (5.0ch/5.1ch) playback of high-resolution audio formats. You can fully enjoy recordings of live concerts and classical music without setting up a special system. For FLAC files, 96 kHz/24-bit multi-channel playback is available via USB and wired/wireless network, while for WAV format, 192 kHz/24-bit files can be played back by USB, 96 kHz/24-bit files via wired network, and 48 kHz/24-bit files via wireless network.

Native DSD Playback via USB-DAC with DoP Transmission

`LX89`

The AV receiver allows direct USB connection with your computer for audio playback, with signal transfer via USB-DAC. The result is high-quality sound reproduction with reduced jitter, reproducing master quality sound with extremely precise audio signals. A dedicated driver can be installed to your computer from the included CD-ROM. The AV receiver supports Native DSD playback by DoP (DSD over PCM) transmission.

DSD Music File Playback via USB

`LX89` `LX79` `LX59`

The AV receivers can play 5.6 MHz or 2.8 MHz DSD (Direct Stream Digital) files via network or from a USB memory stick, letting you enjoy superior sound without any special players.

DSD Disc (SACD) Playback via HDMI

`LX89` `LX79` `LX59`

The AV receivers can play high-quality DSD audio files from SACD discs via HDMI in 2.8 MHz.

DSD Playability Comparison

	Via USB-B	Via USB-A				Via HDMI		
SC-LX89	Native DSD Playback via USB-DAC with DoP 2.8 MHz (2ch)	DSD Direct Playback 5.6 MHz (2ch)	DSD Direct Playback 2.8 MHz (2ch)	DSD Playback with PCM Transcode 5.6 MHz (2ch)	DSD Playback with PCM Transcode 2.8 MHz (2ch)	DSD Disc (SACD) Direct Playback 2.8 MHz (2ch)	DSD Disc (SACD) Playback with PCM Transcode 2.8 MHz (5.1ch)	DSD Disc (SACD) Playback with PCM Transcode 2.8 MHz (2ch)
SC-LX79								
SC-LX59								

Various Music File Playback via USB/Network/HDMI

`LX89` `LX79` `LX59`

Various music files can be played back via USB or HDMI (SACD). With DLNA and AirPlay features, the AV receivers let you stream audio from compatible devices. Through a DLNA app, you can now stream WMA, MP3, AAC, WAV, FLAC, AIFF, and Apple Lossless audio files stored on your DMS.

Playable Formats

Format	Extension	Stream		SC-LX89/SC-LX-79/SC-LX59
via USB/Network				
MP3*	.mp3	MPEG-1Audio Layer-3	Sampling Frequency	32/44.1/48 kHz
			Quantisation Bit Rate	16 bit
			Channels	2ch
			VBR/CBR	Supported/Supported
WAV	.wav	WAV	Sampling Frequency	32/44.1/48/88.2/96/176.4/192 kHz
			Quantisation Bit Rate	16 bit/24 bit
			Channels	5.1/5.0ch**, 2ch
WMA	.wma	WMA2/7/8/9	Sampling Frequency	32/44.1/48 kHz
			Quantisation Bit Rate	16 bit
			Channels	2ch
			Bit Rate	5-320 kbps
			VBR/CBR	Supported/Supported
AAC	.m4a .aac .3gp .3g2	MPEG-4 AAC LC MPEG-4 HE AAC (aacPlus v 1/2)	Sampling Frequency	32/44.1/48 kHz
			Quantisation Bit Rate	16 bit
			Channels	2ch
			Bit Rate	16-320 kbps
			VBR/CBR	Supported/Supported
Apple Lossless	.m4a .mp4	ALAC	Sampling Frequency	32/44.1/48/88.2/96/176.4/192 kHz
			Quantisation Bit Rate	16 bit/24 bit
			Channels	2ch
FLAC	.flac	FLAC	Sampling Frequency	32/44.1/48/88.2/96/176.4/192 kHz
			Quantisation Bit Rate	16 bit/24 bit
			Channels	5.1/5.0ch***, 2ch
AIFF	.aif .aiff	AIFF	Sampling Frequency	32/44.1/48/88.2/96/176.4/192 kHz
			Quantisation Bit Rate	16 bit/24 bit
			Channels	2ch
DSD	.dff .dsf	DSDIFF DSF	Sampling Frequency	2.8224/5.6448 MHz
			Quantisation Bit Rate	1 bit
			Channels	2ch
via HDMI				
DSD Disc (SACD)	–	–	Sampling Frequency	2.8224 MHz
			Quantisation Bit Rate	1 bit
			Channels	5.1ch/2ch

* MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson Multimedia

** Up to 96 kHz via wired network, up to 48 kHz via wireless network

*** Up to 96 kHz via USB and wired network, up to 48 kHz via wireless network.

Variable File Play Action

`LX89` `LX79` `LX59`

Various features to easily access and play your music library are available for the AV receivers. Using the remote control, you can fast forward/fast rewind during playback, and sort songs (alphabetical/track order). In addition to these operations, the new iControlAV5 app lets you search songs and albums. This feature works even if you don't remember the exact title.

Search Songs on iControlAV5
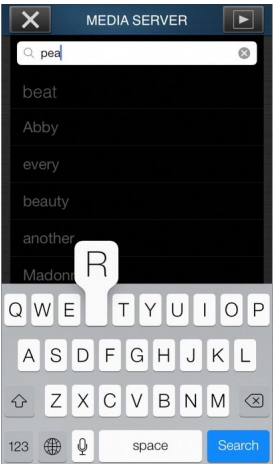
Gapless Playback

`LX89` `LX79` `LX59`

Enjoy smooth, uninterrupted audio playback for WAV, FLAC, AIFF, AAC, MP3, Apple Lossless, and DSD files. The function is ideal for listening to music tracks intended for continuous play, such as classical music, progressive rock, concept albums, or live recordings.

* Gapless playback only available for DLNA 2-Box Pull and USB memory playback. Not available for WAV/FLAC multi-channel streaming.

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Virtual Speakers

`LX89` `LX79` `LX59`

By turning on Virtual Surround Back, Virtual Height, and Virtual Wide modes, you can experience virtual 11.1-channel sound from a 5.1-channel speaker setting (Fig. 1). The sound field can be adjusted with intuitive control on your iPod touch/iPhone/iPad or Android device using the iControlAV5 application.

Virtual Speakers

Virtual Wide

Virtual Wide mode (Fig. 2) is a useful solution for creating the effects of front wide speakers, letting you enjoy surround sound in a rich sound field — all without placing extra speakers.

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. 3) 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. 4). It simulates 7.1-channel surround sound, giving the impression of surround back speakers when listening to a 5.1-channel source. What's more, by turning on both Virtual Height and Virtual Surround Back modes, you can enjoy virtual 9.1-channel sound on a 5.1-channel speaker setting. By adding front wide speakers, you can enjoy virtual 11.1-channel sound from a 7.1-channel speaker layout.

Rendering Mode

`LX89` `LX79` `LX59`

The mode lets you switch the decoding signal between OBJECT (object bas) and LEGACY (channel base) during content playback. If OBJECT is selected when non-Dolby Atmos content is being played, the listening mode switches to Dolby Surround. You can compare between object-based, channel-based, and up-mixed sound.

Speaker Layout Examples
Virtual speakers shown in orange

Fig. 1 — **Virtual 11.1 ch**

Fig. 2 — **Virtual Wide Mode**

Fig. 3 — **Virtual Height Mode**

Fig. 4 — **Virtual Surround Back Mode**

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Construction
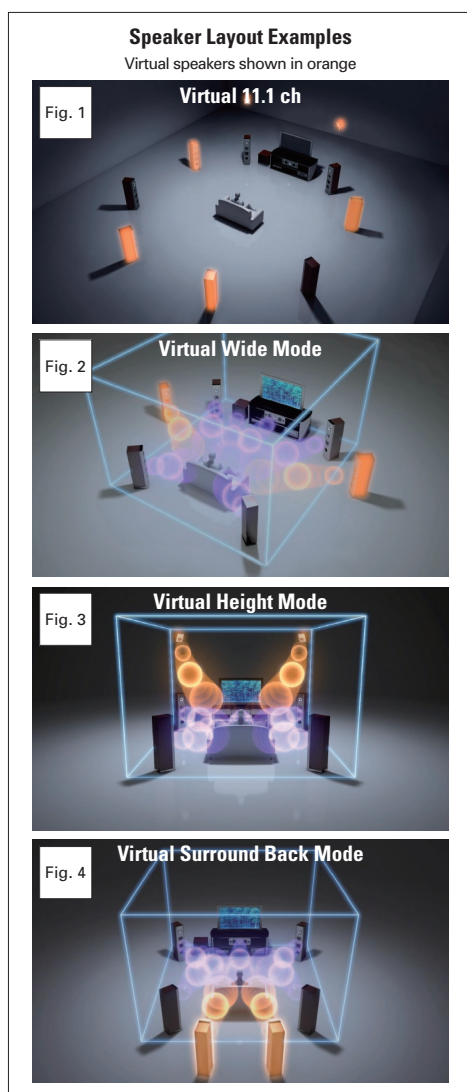
11ch Speaker Configurations

LX89　LX79　LX59

With speaker terminals for 11 channels and PRE OUT EXTRA 2 terminals*, various speaker layouts are available to suit your taste or usage patterns. Seven configurations ([A-1], [A-2], [B], [C], [D], [E], [F-1]) are available for optimum performance when using Dolby Atmos, and these patterns can be used for Dolby Atmos-enabled speakers.

* Connection with an external amplifier required

■ 7.2.2/5.2.2/7.2ch Setting

[A-1] 7.2.2ch Surround System (Surround Back/Top Middle) Connection
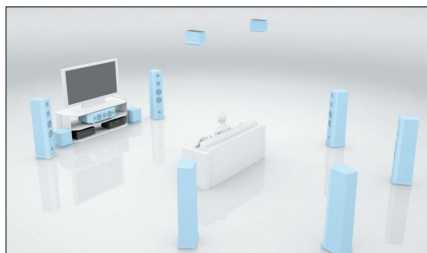
[A-2] 5.2.2ch Surround System (Top Middle) Connection
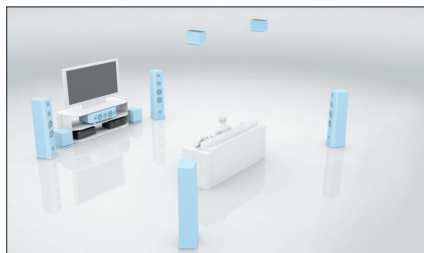
[A-3] 7.2ch Surround System Connection
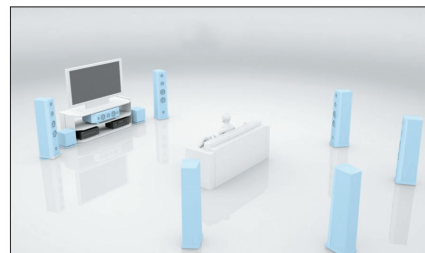
■ 9.2.2ch TMd/FH Setting

[B] 9.2.2ch Surround System (Top Middle/Front Height) Connection

Simultaneous output from top middle and front height speakers not available. Front wide is output from the PRE PUT EXTRA 2 terminals of the receiver. Connect the EXTRA 2 terminal to the external amplifier, and connect the extra amplifier to the front wide speakers.

■ 7.2.4ch SB Pre Out Setting

[C] 7.2.4ch Surround System (Surround Back Pre Out) Connection
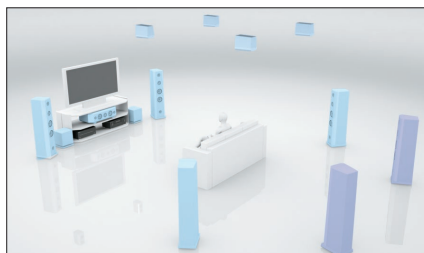
Surround back is output from the PRE PUT EXTRA 2 terminals of the receiver. Connect the EXTRA 2 terminal to the external amplifier, and connect the extra amplifier to the surround back speakers.

■ 7.2.4ch Front Pre Out Setting

[D] 7.2.4ch Surround System (Front Pre Out) Connection
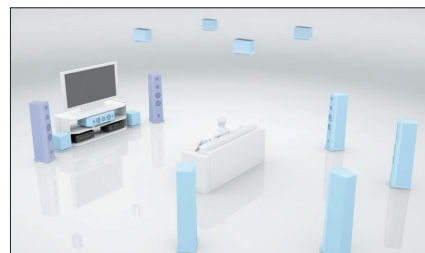
Front is output from the PRE PUT EXTRA 2 terminals of the receiver. Connect the EXTRA 2 terminal to the external amplifier, and connect the extra amplifier to the front speakers.

■ 7.2.2ch Front Bi-Amp Setting

[E] 7.2.2ch Surround System & Front Bi-Amp Connection
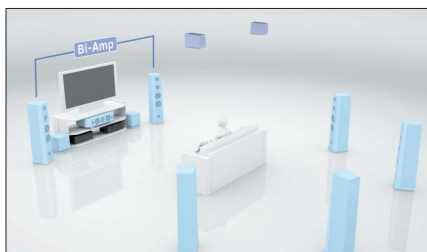
Top middle is output from the PRE PUT EXTRA 2 terminals of the receiver. Connect the EXTRA 2 terminal to the external amplifier, and connect the extra amplifier to the top middle speakers.

■ 7.2.2/7.2ch + SP-B Setting

[F-1] 7.2.2ch Surround System & Speaker B Connection
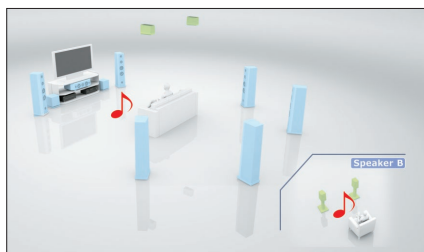
Simultaneous output from top middle and speaker B not available.

[F-2] 7.2ch Surround System & Speaker B Connection
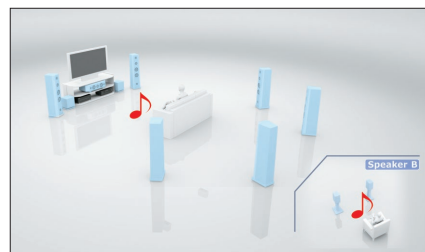
■ 7.2ch + HDZONE Setting

[G] 7.2ch Surround System & HDZONE Connection (Multi Zone)
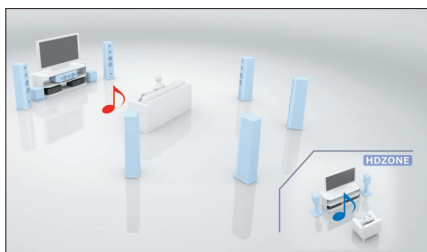
■ 5.2ch Bi-Amp + HDZONE Setting

[H] 5.2ch Surround System & Front Bi-Amp Connection & HDZONE Connection (Multi Zone)
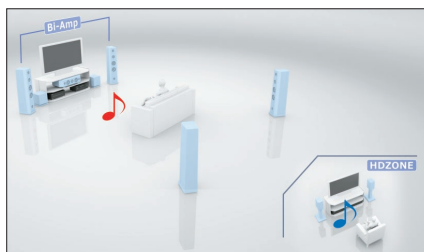
■ 5.2ch + SP-B Bi-Amp Setting

[I] 5.2ch Surround System & Speaker B Bi-Amp Connection

Purple speakers: connected with external amp
Green speakers: exclusive use (not simultaneous)

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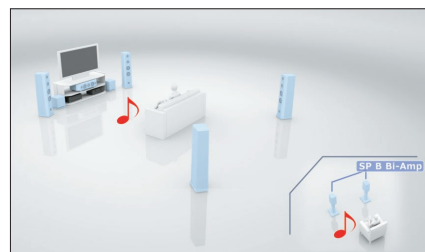
■ 5.2ch F + Surr Bi-Amp Setting

[J] 5.2ch Surround System & Front and Surround Bi-Amp Connection
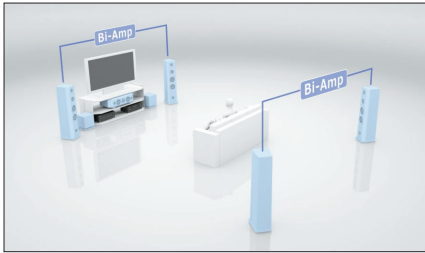
■ 5.2ch F + C Bi-Amp Setting

[K] 5.2ch Surround System & Front and Center Bi-Amp Connection
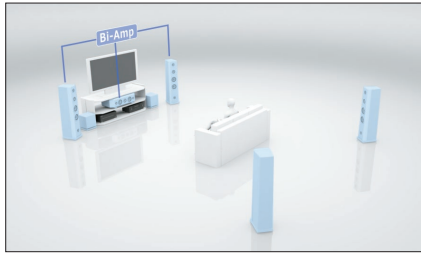
■ 5.2ch C + Surr Bi-Amp Setting

[L] 5.2ch Surround System & Center and Surround Bi-Amp Connection
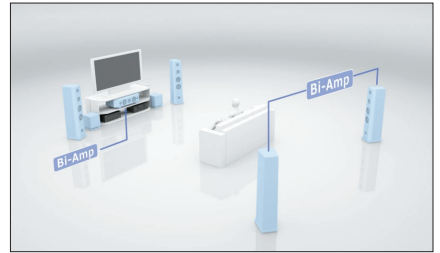
■ Multi-ZONE Music Setting

[M] Multi-ZONE Music Connection
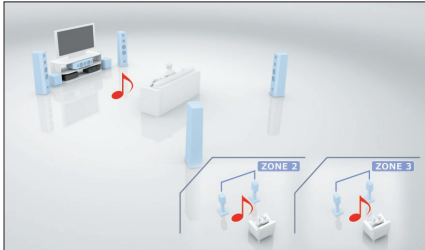
■ 5.2ch + ZONE 2 + HDZONE Setting

[N] 5.2ch Surround System & ZONE 2/HDZONE Connection (Multi Zone)
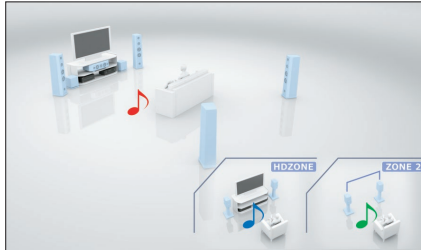
This connection can be used for Multi-ZONE Music.

■ 5.2ch + ZONE 2 + ZONE 3 Setting

[O] 5.2ch Surround System & ZONE 2/ZONE 3 Connection (Multi Zone)
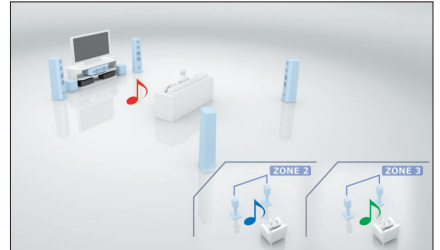
This connection can be used for Multi-ZONE Music.

Purple speakers: connected with external amp
Green speakers: exclusive use (not simultaneous)

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Pre-Amp Mode

LX89 LX79 LX59

Pre-amp Mode shuts down the power supply to the power amplifier, providing more clear and pure sound when using the AV receiver as a pre-amplifier.

Pre-Amp Mode

ON (Normal Use)	9ch drive
OFF	0ch drive +
Front OFF	7ch drive + Front L / R
F&C OFF	6ch drive + Front L / R +C

Driven by external power amp   * Example image with wide speakers
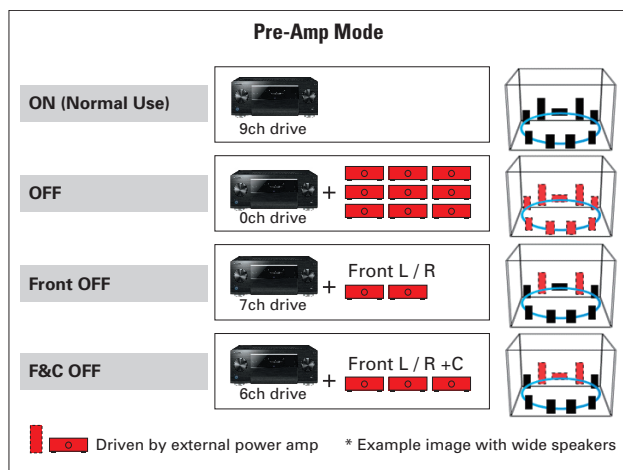
Advanced Surround Modes

LX89 LX79 LX59

The AV receivers feature 10+1 Advanced Surround Modes — Action, Drama, Advanced Game, Sports, Classical, Rock/Pop, Front Stage Surround, Sound Retriever AIR (see page 10 for details), ECO Mode 1, ECO Mode 2 + Phones Surround — for an optimized sound for your entertainment.

Extended Stereo

LX89 LX79 LX59

The mode provides multi-channel sound from stereo sources, by delivering the L/R sound from all speakers.

Front Stage Surround Advance

LX89 LX79 LX59

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.

Front Stage Surround Advance Sound Image

Optimum Surround

LX89 LX79 LX59

Dialogue, bass, and surround sound are the three elements of cinema sound. When soundtracks are played on a home cinema at a much lower volume, the impression may become quite different. Optimum Surround is a Pioneer-exclusive listening mode for solving this problem, developed through repeated interviews with actual film makers. For each scene, this technology automatically optimises the balance of the three elements with an original algorithm. Bring home the real thrills of the movie as intended by the creators.

Three Elements of Cinema Sound Controlled by Optimum Surround

Bass Boost   Dialogue Enhancement

Surround Sound Enhancement

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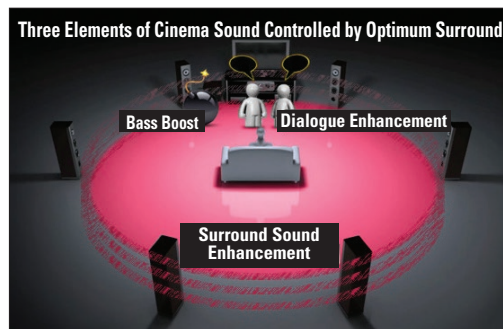
USB-DAC

LX89

The AV receiver allows direct USB connection with a computer*, without having to access the home network. What's more, signal transfer is done with USB asynchronous transfer mode, which controls the transfer process 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, even for Hi-bit32 Audio Processing.

* Driver download from Pioneer website required

Asynchronous USB-DAC

Synchronous Transfer — Synchronous — Sync with PC clock — USB-DAC — USB Connection — PC — Speakers

Asynchronous Transfer — Asynchronous — AV receiver's master clock used; no sync with PC clock — USB Connection — PC — Speakers
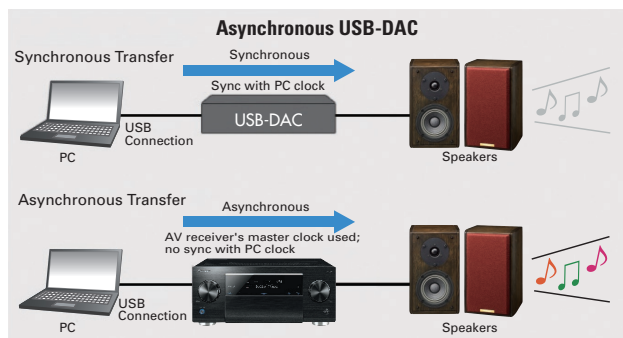
HDMI® (4K@60, 3D, ARC)

LX89 LX79 LX59

Pioneer's latest AV receivers feature HDMI with 3D technology. You can enjoy the 3D Blu-ray Discs, games, and broadcasts by combining the AV 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 AV 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 4K/60p 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.

3D Compatible

ARC (Audio Return Channel)

Not ARC Compatible — Optical Output — HDMI Input — Optical Digital Cable — HDMI Cable — Optical Input — HDMI Output

ARC Compatible (Both TV and AV Receiver) — HDMI Input — HDMI Cable — HDMI Output

With ARC, only one HDMI cable required
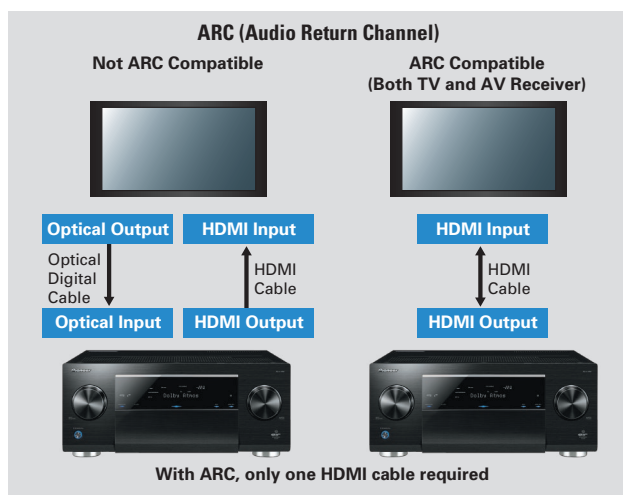
Made for iPod and iPhone

LX89 LX79 LX59

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

* Supports iPhone 6, iPhone 6 Plus, iPhone 5s, iPhone 5c, iPhone 5, iPhone 4s, iPhone 4, iPhone 3GS, iPod touch 5G/4G, iPod nano 7G/6G/5G/4G

Android™ Audio/Video Playback with MHL 2™

LX89 LX79 LX59

One of the HDMI terminals is MHL 2 (Mobile High-Definition Link) compatible, letting you connect an Android device with a MHL cable. High-definition and 3D video can be displayed on your HD or 3D TV with multi-channel sound, while also charging your device.

* MHL cable required

MHL Cable (optional)

Front USB Input

LX89 LX79 LX59

The front panel USB input terminal allows straightforward connection to a USB memory stick. This plug and play connectivity enables you to easily play music files or watch JPEG pictures.

USB

USB Terminal

MCACC SETUP MIC   5V⎓1A

SC-LX89

DLNA Certified™ (1.5)

`LX89` `LX79` `LX59`

The AV receivers are 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/Mac. For example, you can play music content* from a PC/Mac in another room, from a separate device in your living room. As a DMR (2-Box Push System), the AV receivers can also play received audio data when the user controls the DMS. For details on playable formats, see chart on page 15.

DMR

* Depending on file structure and server capacity, it may not be possible to play certain files, including those listed as playable formats on page 15. Playback of DRM protected commercial content requiring DTCP-IP link protection is not supported.

DLNA 2-Box Pull System

Server
Home Network
1. File Search
DMS
2. Stream
Player & Controller
DMP
Remote Control

DLNA 2-Box Push System

Server & Controller
Windows 7 OS PC
DMS
Home Network
Stream
Renderer
DMR

DLNA 3-Box System
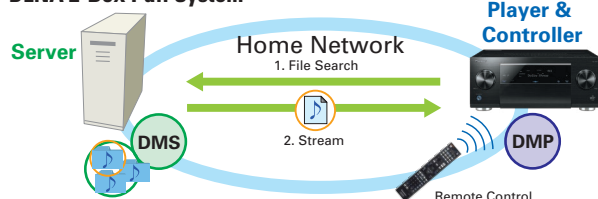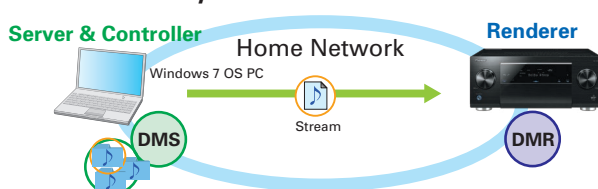
Controller
Smartphone
DMC application required
DMC
Windows 8/Windows 7 OS PC
Windows Media player
2. Play
Home Network
1. DMS Library Info
Server
DMS
Renderer
DMR
3. Stream
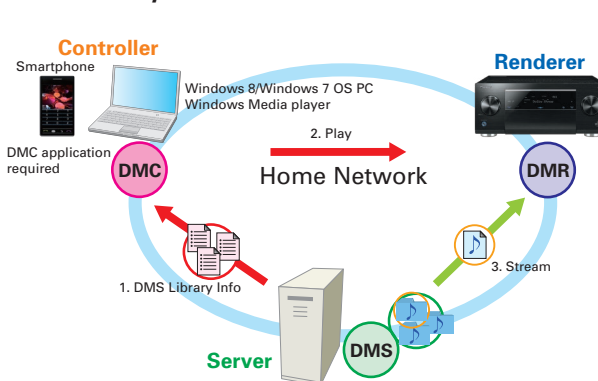
Digital Media Server (DMS):
Stores and distributes content to DMP/DMR
Example: PC

Digital Media Player (DMP):
Finds and plays content on DMS
Example: TV, stereo/home cinema, 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 DMS, which finds content on DMS
Example: TV, AV receiver, remote speakers

AirPlay Wireless Audio

`LX89` `LX79` `LX59`

AirPlay — Enthusiasts have complete access, control and playback of their entire iTunes music library wirelessly through their AV receiver. Users can quickly and easily enjoy all their music with song information and album art simultaneously displayed on a connected monitor/TV.

AirPlay

* Available features depend on iPod/iPhone/iPad model For details on iPod compatibility, visit http://pioneer.jp/homeav/support/ios/eu

AirPlay Connection Examples

iPhone/iPad
PC/Mac
Stream
Wireless LAN or
Wired LAN
Router
Wired LAN
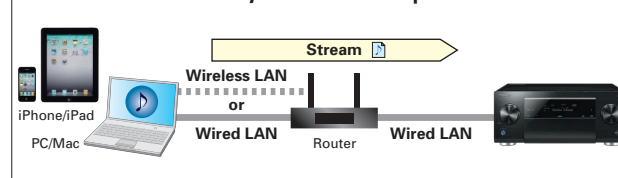
HTC Connect™ Certified

`LX89` `LX79` `LX59`

Pioneer is the first leading partner to provide HTC Connect certified devices. Through wireless transmission, HTC Connect lets you easily stream high-quality audio from compatible devices such as Android phones, with no need for a separate app.

htc connect™

Compatible with Windows 8.1/Windows 8

`LX89` `LX79` `LX59`

The AV receivers are compatible with Windows 8.1/ Windows 8*, letting you easily stream music, video, or photos from compatible PCs on your home network.

* For SC-LX89

Windows 8 Compatible

Internet Radio (vTuner)

`LX89` `LX79` `LX59`

The AV receivers come 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/Mac. 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/Mac*, and register the desired stations to your favorites list. Then, you can easily tune in to the radio stations from the AV receiver.

Internet Radio

* Access code required

Spotify® Digital Music-Streaming Service Ready

`LX89` `LX79` `LX59`

Enjoy on-demand access to millions of songs with Spotify's digital music-streaming service. With the wide range of music selection, you're sure to find a fitting song for your mood or occasion, right at your fingertips. You can make your own choice, or let Spotify surprise you. The AV receivers are ready for the Connect from Spotify, which lets you select songs on your Spotify app for listening on your audio system.

Spotify

* Spotify App, iPhone/iPod touch/iPad, and subscription required. For service availability in your country check www.spotify.com.

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Ready for Start-up Navi App

LX89　LX79　LX59

A special app is available to help you easily set up the AV receiver via Wi-Fi with your smartphone. After opening the package, scan the QR code on the Quick Start Guide with your iPod touch/iPhone/iPad or Android device connected to your home network, and download the Start-up Navi app. As you proceed with the wizard, the network set-up for your AV receiver will be completed smoothly. Then, in coordination with the AVNavigator, the app lets you do all the initial settings of the AV receiver.

Start-up Navi App
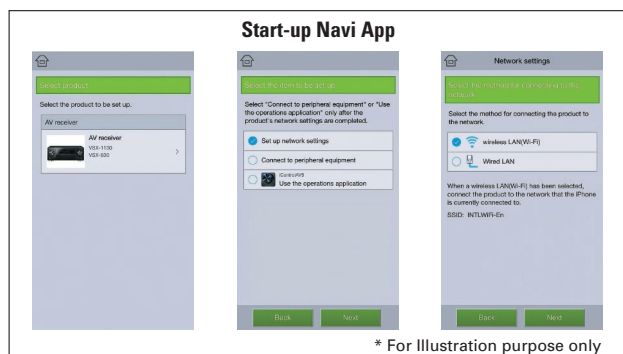
* For Illustration purpose only

Ready for iControlAV5

LX89　LX79　LX59

iControlAV5 is an iPod touch, iPhone and iPad application developed by Pioneer, freely downloadable from the App Store.

iControlAV5

It is also compatible with Android, and available from Google Play. On a simple and intuitive interface, the application allows you to use your device as a remote for operating the AV receiver's functions such as VOLUME CONTROL, INPUT SELECT, LISTENING MODE, BALANCE, EMPHASIS CONTROL for woofer and center speakers, PUSH PLAYER, and ECO MANAGER. With the SOUND EXPLORER function, you can easily adjust various sound parameters in a fun and intuitive operation. You can also control the basic functions of Pioneer's Blu-ray Disc players.

The latest version comes with improved user interface and new features including the AV SCALER, new STATUS VIEWER, and CURSOR.

* AV receiver needs to be connected to a wired LAN in a wireless LAN network. Some functions may not be available depending on the AV receiver.

iControlAV5

OPENING　　　　　　　HOME
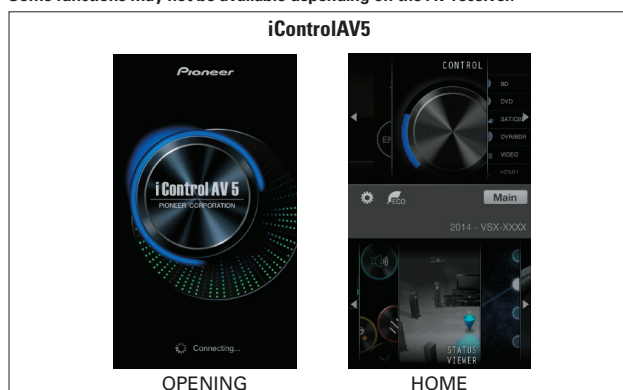
AV SCALER

The AV SCALER lets you easily select the input and output signals by drawing a line with your finger.

AV SCALER
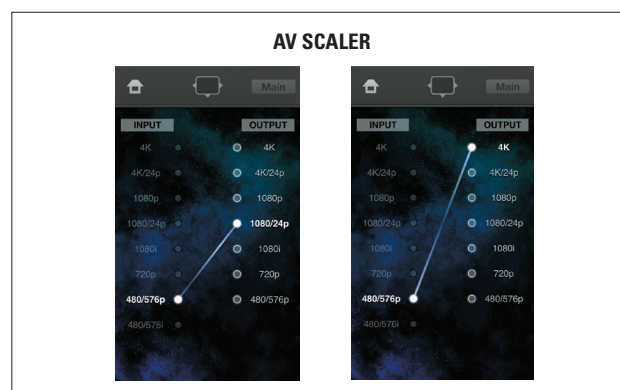
STATUS VIEWER

The new STATUS VIEWER provides graphical display of input/output and status of the playing content, and the image of both real and virtual speakers. You can enjoy intuitive control for Input, Link, Phase, and Channel Level.

STATUS VIEWER
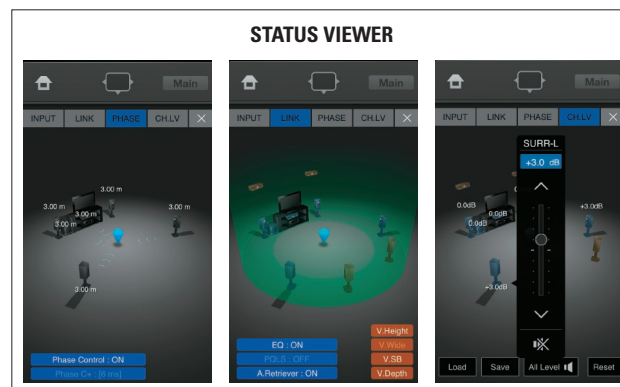
CURSOR

For the currently used function, up/down/left/right operations can be done on the app, instead of using the remote control. The button display changes to correspond to the function on the AV receiver.

CURSOR
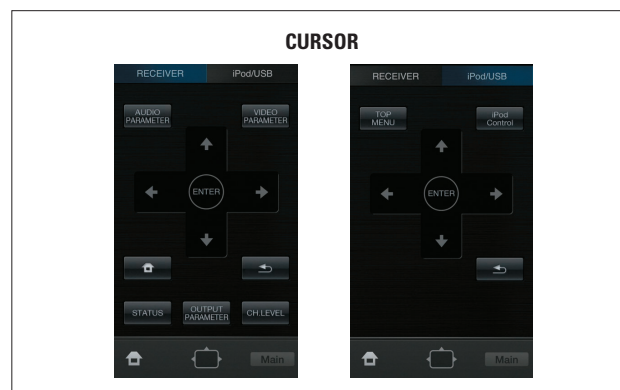
SOUND EXPLORER

SOUND EXPLORER lets you easily adjust various sound parameters with intuitive and pleasing operation. It comes in three operation modes. With Fixed Position mode, all icons are neatly positioned in rows. The screen on the playful Drop Icon mode displays continuously falling icons. All List mode shows the description and status for each setting, with a link to YouTube video clip explaining the feature.

Adjustable sound parameters include PQLS, EQ, Standing Wave Control, Phase Control, Auto Phase Control Plus, LFE ATT, Tone, Auto Sound Retriever, Digital Noise Reduction, Dialog Enhancement, X-Curve, Hi-bit24, and Virtual Speakers.

* Adjustable sound parameters differ by model.

SOUND EXPLORER

PUSH PLAYER

You can directly stream music stored on your device for playback via the AV receiver.

PUSH PLAYER

ECO MANAGER

The feature is a dedicated page for energy efficient settings (During Playback/At Stand-By/When Not in Use) on your AV receiver. You can select ECO Mode 1 or 2 for playback settings.

ECO Mode

ECO Mode 1 features moderate energy saving operation while maintaining high-quality sound, ideal for CD music, 2ch audio files, and internet radio. The higher energy-saving ECO Mode 2 features moderate sound quality, suitable for content with dynamic sound such as movies (multi-ch/2ch) or live concerts. The ECO Mode can also be accessed from the front panel or the remote control.

ECO MANAGER for iPhone

CONTROL

You can turn the power on/off, adjust the volume, switch input/output, and change the listening mode settings.

BDP CONTROL
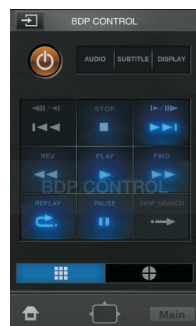
You can operate the basic functions of a connected Pioneer Blu-ray Disc player.

EMPHASIS
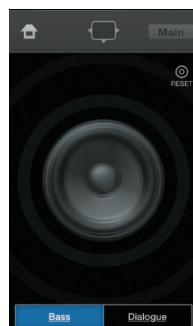
For setting the output level of Dialogue and Subwoofer/Bass.

BALANCE
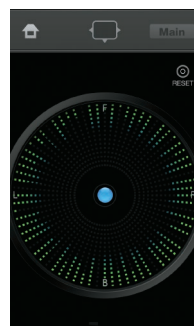
You can adjust the multi-channel sweet spot for the listening position by moving the Balance Cursor (green ball).

FINGER EQ
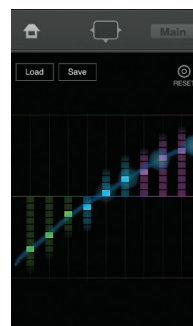
Just stroke the screen with your finger to draw the EQ curve. You can change and save the EQ characteristics.

PUSH PLAYER
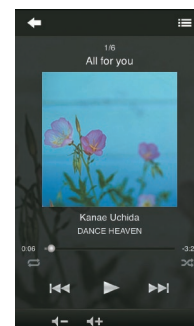
Music files stored on devices such as smarphones can be directly operated on the app, and streamed via Wi-Fi.

Built-in *Bluetooth* Wireless Technology

`LX89` `LX79` `LX59`

With the built-in *Bluetooth*® Wireless
Technology (ver. 2.1+EDR), you can easily
stream songs from compatible devices.
The AV receivers feature Advanced Audio Distribution Profile
(A2DP) and Audio/Video Remote Control Profile (AVRCP), with
support for SBC and AAC codecs.

Built-in AVNavigator

`LX89` `LX79` `LX59`

Pioneer's AVNavigator is a user-friendly support feature for the
AV receiver's wiring and operation, including the Wiring Navi and
Interactive Operation Guide. AVNavigator is now built-in, and you
can easily set up the AV receiver straight out of the box on your
PC/Mac/iPad/smartphone. The software will start up via
Windows Explorer on a PC or Bonjour on a Mac. With an iOS or
Android device, you can access the AVNavigator from the pre-
installed iControlAV5 app.
* The AV receiver and the PC/Mac/iPad/smartphone need to be on the same
home network. Control is also available via LAN cable connection with a PC/
Mac.

AVNavigator Top Menu

Wiring Navi

Start the Wiring Navi on the AVNavigator. 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 device then transmit the setup information to the
AV receiver from your PC/Mac/iPad/smartphone.

Wiring Navi
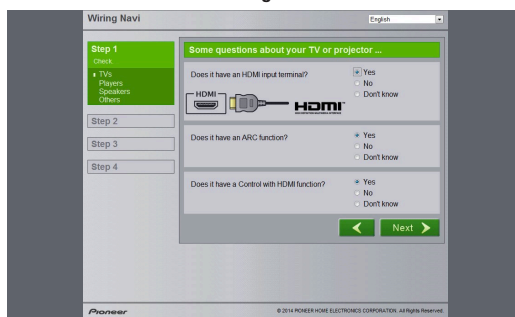
Wiring Navi
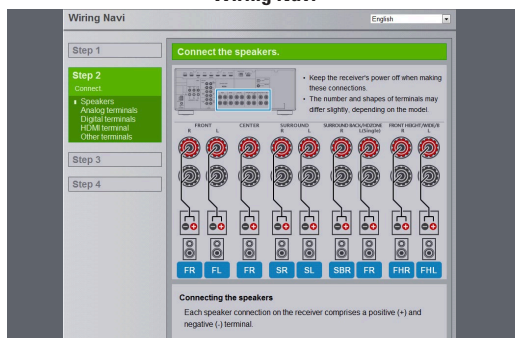
Interactive Operation Guide

After setup, you can check how to use the AV receiver with the
Interactive Operation Guide. This new feature gives a quick
tutorial on basic operations using illustrations and animations,
allowing you to start right off without referring to the user
manual. The Interactive Operation Guide can be browsed on
your PC/Mac/iPad/smartphone, and you can send a command
to the AV 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 device.

Interactive Operation Guide
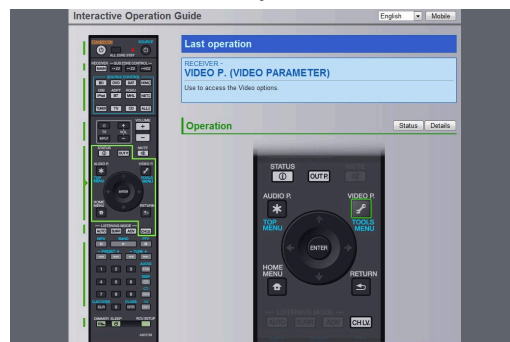
Built-in Dual Band Wi-Fi

`LX89` `LX79` `LX59`

Enjoy network features such as Hi-Res Audio
streaming via wireless LAN connection. The built-
in Wi-Fi is dual band, supporting both 5 GHz and
2.4 GHz frequency channels. By using the 5 GHz
band, you can enjoy steady and uninterrupted streaming of large
Hi-Res Audio files.

* Wi-Fi will turn off when wired LAN connection is established and network type
wired is selected.

Powered HDMI ZONE Out (Powered HDZONE)

`LX89` `LX79` `LX59`

The AV receivers are equipped with HDZONE HDMI output
terminal, for streaming HD audio/video content to a separate
room. If unused for HDZONE, the terminal can be used for MAIN
ZONE OUT 2. The new powered feature* uses the built-in
amplifier, so you can enjoy audio in HDZONE by just connecting
speakers, with no need for a separate amplifier.

* Requires speaker setting HDZONE

Powered HDMI ZONE (7.2ch + 2ch)

Zone A

Zone B

Speaker Cable

HDMI

Speaker Cable

Except SC-91
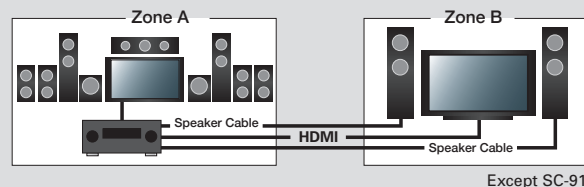
Powered HDMI ZONE (5.2ch + 2ch)

Zone A

Zone B

Speaker Cable

HDMI

Speaker Cable

Multi-Channel
Stereophonic Philosophy

Audio
Technologies

Video
Technologies

Audio Formats

Sophisticated
Listening Modes

Connectivity

Network Features

Advanced Control

Construction
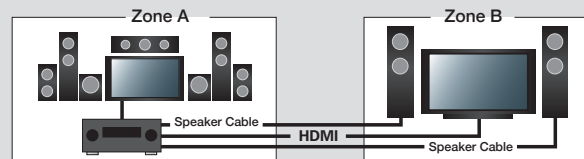
Multi-Zone (ZONE 2/3)

LX89 LX79 LX59

With Pioneer's Multi-Zone, you can play music from different sources in 2/3 zones at the same time.

SC-LX89/SC-LX-79/ SC-LX59	ZONE 2 audio, volume, and balance ZONE 3 audio, volume and balance

Multi-Zone Connection

HDZONE   ZONE 2   ZONE 3

Speaker Cable

Speaker Cable

RCA Cable

HDMI Cable
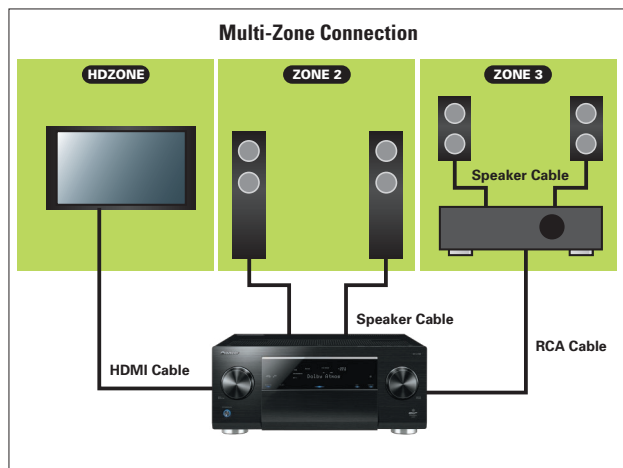
Control with HDMI

LX89 LX79 LX59

HDMI connection with compatible products allows the following linked operations:
• Volume adjustment/mute of AV 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/

Control with HDMI

Compatible TV
(including other brands)

Pioneer AV Receiver

Power on/off
Volume
Surround mode
Input

TV Remote Control

Compatible Blu-ray Disc
Player etc.

Multi-Channel
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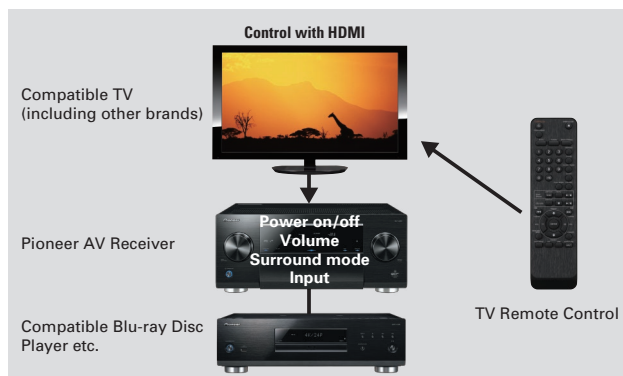
Pioneer PC Setup Application for Custom Installers

LX89 **LX79** **LX59**

This Windows application is a dedicated tool for custom installers, and is not intended for end users. It allows you to access and edit AV receiver's settings through various connection methods. The settings can be stored as files for backup and data management.

Main Features:
- AV receiver default setting management (create, edit, overwrite, save)
- AV receiver control
- AV receiver status display on application
- "Detect difference" function for comparing edited data with backup
- Multiple backup functions
    1. First (normal) backup stores latest setup
    2. Second backup stores original settings by the installer
The second backup feature is especially useful when the user wants to revert back to the original settings made by the installer.

Ways to Connect to the AV Receiver
1. Via local LAN connection (auto/manual) for direct communication
2. Through the internet for remote operation
3. By COM port for data transmission by RS-232C connection
4. Opening a stored file
5. By stand-alone mode for displaying AV receiver's default values

Required PC environment for using Pioneer PC Setup

OS	Edition	Service Pack
Windows 8	Windows 8 Pro	—
	Windows 8	—
Windows 7	Home Premium	SP1
	Professional	SP1
	Ultimate	SP1
Windows Vista	Home Basic	SP2
	Home Premium	SP2
	Ultimate	SP2

DFD (Data Flow Diagram) between PC Setup and the AV receiver
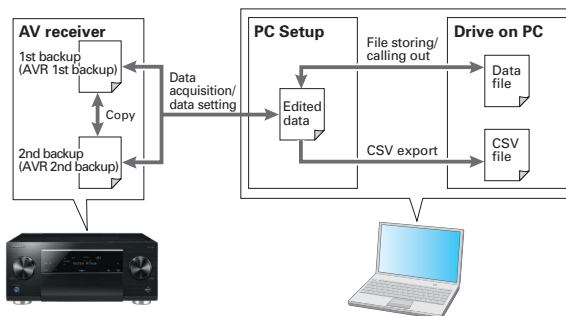
Remote Connection via the Internet
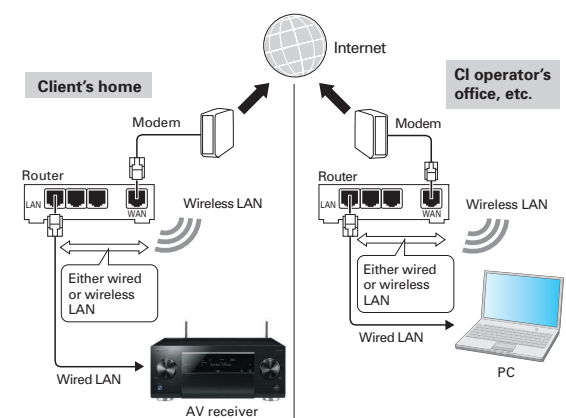
Input Setting Screen
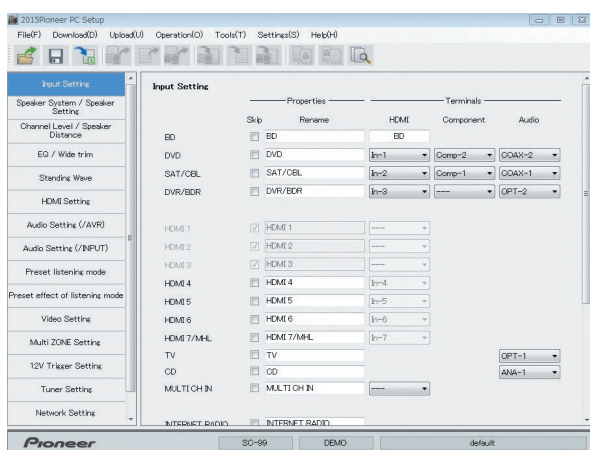
Multi ZONE Setting Screen

Multi-Channel Stereophonic Philosophy

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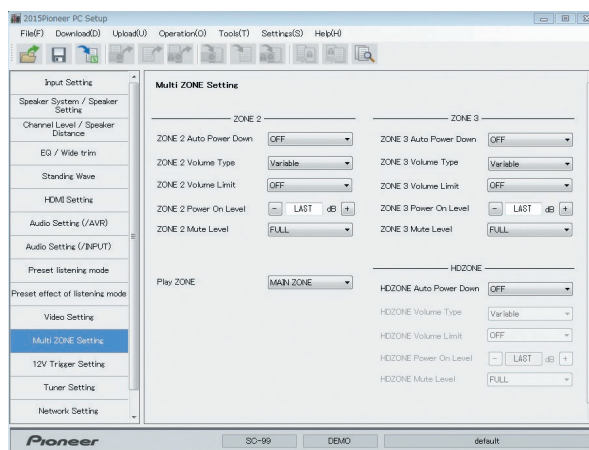
Network Setup via Web Control

`LX89` `LX79` `LX59`

By entering the AV receiver's IP address on the web browser, you can access the Web Control function to change the AV receiver's network settings. You can also easily setup Pandora accounts by typing in your username and password on the PC keyboard.

Network Setup via Web Control

Standby Pass-Through without CEC

`LX89` `LX79` `LX59`

With standby pass-through, the AV receiver can pass audio and video signals via HDMI even during standby. This feature is useful when you want to access HDMI-connected components without turning on the AV receiver.

* Control with HDMI needs to be turned off

Standby Pass-Through
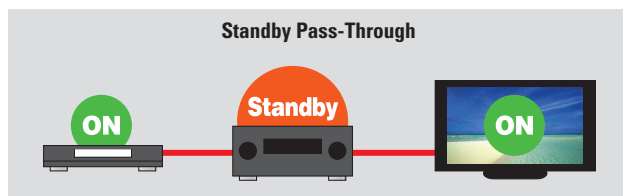
HDMI Standby Input Switching

`LX89` `LX79` `LX59`

The function switches input source when the primary signal is cut off, and switches back to the primary input when the primary signal reappears.

Auto Power Down

`LX89` `LX79` `LX59`

The AV receiver will automatically turn off after being left uncontrolled for a certain time set by the user. This function is available for each zone.

Power Save for HDMI Standby Through

`LX89` `LX79` `LX59`

Power Save for HDMI Standby Through reduces energy consumption while the AV receiver is on standby.

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Simple Overlay OSD

LX89 **LX79** **LX59**

Even when the front FL display is not visible, users can see the AV receiver's operation status on the TV screen. The audio/video parameters can be adjusted while you actually listen to the sound or see the image — an useful feature if you use a projector, or have the AV receiver hidden inside a cabinet.

Simple Overlay OSD

GUI for Smooth Operation

LX89 **LX79** **LX59**

The GUI on the latest AV receivers has been further refined, resulting in enhanced ease-of-use. Each function has a dedicated GUI screen, displaying, for instance, iPod/iPhone data, speaker settings, or EQ adjustments, in 7 selectable languages — English, French, Italian, German, Spanish, Dutch, and Russian.

GUI Images

Reverb Characteristic

iPod/iPhone

Zone 2

EQ Adjustments

Multi-Channel Stereophonic Philosophy

Audio Technologies

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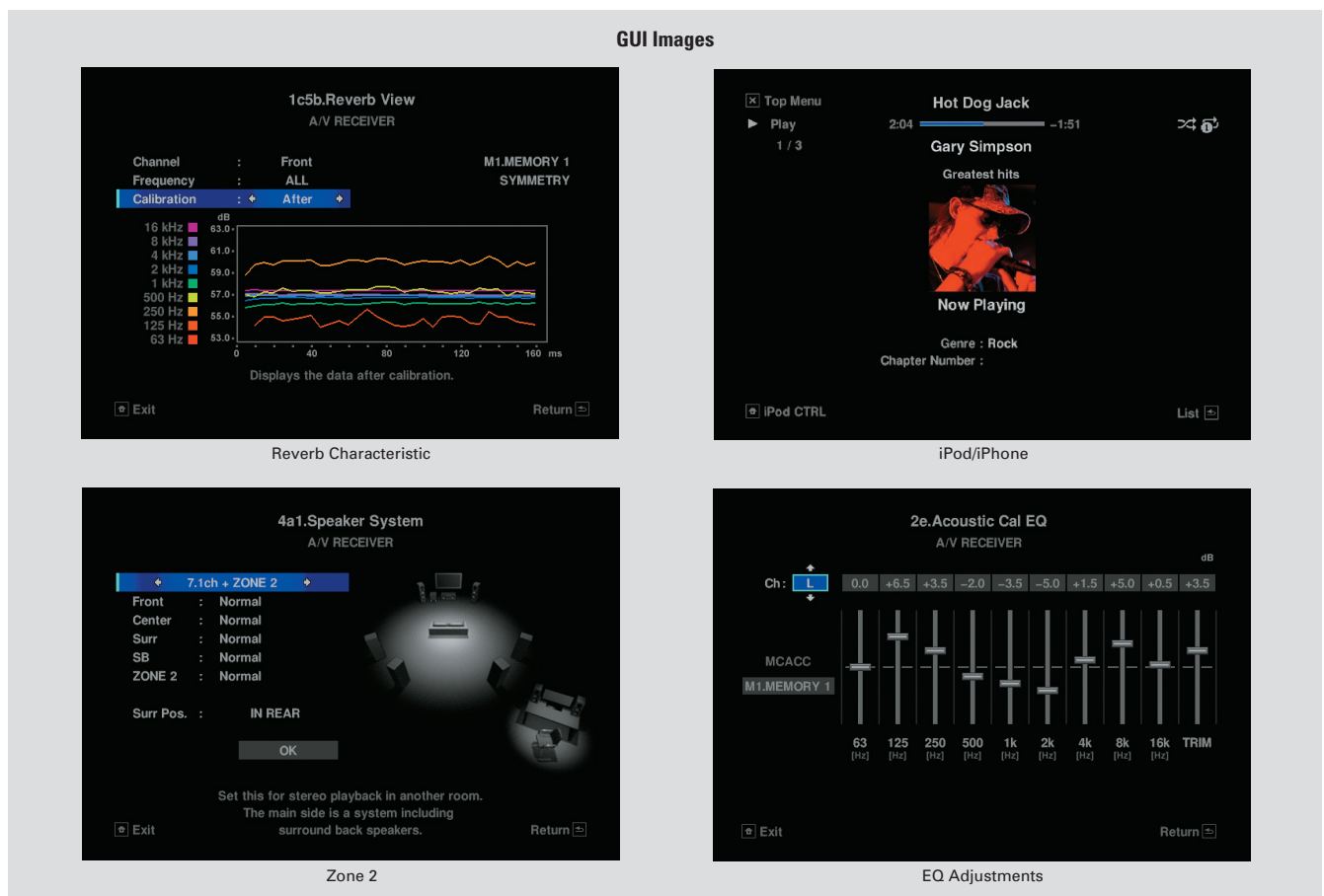
Construction

Advanced Direct Construction

LX89 **LX79** **LX59**

Less is more in circuitry design. Advanced Direct Construction allows the shortest and simplest signal paths — from input to output, circuit block by circuit block — to reduce distortion that can be caused by transmission loss, and to improve sonic clarity.

Internal View (SC-LX89)

3D Space Frame Construction

LX89 **LX79**

The 3D Space Frame Construction is developed to clearly define the mechanical grounding of the chassis and make the structure strong enough to support heavy weight. Perfected by repeated CAE strength analysis and tests, this technology allows each part to deliver maximum performance. Interference is also reduced by separating and insulating the power supply, amp, analogue circuit, digital circuit and video sections from one another.

The AV receivers come with this Advanced 3D Space Frame structure, featuring precise framework design, separating the power supply block, and isolating the analogue video/audio and digital functional blocks into specific compartments. This reduces interference by flat cables between the blocks and improves the operating characteristics to accurately reproduce even the most delicate signals.

Rigid Trans-Stabilizer

LX89 **LX79** **LX59**

The rigid trans-stabilizer acoustically insulates the transformer and eliminates unwanted vibration, enhancing sound clarity.
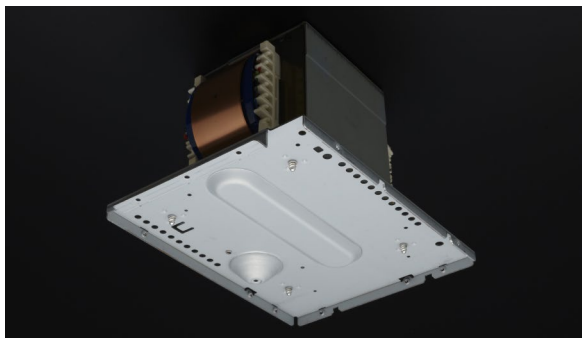
Rigid Trans-Stabilizer

Anti-Standing Wave Insulator

LX89 **LX79** **LX59**

The new Anti-Standing Wave Insulator has been developed through repeated listening tests, featuring a special form with no parallel sides inside to prevent cavity resonance. This makes the sound localisation, tone, and scale clearer, while also enhancing the seamless connection between the channels, and the response to quick sound. The insulator enriches the realistic spatial description for movies, and the space representation of a concert hall for music sources.
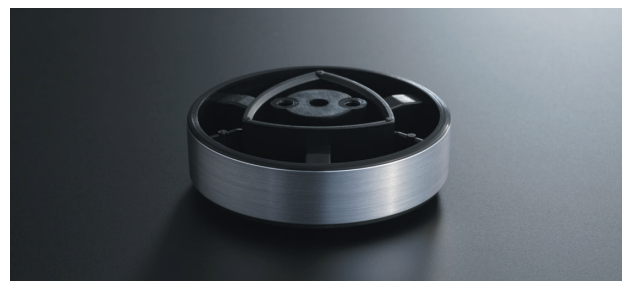
Separated Pre and Power Amplifiers Blocks

LX89 **LX79** **LX59**

Being compact and highly efficient, the Class D amplifier has allowed remarkably smaller heat sink and greater flexibility in circuit design and layout, and the ideal separate structure with independent pre and power amplifier blocks is realised. Additionally, the power supply for digital and analogue circuits has been isolated to provide clean power, significantly contributing to clear signal transmission which is the basis for high-quality sound.
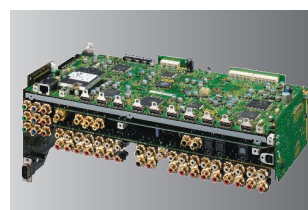
Pre-amplifier Block   Power Amplifier Block

Clean Grounding with Insulated Dual Chassis

LX89 **LX79** **LX59**

Steel plates shield the power amplifier block to eliminate unwanted noise caused by mutual interference, while Pioneer-original Insulated Dual Chassis connects the power amplifier's chassis to the main chassis via special insulators. The pre and power amplifier blocks are electrically separated, enabling the optimal ground design for each block. With thorough clean grounding and elimination of interference between the circuits and load changes, the sound quality and performance equivalent to separate amplifiers combined within a single chassis is achieved.

Insulators

Multi-Channel Stereophonic Philosophy

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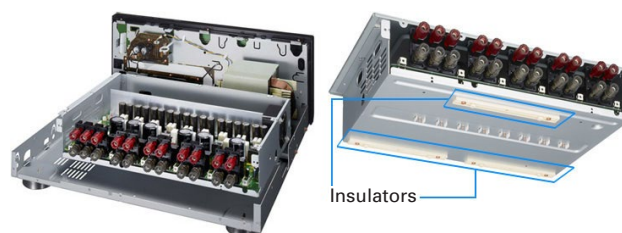
FEATURE COMPARISON: AV RECEIVERS

	SC-LX89-K/-S	SC-LX79-K/-S	SC-LX59-K/-S
Advanced Multi-Channel Stereophonic Philosophy			
Direct Energy HD Amplifier	•	•	•
ESS SABRE³² Ultra DAC	•	•	•
Low Leakage Flux Transformer	•		
Digital Filter	•	•	•
Up-Sampling (192 kHz/32-bit)	•	•	•
MCACC Auto Room Tuning	• (MCACC Pro)	• (MCACC Pro)	• (MCACC Pro)
Phase Control	•	•	•
Auto Phase Control Plus	•	•	•
Speaker Polarity Check	•	•	•
Standing Wave Control	•	•	•
Independent Dual Subwoofer Output	•	•	•
Subwoofer EQ	•	•	•
Full Band Phase Control	•	•	•
Precision Distance	•		
Reflex Path Distance Adjustment System	•	•	•
Bass Management System for Dolby Atmos-Enabled Speakers	•	•	•
AIR Studios Monitor Certification	•	•	
Audio Technologies			
Hi-bit32 Audio Signal Processing	•	•	•
Hi-bit24 Audio Signal Processing			
Advanced Sound Retriever	• (Multi-ch)	• (Multi-ch)	• (Multi-ch)
Auto Sound Retriever/Auto Sound Retriever for ARC	•	•	•
Sound Retriever Link	•	•	•
Sound Retriever AIR	•	•	•
Auto Level Control	• (Multi-ch)	• (Multi-ch)	• (Multi-ch)
PQLS with HDMI (Bit-stream/Multi-Surround/2ch Audio)	•	•	•
Video Technologies			
Video Scaler with Super Resolution	•	•	•
Ultra HD (4K/60p/4:4:4/24-bit) Pass-through with HDCP 2.2	•	•	•
HDR/BT.2020 Ready	•	•	•
Advanced Video Adjust	•	•	•
Stream Smoother	•	•	•
Stream Smoother Link	•	•	•
Triple HD Video Noise Reduction	•	•	•
Deep Colour/"x.v.Colour"	•	•	•
Audio Formats			
DTS:X Ready	•	•	•
Dolby Atmos	•	•	•
DTS Neural X	•	•	•
DTS Neo:X|11.1	•	•	•
Dolby Surround	•	•	•
DTS-HD Master Audio	•	•	•
Dolby TrueHD with Loudness Management	•	•	•
Hi-Res Audio File Playback via USB/Network	•	•	•
Multi-Channel Audio File Playback via USB/Network	•	•	•
Native DSD Playback via USB-DAC with DoP Transmission	•		
DSD Music File Playback via USB	•	•	•
DSD Disc (SACD) Playback via HDMI	•	•	•
Variable File Play Action	•	•	•
Gapless Playback	•	•	•
Sophisticated Listening Modes			
Virtual Speakers	•	•	•
Rendering Mode	•	•	•
Speaker Configurations	11ch	11ch	11ch
Pre-Amp Mode	•	•	•
Advanced Surround Modes	•	•	•
Extended Stereo	•	•	•
Front Stage Surround Advance	• (Focus)	• (Focus)	• (Focus)
Optimum Surround	•	•	•
Connectivity			
USB-DAC	•		
HDMI® (4K@60, 3D, ARC)	•	•	•
Made for iPod and iPhone	•	•	•
Android™ Audio/Video Playback with MHL 2™	•	•	•
Front USB Input	•	•	•
Network Features			
DLNA Certified™ (1.5)	•	•	•
Apple AirPlay Certified	•	•	•
HTC Connect™ Certified	•	•	•
Compatible with Windows® 8.1	•	•	•
Internet Radio (vTuner)	•	•	•
Spotify® Digital Music-Streaming Service Ready	•	•	•
Advanced Control			
Ready for Start-up Navi App	•	•	•
Ready for iControlAV5 App	•	•	•
Built-in *Bluetooth*® Wireless Technology	•	•	•
Built-in AV Navigator	•	•	•
Built-in Dual Band Wi-Fi	•	•	•
Powered HDMI ZONE Out (Powered HDZONE)	•	•	•
Multi-Zone	4 Zone	4 Zone	4 Zone
Control with HDMI	(Zone 3 analogue audio only)	3 Zone	
Pioneer Setup Application	•	•	•
Network Setup via Web Control	•	•	•
Standby Pass-Through without CEC	•	•	•
HDMI Standby Input Switching	•	•	•
Auto Power Down	•	•	•
Power Save for HDMI Standby Through	•	•	•
Simple Overlay OSD	•	•	•
GUI	•	•	•
Construction			
Advanced Direct Construction	•	•	•
3D Space Frame Construction	•	•	
Rigid Trans-Stabilizer	•	•	•
Anti-Standing Wave Insulator	•	•	•
Separated Pre and Power Amplifier Blocks	•	•	•
Clean Grounding with Insulated Dual Chassis	•	•	•

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- The product with the Hi-Res Audio logo is conformed to Hi-Res Audio standard defined by Japan Audio Society. The logo is used under license from Japan Audio Society.

- Blu-ray Disc™, Blu-ray™, Ultra HD Blu-ray™, and the logos are trademarks of the Blu-ray Disc Association.

Product Sheet

SC-LX89-K/-S SYXJ8

SC-LX79-K/-S SYXJ8

SC-LX59-K/-S SYXJ8

Pioneer

9.2-Channel High Fidelity Class D Network AV Receiver

SC-LX89-K/-S

* Image after DTS:X firmware update

SC-LX89-K

SC-LX89-S

Enjoy precise audio reproduction, just as the creators intended with the flagship AV receiver featuring Direct Energy HD (High fidelity class D) amplifier, SABRE^{32} Ultra DAC, and AIR Studios Monitor Certification. Dolby Atmos® brings a new level of surround sound in the ideal environment made by Pioneer's MCACC Pro auto-room calibration, while the object-based DTS:X™ format will also be available with firmware update. Other highlights include video scaler with Super Resolution, Ultra HD Pass-through with HDCP 2.2, and USB-DAC.

AMPLIFICATION

- › Channels: 9
- › Amplification Type: Class D (Direct Energy HD)
- › 850 W Multi ch Simultaneous Drive (8 ohms, 1 kHz, THD 1.0 %)
- › 260 W/ch (4 ohms, 1 kHz, THD 1.0 %, 1ch Driven)
- › 220 W/ch (6 ohms, 1 kHz, THD 1.0 %, 1ch Driven)

CONSTRUCTION DESIGN

- › Advanced Direct Construction
- › Rigid Trans-Stabilizer
- › Insulated Dual Chassis
- › 3D Space Frame Construction
- › Low Leakage Flux Power Transformer
- › Anti-Standing Wave Insulator

AUDIO FEATURES

- › AIR Studios Monitor Certification
- › Dolby Atmos®/Dolby® TrueHD/Dolby Digital Plus/Dolby Surround
- › DTS:X/DTS Neural:X™ Ready*¹
- › DTS-HD Master Audio/DTS-ES/DTS Neo:Xl11.1
- › USB-DAC 192 kHz/32-bit with DSD Native Playback
- › DSD Direct Playback via Network/USB (2.8 MHz, 5.6 MHz/2ch)
- › DSD Disc (SACD) Playback via HDMI (2.8 MHz/5.1ch, 2ch)
- › SABRE^{32} Ultra DAC (ES9016S) for 9.2ch
- › Audio Scaler 192 kHz/32-bit Enhancer
- › MCACC Pro Room Calibration
  - • Full Band Phase Control
  - • Auto Phase Control Plus/Phase Control Plus
  - • Standing Wave Control
  - • 3D Time Axis Measurement
  - • Precision Distance
  - • Subwoofer EQ (4 Band)
  - • Bass Management System for Dolby Atmos Enabled Speakers
- › Sound Enhancements
  - • PQLS Bit-stream/Multi-Surround/2ch
  - • Advanced Sound Retriever (Multi-ch)
  - • Auto Sound Retriever/Auto Sound Retriever for ARC
  - • Auto Level Control (Multi-ch)
  - • Virtual Speakers (Wide/Height/Surround Back)
  - • Rendering Mode

- › Advanced Surround Modes
  - • Action, Drama, Advanced Game, Sports, Classical, Rock/Pop
  - • Front Stage Surround
  - • Sound Retriever Air, Phones Surround
  - • ECO Mode 1, ECO Mode 2
- › Input Volume Absorber
- › Speaker System 15 Patterns Including 7 Patterns for Dolby Atmos

Video Features

- › Ultra HD Pass-through with HDCP 2.2 (4K/60p/4:4:4/24-bit, 4K/24p/4:4:4/36-bit, 4K/60p/4:2:2/36-bit)
- › Video Scaler (1080p to 4K) with Super Resolution
- › Triple HD Noise Reduction
- › Advanced Video Adjust
- › Stream Smoother/Stream Smoother Link

HOME NETWORK FEATURES

- › Apple AirPlay Certified
- › DLNA Certified™ (1.5)
- › HTC Connect™ Certified
- › Compatible with Windows® 8
- › Music File Playback/Seek via Network/USB: AIFF, Apple Lossless, WAV, FLAC, MP3, WMA, AAC, DSD
  - • 192 kHz/24-Bit Audio playback (AIFF, Apple Lossless, WAV, FLAC)
  - • Multi-Channel (5.1ch, 5.0ch) Audio Playback (WAV*², FLAC*³)
- › Gapless Playback for AIFF, Apple Lossless, WAV, FLAC, AAC, MP3, DSD
- › Spotify® Digital Music-Streaming Service Ready*⁴
- › Internet Radio with vTuner

CONVENIENCE FEATURES

- › iPod Digital Transmission via Front USB Terminal
- › Android™ Audio/Video Playback with MHL™
- › Start-up Navi (Initial Setting App) Ready (iOS/Android)*⁵
- › AVNavigator (Wiring Navi/Interactive Operation Guide)
- › iControlAV5 Remote Control App Ready (iOS/Android)*⁵
- › HDMI ZONE Out (HDZONE)
- › Built-in Wi-Fi® (Dual Band 5 GHz/2.4 GHz)
- › Built-in *Bluetooth*® Wireless Technology (Version: 2.1 + EDR, Profile: A2DP/AVRCP, Codec: SBC/AAC)
- › Power Save for HDMI Standby Through
- › Learning Remote Control (Luminous)

FRONT TERMINALS

- › HDMI 1 in
- › USB 1 in for iPod/iPhone, USB drive
- › MCACC Setup MIC in
- › Phones 1 out

REAR TERMINALS

- › HDMI 7 in (7 assignable, 1 for HDMI/MHL)
- › HDMI 3 out (2 for MAIN, 1 for MAIN/HDZONE)
- › Ethernet 1 In

- › AV (Composite) 2 In/1 Out
- › Audio 1 In (assignable)
- › Phono (MM) 1 In
- › Digital Coaxial 2 In (assignable)
- › Digital Optical 2 In (assignable)/1 Out
- › USB-DAC In (B-Type)
- › Component Video 2 In (assignable)
- › Monitor Component 1 Out/Monitor Composite 1 Out
- › Preout 11.2 ch (13.2 ch terminals)
- › Speaker 11 ch Out
- › Independent Dual Subwoofer

- › IR 2 In/1 Out
- › 12 V Trigger x 2/RS-232C

SPECIFICATIONS

- › Power Requirements: AC 220-230 V, 50/60 Hz
- › Power Consumption/Standby: 370 W/0.1 W
- › Dimensions (W x H x D): 435 x 185 x 441 mm
- › Weight: 18.1 kg

*¹ Firmware update required   *² Up to 192 kHz streams via USB, up to 96 kHz streams via wired LAN, up to 48 kHz via wireless LAN   *³ Up to 96 kHz streams
*⁴ For service availability in your country, check www.spotify.com   *⁵ Available for free download from the App Store/the Google Play™

SC-LX89-K/SYXJ8

SC-LX89-S/SYXJ8

Direct Energy HD Amplifier

For the ideal multi-channel environment, all channels should have the same speakers, driven by the same amplifier, under same conditions. So for the SC-LX89-K/-S, Pioneer has adopted the Direct Energy HD Amplifier capable of simultaneous high-power output for all channels. The core Direct Power FET has a simple structure with the semiconductor chip directly mounted on the circuit board. As a result, a large reduction in inductance components for improved signal quality, smaller heat sink by efficient heat dissipation, and shorter transmission path by cleaner circuitry have been achieved, realizing quality sound, high-power output, and high efficiency at the same time. As the Direct Energy HD Amplifier continues to improve by each generation, it creates the ideal reproduction environment for object audio as well as legacy formats.

Direct Power FET on Direct Energy HD Amplifier

Direct Power FET

Semiconductor chip | Directly connected | Circuit board

Direct Power FET Structure

DTS:X Ready

DTS:X is the next-generationaudio codec from DTS thatleverages object-based audioto enable new immersive and interactive audioexperiences. Since DTS:X can automatically adaptthe audio to the existing channels and speakersystem, no specific speaker layout is required.Experience an immersive soundscape withincredibly rich and life-like audio. With the idealreproduction environment created by MCACC Pro,and the powerful and precise multi-channel output by the Direct Energy HD Amplifier, the SC-LX89-K/-S maximises the advantages of the DTS:Xformat.

* DTS:X will be available with firmware update.

Dolby Atmos®

The SC-LX89-K/-S is compatible with the 7.2.4ch*,9.2.2ch*, 7.2.2ch, 5.2.4ch configurations of DolbyAtmos®. You can reproduce object-oriented soundin smooth, curving movements, or the realisticthree-dimensional movement overhead by thetop speakers. However, the appropriate playbackenvironment is required to bring out the best fromDolby Atmos. This is provided by MCACC Pro, whichallows the most precise speaker drive for faithfulreproduction of the true-to-life soundscape of DolbyAtmos. With synchronised sound and image, you canexperience total immersion in the movie world.

* External amplifier required

Full Band Phase Control

Pioneer's Phase Control technology effectivelyeliminates phase lag and significantly improves themulti-channel sound without any extra operation.Furthermore, The Full Band Phase Controltechnology focuses on the group delay in thespeaker network filter, and adjusts the phase of eachunit as well as the group delay for each speaker. Multi-range speakers gain the sound coherenceof full-range speakers, while retaining the widefrequency range advantage. In an environment wherethe phase of all units and all channels are preciselycontrolled, a remarkably clear sound location witha surrounding feel is achieved. In combination withMCACC Pro's auto room tuning technology, theideal multi-channel reproduction environment can becreated, which faithfully replicates object audio andthe intention of the directors.

ESS SABRE³² Ultra DAC

The highly acclaimed 192 kHz/32-bit ESSSABRE³² Ultra DAC (ES9016S) deliversexceptional sound with ultra-low distortion andhigh S/N ratio. It offers jitter-free performance foran astounding audio reproduction with rich deep bass.

USB-DAC

The SC-LX89-K/-S allows direct USB connectionwith a computer by USB asynchronous signaltransfer, which eliminates jitter and reproducesmaster quality sound with extremely precise audiosignals. Native DSD playback is also supported.

Asynchronous USB-DAC

Synchronous Transfer — Synchronous — Sync with PC clock — USB-DAC — Speakers

PC — USB Connection

Asynchronous Transfer — Asynchronous — AV receiver's master clock used; no sync with PC clock — Speakers

PC — USB Connection

Pioneer

9.2-Channel High Fidelity Class D Network AV Receiver

SC-LX79-K/-S

* Image after DTS:X firmware update

SC-LX79-K

SC-LX79-S

Enjoy precise audio reproduction, just as the creators intended with the AV receiver featuring Direct Energy HD (High fidelity class D) amplifier, SABRE³² Ultra DAC, and AIR Studios Monitor Certification. Dolby Atmos® brings a new level of surround sound in the ideal environment made by Pioneer's MCACC Pro auto-room calibration, while the object-based DTS:X™ format will also be available with firmware update. Other highlights include video scaler with Super Resolution, Ultra HD Pass-through with HDCP 2.2, and 3D Space Frame Construction.

AMPLIFICATION
- Channels: 9
- Amplification Type: Class D (Direct Energy HD)
- 810 W Multi ch Simultaneous Drive (8 ohms, 1 kHz, THD 1.0 %)
- 250 W/ch (4 ohms, 1 kHz, THD 1.0 %, 1ch Driven)
- 210 W/ch (6 ohms, 1 kHz, THD 1.0 %, 1ch Driven)

CONSTRUCTION DESIGN
- Advanced Direct Construction
- Rigid Trans-Stabilizer
- Insulated Dual Chassis
- 3D Space Frame Construction
- Anti-Standing Wave Insulator

AUDIO FEATURES
- AIR Studios Monitor Certification
- Dolby Atmos®/Dolby® TrueHD/Dolby Digital Plus/Dolby Surround
- DTS:X/DTS Neural:X™ Ready*¹
- DTS-HD Master Audio/DTS-ES/DTS Neo:Xl11.1
- DSD Direct Playback via Network/USB (2.8 MHz, 5.6 MHz/2ch)
- DSD Disc (SACD) Playback via HDMI (2.8 MHz/5.1ch, 2ch)
- SABRE³² Ultra DAC (ES9016S) for 9.2ch
- Audio Scaler 192 kHz/32-bit Enhancer
- MCACC Pro Room Calibration
  - Full Band Phase Control
  - Auto Phase Control Plus/Phase Control Plus
  - Standing Wave Control
  - 3D Time Axis Measurement
  - Subwoofer EQ (4 Band)
  - Bass Management System for Dolby Atmos Enabled Speakers
- Sound Enhancements
  - PQLS Bit-stream/Multi-Surround/2ch
  - Advanced Sound Retriever (Multi-ch)
  - Auto Sound Retriever/Auto Sound Retriever for ARC
  - Auto Level Control (Multi-ch)
  - Virtual Speakers (Wide/Height/Surround Back)
  - Rendering Mode
- Advanced Surround Modes
  - Action, Drama, Advanced Game, Sports, Classical, Rock/Pop
  - Front Stage Surround

- Sound Retriever Air, Phones Surround
- ECO Mode 1, ECO Mode 2
- Input Volume Absorber
- Speaker System 15 Patterns Including 7 Patterns for Dolby Atmos

Video Features
- Ultra HD Pass-through with HDCP 2.2 (4K/60p/4:4:4/24-bit, 4K/24p/4:4:4/36-bit, 4K/60p/4:2:2/36-bit)
- Video Scaler (1080p to 4K) with Super Resolution
- Triple HD Noise Reduction
- Advanced Video Adjust
- Stream Smoother/Stream Smoother Link

HOME NETWORK FEATURES
- Apple AirPlay Certified
- DLNA Certified™ (1.5)
- HTC Connect™ Certified
- Compatible with Windows® 8.1
- Music File Playback/Seek via Network/USB: AIFF, Apple Lossless, WAV, FLAC, MP3, WMA, AAC, DSD
  - 192 kHz/24-Bit Audio playback (AIFF, Apple Lossless, WAV, FLAC)
  - Multi-Channel (5.1ch, 5.0ch) Audio Playback (WAV*², FLAC*³)
- Gapless Playback for AIFF, Apple Lossless, WAV, FLAC, AAC, MP3, DSD
- Spotify® Digital Music-Streaming Service Ready*⁴
- Internet Radio with vTuner

CONVENIENCE FEATURES
- iPod Digital Transmission via Front USB Terminal
- Android™ Audio/Video Playback with MHL™
- Start-up Navi (Initial Setting App) Ready (iOS/Android)*⁵
- AVNavigator (Wiring Navi/Interactive Operation Guide)
- iControlAV5 Remote Control App Ready (iOS/Android)*⁵
- HDMI ZONE Out (HDZONE)
- Built-in Wi-Fi® (Dual Band 5 GHz/2.4 GHz)
- Built-in Bluetooth® Wireless Technology (Version: 2.1 + EDR, Profile: A2DP/AVRCP, Codec: SBC/AAC)
- Power Save for HDMI Standby Through
- Learning Remote Control (Luminous)

FRONT TERMINALS
- HDMI 1 in
- USB 1 in for iPod/iPhone, USB drive
- MCACC Setup MIC in
- Phones 1 out

REAR TERMINALS
- HDMI 7 in (7 assignable, 1 for HDMI/MHL)
- HDMI 3 out (2 for MAIN, 1 for MAIN/HDZONE)
- Ethernet 1 In

- AV (Composite) 2 In/1 Out
- Audio 1 In (assignable)
- Phono (MM) 1 In
- Digital Coaxial 2 In (assignable)
- Digital Optical 2 In (assignable)/1 Out
- Component Video 2 In (assignable)
- Monitor Composite 1 Out
- Preout 11.2 ch (13.2 ch terminals)
- Speaker 11 ch Out
- Independent Dual Subwoofer
- IR 2 In/1 Out
- 12 V Trigger x 2/RS-232C

SPECIFICATIONS
- Power Requirements: AC 220-230 V, 50/60 Hz
- Power Consumption/Standby: 370 W/0.1 W
- Dimensions (W x H x D): 435 x 185 x 441 mm
- Weight: 17.7 kg

*¹ Firmware update required *² Up to 192 kHz streams via USB, up to 96 kHz streams via wired LAN, up to 48 kHz via wireless LAN *³ Up to 96 kHz streams
*⁴ For service availability in your country, check www.spotify.com *⁵ Available for free download from the App Store/the Google Play™
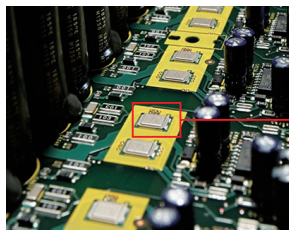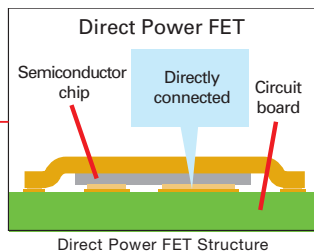
SC-LX79-K/SYXJ8

SC-LX79-S/SYXJ8

Direct Energy HD Amplifier

For the ideal multi-channel environment, all channels should have the same speakers, driven by the same amplifier, under same conditions. So for the SC-LX79-K/-S, Pioneer has adopted the Direct Energy HD Amplifier capable of simultaneous high-power output for all channels. The core Direct Power FET has a simple structure with the semiconductor chip directly mounted on the circuit board. As a result, a large reduction in inductance components for improved signal quality, smaller heat sink by efficient heat dissipation, and shorter transmission path by cleaner circuitry have been achieved, realizing quality sound, high-power output, and high efficiency at the same time. As the Direct Energy HD Amplifier continues to improve by each generation, it creates the ideal reproduction environment for object audio as well as legacy formats.

Direct Power FET on Direct Energy HD Amplifier

Direct Power FET Structure

DTS:X Ready

DTS:X is the next-generation audio codec from DTS that leverages object-based audio to enable new immersive and interactive audio experiences. Since DTS:X can automatically adapt the audio to the existing channels and speaker system, no specific speaker layout is required. Experience an immersive soundscape with incredibly rich and life-like audio. With the ideal reproduction environment created by MCACC Pro, and the powerful and precise multi-channel output by the Direct Energy HD Amplifier, the SC-LX79- K/-S maximises the advantages of the DTS:X format.

* DTS:X will be available with firmware update.

Dolby Atmos®

The SC-LX79-K/-S is compatible with the 7.2.4ch*, 9.2.2ch*, 7.2.2ch, 5.2.4ch configurations of Dolby Atmos®. You can reproduce object-oriented sound in smooth, curving movements, or the realistic three-dimensional movement overhead by the top speakers. However, the appropriate playback environment is required to bring out the best from Dolby Atmos. This is provided by MCACC Pro, which allows the most precise speaker drive for faithful reproduction of the true-to-life soundscape of Dolby Atmos. With synchronised sound and image, you can experience total immersion in the movie world.

* External amplifier required

Full Band Phase Control

Pioneer's Phase Control technology effectively eliminates phase lag and significantly improves the multi-channel sound without any extra operation. Furthermore, The Full Band Phase Control technology focuses on the group delay in the speaker network filter, and adjusts the phase of each unit as well as the group delay for each speaker. Multi-range speakers gain the sound coherence of full-range speakers, while retaining the wide frequency range advantage. In an environment where the phase of all units and all channels are precisely controlled, a remarkably clear sound location with a surrounding feel is achieved. In combination with MCACC Pro's auto room tuning technology, the ideal multi-channel reproduction environment can be created, which faithfully replicates object audio and the intention of the directors.
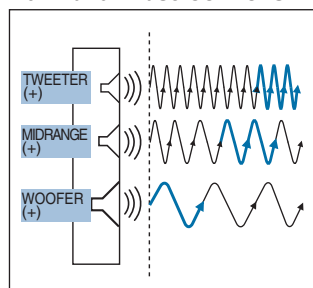
Full Band Phase Control Off   **Full Band Phase Control On**
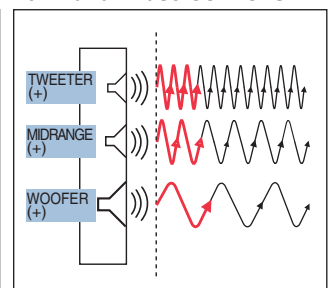
Adjusts group delay for each unit

ESS SABRE^{32} Ultra DAC

The highly acclaimed 192 kHz/32-bit ESS SABRE^{32} Ultra DAC (ES9016S) delivers exceptional sound with ultra-low distortion and high S/N ratio. It offers jitter-free performance for an astounding audio reproduction with rich deep bass.

AIR Studios Certification

The AV receiver has been tested by the professionals at AIR Studios and received the Monitor Certification. Pioneer's perfect application of the world-famous dubbing studio's monitoring methods intensifies the emotion and excitement of what you see and hear. Established in 1969 in London, AIR Studios is a state-of-the-art recording complex, favored by many of the world's most popular and renowned musical talents.

Available with firmware update

Note: Specifications and design subject to change without notice.

Pioneer

9.2-Channel High Fidelity Class D Network AV Receiver

SC-LX59-K/-S

* Image after DTS:X firmware update

SC-LX59-K

SC-LX59-S

Enjoy precise audio reproduction, just as the creators intended with the AV receiver featuring Direct Energy HD (High fidelity class D) amplifier and SABRE^{32} Ultra DAC. Dolby Atmos® brings a new level of surround sound in the ideal environment made by Pioneer's MCACC Pro auto-room calibration with Full Band Phase Control, while the object-based DTS:X™ format will also be available with firmware update. Other highlights include video scaler with Super Resolution, Ultra HD Pass-through with HDCP 2.2, and aluminium front panel.

AMPLIFICATION
› Channels: 9
› Amplification Type: Class D (Direct Energy HD)
› 760 W Multi ch Simultaneous Drive (8 ohms, 1 kHz, THD 1.0 %)
› 240 W/ch (4 ohms, 1 kHz, THD 1.0 %, 1ch Driven)
› 190 W/ch (6 ohms, 1 kHz, THD 1.0 %, 1ch Driven)

CONSTRUCTION DESIGN
› Advanced Direct Construction
› Rigid Trans-Stabilizer
› Insulated Dual Chassis
› Anti-Standing Wave Insulator

AUDIO FEATURES
› Dolby Atmos®/Dolby® TrueHD/Dolby Digital Plus/Dolby Surround
› DTS:X/DTS Neural:X™ Ready*¹
› DTS-HD Master Audio/DTS-ES/DTS Neo:Xl11.1
› DSD Direct Playback via Network/USB (2.8 MHz, 5.6 MHz/2ch)
› DSD Disc (SACD) Playback via HDMI (2.8 MHz/5.1ch, 2ch)
› SABRE^{32} Ultra DAC (ES9016S) for 9.2ch
› Audio Scaler 192 kHz/32-bit Enhancer
› MCACC Pro Room Calibration
  • Full Band Phase Control
  • Auto Phase Control Plus/Phase Control Plus
  • Standing Wave Control
  • 3D Time Axis Measurement
  • Subwoofer EQ (4 Band)
  • Bass Management System for Dolby Atmos Enabled Speakers
› Sound Enhancements
  • PQLS Bit-stream/Multi-Surround/2ch
  • Advanced Sound Retriever (Multi-ch)
  • Auto Sound Retriever/Auto Sound Retriever for ARC
  • Auto Level Control (Multi-ch)
  • Virtual Speakers (Wide/Height/Surround Back)
  • Rendering Mode
› Advanced Surround Modes
  • Action, Drama, Advanced Game, Sports, Classical, Rock/Pop
  • Front Stage Surround
  • Sound Retriever Air, Phones Surround
  • ECO Mode 1, ECO Mode 2

› Input Volume Absorber
› Speaker System 15 Patterns Including 7 Patterns for Dolby Atmos

Video Features
› Ultra HD Pass-through with HDCP 2.2 (4K/60p/4:4:4/24-bit, 4K/24p/4:4:4/36-bit, 4K/60p/4:2:2/36-bit)
› Video Scaler (1080p to 4K) with Super Resolution
› Triple HD Noise Reduction
› Advanced Video Adjust
› Stream Smoother/Stream Smoother Link

HOME NETWORK FEATURES
› Apple AirPlay Certified
› DLNA Certified™ (1.5)
› HTC Connect™ Certified
› Compatible with Windows® 8.1
› Music File Playback/Seek via Network/USB: AIFF, Apple Lossless, WAV, FLAC, MP3, WMA, AAC, DSD
  • 192 kHz/24-Bit Audio playback (AIFF, Apple Lossless, WAV, FLAC)
  • Multi-Channel (5.1ch, 5.0ch) Audio Playback (WAV*², FLAC*³)
› Gapless Playback for AIFF, Apple Lossless, WAV, FLAC, AAC, MP3, DSD
› Spotify® Digital Music-Streaming Service Ready*⁴
› Internet Radio with vTuner

CONVENIENCE FEATURES
› iPod Digital Transmission via Front USB Terminal
› Android™ Audio/Video Playback with MHL™
› Start-up Navi (Initial Setting App) Ready (iOS/Android)*⁵
› AVNavigator (Wiring Navi/Interactive Operation Guide)
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› HDMI ZONE Out (HDZONE)
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› Built-in Bluetooth® Wireless Technology (Version: 2.1 + EDR, Profile: A2DP/AVRCP, Codec: SBC/AAC)
› Power Save for HDMI Standby Through
› Learning Remote Control (Luminous)

FRONT TERMINALS
› HDMI 1 in
› USB 1 in for iPod/iPhone, USB drive
› MCACC Setup MIC in
› Phones 1 out

REAR TERMINALS
› HDMI 7 in (7 assignable, 1 for HDMI/MHL)
› HDMI 3 out (2 for MAIN, 1 for MAIN/HDZONE)
› Ethernet 1 In

› AV (Composite) 2 In/1 Out
› Audio 1 In (assignable)
› Digital Coaxial 2 In (assignable)
› Digital Optical 2 In (assignable)/1 Out
› Component Video 1 In (assignable)
› Monitor Composite 1 Out
› Preout 11.2 ch (13.2 ch terminals)
› Speaker 11 ch Out
› Independent Dual Subwoofer
› IR 2 In/1 Out
› 12 V Trigger x 2/RS-232C

SPECIFICATIONS
› Power Requirements: AC 220-230 V, 50/60 Hz
› Power Consumption/Standby: 330 W/0.1 W
› Dimensions (W x H x D): 435 x 185 x 441 mm
› Weight: 15.3 kg

*¹ Firmware update required   *² Up to 192 kHz streams via USB, up to 96 kHz streams via wired LAN, up to 48 kHz via wireless LAN   *³ Up to 96 kHz streams
*⁴ For service availability in your country, check www.spotify.com   *⁵ Available for free download from the App Store/the Google Play™
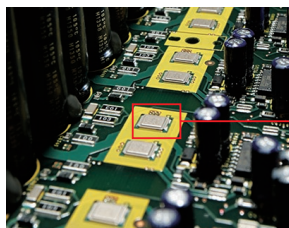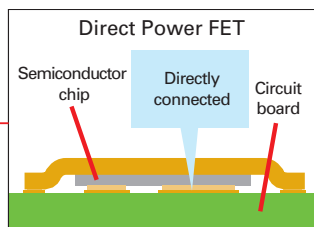
SC-LX59-K/SYXJ8

SC-LX59-S/SYXJ8

Direct Energy HD Amplifier

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Direct Power FET on Direct Energy HD Amplifier

Direct Power FET Structure

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* DTS:X will be available with firmware update.

Dolby Atmos®

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* External amplifier required
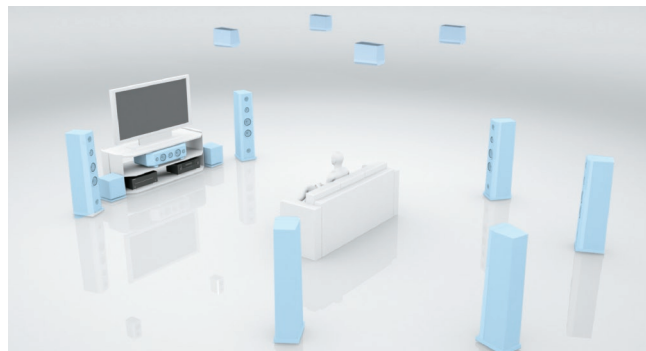
Speaker Layout Example of a Dolby Atmos Home Cinema (7.2.4ch)

Full Band Phase Control

Pioneer's Phase Control technology effectively eliminates phase lag and significantly improves the multi-channel sound without any extra operation. Furthermore, The Full Band Phase Control technology focuses on the group delay in the speaker network filter, and adjusts the phase of each unit as well as the group delay for each speaker. Multi-range speakers gain the sound coherence of full-range speakers, while retaining the wide frequency range advantage. In an environment where the phase of all units and all channels are precisely controlled, a remarkably clear sound location with a surrounding feel is achieved. In combination with MCACC Pro's auto room tuning technology, the ideal multi-channel reproduction environment can be created, which faithfully replicates object audio and the intention of the directors.

ESS SABRE^{32} Ultra DAC

The highly acclaimed 192 kHz/32-bit ESS SABRE^{32} Ultra DAC (ES9016S) delivers exceptional sound with ultra-low distortion and high S/N ratio. It offers jitter-free performance for an astounding audio reproduction with rich deep bass.

Spotify® Digital Music-Streaming Service Ready

Enjoy on-demand access to millions of songs with Spotify's digital music-streaming service. With the wide range of music selection, you're sure to find a fitting song for your mood or occasion, right at your fingertips. You can make your own choice, or let Spotify surprise you. The SC-LX59-K/-S is ready for the Connect from Spotify, which lets you select songs on your Spotify app for listening on your audio system. * Spotify App, iPhone/iPod touch/iPad, and subscription required.

For service availability in your country check www.spotify.com.

AirPlay | Made for iPod iPhone | Bluetooth® | Wi-Fi CERTIFIED | DOLBY ATMOS | DTS X | SABRE^{32} DAC
Available with firmware update

HDMI® | MHL | HTC connect | dlna CERTIFIED | Windows 8 Compatible | Spotify | vTuner | MCACC PRO | Hi-Res AUDIO