

Pioneer



CAR ENTERTAINMENT **2012**
AUDIO & AV

2012 Pioneer New Products

Entertainment. Connectivity. Quality. Convenience. These elements not only define the integrity of every product in this state-of-the-art Pioneer lineup — they drive car entertainment deeper into the state of perfection.

ENTERTAINMENT

Our brand of excitement creates fresh ways to bring the experience of car audio to greater life. New MIXTRAX technology provides Non-Stop Mix Playback seamlessly enough to keep a dance club rocking. Such awesome, versatile sound and effects add joy to every journey.

CONNECTIVITY

Connect with the latest advances that greater digital device and A/V format compatibility provide. Extending car entertainment is easy with Bluetooth® Wireless audio. Dual USB Ports accommodate up to two external USB devices. Now you can bring thousands of extra tunes on board.

QUALITY

Pioneer's passion for quality runs deep at every stage of development. Strict listening tests ensure that Pioneer-designed audio parts deliver superior sound. Control of various audio parameters is precisely adjustable to listeners' tastes for optimal acoustic effect.

CONVENIENCE

Convenient installation and control provide immeasurable comfort. With more user-friendly customizable functions and interfaces, high-power amps compact enough to fit under seats, plus a great range of subwoofers and speakers, virtually any car can be optimally equipped for Pioneer sound.

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MIXTRAX

Your TRAX. Your MIX.

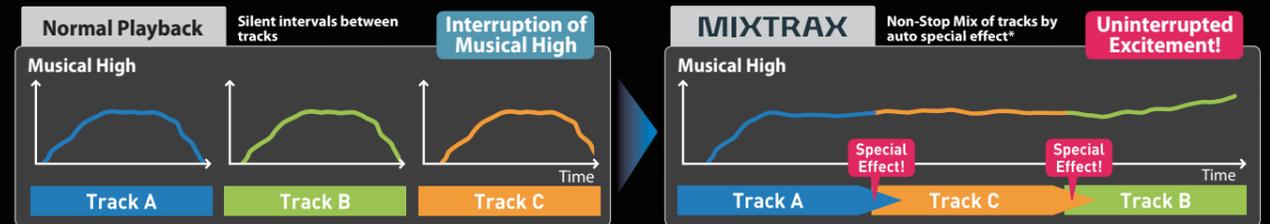
What is MIXTRAX?

Born of Pioneer's professional DJ product development expertise, MIXTRAX is original technology for creating non-stop mixes of selections from your audio library, complete with DJ effects that make them sound as if a DJ is right there with you playing the music.

- Analyzes music data according to beat position, melody, tempo, hook-line and other criteria.
- Non-Stop Mix Play seamlessly joins tracks based on music analysis data.
- Receiver compatible with MIXTRAX software allows you to experience a new way to listen to music in various situations.
- MIXTRAX EZ makes Non-Stop MIX Play and other control quick and easy without using MIXTRAX software.

MIXTRAX Benefit

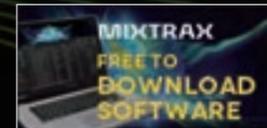
Extending its unique heritage of innovation and deep passion for music, Pioneer presents the magic of MIXTRAX — delivering experiences in car, home and other listening environments with enough euphoria by automatically joining tracks which technology is based on expertise know-how in Pioneer's professional DJ products development.



* Depending on the file/song, sound effects may not be enabled for adding.

MIXTRAX Software

Original Pioneer software for organizing library/playlist and playing music lets you mix tracks and enjoy Non-Stop Mix Play that sounds as if a DJ is right there at work.



Note: Please refer to official MIXTRAX support site regarding recommended system requirements, etc.

AV RECEIVER

AVH-P8450BT

See page 12 for more details.

- AVH-P8450BT is compatible with MIXTRAX software. Smooth, seamless Non-Stop Mix Play plays back analyzed music stored in a USB device/SD memory card*.

MIXTRAX

- AVH-P8450BT is also compatible with MIXTRAX EZ for quick and easy Non-Stop MIX Play without using MIXTRAX software.

MIXTRAX EZ

- Album Jacket Dance function bounces and gyrates the album art to the music as it plays.

* You can fully control the MIXTRAX App in the iPhone 4/iPhone 4S (or 4th generation iPod touch) by using Advanced App Mode through the receiver's display. MIXTRAX App availability may be limited according to region.

AUDIO RECEIVERS

DEH-6450BT DEH-5450SD

See page 37 for more details.

- DEH-6450BT and DEH-5450SD are compatible with MIXTRAX EZ for quick and easy Non-Stop MIX Play without using MIXTRAX software.

MIXTRAX EZ

- Flashing Color sets a club-like mood with vivid illumination that pulses and changes color to the MIXTRAX beat.

FLASHING COLOR

MIXTRAX and MIXTRAX EZ Comparison

	Advantage	MIXTRAX Software	Compatible Source
MIXTRAX	Full-featured Non-Stop Mix Play*	Compatible	USB Device SD Memory Card
MIXTRAX EZ	Quick and Easy Mix Play	—	USB Device SD Memory Card iPod/iPhone

* Requires music analysis by "MIXTRAX" PC application from Pioneer (free download).

Best Solution for Pioneer Car Entertainment System

Pioneer's full product lineup provides the best solutions for all customer needs in categories ranging from basic audio and AV, to high-power, to high-end audio systems.

Performance Perfection

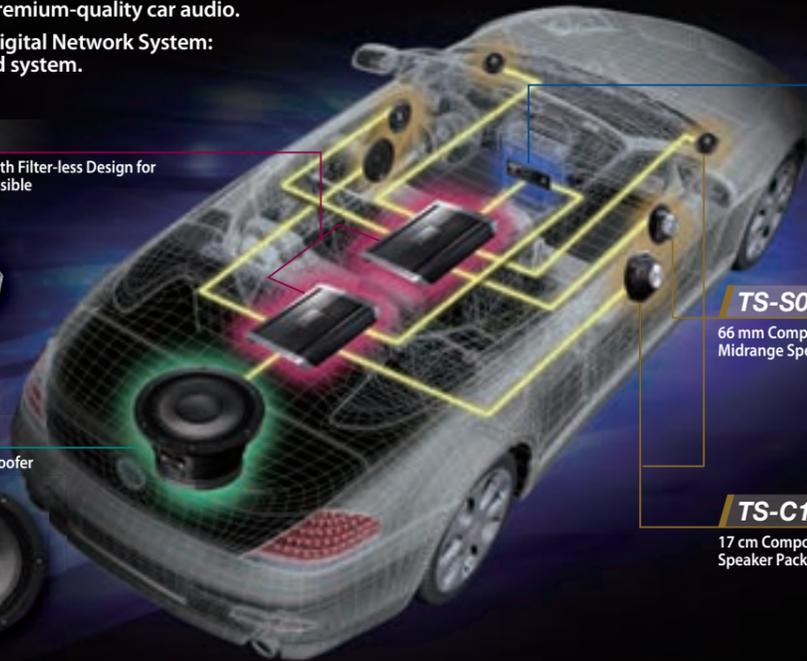
Target: Aficionados of premium-quality car audio.

What We Offer: 4-Way Digital Network System: the ultimate in-car sound system.

PRS-A900
4-Channel Bridgeable Amplifier with Filter-less Design for the Purest Sonic Reproduction Possible



TS-W252PRS
25 cm (10") Component PRS Subwoofer



DEX-P99RS
Audio Receiver with Sound Master Clock Circuit, High-Performance DSP, and USB Port with Digital Direct Signal Transmission



TS-S062PRS
66 mm Component Midrange Speaker



TS-C172PRS
17 cm Component Speaker Package



Club Atmosphere, Massive Impact

Target: Lovers of loud dance music with extra-deep bass impact.

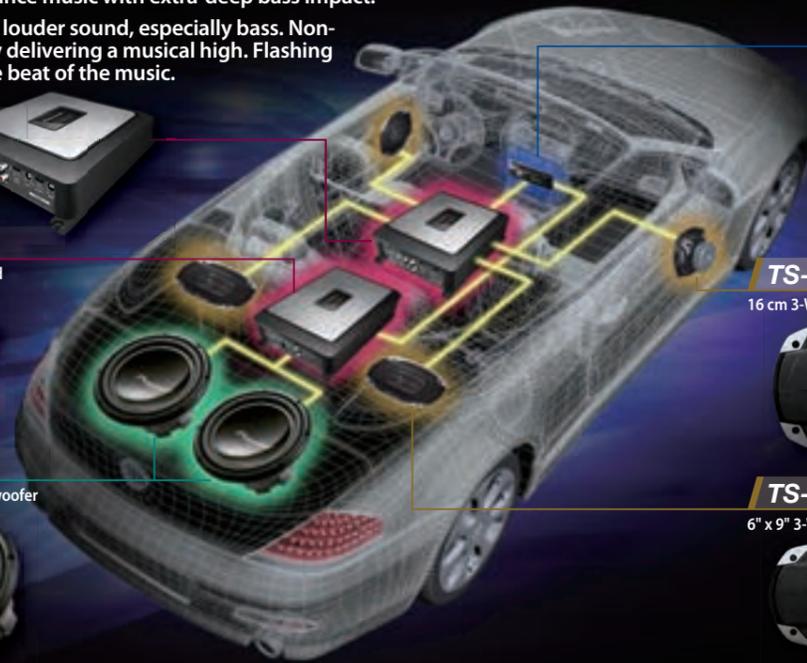
What We Offer: Deeper, louder sound, especially bass. Non-Stop Mix Play seamlessly delivering a musical high. Flashing Color light pulsing to the beat of the music.

GM-D9500F
Class-FD 4-Channel Bridgeable Amplifier

GM-D8500M
Class-D Mono Amplifier with Wired Bass Boost Remote



TS-W309S4
30 cm (12") Champion Series Subwoofer (4 Ω Single Voice Coil Type)



DEH-5450SD
Audio Receiver with MIXTRAX, and USB Direct Control for iPod/iPhone



TS-1675 V2
16 cm 3-Way Champion Series Speaker



TS-6975 V2
6" x 9" 3-Way Champion Series Speaker

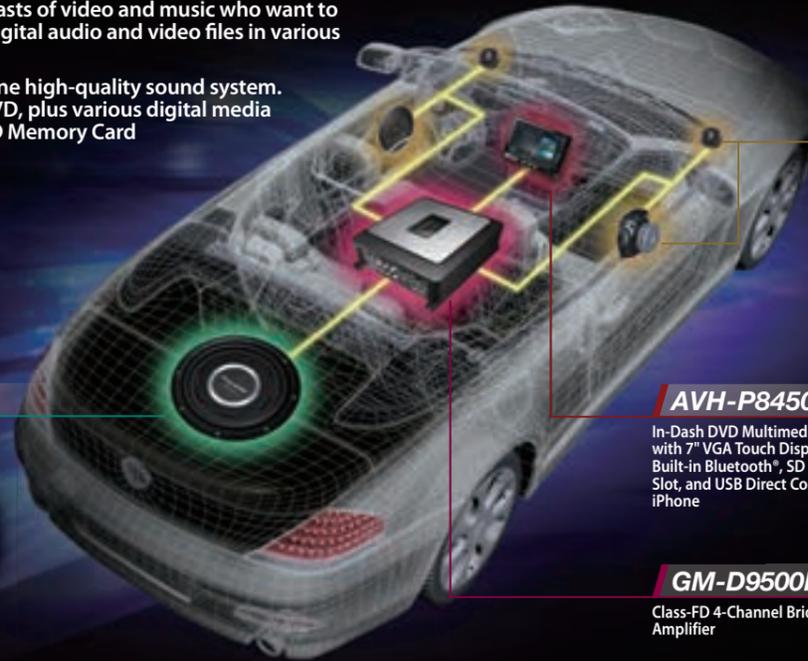


More AV Media on the Move

Target: Serious enthusiasts of video and music who want to play huge volumes of digital audio and video files in various media formats.

What We Offer: All-in-one high-quality sound system. Compatible with CD, DVD, plus various digital media via iPod, USB Device, SD Memory Card and Bluetooth®.

TS-SW3001S4
30 cm (12") Shallow-Mount IMPP Component Subwoofer



TS-D1720C
17 cm Component Speaker Package



AVH-P8450BT
In-Dash DVD Multimedia AV Receiver with 7" VGA Touch Display, Built-in Bluetooth®, SD Memory Card Slot, and USB Direct Control for iPod/iPhone



GM-D9500F
Class-FD 4-Channel Bridgeable Amplifier

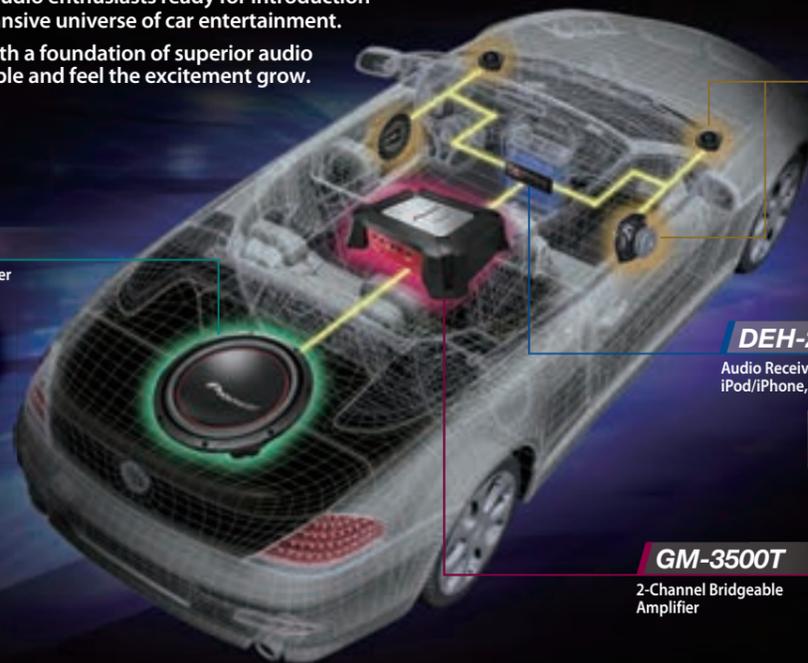


Stronger from the Start

Target: Entry-level car audio enthusiasts ready for introduction to a more exciting, expansive universe of car entertainment.

What We Offer: Start with a foundation of superior audio performance made simple and feel the excitement grow.

TS-W304R
30 cm (12") Component Subwoofer



TS-A1604C
16 cm Component Speaker Package (17 cm Compatible)



DEH-2450UB
Audio Receiver with USB Direct Control for iPod/iPhone, and Front USB Port



GM-3500T
2-Channel Bridgeable Amplifier





KEY FEATURES STEP-UP COMPARISON CHART

	DIN Size	Display	Preout	Playback	Video Format	Audio Format	AUX Input (Mini-Jack)	USB Interface	Control for iPod/iPhone ^{*1}	Advanced App Mode	SD/SDHC Memory Card Slot	Bluetooth ^{*2}	MIXTRAX	Dual Zone Audio/Video	Auto EQ ^{*3}	Advanced Sound Retriever	Back-Up Camera Ready	Page Number
AVH-P8450BT	2-DIN	7.0" VGA	3 (4V)	DVD/CD	H.264 WMV DivX	MP3 WMA AAC	Rear	Rear x 2				HFP A2DP AVRCP SSP						10
AVH-P4450BT	2-DIN	7.0" QVGA	3 (4V)	DVD/CD	DivX	MP3 WMA AAC	Rear	Rear				HFP A2DP AVRCP SSP						14
AVH-P3450DVD	2-DIN	7.0" QVGA	3 (4V)	DVD/CD	DivX	MP3 WMA AAC	Rear	Rear				CD-BTB200						14
AVH-2450BT	2-DIN	5.8" QVGA	3 (2V)	DVD/CD	DivX	MP3 WMA AAC	Front	Front				HFP A2DP AVRCP SSP						15
AVH-1450DVD	2-DIN	5.8" QVGA	3 (2V)	DVD/CD	DivX	MP3 WMA AAC	Front	Front										15
AVH-P6350BT	1-DIN	7.0" QVGA	3 (4V)	DVD/CD	DivX	MP3 WMA AAC	Front	Front				HFP						18
AVH-P5350DVD	1-DIN	7.0" QVGA	3 (4V)	DVD/CD	DivX	MP3 WMA AAC	Front	Front				CD-BTB200						18
AVH-5450DVD	1-DIN	7.0" QVGA	2 (2V)	DVD/CD	DivX	MP3 WMA AAC	Front	Front										19
DVH-735AV	1-DIN	3.0" QVGA	2 (4V)	DVD/CD	DivX	MP3 WMA	Front	Front										20
DVH-345SUB	1-DIN		2 (2V)	DVD/CD	DivX	MP3 WMA AAC	Front	Front										21
MVH-8350BT	1-DIN	3.0" QVGA	3 (4V)		DivX	MP3 WMA AAC	Front	Front				HFP						22
MVH-7350	1-DIN	3.0" QVGA	3 (4V)		DivX	MP3 WMA AAC	Front	Front										22

^{*1} Optional cable required. Please refer to page 96 for compatibility.
^{*2} HFP = Hands-Free Profile, A2DP = Advanced Audio Distribution Profile, AVRCP = Audio/Video Remote Control Profile (version 1.3), SSP = Simple Secure Profile. Please refer to instruction manual for other information about profile compatibility.
^{*3} CD-MC20 required.
^{*4} Optional cable CD-IU201S required.

See pages 10-23 for in-depth feature information fro each model, and page 94 for full specifications.

Entertainment

- New Music Experience
- MIXTRAX

MIXTRAX

Convenience

- Easy Interface: Fun and Convenient
 - Home Screen Menu
 - Innovative Interface to Naturally Tap, Swipe or Drag for Intuitive Control with High Response
 - Thumbnail Display for Video Browsing
 - Multi-Language Display for Menu and ID3 Tag
- Make It Yours with Customization
 - Color Customization (5- or 6-Display Colors, 112-Key Colors)
 - Album Art Display
 - Change Background Wallpaper Among Built-in Selections, a Spectrum Analyzer, or Your Own JPEGs
- See the Big Picture
 - Select from 7", 5.8" or 3" Widescreen Color Displays

- Safe and Secure

- Detachable Face Security™

Connectivity

- Connect Multiple Devices and Other Compatible Devices
 - Dual USB Ports
 - USB Direct Control for iPod/iPhone
 - USB Control of Portable Media Players and USB Devices
 - Built-in SD/SDHC Memory Card Slot
 - RGB Input
- Hands-Free Calling for Safer Driving
 - Hands-Free Calling (HFP)
 - Wireless Audio Streaming/Control (A2DP/AVRCP)
 - Easy Pairing (SSP)
- Smartphone Connectivity with Advanced App Mode
 - Fully controls Apps compatible with Advanced App Mode through the display — Google Maps™, etc.

Audio/Video Quality

- Extraordinary Video Quality and Visibility
 - VGA Panel
 - Advanced Display Resolution (ADR)
 - LED Backlight
- Now Playing in a Dash Near You
 - H.264 and WMV Playback Capability
 - DivX® Playback on CD/DVD/USB Device/SD/SDHC Memory Card Slot
 - iTunes AAC/MP3/WMA Playback
- Bring Your Music to Life
 - Advanced Sound Retriever
 - Hi-Volt Preout — Stronger Dynamics, Crisper Highs, Fuller Bass
 - Auto EQ — Microphone* Analyzes Acoustic Characteristics of the car cabin to create custom equalizer setting for optimum sound
 - * CD-MC20 Required
 - Sonic Center Control — Controls phasing of speakers according to listening position for clearer focus of the soundstage

Note: Functions available differ among receivers. For details about a particular receiver, refer to its product page.



AVH-P8450BT NEW

In-Dash DVD Multimedia AV Receiver with 7" VGA Touch Display, Built-in Bluetooth®, SD Memory Card Slot, and USB Direct Control for iPod/iPhone



7.0W VEGA, AAC, PEG, DIVX, DOLBY DIGITAL, S/PDIF, DVD, MP3, WMA, MIXTRAX, ADVANCED APP MODE, Made for iPod iPhone, Bluetooth, Dual USB, Auto EQ, Sonic Center Control, RDS, SUPER TUNER III, MOSFET 50W x 4, Back Up Camera, 24bit, Hi-VOLT, RCA PRESETS, Dual Zone Audio/Video, IP-Bus IN, Wired Remote IN, Bluetooth Microphone IN, Audio Preouts, Audio OUT, AUX IN, RGB IN, Video OUT, Video IN, Optical OUT, Dual USB Ports, Rear View Camera IN, Audio IN.

Key Selling Points

Point 1 The Advanced User Interface makes various audio/video functions exceptionally operable using an innovative GUI.

Point 2 With advanced Non-Stop Mix, auto beat sound seamlessly delivers a musical high as if a club DJ is mixing.

MIXTRAX

Point 3 VGA panel and Advanced Display Resolution (ADR) brilliantly enhance video visibility and clarity of various video formats. Versatile audio functions provide plenty of control to optimize sound for your seating position.



Point 4 Fully controls Apps compatible with Advanced App Mode through the display — Google Maps™, etc.

ADVANCED APP MODE, Made for iPod iPhone

Main Features

- MIXTRAX
- 7" VGA Touch Panel Display with LED Backlight
- Advanced Display Resolution (ADR)
- Multi-Language Display* (Menu/ID3 Tag)
- Color Customization (5-Display Colors and 112-Key Colors)
- USB Direct Control for iPod/iPhone and USB Devices (USB Interface Cable for iPod/iPhone Required)
- Advanced App Mode (CD-IU2015 Required)
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- Dual USB Ports (Rear: High Current 1A Handling Capability)
- SD/SDHC Memory Card Slot
- AUX Input (Audio/Video)
- RGB Input
- DVD/CD Player with DVD Video Playback
- H.264/WMV Playback from CD/DVD/USB Device/SD Memory Card
- DivX/MPEG** -1, -2, -4/iTunes AAC/MP3/WMA/WAV Playback from CD/DVD/USB Device/SD Memory Card
- Dual Zone Audio/Video
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Hi-Volt Preouts x 3 (4 V)
- 8-Band Graphic EQ
- Auto EQ (CD-MC20 Required)

- Sonic Center Control
 - Multi-Channel Processor Ready
 - Digital Photo Frame
 - Back-Up Camera Ready
 - Detachable Face Security™
 - Wired Remote Input
 - Display Off Mode
 - RDS
- * Please see page 17 for more details.
** MPEG-1/-2 files stored in a USB Device or SD Memory Card can't be played.
Note: Text in blue indicates feature differentiation from other models.
Please see pages 92 and 93 for accessories.

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4S (Advanced App Mode Compatible)
iPhone 4 (Advanced App Mode Compatible)
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Point 1

Advanced User Interface

Direct Access to MIXTRAX and MIXTRAX EZ

With Non-Stop Mix, auto beat sound seamlessly delivers a musical high as if a club DJ is mixing.

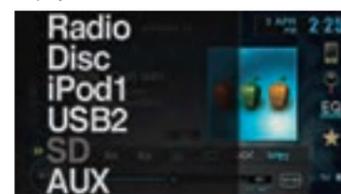
* Please see page 12 for more details about MIXTRAX.

Bluetooth® Hands-Free Display

The AVH-P8450BT allows safe, simple, hands-free wireless-enabled cell phones. Just touch the cell phone icon in the receiver display for direct access to the Bluetooth display. Simple pairing requires no input of a PIN code.

Source Change Display

Cool, simple display featuring large easy-to-read font makes it effortless to change a source without switching the display.



Advanced Sound Retriever

Equalizer Setting Display

Directly access the equalizer setting display. With its unique Advanced Touch Slide Operation, you simply drag a finger to change the EQ curve and audio characteristics.

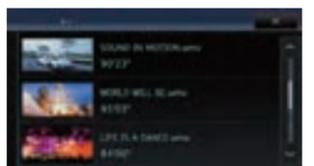


You can set EQ curve freely just by dragging a finger.



Browsing Display

Thumbnail images make video file search easy. Press playback button to preview video in the browsing display for quick, easy access and search for what you want to see.



Intuitive Operation!

Home Menu Display

Press home button to display source list. Icons are well designed and positioned for quick recognition of sources and easy access to the desired one. With the Dual Zone Audio/Video system, flicking a finger right or left makes it easy for front and rear passengers to switch sources, and access and control displays for each source.

Front Zone



Front Source Display

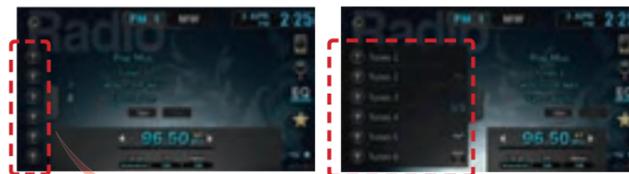


Rear Source Display



Radio Display

Preset channels are positioned at the left side of the display. You can see the lists in the same display at once, and select a channel without a hassle.



Easy Access

Customize Your Mode Mix or Match Your Colors

Select among five (Blue/Red/Amber/Green/Violet) colors for the display and 112 different colors to match unit illumination to the dash.

Brilliant!

MULTIPLE COLOR



Point 2

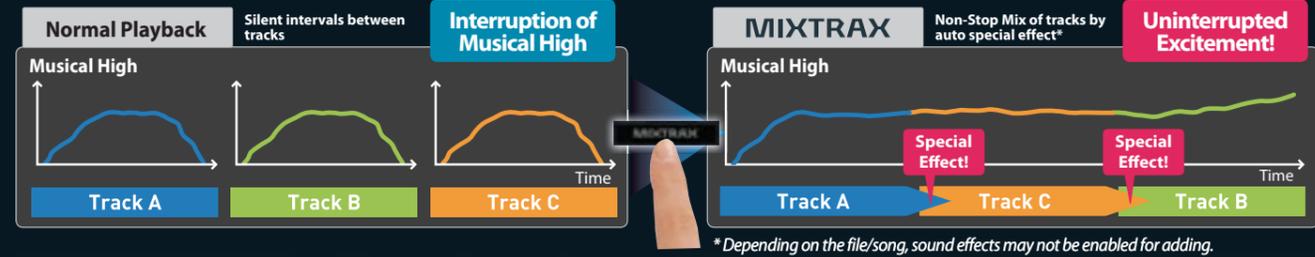
MIXTRAX



Innovative MIXTRAX technology applies Pioneer's original professional DJ product development know-how, so you can create non-stop mixes of selections from your audio library.

MIXTRAX Benefit

Pioneer applied its unique expertise to keep car entertainment flowing smoothly without interruption, so you can experience the intimate euphoria of listening to music that sounds as if a club DJ is there playing it.



How MIXTRAX Works

MIXTRAX and MIXTRAX EZ Comparison

	Advantage	MIXTRAX Software	Compatible Source
MIXTRAX	Full-featured Non-Stop Mix Play*	Compatible	USB Device SD Memory Card
MIXTRAX EZ	Quick and Easy Mix Play	—	USB Device SD Memory Card iPod/iPhone

* Requires music analysis by "MIXTRAX" PC application from Pioneer (free download).

MIXTRAX
Seamlessly plays full-featured Non-Stop Mix Play automatically based on data from music analysis.
Note: You can fully control the MIXTRAX App in the iPhone 4/iPhone 4S (or 4th generation iPod touch) by using Advanced App Mode through on the receiver's display. MIXTRAX App may not be available in some countries.

MIXTRAX EZ
Simple, seamless music connection makes it quick and easy to enjoy Non-Stop Mix Play.

Music Analysis

MIXTRAX software automatically analyzes a track's BPM, bar, beat position, vocal position and mood, then adds the analyzed data to the music file. The AVH-P8450BT reads in this well-categorized data, so it's simple to enjoy precise, full-featured Non-Stop Mix Play in various mixes in your car.

Auto DJ Style Playlist

From a USB device or SD memory card, the receiver automatically reads in a playlist categorized (Beat/Chill/Thump/Distortion/High) according to the analyzed music data added to the music file. To make natural sounding transitions between music within the mix for playback, this function selects music by matching pieces that are similar in BPM tempo and mood.

MIX Style

Select among three mixing styles of different track time durations and effects in preset four steps.

Standard Style
Joins hook-line parts with moderate effect.

Simple Style
Joins tracks in long playback with natural effect.

Active Style
Joins tracks in short playback with bold effect.

Beat Matching

Synchronizing the beat of the music makes for natural Non-Stop Mix Play enjoyment.

Without beat timing matching

With beat timing matching

Music Beat Timing

Beat matching point

Album Jacket Dance

Album Jacket Dance function bounces and gyrates the album art to the music as it plays.

Point 3

Video Quality

Enjoy outstanding pictures from various video sources.

VGA Panel

The AVH-P8450BT has a VGA display reproducing detailed pictures and vivid hues.



Advanced Display Resolution (ADR)

By incorporating extra-high-resolution technology, even low-resolution moving images can be reproduced as high-quality images.

Compatibility with Various Video Formats

The AVH-P8450BT can play video formats including DivX, H.264, WMV and others.



Audio Quality

Auto EQ*

Automatically tailors acoustics by fine-tuning frequency bandwidths plus front/rear speaker digital parametric equalization. Result: smooth sound full of subtle nuance and clarity.



* CD-MC20 required

Sonic Center Control

Adjusts frequency phase and acoustic characteristics by up to 15 steps for clearer, focused soundstage.



Advance Sound Retriever

Restores sound quality and clarity to your highly compressed MP3, WMA and AAC files.

Please see page 17 for more details about Auto EQ, Sonic Center Control and Advanced Sound Retriever.

Point 4

Smartphone Connectivity

Pioneer's revolutionary, game-changing AVH-P8450BT is the first car stereo to revolutionize the driver's smartphone experience by bringing compatible iPhone 4/iPhone 4S (or 4th generation iPod touch) apps to your dash. When connected to an iPhone 4/iPhone 4S (or a 4th generation iPod touch) loaded with App compatible with Advanced App Mode, the AVH-P8450BT in-dash receiver provides the ultimate in-vehicle smartphone experience.



Step 1



Install the AppRadio App to your iPhone 4/iPhone 4S (or 4th generation iPod touch).

Step 2



After booting the AppRadio App, connect your iPhone to the receiver using the Advanced App Mode compatible cable CD-IU2015. Pressing the "Mode" button lets you change to the Advanced App Mode's Home display screen.

Step 3



Through the display of the AVH-P8450BT, you can fully control Apps compatible with Advanced App Mode, such as Google Maps™, etc.

Note: AppRadio App is available from iTunes App Store. Please use in 3G or Wi-Fi connection situations. AppRadio App & Compatible Apps may not be available in some countries.

Other Points

Detachable Face Security™

You can remove the face panel to deter theft.



Versatile Connectivity

Convenient, Easy Bluetooth® Wireless Functions

- Hands-free calling (HFP) for safe driving
- Wireless Audio Streaming/Control (A2DP/AVRCP)
- Easy Pairing (SSP)



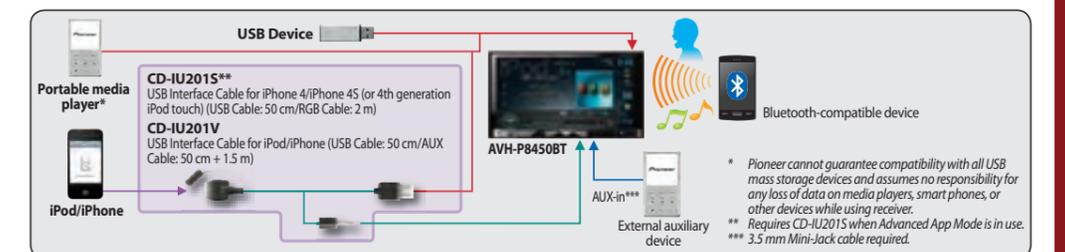
Dual USB Ports

More connectivity adds more convenience and utility. For example, you can listen to music from a USB device while charging your smartphone.



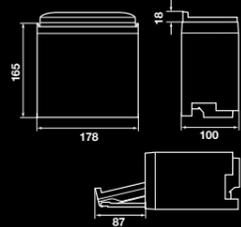
USB Direct Control for iPod/iPhone

Pioneer's AVH-P8450BT is ready to roll with capability for direct connection to your iPod. File search and access are extra-quick. The receiver keeps song, artist, time and album information displays very clear and user-friendly. The system's wired USB connection provides direct digital signal transfer from the iPod for clean, clear sound.



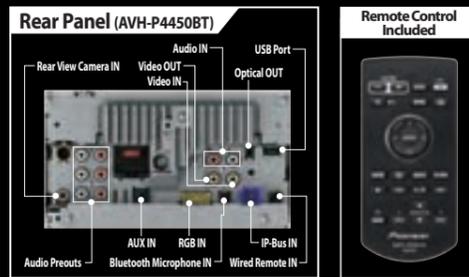
AVH-P4450BT NEW

In-Dash Double-DIN DVD Multimedia AV Receiver with 7" Widescreen Touch Display, Built-in Bluetooth®, and USB Direct Control for iPod/iPhone



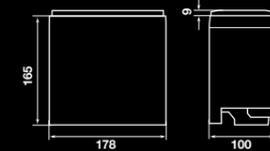
AVH-P3450DVD NEW

In-Dash Double-DIN DVD Multimedia AV Receiver with 7" Widescreen Touch Display, and USB Direct Control for iPod/iPhone



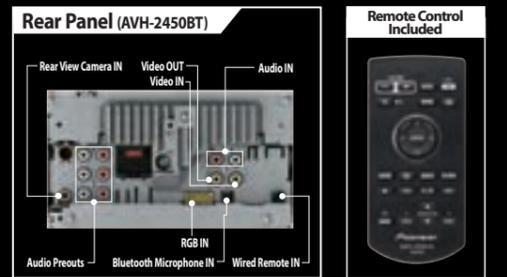
AVH-2450BT NEW

In-Dash Double-DIN DVD Multimedia AV Receiver with 5.8" Widescreen Touch Display, Built-in Bluetooth®, and USB Direct Control for iPod/iPhone



AVH-1450DVD NEW

In-Dash Double-DIN DVD Multimedia AV Receiver with 5.8" Widescreen Touch Display, and USB Direct Control for iPod/iPhone



7.0W, LED, MULTIPLE COLOR, MULTI-LANGUAGE DISPLAY, DVD VIDEO, MP3 WMA AAC APEG DIVX, DOLBY DIGITAL, Bluetooth®, Made for iPod iPhone, USB, AUX IN, RCA Pre-outs, Hi-VOLT, 24bit D/A Converter, Auto EQ, Sonic Center Control, WIRED REMOTE INPUT, RDS, SUPER TUNER III, MOSFET 50Wx4, Back UP Camera Ready.

Notes: Bluetooth Wireless Technology for AVH-P4450BT. Bluetooth adapter ready for AVH-P3450DVD.

Key Selling Points

Point 1 Innovative Interface with High Response and Customizable Function make your car cabin more comfortable and enjoyable. Touch Panel Screen, MULTIPLE COLOR.

Point 2 Versatile connectivity to various digital devices like Bluetooth-compatible cell phone. Also, connection with USB device allows DivX playback capability. Bluetooth, DIVX, USB.

Point 3 Multi-Language Display shows not only Menu, but also ID3 tag text in multiple languages. MULTI-LANGUAGE DISPLAY.

Point 4 Superior video quality enhances playback compatibility with various video formats. Versatile audio functions provide plenty of control to optimize sound for your seating position. 7.0W/5.8W, DIVX, Auto EQ, Sonic Center Control.

5.8W, LED, MULTIPLE COLOR, MULTI-LANGUAGE DISPLAY, DVD VIDEO, MP3 WMA AAC APEG DIVX, AUX IN, RCA Pre-outs, 24bit D/A Converter, Auto EQ, Sonic Center Control, WIRED REMOTE INPUT, RDS, SUPER TUNER III, MOSFET 50Wx4, Back UP Camera Ready, Bluetooth®, Made for iPod iPhone, USB.

Note: Bluetooth Wireless Technology for AVH-2450BT.

Common Main Features

- Multi-Language Display* (Menu/ID3 Tag)
- Color Customization (5-Display Colors and 112-Key Colors)
- USB Direct Control for iPod/iPhone and USB Devices (USB Interface Cable for iPod/iPhone Required)
- App Mode
- RGB Input
- DVD/CD Player with DVD Video Playback
- DivX/MPEG-1, -2, -4/iTunes AAC/MP3/WMA Playback from CD/DVD/USB Device
- Advanced Sound Retriever
- MOSFET 50 W x 4
- 8-Band Graphic EQ
- Auto EQ (CD-MC20 Required)
- Sonic Center Control
- Digital Photo Frame
- Back-Up Camera Ready
- Wired Remote Input
- Display Off Mode
- RDS

* Please see page 17 for more details.

AVH-P4450BT Main Features

- 7" Touch Panel Display with LED Backlight
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- USB Port (Rear: High Current 1A Handling Capability)
- AUX Input (Audio/Video)
- Hi-Volt Preouts x 3 (4 V)
- Multi-Channel Processor Ready

AVH-P3450DVD Main Features

- 7" Touch Panel Display with LED Backlight
- USB Port (Rear: High Current 1A Handling Capability)
- AUX Input (Audio/Video)
- Hi-Volt Preouts x 3 (4 V)
- Multi-Channel Processor Ready

AVH-2450BT Main Features

- 5.8" Touch Panel Display with LED Backlight
- Built-in Bluetooth Wireless Technology (Hands-Free Calling/Wireless Audio)
- USB Port (Front: High Current 1A Handling Capability)
- Front AUX Input (Audio/Video)
- RCA Preouts x 3 (2 V)

AVH-1450DVD Main Features

- 5.8" Touch Panel Display with LED Backlight
- USB Port (Front: High Current 1A Handling Capability)
- Front AUX Input (Audio/Video)
- RCA Preouts x 3 (2 V)

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Note: Text in blue indicates feature differentiation from other models.

Please see pages 92 and 93 for accessories.

Point 1

A Simpler, More Innovative Interface

Home Menu Display

Source and setting icons are designed and arranged on the Home display for easy recognition at a glance, making direct access to Pioneer interface operating functions more smooth, simple and stress-free than ever.



Advanced Sound Retriever/8-Band Graphic EQ

Direct Source Selection

Switch to another source simply by touching a screen icon. You can access another targeted source instantly without defaulting back to the menu display.



Hyper Link with Connected iPod/iPhone

- Just touch the receiver display to switch to List Search display of each Song, Artist and Album
- Search for other songs in the same Album

More Comfortable Control of an iPod/iPhone

When an iPod is connected to the receiver, you can switch among Link Search and Shuffle All.

App Mode

You can enjoy video and music using apps installed in iPhone and iPod touch.

Note: In App Mode, operability of app on receiver's display is limited. Pioneer Receiver can play audio/video content from an iPod or iPhone with an app that outputs audio/video signals. Not every app, however, is compatible with App Mode.



Setting Menu

You can jump to access setting menus registered as favorites.

Digital Photo Frame*

The receiver can display JPEG images while it plays music. Just one touch of the Capture button can save a favorite picture as a wallpaper to the receiver.

** While viewing a picture on USB Device or SD Memory Card, you can only play music on CD, DVD or Tuner.*

Bluetooth® Mode Display

The AVH-P4450BT and AVH-2450BT allow safe, simple, hands-free calling and receiving with most Bluetooth wireless-enabled cell phones. Just touch the cell phone icon in the receiver display for direct access to the Bluetooth display.



List Search

Now you can search using fewer steps to find the next song without interrupting what is already playing, or reverting back to another layer of command.



Stress-Free Operation

Operation of the touch panel is highly responsive. Touch slide operation allows quick effortless song search, even while an iPod is connected.



Quick Response!

Customize Your Mode

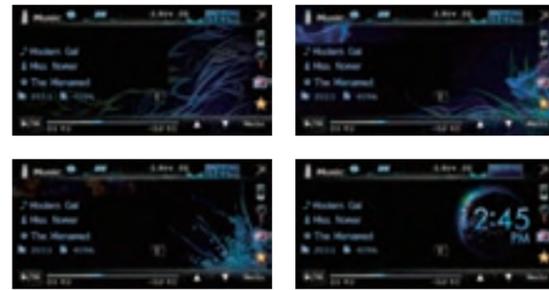
Mix or Match Your Colors

Select among five (Blue/Red/Amber/Green/Violet) colors for the display and 112 different colors to match unit illumination to the dash.



Brilliant!

Background Pictures/Clock



Note: Display may differ from those shown here according to model.

Point 2

Versatile Connectivity

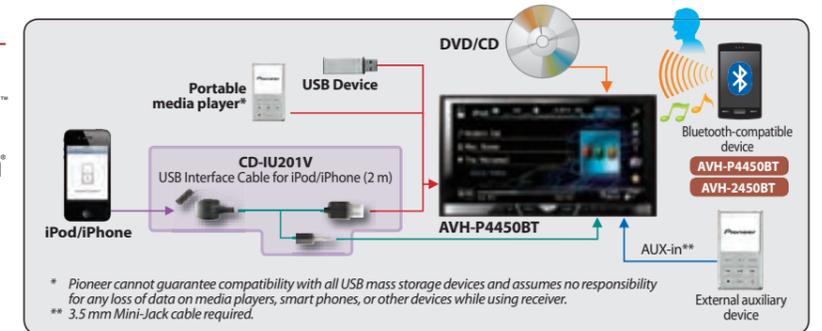
Versatile Multimedia Playback

Extended DivX playback from USB Devices



Convenient, Easy Bluetooth® Wireless Functions

- Hands-free calling (HFP) for safe driving
- Wireless Audio Streaming/Control (A2DP/AVRCP)
- Easy Pairing (SSP)



** Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.
** 3.5 mm Mini-Jack cable required.*

Point 3

Multi-Language Display

New Pioneer AV receivers feature Multi-Language Display of Menu and ID3 tag text.

MULTI-LANGUAGE DISPLAY



** Language differs according to region and is specifically indicated on packaging carton. Ask local distributor for details regarding any exceptions that may exist.*

Point 4

Auto EQ*

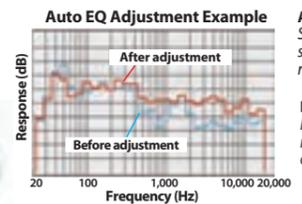
It is difficult to reproduce music well in a car because speaker positioning is constrained by interior space and other conditions. These limitations can lead to sound phase distortion, as well as speaker sound reflection against glass and absorption by dashboard and seats. Auto EQ tailors specific musical characteristics according to taste, uses a microphone to monitor and analyze acoustics, then automatically fine-tunes all frequency bandwidths and front and rear speaker digital parametric equalization.



CD-MC20

Microphone for Auto EQ Frequency Band Fine-Tuning

** CD-MC20 Required*



Auto EQ Adjustment Example
After adjustment: Smooth response with subtle nuances reproduced clearly.
Before adjustment: Rough frequency response curve; unclear overall sound.

Sonic Center Control

Unless a listener is perfectly centered in a car cabin, sound heard from some speakers will lag the sound heard from other speakers, resulting in unfocused soundstage and instable frequency characteristics. Sonic Center Control remedies this by adjusting frequency phase and acoustic characteristics by up to 15 steps, resulting in a clearer, focused soundstage.



Sonic Center Control



8-Band Graphic EQ

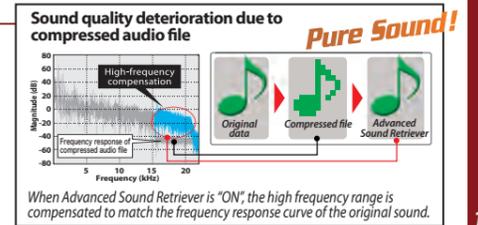
With Pioneer's 8-band graphic equalizer, you can customize the equalization levels to best match the acoustics of your car.



8-Band Graphic EQ

Advanced Sound Retriever

Hear more detail, warmth and clarity that the artist originally wanted you to hear from MP3, WMA and AAC files stored on your CD, USB Device, SD/SDHC Memory Card, iPod/iPhone and portable media players. Pioneer's Advanced Sound Retriever technology benefits audio reproduction performance by restoring data (especially high-frequency data) that tends to get lost in the digital compression process.



Sound quality deterioration due to compressed audio file
When Advanced Sound Retriever is "ON", the high frequency range is compensated to match the frequency response curve of the original sound.

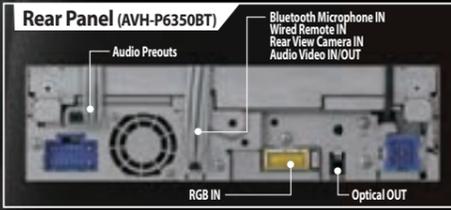
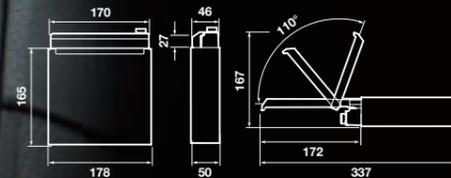
AVH-P6350BT

In-Dash DVD Multimedia AV Receiver with 7" Widescreen Touch Display, SD Memory Card Slot, USB Direct Control for iPod/iPhone, and Built-in Bluetooth*



AVH-P5350DVD

In-Dash DVD Multimedia AV Receiver with 7" Widescreen Touch Display, SD Memory Card Slot, and USB Direct Control for iPod/iPhone



Rear Panel (AVH-P6350BT)
 Bluetooth Microphone IN
 Wired Remote IN
 Rear View Camera IN
 Audio Video IN/OUT
 Audio Preouts
 RGB IN
 Optical OUT

Notes: Bluetooth Wireless Technology for AVH-P6350BT. Bluetooth adapter ready for AVH-P5350DVD.

Key Selling Points

- Point 1** Innovative Interface with High Response and Customizable Function make your car cabin more comfortable and enjoyable.
- Point 2** Reproduces DVD Video as well as compressed video format recordings contained in USB device and SD memory card.
- Point 3** Experience superior in-car AV Performance with 7" display sizes, Dual Zone Video*, Auto EQ**, Sonic Center Control, 8-Band Graphic EQ and more.

* Not compatible with AVH-5450DVD. ** CD-MC20 Required.

Main Features

- 7" Touch Panel Display with LED Backlight
- Multi-Language Display* (Menu)
- Color Customization (5-Display Colors and 112-Key Colors)
- USB Direct Control for iPod/iPhone and USB Devices (USB Interface Cable for iPod/iPhone Required)
- App Mode
- Built-in Bluetooth Wireless Technology (Hands-Free Calling) (AVH-P6350BT)
- USB Port (Front)
- SD/SDHC Memory Card Slot
- Front AUX Input (Audio/Video)
- RGB Input
- DVD/CD Player with DVD Video Playback
- DivX/iTunes AAC/MP3/WMA/WAV Playback from CD/DVD/USB Device/SD Memory Card
- Dual Zone Audio/Video
- Advanced Sound Retriever
- MOSFET 50W x 4
- Hi-Volt Preouts x 3 (4V)
- 8-Band Graphic EQ
- Auto EQ (CD-MC20 Required)
- Sonic Center Control
- Multi-Channel Processor Ready
- Digital Photo Frame
- Back-Up Camera Ready
- Rotary Volume Control
- Detachable Face Security™
- Wired Remote Input
- Display Off Mode
- RDS

* Please see page 19 for more details.

Note: Text in blue indicates feature differentiation from other models.

Please see pages 92 and 93 for accessories.

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Point 1

A Simpler, More Innovative Interface

Pioneer interface makes direct operation stress-free by eliminating complicated layered selection displays, so access to desired functions is smoother and simpler than ever. Various customization and digital photo frame functions also make it easy to suit the mood.

Direct Source Selection



Hyper Link with Connected iPod/iPhone

More Comfortable Control of an iPod/iPhone

App Mode



Advanced Sound Retriever 8-Band Graphic EQ

Bluetooth® Mode Display



List Search



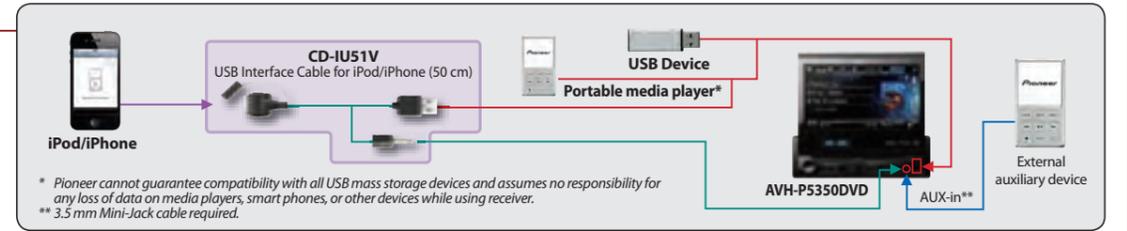
Digital Photo Frame



Point 2

Versatile Connectivity

Various devices can be connected via built-in front AUX input, extending access to all the songs contained in iPod, iPhone and USB Devices.



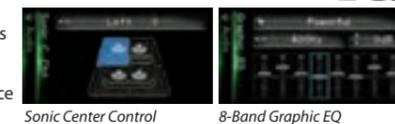
* Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.
 ** 3.5 mm Mini-Jack cable required.

Point 3

Auto EQ*

Automatically tailors acoustics by fine-tuning frequency bandwidths plus front/rear speaker digital parametric equalization. Result: smooth sound full of subtle nuance and clarity.

* CD-MC20 required



Auto EQ

Sonic Center Control

Adjusts frequency phase and acoustic characteristics by up to 15 steps for clearer, focused soundstage.



Advanced Sound Retriever

Restores sound quality and clarity to your highly compressed MP3, WMA and AAC files.

Please see page 17 for more details about Auto EQ, Sonic Center Control and Advanced Sound Retriever.

Other Point

Multi-Language Display

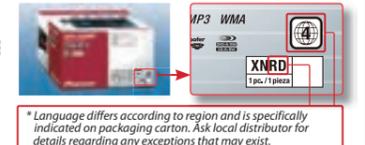
Pioneer AV receivers feature Multi-Language Display.

MULTI-LANGUAGE DISPLAY

Middle East Asia
 English/Arabic/Persian/Russian

Asia
 English/French/Thai/Chinese (Simplified)

Central America/Latin America/Oceania
 English/Thai/Spanish/Portuguese



* Language differs according to region and is specifically indicated on packaging carton. Ask local distributor for details regarding any exceptions that may exist.

AVH-5450DVD NEW

In-Dash DVD Multimedia AV Receiver with 7" Widescreen Touch Display, and USB Control



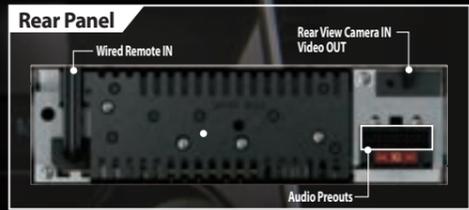
Main Features

- 7" Touch Panel Display with LED Backlight
- Multi-Language Display (Menu)
- Color Customization (5-Display Colors and 112-Key Colors)
- USB Port (Front)
- SD/SDHC Memory Card Slot
- Front AUX Input (Audio/Video)
- RGB Input
- DVD/CD Player with DVD Video Playback
- DivX/iTunes AAC/MP3/WMA/WAV Playback from CD/DVD/USB Device/SD Memory Card
- Advanced Sound Retriever
- MOSFET 50 W x 4
- 8-Band Graphic EQ
- Auto EQ (CD-MC20 Required)
- Sonic Center Control
- Back-Up Camera Ready
- Rotary Volume Control
- Detachable Face Security™
- Display Off Mode
- RDS

Note: Please see pages 92 and 93 for accessories.

DVH-735AV NEW

DVD Receiver with 3" Widescreen Color TFT Display, Front USB Port, and Front AUX-In



3.0W **LED** MULTI-LANGUAGE DISPLAY DVD VIDEO DVD-R/RW CD-R/RW MP3 WMA JPEG DIVX DOLBY DIGITAL AUX IN 2 RCA pre-outs Hi-VOLT USB

24bit DA Converter WIRELESS REMOTE INPUT MOSFET 50Wx4 DETACHABLE FACE SECURITY Back Up Camera READY

Key Selling Points

- Point 1** 3" large, highly operable TFT display with excellent visibility. 3.0W
- Point 2** In-car playback of DivX highly compressed digital video files from DVD and USB device. **DIVX DVD VIDEO USB**
- Point 3** High-quality sleek face panel design features full color TFT display.

Main Features

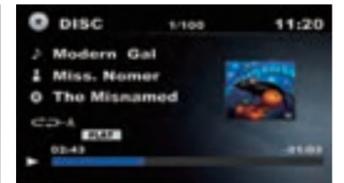
- 3" Color TFT Display with LED Backlight
 - Multi-Language Display (Menu/ID3 Tag) (English/Spanish/Portuguese)
 - Dual Color (Red/Blue)
 - USB Port (Front)
 - Front AUX Input (Audio/Video)
 - DVD/CD Player with DVD Video Playback
 - DivX/MPEG-1, -2, -4/MP3/WMA/WAV Playback from CD/DVD/USB Device
 - MOSFET 50 W x 4
 - Hi-Volt Preouts x 2 (4 V)
 - 3-Band Equalizer (High/Mid/Low)
 - Back-Up Camera Ready
 - Rotary Volume Control
 - Detachable Face Security™
 - Wired Remote Input
 - Display Off Mode
- Note: Text in blue indicates feature differentiation from other models.*
- Please see pages 92 and 93 for accessories.

Point 1

3" Large Full Color TFT Display

- A built-in 3" full color display presents a range of information with excellent visibility and comfortably operable functions.
- Display built into the front panel makes it easy to enjoy video.

3.0W

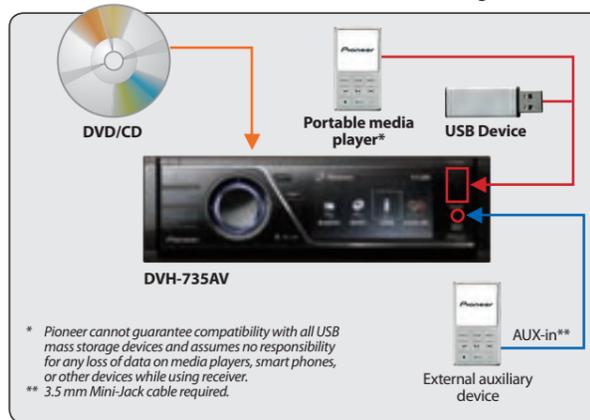


Point 2

Versatile Connectivity

Versatile Multimedia Playback

Extended DivX playback from USB devices.



Point 3

Sleek Face Panel Design

High-quality face panel design features full color TFT display.



DVH-345UB NEW



LED DVD VIDEO DVD-R/RW CD-R/RW MP3 WMA AAC JPEG DIVX DOLBY DIGITAL AUX IN 2 RCA pre-outs 24bit DA Converter WIRELESS REMOTE INPUT RDS USB

SUPER TUNER III MOSFET 50Wx4 DETACHABLE FACE SECURITY

Main Features

- LCD Display with LED Backlight (10-Character)
 - USB Port (Front)
 - Front AUX Input (Audio)
 - DVD/CD Player with DVD Video Playback
 - DivX/MPEG-1, -2, -4/iTunes AAC/MP3/WMA/WAV Playback from CD/DVD/USB Device
 - Advanced Sound Retriever
 - MOSFET 50 W x 4
 - RCA Preouts x 2 (2 V)
 - 3-Band Equalizer (High/Mid/Low)
 - Rotary Volume Control
 - Detachable Face Security™
 - Wired Remote Input
 - RDS
- Note: Please see pages 92 and 93 for accessories.*

MVH-7350

Multimedia AV Receiver with 3" Widescreen Color TFT Display, SD Memory Card Slot, and USB Direct Control for iPod/iPhone

MVH-8350BT

Multimedia AV Receiver with 3" Widescreen Color TFT Display, SD Memory Card Slot, USB Direct Control for iPod/iPhone, and Built-in Bluetooth®



3.0W **EP** **MULTIPLE COLOR** **MULTI-LANGUAGE DISPLAY** **MP3 WMA AAC APEG DIVX** **Hi-Fi** **USB** **Bluetooth** **Made for iPod iPhone**

3 RCA **Hi-VOLT** **24bit** **Auto EQ** **Sonic Center Control** **Rotary Commander** **WIRELESS REMOTE (N.P.01)** **RDS SUPER TUNER II**

MOSFET 50Wx4 **REAR PANEL**

Note: Bluetooth Wireless Technology for MVH-8350BT.

Key Selling Points

Point 1 **New-generation Music Video Receivers are compatible with digital AV sources including iPod/iPhone, USB devices and SD memory cards.** **USB** **SD** **Made for iPod iPhone**

Point 2 **3" TFT display, Rotary Commander, new user interface and customizable menus provide fast, simple operation.** **3.0W** **Rotary Commander**

Point 3 **Experience superior in-car AV Performance with Auto EQ*, Sonic Center Control, 8-Band Graphic EQ and more.** **Auto EQ** **Sonic Center Control** * CD-MC20 Required.

Main Features

- 3" Color TFT Display with LED Backlight
- Multi-Language Display (Menu) (English/Spanish/Portuguese/Russian)
- Color Customization [6-Display Colors (Blue/Violet/Red/Amber/Green/White) and 112-Key Colors]
- USB Direct Control for iPod/iPhone and USB Devices (CD-IU51V Required for iPod/iPhone)
- App Mode
- Built-in Bluetooth Wireless Technology (Hands-Free Calling) (MVH-8350BT)
- USB Port (Front)
- SD/SDHC Memory Card Slot
- Front AUX Input (Audio/Video)
- iTunes AAC/MP3/WMA/WAV Playback from USB Device/SD Memory Card
- Advanced Sound Retriever
- MOSFET 50W x 4
- Hi-Volt Preouts x 3 (4V)
- 8-Band Graphic EQ
- Auto EQ (CD-MC20 Required)
- Sonic Center Control
- Digital Photo Frame
- 7-Way Rotary Commander
- Detachable Face Security™
- Wired Remote Input
- Display Off Mode
- RDS

Note: Text in blue indicates feature differentiation from other models. Please see pages 92 and 93 for accessories.

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Point 1

Easier Phone Calling — Bluetooth®

3" full-color TFT display and new Parrot Bluetooth® module make hands-free calling operation very convenient. (MVH-8350BT)



Video/JPEG Playback for Non-Stop Entertainment — DIVX APEG

MVH features a 3" color display designed to take full advantage of all of your media. Play music videos and more from your iPod/iPhone, SD Memory Card or USB devices. Even display JPEG photos using the Digital Photo Frame feature.



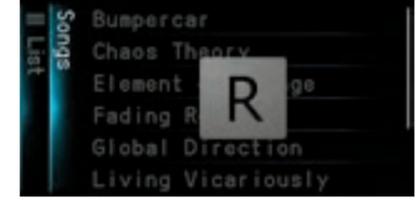
Video File Playback



Digital Photo Frame

Simple Search for iPod

Quickly search your iPod/iPhone with alphabetical search by Song, Artist, Album or Genre categories.



Point 2

Smart Interface for Quick Access

The new user interface has a minimalistic yet powerful design, and scales to accommodate modern media sources easily. The customizable home menu allows you to tailor your favorite features.

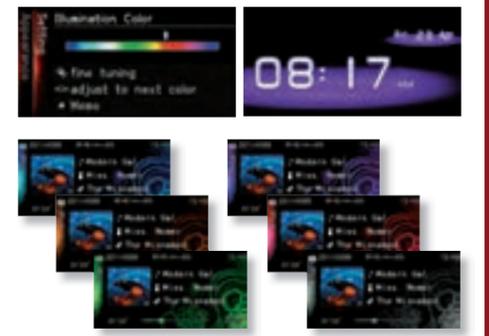
Access the Custom menu from the Home menu by pressing DOWN on the Rotary Commander. (Press UP to go back) To add items, browse the menus, then press & hold RIGHT to add that item to the Custom menu.



Rotary Commander allows you to easily toggle between the Home Menu and Custom Menu.

Customize Your Colors — MULTIPLE COLOR

The MVH-8350BT and MVH-7350 will accommodate your taste or mood. Select among 6 colors (Blue/Violet/Red/Amber/Green/White) for the display and 112 colors for key panel illumination.



Point 3

Auto EQ*

Automatically tailors acoustics by fine-tuning frequency bandwidths plus front/rear speaker digital parametric equalization. Result: smooth sound full of subtle nuance and clarity. * CD-MC20 required



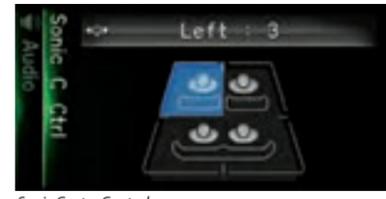
Sonic Center Control

Adjusts frequency phase and acoustic characteristics by up to 15 steps for clearer, focused soundstage.

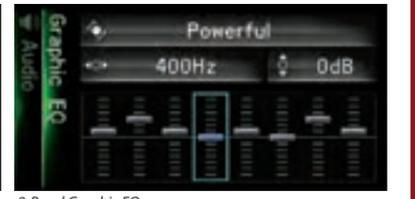


Advanced Sound Retriever

Restores sound quality and clarity to your highly compressed MP3, WMA and AAC files.



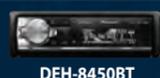
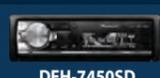
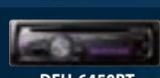
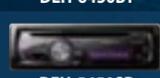
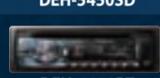
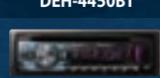
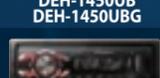
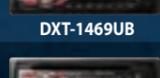
Sonic Center Control



8-Band Graphic EQ

Please see page 17 for more details about Auto EQ, Sonic Center Control and Advanced Sound Retriever.

KEY FEATURES STEP-UP COMPARISON CHART

	Display	Preout	CD Player	Audio Format	AUX Input (Mini-Jack)	USB Interface ¹	Control for iPod/iPhone ²	SD/SDHC Memory Card Slot	Bluetooth ³	MIXTRAX ⁴	Music Browser	Color Customization	Advanced Sound Retriever	Page Number
 DEX-P99RS	Full Dot OEL 3-Line	4 (5V)	•	MP3 WMA AAC	Front	Rear	•		With CD-BTB200			125 Colors ⁵	•	28
 DEH-80PRS	Full Dot LCD 3-Line	3 (5V)	•	MP3 WMA AAC	Front	Rear x 2	•	•				210,000 Colors (Separated) ⁶	•	30
 DEH-9450UB	Full Dot LCD 3-Line	3 (4V)	•	MP3 WMA AAC	Rear	Rear x 2	•					210,000 Colors (Separated) ⁶	•	32
 DEH-8450BT	Full Dot LCD 3-Line	3 (4V)	•	MP3 WMA AAC	Front	Rear x 2	•	•				210,000 Colors (Separated) ⁶	•	34
 DEH-7450SD	Full Dot LCD 3-Line	3 (4V)	•	MP3 WMA AAC	Front	Rear x 2	•	•				210,000 Colors (Separated) ⁶	•	34
 DEH-6450BT	Full Dot LCD 3-Line	3 (4V)	•	MP3 WMA AAC	Front	Rear	•	•	•			210,000 Colors (Separated) ⁶	•	36
 DEH-5450SD	Full Dot LCD 3-Line	3 (4V)	•	MP3 WMA AAC	Front	Rear	•	•	•	•		210,000 Colors (Separated) ⁶	•	36
 DEH-4450BT	Dot Matrix LCD (12 x 1)	2	•	MP3 WMA	Front	Front ³	•						•	38
 DEH-3450UB	LCD (10 x 1)	2	•	MP3 WMA	Front	Front ³	•					210,000 Colors (Separated) ⁶	•	40
 DEH-2450UB	LCD (10 x 1)	2	•	MP3 WMA	Front	Front ³	•						•	40
 DEH-1450UB DEH-1450UBG	LCD (10 x 1)	1	•	MP3 WMA	Front	Front ³							•	41
 MVH-1450UB	LCD (10 x 1)	2	•	MP3 WMA	Front	Front ³	•						•	41
 DEH-1350MP DEH-1350MPG	LCD (8 x 1)	1	•	MP3 WMA	Front								•	43
 FH-P6050UB	OEL (16 x 3)	2 (4V)	•	MP3 WMA AAC	Rear	Rear	iPod		With CD-BTB200				•	44
 DXT-1469UB	LCD (10 x 1)	1	•	MP3 WMA	Front	Front ³							•	46
 DXT-146UB	LCD (10 x 1)	1	•	MP3 WMA	Front	Front ³							•	46

*1. Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.

*2. Compatibility with unit depends on iPod generation. Requires use of CD-IU51.

*3. Please use CD-US0E USB extension cable if a direct connection causes a USB device to protrude from the receiver in a way that can interfere with driving.

*4. Works with music from iPod, SD/SDHC memory card and USB device.

*5. Key illumination only.

*6. Colors for key illumination and display are separately adjustable.

See page 95 for in-depth information on features.



Pioneering a Growing Range of Car Entertainment

Seamless connections. Stellar quality. Superior convenience. These and many other qualities not only give Pioneer audio receivers the edge in expanding car audio entertainment—they give you a new experience of car entertainment that you've never experienced before.

Entertainment

- **Changing the Mood in a Car as in a Club**
 - MIXTRAX

Connectivity

- **Convenient, Easy-to-Use Wireless Functions**
 - Hands-Free Calling
 - Wireless Audio Streaming (Advanced Audio Distribution Profile)
- **Versatile iPod Command via Digital USB Connection**
 - USB Direct Control for iPod/iPhone
 - App Mode
- **Multi-Format Compatibility**
 - iTunes AAC/MP3/WMA/WAV Playback
- **Multiple Media Connectivity**
 - Dual USB Ports (High Current 1A Handling Capability)
 - USB Control of Portable Media Players and USB Devices
 - Built-in SD/SDHC Memory Card Slot
- **Radio Expandability**
 - RDS
 - Built-in Shortwave Tuner

Convenience

- **Leave Your Mark**
 - Separated Color Customization
- **Easy, Accessible, Intuitive Operation**
 - Music Browser
 - Lever Key
 - Rotary Volume Control
- **High-Visibility Interface, Safer Driving**
 - Full Dot LCD Display
 - LED Backlight
- **Fast Hookup to Portable Digital Devices**
 - Built-in Front USB and AUX Inputs
- **Higher Reliability**
 - Anti-Dust Design

Audio Quality

- **The Ultimate in Sound**
 - Specialized Audio Parts
- **Hear Everything**
 - Advanced Sound Retriever
- **Stronger Dynamics, Crisper Highs, Fuller Bass**
 - Hi-Volt Preouts
- **Greater Tuning Power**
 - EEQ: 5-Band Graphic Equalizer/3-Band Equalizer
- **Stronger, More Stable Radio Reception**
 - Supertuner® IID
- **More Linear Power**
 - MOSFET 50 W x 4



MIXTRAX DEH-6450BT DEH-5450SD

MIXTRAX

Innovative MIXTRAX technology applies Pioneer's original professional DJ product development know-how, so you can create non-stop mixes of selections from your audio library.

MIXTRAX EZ

DEH-6450BT and DEH-5450SD are compatible with MIXTRAX EZ for quick and easy Non-Stop MIX Play without using MIXTRAX software.

Flashing Color

Livens up the cabin with light pulsing to the beat of the music.

FLASHING COLOR



Auto Flap Face DEX-P99RS DEH-9450UB

Highly functional, high-quality face panel design features a smoothly motorized auto flap.

AUTO FLAP



Bluetooth® DEH-8450BT DEH-6450BT DEH-4450BT

Bluetooth Wireless Technology enables hands-free calling. Enjoy wireless audio control and streaming.

Bluetooth



Dual USB Ports DEH-80PRS DEH-9450UB DEH-8450BT DEH-7450SD

More connectivity adds more convenience and utilities.

Flexible Connection

Dual USB

Lever Key DEH-80PRS DEH-9450UB DEH-8450BT DEH-7450SD DEH-6450BT DEH-5450SD

Gives a driver more assured operability and smoother control of various functions and settings.

Lever Key



App Mode All Receivers Compatible with iPod (except DEX-P99RS and FH-P6050UB)

Allows a passenger to use iPod apps while the audio from the application is played through your car's speakers.

Apps in Your Car

Steady Operation

Separated Color Customization DEH-80PRS DEH-9450UB DEH-8450BT DEH-7450SD DEH-6450BT DEH-5450SD DEH-3450UB

Lets user match a receiver to car cabin and dash.

Separated Color



Matches Any Car Illumination!

Advanced Sound Retriever

Reproduces high-quality sound from compressed digital audio files.



Pure Sound!

DEX-P99RS

Audio Receiver with Sound Master Clock Circuit, High-Performance DSP, and USB Port with Digital Direct Signal Transmission



MULTI-LANGUAGE DISPLAY MP3 WMA AAC AUX IN Hi-VOLT Bluetooth® Adapter Ready USB Made for iPod iPhone
 24bit DA Converter DSP Rotary Commander AUTO FLAP WIRED REMOTE INPUT SUPER TUNER III DETACHABLE FACE SECURITY

Key Selling Points

- Point 1** Devices and materials carefully selected according to the highest standards to achieve the ultimate in sound quality.
- Point 2** L/R Independent 4-Way Crossover, 31-Band L/R Independent EQ and 0.77 cm step Auto Time Alignment help optimize sound field in greater detail.
- Point 3** Built-in USB port allows transmission of digital signals from a connected iPod, iPhone or USB Device to DSP for high-quality sound reproduction.

Main Features

- Full Dot OEL Display (192 x 48 Pixels, 3-Line)
- 125-Color Button Illumination
- Bluetooth® Adapter Ready (CD-BTB200 Required)*
- USB Direct Control for iPod/iPhone and USB Devices with Digital Direct Signal Transmission (CD-IU51 Required for iPod/iPhone)
- AUX** Input (Front)
- iTunes AAC/MP3/WMA/WAV Playback
- Advanced Sound Retriever
- Hi-Volt Preouts x 4 (5V)
- Built-in DSP with Dual (L/R) 31-Band GEQ
- Auto EQ and Auto Time Alignment
- Multi-Language Display (English/Spanish/Portuguese)
- 7-Way Rotary Commander
- Steering Wheel Remote Control
- Sound Master Clock Circuit
- High-Performance 32-Bit Floating Point DSP
- 24-Bit AKM DACs
- Detachable Face Security™
- Display Off Mode
- Door Mute

CD-IU51 NEW

USB Interface Cable for iPod/iPhone (50 cm)

Made for iPod iPhone Operable with Pioneer Receivers

- iPhone 4
- iPhone 3GS
- iPhone 3G
- iPhone
- iPod touch (1st, 2nd, 3rd, and 4th generation)
- iPod classic
- iPod with video
- iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

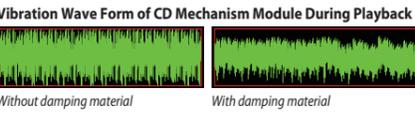
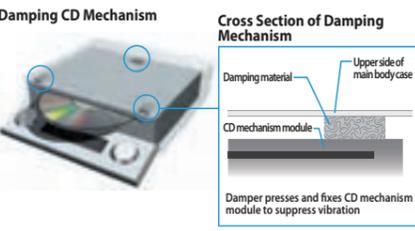
Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

* External control of IP-Bus Bluetooth Adapter has some limitations. Please consult owner's manual or Pioneer sales representative for more information.
 ** Use a 2.5 mm diameter mini-jack to connect to the AUX input while the Auto-Flap Motorized Face is at open position.

Point 1

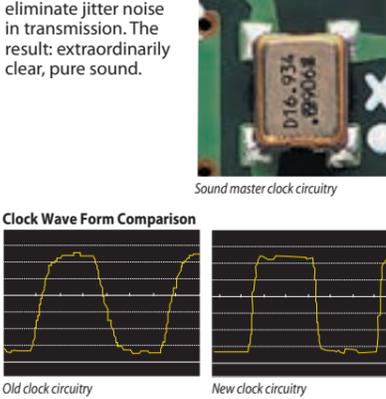
High-Performance Damping Material and Mechanism

To pick up digital signals recorded on CDs with superior precision, new damping mechanism and material firmly press and fix the entire CD mechanism module — effectively absorbing and dispersing vibration caused by CD rotation.



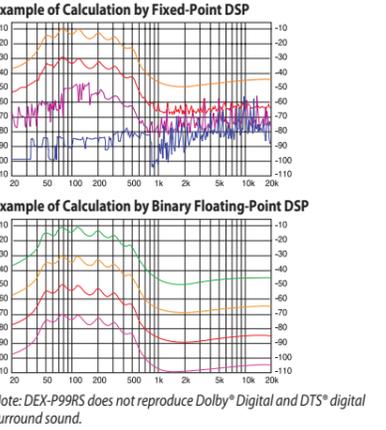
New High-Precision Sound Master Clock Circuitry

The latest integrated circuits require superior clock signal quality to handle digital data accurately without distortion at ever-higher speeds. New Sound Master Clock Circuitry in the DEX-P99RS generates clock waveforms to read and process digital signals with ultra-precision, and eliminate jitter noise in transmission. The result: extraordinarily clear, pure sound.



32-Bit Binary Floating-Point DSP

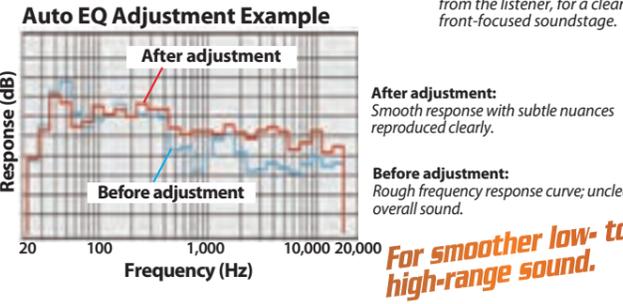
The DEX-P99RS incorporates 32-Bit Binary Floating-Point DSP for high-precision sound processing and tuning without degrading digital signals from their sources.



Point 2

Auto Time Alignment and Auto EQ

Time alignment automatically estimates the delay from each speaker to driver's position and adjusts speaker sound output timing accordingly by 0.77 cm differences, so that sound from all speakers reaches the driver's ears in perfect sync. Auto EQ tailors specific musical characteristics according to taste, uses a microphone to monitor and analyze acoustics, then automatically fine-tunes all frequency bandwidths and front and rear speaker digital parametric equalization. These entire processes occur in 543 seamless steps in just about 5 minutes.



4-Way Digital Network

To let listeners keep transitions between frequency ranges sounding smooth, the DEX-P99RS features a 4-Way Digital Network that lets you adjust Cutoff Frequency, Cutoff Slope, Level and Phase for any of four (high, mid, low and subwoofer) frequency ranges. Moreover, the adjustments for left and right channels can be made independently of each other. The result: more distinct separation of the four frequency ranges and fuller, more natural sound, with each speaker reaching its full potential as part of a multi-speaker system.

4-Way Digital Network

Network	L/R Independent Network	Cutoff Frequency (Hz)	Cutoff Slope	Level	Phase (Normal/Reverse)
High (HPF)	800/1 k/1.25 k/1.6 k/2 k/2.5 k/3.15 k/4 k/5 k/6.3 k/8 k/10 k/12.5 k/16 k	6 dB/-12 dB/-18 dB/-24 dB/-30 dB/-36 dB/oct.	0 to -24 dB/MUTE (1 dB step)	○	
Mid (LPF)	25/31.5/40/50/63/80/100/125/160/200/250/315/400/500/630/800/1 k/1.25 k/1.6 k/2 k/2.5 k/3.15 k/4 k/5 k/6.3 k/8 k/10 k/12.5 k/16 k/20 k	PASS, -6 dB/-12 dB/-18 dB/-24 dB/-30 dB/-36 dB/oct.	0 to -24 dB/MUTE (1 dB step)	○	
Mid (HPF)	20/25/31.5/40/50/63/80/100/125/160/200/250/315/400/500/630/800/1 k/1.25 k/1.6 k/2 k/2.5 k/3.15 k/4 k/5 k/6.3 k/8 k/10 k/12.5 k/16 k	PASS, -6 dB/-12 dB/-18 dB/-24 dB/-30 dB/-36 dB/oct.	0 to -24 dB/MUTE (1 dB step)	○	
Low (LPF)	25/31.5/40/50/63/80/100/125/160/200/250/315/400/500/630/800/1 k/1.25 k/1.6 k/2 k/2.5 k/3.15 k/4 k/5 k/6.3 k/8 k/10 k/12.5 k/16 k/20 k	PASS, -6 dB/-12 dB/-18 dB/-24 dB/-30 dB/-36 dB/oct.	+6 to -24 dB/MUTE (1 dB step)	○	
Low (HPF)	20/25/31.5/40/50/63/80/100/125/160/200/250/315/400/500/630/800/1 k/1.25 k/1.6 k/2 k/2.5 k/3.15 k/4 k/5 k/6.3 k/8 k/10 k/12.5 k/16 k	PASS, -6 dB/-12 dB/-18 dB/-24 dB/-30 dB/-36 dB/oct.	+6 to -24 dB/MUTE (1 dB step)	○	
SW (LPF)	25/31.5/40/50/63/80/100/125/160/200/250/315/400/500/630/800/1 k/1.25 k/1.6 k/2 k/2.5 k/3.15 k/4 k/5 k/6.3 k/8 k/10 k/12.5 k/16 k/20 k	PASS, -6 dB/-12 dB/-18 dB/-24 dB/-30 dB/-36 dB/oct.	+6 to -24 dB/MUTE (1 dB step)	○	

Point 3

- Digital signal is directly transferred to DSP for high-quality sound reproduction from USB device and iPod.
- 125-Color Button Illumination offers choice of colors to closely match the illumination of various dashboard displays.
- Automatically mutes sound from source being played as a car window or door are being opened or closed.

USB Made for iPod iPhone

DEH-80PRS NEW

Audio Receiver for Entering the World of High-Quality Car Audio



FULL DOT LCD **Separated Color** **MULTI-LANGUAGE DISPLAY** **CD-R/RW** **MP3 WMA AAC** **24bit DA Converter** **AUX IN** **RCA PRE-OUTS** **Hi-VOLT** **Dual USB** **Made for iPod iPhone**
DSP **FLAP FACE** **Anti-Dust Design** **WIRELESS REMOTE INPUT** **RDS** **SUPER TUNER III D** **MOSFET 50Wx4** **RETRACTABLE FACE SECURITY** **Music Browser**

Key Selling Points

- Point 1** Devices and materials carefully selected according to the highest standards to achieve the ultimate in sound quality.
- Point 2** Pioneer's exclusive sound field technologies including Auto EQ and Auto Time Alignment help optimize audio in ways that perfectly suit particular listening spaces and allow subtle manual control of settings.
- Point 3** Versatile connectivity helps deliver exceptional sound quality from various digital devices.

Main Features

- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi Language Display (English/Spanish/Portuguese)
- Separated Color Customization (More than 210,000 Colors)
- SD/SDHC Memory Card Slot
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- Dual USB Ports (Rear: High Current 1A Handling Capability)
- AUX Input (Front)
- Music Browser
- MP3/WMA/AAC Playback
- 3-Way Digital Network
- DSP with Dual (L/R) 16-Band GEQ
- Auto EQ and Auto Time Alignment
- Exclusively Designed Audio Parts
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® III D
- RDS
- Hi-Volt Preouts x 3 (5 V)
- Flap Face
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Aluminum Rotary Volume Knob
- Card Remote Control

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Note: Text in blue indicates feature differentiation from other models.

Point 1

High Performance Burr-Brown 24-bit Advanced Segment D/A Converter x 3

Incorporation of three circuit boards for each of high, mid and low frequency ranges make for exceptional linear sound reproduction with wide dynamic range and low distortion of original sources.



Four-Layer Circuit Board Design

Uses four-layer copper foil, and parts are set by reflow mounting to both sides of the circuit board. A more highly integrated parts layout makes the circuit board significantly more compact than a conventional one. Ground and power supply patterns are mainly used in the inside layer and the lower impedance as a result greatly reduces noise.



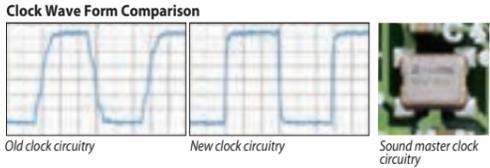
Full-Custom High-Capacitance Power Supply Capacitor

Stabilizes power supply to keep sound clear and consistent. Original parts are developed and tuned for optimal sound quality through close examination of materials and repeated listening trials.



Sound Master Clock Circuitry

Generates clock waveforms to read and process digital signals with extraordinary precision to eliminate jitter (digital signal time axis fluctuation noise). Very fine signals can be accurately reproduced.



Point 2

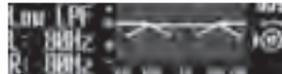
28-bit Binary Floating-Point DSP

Handling of a wider range of complicated calculations than fixed-point DSP and use of advanced programming technology allows for this high-precision sound processing and tuning without source digital signal degradation.



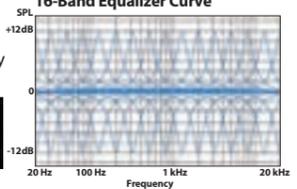
3-Way Digital Network Mode

The DEH-80PRS lets user switch to "network mode" for a 3-Way Digital Network, connecting (via three preouts) up to three external amplifiers, dedicated to driving high-, mid- and low-frequency ranges, respectively. The result: more distinct separation of the three frequency ranges, for more full, natural sound realizing more of each speaker's potential in a multi-speaker system.



L/R Independent 16-Band Digital Equalizer

Incorporates L/R Independent 16-Band Digital Equalizer excellent at correcting frequency characteristics distortion. Makes full, fine adjustment by each 2/3 octave to realize ideally flat sound characteristics in any type of car.



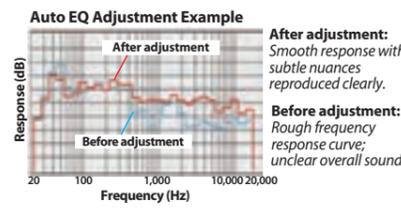
Time Alignment

Not only can this function precisely adjust each speaker's output timing according to its distance from the listening position in 1.25 cm increments – it is also adaptable to a 3-way multi-amplifier and speaker system.



Auto Time Alignment and Auto EQ

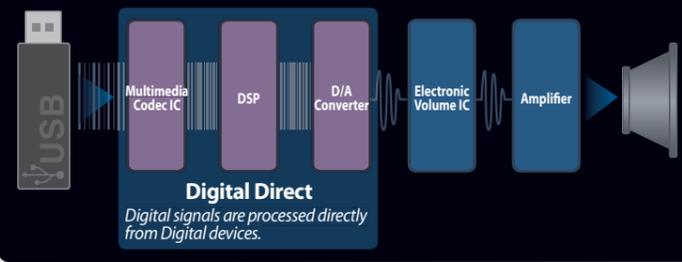
Time alignment automatically estimates the delay from each speaker to driver's position and adjusts speaker sound output timing accordingly by 0.77 cm differences, so that sound from all speakers reaches the driver's ears in perfect sync. Auto EQ tailors specific musical characteristics according to taste, uses a microphone to monitor and analyze acoustics, then automatically fine-tunes all frequency bandwidths and front and rear speaker digital parametric equalization. These entire processes occur in 399 seamless steps in just about 6 minutes and 30 seconds.



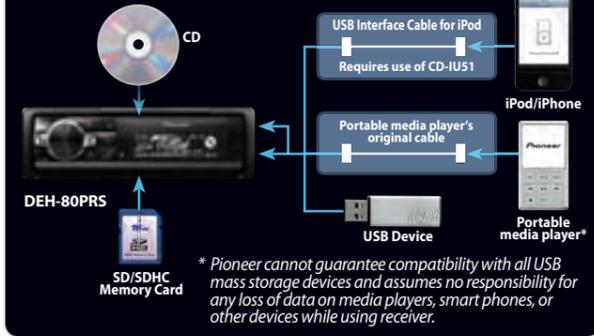
Point 3

Direct Digital Transfer for Superior Compressed Audio File Sound Quality

Musical signals recorded in an iPod, USB device and SD memory card are directly transferred to a DSP as digital signals and processed so that quality of sound using these digital devices is excellent.



Connection Example for USB Devices, SD Memory Card and External Auxiliary Device



* Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.

DEH-9450UB NEW

Audio Receiver with Dual USB Ports, USB Direct Control for iPod/iPhone, and Auto Flap Face



Key Selling Points

Point 1 Highly functional, high-quality face panel design features a smoothly motorized auto flap and clear front interface.

Point 2 Specialized audio parts carefully chosen for outstanding audio quality.

Point 3 Music Browser for faster, simpler song search and selection.

Main Features

- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi Language Display (English/Spanish/Portuguese)
- Separated Color Customization (More than 210,000 Colors)
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- Dual USB Ports (Rear: High Current 1A Handling Capability)
- AUX Input (Rear)
- Music Browser
- MP3/WMA/AAC Playback
- Specialized Audio Parts
- Advanced Sound Retriever
- MOSFET 50W x 4
- Supertuner® III D
- RDS
- Hi-Volt Preouts x 3 (4V)
- 5-Band Graphic EQ
- Auto Flap Face
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Card Remote Control

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Note: Text in blue indicates feature differentiation from other models.

Point 1

Elegantly Functional Face

Highly functional, high-quality face panel design features a smoothly motorized auto flap and clear front interface.



AUTO FLAP

Point 2

Specialized Audio Parts

Our engineers perform listening tests with expert care to incorporate specially designed parts that make for superior audio quality. Take Pioneer's new receiver. Its high-capacitance audio capacitor has particularly strong influence on audio signal input for higher performance sound reproduction. Audio control functions like 5-band GEQ and LPF/HPF take advantage of electronic circuitry that improves sound quality and minimizes analog signal degradation.



High-capacitance capacitor for audio



Electronic volume control IC for audio

Specialized Audio Parts

Point 3

Music Browser

With so many selections filling your USB device, why can't it be easy to find the music you want in an instant? With a conventional system, files are not displayed alphabetically, making it difficult to search for a song. But Pioneer's built-in Music Browser function automatically lists those tunes alphabetically, using audio file tag information, by Artist, Album, Song or Genre. New alphabetical search makes it especially quick and convenient to get what you want to hear from a big archive of tunes.

Music Browser

Conventional
No alphabetical song search. Folder and Song file appear in the same layer.

```

Menu Tree
- Song
- Folder name 1
  - Folder name 1
  - Song 1
  - Folder name 2
  - Song 2
- Folder name 2
  - Song 3
                    
```

Song and Folder appear in the same layer

Not in alphabetical order

Music Browser
Lists by Artist, Album, Song or Genre in alphabetical order.

```

Menu Tree
- Artists
  - All
  - Artist 1
  - Artist 2
- Albums
  - All
  - Album 1
  - Album 2
- Songs
  - Song 1
  - Song 2
  - Song 3
- Genre
                    
```

Speedy access to desired song

* All in easy-to-find alphabetical order

Alphabetical Search
This new function helps you find and access a tune quickly by its initial title letter.

Other Points

Full Dot 3-Line LCD Display

The Full Dot LCD Display allows you to scroll through your iPod with greater ease, displaying up to three lines in list mode.



FULL DOT LCD

Smooth, Sure Operability

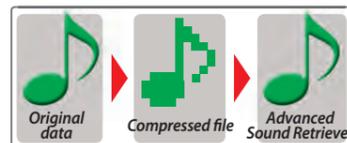
For the sake of safety, a new horizontally laid out lever gives a driver more assured operability and smoother control of various functions and settings.



Lever Key

Advanced Sound Retriever

Advanced Sound Retriever reproduces high-quality sound from compressed digital audio files.



Pure Sound!

Separated Color Customization

Separated Color Customization lets the user match their receiver illumination to their interior lighting. Color of key illumination and display can be selected separately.

Separated Color



Over 210,000 Colors!

Matches Any Car Illumination!

DEH-8450BT NEW

Audio Receiver with Bluetooth® for Hands-Free Calling/Wireless Audio, Dual USB Ports, USB Direct Control for iPod/iPhone, and Flap Face



Rear Panel

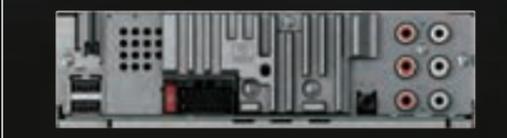


DEH-7450SD NEW

Audio Receiver with Dual USB Ports, USB Direct Control for iPod/iPhone, and Flap Face



Rear Panel



Note: Bluetooth Wireless Technology for DEH-8450BT

Key Selling Points

Point 1 **Finely detailed Full Dot 3-Line LCD display features flap face with sleek, elegant design.** FULL DOT LCD FLAP FACE

Point 2 **Music Browser for faster, simpler song search and selection.** Music Browser

Point 3 **Dual USB Ports with 1A high current handling capability enable connections to various digital devices.** Dual USB 1A

Built-in Bluetooth by Parrot technology makes hands-free calling loud and clear. Enjoy wireless audio control and streaming. (DEH-8450BT) Bluetooth

Common Main Features

- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi Language Display (English/Spanish/Portuguese)
- Separated Color Customization (More than 210,000 Colors)
- SD/SDHC Memory Card Slot
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- Dual USB Ports (Rear: High Current 1A Handling Capability)
- AUX Input (Front)
- Music Browser
- MP3/WMA/AAC Playback
- Specialized Audio Parts
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® III D
- RDS
- Hi-Volt Preouts x 3 (4 V)
- 5-Band Graphic EQ
- Flap Face
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Card Remote Control

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

DEH-8450BT Main Feature

- Bluetooth for Hands-Free Calling & Wireless Audio
- Note: Text in blue indicates feature differentiation from other models.

Point 1

Full Dot 3-Line LCD Display

The Full Dot LCD Display allows you to scroll through your iPod with greater ease, displaying up to three lines in list mode.



Point 2

Music Browser

With so many selections filling your SD/SDHC memory card or USB device, why can't it be easy to find the music you want in an instant? With a conventional system, files are not displayed alphabetically, making it difficult to search for a song. But Pioneer's built-in Music Browser function automatically lists those tunes alphabetically, using audio file tag information, by Artist, Album, Song or Genre. New alphabetical search makes it especially quick and convenient to get what you want to hear from a big archive of tunes.

Conventional
No alphabetical song search. Folder and Song file appear in the same layer.
Song and Folder appear in the same layer
Not in alphabetical order

Music Browser
Lists by Artist, Album, Song or Genre in alphabetical order.
Speedy access to desired song

Menu Tree

- Artists
 - All
 - Artist 1
 - Artist 2
- Albums
 - All
 - Album 1
 - Album 2
- Songs
 - Song 1
 - Song 2
 - Song 3
- Genre

* All in easy-to-find alphabetical order

Alphabetical Search
This new function helps you find and access a tune quickly by its initial letter.

Point 3

Built-in Bluetooth® for Safety and Convenience — DEH-8450BT

- Bluetooth hands-free (HFP) function is easy enough to operate safely while driving.
- Using "wireless audio" control and streaming (AVRCP, A2DP), you can control and listen to a compatible audio player on your receiver.
- Simple secure pairing (SSP) allows more simple phone pairing without PIN code input.

Dual USB Ports

More connectivity adds more convenience and utilities. For example, you can listen to music from a USB device while charging your smartphone.

App Mode

- Use iPod and iPhone music apps to enjoy listening through the car speakers.
- Fast forward and reverse can be operated through the receiver.

Note: Not every app is compatible with App Mode.

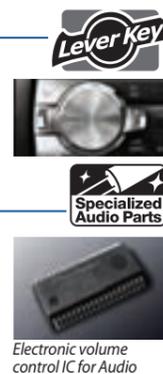
Other Points

Smooth, Sure Operability

For the sake of safety, a new horizontally laid out lever gives a driver more assured operability and smoother control of various functions and settings.

Electronic Parts for Superb Sound and Functions

- **Electronic Volume Control**
For multifunctional control of high quality sound from the digital-to-analog converter (DAC) with minimal analog signal degradation.

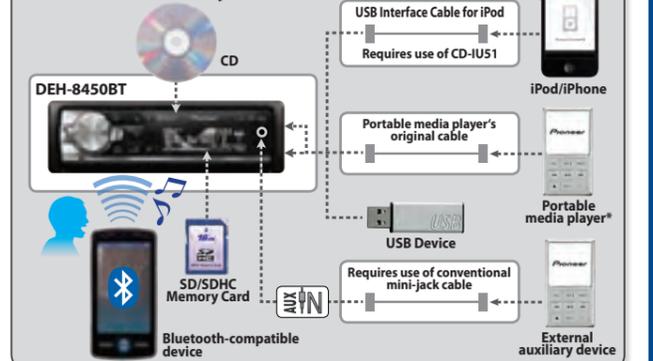


Separated Color Customization

Separated Color Customization lets the user match their receiver illumination to their interior lighting. Color of key illumination and display can be selected separately.



Connection Example for USB Devices, SD Memory Card and External Auxiliary Device



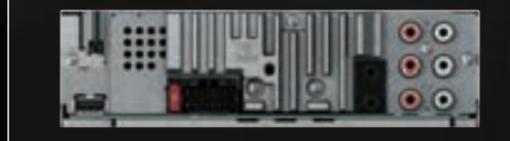
* Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.

DEH-6450BT NEW

Audio Receiver with MIXTRAX, Bluetooth® for Hands-Free Calling/ Wireless Audio, and USB Direct Control for iPod/iPhone



Rear Panel



DEH-5450SD NEW

Audio Receiver with MIXTRAX, and USB Direct Control for iPod/iPhone



Rear Panel



Note: Bluetooth Wireless Technology for DEH-6450BT

Key Selling Points

- Point 1** Simple, seamless music connection makes it quick and easy to enjoy Non-Stop Mix Play. Cool Flashing Color livens up the cabin with light pulsing to the beat of the music. **MIXTRAX**
- Point 2** Built-in Bluetooth by Parrot technology makes hands-free calling loud and clear. Enjoy wireless audio control and streaming. (DEH-6450BT) **Bluetooth**
- Point 3** Finely detailed Full Dot 3-Line LCD display makes more information more visible. **FULL DOT LCD**

Common Main Features

- MIXTRAX
- CD Player
- Full Dot LCD Display (192 x 48 Pixels, 3-Line)
- LED Backlight
- Multi Language Display (English/Spanish/Portuguese)
- Separated Color Customization (More than 210,000 Colors)
- SD/SDHC Memory Card Slot
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- USB Port (Rear: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA/AAC Playback
- Specialized Audio Parts
- Advanced Sound Retriever
- MOSFET 50W x 4
- Supertuner III D
- RDS
- Hi-Volt Preouts x 3 (4V)
- 5-Band Graphic EQ
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Lever Key
- Rotary Volume Control
- Card Remote Control

DEH-6450BT Main Feature

- Bluetooth for Hands-Free Calling & Wireless Audio

Note: Text in blue indicates feature differentiation from other models.

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

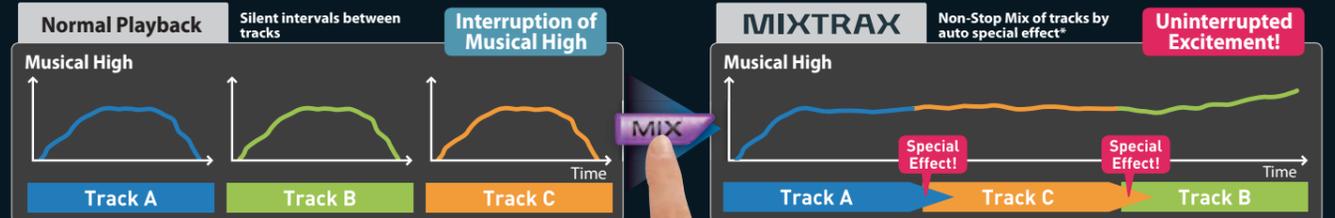
Point 1

MIXTRAX

Innovative MIXTRAX technology applies Pioneer's original professional DJ product development know-how, so you can create non-stop mixes of selections from your audio library.

MIXTRAX Benefit

Pioneer applied its unique expertise to keep car entertainment flowing smoothly without interruption, so you can experience the intimate euphoria of listening to music that sounds as if a club DJ is there playing it.



MIXTRAX EZ

MIXTRAX EZ makes Non-Stop MIX Play and other control quick and easy without using MIXTRAX software. Tracks are joined by various random sound effects in Non-Stop MIX Play to keep the mood moving in full swing.

Special Various Effects* (Back Spin, Scratch, Echo, etc.)



* Depending on the file/song, sound effects may not be enabled for adding.

* Effects vary according to playback source.

* Not available for iPod.

Flashing Color*

The receiver's cool Flashing Color function enhances the mood with a dynamic dance club-like lighting effect. As MIXTRAX begins, lights start pulsing to the beat of the music, livening up your in-car entertainment. Choose among six patterns of lighting color variation. You can also select either of two synchronization modes: sound level or low-pass.

* Function automatically starts up when MIXTRAX is on, and can be switched on or off.

Sound ← **Illumination and Beat in Sync** → **Color**

• Sound Level Mode synchronizes with sound signal level.
• Low Pass Mode synchronizes with bass sound.

6 Color Patterns + Random Pattern

* Color patterns are simulated images for Sound Level Mode.

Point 2

Built-in Bluetooth® for Safety and Convenience — DEH-6450BT

- Bluetooth hands-free (HFP) function is easy enough to operate safely while driving.
- Using "wireless audio" control and streaming (AVRCP, A2DP), you can control and listen to a compatible audio player on your receiver.
- Simple secure pairing (SSP) allows more simple phone pairing without PIN code input.



Point 3

Full Dot 3-Line LCD Display — FULL DOT LCD

The Full Dot LCD Display allows you to scroll through your iPod with greater ease, displaying up to three lines in list mode.



Other Points

Smooth, Sure Operability

For the sake of safety, a new horizontally laid out lever gives a driver more assured operability and smoother control of various functions and settings.



Electronic Parts for Superb Sound and Functions

• **Electronic Volume Control**
For multifunctional control of high quality sound from the digital-to-analog converter (DAC) with minimal analog signal degradation.



Electronic volume control IC for Audio



DEH-4450BT NEW

Audio Receiver with Bluetooth® for Hands-Free Calling/Wireless Audio, and USB Direct Control for iPod/iPhone



MP3 WMA AUX IN 24bit DA Converter WIRED REMOTE INPUT Bluetooth® Made for iPod iPhone
 MOSFET 50W x 4

Key Selling Points

- Point 1** Bluetooth Wireless Technology enables hands-free calling. Enjoy wireless audio control and streaming.
- Point 2** Finely detailed Dot Matrix display makes more information more visible.
- Point 3** Advanced Sound Retriever reproduces high-quality sound from compressed digital audio files.

Main Features

- CD Player
- Dot Matrix LCD Display (12-Character)
- LED Backlight
- Bluetooth for Hands-Free Calling & Wireless Audio
- USB Direct Control for iPod/iPhone (CD-IUS1 Required)
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- Shortwave Tuner
- RDS
- RCA Preouts x 2 (2 V)
- 3-Band Equalizer (High/Mid/Low)
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control

Note: Text in blue indicates feature differentiation from other models.

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Point 1

Built-in Bluetooth® for Safety and Convenience

The DEH-4450BT not only makes Bluetooth hands-free function easy and safe to operate while driving—it also extends your enjoyment of wireless audio control and streaming.

- Bluetooth Hands-Free Calling** = HFP
- Bluetooth Wireless Audio** = A2DP, AVRCP
- Simple Secure Pairing** = SSP



Bluetooth Hands-Free Calling

Direct Access to Bluetooth Menu

Use with Phone Pairing to transfer your entire phonebook* via Bluetooth at a single time to the receiver. Press the button for direct access to missed, dialed, received and called calling histories.

* Compatible phone with PBAP profile required.

Bluetooth Wireless Audio

Bluetooth Wireless Audio Source

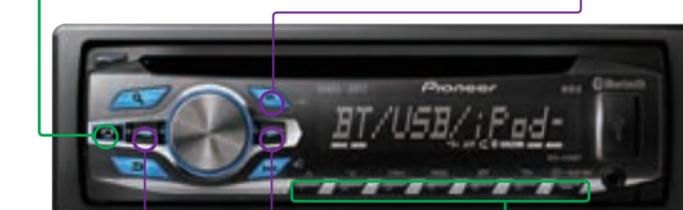
Press the source button to select and enjoy Bluetooth wireless audio with A2DP compatible devices.

Simple Secure Pairing



Simple Pairing

It's simpler and easier to use your cell phone to register up to 3 Bluetooth-compatible cell phones, without PIN code input and complicated phone pairing operations.



Echo Cancellation
Advanced Echo Cancellation keeps phone calls sounding sufficiently loud and clear. Parrot move wireless **Hands-Free Talking Microphone included.**

Noise Reduction
The DEH-4450BT incorporates noise reduction technology that can reduce the effect of road noise.

Before Noise Reduction **After Noise Reduction**

Bluetooth Wireless Audio

Bluetooth Wireless Audio Control (AVRCP)

- Press to skip to next track
- Press and hold to fast forward/backward to playback

Bluetooth Hands-Free Calling

Preset Dial

Press and hold the button, and preset register function conveniently registers in memory up to 6 frequently called phone numbers from up to 3 cell phones, for extra-quick access.

Point 2

Dot Matrix Display

Finely detailed 12-character dot matrix display shows and scrolls bigger, extra-informative text, so you can always see the current playback source and other information at a glance.

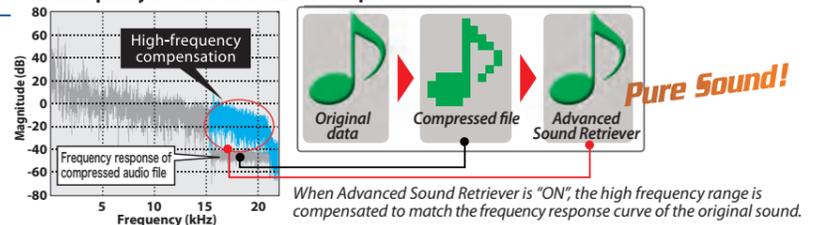


Point 3

Advanced Sound Retriever

Hear the detail, warmth and clarity, the way the artist intended it, from all of your highly compressed MP3 and WMA files stored on USB device, iPod and portable media players. By restoring data (especially higher frequencies) that tend to get lost in the digital compression process, Pioneer's Advanced Sound Retriever technology enhances audio reproduction nearly all the way up to 20 kHz frequencies.

Sound quality deterioration due to compressed audio file



Other Points

USB Direct Control for iPod/iPhone

Pioneer's DEH-4450BT is ready to roll with capability for direct connection to your iPod. File search and access are extra-quick. The receiver keeps song, artist, time and album information displays very clear and user-friendly. The system's wired USB connection provides direct digital signal transfer from the iPod for clean, clear sound.



Anti-Dust Design*

Pioneer heat release structure can reduce ventilation holes & clearance gaps. The results are optimally efficient heat dissipation and prevention of entry of dust that can cause malfunction.

Anti-Dust Structure Image



Non-anti-dust design Anti-dust design
*The effect might change depending on the environment of the car.

Higher Reliability

DEH-3450UB NEW

Audio Receiver with Separated Color Customization, and USB Direct Control for iPod/iPhone



Key Selling Point

- Point 1 **Color Customization lets user match a receiver to car cabin and dash.**

DEH-1450UB / DEH-1450UBG NEW

Audio Receiver with Front USB Port



Key Selling Point

- Point 3 **1A high current supply to a connected USB device keeps playback from the device stable and quickly recharges connected digital devices.**

DEH-2450UB NEW

Audio Receiver with USB Direct Control for iPod/iPhone, and Front USB Port



Key Selling Point

- Point 2 **Compatible with iPod and iPhone. App Mode allows you to use iPod and iPhone music apps to enjoy listening through the car speakers.**

Common Key Selling Points

- Point 3 **1A high current supply to a connected USB device keeps playback from the device stable and quickly recharges connected digital devices.**
- Point 4 **Advanced Sound Retriever reproduces high-quality sound from compressed digital audio files.**
- Point 5 **Anti-Dust Design ensures reliability and stability of performance.**

MVH-1450UB NEW

Multimedia Audio Receiver with USB Direct Control for iPod/iPhone, and Front USB Port



Key Selling Point

- Point 2 **Multimedia Audio Receiver lets you get the most out of music from digital devices such as iPod, iPhone and USB device.**

Common Main Features

- LCD Display (10-Character)
- LED Backlight
- Bright USB Port (Front: High Current 1A Handling Capability)
- AUX Input (Front)
- MP3/WMA Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4 (Front: High Current 1A Handling Capability)
- Supertuner III D
- Shortwave Tuner
- RDS
- 3-Band Equalizer (High/Mid/Low)
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control

DEH-3450UB Main Features

- CD Player
- Separated Color Customization (More than 210,000 Colors)
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- RCA Preouts x 2 (2V)
- Anti-Dust Design

DEH-1450UB(G) Main Features

- CD Player
- RCA Preout x 1 (2V)
- Anti-Dust Design

Note: Text in blue indicates feature differentiation from other models.

DEH-2450UB Main Features

- CD Player
- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- RCA Preouts x 2 (2V)
- Anti-Dust Design

MVH-1450UB Main Features

- USB Direct Control for iPod/iPhone (CD-IU51 Required)
- RCA Preouts x 2 (2V)

iPod/iPhone Operable with Pioneer Receivers

Made for
iPhone 4
iPhone 3GS
iPhone 3G
iPhone
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

Point 1

Separated Color Customization

Separated Color Customization lets the user match their receiver illumination to their interior lighting. Color of key illumination and display can be selected separately.



Point 2

USB Direct Control for iPod/iPhone

DEH-3450UB DEH-2450UB MVH-1450UB

Pioneer's DEH-3450UB, DEH-2450UB and MVH-1450UB are ready to roll with capability for direct connection to your iPod. File search and access are extra-quick. The receiver keeps song, artist, time and album information displays very clear and user-friendly. The system's wired USB connection provides direct digital signal transfer from the iPod for clean, clear sound.



App Mode

DEH-3450UB DEH-2450UB MVH-1450UB

- Use iPod and iPhone music apps to enjoy listening through the car speakers.
- Fast forward and reverse can be operated through the receiver.

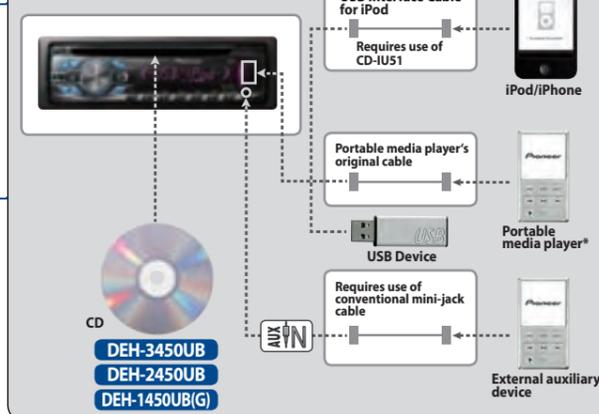
Note: Not every app is compatible with App Mode.

Bright USB Port

Bright USB port illuminates car interior more brilliantly.



Connection Example for USB Devices and External Auxiliary Device



*Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.

Point 3

1A High Current USB Port

The new receiver can supply 1.0A high current to a connected USB device to keep playback from the device stable, or quickly charge a connected smartphone.

Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.

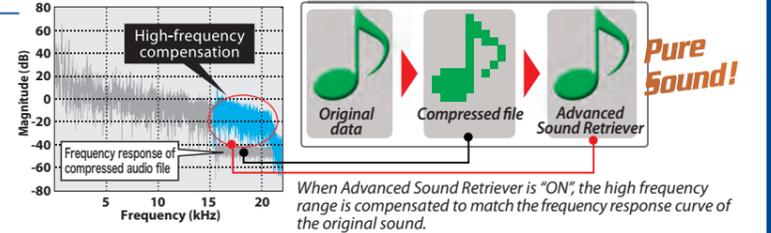


Point 4

Advanced Sound Retriever

Hear the detail, warmth and clarity, the way the artist intended it, from all of your highly compressed MP3 and WMA files stored on USB device, iPod and portable media players. By restoring data (especially higher frequencies) that tend to get lost in the digital compression process, Pioneer's Advanced Sound Retriever technology enhances audio reproduction nearly all the way up to 20 kHz frequencies.

Sound quality deterioration due to compressed audio file



When Advanced Sound Retriever is "ON", the high frequency range is compensated to match the frequency response curve of the original sound.

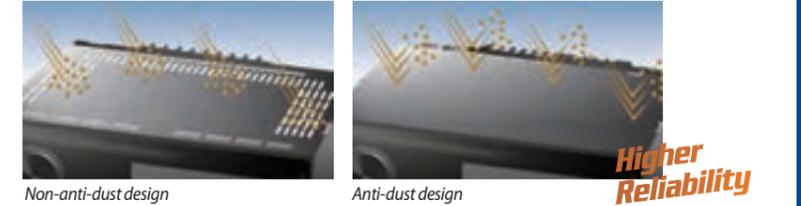
Point 5

Anti-Dust Design*

Pioneer heat release structure can reduce ventilation holes & clearance gaps. The results are optimally efficient heat dissipation and prevention of entry of dust that can cause malfunction.

*The effect might change depending on the environment of the car.

Anti-Dust Structure Image



Other Points

Brighter Illumination and Dimmer Control

Brighter illumination than in previous models makes for more vivid, colorful atmosphere in the car. Dimmer control allows adjustment for up to 50% lower brightness.



Larger Display

The larger display improves visibility and incorporates finely balanced font to keep text easy to read.

10.5 mm x 64 mm (DEH-3350UB)



Text Scrolling

Smooth text scrolling takes the stress out of reading long text.



11.6 mm x 68.6 mm (DEH-2450UB)

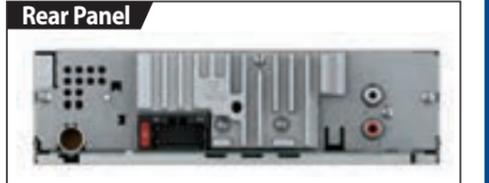
DEH-1350MP / DEH-1350MPG

Audio Receiver with MP3 Playback, Remote Control, and Front AUX-In



DEH-1350MP

DEH-1350MPG



Main Features

- CD Player
- LCD Display (8-Character)
- LED Backlight
- AUX Input (Front)
- MP3/WMA Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- RCA Preout x 1 (2 V)
- 3-Band Equalizer (High/Mid/Low)
- Anti-Dust Design
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control

FH-P6050UB

Double-DIN Audio Receiver with 3-Line OEL Display, USB Direct Control for iPod, and USB Port



Key Selling Points

- Point 1** **Bigger Rotary Commander and bigger buttons surrounding it offers easy and sure operation.**
- Point 2** **OEL display with 3 lines of text clearly shows various information with superior brightness and visibility in all conditions.**
- Point 3** **Restore the sound quality and clarity to your compressed digital audio files with Advanced Sound Retriever.**

Main Features

- CD Player
- OEL Display (3-Line, 16-Character)
- Bluetooth® Adapter Ready* (CD-BTB200 Required)
- USB Direct Control for iPod and USB Devices (CD-IU51 Required for iPod)
- AUX Input (Rear)
- MP3/WMA/AAC Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® IIID
- Hi-Volt Preouts x 2 (4 V)
- 7-Band Graphic EQ
- Display Off Mode
- 7-Way Rotary Commander
- Card Remote Control

iPod/iPhone Operable with Pioneer Receivers

Made for
iPod touch (1st, 2nd, 3rd, and 4th generation)
iPod classic
iPod with video
iPod nano (1st, 2nd, 3rd, 4th, 5th, and 6th generation)

Notes: Receiver may not operate other iPod models. Compatibility with unit and operations may vary depending on the software version of iPod. Please see page 96 for more compatibility.

* External control of IP-Bus Bluetooth Adapter has some limitations. Please consult owner's manual or Pioneer sales representative for more information.

Point 1

Bigger Rotary Commander and Buttons

The bigger Rotary Commander knob is easy to grip, rotate and tilt, and is surrounded by big buttons for such frequently used functions as SOURCE, LIST, BAND and EQ. This makes operation more convenient and error-free.

Bigger Rotary Commander knob



Point 2

3-Line OEL Display

The 2-DIN-size face panel of the FH-P6050UB has an OEL display large enough for 3 lines of text. It conveys a lot of information with superior brightness and visibility under all conditions.

Larger Display

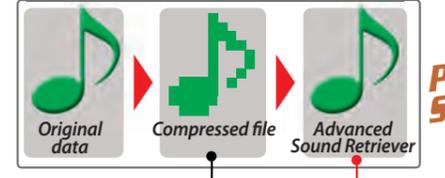
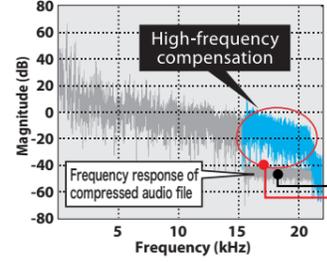


Point 3

Advanced Sound Retriever

Hear the detail, warmth and clarity, the way the artist intended it, from all of your highly compressed MP3, WMA and AAC files stored on USB Device, iPod and portable media players. By restoring data (especially higher frequencies) that tend to get lost in the digital compression process, Pioneer's Advanced Sound Retriever technology enhances audio reproduction nearly all the way up to 20 kHz frequencies.

Sound quality deterioration due to compressed audio file



Pure Sound!

When Advanced Sound Retriever is "ON", the high frequency range is compensated to match the frequency response curve of the original sound.

Cassette Receiver

KEH-P2035

Cassette Receiver



Main Features

- 45 W x 4
- RCA Preout x 1 (2 V)
- IP-Bus System Control

DXT-1469UB NEW

Audio Receiver with Front USB Port, Front AUX-In, and Speaker Package (6" x 9" & 16 cm Speakers)



DXT-146UB NEW

Audio Receiver with Front USB Port, Front AUX-In, and Speaker Package (16 cm Speaker)



- CD-R/RW
 - MP3
 - WMA
 - AUX IN
 - 1 RCA pre-out
 - Anti-Dust Design
 - WIRED REMOTE INPUT
 - SUPER TUNER III D
 - USB
- MOSFET 50Wx4 DETACHABLE FACE SECURITY

Key Selling Points

Point 1 Speaker package models make it easy to upgrade a car audio system.

Point 2 Advanced Sound Retriever reproduces high-quality sound from compressed digital audio files.

Point 3 Anti-Dust Design ensures reliability and stability of performance.

Common Main Features

- CD Player
- LED Backlight
- Bright USB Port (Front)
- AUX Input (Front)
- MP3/WMA Playback
- Advanced Sound Retriever
- MOSFET 50 W x 4
- Supertuner® III D
- RCA Preout x 1 (2V)
- 3-Band Equalizer (High/Mid/Low)
- Anti-Dust Design
- Wired Remote Input
- Display Off Mode
- Detachable Face Security™
- Rotary Volume Control
- Card Remote Control

Speaker Specifications

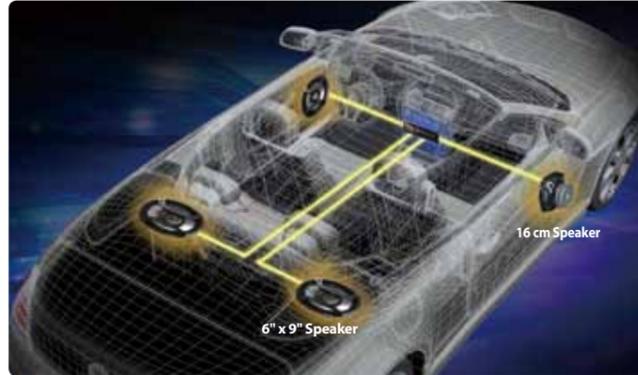
	DXT-1469UB		DXT-146UB
Size	6" x 9"	16 cm	16 cm
Max. Music Power (Nominal)	230 W (30 W)	200 W (25 W)	200 W (25 W)
Frequency Response	28 Hz to 32 kHz	31 Hz to 16 kHz	31 Hz to 16 kHz
Sensitivity (1 W/1 m)	88 dB	88 dB	88 dB
Impedance	4 Ω	4 Ω	4 Ω
Mounting Depth	66.3 mm	41 mm	41 mm
Cut-Out Dimensions	153 mm x 222 mm	ø128 mm	ø128 mm

Point 1

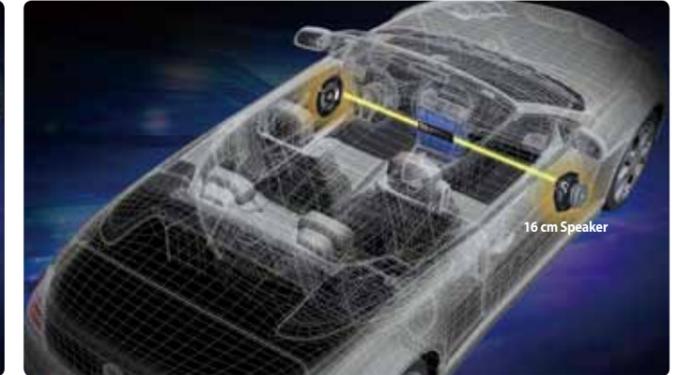
Package System Configurations

Pioneer's new package models containing a audio receiver and bundled speakers are ideal for entry-level customers who want to upgrade their car audio system with ease.

DXT-1469UB: Audio Receiver + 16 cm & 6" x 9" Speaker Package



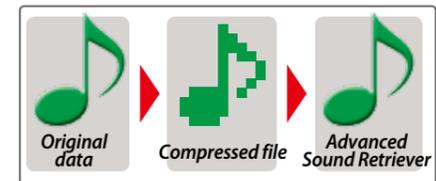
DXT-146UB: Audio Receiver + 16 cm Speaker Package



Point 2

Advanced Sound Retriever

Hear the detail, warmth and clarity, the way the artist intended it, from all of your highly compressed MP3 and WMA files stored on USB device, iPod and portable media players. By restoring data (especially higher frequencies) that tend to get lost in the digital compression process, Pioneer's Advanced Sound Retriever technology enhances audio reproduction nearly all the way up to 20 kHz frequencies.



Pure Sound!
When Advanced Sound Retriever is "ON", the high frequency range is compensated to match the frequency response curve of the original sound.

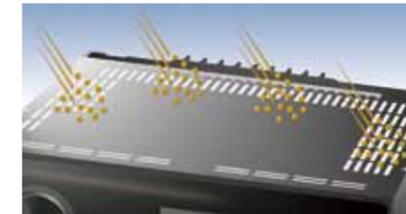
Point 3

Anti-Dust Design*

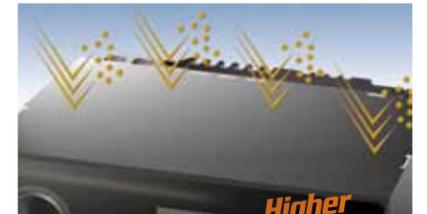
Pioneer new heat release structure can reduce ventilation holes & clearance gaps. The results are optimally efficient heat dissipation and prevention of entry of dust that can cause malfunction.

*The effect might change depending on the environment of the car.

Anti-Dust Structure Image



Non-anti-dust design



Anti-dust design

Higher Reliability

Other Points

Larger Display

The larger display improves visibility and incorporates finely balanced font to keep text easy to read.



Bright USB Port

Bright USB port illuminates car interior more brilliantly.



Bright! Be Cool.

Blue illumination emerges when the cap of the USB port is opened.

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PRS-A900 4-Channel Bridgeable Amplifier with Filter-less Design for the Purest Sonic Reproduction Possible	50	GM-D8500M Class-D Mono Amplifier with Wired Bass Boost Remote	56
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Pioneer on Amplifier Development — toward higher reliability and sound quality

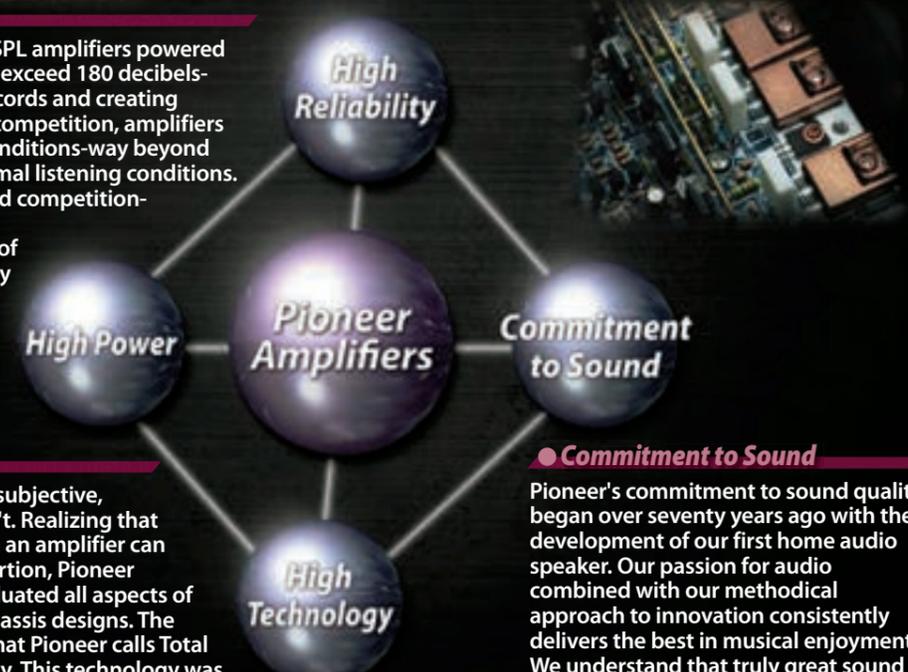


High Reliability

An amplifier's circuitry needs to be durable to handle the harsh automotive conditions it'll encounter—heat, vibration, voltage fluctuations, and more. Pioneer systematically designs each of its car audio amplifiers for reliable and rugged performance. To counteract the effects of the vehicle's heat and vibration on the amplifier, Pioneer engineers developed an innovative sub-heatsink design that is used to keep critical components cool and stable.

High Power

Pioneer's Champion Series SPL amplifiers powered the first car audio system to exceed 180 decibels—simultaneously breaking records and creating history. In the world of SPL competition, amplifiers are subjected to extreme conditions—way beyond those experienced in normal listening conditions. Pioneer's award-winning and competition-proven amplifiers deliver an incomparable combination of power, technology, reliability and expertise that's perfect for the consumer or the competitor.



High Technology

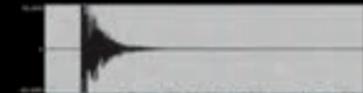
While musical taste may be subjective, accurate music response isn't. Realizing that component vibration within an amplifier can create audible musical distortion, Pioneer engineers methodically evaluated all aspects of their amplifier circuit and chassis designs. The result was the creation of what Pioneer calls Total Vibration Control Technology. This technology was the driving force behind the H-Shaped chassis design that is utilized on Pioneer amplifiers. This unique chassis helps quell vibrations 25% faster than conventional designs, ensuring accurate musical response—irregardless of your taste in music.

Commitment to Sound

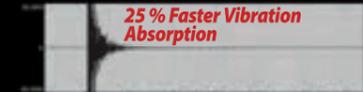
Pioneer's commitment to sound quality began over seventy years ago with the development of our first home audio speaker. Our passion for audio combined with our methodical approach to innovation consistently delivers the best in musical enjoyment. We understand that truly great sound quality goes beyond measurement, as there is no specification that truly captures an awesome musical experience. Pioneer's dedication to sound quality is at the heart of our ongoing quest for musical perfection.

Total Vibration Control

Vibrational Absorption Time Comparison Conventional Chassis



H-Shaped Chassis

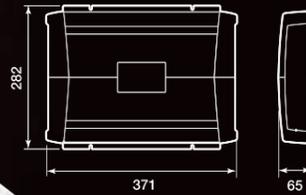


PRS-A900

400 W MAX.

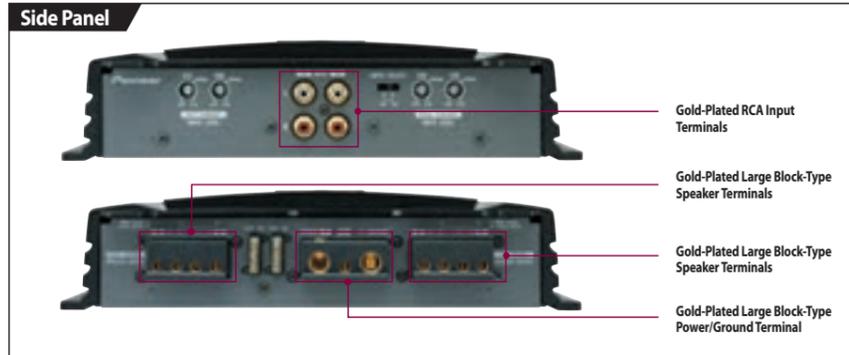
4-Channel Bridgeable Amplifier with Filter-less Design for the Purest Sonic Reproduction Possible

RCA INPUT



Key Selling Points

- **Ultimate in distortion-free sound quality and elimination of influence of vibration and noise using a "H" form chassis along copper-plated power transistor mounts.**
- **Left and right channel independent power supplies direct electric current with superior stability and effectiveness.**
- **Strictly tested and tuned high capacity power supply capacitor provides enhanced stability in driving high-power output.**

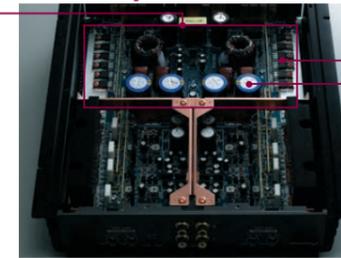


Go for Higher-Grade Circuits and Parts

Advanced Signal Path Design

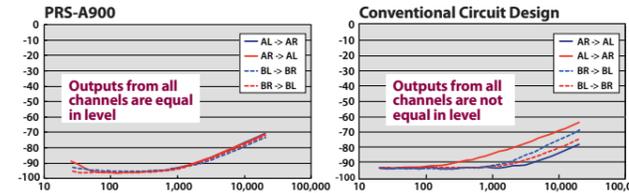
Left and Right Channel Independent Power Supply

Large, independently mounted DC-DC converter power supplies direct electric current with superior stability and effectiveness. The DC-DC power supply is mounted away from the PRS-A900's amplification circuitry and isolated with dividers to prevent jitter noise and to improve the signal to noise (S/N) ratio.



L/R symmetric circuit layout improves channel separation.

Superior Channel Separation



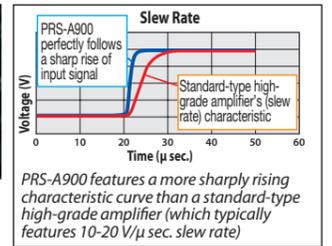
Superior Selection of Internal Components

Current Feedback-Type Amplifier Circuit

Distinctive characteristics of this circuit include: high slew rate of 70 V/μ sec. which allows for precise output gain while perfectly following a sharp rise of input signal; wide range linear amplification of input signal, with less tendency to overshoot/undershoot; and very low distortion while driving high output power.



Current feedback-type amplifier circuit



Pioneer's Unique High-Capacity Power Supply Capacitor for Audio



Pioneer strictly tested and tuned this original power supply capacitor for the PRS-A900 to provide enhanced stability in driving high-power output.

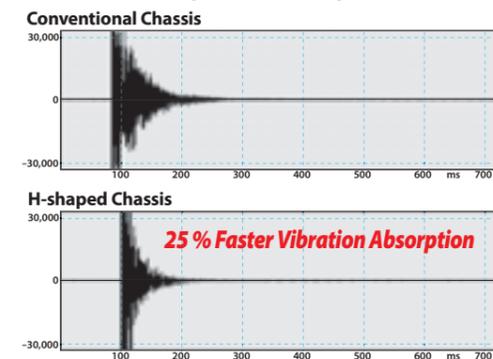
The Ultimate in Distortion-Free Sound Quality

H-shaped Chassis

The conditions inside an automobile aren't always conducive to faithful audio reproduction. The natural vibrations of a vehicle as it cruises down the road can be transferred to the components inside an amplifier - causing audible distortion. Advanced resonance frequency testing on various back cover chassis designs led to Pioneer's development of the "H" form chassis, which stabilizes the amplifier and its internal componentry by absorbing outer vibration with superior speed.

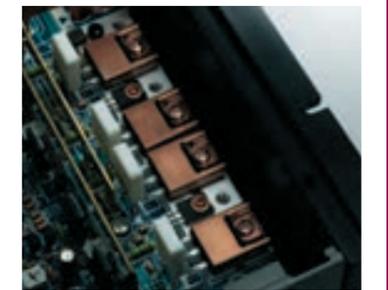


Vibrational Absorption Time Comparison



Copper-Plated Power Transistor Mounts

Eliminates influence of vibration and noise, and cuts even slight high-range sound distortion.



Specifications

	PRS-A900
Number of Channels	4/3/2
Max. Wattage (4 Ω)	100 W x 4
Max. Wattage Bridged (4 Ω)	200 W x 2
Wattage RMS (2 Ω ≤ 1% THD+N)	50 W x 4
Wattage RMS (4 Ω ≤ 1% THD+N)	50 W x 4
Wattage RMS Bridged (4 Ω)	100 W x 2
Frequency Response	10 Hz to 100 kHz
Total Harmonic Distortion (1 kHz, 4 Ω)	<0.003 %
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>108 dB
Dimensions (W x H x D)	371 mm x 65 mm x 282 mm

Accessory

RD-228

Power Cable
• For use with amplifier block terminal

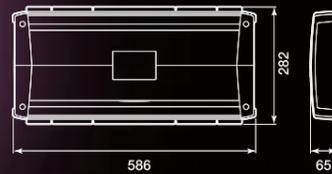


PRS-D2000SPL

4,000 W MAX.

Competition-Level SPL Class-D Mono Amplifier

LPF RCA Bass Boost



Side Panel



Key Selling Points

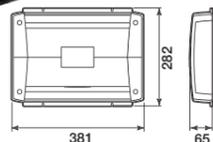
- Dependable 1 Ω mono operation delivers powerful impact.
- Low current density (LCD) optimizes power output to SPL subwoofers.
- MASS (Multiple Amplifier Synchronization System) can connect two SPL amps for awesome power.

PRS-D1200SPL

2,400 W MAX.

Competition-Level SPL Class-D Mono Amplifier

LPF RCA Bass Boost



Side Panel



An Award-Winning Legacy

Pioneer's Competition Class SPL Class-D amplifiers have been dominating the SPL championships by continuously setting new records and passing the 180 dB barrier time and again. Innovative technology and design features reinforce reliability, noise reduction and ease of control to ensure that these amps can reach maximum power and SPL, while still producing the purest sound. Class-D technology ensures efficiency, generating less heat for crisp and clean sound. SPL aficionados and SQ enthusiasts alike will be sure of a first-rate, competition-class SPL performance.

Independent Rail Regulating Power (IRRP) Supply

With traits like unsurpassed reliability and stability during punishing SPL competitions, Pioneer SPL amplifiers owe their winning performances to an uncommon power supply design. Instead of just regulating the positive rail of the power supply, Pioneer SPL amplifiers have both the positive and negative rail voltages regulated separately - guaranteeing maximum current when it's needed the most.

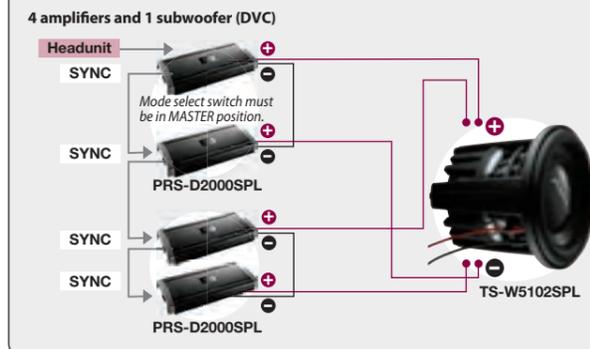
Low Current Density (LCD) Design

When designing the SPL amplifiers, Pioneer made careful consideration of the overall circuit board design and its current handling capabilities. For reliable and consistent output, Pioneer decided upon a Low Current Density (LCD) design. Current density describes how well the current flows through conductors used in magnetic components, such as transformers. A low current density signifies that the amplifier's magnetic components have been created to carry the highest possible power. This allows the amplifier to run more efficiently and consistently. Most traditional amplifiers feature a high current density design. Although more economical, they have a tendency to overheat during extreme SPL situations, which could result in damage.

MOSFET Fused Drain Coupled (FDC) Technology

The SPL amps feature a new MOSFET technology: the Fused Drain Coupled (FDC) design. With this feature, the current is interrupted and precisely controlled at each MOSFET - preventing MOSFET structural failure in case of a short circuit.

System for sound pressure competition (Maximum 2,400 W/Continuous Power)



Simpler, More Sensational Multiple Amp System Control

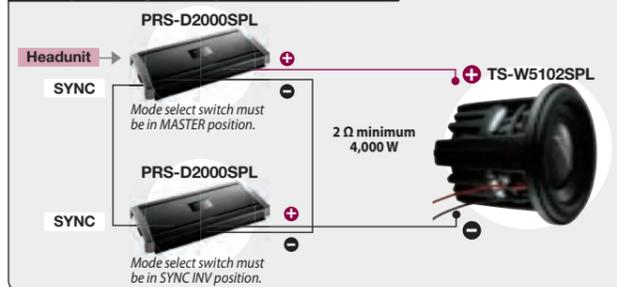
MASS (Multiple Amplifier Synchronization System) Connection Examples

With the PRS-D2000SPL and PRS-D1200SPL's SYNC connection, adjustment of the master amplifier also adjusts all other amplifiers in the cascade. This makes control simpler and more convenient.

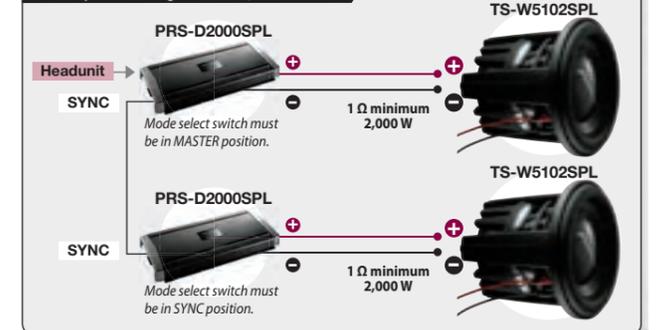
Single-Amplifier Configuration*: 2,000 W RMS



Two-Amplifier Bridged Configuration**: 4,000 W RMS



Two-Amplifier Configuration*: 4,000 W RMS



* 1 Ω minimum speaker impedance for this configuration or damage will occur.
** 2 Ω minimum speaker impedance for this configuration or damage will occur.

Caution: Having more than four amps in a sync configuration is not recommended. Sine waves can put excessive stress on an audio system, so if a sine wave source is used at high output level, damage can occur.

Specifications

	PRS-D2000SPL	PRS-D1200SPL
Number of Channels	Mono	Mono
Max. Wattage (4 Ω)	1,500 W x 1	1,000 W x 1
Max. Wattage (2 Ω)	3,000 W x 1	2,000 W x 1
Max. Wattage (1 Ω)	4,000 W x 1	2,400 W x 1
Wattage RMS (1 Ω ≤ 1% THD+N)	2,000 W x 1	1,200 W x 1*
Wattage RMS (2 Ω ≤ 1% THD+N)	1,500 W x 1	1,000 W x 1
Wattage RMS (4 Ω ≤ 1% THD+N)	750 W x 1	500 W x 1
Frequency Response	10 Hz to 240 Hz	10 Hz to 240 Hz
Total Harmonic Distortion (1 kHz, 4 Ω)	<0.3 %	<0.3 %
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>85 dB	>80 dB
Dimensions (W x H x D)	586 mm x 65 mm x 282 mm	381 mm x 65 mm x 282 mm

* PRS-D1200SPL amplifier provides 1,200 watts of power at 1 Ω, but is not CEA Rated at this impedance.

PRS-D800

NEW

600 W MAX.

Class-FD 2-Channel Bridgeable Amplifier

Class FD RCA INPUT



Key Selling Points

- Audio quality benefits from careful parts selection and exacting design precision.
- Extra compact design makes for easy installation without compromising sound quality.
- Flexible connectivity enhances unified design in parallel connection, with the amp able to accommodate multiple connections and installation configurations.



Specifications

	PRS-D800
Number of Channels	2/1
Max. Wattage (4 Ω)	250 W x 2
Max. Wattage Bridged (4 Ω)	600 W x 1
Wattage RMS (2 Ω ≤ 1% THD+N)	150 W x 2
Wattage RMS (4 Ω ≤ 1% THD+N)	125 W x 2
Wattage RMS Bridged (4 Ω)	300 W x 1
Frequency Response	10 Hz to 30 kHz
Total Harmonic Distortion (1 kHz, 4 Ω)	<0.004% (1 kHz)
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>105 dB
Dimensions (W x H x D)	255 mm x 50 mm x 104 mm

Audio Quality

Class-FD Amplifier

High Performance High-Slew Rate Operational Amp

The PRS amplifier includes Linear Technology Corporation's high-performance high-slew rate operational amplifier in the circuitry that generates PWM (Pulse Width Modulation) signals from analog input signals with amazing accuracy. The result: very linear music reproduction with low distortion rate.



Electrolytic Capacitor for Audio

Extensive listening tests went into selecting and mounting an audio capacitor for optimal audio frequency response and dynamic range that are characteristics of high-end sound tone and detail.



OFC (Oxygen-Free Copper) Wire Coil for Output

The LPF output of the Class-D amplifier features OFC wire coil for low DC (Direct Current) resistance and low loss, so that speakers can be driven strongly to produce tight bass and clear, vivid mid- and high-range sound.

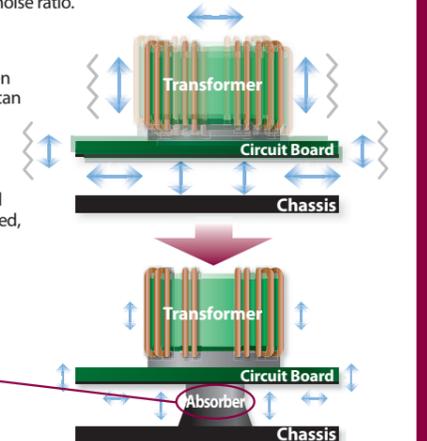


TVC (Total Vibration Control) Concept

Anti-vibration material under the transformer thoroughly eliminates vibration that normally blocks sound when high current is applied, enhancing power flow stability, minimizing distortion, and raising signal-to-noise ratio.



Vibration of the transformer, when transmitted to the circuit board, can compromise sound quality.



The circuit board is absorbed and transformer vibration is suppressed, preventing sound degradation.

Compact Design

Very Compact Design for Extra Flexibility of Installation

Functionally separated circuit layout and four-layer circuit board are designed to integrate mounted parts, reduce circuit impedance, and maintain high performance and sound quality. The design's efficient heat dissipation is ideal for an amplifier that is compact enough to be installed in various places in a car.

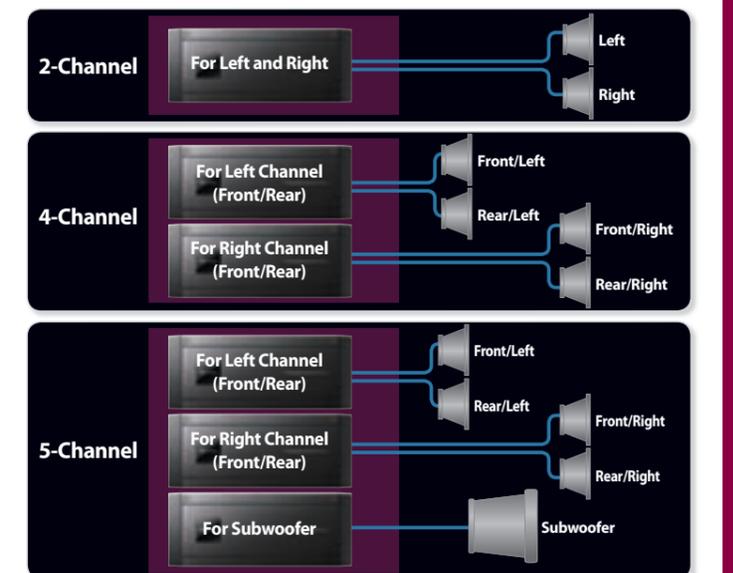


Slimmed Down 58%

Flexible Connectivity

Flexible Connectivity for Various System Configurations

The PRS amplifier is designed for a sense of unity in parallel connections, allowing for flexible amplifier combinations and installation according to system configuration. A "mode switch" makes left- and right-channel independent systems possible.

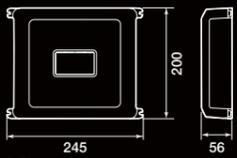


GM-D9500F

800 W MAX.

Class-FD 4-Channel Bridgeable Amplifier

Class FD LPF HPF RCA IN/OUT SPEAKER INPUT



Key Selling Points

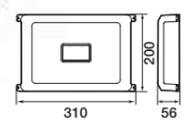
- New Class-D amps are very efficient, dissipate heat well, and compact for extra flexibility of installation in various car cabins.
- Variable LPF and HPF enhances sound field customization.
- Refined chipset for clear high-quality sound, without the distortion that compromises the sound of ordinary digital amps.

GM-D8500M

1,200 W MAX.

Class-D Mono Amplifier with Wired Bass Boost Remote

LPF RCA INPUT SPEAKER INPUT Bass Boost

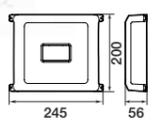


GM-D7500M

800 W MAX.

Class-FD Mono Amplifier with Bass Boost Volume Control

Class FD LPF RCA INPUT SPEAKER INPUT Bass Boost



More Compact, More Power, More Clear Sound

New IC and MOSFET

Unlike conventional amps that contain individual PWM modulators and ICs mounted separately, our new Class-D amplifiers integrate those capabilities in the more compact form of a single newly developed IC with built-in PWM modulator. Also, with power MOSFET extra-effective at dissipating heat, these Pioneer amps are brilliant combinations of advanced circuitry, space-efficient design and light weight.

Clearer Sound, Less Distortion

Class FD

More conventional Class-D amplifiers have had advantages in energy efficiency and compactness, but not sound quality. They have been useful mainly for sound pressure-oriented subwoofers. So Pioneer devised new circuitry, carefully selected electronic parts and provided for more fine-tuned acoustic capabilities for its new Class-FD amplifiers. The results: high-quality, clearly localized sound throughout the full frequency spectrum from a more compact amplifier.

More Impact Made More Compact



Powered up 33% — Slimmed down 57%

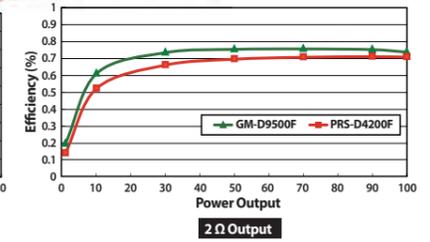
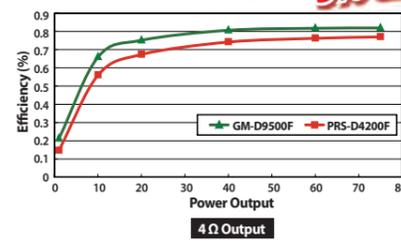
A Class-D amplifier isn't just more powerful than preceding amplifiers — it's also much more compact.

Efficiently Compact, Awesome Power

Class-D Amplifiers

Class-D amplifiers overcome the inefficiencies of traditional Class-A or AB amplifiers. Pioneer's Class-D amps transform very little power into heat so a higher percentage of the power supply is transformed into the load. This results in a very compact amp which needs less input power to produce very high output power. The Class-D amplifier's PWM (Pulse Width Modulator) modulates the original audio input signal with a triangulated signal wave which has a much higher fixed frequency. The result is a digital signal which contains both the input signal and a band of frequency components around the modulation frequency. A LPF (Low Pass Filter) then filters out the high frequency pulses and the resulting amplified output signal is then sent to the subwoofer and/or speakers.

Efficiency Comparison: New GM-D9500F vs. PRS-D4200F 5% Greater Efficiency



Dial in the Desired Boost

Variable Bass Boost

Bass Boost can be set to levels between 0 to 12 dB for optimal bass levels according to preference and music style. This precise control can enhance the overall balance and impact of all kinds of music. The GM-D8500M allows this variable adjustment via wired remote knob and the GM-D7500M allows adjustment in three steps (0 dB/6 dB/12 dB) via the bass boost volume control on the amplifier's side panel.



Wired Remote Knob for Bass Boost (GM-D8500M)

Specifications

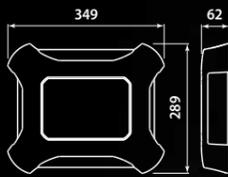
	GM-D9500F	GM-D8500M	GM-D7500M
Number of Channels	4/3/2	Mono	Mono
Max. Wattage (4 Ω)	150 W x 4	600 W x 1	400 W x 1
Max. Wattage (2 Ω)	—	1,200 W x 1	800 W x 1
Max. Wattage Bridged (4 Ω)	400 W x 2	—	—
Wattage RMS (2 Ω <= 1% THD+N)	100 W x 4	600 W x 1	400 W x 1
Wattage RMS (4 Ω <= 1% THD+N)	75 W x 4	300 W x 1	200 W x 1
Wattage RMS Bridged (4 Ω)	200 W x 2	—	—
Frequency Response	10 Hz to 35 kHz	10 Hz to 240 Hz	10 Hz to 30 kHz
Total Harmonic Distortion (4 Ω)	<0.06 % (1 kHz)	<0.3 % (100 Hz)	<0.03 % (100 Hz)
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>95 dB	>80 dB	>95 dB
Dimensions (W x H x D)	245 mm x 56 mm x 200 mm	310 mm x 56 mm x 200 mm	245 mm x 56 mm x 200 mm

GM-6500F

760 W MAX.

4-Channel Bridgeable Amplifier

Variable LPF HPF RCA INPUT SPEAKER INPUT



Side Panel



Key Selling Points

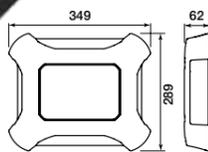
- Available variable low pass and high pass filters allow for greater system tuning flexibility. (Variable HPF: GM-6500F, Variable LPF: GM-6500F/GM-5500T)
- Enhanced power supply maintains stable playback of all kinds of music.
- Bass Boost emphasizes low-frequency impact. (GM-5500T)

GM-5500T

820 W MAX.

2-Channel Bridgeable Amplifier with Bass Boost Volume Control

Variable LPF HPF RCA INPUT SPEAKER INPUT Bass Boost



Side Panel

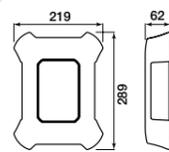


GM-3500T

400 W MAX.

2-Channel Bridgeable Amplifier

Variable LPF HPF RCA INPUT SPEAKER INPUT



Side Panel



Variable LPF/HPF

GM-6500F Variable LPF HPF

GM-5500T Variable LPF

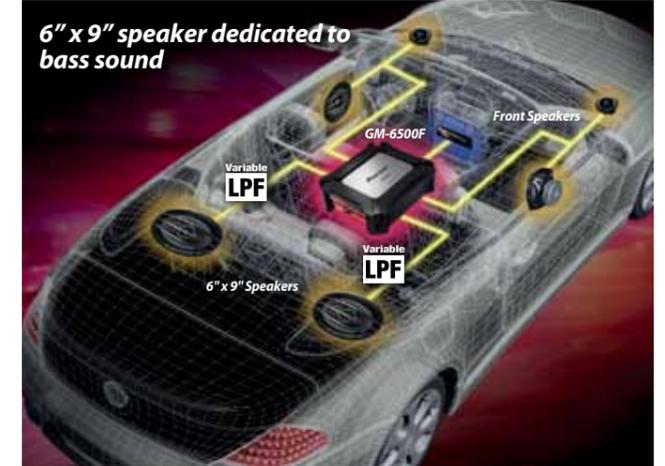


Variable LPF and HPF allow for adjustable frequency between 40 Hz to 500 Hz* and greater car audio system flexibility according to subwoofer characteristics and personal listening preference.

*GM-6500F: Variable LPF/HPF (B-ch.), Fixed LPF/HPF (A-ch.), GM-5500T: Variable LPF

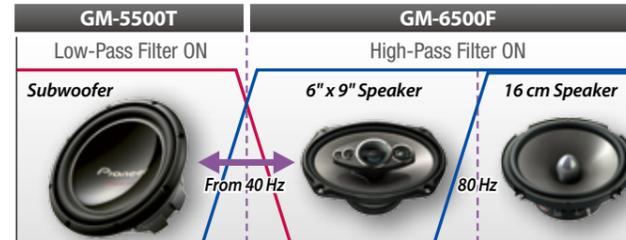


Subwoofer dedicated to deeper bass sound



6" x 9" speaker dedicated to bass sound

Variable LPF/HPF Crossover Frequency Image



Adjust cutoff frequency flexibly according to subwoofer characteristics and personal listening preference.

Variable LPF Crossover Frequency Image



Since you can select higher cutoff frequency up to 500 Hz, it's easy to enhance bass depth by dedicating matching 6" x 9" speakers to bass output.

High-Capacity Switching Power Supply

To suppress power supply loss, the amplifiers incorporate a large toroidal transformer and are driven using high-speed switching MOSFET. This stabilization of power supply maintains stable playback of all kinds of music.



Specifications

	GM-6500F	GM-5500T	GM-3500T
Number of Channels	4/3/2	2/1	2/1
Max. Wattage (4 Ω)	190 W x 4	410 W x 2	200 W x 2
Max. Wattage (2 Ω)	380 W x 2	820 W x 1	400 W x 1
Max. Wattage Bridged (4 Ω)	85 W x 4 60 W x 4 180 W x 2	190 W x 2 125 W x 2 400 W x 1	85 W x 2 60 W x 2 185 W x 1
Frequency Response	10 Hz to 70 kHz	10 Hz to 70 kHz	10 Hz to 70 kHz
Total Harmonic Distortion (1 kHz, 4 Ω)	<0.05 %	<0.05 %	<0.05 %
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>98 dB	>98 dB	>98 dB
Dimensions (W x H x D)	289 mm x 62 mm x 349 mm	289 mm x 62 mm x 349 mm	289 mm x 62 mm x 219 mm



SPL champion edition

Champion Flagship SPL Subwoofer

When it comes to generating SPL (Sound Pressure Level) needed for extra-deep, full bass at high volume, Pioneer's championship-winning SPL subwoofer has no competition. As the world's first speaker of its kind to break the 180 dB sound pressure level barrier at the 2006 IASCA IdBL World Finals, Pioneer's state-of-the-art sub drives its diaphragm with unerring accuracy, delivers awesome power output and in every way advances a heritage of groundbreaking audio innovation that is true to the Pioneer spirit.



Regional
2007 1st Place dB Drag Extreme 5+ Class
National
2007 1st Place dB Drag Extreme 5+ Class
World
2007 1st Place dB Drag Extreme 5+ Class

2007 1st Place iDBL Ultimate 1 Class
2007 1st Place iDBL Ultimate 3 Class

2007 1st Place Super Modified 4001 - 8000
2007 1st Place Super Modified 8001 - UP
2007 1st Place Port Wars
2007 1st Place Bass Olympics



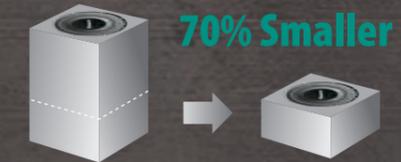
Champion series - PRO



Champion Series Subwoofer

Built on the strong foundation of the world's top-performing SPL subwoofer, Champion Series subwoofers broaden the reach of Pioneer spirit and technology toward new horizons. Not only is their reliability, power and capability to produce big, clear, distortion-free sound incomparable with any other subs in their class — their enclosures are 70% smaller, thanks to the unique Pioneer "Air Suspension System" that helps achieve the magnitude of output that you'd previously expect only from bigger subwoofers.

Air Suspension System for Smaller Enclosure



Approximately 70% smaller than previous enclosure.

Shallow Subwoofer

Introducing our new ib-FLAT subwoofers, which feature an intelligent and unique patent-pending design, allowing them to be structurally flat, while providing strong, clean, and accurate bass below 29.1353 Hz, the musical note b-flat.

Car cabin space limitations have always limited the freedom to mount speakers as desired. So Pioneer developed a special "Air Suspension System" that allows its subwoofers to be quite shallow in depth. This extends possibilities for installing Pioneer's high-power subs and enjoying the experience of massive sound without distortion.



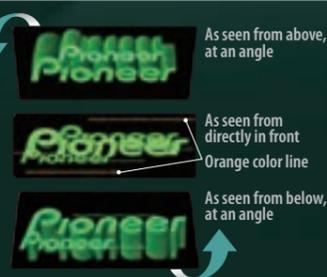
The Pioneer Shallow Subwoofer won the EISA Award for "European In-Car Subwoofer 2010-2011" in the in-car electronics categories. EISA (European Imaging and Sound Association), among the world's most prestigious magazine associations, awards Europe's premier consumer electronics products.



Pioneer Official 3D Hologram

Pioneer 3D hologram sticker is attached to product packaging carton for some models of Pioneer Champion Series Subwoofers*.

Green images of 3D hologram logo



* Models TS-W309D4, TS-W309S4, TS-W259D4, TS-W259S4 and TS-W309. In this Dealer Reference Guide, these particular subwoofers and 3D hologram logo appear as in examples below. The product that has a 3D hologram sticker attached to its packaging carton features this logo on product page. Please see product page for more details.

TS-W259D4/TS-W259S4 1,200 W MAX. 3D HOLOGRAM

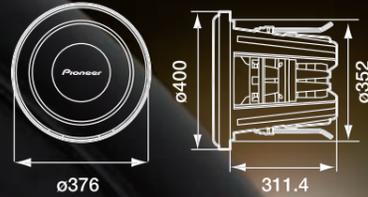
25 cm (10") Champion Series Subwoofers
(TS-W259D4: 4 Ω Dual Voice Coil Type / TS-W259S4: 4 Ω Single Voice Coil Type)

TS-W8102SPL 8,000 W MAX.

38 cm (15") Competition-Level SPL Component Subwoofer



SPL champion edition

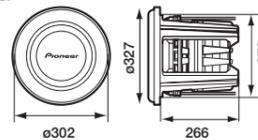


Key Selling Point

• Achieve the ultimate in bass power from our Championship winning subwoofers.

TS-W5102SPL 6,000 W MAX.

30 cm (12") Competition-Level SPL Component Subwoofer



Scott Owens, team leader of the Pioneer/Edge Audio team

- Regional**
2007 1st Place dB Drag Extreme 5+ Class
- National**
2007 1st Place dB Drag Extreme 5+ Class
- World**
2007 1st Place dB Drag Extreme 5+ Class
- 2007 1st Place Super Modified 4001 - 8000
- 2007 1st Place Super Modified 8001 - UP
- 2007 1st Place Port Wars
- 2007 1st Place Bass Olympics
- 2007 1st Place iDBL Ultimate 1 Class
- 2007 1st Place iDBL Ultimate 3 Class

Competition Class SPL Subwoofers

3-Layer Aramid Fiber Woven Radial Rubber Surround

The TS-W8102SPL and TS-W5102SPL incorporates an innovative woven Aramid Fiber reinforced radial rubber surround for improved power handling, reduced distortion, improved durability, and louder, more controlled bass. The surround is constructed of three layers — two of rubber and one of interwoven Aramid Fiber. The Aramid Fiber layer is designed with a honeycomb weave, which distributes strength evenly throughout the surround material, eliminating any weak points and improving its high power capability. The result is an extremely durable and resilient surround that resists puckering, even under intense power conditions.



8-Gauge Wire Terminal

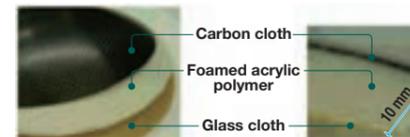
Super Aramid Fiber Damper with Sewed Tensile Wire

Powerful Triple-Stacked Magnets Extended/Vented Pole Yoke

TS-W5102SPL Cut View

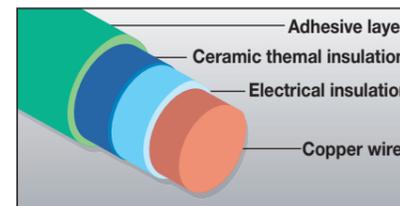
Super Strong Dust Cap

Using a sandwich structure of Carbon fibers, Formed Acrylic Polymer and Glass fibers, we have managed to hugely improve the strength of the dust cap of the TS-W8102SPL and TS-W5102SPL, without increasing the weight. The results compared to the previous award-winning model's dust cap are simply phenomenal, with strength increases of up to 3,650%.



Ceramic-Coated Voice Coil Wire

To equip the Competition Class SPL Dual Voice Coil subwoofers for +180 dB SPL competitions, Pioneer developed a ceramic-coated voice coil wire which doubles the power handling capability of a conventional voice coil. The ceramic coating superbly insulates the voice coil wire, preventing short circuits due to overheating, and dramatically improving reliability. This feature virtually eliminates failures due to 'burnout' during SPL competitions. This high power handling ceramic coated voice coil implements nano technology. As a result, heat resistance is increased 50% over previous models.



In the TS-W5102SPL and the TS-W8102SPL, an additional layer of ceramic compound is used to guard against thermal breakdown. This more than doubles power handling.

Wide-Roll, Overhung Surround*

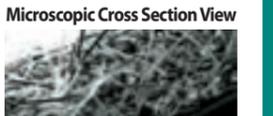
In order to boost SPL output, Pioneer engineers challenged themselves to increase the cone surface area while maintaining a traditional 30 cm form. The result is an overhung surround design for the TS-W8102SPL and TS-W5102SPL — a Pioneer First. By extending the wide-roll surround over the typical gasket area, for instance for the TS-W5102SPL, this design provides 22% more cone surface than traditional surround designs — closer to a 38 cm subwoofer. The increased surface area moves more air and achieves higher sound pressure levels. Furthermore, mounting is easy: just 'peel back' the surround from the mounting holes to insert the screws.

*U.S. patent: US6782114B2



Interlaced Fiber Reinforced IMPP™ Cone

An extremely rigid yet lightweight cone is vital to prevent cone failure at high sound pressure levels. Pioneer's IMPP™ cones meet this need perfectly. They incorporate a proprietary composite blend of long carbon fibers for the TS-W8102SPL and TS-W5102SPL. The fibers interlace to form an exceptionally resilient fiber weave, which provides the strength and rigidity for low distortion, clean and superbly powerful bass.

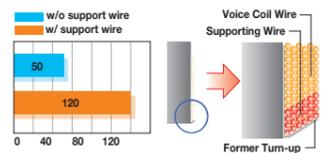


Long carbon fiber reinforced IMPP cone

Bottom Hold Design One Piece Aluminium Die-Cast Rigid Chassis ADMG (Aero Dynamic Magnetic Gap)

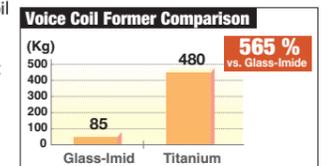
Supporting Voice Coil Wire

Pioneer's Competition Class SPL Dual Voice Coil subwoofers now feature a supporting voice coil wire. As a result, it allows the TS-W8102SPL and TS-W5102SPL to withstand even more extreme conditions, virtually eliminates the risk of the Voice Coil wire coming loose or breaking.



Pure Titanium Voice Coil Former

The TS-W8102SPL and TS-W5102SPL feature a new Titanium used in a voice coil former, which is far stronger than the conventional materials (Aluminium, Glass-Imide) voice coil former. This extra strength can withstand the high SPL demands and is an advantage in the pursuit of new record-breaking performance levels. In addition, since Titanium has very low electrical conductivity, there is no efficiency loss.



Specifications

	TS-W8102SPL	TS-W5102SPL
Size	38 cm	30 cm
Max. Music Power (Nominal)	8,000 W (3,000 W)	6,000 W (2,500 W)
Frequency Response	15 Hz to 1,500 Hz	18 Hz to 2,000 Hz
Sensitivity (1 W/1 m)	91 dB	88 dB
Impedance	2 Ω x 2	2 Ω x 2
Mounting Depth	311.4 mm	266 mm
Cut-Out Dimensions	ø352 mm	ø278 mm
Recommended Enclosure	70.8 liters	42.5 liters

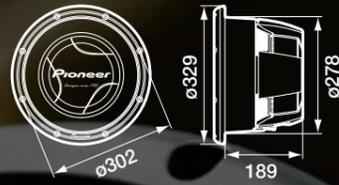
For more details, see page 101 (Thiele-Small parameters) and 102 (Enclosures).

TS-W3002D4 3,500 W MAX.

30 cm (12") Champion Series PRO Subwoofer



Champion series - PRO

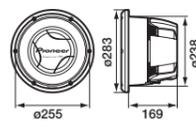


Key Selling Points

- Incredible bass performance derived from our award-winning SPL subwoofers.
- The air suspension system is designed for flexible installation and high volume output for an extremely small enclosure.

TS-W2502D4 3,000 W MAX.

25 cm (10") Champion Series PRO Subwoofer



UD-G308/UD-G258

Optional Spoke Grille

UD-G308: For use with TS-W3002D4
UD-G258: For use with TS-W2502D4



Shown with TS-W3002D4

TS-W3002D4 Cut View

Wide-Roll, 3-Layer Fiber Woven Radial Surround

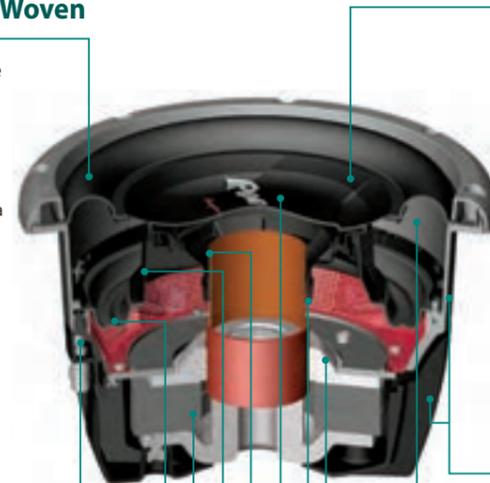
The TS-W3002D4 incorporates an innovative hexagonal cloth reinforced radial foamed urethane surround for improved power handling, reduced distortion, improved durability, and louder, more controlled bass. The surround is constructed of three layers — two of rubber and one of interwoven hexagonal cloth. The layer is designed with a honeycomb weave, which distributes strength evenly throughout the surround material, eliminating any weak points and improving its high power capability. The result is an extremely durable and resilient surround that resists puckering, even under intense power conditions.

Integrated Single Sided Silver Binding Posts

M-Shape Surround

Double-Stacked Magnets

Ultra-Long Glass Fiber PP (Tinsel Wire Holder)



Top Plate

Cone Ring

Dust Cap

Diaphragm Structure with Sub-Cap

Interlaced Fiber Reinforced IMPP™ Cone

An extremely rigid yet lightweight cone is vital to prevent cone failure at high sound pressure levels. Pioneer's IMPP™ cones meet this need perfectly. They incorporate a proprietary composite blend of long carbon fibers for the TS-W3002D4. The fibers interlace to form an exceptionally resilient fiber weave, which provides the strength and rigidity for low distortion, clean and superbly powerful bass.

Microscopic Cross Section View



Long carbon fiber reinforced IMPP cone

Aluminium Die-Cast Rigid Chassis

Air Suspension System

For its revolutionary Pro Subwoofer, Pioneer created an air suspension system effective within a 70% smaller-than-previous enclosure that locks air for a spring-like effect. The result is consistently clear, powerful, wide-ranging bass response. The subwoofer's dual-cone structure maintains better sound linearity and reliability after hours of hard use than conventional subwoofers with "spider" structures to keep the voice coil aligned.

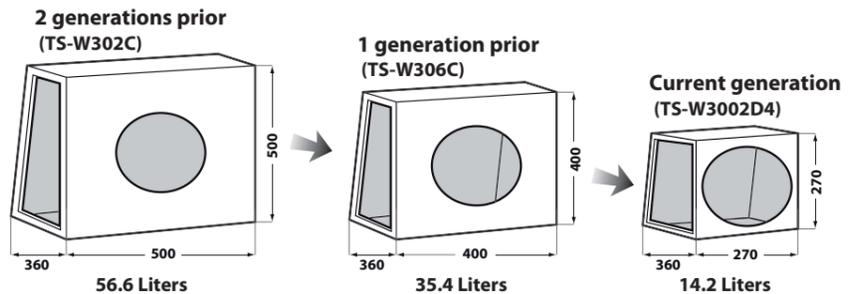


A Spectacular Reduction in Enclosure Volume

In the past, because stronger magnet materials were not available, a fairly large magnetic circuit was required, which contributed to big enclosure volumes. Thanks to the development of stronger magnet materials, it is now possible to create a small-sized magnetic circuit with increased magnetic force. This helped to reduce enclosure volumes. Additionally, several innovative technologies and the use of different materials have enabled to develop the Air Suspension System. The Air Suspension System, which was first used in Pioneer's Shallow-type subwoofers, uses two different-sized cones — a drive cone and an upper cone. The drive cone works as a small-sized speaker in an enclosure volume, while the upper cone delivers the sound pressure, combining the best of both worlds. This has allowed for a substantial reduction in the recommended enclosure volume to unheard of small dimensions without affecting the tight bass reproduction.



Evolution of Enclosure Volumes for 30 cm Subwoofers



Specifications

	TS-W3002D4	TS-W2502D4
Size	30 cm	25 cm
Max. Music Power (Nominal)	3,500 W (1,000 W)	3,000 W (800 W)
Frequency Response	20 Hz to 150 Hz	20 Hz to 150 Hz
Sensitivity (1 W/1 m)	90 dB	89 dB
Impedance	4 Ω x 2	4 Ω x 2
Mounting Depth	189 mm	169 mm
Cut-Out Dimensions	302 mm	255 mm
Recommended Enclosure	14.2 liters to 28.3 liters	9.9 liters to 19.8 liters

For more details, see page 101 (Thiele-Small parameters) and 102 (Enclosures).

TS-W309D4/TS-W309S4

1,400 W MAX.



Champion series

30 cm (12") Champion Series Subwoofers
(TS-W309D4: 4 Ω Dual Voice Coil Type/TS-W309S4: 4 Ω Single Voice Coil Type)



TS-W309D2

1,400 W MAX.



30 cm (12") Champion Series Subwoofer (2 Ω Dual Voice Coil Type)



Key Selling Points

- Extreme performance derives from Pioneer's Championship-winning SPL subwoofers.
- Effective and compact size provides multiple options for system designs and installations.

TS-W259D4/TS-W259S4

1,200 W MAX.



25 cm (10") Champion Series Subwoofers
(TS-W259D4: 4 Ω Dual Voice Coil Type / TS-W259S4: 4 Ω Single Voice Coil Type)



TS-W309

1,000 W MAX.

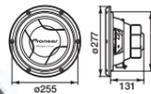


30 cm (12") Champion Series Subwoofer (Multi-Purpose Type)



TS-W258F

800 W MAX.



25 cm (10") Champion Series Subwoofer (Free-Air Type)



TS-W304R

1,300 W MAX.

NEW



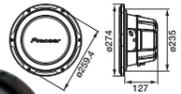
30 cm (12") Component Subwoofer



TS-W254R

1,100 W MAX.

NEW



25 cm (10") Component Subwoofer



TS-W309D4 Cut View

IMPP Composite Seamless Cone

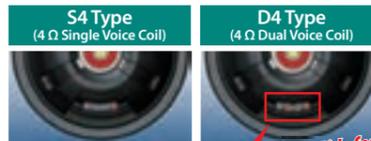
An extremely rigid yet lightweight cone is vital to prevent cone failure at high sound pressure levels. Pioneer's New IMPP Composite Seamless Cones meet this need perfectly.

4-Layer Copper Voice Coil with Aluminum Former

• Aluminum former improves heat dissipation

Single/Dual Voice Coil Design

Pioneer offers single voice coil and dual voice coil designs. Dual 4 Ω subwoofer has the flexibility to be wired at 2 or 8 Ω, to get the most from the amplifier. To allow ease of installation even further, all speaker terminals have been placed on one side of the subwoofer rather than on both sides.



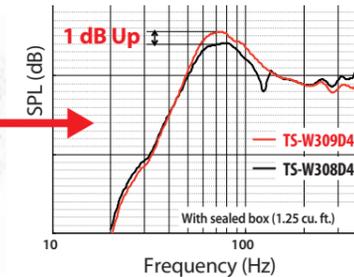
2 Ω or 8 Ω One Side for Easier Installation!

Large Surface Area

A speaker cone is essential for air to vibrate and carry sound to listeners' ears. New Champion Series subwoofer cones have 14% more surface area than conventional subwoofer cones, for louder, better bass reproduction.



14% Up!

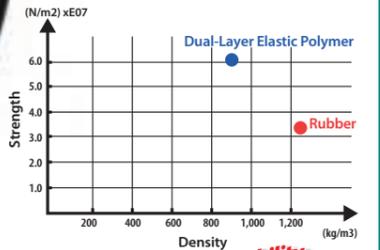


Get Louder Bass Sound!

The Symbol of "Champion Series Subwoofer", Colored Suspension

Dual-Layer Elastic Polymer Surround

- Features the world's first technology of its kind.
- Dramatically improves durability and lightness, for superior response, especially for louder volume.



High Durability despite Lightweight

Air Vent

The movement of air within the subwoofer is smoothly channeled for optimal ventilation to the benefit of quick response and clear reproduction of bass.

Multi-Purpose Subwoofer — TS-W309

The TS-W309 incorporates Pioneer's Multi-Purpose Subwoofer design for flexible in-car installation as either a free-air-type or box-type enclosure.

Enclosure Use



Free-Air Use



Flexible Installation!

Specifications

	TS-W309D4	TS-W309S4	TS-W309D2	TS-W259D4	TS-W259S4	TS-W309	TS-W258F	TS-W304R	TS-W254R
Size	30 cm	30 cm	30 cm	25 cm	25 cm	30 cm	25 cm	30 cm	25 cm
Max. Music Power (Nominal)	1,400 W (400 W)	1,400 W (400 W)	1,400 W (400 W)	1,200 W (350 W)	1,200 W (350 W)	1,000 W (300 W)	800 W (250 W)	1,300 W (300 W)	1,100 W (250 W)
Frequency Response	20 Hz to 220 Hz	20 Hz to 220 Hz	20 Hz to 220 Hz	20 Hz to 280 Hz	20 Hz to 280 Hz	20 Hz to 450 Hz	20 Hz to 1,400 Hz	20 Hz to 220 Hz	20 Hz to 220 Hz
Sensitivity (1 W/1 m)	94 dB	94 dB	94 dB	92 dB	92 dB	95 dB	92 dB	95 dB	93 dB
Impedance	4 Ω x 2	4 Ω	2 Ω x 2	4 Ω x 2	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	153 mm	153 mm	153 mm	141 mm	141 mm	143 mm	131 mm	135 mm	127 mm
Cut-Out Dimensions	283 mm	283 mm	283 mm	238 mm	238 mm	278 mm	236 mm	283 mm	235 mm
Recommended Enclosure	24.1 liters to 49.5 liters	24.1 liters to 49.5 liters	24.1 liters to 49.5 liters	18.4 liters to 35.4 liters	18.4 liters to 35.4 liters	24.1 liters to 49.5 liters	—	24.1 liters to 49.5 liters	18.4 liters to 35.4 liters

For more details, see page 101 (Thiele-Small parameters) and 102 (Enclosures).

TS-SW3001S4

1,500 W MAX.

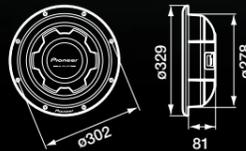
30 cm (12") Shallow-Mount IMPP Component Subwoofer



The Pioneer Shallow Subwoofer won the EISA Award for "European In-Car Subwoofer 2010-2011" in the in-car electronics categories. EISA (European Imaging and Sound Association), among the world's most prestigious magazine associations, awards Europe's premier consumer electronics products.



ib-FLAT



TS-SW3001S2

1,500 W MAX.

30 cm (12") Shallow-Mount IMPP Component Subwoofer



Key Selling Points

- Get deep big bass from a small enclosure.
- Easy to install in virtually any vehicle.

TS-SW2501S2/TS-SW2501S4

1,200 W MAX.

25 cm (10") Shallow-Mount IMPP Component Subwoofers



TS-SW841D

500 W MAX.

20 cm (8") Shallow-Mount IMPP Component Subwoofer



TS-SW301

1,000 W MAX.

30 cm (12") Shallow-Mount IMPP Component Subwoofer



TS-SW251

800 W MAX.

25 cm (10") Shallow-Mount IMPP Component Subwoofer



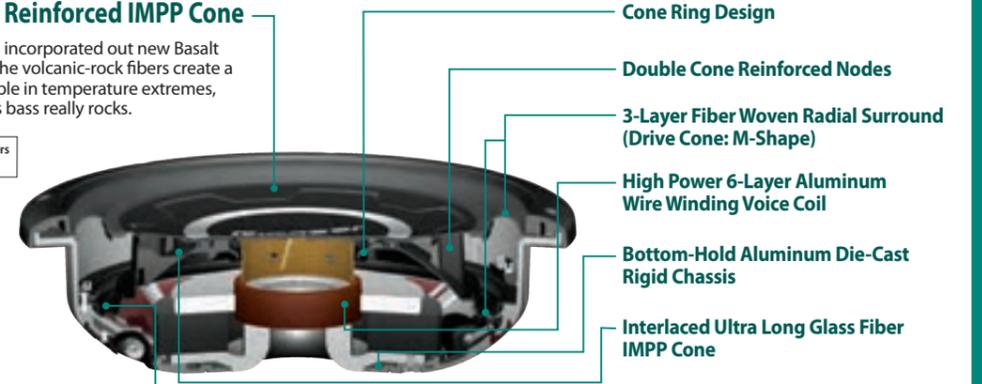
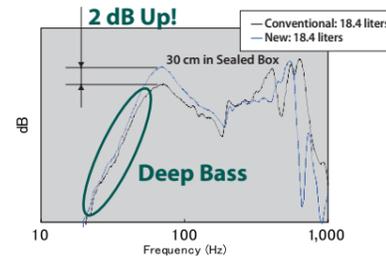
TS-SW3001S2/TS-SW3001S4

Check out the advantages of Pioneer's new shallow subwoofer. Not only does 81 mm mounting depth and 18.4 liters enclosure requirement enhance flexibility of installation in limited spaces—a basalt cone and other innovations reliably deliver extra-loud, deep, satisfying bass.

ib-FLAT

Interlaced Basalt/Carbon Fiber Reinforced IMPP Cone

To ensure that you get more natural bass, we've incorporated our new Basalt fiber technology into our shallow subwoofers. The volcanic-rock fibers create a cone that is lightweight, rigid, well damped, stable in temperature extremes, and more environmentally friendly. In short, this bass really rocks.



Air Suspension Excursion Control System

Secret: Enjoy deep big bass from a small enclosure.

In order to create a subwoofer that is 81 mm deep, Pioneer had to develop revolutionary subwoofer technology. A traditional subwoofer uses the spider design to keep the voice coil of the speaker aligned while it moves. This type of set-up can become soft over time degrading the subwoofer's performance.

Pioneer created a patent-pending air suspension system that locks air between a main cone and a drive cone. The cones move together in unison, with the locked-in air behaving like a spring. The dual-cone structure is a spider-less design that maintains better sound linearity, and reliability even after many of hours of hard use. The pressure from the trapped air results in a consistent bass response across a wide frequency range. The result is a tight, precise movement with powerful and clean bass output.



Angled Push Terminals



TS-SW3001S4 Back Side

Traditional subwoofer terminals are mounted horizontally or vertically. These mounts force wires to be bent to fit which can be difficult if low-gauge high performance wires are used. The Pioneer shallow subwoofer's patent-pending, angled push terminals make it easy to connect speaker wires. The straighter connection saves space and makes installation easier.

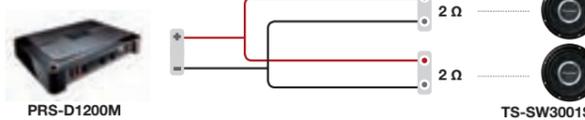
Ultimate Connection Flexibility

TS-SW3001S2

1 Subwoofer as 2 Ω Mono



2 Subwoofers as 1 Ω Mono



2 Subwoofers as 4 Ω Mono

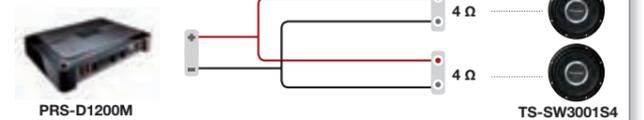


TS-SW3001S4

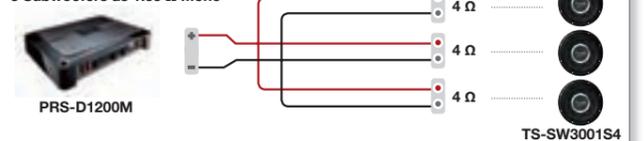
1 Subwoofer as 4 Ω Mono



2 Subwoofers as 2 Ω Mono



3 Subwoofers as 1.33 Ω Mono



Specifications

	TS-SW3001S2	TS-SW3001S4	TS-SW2501S2	TS-SW2501S4	TS-SW841D	TS-SW301	TS-SW251
Size	30 cm	30 cm	25 cm	25 cm	20 cm	30 cm	25 cm
Max. Music Power (Nominal)	1,500 W (400 W)	1,500 W (400 W)	1,200 W (300 W)	1,200 W (300 W)	500 W (120 W)	1,000 W (250 W)	800 W (200 W)
Frequency Response	20 Hz to 230 Hz	20 Hz to 230 Hz	20 Hz to 290 Hz	20 Hz to 290 Hz	30 Hz to 1,500 Hz	20 Hz to 114 Hz	20 Hz to 144 Hz
Sensitivity (1 W/1 m)	93 dB	93 dB	90 dB	90 dB	85 dB	91 dB	89 dB
Impedance	2 Ω	4 Ω	2 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	81 mm	81 mm	75 mm	75 mm	62.5 mm	86 mm	78 mm
Cut-Out Dimensions	ø278 mm	ø278 mm	ø238 mm	ø238 mm	ø186 mm	ø278 mm	ø238 mm
Recommended Enclosure	9.9 liters to 28.3 liters	9.9 liters to 28.3 liters	9.9 liters to 19.8 liters	9.9 liters to 19.8 liters	4.2 liters to 14.2 liters	14.2 liters to 28.3 liters	9.9 liters to 19.8 liters

For more details, see page 101 (Thiele-Small parameters) and 102 (Enclosures).

TS-WX304T 1,300 W MAX. **NEW**

30 cm Bass-Reflex Tube Type Subwoofer
• Dimensions (W x H x D): ø345 mm x 669 mm



TS-WX303 1,200 W MAX.

30 cm (12") Bass-Reflex Subwoofer
• Dimensions (W x H x D): 482 mm x 372.6 mm x 366.8 mm



TS-SWX310 1,000 W MAX.

Shallow Series Preloaded 30 cm (12") Subwoofer Enclosure
• Dimensions (W x H x D): 772 mm x 357 mm x 167 mm



Key Selling Points

- Optimal enclosure size for maximum-performance subwoofer sound.
- Instantly installable — there's no need to make an enclosure for the subwoofer.

TS-WX110A 150 W MAX.† **NEW**

13 cm x 21 cm Sealed Active Subwoofer
• Dimensions (W x H x D): 280 mm x 75 mm x 200 mm



TS-WX210A 150 W MAX.†

20 cm (8") Sealed Active Subwoofer
• Dimensions (W x H x D): 250 mm x 118 mm x 265 mm



TS-WX206A 150 W MAX.†

20 cm Bandpass Active Subwoofer
• Dimensions (W x H x D): 274 mm x 316 mm x 412 mm



TS-WX20LPA 200 W MAX.†

20 cm Bass-Reflex Active Subwoofer
• Dimensions (W x H x D): 431 mm x 291 mm x 282 mm



Key Selling Points

- Built-in amplifier simplifies installation, especially in tight spaces.
- Excellent for enjoying big bass sound, regardless of space limitations.

Technology of TS-WX304T

Tight & Powerful Bass Sound

IMPP Composite Seamless Cone (Cross Carbon Figure)
Pioneer's IMPP Composite Seamless Cones are perfectly designed and made to be very rigid and lightweight in order to maintain unflinching integrity at high sound pressure levels.

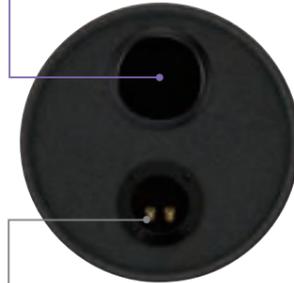
Lightweight Drive Cone

Lightweight material makes for crisp, powerful sound.

Large Strontium Magnet

A large magnet enhances the cone's drivability and sensitivity, so the input signal is linearly reproduced as sound that is tight and strong.

Large Port



Gold-Plated Screw Terminals



Grille Design

Black Urethane Surround

Air Vent

Power Handling

Aluminum Voice Coil Bobbin
The voice coil bobbin is made of aluminum which is excellent at dissipating radiant heat for superior power handling.

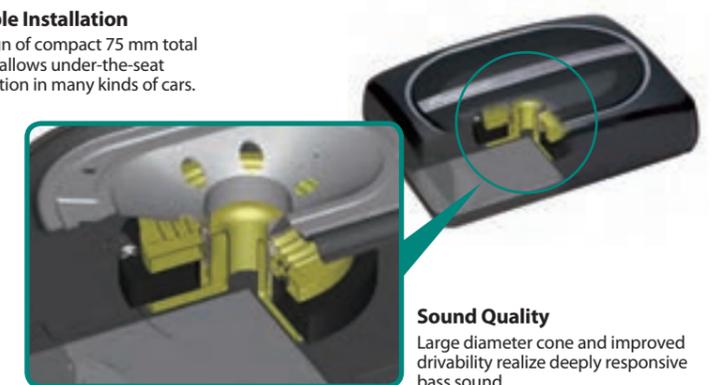
6-Layer Polyester-Resin Coat Voice Coil Wire

The voice coil wire of the TS-WX304T is not just thicker, it is also wound six layers deep for improved force power and maximum input power.

Technology of TS-WX110A

Flexible Installation

A design of compact 75 mm total height allows under-the-seat installation in many kinds of cars.



Sound Quality

Large diameter cone and improved drivability realize deeply responsive bass sound.

Specifications

	TS-WX304T	TS-WX303	TS-SWX310	TS-WX110A	TS-WX210A	TS-WX206A	TS-WX20LPA
Size	30 cm	30 cm	30 cm	13 cm x 21 cm	20 cm	20 cm	20 cm
Max. Music Power (Nominal)	1,300 W (300 W)	1,200 W (250 W)	1,000 W (250 W)	150 W ⁽¹⁾ (50 W ⁽²⁾)	150 W ⁽¹⁾ (50 W ⁽²⁾)	150 W ⁽¹⁾ (60 W ⁽²⁾)	200 W ⁽¹⁾ (100 W ⁽²⁾)
Frequency Response	10 Hz to 360 Hz	10 Hz to 220 Hz	20 Hz to 114 Hz	40 Hz to 200 Hz	37 Hz to 200 Hz	35 Hz to 200 Hz	25 Hz to 200 Hz
Sensitivity (1 W/1 m)	98 dB	98 dB	91 dB	101 dB	102 dB	107 dB	106 dB
Impedance	4 Ω	4 Ω	4 Ω	—	—	—	—

(1) Maximum output power (2) Nominal output power

OPEN & SMOOTH™

Pioneer's Sound Concept: Open & Smooth

The "Open & Smooth" sound of Pioneer's industry-leading speakers delivers both sonic excellence and performance. The open-staging and smooth transition of driver response makes for an immersive experience that is truly the ultimate in-car sound.

Pioneering An Ideal

Absolute fidelity to musical sources takes form from speakers that reproduce the ambience in which sounds originate. Stage size, musicians' movement, aural reflection and other distinctive details all bring these sounds to life.

What is "Open & Smooth"?

Like a smooth, open road, the journey to more perfect in-car sound treats passengers to dramatic sensations moving with natural, dynamic flow.

Open: Open staging and sound characteristics enhance the widening effect that extends way beyond the space between speakers.

Smooth: With smooth transitions between mid-bass and tweeter, sound from these speakers is not marred by crossover frequency dips.

Why "Open & Smooth"?

Only by pursuing this ideal can we realize "accurate mid-range sound reproduction" and "music that lacks for nothing, with flat response".

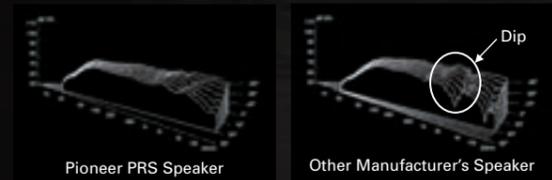
How "Open & Smooth"?

Pioneer's approach to ideal sound relies on a foundation of "Smoother Off-Axis Response", "Low Crossover Frequency", "Low Distortion" and "Rigid and Light weight cone structure".

Smoother Off-Axis Response

Superior Directivity: Pioneer PRS Speakers

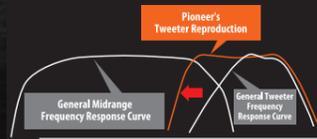
Pioneer PRS speakers always maintain more open, smooth, expansive, multidimensional sound, without the dramatic dips and inconsistencies that lesser speakers can produce.



Low Crossover Frequency

Wider Response, Lower Crossover Point

Pioneer extends tweeter performance to much lower frequencies, creating fuller midrange fidelity and clear, accurate vocals.



Low Distortion

Pioneer speaker innovations to suppress distortion include revolutionary rigid yet lightweight IMPP cones that significantly reduce mid-to-low range distortion and reproduce sound staging to natural effect.

OPEN & SMOOTH™

TS-C172PRS

17 cm Component Speaker Package

OPEN & SMOOTH™



TS-C132PRS

13 cm Component Speaker Package



TS-S062PRS

66 mm Component Midrange Speaker



Key Selling Points

- Audiophile-grade speakers designed to stunningly recreate the musical performance in exact detail.
- Meticulous attention to detail in the materials and craftsmanship ensure the most subtle musical nuances are reproduced with extraordinary accuracy.
- New midrange component delivers amazing clarity to male and female vocal range.

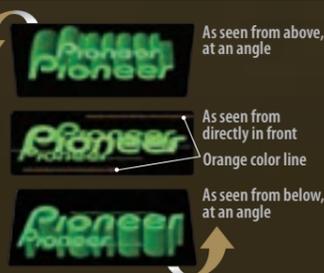
The New Reference in Audio Excellence: The PRS 4-Way System

Complete your state-of-the-art system using the PRS 4-way speaker setup. Utilize the midrange along with one of the component speaker packages, and setup & adjust it all with the DEX-P99RS. This system results in truly spectacular imaging & staging, as the main male & female vocal ranges are covered by one driver (the midrange).

Pioneer Official 3D Hologram

Pioneer 3D hologram sticker is attached to product packaging carton for some models of Pioneer speakers*.

Green images of 3D hologram logo



* In this Dealer Reference Guide, particular speakers and 3D hologram logo appear as in examples below. The product that has a 3D hologram sticker attached to its packaging carton features this logo on product page. Please see product page for more details.

TS-A6994S 600 W MAX.

6" x 9" 5-Way Speaker



PRS Speaker Cut View — Tweeter

Smooth Off-Axis Response

Soft-Dome Diaphragm

The FEM (Finite Element Method) designed dome allows wide sound dispersion with flat & even response.

Sound Absorbing Material

Absorbs the back wave reflection from the moving tweeter diaphragm, preventing phase shifts or frequency cancellation-producing a smoother, more linear sound.

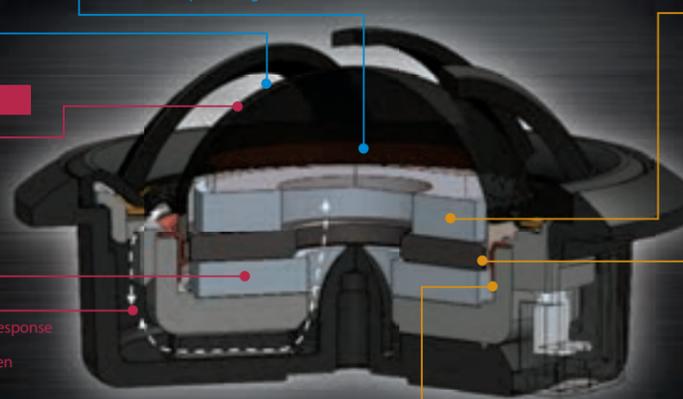
Lower Crossover Frequency

28 mm Large Sized Diaphragm

Main Magnet

Back Chamber

By utilizing a sealed rear cavity, low-end response of the tweeter is extended - allowing for a smoother transition infrequencies between tweeter and midrange.



OFC Short Ring

Focuses the magnetic field where it needs to be, increasing efficiency, lowering distortion and providing for more linear voice coil movement.

Low Distortion

Canceling Magnet

Reinforces the magnetic flux density to provide greater control and precisely linear performance.

PCOCC®* Voice Coil Wire

The purity of the copper in voice coil wire plays a significant role in sound quality, which is why the use of OFC (Oxygen-Free Copper) is a common practice. But for a Pioneer PRS speaker that isn't good enough.

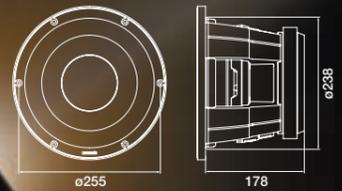
Pioneer features the world's-first use of the pure crystal casting process (PCOCC) in a voice coil wire. This "five nines" purity (99.9997%, compared to OFC's 99.99%) results in wires with superior conductivity, lower electrical resistance and reduced skin effect.

* PCOCC is registered trademark of Furukawa Electric Co., Ltd.



TS-W252PRS

25 cm (10") Component PRS Subwoofer



Key Selling Point

• High sensitivity, unmatched linearity and superior speed designed to create the epitome of detailed, accurate and impactful bass reproduction.

PRS Speaker Cut View — Woofer

High Linearity Sound

Linear Moving Force System for ultra low distortion and high definition in bass sound.

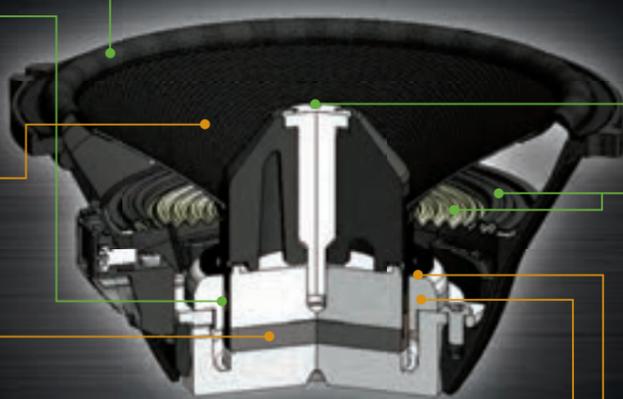
Micro Fiber Surround: Maximum Musical Response

The high-density micro fiber material surrounding the woofer of a PRS speaker is very light and low internal loss characteristics. The Micro Fiber Surround realizes faster response and more accurate bass reproduction that allows all music to be heard to greatest advantage.

Voice Coil with Short-Winding Length

Short voice coil (underhung design) provides maximum control with very light weight, providing high sensitivity and superior musical detail.

2nd Generation Multi-Layer IMX (Injection Molded Matrix) Cone



Inside Magnetic Type with Neodymium Magnet

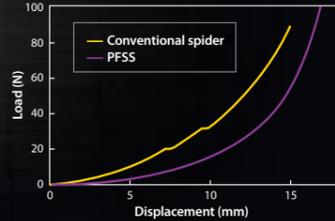
AL/Brass Dual Metal Center Plug

Two different metals combine to reduce resonance.

Progressive Flex Suspension System (PFSS)

Most spiders are all brawn and no brains, but Pioneer's PFSS is a "smart spider" that adapts to your music dynamically. When listening to soft music, it delivers the detail and fast response required, but when the big crescendo hits, it provides the precise control as well as the long excursion required for exceptional sound quality.

Spider Displacement of Static Load



Low Distortion

OFC Short Ring

Focuses the magnetic field where it needs to be, increasing efficiency, lowering distortion and providing for more linear voice coil movement.

Overhung Top Plate

Focuses the magnetic field towards the voice coil.

TS-W252PRS Cut View

Corrugated Surround

Aramid Fiber (Conex) with Rubber Coating

OFC Short Ring

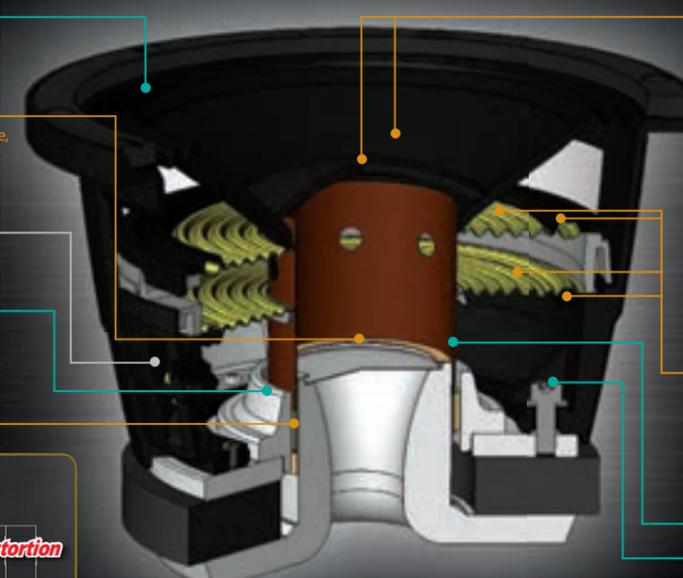
Focuses the magnetic field where it needs to be, increasing efficiency, lowering distortion and providing for more linear voice coil movement.

Block Terminal (Gold-Plated)

*Accepts up to 4 AWG Cable

Overhung (Thick) Plate 35 mm

Short Voice Coil



Sound Quality and Reliability

Rigid and Light weight Cone and Cap structure realizes both reliability and high speed sound.

Three layer design creates feather-weight cone with exceptional strength

- Aramid Fiber surface layer
- Foamed PP core
- Glass Fiber reinforcement layer

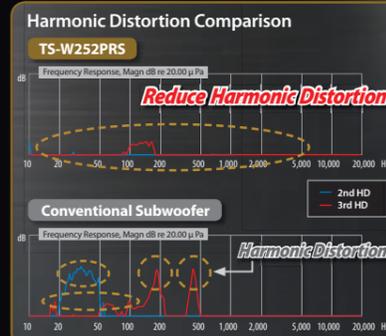
Progressive Flex Suspension System (PFSS)

It delivers the detail and fast response required, but when the big crescendo hits, it provides the precise control as well as the long excursion required for exceptional sound quality.

Massive 75 mm Diameter Voice Coil

AL-Diecast Basket

Eliminates ringing and unwanted resonances.



Installation Capability Improvement!!

TS-C172PRS: 67 mm (TS-C172PRS), 73.4 mm (TS-C172PRS), 122 mm (TS-C171PRS)

Conventional Model (TS-C171PRS)

New inner-magnet design with Neodymium magnet allows the basket structure to be significantly smaller, and allows the woofer to fit easier into many doors - avoiding obstructions like window rails.

	TS-C172PRS	TS-C132PRS	TS-S062PRS	TS-W252PRS
Size	17 cm 28 mm*	13 cm 28 mm*	66 mm	25 cm
Max. Music Power (Nominal)	200 W (50 W)	150 W (30 W)	200 W (50 W)** 60 W (15 W)***	800 W (400 W)
Frequency Response	25 Hz to 35 kHz	30 Hz to 35 kHz	48 Hz to 40 kHz	20 Hz to 2,400 Hz
Sensitivity (1 W/1 m)	89 dB	86 dB	84 dB	84 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω
Crossover Frequency	2,300 Hz	2,200 Hz	—	—
Mounting Depth	67 mm 13.4 mm*	57.3 mm 13.4 mm*	32 mm 42.2 mm****	178 mm
Mounting Depth with Mount Adapter	16 cm: 55 mm	—	—	—
Cut-Out Dimensions	ø142 mm	ø123 mm	ø64 mm ø69 mm****	ø238 mm
Recommended Enclosure	—	—	—	28.3 liters

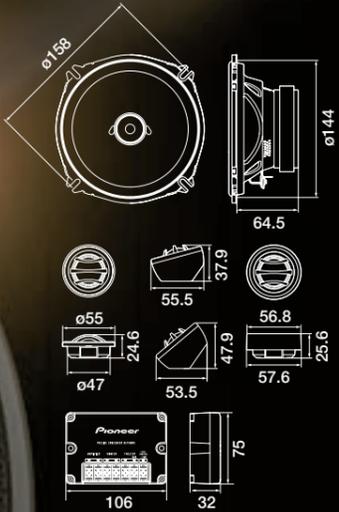
* Tweeter specification ** With back chamber, 800 Hz, -12 dB/oct. HPF *** Without back chamber, 400 Hz, -12 dB/oct. HPF **** With back chamber

TS-D1720C 260 W MAX.

17 cm Component Speaker Package



OPEN & SMOOTH™



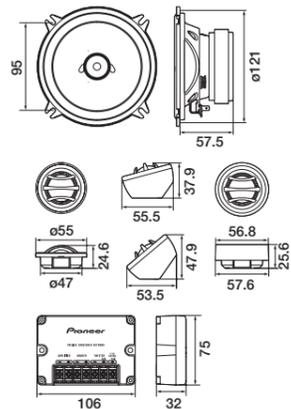
Mounting Depth with Mount Adapter:
• 16 cm: 51.5 mm

Key Selling Points

- Revolutionary Basalt Fiber IMX speaker cones provide ideal strength and durability to deliver amazing sound.
- Included crossover network unit uses audiophile-grade components for exceptional fidelity.
- Available in 2-way components or coaxial designs to fit most vehicles.

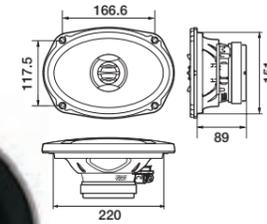
TS-D1320C 180 W MAX.

13 cm Component Speaker Package



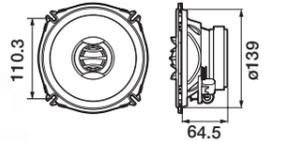
TS-D6902R 360 W MAX.

6" x 9" 2-Way Speaker



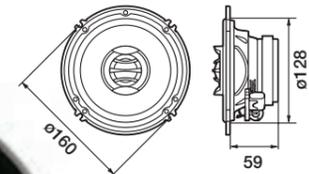
TS-D1702R 280 W MAX.

17 cm 2-Way Speaker



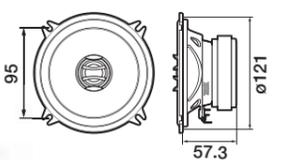
TS-D1602R 260 W MAX.

16 cm 2-Way Speaker



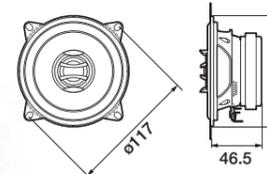
TS-D1302R 180 W MAX.

13 cm 2-Way Speaker



TS-D1002R 110 W MAX.

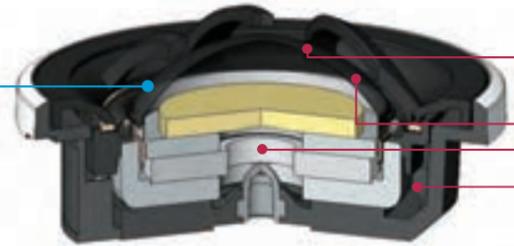
10 cm 2-Way Speaker



Technology of a D-Series Speaker

Smooth Off-Axis Response

Optimal Choice of Tweeter Diaphragm Shapes



Lower Crossover Frequency

28 mm Dia. Large-Sized Tweeter Diaphragm

Light Weight Soft-Dome Diaphragm

Rear Chamber

High-Quality Passive Crossover Network (Woofer, LPF: -12 dB/ Tweeter, HPF: -12 dB)

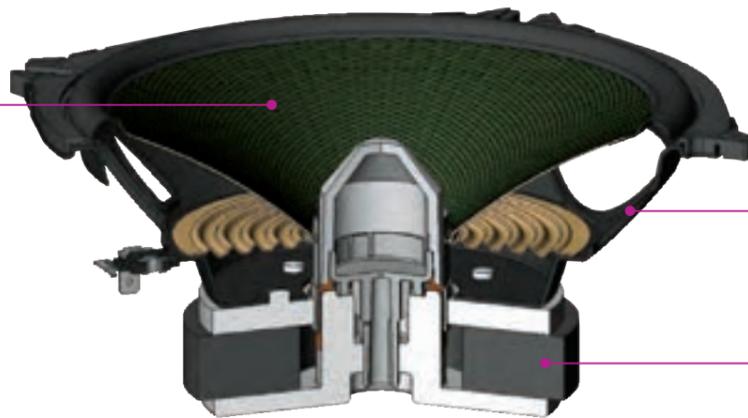


Large air core coil eliminates signal transmission loss.

Improved Installation Flexibility—Tweeter Mounting Options



Integrating aftermarket speakers into a vehicle's interior is as much about sound quality as it is about aesthetics. Now, thanks to Pioneer, there's no longer a trade-off between better sound and an unsightly tweeter location. As a growing number of today's vehicles come equipped with factory tweeter locations, Pioneer has designed an invisible mount spacer that allows the Pioneer tweeter to be installed in the factory tweeter location behind the grille. For those customers who want more control over tweeter placement, the tweeters can also be flush mounted or surface mounted with the supplied hardware.



Low Distortion

Thick Woofer Basket

Large-Sized Woofer Magnet

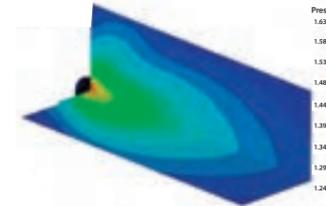
Technology of a D-Series Speaker

Smooth Off-Axis Response

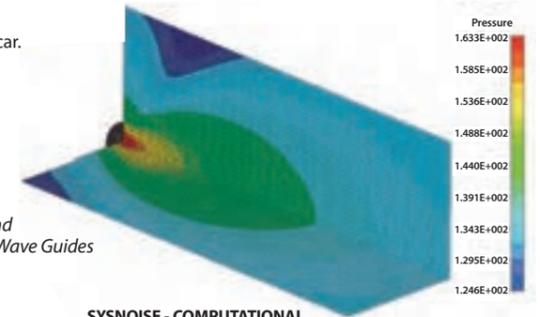


Wave Guides

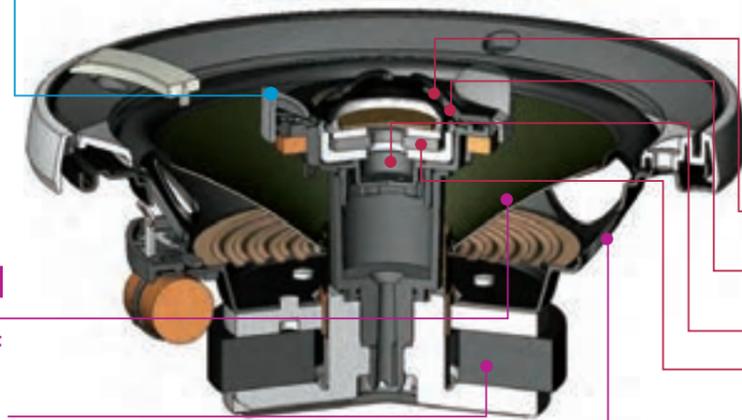
Controls sound dispersion to make sound stage wider in the car.



Improves sound dispersion by Wave Guides construction



SYSNOISE - COMPUTATIONAL VIBRO-ACOUSTICS



Lower Crossover Frequency

28 mm Dia. Large-Sized Tweeter Diaphragm

Light Weight Soft-Dome Diaphragm

Rear Chamber

High-Power Neodymium Tweeter Magnet

Low Distortion

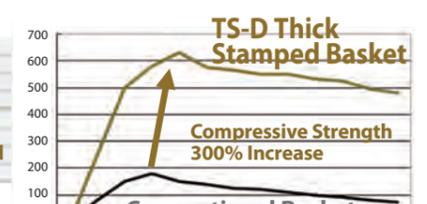
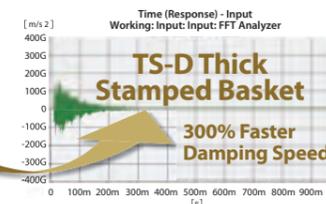
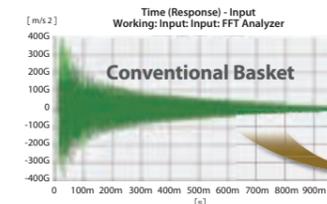
Dual-Layer IMX (Injection Molded Matrix) Aramid/Basalt Fiber Composite Cone

Large-Sized Woofer Magnet

Thick Woofer Basket



Thick stamped basket to prevent distortion.



Note: Except for TS-D1320C, TS-D1302R and TS-D1002R

Dual-Layer IMX (Injection Molded Matrix) Aramid/Basalt Fiber Composite Cone

To create TS-D series speakers, Pioneer developed the industry's first basalt fiber made from natural rock interwoven with aramid fiber. Used in the surface layer, this Aramid/Basalt Fiber material is highly rigid and better absorbent, enhancing stability and maintaining integrity throughout a wide temperature range.

Together, the Dual-Layer IMX Aramid/Basalt Fiber and IMPP Composite Cone provide for outstanding low and mid bass range fidelity, low distortion as well as extraordinarily detailed, accurate sound reproduction.

Natural Basalt

Melted and Spun

Microscopic Cross Section View

- Aramid/Basalt Fiber Skin with Ceramic Coating**
 - Reproduces lively sound
 - Disperses resonance
- Composite Foamed IMPP**
 - Better transience in low and mid-low range
 - Better rigidity and velocity
 - Light weight for better response

Specifications

	TS-D1720C	TS-D1320C	TS-D6902R	TS-D1702R	TS-D1602R	TS-D1302R	TS-D1002R
Size	17 cm, 28 mm*	13 cm, 28 mm*	6" x 9"	17 cm	16 cm	13 cm	10 cm
Max. Music Power (Nominal)	260 W (60 W)	180 W (35 W)	360 W (80 W)	280 W (60 W)	260 W (60 W)	180 W (35 W)	110 W (25 W)
Frequency Response	30 Hz to 33 kHz	35 Hz to 33 kHz	28 Hz to 30 kHz	30 Hz to 32 kHz	35 Hz to 32 kHz	35 Hz to 40 kHz	40 Hz to 40 kHz
Sensitivity (1 W/1 m)	88 dB	88 dB	90 dB	88 dB	88 dB	88 dB	86 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Crossover Frequency	≥2,800 Hz (with -12 dB)	≥2,800 Hz (with -12 dB)	2,800 Hz	3,200 Hz	4,000 Hz	6,000 Hz	6,000 Hz
Mounting Depth	64.5 mm 12.2 mm*	57.5 mm 12.2 mm*	89 mm	64.5 mm	59 mm	57.3 mm	46.5 mm
Mounting Depth with Mount Adapter	16 cm: 51.5 mm	—	—	—	—	—	—
Cut-Out Dimensions	ø144 mm	ø121 mm	151 mm x 220 mm	ø139 mm	ø128 mm	ø121 mm	ø106 mm

* Tweeter specification

TS-A1604C 350 W MAX.

16 cm Component Speaker Package (17 cm Compatible)

INJECTION MOLDED CONE

OPEN & SMOOTH™



Technical specifications and dimensions for the TS-A1604C 16 cm Component Speaker Package:

- Overall diameter: 109.6 mm
- Mounting hole diameter: 111.7 mm
- Depth: 54.3 mm
- Speaker diameter: 128 mm
- Woofer diameter: 19.5 mm
- Woofer depth: 41 mm
- Woofer diameter (inner): 46 mm
- Woofer diameter (outer): 18.9 mm
- Woofer diameter (mounting): 42 mm
- Crossover network: 1,200 Hz, 300 Hz

Key Selling Points

- Open and Smooth sound for the ultimate listening experience with high sensitivity design.
- Composite IMPP cone with Interlaced Aramid Fiber creates full-bodied, rich sound character with midrange depth.
- Available in 2-way components or coaxial designs to fit most vehicles.

TS-A1304C 300 W MAX.

13 cm Component Speaker Package

INJECTION MOLDED CONE



Technical specifications and dimensions for the TS-A1304C 13 cm Component Speaker Package:

- Overall diameter: 97 mm
- Mounting hole diameter: 111.7 mm
- Depth: 53 mm
- Speaker diameter: 121 mm
- Woofer diameter: 19.5 mm
- Woofer depth: 41 mm
- Woofer diameter (inner): 46 mm
- Woofer diameter (outer): 18.9 mm
- Woofer diameter (mounting): 42 mm
- Crossover network: 1,200 Hz, 300 Hz

TS-A6994S 600 W MAX. **3D HOLOGRAM**

6" x 9" 5-Way Speaker



Technical specifications and dimensions for the TS-A6994S 6" x 9" 5-Way Speaker:

- Overall diameter: 166.6 mm
- Mounting hole diameter: 117.5 mm
- Depth: 85 mm
- Speaker diameter: 153 mm
- Woofer diameter: 222 mm

TS-A6984S 550 W MAX. **3D HOLOGRAM**

6" x 9" 4-Way Speaker



Technical specifications and dimensions for the TS-A6984S 6" x 9" 4-Way Speaker:

- Overall diameter: 166.6 mm
- Mounting hole diameter: 117.5 mm
- Depth: 84 mm
- Speaker diameter: 153 mm
- Woofer diameter: 222 mm

TS-A6974S 500 W MAX. **3D HOLOGRAM**

6" x 9" 3-Way Speaker



Technical specifications and dimensions for the TS-A6974S 6" x 9" 3-Way Speaker:

- Overall diameter: 166.6 mm
- Mounting hole diameter: 117.5 mm
- Depth: 84 mm
- Speaker diameter: 153 mm
- Woofer diameter: 222 mm

TS-A6964S 400 W MAX. **3D HOLOGRAM**

6" x 9" 3-Way Speaker



Technical specifications and dimensions for the TS-A6964S 6" x 9" 3-Way Speaker:

- Overall diameter: 166.6 mm
- Mounting hole diameter: 117.5 mm
- Depth: 72 mm
- Speaker diameter: 153 mm
- Woofer diameter: 222 mm

TS-A1684S 350 W MAX. **3D HOLOGRAM**

16 cm 4-Way Speaker (17 cm Compatible)



Technical specifications and dimensions for the TS-A1684S 16 cm 4-Way Speaker:

- Overall diameter: 109.6 mm
- Mounting hole diameter: 111.7 mm
- Depth: 54.3 mm
- Speaker diameter: 128 mm

TS-A1674S 300 W MAX. **3D HOLOGRAM**

16 cm 3-Way Speaker



Technical specifications and dimensions for the TS-A1674S 16 cm 3-Way Speaker:

- Overall diameter: 109.6 mm
- Mounting hole diameter: 111.7 mm
- Depth: 44 mm
- Speaker diameter: 128 mm

TS-A6874R 350 W MAX. **3D HOLOGRAM**

6" x 8" 3-Way Speaker



Technical specifications and dimensions for the TS-A6874R 6" x 8" 3-Way Speaker:

- Overall diameter: 126 mm
- Mounting hole diameter: 106.7 mm
- Depth: 61 mm
- Speaker diameter: 133 mm
- Woofer diameter: 191 mm

TS-A4674R 200 W MAX. **3D HOLOGRAM**

4" x 6" 3-Way Speaker



Technical specifications and dimensions for the TS-A4674R 4" x 6" 3-Way Speaker:

- Overall diameter: 76 mm
- Mounting hole diameter: 133 mm
- Depth: 41.5 mm
- Speaker diameter: 153 mm

TS-A2013i 500 W MAX. **3D HOLOGRAM**

20 cm 3-Way Speaker



Technical specifications and dimensions for the TS-A2013i 20 cm 3-Way Speaker:

- Overall diameter: 143 mm
- Mounting hole diameter: 120.2 mm
- Depth: 89 mm
- Speaker diameter: 186 mm

TS-A2503i 420 W MAX. **3D HOLOGRAM**

25 cm 3-Way Speaker



Technical specifications and dimensions for the TS-A2503i 25 cm 3-Way Speaker:

- Overall diameter: 155 mm
- Mounting hole diameter: 115 mm
- Speaker diameter: 236 mm

Technology of an A-Series Speaker

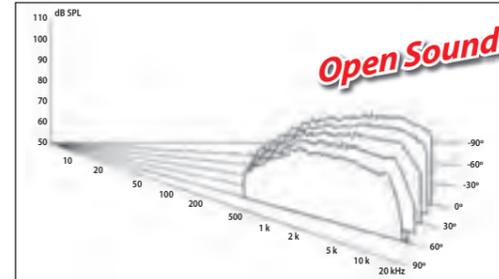
TS-A6984S Cut View

Smooth Off-Axis Response

Soft-Dome Diaphragm

Sound Absorbing Material

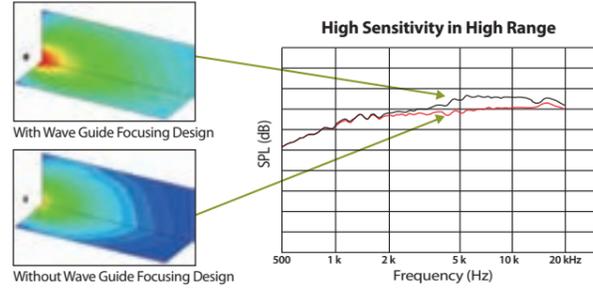
TS-A1604C TS-A1304C TS-A6994S TS-A6984S TS-A1684S



High Sensitivity

Soft-Dome Midrange with Wave Guide

TS-A1604C TS-A1304C TS-A6994S TS-A6984S TS-A1684S



Light Weight Elastic Polymer Surround

TS-A1604C TS-A1304C TS-A6994S TS-A6984S
TS-A6974S TS-A1684S TS-A1674S TS-A6874R

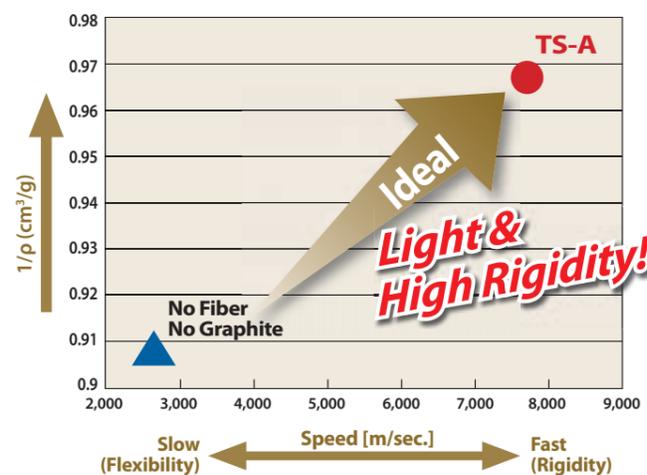
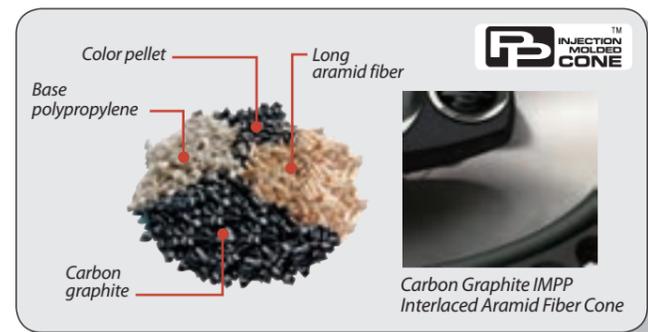
Grille Design

Low Distortion

Carbon Graphite IMPP Interlaced Aramid Fiber Cone

TS-A1604C TS-A1304C TS-A6994S TS-A6984S TS-A6974S TS-A6964S
TS-A1684S TS-A1674S TS-A6874R TS-A4674R TS-A2013i

This IMPP cone is designed with long aramid fibers to provide strength and rigidity that powerful bass sound requires. High-density compressed internal architecture is resilient, stacks up against high power well and transfers sound quickly. The result is full-bodied, rich sound character with midrange depth that conventional IMPP cones cannot match.



Technology of an A-Series Speaker

TS-A1604C Cut View

Smooth Off-Axis Response

Soft-Dome Diaphragm

Sound Absorbing Material

High Sensitivity

Wave Guide Focusing Design

Neodymium Magnet

Low Crossover Frequency

Large Cavity

Low Distortion

Center Phasing Plug

Carbon Graphite IMPP Interlaced Aramid Fiber Cone

16 cm & 17 cm Compatible Basket

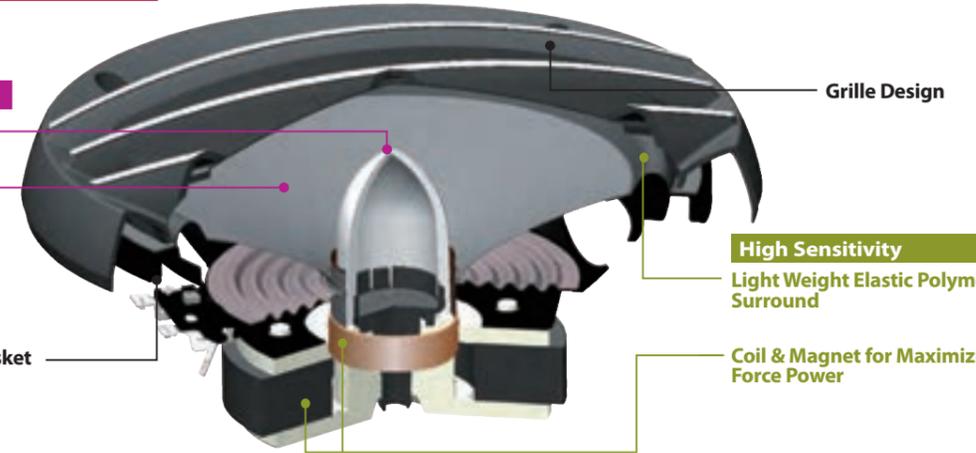
TS-A1604C TS-A1684S

Installation Flexibility — Tweeter Mounting Options*

*Please refer to page 78 for details.



This newly developed tweeter disperses sound more widely with superior control, providing listeners with the best sound under all conditions, regardless of listening position or car.



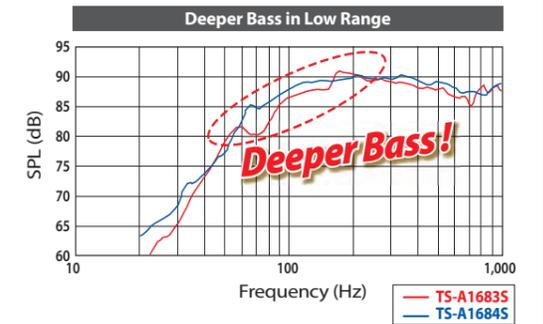
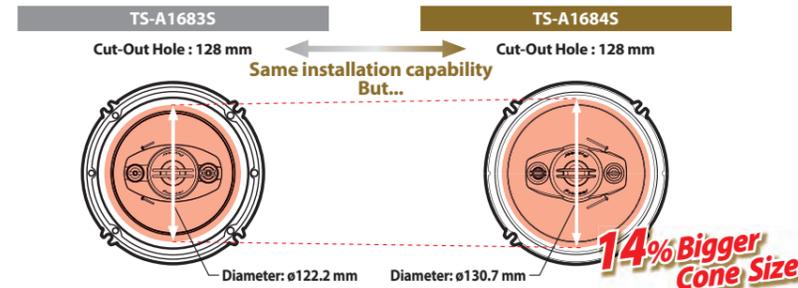
High Sensitivity

Light Weight Elastic Polymer Surround

Coil & Magnet for Maximizing Force Power

Larger-Than-Normal Cone for 16 cm Cutout

TS-A1604C and TS-A1684S have bigger cones than, but same cut-out dimensions to conventional speakers. The result is deeper low-range sound reproduction.



Specifications

	TS-A1604C	TS-A1304C	TS-A6994S	TS-A6984S	TS-A6974S	TS-A6964S
Size	16 cm* 20 mm**	13 cm 20 mm**	6" x 9"	6" x 9"	6" x 9"	6" x 9"
Max. Music Power (Nominal)	350 W (50 W)	300 W (35 W)	600 W (80 W)	550 W (80 W)	500 W (80 W)	400 W (40 W)
Frequency Response	29 Hz to 29 kHz	28 Hz to 29 kHz	27 Hz to 30 kHz	27 Hz to 37 kHz	27 Hz to 27 kHz	31 Hz to 37 kHz
Sensitivity (1 W/1 m)	90 dB	89 dB	92 dB	91 dB	91 dB	91 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	54.3 mm	53 mm	85 mm	84 mm	84 mm	72 mm
Cut-Out Dimensions	ø128 mm	ø121 mm	153 mm x 222 mm	153 mm x 222 mm	153 mm x 222 mm	153 mm x 222 mm
	TS-A1684S	TS-A1674S	TS-A6874R	TS-A4674R	TS-A2013i	TS-A2503i
Size	16 cm*	16 cm	6" x 8"	4" x 6"	20 cm	25 cm
Max. Music Power (Nominal)	350 W (50 W)	300 W (35 W)	350 W (40 W)	200 W (20 W)	500 W (80 W)	420 W (80 W)
Frequency Response	33 Hz to 27 kHz	37 Hz to 30 kHz	30 Hz to 30 kHz	41 Hz to 29 kHz	25 Hz to 28 kHz	20 Hz to 31 kHz
Sensitivity (1 W/1 m)	91 dB	90 dB	90 dB	88 dB	91 dB	92 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	54.3 mm	44 mm	61 mm	45 mm	89 mm	115 mm
Cut-Out Dimensions	ø128 mm	ø128 mm	133 mm x 191 mm	95 mm x 153 mm	ø186 mm	ø236 mm

*17 cm compatible ** Tweeter specification

TS-6975 V2

500 W MAX.



Champion series

6" x 9" 3-Way Champion Series Speaker



Key Selling Points

- Inherits technology from Champion series subwoofer for powerful, punchy sound.
- PEEK film cone creates vivid, crisp sound. (TS-6975 V2/TS-1675 V2)
- Basket design for wider installation coverage, without compromising high power input capability. Although the TS-1675 V2 is designated as a 16 cm installation size speaker, its cone is actually 17 cm in size, for more powerful sound.

TS-6965 V2

400 W MAX.



6" x 9" 3-Way Champion Series Speaker



TS-1675 V2

300 W MAX.



16 cm* 3-Way Champion Series Speaker

* 16 cm installation size speaker actually contains 17 cm cone size for more powerful sound.



* The 3D sticker may not appear on all applicable units of the same model in the market during the switch to use of this sticker.

Technology of a Champion Series Speaker

TS-6975 V2 Cut View

Polycarbonate Sub-Grille

PI Film Spider

Film Cone Tweeter

Punchy Bass High Sensitivity

TS-6975 V2 TS-6965 V2 TS-1675 V2

Rigid, Light Non-Pressed Paper Cone

Pioneer carefully selects materials and applies a non-pressed paper process — giving these new cones the light, rigid qualities needed to create punchy, powerful sound, plus extra durability to go to the limit.

Gold-Plated Screw Terminal

TS-6975 V2 TS-6965 V2* TS-1675 V2*

* Not screw-type terminal

Rubber Magnet Cover*

* Magnet cover is removable.

Punchy Bass

Dual Layer Urethane Surround

TS-6975 V2 TS-6965 V2 TS-1675 V2

Improves cone stiffness. Greatly reduces unnecessary resonance that can compromise sound quality.

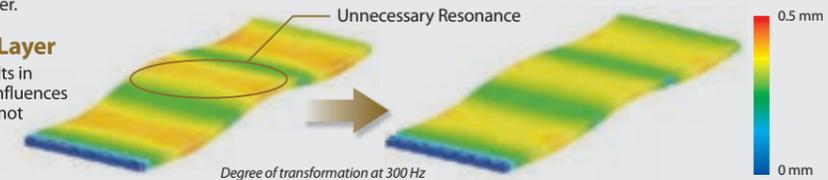
Champion Series Speaker Cross Section Detail



Dual-Layer Surround technology originally for the Champion series subwoofer.

Conventional Single Layer

Wave-like cone vibration results in unnecessary resonance that influences tonal quality, so this cone cannot reproduce original sound linearly.



Degree of transformation at 300 Hz

High Sensitivity

TS-6975 V2 TS-1675 V2

PEEK Film Cone with Urethane Surround

New PEEK (Polyetheretherketon) cone material has excellent characteristics of rigidity and durability, even when subjected to heat. This contributes to sharp response (especially across the mid- to high-frequency range) and vivid sound reproduction.

PEEK Cone Midrange

Sound of speed x tan δ (at 1,000 Hz)



TS-6975 V2 TS-1675 V2

Copper-Clad Aluminum Wire Voice Coil

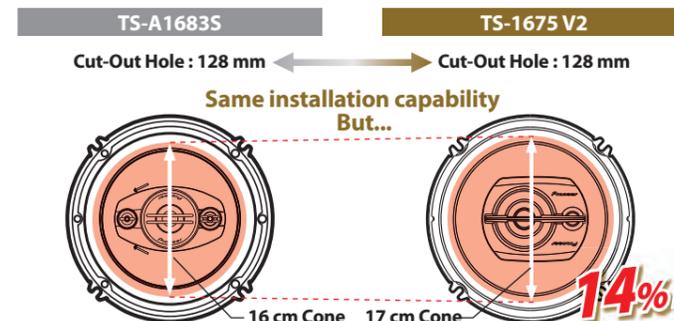
Lightweight Copper-Clad Aluminum Wire Voice Coil allows for faithful reproduction of louder sounds.

TS-6975 V2 TS-6965 V2 TS-1675 V2

Large Magnetic Circuit for High-Power Drive

Larger-Than-Normal Cone for 16 cm Cutout

The TS-1675 V2 can be installed in a 16 cm- or 17 cm-diameter cutout hole. Superior bass response comes from a cone diameter larger than that of a conventional 16 cm speaker. Shallow basket depth enhances versatility of installation



Specifications

	TS-6975 V2	TS-6965 V2	TS-1675 V2
Size	6" x 9"	6" x 9"	16 cm
Max. Music Power (Nominal)	500 W (80 W)	400 W (80 W)	300 W (50 W)
Frequency Response	30 Hz to 25 kHz	30 Hz to 22 kHz	35 Hz to 20 kHz
Sensitivity (1 W/1 M)	92 dB	93 dB	92 dB
Impedance	4 Ω	4 Ω	4 Ω
Mounting Depth	92 mm	84 mm	58 mm
Cut-Out Dimensions	151 mm x 220 mm	151 mm x 220 mm	∅128 mm

TS-G1604C 280 W MAX. NEW

16 cm Component Speaker Package

INJECTION MOLDED CONE HOLOGRAM*

113

42

ø128

ø36.3

15

37

46

1,200

300 300

Crossover network

TS-G1644R 250 W MAX. NEW

16 cm 2-Way Speaker

INJECTION MOLDED CONE HOLOGRAM*

TS-G1344R 220 W MAX. NEW

13 cm 2-Way Speaker

INJECTION MOLDED CONE HOLOGRAM*

TS-G1044R 200 W MAX. NEW

10 cm 2-Way Speaker

INJECTION MOLDED CONE HOLOGRAM*

TS-G1614R 230 W MAX. NEW

16 cm Dual-Cone Speaker

INJECTION MOLDED CONE HOLOGRAM*

TS-G1314R 200 W MAX. NEW

13 cm Dual-Cone Speaker

INJECTION MOLDED CONE HOLOGRAM*

TS-G1014R 180 W MAX. NEW

10 cm Dual-Cone Speaker

INJECTION MOLDED CONE HOLOGRAM*

*The 3D sticker may not appear on all applicable units of the same model in the market during the switch to use of this sticker.

Technology of a G-Series Speaker

TS-G1604C Cut View

- IMPP with MICA Cone
- Poly-Propylene Center Cap
- New Grille Design
- Rubber Coated Cloth Surround
- PEI (Poly-Ether Imide) Balanced Dome Tweeter with Neodymium Magnet and Magnetic Fluid
- New Design Flange with Spin Pattern
- Installation Flexibility
- Slant Type
- Optimized Magnetic Circuit
- Polyimide Voice Coil Bobbin
- Heat Resistant Voice Coil

TS-G1644R Cut View

- IMPP with MICA Cone
- PEI (Poly-Ether Imide) Balanced Dome Tweeter with Magnetic Fluid
- New Grille Design
- Rubber Coated Cloth Surround
- New Design Flange with Spin Pattern
- Optimized Magnetic Circuit
- Polyimide Voice Coil Bobbin
- Heat Resistant Voice Coil

Specifications

	TS-G1604C	TS-G1644R	TS-G1344R	TS-G1044R
Size	16 cm 30 mm*	16 cm	13 cm	10 cm
Max. Music Power (Nominal)	280 W (45 W)	250 W (40 W)	220 W (35 W)	200 W (30 W)
Frequency Response	35 Hz to 38 kHz	31 Hz to 29 kHz	43 Hz to 27 kHz	45 Hz to 27 kHz
Sensitivity (1 W/1 m)	89 dB	90 dB	89 dB	88 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	42 mm	42 mm	46 mm	43 mm
Cut-Out Dimensions	ø128 mm	ø128 mm	ø121 mm	ø106 mm

	TS-G1614R	TS-G1314R	TS-G1014R
Size	16 cm	13 cm	10 cm
Max. Music Power (Nominal)	230 W (40 W)	200 W (35 W)	180 W (30 W)
Frequency Response	30 Hz to 23 kHz	40 Hz to 25 kHz	45 Hz to 26 kHz
Sensitivity (1 W/1 m)	90 dB	90 dB	88 dB
Impedance	4 Ω	4 Ω	4 Ω
Mounting Depth	42 mm	46 mm	43 mm
Cut-Out Dimensions	ø128 mm	ø121 mm	ø106 mm

*Tweeter specification

TS-F1634R 200 W MAX. **NEW**

16 cm 2-Way Speaker

- FEATURES:**
- 16 cm IMPP Composite Cone Woofer
 - 30 mm Silver PET Film Dome Tweeter
 - Copper Voice Coil
 - Single Blended Fabric Damper



TS-F1034R 150 W MAX. **NEW**

10 cm 2-Way Speaker

- FEATURES:**
- 10 cm IMPP Composite Cone Woofer
 - 30 mm Silver PET Film Dome Tweeter
 - Copper Voice Coil
 - Single Blended Fabric Damper



TS-CX900 80 W MAX. **KEVLAR**

2-Way A/V Center Speaker

- FEATURES:**
- 66 mm KEVLAR® Brand Fiber Composite Cone Woofer
 - 25 mm Balanced Dome Tweeter with Neodymium Magnet
 - Butyl Rubber Surround
 - Compact Aerodynamic Cabinet Design
 - Double Neodymium Magnet Assembly with Magnetically Shielded Circuit Design



TS-2150 200 W MAX.

20 cm Cross-Axial 3-Way Speaker

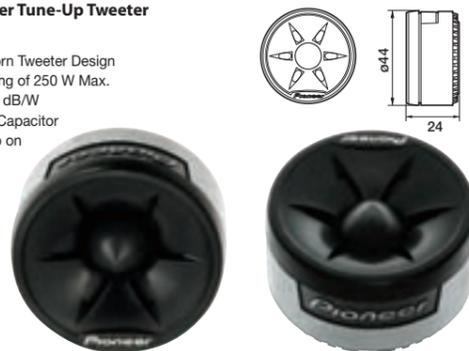
- FEATURES:**
- 20 cm IMPP Composite Cone Woofer/25 mm Titanium Dome Tweeter/20 mm Ceramic Up-Dome Tweeter
 - Cross-Axial Engineering for Excellent Sound Quality



TS-S250 250 W MAX.

40 mm High-Power Tune-Up Tweeter

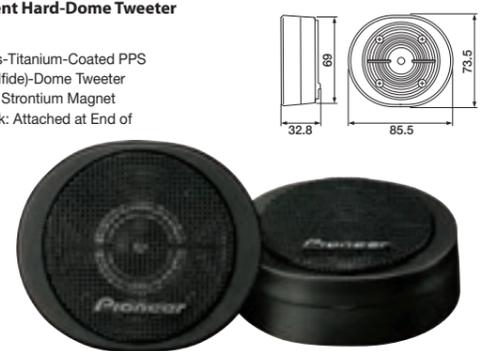
- FEATURES:**
- 40 mm Ceramic Horn Tweeter Design
 - High-Power Handling of 250 W Max.
 - High Sensitivity: 97 dB/W
 - Built-in -6 dB/oct. Capacitor
 - Large Pioneer Logo on Side Surface



TS-S20 200 W MAX. **3D HOLOGRAM***

20 mm Component Hard-Dome Tweeter

- FEATURES:**
- 20 mm Amorphous-Titanium-Coated PPS (Polyphenylene Sulfide)-Dome Tweeter
 - High-Performance Strontium Magnet
 - Built-in LC Network: Attached at End of Speaker Cable



TS-T110 120 W MAX.

22 mm Component Hard Dome Tweeter

- FEATURES:**
- 22 mm PPTA Hard Dome Tweeter with Strontium Magnet and Magnetic Fluid
 - In-Line -6 dB/Oct. Capacitor for Tweeter Protection
 - Surface or Flush Mounting Capabilities



TS-T15 120 W MAX.

20 mm Component Soft Dome Tweeter

- FEATURES:**
- Small-Sized (20 mm) Polyester Fiber Soft Dome Tweeter with Neodymium Magnet and Magnet Fluid
 - -6 dB/Oct. Capacitor for Tweeter Protection (Included)
 - Flush and Surface Mounting Capabilities



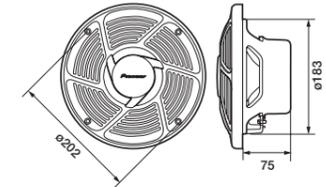
*The 3D sticker may not appear on all applicable units of the same model in the market during the switch to use of this sticker.

TS-MR2040 200 W MAX.



20 cm Marine-Use 2-Way Speaker

- FEATURES:**
- White Water-Resistant IMPP Cone Woofer
 - Water-Resistant Elastomer Surround
 - Glass-Imide Voice Coil Bobbin
 - Conex Dampener
 - 20 mm PI Dome Reflex Horn Tweeter
 - High-Quality Corrosion-Resistant Hardware
 - Gold-Plated Tinsel Leadwire and Terminals
 - Weather-Proof and Heat-Resistant Resin

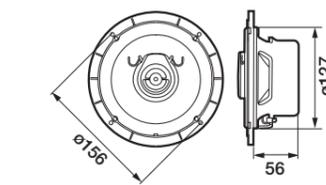


TS-MR1640 160 W MAX.



16 cm Marine-Use 2-Way Speaker

- FEATURES:**
- White Water-Resistant IMPP Cone Woofer
 - Water-Resistant Elastomer Surround
 - Glass-Imide Voice Coil Bobbin
 - Conex Dampener
 - 27 mm PEI Balanced Dome Tweeter
 - High-Quality Corrosion-Resistant Hardware
 - Gold-Plated Leadwire and Terminals
 - Weather-Proof and Heat-Resistant Resin

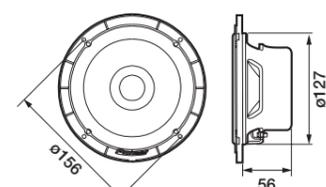


TS-MR1600 100 W MAX.



16 cm Marine-Use Dual-Cone Speaker

- FEATURES:**
- White Water-Resistant IMPP Cone Woofer
 - Water-Resistant Elastomer Surround
 - Glass-Imide Voice Coil Bobbin
 - Conex Dampener
 - High-Quality Corrosion-Resistant Hardware
 - Gold-Plated Tinsel Leadwire and Terminals
 - Weather-Proof and Heat-Resistant Resin



Specifications

	TS-F1634R	TS-F1034R	TS-CX900	TS-2150	TS-S250	TS-S20
Size	16 cm	10 cm	6.6 cm	20 cm	40 mm	20 mm
Max. Music Power (Nominal)	200 W (25 W)	150 W (20 W)	80 W (20 W)	200 W (50 W)	250 W (50 W)	200 W (50 W)
Frequency Response	31 Hz to 16 kHz	45 Hz to 18 kHz	80 Hz to 70 kHz	28 Hz to 28 kHz	6,000 Hz to 40 kHz	3,000 Hz ⁽¹⁾ / 1,200 Hz ⁽²⁾ to 26 kHz
Sensitivity (1 W/1 M)	88 dB	86 dB	81 dB	91 dB	97 dB	92 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	8 Ω	8 Ω
Mounting Depth	41 mm	43 mm	—	88 mm	—	—
Cut-Out Dimensions	ø128 mm	ø102 mm	—	ø186 mm	—	—

(1) With network (2) Without network

	TS-T110	TS-T15	TS-MR2040	TS-MR1640	TS-MR1600
Size	22 mm	20 mm	20 cm	16 cm	16 cm
Max. Music Power (Nominal)	120 W (40 W)	120 W (40 W)	200 W (40 W)	160 W (30 W)	100 W (25 W)
Frequency Response	2,500 Hz to 30 kHz	2,500 Hz to 30 kHz	25 Hz to 30 kHz	30 Hz to 30 kHz	30 Hz to 20 kHz
Sensitivity (1 W/1 M)	90 dB	90 dB	92 dB	91 dB	90 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	—	—	75 mm	56 mm	56 mm
Cut-Out Dimensions	—	—	ø183 mm	ø127 mm	ø127 mm

Accessories Connection Table with AV and Audio Receivers

ACCESSORY COMPATIBILITY

	AVH-P8450BT	AVH-P4450BT	AVH-P3450DVD	AVH-2450BT	AVH-1450DVD	AVH-P6350BT AVH-P5350DVD	AVH-5450DVD	DVH-735AV DVH-345SUB	MVH-8350BT MVH-7350	DEH-P99RS	DEH-80PRS DEH-9450UB DEH-7450SD DEH-5450SD DEH-3450UB DEH-2450UB MVH-1450UB	DEH-9450BT DEH-6450BT DEH-4450BT	DEH-1450UB(G) DXT-1350MP(G) DXT-146UB	FH-P6050UB
iPod/iPhone 	CD-IU201S	*1												
	CD-IU201V													
	CD-IU51V													
	CD-IU51													
Bluetooth® 	CD-BTB200		EXT			EXT (AVH-P5350DVD)								
System 	DEQ-P7650/ DEQ-P6600													
	XDV-P650/ XDV-P6	EXT	EXT	EXT			EXT							
	CDX-P1280/ CDX-P680													
	CDX-FM1287/ CDX-FM687													
Tuner 	GEX-P5750TV													
	GEX-P5750TVP													
Back Up Camera 	ND-BC5							DVH-735AV						
	ND-BC20PA							DVH-735AV						
Remote Control 	CD-R510													
	CD-R320													
	CD-SR110					AVH-P6350BT			MVH-8350BT					
	CD-SR100							DVH-345UB						

Note: Some functions may be limited in terms of remote controllability, even if the receiver and remote control are denoted as compatible in the chart.
*1. When Advanced App Mode is in use.

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- / Audio Receivers Features Comparison** 95
- / Connection Table for iPod/iPhone with Pioneer Receivers** 96
- / Amplifiers Features Comparison & Specifications** 97
- / General Information about Subwoofer Connection** 98
- / Amplifier & Subwoofer Connection and Combination Charts** 99
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- / Subwoofer Enclosures** 102
- / Symbols for Special Features** 103

Audio/Video Receiver Accessories

CD-BTB200

Bluetooth® Wireless Adapter
 • For use with Pioneer Bluetooth adapter ready receivers.
 • Dimensions (W x H x D): 146 mm x 25 mm x 90 mm



XDV-P650/XDV-P6

1-DIN Size 6-Disc DVD Player with Dolby® Digital and DTS Digital Out™
 • Compatible with DVD-R/RW (Video mode) and CD-R/RW
 • Built-in MPEG-1/2 Decoder
 • 96 kHz/24-bit D/A Converter
 • Direct Control by AV Receiver
 • External Control by Any IP-Bus Receiver
 • Optical Digital Output (Dolby® Digital/DTS*/Linear PCM)
 • Analog IP-Bus Output
 • Composite Video Output (Front & Rear)
 • Graphic User Interface with OSD (On Screen Display)



ND-BC5 NEW

Universal Rear View Camera



ND-BC20PA

ND-BC2 with Parking Assistant Feature



CD-VS33

Video Switcher
 • Universal switcher with 3 A/V inputs, 3 video inputs, 2 headphone outputs with volume control and independent AV selector.



CD-MC20

Microphone for Auto EQ Frequency Band Fine-Tuning



DEQ-P7650/DEQ-P6600

Dolby® Digital, Dolby Pro Logic® II and DTS® Audio Processor
 • 5.1-Channel Multi Channel Audio Processor
 • Sound Field Control (6 modes)
 • Multi-Channel Auto EQ/Auto-Time Alignment
 • 4.1-Channel Down Mixing Processor
 • 1-Day Back-up Memory
 • Dimensions (W x H x D): 237 mm x 29 mm x 171 mm



DEQ-P7650

CD-DD25

Optical Digital Converter for DEQ-P7650/DEQ-P6600 with AV receivers



GEX-P5750TVP

Hide-Away TV Tuner for PAL/SECAM⁽¹⁾
 • 24-Station (12 TV1/12 TV2) Presets by BSSM
 • IP-Bus Input and Output Terminals
 • RCA Composite Video Output⁽²⁾ for Front and Rear Display (GEX-P5750TVP: PAL/SECAM, GEX-P5750TV: NTSC/PAL-M)



GEX-P5750TVP

GEX-P5750TV

Hide-Away TV Tuner for NTSC/PAL-M
 • RCA Audio Output for Rear Display
 • AV-Bus Input/Output
 • On-screen Display
 • Remote Control Sensor
 • Mode Change: Source or Stand Alone
 • Dimensions (W x H x D): 172 mm x 30 mm x 150 mm
 (1) Compatible with B, G, H, D, K, I
 (2) The video output does not feature conversion function for rear display(s) between PAL and NTSC systems.

Remote Controls

CD-R510

Remote Control
 • For use with receiver with Bluetooth wireless technology.



CD-R320

Optional Remote Control for DEH Series Receivers



CD-R310

Optional Remote Control for DEH Series Receivers



CD-SR110

Steering Wheel Remote Control for Bluetooth Receivers



CD-SR100

Steering Wheel Remote Control for Bluetooth Receivers
 • For use with all Remote Control Ready IP-Bus source units (CD Players and DVD Receivers)



CD-R30-02

Optional Remote Control
 • For use with KEH-P4025



Note: Accessories are for products that appear in the Dealer Reference Guide. Please refer to a Pioneer sales representative for up-to-date information.

Installation Accessories

RD-221

Power Supply Wiring Kit



RD-223

Optional Wiring Kit



RD-226

Power Cable
 • For use with amplifier with screw terminal.

RD-228

Power Cable
 • For use with amplifier with block terminal.



RD-228

RD-983

Alternator Noise Suppressor



RD-984

Alternator Noise Suppressor



RD-985

In-Line RCA Noise Suppressor



RD-SR520

High-Power Speaker Output to RCA Adapter



Accessories for Connection of iPod

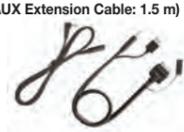
CD-IU201S NEW

USB Interface Cable for iPhone 4/ iPhone 4S (or 4th generation iPod touch) (USB Cable: 50 cm/ RGB Cable: 2 m)



CD-IU201V NEW

USB Interface Cable for iPod/iPhone (USB and AUX Cable: 50 cm/ AUX Extension Cable: 1.5 m)



CD-IU51V

USB Interface Cable for iPod/iPhone (USB and AUX Cable: 50 cm)



Note: Please refer to pages 91 and 96 for accessories for connection of iPod details.

CD-IU51 NEW

USB Interface Cable for iPod/iPhone (50 cm)



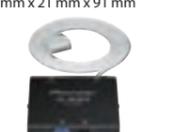
CD-V150M

Mini-Jack Cable for iPod (1.5 m)
 • For use with iPod and receiver with built-in AUX input.



CD-IB100II

Interface Adapter for iPod
 • Dimensions (W x H x D): 95 mm x 21 mm x 91 mm



IP-Bus Accessories

CD-IP601E

IP-Bus Extension Cable (6 m)
 • Female-to-Male IP-Bus Extension Cable.



CD-IP150

IP-Bus Cable (1.5 m)
 • Male-to-Male IP-Bus Cable.



CD-RB10

IP-Bus-to-RCA Adapter
 • Allows connection of external audio source to IP-Bus receiver.



Note: Not available in AVH series receivers released in and after 2010.

Auxiliary Input Accessories

CD-U50E

USB Extension Cable (50 cm)



CD-RM10

AUX Mini-Plug to Composite A/V Cable (2 m)



CD-UB100

IP-Bus USB Adapter
 • Dimensions (W x H x D): 146 mm x 24 mm x 90 mm



Subwoofer Grilles

UD-G308

30 cm Spoke Grille
 • For use with TS-W3002D4, TS-W308D2, TS-W308D4, TS-W308F and TS-W303R



UD-G308

UD-G258

25 cm Spoke Grille
 • For use with TS-W2502D4, TS-W258D2, TS-W258D4 and TS-W258F

MCD Players and Magazines

CDX-P1280

12-Disc IP-Bus Multi-CD Player
 • Dimensions (W x H x D): 257 mm x 94 mm x 170 mm



CDX-FM1287

Universal FM-Modulated 12-Disc Multi-CD System with Wireless Remote Control
 • Dimensions (W x H x D): 257 mm x 94 mm x 170 mm



JD-1212S

12 Disc Magazine
 • For use with FM and Straight 12 Disc Changers, 1996 to current.



CDX-P680

6-Disc IP-Bus Multi-CD Player
 • Dimensions (W x H x D): 248 mm x 66 mm x 168 mm



CDX-FM687

Universal FM-Modulated 6-Disc Multi-CD System with Wireless Remote Control
 • Dimensions (W x H x D): 248 mm x 66 mm x 168 mm



JD-612V

6 Disc Magazine
 • For use with FM and Straight 6 Disc Changers, 1996 to current.



AV Receivers Features Comparison

	AVH-P8450BT	AVH-P4450BT	AVH-P3450DVD	AVH-2450BT	AVH-1450DVD	AVH-P6350BT	AVH-P3350DVD	AVH-5450DVD	DVH-735AV	DVH-345UB	MVH-8350BT	MVH-7350
Display Section												
Screen Size/Aspect Ratio	7"/16:9	7"/16:9	7"/16:9	5.8"/16:9	5.8"/16:9	7"/16:9	7"/16:9	7"/16:9	3"/16:9		3"/16:9	3"/16:9
Resolution	VGA (800 x 480)	QVGA (480 x 240)		QVGA (480 x 240)	QVGA (480 x 240)							
Advanced Display Resolution (ADR)	x											
LED Backlight	x	x	x	x	x	x	x	x	x	x	x	x
Background Picture and Video												
Background Picture	4 BGP, 2 BGV	4 BGP, 3 BGV		3 BGP, 1 BGV	3 BGP, 1 BGV							
Spectrum Analyzer	x	x	x	x	x	x	x	x	x		x	x
AG (Anti-Glare) Screen Coating	x	x	x	x	x	x	x	x	x			
Touch Panel Operation	x	x	x	x	x	x	x	x	x			
Motorized Display	x	x	x	x	x	x	x	x	x			
Selected Angle Setting	5 Settings	5 Settings	5 Settings			50 to 110 Degrees	50 to 110 Degrees	50 to 110 Degrees				
Automatic Display Positioning	x	x	x			x	x	x				
Media Playback Section												
Disc Capacity	1	1	1	1	1	1	1	1	1			
CD-R/RW, DVD-R/RW Compatible	x	x	x	x	x	x	x	x	x	x		
DVD Video Playback	x	x	x	x	x	x	x	x	x	x		
Music CD Playback	x	x	x	x	x	x	x	x	x	x		
Video CD Playback	x	x	x	x	x	x	x	x	x	x		
MP3/WMA/iTunes AAC Playback on CD/DVD	x	x	x	x	x	x	x	x	x	MP3/WMA		
JPEG Image File Playback on CD/DVD		x	x	x	x	x	x	x	x	x		
DivX Video File Playback on CD/DVD	x	x	x	x	x	x	x	x	x	x		
MP3/WMA/iTunes AAC/JPEG Playback from USB Device/SD Memory Card	USB/SD	USB	USB	USB	USB	USB/SD	USB/SD	USB/SD	USB	USB (MP3/WMA/JPEG)	USB/SD	USB/SD
H.264/WMV Playback from CD/DVD/USB Device/SD Memory Card	x											
DivX Video File Playback from USB Device/SD Memory Card	USB/SD	USB	USB	USB	USB	USB/SD	USB/SD	USB/SD	USB	USB	USB/SD	USB/SD
MPEG-1/-2/-4 Decoder	x ¹	x	x	x	x	MPEG-1/-2	MPEG-1/-2	MPEG-1/-2	x	x		
Linear PCM Decoder	x	x	x	x	x	x	x	x	x	x		
Dolby® Digital Decoder	x	x	x	x	x	x	x	x	x	x		
DVD Chapter/Title/Time Direct Search	x	x	x	x	x	x	x	x	Chapter/Title	Chapter/Title		
DVD Chapter/Title Repeat	x	x	x	x	x	x	x	x	x	x		
DVD Auto Play	x	x	x	x	x	x	x	x	x	x		
VCD Playback Control	x	x	x	x	x	x	x	x	x	x		
Repeat (Disc/Track)	x	x	x	x	x	x	x	x	x	x		
CD Text	x	x	x	x	x	x	x	x	x	x		
Tuner Section												
Supertuner® IID	x	x	x	x	x	x	x	x	x	x	x	x
24 Stations/6 Presets	x	x	x	x	x	x	x	x	x	x	x	x
BSM (Best Stations Memory)	x	x	x	x	x	x	x	x	x	x	x	x
Local Seek Tuning	x	x	x	x	x	x	x	x	x	x	x	x
RDS	x	x	x	x	x	x	x	x	x	x	x	x
Audio Section												
MIXTRAX	x											
Built-in Amplifier	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4								
Hi-Volt RCA Preouts	3 (4V)	3 (4V)	3 (4V)	3 (2V)	3 (2V)	3 (4V)	3 (4V)	2 (2V)	2 (4V)	3 (4V)	3 (4V)	3 (4V)
RCA Preouts												
Optical Out	x	x	x	x	x	x	x	x	x	x		
D/A Converter	96 kHz/24-bit	96 kHz/24-bit	96 kHz/24-bit	96 kHz/24-bit								
Auto EQ (CD-MC20 Required)	x	x	x	x	x	x	x	x	x	x	x	x
Sonic Center Control	x	x	x	x	x	x	x	x	x	x	x	x
Equalizer												
EQ (Easy EQ) Preset Equalizer	x	x	x	x	x	x	x	x	x	x	x	x
2-Channel Equalizer Mode	8-Band Graphic	Bass/Mid/Treble	Bass/Mid/Treble	8-Band Graphic	8-Band Graphic							
Crossover Network	HPF/LPF	LPF	LPF	HPF/LPF	HPF/LPF							
Advanced Sound Retriever	x	x	x	x	x	x	x	x	x	x	x	x
Subwoofer Control	x	x	x	x	x	x	x	x	x	x	x	x
Bluetooth®/iPod/USB/SD Memory Card Control												
Built-in Bluetooth®	HFPA/A2DP/AVRCP/SSP	HFPA/A2DP/AVRCP/SSP		HFPA/A2DP/AVRCP/SSP		HFPA					HFPA	
Bluetooth Adapter Ready (CD-BTB200)	x	x	x	x	x	x	x	x	x	x	x	x
Direct Control for iPod/iPhone (Audio/Video)	x	x	x	x	x	x	x	x	x	x	x	x
Advanced App Mode ⁴	x											
App Mode	x	x	x	x	x	x	x	x	x	x	x	x
Link Search	x	x	x	x	x	x	x	x	x	x	x	x
Compatible with iPod (CD-IB100II)	External	External	External			External	External					
SD/SDHC Memory Card Slot	x	x	x	x	x	x	x	x	x	x	x	x
USB Port ⁵	Rear x 2	Rear	Rear	Front ⁶	Front ⁶	Front ⁶	Front ⁶					
AUX Input (3.5 mm mini-jack)	Rear (Audio/Video)	Rear (Audio/Video)	Rear (Audio/Video)	Front (Audio/Video)	Front (Audio/Video)	Front (Audio/Video)	Front (Audio/Video)	Front (Audio/Video)	Front (Audio)	Front (Audio/Video)	Front (Audio/Video)	Front (Audio/Video)
General												
IP-Bus	x	x	x			x	x					
Multi-Channel Processor Ready (DEQ-P7650/DEQ-P6600)	x	x	x			x	x					
Source DVD Control (XDV-P650/XDV-P6)	External	External	External			External	External					
Rear-View Camera Input ⁷	x	x	x			x	x					
Composite A/V Input	1 (Audio/Video)	1 (Audio)	1 (Audio/Video)	1 (Audio/Video)	1 (Audio/Video)							
Composite Video Output	1	1	1	1	1	1	1	1	1	1	1	1
RGB Input	x	x	x	x	x	x	x	x	x	x	x	x
Dual Zone Audio/Video	x					x	x					
Color Customization	5-Display Colors 112-Key Colors	2 Colors (Red/Blue)	6-Display Colors 112-Key Colors	6-Display Colors 112-Key Colors	6-Display Colors 112-Key Colors							
Display Off Mode	x	x	x	x	x	x	x	x	x	x	x	x
Digital Photo Frame	x ⁹	x ¹⁰		x ¹⁰	x ¹⁰	x ¹⁰						
Multi-Language Display	Menu/ID3 Tag ¹¹	Menu ¹¹	Menu ¹¹	Menu ¹¹	Menu/ID3 Tag (English/Spanish/Portuguese/Russian)	Menu (English/Spanish/Portuguese/Russian)	Menu (English/Spanish/Portuguese/Russian)	Menu (English/Spanish/Portuguese/Russian)				
Rotary Volume Control						x	x	x	x	Rotary Commander	Rotary Commander	Rotary Commander
Wired Remote Input	x	x	x	x	x	x	x	x	x	x	x	x
Remote Control	x	x	x	x	x	x	x	x	x	x	x	x
Detachable Face Security™	x	x	x	x	x	x	x	x	x	x	x	x

¹ MPEG-1/-2 files stored in a USB Device or SD Memory Card can't be played.
² HFP = Hands-Free Profile, A2DP = Advanced Audio Distribution Profile, AVRCP = Audio/Video Remote Control Profile (version 1.0), SSP = Simple Secure Profile. Please refer to instruction manual for other information about profile compatibility.
³ Optional cable required. Please refer to page 96 for compatible cable information.
⁴ Optional cable CD-IU201S required when Advanced App Mode is in use.
⁵ Pioneer cannot guarantee compatibility with all USB mass storage devices and assumes no responsibility for any loss of data on media players, smart phones, or other devices while using receiver.
⁶ Please use CD-USE0 USB extension cable if a direct connection causes a USB Device to protrude from the receiver in a way that can interfere with driving.
⁷ Use input only for reverse or mirror image rear view camera. Other use may result in injury or damage.
⁸ Usable language differs according to region.
⁹ Music cannot be played back while digital photo frame mode is activated.
¹⁰ While viewing a picture on USB Device or SD Memory Card, you can only play music on CD, DVD or Tuner.
¹¹ Available only in certain regions of product distribution. Please see pages 17 and 19 for more details.

Audio Receivers Features Comparison

	DEX-P99RS	DEH-80PRS	DEH-9450UB	DEH-8450BT	DEH-7450SD	DEH-6450BT	DEH-5450SD	DEH-4450BT	DEH-3450UB	DEH-2450UB	DEH-1450UB	MVH-1450UB	DEH-1350MP	DEH-1350MPG	FH-P6050UB	KEH-P2035	DXT-1469UB	DXT-1469UB
CD Player/Media Playback Section																		
CD-R/CD-RW Compatible	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
WMA/MP3/WAV Playback	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
iTunes ¹ AAC Playback ²	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Disc List	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CD Text	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Tuner Section																		
Supertuner® IID	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
24 Stations/6 Presets	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BSM (Best Stations Memory)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
RDS		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Shortwave Tuner																		
Audio Section																		
MIXTRAX ³																		
Built-in Amplifier		MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4	MOSFET 50 W x 4
Hi-Volt RCA Preouts	4 (5V)	3 (5V)	3 (4V)															
RCA Preouts																		
DSP	x	x																
D/A Converter	AKM 24-bit	Bur Brown 24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit
Exclusively Designed Audio Parts	x	x																
Specialized Audio Parts																		
Auto-EQ (with Mic Included)	x	x																
Time Alignment	Auto/Manual	Auto/Manual																
Equalizer	Dual (L/R) 31-Band GEQ	Dual (L/R) 16-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	5-Band GEQ	Bass/Mid/Treble	Bass/Mid/Treble	Bass/Mid/Treble	Bass/Mid/Treble	Bass/Mid/Treble	Bass/Mid/Treble
Crossover Network	4-Way	3-Way	HPF/LPF	HPF/LPF	HPF/LPF	HPF/LPF												

The Best Solutions To Enjoy iPod



Connection Table for iPod/iPhone with Pioneer Receivers

Model	Interface	Use with	iPod/iPhone																		
			iPhone ^(*)			iPod	iPod Classic	iPod touch ^(*)				iPod nano									
			iPhone ^(*)	iPhone 3G iPhone 3GS	iPhone 4 iPhone 4S	5th gen.	160GB (2007/2009) 120GB 80GB	1st gen. ^(*)	2nd gen.	3rd gen.	4th gen.	1st/2nd gen.	3rd gen.	4th gen.	5th gen.	6th gen.					
AVH-P8450BT	USB Direct Connection for Video, Music and Advanced App Mode	CD-IU2015 ^{4,5}																			
	USB Direct Connection for Video and Music	CD-IU201V																			
AVH-P6350BT/ AVH-P3350DVD/ AVH-2450BT/ AVH-1450DVD	USB Direct Connection for Video and Music	CD-IU201V CD-IU51V																			
AVH-P4450BT/ AVH-P3450DVD	USB Direct Connection for Video and Music	CD-IU201V																			
AVH-5450DVD	AUX	3.5 mm AUX Cable																			
DVH-735AV	AUX	3.5 mm AUX Cable																			
DVH-345UB	AUX	3.5 mm AUX Cable																			
MVH-8350BT/MVH-7350	USB Direct Connection for Video and Music	CD-IU201V CD-IU51V																			
DEX-P99RS/DEH-80PRS	USB Direct Connection for Music	CD-IU51																			
DEH-9450UB/DEH-8450BT/ DEH-7450SD/DEH-6450BT/ DEH-5450SD/DEH-4450BT/ DEH-3450UB/DEH-2450UB/ MVH-1450UB	USB Direct Connection for Music	CD-IU51																			
DEH-1450UB/GI/ DEH-1350MP/GI/ DXT-1469UB/DXT-146UB	AUX	3.5 mm AUX Cable																			
FH-P6050UB	USB Direct Connection for Music	CD-IU51																			
	AUX	3.5 mm AUX Cable																			

• Operations may vary depending on the software version of iPod.
 • Depending on the generation or version of the iPod, some functions can not be operated.
 • Please contact Pioneer Support Center for more details regarding connection.

*1. When an error occurs in connection with iPod/iPhone, switching ACC ON/OFF or reloading the iPod may help recovery.
 *2. Version 2.0 or later software is required when operating the receiver to browse video.
 *3. When Advanced App Mode is in use, AppRadio App is available from iTunes App Store. Please use in 3G or Wi-Fi connection situations. AppRadio App & Compatible Apps may not be available in some countries.
 *4. App Mode Available. You can enjoy video and music using apps installed in iPhone and iPod touch. In App Mode, operability of app on receiver's display is limited. Pioneer Receiver can play audio/video content from an iPod or iPhone with an app that outputs audio/video signals. Not every app, however, is compatible with App Mode.
 *5. Not compatible with iPhone 4S.

Amplifiers Features Comparison

	PRS-A900	PRS-D2000SPL	PRS-D1200SPL	PRS-D800	GM-D9500F	GM-D8500M	GM-D7500M	GM-6500F	GM-5500T	GM-3500T
Amplifier Class		Class D	Class D	Class FD	Class FD	Class D	Class FD			
Current Feedback Amplifier	x									
Load Impedance Allowance (Ω)	2 to 8	1 to 8	1 to 8	2 to 8	2 to 8	2 to 8	2 to 8	2 to 8	2 to 8	2 to 8
Bridgeable	x	External SEPP	External SEPP	x	x			x	x	x
MASS (Multiple Amplifier Synchronization System)		x	x							
4-Layered Circuit Board				x						
L/R Independent Power Supply	x									
L/R Symmetric Layout Circuit	x									
MOSFET Output Section		x	x	x	x	x	x			
PWM Regulated MOSFET	x		x	x	x	x	x	x	x	
Balanced Isolator Input Circuit	x	x	x	x	x	x	x	x	x	
High Grade Bipolar Transister	x									
RCA Inputs	4-Ch. (Gold-Plated)	2-Ch. (Gold-Plated)	2-Ch. (Gold-Plated)	2-Ch. (Gold-Plated)	4-Ch.	2-Ch.	2-Ch.	4-Ch.	2-Ch.	2-Ch.
RCA Outputs (Pass-Through)					x			x		
Speaker Level Input					x	x	x	x	x	x
Speaker Line Input Turn-On Sensor					x	x	x			
Hi-Volt Input Level Control (400 mV to 6.5 V)	x L/R independent	x	x	x A/B independent						
Hi-Volt Input Level Control (200 mV to 6.5 V)					x	x	x	x	x	x
Block-Type Terminal	Power/Ground Terminals	x ⁽¹⁾ (Gold-Plated)	x ⁽²⁾ (Gold-Plated)	x ⁽¹⁾ (Gold-Plated)						
	Speaker Terminals	x ⁽¹⁾ (Gold-Plated)	x ⁽¹⁾ (Gold-Plated)	x ⁽¹⁾ (Gold-Plated)						
Screw-Type Terminal	Power/Ground Terminals			x (Ground: Gold-Plated)	x	x	x	x	x	x
	Speaker Terminals			x (Gold-Plated)	x	x	x	x	x	x
Removable Terminal/Settings Cover	x	x	x	x						
Crossover Type		LPF	LPF		4-Ch. HPF/LPF	LPF	LPF	A-Ch.: LPF/HPF B-Ch.: Variable LPF/HPF	Variable LPF	LPF
Crossover Frequency		40 Hz to 240 Hz	40 Hz to 240 Hz		40 Hz to 500 Hz	40 Hz to 240 Hz	40 Hz to 240 Hz	A-Ch.: 80 Hz B-Ch.: 40 Hz to 500 Hz	40 Hz to 500 Hz	80 Hz
Crossover Slope		-24 dB/oct.	-24 dB/oct.		-12 dB/oct.	-12 dB/oct.	-12 dB/oct.	-12 dB/oct.	-12 dB/oct.	-12 dB/oct.
Subsonic Filter		20 Hz, -24 dB/oct.	20 Hz, -24 dB/oct.							
Bass Boost Frequency		40 Hz to 120 Hz	40 Hz to 120 Hz			50 Hz	50 Hz		50 Hz	
Bass Boost Level		0/6/9/12 dB	0/6/9/12 dB			0 dB to 12 dB	0/6/12 dB		0/6/12 dB	
Bass Boost Remote		x	x			x				

*1. 4 to 8-gauge *2. 1/0-gauge *3. 4-gauge *4. 12 to 18-gauge
 Note: The "Class-FD" stands for "Full Range Class-D". Incorporating Pioneer-developed Class-D circuit, the Class-FD amplifiers deliver superior performance and sound quality.

Amplifiers Specifications

	PRS-A900	PRS-D2000SPL	PRS-D1200SPL	PRS-D800	GM-D9500F
Number of Channels	4/3/2	Mono	Mono	2/1	4/3/2
Max. Wattage (4 Ω)	100 W x 4	1,500 W x 1	1,000 W x 1	250 W x 2	150 W x 4
Max. Wattage (2 Ω)	—	3,000 W x 1	2,000 W x 1	—	—
Max. Wattage (1 Ω)	—	4,000 W x 1	2,400 W x 1	—	—
Max. Wattage Bridged (4 Ω)	200 W x 2	—	—	600 W x 1	400 W x 2
Wattage RMS (1 Ω <=1% THD+N) Wattage RMS (2 Ω <=1% THD+N) Wattage RMS (4 Ω <=1% THD+N) Wattage RMS Bridged (4 Ω)	—	2,000 W x 1*	1,200 W x 1	—	—
	50 W x 4	1,500 W x 1	1,000 W x 1	150 W x 2	100 W x 4
	50 W x 4	750 W x 1	500 W x 1	125 W x 2	75 W x 4
	100 W x 2	—	—	300 W x 1	200 W x 2
Frequency Response	10 Hz to 100 kHz	10 Hz to 240 Hz	10 Hz to 240 Hz	10 Hz to 30 kHz	10 Hz to 35 kHz
Total Harmonic Distortion (4 Ω)	<0.003 % (1 kHz)	<0.3 % (1 kHz)	<0.3 % (1 kHz)	<0.004 % (1 kHz)	<0.06 % (1 kHz)
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>108 dB	>85 dB	>80 dB	>105 dB	>95 dB
Dimensions (W x H x D)	371 mm x 65 mm x 282 mm	586 mm x 65 mm x 282 mm	381 mm x 65 mm x 282 mm	255 mm x 50 mm x 104 mm	245 mm x 56 mm x 200 mm

* 1 Ω output of PRS-D2000SPL is 2,000 watts according to the CEA2006 standard.

	GM-D8500M	GM-D7500M	GM-6500F	GM-5500T	GM-3500T
Number of Channels	Mono	Mono	4/3/2	2/1	2/1
Max. Wattage (4 Ω)	600 W x 1	400 W x 1	190 W x 4	410 W x 2	200 W x 2
Max. Wattage (2 Ω)	1,200 W x 1	800 W x 1	—	—	—
Max. Wattage Bridged (4 Ω)	—	—	380 W x 2	820 W x 1	400 W x 1
Wattage RMS (1 Ω <=1% THD+N) Wattage RMS (2 Ω <=1% THD+N) Wattage RMS (4 Ω <=1% THD+N) Wattage RMS Bridged (4 Ω)	—	—	—	—	—
	600 W x 1	400 W x 1	85 W x 4	190 W x 2	85 W x 2
	300 W x 1	200 W x 1	60 W x 4	125 W x 2	60 W x 2
	—	—	180 W x 2	400 W x 1	185 W x 1
Frequency Response	10 Hz to 240 Hz	10 Hz to 30 kHz	10 Hz to 70 kHz	10 Hz to 70 kHz	10 Hz to 70 kHz
Total Harmonic Distortion (4 Ω)	<0.3 % (100 Hz)	<0.3 % (100 Hz)	<0.05 % (1 kHz)	<0.05 % (1 kHz)	<0.05 % (1 kHz)
Signal-to-Noise Ratio (IHF-A Weighted, at 1 kHz)	>80 dB	>95 dB	>98 dB	>98 dB	>98 dB
Dimensions (W x H x D)	310 mm x 56 mm x 200 mm	245 mm x 56 mm x 200 mm	289 mm x 62 mm x 349 mm	289 mm x 62 mm x 349 mm	289 mm x 62 mm x 219 mm

General Information about Subwoofer Connection

Important Caution against Improper Connection

Examples shown here indicate theoretical impedance values in the connections. Properly connect subwoofer(s) to amplifier according to the amplifier's compatible speaker impedance range. Avoid improper connection which may cause the product to overheat, malfunction or even ignite.

Single Voice Coil (SVC)

Connection Examples
Series and parallel connections apply to subwoofer(s).

Single Subwoofer Connection

1 SVC

- 2 Ohm Subwoofer: 2 Ohm
- 4 Ohm Subwoofer: 4 Ohm

Multiple Subwoofer Connection

2 SVC

Series (+)

- 2 Ohm Subwoofers: 4 Ohm
- 4 Ohm Subwoofers: 8 Ohm

Parallel (||)

- 2 Ohm Subwoofers: 1 Ohm
- 4 Ohm Subwoofers: 2 Ohm

3 SVC

Parallel (||)

- 4 Ohm Subwoofers: 1.33 Ohm

4 SVC

Parallel (||)

- 4 Ohm Subwoofers: 1 Ohm

Dual Voice Coil (DVC)

Connection Examples
Series and parallel connections apply to subwoofer(s).

Single Subwoofer Connection

1 DVC

Series (+)

- Dual 2 Ohm Subwoofer: 4 Ohm
- Dual 4 Ohm Subwoofer: 8 Ohm

Parallel (||)

- Dual 2 Ohm Subwoofer: 1 Ohm
- Dual 4 Ohm Subwoofer: 2 Ohm

Multiple Subwoofer Connection

In theory, there are four main connection patterns (below). In practice, however, you should choose connection method in consideration of the proper balance between amplifier's impedance and subwoofer's combined impedance.

- All voice coils are in series connection
- Voice coil is in series connection, and subwoofers are in parallel connection
- Voice coil is in parallel connection, and subwoofers are in series connection
- All voice coils are in parallel connection

2 DVC

Series (+)-Parallel (||) Connection

- 2 Ohm Subwoofers: 2 Ohm
- 4 Ohm Subwoofers: 4 Ohm

Parallel (||)-Parallel (||) Connection

- 2 Ohm Subwoofers: 0.5 Ohm
- 4 Ohm Subwoofers: 1 Ohm

3 DVC

Series (+)-Parallel (||) Connection

- 2 Ohm Subwoofers: 1.33 Ohm
- 4 Ohm Subwoofers: 2.67 Ohm

4 DVC

Series (+)-Parallel (||) Connection

- 2 Ohm Subwoofers: 1 Ohm
- 4 Ohm Subwoofers: 2 Ohm

Calculating Impedance

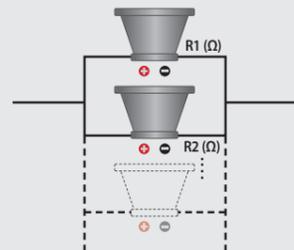
Series (+) Wiring: The more subwoofers connected within the circuit, the higher the total impedance.



$$R1 (\Omega) + R2 (\Omega) + \dots + Rn (\Omega) = Rt (\Omega)$$

Example with 2 subwoofers:
4 Ω subwoofer: 4 Ω + 4 Ω = 8 Ω
2 Ω subwoofer: 2 Ω + 2 Ω = 4 Ω

Parallel (||) Wiring: The more subwoofers connected within the circuit, the lower the total impedance.



$$\frac{1}{\frac{1}{R1 (\Omega)} + \frac{1}{R2 (\Omega)} + \dots + \frac{1}{Rn (\Omega)}} = Rt (\Omega)$$

Example with 2 subwoofers:
4 Ω subwoofer: $\frac{1}{\frac{1}{4 \Omega} + \frac{1}{4 \Omega}} = 2 \Omega$
2 Ω subwoofer: $\frac{1}{\frac{1}{2 \Omega} + \frac{1}{2 \Omega}} = 1 \Omega$

Amplifier & Subwoofer Connection Chart

Voice Coil Connection	Single Subwoofer	2 Subwoofers
■: Single Voice Coil	Single ■ 1 Subwoofer as 2 Ω mono GM-D7500M → 2 Ω TS-SW3001S2	2pc. ■ 2 Subwoofers as 2 Ω mono GM-D8500M → 4 Ω TS-W30954, 4 Ω TS-W30954
	Single ■ 1 Subwoofer as 4 Ω mono GM-5500T → 4 Ω TS-W30954	2pc. ■ 2 Subwoofers as 4 Ω mono GM-5500T → 2 Ω TS-SW3001S2, 2 Ω TS-SW3001S2
	GM-3500T → 4 Ω TS-W304R	
	DVC ● 1 Subwoofer as 2 Ω mono GM-D7500M → 2 Ω TS-W309D4	2pc. ○ 2 Subwoofers as 4 Ω mono GM-5500T → 8 Ω TS-W309D4, 8 Ω TS-W309D4
Dual Voice Coil		
○: Dual Voice Coil Series Connection		
●: Dual Voice Coil Parallel Connection		

Amplifier & Subwoofer Combination Chart

○: DVC Series Wiring
●: DVC Parallel Wiring
●○: or ○

■: Single Voice Coil Series Wiring
Para: Parallel Wiring
2pc.: 2 Pieces Use

Model	Channels	Impedance	Power	Conventional Subwoofers								Shallow Subwoofers									
				Champion Series PRO				Champion Series				TS-SW3001S2		TS-SW2501S2		TS-SW841D		TS-SW301		TS-SW251	
				TS-W3002D4	TS-W2502D4	TS-W309D4	TS-W30954	TS-W309D2	TS-W259D4	TS-W25954	TS-W304R	TS-W254R	400 W	400 W	300 W	300 W	120 W	250 W	250 W	200 W	
GM-D9500F	4-ch.	2 Ω	100 W x 4	●	●	●	2pc. Para	2pc. ●○	●	2pc. Para	2pc. Para	2pc. Para	■	2pc. Para	■	2pc. Para	2pc. Para	2pc. Para	2pc. Para		
	2-ch.	4 Ω	75 W x 4	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	■	■	■		
GM-D8500M	1-ch.	4 Ω	200 W x 2	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	■	■	■		
	1-ch.	2 Ω	600 W x 1	●	●	—	2pc. Para	2pc. ●○	—	2pc. Para	2pc. Para*	—	—	2pc. Para	—	2pc. Para	—	—	—		
GM-D7500M	1-ch.	2 Ω	400 W x 1	●	●	●*	2pc. Para	2pc. ●○	—	2pc. Para	2pc. Para	2pc. Para	■*	2pc. Para	—	2pc. Para	—	2pc. Para	2pc. Para		
	1-ch.	4 Ω	200 W x 1	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	—	■	■*		
GM-6500F	4-ch.	2 Ω	85 W x 4	●	●	●	2pc. Para	2pc. ●○	●	2pc. Para	2pc. Para	2pc. Para	■	2pc. Para	■	2pc. Para	2pc. Para	2pc. Para	2pc. Para		
	2-ch.	4 Ω	60 W x 4	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	■	■	■		
GM-5500T	2-ch.	2 Ω	190 W x 2	●	●	●	2pc. Para	2pc. ●○	●	2pc. Para	2pc. Para	2pc. Para	■	2pc. Para	■	2pc. Para	2pc. Para	2pc. Para	2pc. Para		
	1-ch.	4 Ω	125 W x 2	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	—	■	■		
GM-3500T	2-ch.	2 Ω	85 W x 2	●	●	●	2pc. Para	2pc. ●○	●	2pc. Para	2pc. Para	2pc. Para	■	2pc. Para	■	2pc. Para	2pc. Para	2pc. Para	2pc. Para		
	1-ch.	4 Ω	60 W x 2	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	■	■	■		
GM-3500T	1-ch.	4 Ω	185 W x 1	2pc. ●○	2pc. ●○	2pc. ●○	■	○	2pc. ●○	■	■	■	2pc. Series	■	2pc. Series	■	—	■	■		

* Please avoid sustained use at maximum output power.

Subwoofers Specifications

	TS-W8102SPL	TS-W5102SPL	TS-W3002D4	TS-W2502D4	TS-W309D4	TS-W309S4	TS-W309D2	TS-W259D4	TS-W259S4
Size	38 cm	30 cm	30 cm	25 cm	30 cm	30 cm	30 cm	25 cm	25 cm
Max. Music Power (Nominal)	8,000 W (3,000 W)	6,000 W (2,500 W)	3,500 W (1,000 W)	3,000 W (800 W)	1,400 W (400 W)	1,400 W (400 W)	1,400 W (400 W)	1,200 W (350 W)	1,200 W (350 W)
Frequency Response	15 Hz to 1,500 Hz	18 Hz to 2,000 Hz	20 Hz to 150 Hz	20 Hz to 150 Hz	20 Hz to 220 Hz	20 Hz to 220 Hz	20 Hz to 220 Hz	20 Hz to 280 Hz	20 Hz to 280 Hz
Sensitivity (1 W/1 m)	91 dB	88 dB	90 dB	89 dB	94 dB	94 dB	94 dB	92 dB	92 dB
Impedance	2 Ω x 2	2 Ω x 2	4 Ω x 2	4 Ω x 2	4 Ω x 2	4 Ω	2 Ω x 2	4 Ω x 2	4 Ω
Mounting Depth	311.4 mm	266 mm	189 mm	169 mm	153 mm	153 mm	141 mm	141 mm	141 mm
Cut-Out Dimensions	ø352 mm	ø278 mm	ø278 mm	ø238 mm	ø283 mm	ø283 mm	ø283 mm	ø238 mm	ø238 mm
Recommended Enclosure	70.8 liters	42.5 liters	14.2 liters to 28.3 liters	9.9 liters to 19.8 liters	24.1 liters to 49.5 liters	24.1 liters to 49.5 liters	24.1 liters to 49.5 liters	18.4 liters to 35.4 liters	18.4 liters to 35.4 liters

	TS-W309	TS-W258F	TS-W304R	TS-W254R	TS-SW3001S2	TS-SW3001S4	TS-SW2501S2	TS-SW2501S4	TS-SW841D
Size	30 cm	25 cm	30 cm	25 cm	30 cm	30 cm	25 cm	25 cm	20 cm
Max. Music Power (Nominal)	1,000 W (300 W)	800 W (250 W)	1,300 W (300 W)	1,100 W (250 W)	1,500 W (400 W)	1,500 W (400 W)	1,200 W (300 W)	1,200 W (300 W)	500 W (120 W)
Frequency Response	20 Hz to 450 Hz	20 Hz to 1,400 Hz	20 Hz to 220 Hz	20 Hz to 220 Hz	20 Hz to 230 Hz	20 Hz to 230 Hz	20 Hz to 290 Hz	20 Hz to 290 Hz	30 Hz to 1,500 Hz
Sensitivity (1 W/1 m)	95 dB	92 dB	95 dB	93 dB	93 dB	93 dB	90 dB	90 dB	85 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	2 Ω	4 Ω	2 Ω	4 Ω	4 Ω
Mounting Depth	143 mm	131 mm	135 mm	127 mm	81 mm	81 mm	75 mm	75 mm	62.5 mm
Cut-Out Dimensions	ø278 mm	ø236 mm	ø283 mm	ø235 mm	ø278 mm	ø278 mm	ø238 mm	ø238 mm	ø186 mm
Recommended Enclosure	24.1 liters to 49.5 liters	—	24.1 liters to 49.5 liters	18.4 liters to 35.4 liters	9.9 liters to 28.3 liters	9.9 liters to 28.3 liters	9.9 liters to 19.8 liters	9.9 liters to 19.8 liters	4.2 liters to 14.2 liters

	TS-SW301	TS-SW251	TS-WX303	TS-SWX310	TS-WX304T	TS-WX110A	TS-WX210A	TS-WX206A	TS-WX20LPA	TS-W252PRS
Size	30 cm	25 cm	30 cm	30 cm	30 cm	13 cm x 21 cm	20 cm	20 cm	20 cm	25 cm
Max. Music Power (Nominal)	1,000 W (250 W)	800 W (200 W)	1,200 W (250 W)	1,000 W (250 W)	1,300 W (300 W)	150 W* (50 W**)	150 W* (50 W**)	150 W* (60 W**)	200 W* (100 W**)	800 W (400 W)
Frequency Response	20 Hz to 114 Hz	20 Hz to 144 Hz	10 Hz to 220 Hz	20 Hz to 114 Hz	10 Hz to 360 Hz	40 Hz to 200 Hz	37 Hz to 200 Hz	35 Hz to 200 Hz	25 Hz to 200 Hz	20 Hz to 2,400 Hz
Sensitivity (1 W/1 m)	91 dB	89 dB	98 dB	91 dB	98 dB	101 dB	102 dB	107 dB	106 dB	84 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	—	—	—	—	4 Ω
Mounting Depth	86 mm	78 mm	—	—	—	—	—	—	—	178 mm
Cut-Out Dimensions	ø278 mm	ø238 mm	—	—	—	—	—	—	—	ø238 mm
Recommended Enclosure	14.2 liters to 28.3 liters	—	—	—	—	—	—	—	—	28.3 liters

* Maximum output power ** Nominal output power

Speakers Specifications

	Component Speakers			TS-D Series						
	TS-C172PRS	TS-C132PRS	TS-S062PRS	TS-D1720C	TS-D1320C	TS-D6902R	TS-D1702R	TS-D1602R	TS-D1302R	TS-D1002R
Size	17 cm 28 mm*	13 cm 28 mm*	66 mm	17 cm 28 mm*	13 cm 28 mm*	6" x 9"	17 cm	16 cm	13 cm	10 cm
Max. Music Power (Nominal)	200 W (50 W)	150 W (30 W)	200 W (50 W)** 60 W (15 W)***	260 W (60 W)	180 W (35 W)	360 W (80 W)	280 W (60 W)	260 W (60 W)	180 W (35 W)	110 W (25 W)
Frequency Response	25 Hz to 35 kHz	30 Hz to 35 kHz	48 Hz to 40 kHz	30 Hz to 33 kHz	35 Hz to 33 kHz	28 Hz to 30 kHz	30 Hz to 32 kHz	35 Hz to 32 kHz	35 Hz to 40 kHz	40 Hz to 40 kHz
Sensitivity (1 W/1 m)	89 dB	86 dB	84 dB	88 dB	88 dB	90 dB	88 dB	88 dB	88 dB	86 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Crossover Frequency	2,300 Hz	2,200 Hz	—	>2,800 Hz (with -12 dB)	>2,800 Hz (with -12 dB)	2,800 Hz	3,200 Hz	4,000 Hz	6,000 Hz	6,000 Hz
Mounting Depth	67 mm 13.4 mm*	57.3 mm 13.4 mm*	32 mm 42.2 mm***	64.5 mm 12.2 mm*	57.5 mm 12.2 mm*	89 mm	64.5 mm	59 mm	57.3 mm	46.5 mm
Mounting Depth with Mount Adapter	16 cm: 55 mm	—	—	16 cm: 51.5 mm	—	—	—	—	—	—
Cut-Out Dimensions	ø142 mm	ø123 mm	ø64 mm ø69 mm****	ø144 mm	ø121 mm	151 mm x 220 mm	ø139 mm	ø128 mm	ø121 mm	ø106 mm

* Tweeter specification ** With back chamber, 800 Hz, -12 dB/oct. HPF *** Without back chamber, 400 Hz, -12 dB/oct. HPF **** With back chamber

	TS-A Series							
	TS-A1604C	TS-A1304C	TS-A6994S	TS-A6984S	TS-A6974S	TS-A6964S	TS-A1684S	TS-A1674S
Size	16 cm* 20 mm**	13 cm 20 mm**	6" x 9"	6" x 9"	6" x 9"	6" x 9"	16 cm*	16 cm
Max. Music Power (Nominal)	350 W (50 W)	300 W (35 W)	600 W (80 W)	550 W (80 W)	500 W (80 W)	400 W (40 W)	350 W (50 W)	300 W (35 W)
Frequency Response	29 Hz to 29 kHz	28 Hz to 29 kHz	27 Hz to 30 kHz	27 Hz to 30 kHz	27 Hz to 27 kHz	31 Hz to 37 kHz	33 Hz to 27 kHz	37 Hz to 30 kHz
Sensitivity (1 W/1 m)	90 dB	89 dB	92 dB	91 dB	91 dB	91 dB	91 dB	90 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	54.3 mm 18.9 mm**	53 mm 18.9 mm**	85 mm	84 mm	84 mm	72 mm	54.3 mm	44 mm
Cut-Out Dimensions	ø128 mm	ø121 mm	153 mm x 222 mm	153 mm x 222 mm	153 mm x 222 mm	153 mm x 222 mm	ø128 mm	ø128 mm

* 17 cm compatible ** Tweeter specification

	Champion Series						
	TS-A6874R	TS-A4674R	TS-A2013I	TS-A2503I	TS-6975 V2	TS-6965 V2	TS-1675 V2
Size	6" x 8"	4" x 6"	20 cm	25 cm	6" x 9"	6" x 9"	16 cm
Max. Music Power (Nominal)	350 W (40 W)	200 W (20 W)	500 W (80 W)	420 W (80 W)	500 W (80 W)	400 W (80 W)	300 W (50 W)
Frequency Response	30 Hz to 30 kHz	41 Hz to 29 kHz	25 Hz to 28 kHz	20 Hz to 31 kHz	30 Hz to 25 kHz	30 Hz to 22 kHz	35 Hz to 20 kHz
Sensitivity (1 W/1 m)	90 dB	88 dB	91 dB	92 dB	92 dB	92 dB	92 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	61 mm	45 mm	89 mm	115 mm	92 mm	84 mm	58 mm
Cut-Out Dimensions	133 mm x 191 mm	95 mm x 153 mm	ø186 mm	ø236 mm	151 mm x 220 mm	151 mm x 220 mm	ø128 mm

* 17 cm compatible ** Tweeter specification

	TS-G Series							DXT-1469UB & DXT-146UB Speakers		
	TS-G1604C	TS-G1644R	TS-G1344R	TS-G1044R	TS-G1614R	TS-G1314R	TS-G1014R	DXT-1469UB	DXT-146UB	DXT-146UB
Size	16 cm 30 mm*	16 cm	13 cm	10 cm	16 cm	13 cm	10 cm	6" x 9"	16 cm	16 cm
Max. Music Power (Nominal)	280 W (45 W)	250 W (40 W)	220 W (35 W)	200 W (30 W)	230 W (40 W)	200 W (35 W)	180 W (30 W)	230 W (30 W)	200 W (25 W)	200 W (25 W)
Frequency Response	35 Hz to 38 kHz	31 Hz to 29 kHz	43 Hz to 27 kHz	45 Hz to 27 kHz	30 Hz to 23 kHz	40 Hz to 25 kHz	45 Hz to 26 kHz	28 Hz to 32 kHz	31 Hz to 16 kHz	31 Hz to 16 kHz
Sensitivity (1 W/1 m)	89 dB	90 dB	89 dB	88 dB	90 dB	90 dB	88 dB	88 dB	88 dB	88 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	42 mm	42 mm	46 mm	43 mm	42 mm	46 mm	43 mm	66.3 mm	41 mm	41 mm
Cut-Out Dimensions	ø128 mm	ø128 mm	ø121 mm	ø106 mm	ø128 mm	ø121 mm	ø106 mm	153 mm x 222 mm	ø128 mm	ø128 mm

* Tweeter specification

	Other Speakers										
	TS-F1634R	TS-F1034R	TS-CX900	TS-2150	TS-S250	TS-S20	TS-T110	TS-T15	TS-MR2040	TS-MR1640	TS-MR1600
Size	16 cm	10 cm	6.6 cm	20 cm	40 mm	20 mm	22 mm	20 cm	20 cm	16 cm	16 cm
Max. Music Power (Nominal)	200 W (25 W)	150 W (20 W)	80 W (20 W)	200 W (50 W)	250 W (50 W)	200 W (50 W)	120 W (40 W)	120 W (40 W)	200 W (40 W)	160 W (30 W)	100 W (25 W)
Frequency Response	31 Hz to 16 kHz	45 Hz to 18 kHz	80 Hz to 70 kHz	28 Hz to 28 kHz	6,000 Hz to 40 kHz	3,000 Hz/1,200 Hz** to 26 kHz	2,500 Hz to 30 kHz	2,500 Hz to 30 kHz	25 Hz to 30 kHz	30 Hz to 30 kHz	30 Hz to 20 kHz
Sensitivity (1 W/1 m)	88 dB	86 dB	81 dB	91 dB	97 dB	92 dB	90 dB	90 dB	92 dB	91 dB	90 dB
Impedance	4 Ω	4 Ω	4 Ω	4 Ω	8 Ω	8 Ω	4 Ω	4 Ω	4 Ω	4 Ω	4 Ω
Mounting Depth	41 mm	43 mm	—	88 mm	—	—	—	—	75 mm	56 mm	56 mm
Cut-Out Dimensions	ø128 mm	ø102 mm	—	ø186 mm	—	—	—	—	ø183 mm	ø127 mm	ø127 mm

* With network ** Without network

Subwoofers Thiele/Small Parameters

	TS-W8102SPL	TS-W5102SPL	TS-W3002D4	TS-W2502D4	TS-W309D4	TS-W309S4	TS-W309D2	TS-W259D4	TS-W259S4	TS-W309
Nom.Dia	38 cm	30 cm	30 cm	25 cm	30 cm	30 cm	30 cm	25 cm	25 cm	30 cm
Qts	0.310	0.340	0.65	0.74	0.811	0.656	0.662	1.000	0.840	0.894
Qms	5.720	7.600	15.13	14.34	11.860	12.467	11.265	11.635	11.130	8.739
Qes	0.330	0.360	0.68	0.78	0.871	0.693	0.703	1.094	0.909	0.996
Frequencies	23.2 Hz	29.0 Hz	31.4 Hz	36.0 Hz	37.2 Hz	39.5 Hz	37.7 Hz	48.0 Hz	48.2 Hz	29.5 Hz
Vas [Liters]	70.14	26.72	13.03	6.77	33.79	30.14	33.20	14.63	14.02	67.32
Vas [ft³]	2.479	0.944	0.460	0.240	1.193	1.064	1.172	0.517	0.495	2.377
Vd [Liters]	1.413	0.673	0.564	0.307	0.598	0.541	0.541	0.419	0.300	0.546
Vd [ft³]	4.99 E-02	2.38 E-02	1.99E-02	1.08E-02	2.11E-02	1.91E-02	1.91E-02	1.48E-02	1.06E-02	1.93E-02
Sd [m²]	9.18 E-02	5.85 E-02	4.37E-02	3.13E-02	5.20E-02	5.20E-02	5.20E-02	3.49E-02	3.49E-02	4.96E-02
Sd [ft²]	0.988	0.630	0.471	0.337	0.560	0.560	0.560	0.376	0.376	0.534
Revc	3.0 Ω	Dual 1.5 Ω	Dual 3.3 Ω	Dual 3.3 Ω	Dual 3.0 Ω	3.0 Ω	Dual 1.5 Ω	Dual 3.4 Ω	3.0 Ω	3.0 Ω
Levc (at 2,000 Hz)	5.560 mH	5.090 mH	5.55 mH (8 Ω) 1.39 mH (2 Ω)	4.80 mH (8 Ω) 1.20 mH (2 Ω)	3.79 mH (8 Ω) 0.94 mH (2 Ω)	2.33 mH	2.99 mH (4 Ω) 0.74 mH (1 Ω)	3.82 mH (8 Ω) 0.96 mH (2 Ω)	1.90 mH	0.94 mH
Xmax [mm]	15.4	11.5	12.9	9.8	11.5	10.4	10.4	12.0	8.6	11.0
Xmax [In]	0.61	0.45	0.51	0.39	0.45	0.41	0.41	0.47	0.34	0.43
Zmax	58.56 Ω	161.04 Ω	157.77 (8 Ω) 38.53 (2 Ω)	133.73 (8 Ω) 32.72 (2 Ω)	74.6 (8 Ω) 17.3 (2 Ω)	52.0 Ω	49.4 (4 Ω) 12.7 (1 Ω)	64.6 (8 Ω) 14.0 (2 Ω)	35.6 Ω	27.5 Ω
Bl	33.640 Tm	30.180 Tm	28.38 Tm (8 Ω) 14.19 Tm (2 Ω)	24.16 Tm (8 Ω) 12.08 Tm (2 Ω)	19.39 Tm (8 Ω) 9.70 Tm (2 Ω)	15.73 Tm	14.82 Tm (4 Ω) 7.41 Tm (1 Ω)	16.54 Tm (8 Ω) 8.27 Tm (2 Ω)	12.30 Tm	9.58 Tm
Rms	20.367 Ns/m	13.470 Ns/m	5.334 Ns/m	4.602 Ns/m	4.312 Ns/m	4.333 Ns/m	4.319 Ns/m	3.566 Ns/m	3.874 Ns/m	3.195 Ns/m
Mms	800.11 g	550.50 g	408.83 g	291.71 g	218.80 g					

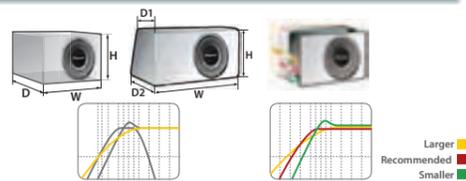
Subwoofer Enclosures

SEALED ENCLOSURES

The simplest subwoofer enclosure to design and build is a sealed enclosure. A sealed enclosure is essentially a completely sealed box that isolates the front sound waves of the subwoofer from the rear waves.

Advantages of a sealed enclosure design include: smaller enclosure size, simple design and fabrication, flat frequency response, good in-vehicle transient response, and higher power handling.

Disadvantages of a sealed enclosure design include: less efficient than a comparable vented enclosure and limited lower frequency extension.



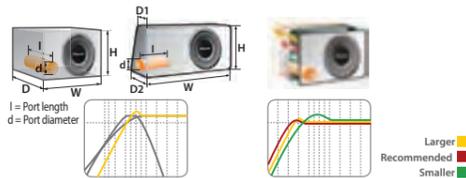
Recommended Enclosure Volumes and Dimensions*	TS-W8102SPL	TS-W5102SPL	TS-W3002D4	TS-W2502D4	TS-W309D4	TS-W309S4	TS-W309D2	TS-W259D4	TS-W259S4
Enclosure Volume (l)									
Center	70.8	42.5	22.6	17.0	35.4	35.4	35.4	22.6	22.6
Box Dimensions: W x H x D (mm)	—	—	367 x 367 x 247	329 x 329 x 238	396 x 314 x 396	396 x 314 x 396	396 x 314 x 396	351 x 269 x 351	351 x 269 x 351
Min.	63.7	38.3	14.2	9.9	24.1	24.1	24.1	18.4	18.4
Max.	77.9	46.8	28.3	19.8	49.5	49.5	49.5	35.4	35.4

Recommended Enclosure Volumes and Dimensions*	TS-W309	TS-W304R	TS-W254R	TS-SW3001S4	TS-SW3001S2	TS-SW2501S4	TS-SW2501S2	TS-SW841D	TS-SW301	TS-SW251
Enclosure Volume (l)										
Center	35.4	35.4	22.6	18.4	18.4	12.7	12.7	11.3	18.4	12.7
Box Dimensions: W x H x D (mm)	396 x 396 x 314	396 x 396 x 314	396 x 396 x 314	630 x 357 x 107 x 164	630 x 357 x 107 x 164	545 x 320 x 102 x 152	545 x 320 x 102 x 152	618 x 290 x 100 x 131	630 x 357 x 107 x 164	545 x 320 x 102 x 152
Box Dimensions: W x H x D1 x D2 (mm)	—	—	—	630 x 357 x 107 x 164	630 x 357 x 107 x 164	545 x 320 x 102 x 152	545 x 320 x 102 x 152	618 x 290 x 100 x 131	630 x 357 x 107 x 164	545 x 320 x 102 x 152
Min.	24.1	24.1	18.4	14.2	14.2	9.9	9.9	4.2	14.2	9.9
Max.	49.5	49.5	35.4	28.3	28.3	19.8	19.8	14.2	28.3	19.8

*Measured externally. 19 mm MDF particle board recommended.

VENTED ENCLOSURES (BASS REFLEX)

Similar in design to a sealed enclosure, vented enclosures utilize a sealed chamber that has been 'vented' or 'ported' with an opening of a determined diameter and length. The vent (or port) opening is tuned to a certain frequency by changing the length or diameter of the opening. The addition of the vent allows the enclosure to be more efficient by allowing the rear sound waves of the subwoofer motion to reinforce the front waves. In a vented enclosure, there's a direct relationship between the subwoofer, the enclosure airspace, and the tuned frequency of the vent. When properly designed, a vented enclosure benefits from having a 3 dB higher efficiency at the tuned frequency of the vent compared to the same subwoofer mounted in a sealed enclosure.



Advantages of a vented enclosure design include: Higher efficiency and increased low-frequency extension (above the tuned frequency of the vent).

Disadvantages of a vented enclosure design include: Higher distortion below the tuned frequency of the vent, more complex design and fabrication, larger in size than a sealed enclosure, and less-transient in-vehicle accuracy.

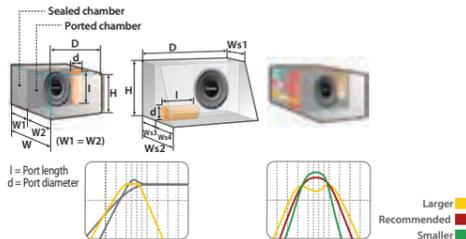
Recommended Enclosure Volumes, Dimensions* and Port Size	TS-W8102SPL	TS-W5102SPL	TS-W3002D4	TS-W2502D4	TS-W309D4	TS-W309S4	TS-W309D2	TS-W259D4	TS-W259S4
Enclosure Volume (l)									
Center	92.0	56.6	34.0	25.5	42.5	42.5	42.5	31.1	31.1
Box Dimensions: W x H x D (mm)	—	—	382 x 381 x 325	342 x 342 x 314	461 x 373 x 338	461 x 373 x 338	461 x 373 x 338	396 x 353 x 314	396 x 353 x 314
Port Size: d x l (mm)	—	—	ø76 x 89	ø76 x 95	ø76 x 127	ø76 x 140	ø76 x 127	ø76 x 203	ø76 x 191
Min.	83.0	50.9	22.6	17.0	35.4	35.4	35.4	25.5	25.5
Max.	101.4	62.3	45.3	34.0	56.6	56.6	56.6	42.5	42.5

Recommended Enclosure Volumes, Dimensions* and Port Size	TS-W309	TS-W304R	TS-W254R	TS-SW3001S4	TS-SW3001S2	TS-SW2501S4	TS-SW2501S2	TS-SW841D	TS-SW301	TS-SW251
Enclosure Volume (l)										
Center	42.5	42.5	31.1	22.6	22.6	17.0	17.0	11.3	22.6	17.0
Box Dimensions: W x H x D (mm)	461 x 373 x 338	461 x 373 x 338	396 x 353 x 314	769 x 357 x 107 x 164	769 x 357 x 107 x 164	714 x 320 x 102 x 152	714 x 320 x 102 x 152	618 x 290 x 100 x 131	769 x 357 x 107 x 164	714 x 320 x 102 x 152
Box Dimensions: W x H x D1 x D2 (mm)	—	—	—	769 x 357 x 107 x 164	769 x 357 x 107 x 164	714 x 320 x 102 x 152	714 x 320 x 102 x 152	618 x 290 x 100 x 131	769 x 357 x 107 x 164	714 x 320 x 102 x 152
Port Size: d x l (mm)	ø76 x 203	ø76 x 165	ø76 x 203	ø76 x 266.7	ø76 x 279.4	ø76 x 292.1	ø76 x 317.5	ø64 x 152.4	ø76 x 254	ø76 x 203
Min.	35.4	35.4	25.5	18.4	18.4	14.2	14.2	7.1	18.4	11.3
Max.	56.6	56.6	42.5	28.3	28.3	19.8	19.8	14.2	28.3	22.6

*Measured externally. 19 mm MDF particle board recommended.

BANDPASS ENCLOSURES

The most complex of the common enclosures is a Band-pass enclosure. While there are several types (also called orders) of Bandpass designs, the most commonly used design is referred to as a single-reflex (or a 4th order) Bandpass. A single-reflex Bandpass enclosure consists of a subwoofer loaded into a small sealed enclosure fires into a vented chamber. As the sound waves from the subwoofer travel through the vented chamber upper midbass frequencies are filtered out, allowing only the low frequency bands to pass through- hence the name: Bandpass.



Advantages of a Bandpass enclosure design include: High efficiency over a narrow of low frequencies and some filtering characteristics.

Disadvantages of a Bandpass enclosure design include: decreased frequency response, sluggish frequency response, extreme complexity in design and assembly, larger enclosure size, and decreased power handling.

Recommended Enclosure Volumes, Dimensions* and Port Size	TS-W8102SPL	TS-W5102SPL	TS-W3002D4	TS-W2502D4	TS-W309D4	TS-W309S4	TS-W309D2	TS-W259D4	TS-W259S4
Enclosure Volume (l)									
Center (Sealed Chamber/Ported Chamber)	56.6/56.6	35.4/35.4	28.3/28.3	22.6/22.6	25.5/25.5	25.5/25.5	25.5/25.5	17.0/17.0	17.0/17.0
Box Dimensions: W x H x D (mm)	—	—	531 x 377 x 377	567 x 330 x 330	481 x 385 x 385	481 x 385 x 385	481 x 385 x 385	449 x 332 x 332	449 x 332 x 332
Port Size: d x l (mm)	—	—	ø76 x 178	ø76 x 203	ø76 x 114	ø76 x 114	ø76 x 114	ø76 x 165	ø76 x 165
Min. (Sealed Chamber/Ported Chamber)	50.9/50.9	31.7/31.7	22.6/22.6	17.0/17.0	19.8/19.8	19.8/19.8	19.8/19.8	12.7/12.7	12.7/12.7
Max. (Sealed Chamber/Ported Chamber)	62.3/62.3	38.9/38.9	34.0/34.0	28.3/28.3	31.1/31.1	31.1/31.1	31.1/31.1	22.6/22.6	22.6/22.6

Recommended Enclosure Volumes, Dimensions* and Port Size	TS-W309	TS-W304R	TS-W254R	TS-SW3001S4	TS-SW3001S2	TS-SW2501S4	TS-SW2501S2	TS-SW841D	TS-SW301	TS-SW251
Enclosure Volume (l)										
Center (Sealed Chamber/Ported Chamber)	25.5/25.5	25.5/25.5	17.0/17.0	17.0/17.0	17.0/17.0	12.7/12.7	12.7/12.7	9.9/9.9	17.0/17.0	12.7/12.7
Box Dimensions: W x H x D (mm)	481 x 385 x 385	481 x 385 x 385	449 x 332 x 332	—	—	—	—	—	—	—
Box Dimensions: Ws1 x Ws2 x H x D (mm)	—	—	—	180 x 306 x 388 x 559	180 x 306 x 388 x 559	197 x 277 x 338 x 509	197 x 277 x 338 x 509	177 x 257 x 290 x 529	180 x 306 x 388 x 559	197 x 277 x 338 x 509
Box Dimensions: Ws3 x Ws4 (mm)	—	—	—	121.5 x 184.5	121.5 x 184.5	118.5 x 158.5	118.5 x 158.5	108.5 x 148.5	121.5 x 184.5	118.5 x 158.5
Port Size: d x l (mm)	ø76 x 102	ø76 x 114	ø76 x 165	ø76 x 152.4	ø76 x 152.4	ø76 x 177.8	ø76 x 177.8	ø76 x 127	ø76 x 178	ø76 x 178
Min. (Sealed Chamber/Ported Chamber)	19.8/19.8	19.8/19.8	12.7/12.7	14.2/14.2	14.2/14.2	9.9/9.9	9.9/9.9	7.1/7.1	14.2/14.2	9.9/9.9
Max. (Sealed Chamber/Ported Chamber)	31.1/31.1	31.1/31.1	22.6/22.6	22.6/22.6	22.6/22.6	17.0/17.0	17.0/17.0	11.3/11.3	22.6/22.6	17.0/17.0

*Measured externally. 19 mm MDF particle board recommended.

Symbols for Special Features

Display	
Touch Panel Screen	Touch Panel Screen
7.0W	7.0-inch Wide Screen
5.8W	5.8-inch Wide Screen
3.0W	3.0-inch Wide Screen
VGA	VGA Display
OE	OEL Display
LED	LED Backlight
FULL DOT LCD	Full Dot LCD Display
MULTI-LANGUAGE DISPLAY	Multi-Language Display

Media & Format	
DVD VIDEO	DVD Video Compatible
DVD-R/RW	DVD-R/RW Compatible
CD-R/RW	CD-R/RW Compatible
MP3	MP3 (MPEG Audio Layer-3)
WMA	WMA (Windows Media™ Audio)
AAC	iTunes AAC (Advanced Audio Coding)
JPEG	Jpeg Image Viewer
DIVX	DivX Digital Media
DOLBY DIGITAL	Dolby® Digital Decoder

Connectivity

Made for iPod iPhone	Made for iPod and iPhone Products
Made for iPod	Made for iPod Products
ADVANCED APP MODE	Advanced App Mode
Bluetooth	Built-in Bluetooth®
Bluetooth Adapter Ready	Bluetooth Adapter Ready
SD	SD/SDHC Memory Card Compatible
AUX IN	AUX-In Connectivity (mini-jack)
USB	USB Direct Connection
Dual USB	Dual USB Ports
1A	1A High Current USB
Back Up Camera	Back Up Camera Ready

Audio

MIXTRAX	MIXTRAX
MIXTRAX EZ	MIXTRAX EZ
Hi-VOLT	Hi-Volt Preout
4 RCA	RCA Preout
24bit DA Converter	24-Bit DA Converter
Auto EQ	Auto EQ
Sonic Center Control	Sonic Center Control
Dual Zone	Dual Zone Audio/Video
SUPER TUNER III D	Supertuner® IIID
SUPER TUNER	Supertuner®
RDS	Radio Data System
SHORT WAVE	Shortwave Tuner
MOSFET 50Wx4	MOSFET 50 W x 4
45Wx4	45 W x 4
DSP	Digital Signal Processor
Specialized Audio Parts	Specialized Audio Parts

Amplifier

Variable HPF	Variable High Pass Filter
Variable LPF	Variable Low Pass Filter
HPF	High Pass Filter
LPF	Low Pass Filter
RCA IN/OUT	RCA Input/Output
RCA INPUT	RCA Input
SPEAKER INPUT	Speaker Level Inputs
Bass Boost	Bass Boost
Class FD	Class FD

General

Music Browser	Music Browser (please refer to page 33 for details)
DETACHABLE FACE SECURITY™ (DFS)	Detachable Face Security™ (DFS)
AUTO FLAP	Auto Flap Face
FLAP FACE	Flap Face
MULTIPLE COLOR	Color Customization
FLASHING COLOR	Separated Color Customization
LEVER KEY	Flashing Color
Rotary Commander	Lever Key
WIRED REMOTE INPUT	Rotary Commander
ANTI-DUST DESIGN	Wired Remote Input
	Anti-Dust Design

Subwoofer & Speaker

OPEN & SMOOTH	Open & Smooth Sound Concept (please refer to page 72 for details)
ib-FLAT	ib-FLAT Subwoofer (please refer to page 61 for details)
AIR SUSPENSION	Air Suspension System (please refer to page 69 for details)
INJECTION-MOLDED CONE	IMPP (Injection-Molded Polypropylene) Composite Cone (please refer to pages 78 and 82 for details)
KEVLAR	KEVLAR® Brand Fiber
HOLOGRAM	Pioneer 3D Hologram Sticker Attached to Product Packaging Carton (please refer to pages 60 and 72 for details)

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