

# CAR ENTERTAINMENT 2009

# Audio & AV



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# ALL SENSATIONS, NO SEAMS

What should all great audio sound systems share in common? Seamless hookups for portable digital devices to access more of your favorite entertainment in a wider variety of media formats. Just bring along a pocket-sized player. Plug into a Pioneer car headunit's power to rock your world. Break every barrier that ever kept you from enjoying your music as you like. With such sensational command within easy reach, there's no limit to how far you can go.



Audio Headunits & Accessories



ODR & Pure Component Systems





# MORE MEDIA, MORE DIRECT

Simplicity is a key to superior control. Just swipe a finger to fast-forward or rewind movie or music playback with Touch Slide. Direct connections between our headunits and iPod, iPhone, USB devices and portable media players are fast and easy. 112 key illumination colors even give you a great choice of ways to personalize the display.

> AVH-P4150DVD 7" Wide Display 2-DIN AV with USB Direct Connection

Pioneer

#### AVH-P5150DVD

7" Wide Display 1-DIN AV with USB Direct Connection

# COMMAND MORE DISPLAY COLORS

oneer

#### Selectable Screen Color & RGB Key Illumination

AVH-P5150DVD AVH-P4150DVD AVH-P3150DVD

Select among five color themes for the display and 112 colors for key panel illumination to seamlessly match your unit to your dash.





#### A TOUCH OF SUPERIOR SIMPLICITY

#### Touch Slide Operation

#### AVH-P4150DVD AVH-P3150DVD

With new Touch Slide Operation, just swipe your finger on the touch panel to fast-forward or rewind movie and music playback. The GUI (Graphic User Interface) on a wide color LCD makes file access and playback from DVD, CD, iPod or other digital device very easy, in keeping with the convenience of direct touch panel operation.





AVH-P3150DVD 5.8" Wide Display 2-DIN AV with Front USB Direct Connection

#### **VERSATILE PERFORMANCE**

#### Multiple Media Connectivity

Connect a Pioneer AV headunit to an iPod via USB, for direct control of audio and video menus, functions and selections via headunit's touch-panel display similar to iPod. This not only speeds up and simplifies file search and access—it paves the way to enjoy higher-quality sound via USB digital data transfer. Also, a built-in AUX-in mini jack makes it convenient to connect a Pioneer AV headunit to an external iPod Audio, iPod Video, MP4 player, digital camera or other portable audio/video media player.



FRONT



#### DivX<sup>®</sup> Playback

 AVH-P7950DVD
 AVH-P5150DVD
 AVH-P4150DVD

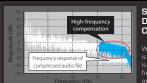
 AVH-P3150DVD
 DVH-P4150UB
 DVH-3150UB



DivX<sup>®</sup> is the world's most popular high-compression digital video format and does not appreciably compromise movie picture quality. Simply burn a movie from a PC onto a long-playing Video CD or DVD, then play that disc in a Pioneer AV headunit to gain a new appreciation of in-car theater.

#### Advanced Sound Retriever

(AVH-P4150DVD) (AVH-P3150DVD) (DVH-P4150UB) (DVH-3150UB) Pioneer AV headunits use advanced sound retrieval to access high-quality audio from compressed file formats.



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.

# na£VEA '||



#### Selectable Screen Color & RGB Key Illumination

#### AVH-P5150DVD AVH-P4150DVD AVH-P3150DVD

The AVH-P5150DVD, AVH-P4150DVD and AVH-P3150DVD let you select among five screen colors, according to your preference and color scheme. These headunits also feature 112 key illumination colors for even more ways to match car interior and dashboard lighting.







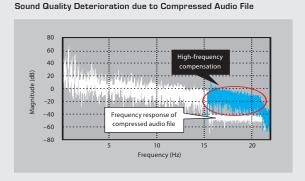
#### Direct Connection for iPod and iPhone Adds Convenience to AV Control

(AVH-P5150DVD\*) (AVH-P4150DVD) (AVH-P3150DVD) (DVH-P4150UB) Connect your iPod to the Made for AVH-P5150DVD for direct control  $\overline{\odot}$ iPod of iPod audio and video menus, CD-1U205V functions, and selections via Made for Interface Cable fo on-screen touch panel. This makes  $\odot$ iPod AVH-P5150DVD with iPod Vorks with song access and search extra-quick iPhone CD-IU205V\* and easy. NEW Similarly, the AVH-P4150DVD, AVH-P3150DVD and DVH-P4150UB -iPod displav can be connected to an iPhone. iPod \*Does not apply to iPhone. AVH-P5150DVD \*Please see page 30 for details about iPod compatibility with Pioneer headunits.

#### Advanced Sound Retriever

AVH-P4150DVD AVH-P3150DVD DVH-P4150UB DVH-3150UB

Hear the glory of original sound across a deeper, wider spectrum from highly compressed MP3, WMA and AAC files stored on USB device, iPod and portable media players. By compensating for 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. We can make your music sound close to CD quality.



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

#### Wide LCD Color Display with Touch Panel Operation



(AVH-P7950DVD) (AVH-P6050DVD) (AVH-P5150DVD) (AVH-P4150DVD) (AVH-P3150DVD\*) The AVH-P5150DVD reproduces clear, bright DVD images on its 7-inch LCD color display. AG (Anti-Glare) screen coating prevents external light diffusion from impeding visibility. Settings, source access and playback via touch panel with GUI (Graphic User Interface) makes operation effortless.

#### DivX<sup>®</sup> Playback



SOUND

(AVH-P7950DVD) (AVH-P5150DVD) (AVH-P4150DVD) (AVH-P3150DVD) (DVH-P4150UB DVH-3150UB

Create a DivX® movie on a PC, burn it to a disc, and play it in-car. Pioneer's AV headunits can play DivX® video files from CDs and DVDs. The world's most popular compressed digital video format, DivX® delivers speedy transfer without appreciably compromising picture quality.

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#### ▶ Selectable Screen Color & RGB Key Illumination

#### AVH-P5150DVD AVH-P4150DVD AVH-P3150DVD

The AVH-P4150DVD will accommodate your taste or mood. Select among five (Blue/Red/ Amber/Green/White) colors for display, and among 112 key illumination colors to match car interior, iPod and dashboard lighting.







#### Touch Slide Operation

#### AVH-P4150DVD AVH-P3150DVD

With a smooth swipe of your finger on the touch panel display, you can fast forward/rewind AV content playing from DVD-Video, DivX®, MP3/WMA/AAC and CD source formats, or scroll a list of files for you to select among. Note: Touch slide Fast-Forward/Rewind function not available on iPod.



#### Customizable Wallpapers

#### AVH-P4150DVD AVH-P3150DVD

Choose among 4 types of BGP (Background Picture) and 3 types of BGV (Background Visual). You can even set your favorite JPEG file as wallpaper. Parked with no place to go? Now you can enjoy a slideshow of your photos on a CD or USB Device.



#### Link Play for iPod

#### (AVH-P5150DVD\*) (AVH-P4150DVD) (AVH-P3150DVD) (DVH-P4150UB)

Not in the mood for all of the kinds of music that shuffle mode can play from your iPod library? Then here's a great way to listen only to your favorite kinds. Just plug your iPod directly into the unit using the optional cable, touch the Link Play button and select specific artist, album or genre. Now, you are ready to rock and roll.

\*Artist only

#### 256/2048 iPod inan HEATE 12:34 (#) xt #// Jump to another album of the same artist. Modern Gal 🛔 Miss. Nomer Artists • The Jump to another title that hasn't recently been played from the Misnamed same album Albums Jump to other music that you Genres haven't heard in a while from the same genre.

#### Speedier Search Using iPod and iPhone

#### AVH-P4150DVD AVH-P3150DVD DVH-P4150UB

Now, Pioneer's latest headunits are even easier to enjoy with an iPod. A new USB mechanism speeds up "List Search", refined processing speeds up "Alphabetical Search" for song, artist name, or album, and "Touch Slide Operation" speeds up access to any file in the connected iPod.



**AV Systems** 







#### Front AUX-In Mini Jack Connection for Audio and Video



#### AVH-P3150DVD DVH-P4150UB DVH-3150UB\*

Pioneer's AV headunits' AUX-in mini jacks extend playback from external iPod Audio, iPod Video, MP4 player, digital camera and other portable audio/video media players. These jacks are built into the front panel for fast, trouble-free connection. \*Audio only



#### Picture Quality Adjustment

#### AVH-P4150DVD AVH-P3150DVD

In addition to LED-backlight for brighter pictures, Black Level Adjustment displays deeper black that you'll appreciate when viewing movies. Color Temperature Adjustment allows you fine-tune color quality ensuring a crisper, clearer picture.



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Metallic hairline finish front panel



USB adapter ready (external unit control)

Like sound engineers, Pioneer applies Auto Time

Alignment to customize the front sound stage and

bring out vocal impact. After a microphone measures

- Adapter ready for iPod Bluetooth® adapter ready
- Dual illumination (white/red) •Built-in MPEG-1/-2 decoder

AVH-P7950DVD

- Built-in DSP (Digital Signal Processor) 5-mode preset equalizer
- -3-mode custom preset equalizer
- -2-channel/multi-channel Auto EQ
- Digital listening position selector
- · Joystick remote control

 6 m cable between monitor and hide-away unit •Multi-language guide—caution message only (English/Spanish/Portuguese/Traditional

Chinese)

#### Built-In Multi-Channel Processor for 6.1-Channel Surround Sound

#### AVH-P7950DVD

The Pioneer AVH-P7950DVD enhances the experience of cinema in a car in several ways. Play 6.1-channel compatible audio/video DVDs or DTS Neo:6-compatible media to maximize the drama that a full 6.1-channel surround sound system can create. The audio effect from eight speakers (four front left and right, two rear left and right, one center, and one rear center plus an active subwoofer) is especially astounding from the perspectives of driver and front passenger. The overall sound is stable and natural, particularly in the dedicated subwoofer channel for low frequencies.

(by camera\*)

\*Camera not includea

• Built-in GDC (Graphics Display Controller)

· Automatic rear view monitoring in reverse gear



# 2-Channel/Multi-Channel Selectable Auto Time Alignment and Auto EQ

equidistant from the listener, for a clearer

front-focused soundstage.

for multi-channel Auto EQ, and the information is used to automatically equalize frequency response curves. Such innovations deliver the best sound quality you can get in a car. You can even enjoy expansive 6.1- or 5.1-channel surround sound when listening to a DVD or 2-channel CD recording.



# Display colors and graphics may differ in photographs from actual appearance.







#### 7-Inch Wide In-Dash Monitor with Enhanced Touch Panel

#### (AVH-P7950DVD) (AVH-P6050DVD) (AVH-P5150DVD) (AVH-P4150DVD)

Gaining a greater touch of control over all your in-car entertainment now gets simpler. Whether it is playing a stack of DVDs, CDs, or a connected iPod or other portable media player, these models are more than a multimedia headunit—it is a multi-operational centerpiece engineered for more direct access to the new generation of in-car entertainment. Its brilliant 7-inch-wide in-dash monitor features easy-access smudgeresistant touch panel and external light-diffusing AG (Anti-Glare) screen coating. Every image emanating from the screen is bold, clear and sharp, yet easy on the eyes.

#### In-Car Sound Staging

#### AVH-P6050DVD

Choose among four presets (Music Studio/Dynamic Theater/Actor's Stage/Relax Living) designed for you to listen to optimal advantage, according to the nature of your source material, acoustic environment and personal preference. Touch panel operation makes it extra-easy to select the right setting to stage your sound.

#### ■ 6-Disc CD/DVD Changer

#### AVH-P6050DVD

Keep the music and movie entertainment rolling without interruption for as long as you like. The CD/DVD changer section holds up to six discs. Use the touch panel to select and sequence disc tracks for playback as desired. With the 7-inch wide monitor, confirming details and data is simplicity itself.

In all, it is visibly superior to what more conventional AV command centers have to offer in overall performance and style.

#### A Clear Touch Panel Makes Operation Easy

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		No.57
AVH-P5150DVD	AVH-P4150DVD	AVH-P6050DVD

AVH-P5150DVD

Screens For Four Sound Staging Presets (AVH-P6050DVD)

Music Studio

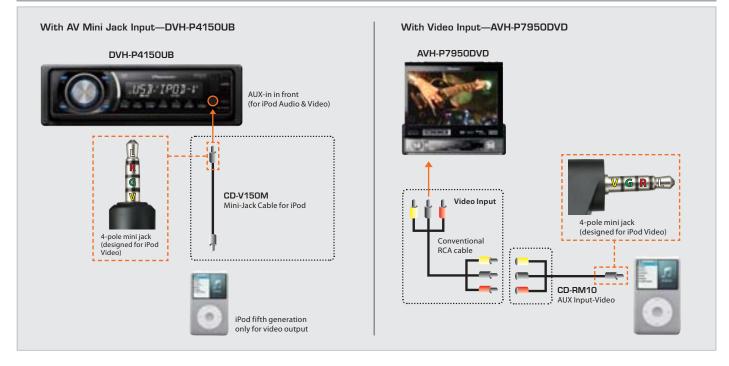








#### View iPod Video Via Pioneer AV Headunits by Mini Jack



#### ■ Tips: iPod Video Setup

You will need to change the settings on both the iPod and headunit in order to use iPod Video.

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Parame Land	10.1
-trans.	
Baimaing In-	
these lighting	
10.64	
Planting	
To Signal	which a
1. iPod TV OL	JT setting

must be "ON"

iPo	d Initial Menu	The second
\$	RUX1	1Pod
	RUX2	Dff
	Rear Speaker	
	Caution Language	English
\$	TEL	Mute

2. AUX 1 should be switched to "iPod" in the initial menu. The initial menu is available even if the source is off.

**AV Systems** 

# ENTERTAINMENT EXPANDS

You can choose among a greater range of audio/video content to play than discs alone can offer-thanks to a Pioneer 1-DIN DVD player's front built-in USB and AUX-in jacks for easy, direct connection to an iPod or other digital device.

#### DVH-P4150UB 4-Channel High-Power DVD/VCD/CD Receiver with USB Direct Connection NEW 2 RCA DVD DIGITAL Digital Out VIDEO Control CCC CT BEAGABLE PAL/NTSC ¥Ν Pioneer LIST -3.' FRONT . Made for Made foriPod

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Direct connection for iPod and iPhone (audio & video) (CD-IUS0V required) DivX\*/MP3/WMA/AAC playback on DVD and CD JPEG on CD-R/RW and USB Front USB direct connection: USB 2.0 (full speed) •Bluetooth\* adapter ready =Built-in MPEG-1/-2 decoder •Built-in decoder (Dolby Digital, Linear PCM) •96 KHz/24-bit DAC (for audio)

• 10-bit video DAC
 • Advanced Sound Retriever
 • EEQ
 — S-mode preset equalizer
 — 1-mode custom preset equalizer
 — 3-band equalizer (Bass/Mid/Treble)
 —2-mode selectable loudness
 • Rotary volume
 • IP-Bus input

•2 RCA pre-outs (front + rear)
 •A/V inputs and outputs
 — I RCA Video input
 — I RCA Video output
 •Nulti-channel processor (DEQ-P7650)
 control (CD-DD25 required)
 •External unit control via IP-Bus (2 units)
 •AUX-in by mini jack (front for audio & video)

Pioneer

A/C

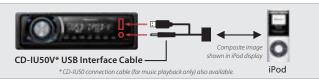
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use

Works with iPhone



#### Front USB Direct Connection for iPod with DVH-P4150UB





#### DivX<sup>®</sup>/MP3/WMA/AAC Playback on DVD



ALL AV HEADUNITS\* \*Except AVH-P6050DVD

Pioneer AV headunits can play compressed data formats (DivX® movies; MP3, WMA and AAC audio) burned from a PC onto CDs and DVDs. Simply load a disc into your car entertainment system and enjoy. Capacity of a recordable DVD is so huge that your entire music collection is likely to fit on one or two discs full of MP3, WMA and AAC files, with no need for external devices or connections.

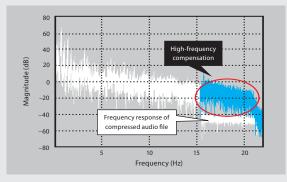


#### Advanced Sound Retriever

AVH-P4150DVD AVH-P3150DVD DVH-P4150UB DVH-3150UB

Hear the glory of original sound across a deeper, wider spectrum from highly compressed MP3, WMA and AAC files stored on USB device, iPod and portable media players. By compensating for 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. We can make your music sound close to CD quality.

#### Sound Quality Deterioration due to Compressed Audio File



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AV Systems

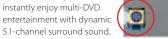
#### Multi-Channel Processor



It is easy to expand DVD entertainment. The DEQ-P7650 has dual optical inputs for further upgrading your DVD system.

For example, by connecting one main DVD headunit (AVH-P5150DVD, DVH-P4150UB, etc.) plus additional source DVD player (XDV-P650) with

the DEQ-P7650, you can instantly enjoy multi-DVD





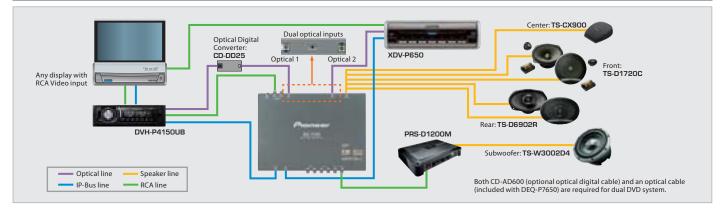
The driver who is looking for the versatility, sonic purity and distortion-free control of digital signal processing should be introduced to the DSP features of the DEQ-P7650. Built-in 6-channel DSP converts the incoming signals to digital form. The user can then balance the output signal to match the acoustic characteristics of a specific car and create a personal sound profile by using the Parametric Equalizer and SFC controls. A range of DSP-based sound timing features allows the DEQ-P7650 to be set up for truly optimum performance.

SFC (Sound Field Control) lets you optimize the aural ambience of every sound source. Musical, Drama and Action modes are heard to best advantage over 5.1-channel surround systems. For Jazz, Hall and Club modes, a two-channel stereo system is sufficient.

# CD-DD25

Optical Digital Converter for DEQ-P7650 Connection with AVH-P5150DVD, AVH-P4150DVD, AVH-P3150DVD and DVH-P4150UB

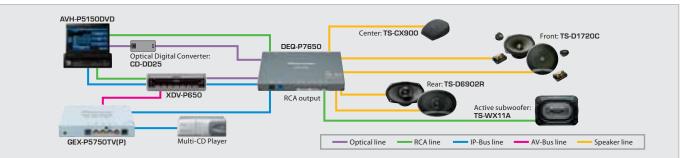
#### DEQ-P7650 Connection Example—DVH-P4150UB & Monitor plus Source DVD Player



#### DEQ-P7650 Connection Example—AVH-P5150DVD plus Source DVD Player



#### DEQ-P7650 Connection Example—AVH-P5150DVD plus Source DVD Player and TV Tuner



### **Other AV Units**



#### Hide-Away TV Tuner for PAL/SECAM\*

•24-station (12 TV1/12 TV2) presets by BSSM P-Bus input and output terminals
 RCA composite video output\*\* for front and rear display (GEX-P5750TVP: PAL/ SECAM, GEX-P5750TV: 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

# GEX-P5750TV

#### Hide-Away TV Tuner for NTSC/PAL-M

\* Compatible with B, G, H, D, K, I (Details on page 59) \*\* The video output does not feature conversior function for rear display(s) between PAL and NTSC systems

0000 GEX-P5750TVP

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# IN-CAR SURROUND SOUND FOR MAXIMUM IMPACT

#### **Peerless DVD Playback**

The AVH-P7950DVD player packs versatile technology including 50 W x 8-channel MOSFET amplifier and decoders for DTS, DTS-ES, DTS Neo:6, DTS 96/24, Dolby Digital, Dolby Pro Logic II, Dolby Digital EX and Linear PCM for enhanced multi-channel surround and all-around versatility. Auto time alignment and multi-channel Auto EQ effortlessly customize

Simple touch panels make this and other Pioneer AV headunits a breeze to operate. The AVH-P7950DVD\*, DVH-P4150UB and DVH-3150UB can even play multiple formats: MP3, WMA, AAC and DivX<sup>®</sup> files from DVDs. AVH-P7950DVD has built-in multi-channel processor.

AVH-P7950DVD*	AVH-P6050DVD	AVH-P5150DVD	AVH-P4150DVD
AVH-P3150DVD	DVH-P4150UB	DVH-3150UB	XDV-P650



AVH-P7950DVD " (16:9) Wide WVGA Fully Motorized LCD Color Display with 8-Chan High-Power DVD/VCD

S. E

# **Expanding Sound By The Unit**

The solution to achieve every sound has never been simpler, The DEQ-P7650 Multi-Channel Processor lets you enjoy 5.1-channel surround sound from a dual DVD system of your the comfort of your cabin. You can even use the AXM-P7650 Multi-Channel Processor Controller to upgrade your car's pre-installed OEM system to 5.1-channel surround.



#### **Digital Amps of Compact Power**

Pioneer's Class-FD ICEpower and Class-D power amplifiers redefine state-of-the-art power amplification, thanks to their high-efficiency input power processing, compact design, and dynamic, yet stable clarity of subwoofer and speaker output



PRS-D2000SPL

Bridgeable Amplifier		
PRS-D4200F	PRS-D2200T	PRS-D1200M
PRS-D2000SPL	PRS-D1200SPL	GM-D8400M

GM-D7400M

PRS-D4200F

#### **Dynamic Linear Surround**

To see how well high-performance speakers can suit even compact spaces, consider Pioneer shallow-type subwoofers that are shallow enough in depth to install behind or under seats, yet deliver deep, dynamic bass. Smartly designed for easy 6.1- and 5.1-channel surround, the lineup of Pioneer's flush mount speakers features extra-rigid lightweight cones that deliver crisp, clear low-frequency sound across a wide dynamic spectrum from low whispers to massive volumes.

TS-D6902R	TS-D1602R	TS-W12PRS
TS-M171PRS	TS-S101PRS	TS-TO31PRS
TS-C171PRS	TS-C131PRS	TS-D1720C
TS-D1320C	TS-A1702C	TS-A1302C
TS-W3002D2	TS-W3002D4	TS-W308D2
TS-W308D4	TS-SW3001S4	TS-SW3001S2
TS-SW2501S4	TS-SW2501S2	TS-WX11A
TS-WX22A	TS-CX900	



TS-SW3001S4

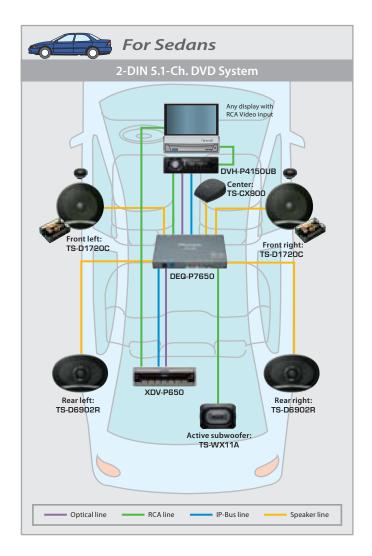
30 cm (12") Shallow-M Component Subwoo (Single 4 Ω Voice Coil

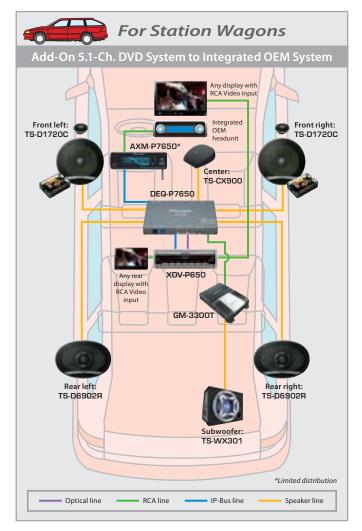


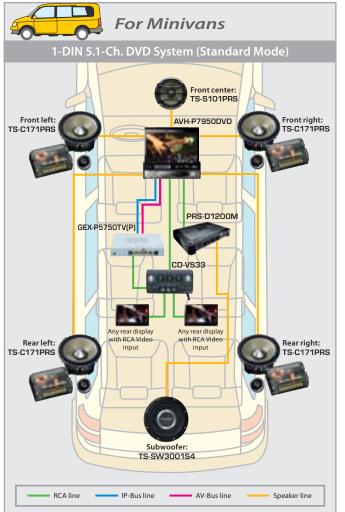
TS-D6902R

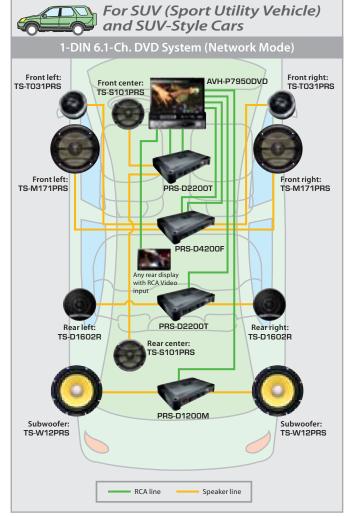


TS-WX301 Bass-Reflex Subwoofer









# UNIFY YOUR UNIVERSE OF SOUND

Gain capability to extend your listening pleasure from more sources, for longer lengths of time. Now, a Pioneer audio headunit can play high-capacity, extra-compact SD memory cards as well as iPod, iPhone and portable media players. Every connection is simple, so you can bring more music onboard without complications.

Pioneer

DEH-4150SD Handy, Versatile SD Card Compatibility



DEH-6150BT Built-in Bluetooth® for Safer Calling

Proneer 200 Harmonic Relaytion Contraction Contractio

DEH-P5150UB Easy Front USB Connection and OEL Display

#### **EXPANDED CONNECTION**

#### Multiple Media Connectivity

Getting maximum play out of your in-car system requires a more seamless connection to various media. So the DEH-4150SD lets you bring SD memory cards containing music onboard for headunit storage and playback. You can also directly connect, control and playback music from an iPod, iPhone, USB device or other external portable media player.

An AUX input jack is easily accessible on the front panel.







#### **RAISING DIGITAL AUDIO QUALITY**

#### Advanced Sound Retriever

				ADVANCED
DEH-2150UBG	FH-P6050UB			
DEH-P715OUB	DEH-6150BT	DEH-P515OUB	DEH-4150SD	DEH-3150UB

Pioneer audio headunits process high-quality sound even from compressed audio files stored in an iPod, USB device, etc.

-1	ADVANCED Sound Retriever	1
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#### MAKING CONVENIENCE MORE COMFORTABLE

#### Wired Remote Control Input

DEH-P7150UB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	DEH-3150UB
DEH-2150UBG				

For more convenient entertainment system control that won't compromise driving safety, this feature lets a driver operate a Pioneer headunit without taking hands off of the steering wheel (given that the vehicle has factory-equipped remote control installed on the steering wheel).

#### Bluetooth<sup>®</sup> Wireless Technology

#### DEH-6150BT

Pioneer's new DEH-6150BT features wireless Bluetooth<sup>®</sup> with Parrot module for easy, safe phone calling, excellent noise reduction to keep conversations clear and enhanced cell phone compatibility.







# Introducing a Better Hands-Free Solution

#### Simple and Convenient

Enjoy the convenience of having Bluetooth<sup>®</sup> built right into the unit, with no additional hands free car kits or other accessories needed. The unit acts like a speakerphone, channeling the sound through your car speakers which makes the call sound better. It also automatically mutes your music so that you'll never miss a call.

#### DEH-6150BT

Notes: Use of Bluetooth<sup>®</sup> is permissible according to regulations on radio waves in the country in which the Bluetooth<sup>®</sup> product is used. Ask your nearest dealer about Bluetooth<sup>®</sup> connectivity with your cell phone.

#### Built-in Bluetooth<sup>®</sup> Technology with Parrot Module

With Bluetooth<sup>®</sup> module by Parrot, cell phone compatibility is extended, and calls come in loud and clear.

#### **Expanded Cell Phone Compatibility**

Thanks to Parrot technology, Pioneer units are now compatible with more cell phones.

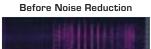
#### Auto Phonebook Synchronization

Connect your cell phone to the DEH-6150BT, and phonebook synchronization is automatic.



#### Improved Noise Reduction

The DEH-6150BT incorporates new noise reduction technology that can reduce the effect of road noise.

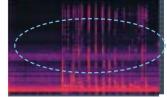




Parrot

move wireless

😵 Bluetooth°



#### More Phonebook Memory

Use with Phone Pairing to transfer your entire phonebook at a single time to the headunit, which can memorize up to 1,000 different numbers: e.g., 500 persons  $\times$  2 phone types (cell phone, home).







1,000 numbers

#### SMS Alert

SMS alert lets you know if you receive any incoming text messages, even if you are listening to loud music. The message alert will play a sound and an icon will appear on the screen.

#### Phonebook Access

Don't stop the music to make a call. You can access a phonebook without switching from the sound source to Bluetooth® mode.





#### "Wireless Audio" Control and Streaming

When you're not utilizing hands-free calling, the DEH-6150BT can use Bluetooth® Wireless Technology to feed your appetite for entertainment. Using "wireless audio" control and streaming (AVRCP, A2DP), you can control and listen to a compatible audio player or music phone on your headunit.





ADVANCED

RETRIEVER

#### Advanced Sound Retriever



\*Artist only

3D Animated Screensave

Press List Key

Press and hold the List

Key for about three seconds.

library. You can also have your passenger control your music directly from the iPod.

Album

Artist

Genre

Jump to another title that hasn't recently been played from the same album.

Jump to another album of the same artist.

Jump to other music that you haven't heard in a while from the same genre

White Color OEL Display

FLDO) TREO3

#### **Audio Headunits**



#### Built-in SD Memory Card Slot (SDHC Compatible)



#### DEH-4150SD

The new DEH-4150SD has a built-in slot for SD memory card\* of up to 16 GB containing MP3, WMA, AAC and WAV music files. Such huge capacity allows for seamless playback with no need to change SD cards often. That goes a long way toward extending convenience and listening pleasure.

\* Please see page 27 for details about SD memory card compatibility with DEH-4150SD.



#### ▶ USB Direct Connection for iPod and iPhone

 DEH-P7150UB\*
 DEH-6150BT
 DEH-5150UB
 DEH-4150SD
 FH-P6050UB\*

 Pioneer's new headunit is ready to roll with capability for direct connection\*\* to iPod nano, iPod or iPhone. File search and access are extra-quick. The headunit keeps song, artist, time and album information displays very clear and user-friendly.

\*Does not apply to iPhone. \*\*CD-IU50 required



#### Speedier Search Using iPod and iPhone

DEH-6150BT DEH-P5150UB DEH-4150SD

Now, Pioneer's latest headunits are even easier to enjoy along with an iPod than previous headunits. A new USB mechanism speeds up "List Search", refined processing speeds up "Alphabetical Search" and the Rotary Commander speeds up access to any file in the iPod.

#### Front USB Direct Connection

FROUT

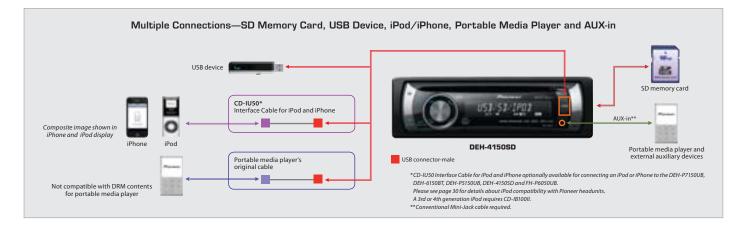
DEH-6150BT DEH-P5150UB DEH-4150SD DEH-3150UB DEH-2150UBG Take your favorite MP3, WMA and AAC files for a ride. New Pioneer headunits have a front USB terminal to directly connect\*\* a portable media player, USB device or other USB-compatible gear, so you can play in your car whatever you've recorded via PC. It's fast and easy. No adapters are required.

\*\*Please use CD-U50E USB extension cable if a direct connection causes a USB device to protrude from the headunit in a way that can interfere with driving.









Audio Headunits

#### DEH-4150SD: SD Memory Card Formats and Features for Playback

Applicable Logomarks	arks Sign Sign	•	Decoding Format	MP3	MPEG-1/-2 Audio Layer-3	
			•		WMA	Version 7/7.1/8/9/10/11 (2-ch. audio)
	Mili	Mini" EE	•*		AAC	MPEG-4 AAC (iTunes encoded only) (version 7.7 and earlier versions)
	Micro		-*		WAV	Linear PCM, MS ADPCM (non-compressed)
		•*	Text Data	File/Folder Name	• (64 bytes)	
Max. Memory Capacity			16 GB	FF/REV & Pause		•
File System			FAT16/32	Scan/Repeat		• (File/Folder)
NOTES: "SDHC", "miniSD", "miniSDHC", "microSD" and "microSDHC" Logos are trademarks.			Random Play		• (Folder/All)	
NOTES: "SD", "SDHC", "miniSD SDHC stands for SD High Capa * Maximum capacity of applic.	acity memory card.					



#### Front AUX-In Connection

 DEH-6150BT
 DEH-P5150UB
 DEH-4150SD
 DEH-3150UB
 DEH-2150UBG

 DEH-1150MPG

Hook up your portable digital devices with ease in an instant. Each new Pioneer headunit has a built-in AUX input on its front panel for connecting a portable media player and external auxiliary devices.

#### Wired Remote Control Input

DEH-P715OUB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	DEH-3150UB
DEH-2150UBG				

Since entertainment shouldn't compromise driving safety, Pioneer engineered this feature for cars with factory-equipped remote control installed on the steering wheel to give drivers more convenient control of a Pioneer headunit without having to take their hands off the wheel.

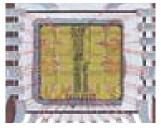
#### Built-in 50 W × 4-Channel High-Power MOSFET Amplifier

#### ALL AUDIO HEADUNITS\* \*Except KEH-P2035, RS-D7RII and DEX-P90RS

To minimize voltage loss in its headunit amplifiers, Pioneer built-in high-performance Power MOSFET integrated circuitry that processes signals efficiently at 50 W  $\times$  4 maximum total output.

High-speed MOSFET switching reduces distortion to virtually nothing at high frequency ranges, thanks to superior characteristics of linearity that smooth the signal transmission path from input to output. Pioneer's independent routing of input and output current is essential to obliterating distortion.

High power of 50 W per channel and characteristics of the bonding wire ensure excellent sound quality. The 99.99 % pure OFC (oxygen-free copper) bonding wire has low electrical resistance, so minimal electric power is lost as heat in the IC chip, enhancing power handling efficiency as well as sound quality.





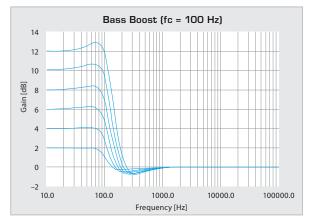
#### Display Off Enhances Security and Ambience

DEH-P7150UB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	FH-P6050UB
RS-D7RII	DEX-P90RS	DEH-P80RSII		

To avoid unwanted attention and indulge more completely in the listening experience, press and hold the DISP OFF button for two seconds, and all headunit illumination and display lights (except that for the DISP OFF button) turn off instantly, even while the headunit is in playback mode.

#### Bass Boost

DEH-P7150UB DEH-6150BT DEH-P5150UB DEH-4150SD FH-P6050UB Bass Boost offers a choice between 0 dB to 12 dB level settings that can be adjusted in 2 dB steps, letting you set the optimal bass level for each speaker and subwoofer connected to a system, according to preference and music style. The result is more precise control over the balance of sounds to enhance the overall impact of the music you listen to.



Power MOSFET high-power IC chip



#### EEQ (Easy Equalizer)

ALL AUDIO HEADUNITS\* \*Except KEH-P2035, RS-D7RII and DEX-P90RS

Sound shaping is at your command. You can adjust the sound according to in-car acoustic characteristics and the music you listen to.

#### 5-Mode Preset Equalizer

You can switch among five preset equalization curves\* (Super Bass/Powerful/Natural/ Vocal/Flat) simply by pushing an EQ button. Each of these settings boosts bass and high-frequency ranges in ways that suit the music best.

\*Dynamic/Powerful/Natural/Vocal/Flat in the DEH-3150UB, DEH-2150UBG and DEH-1150MPG.

#### 2-Mode Custom Preset Equalizer

Create and memorize your favorite equalization curves from an amazing variety of sound-shaping dimensions and combinations, just as you like. Custom-1 mode can memorize adjusted preset curves using 7-band\* digital equalizer settings for each source (Source EQ memory). Custom-2 mode can register your favorite custom curve (based on Flat mode\*\* curve) for all sources using the 7-band\* digital equalizer. \*L/R independent 16-band for DEH-P80RSII.

\*\* Flat mode also remains after customizing equalization curve.

#### **1-Mode Custom Preset Equalizer**

Pioneer's headunits feature a 1-mode custom preset equalizer for creating your favorite sound curve from an amazing variety of sound-shaping dimensions/combinations exactly as you like. This mode can memorize adjusted preset curves by 3-band parametric equalizer\* settings for each source.

\*Bass/mid/treble equalizer for DEH-3150UB, DEH-2150UBG and DEH-1150MPG.

#### 2-Way Crossover (HPF/LPF)

Our most feature-loaded models allow extra EEQ flexibility with selectable HPF (High Pass Filter) and LPF (Low Pass Filter). Headunits of these systems can perform as amplifiers or separate crossover units for easier system control, particularly of low-frequency signals.

#### 3-Mode Selectable Loudness

Select among three levels (high/mid/low) to instantly boost volume when driving noise overpowers in-car sound.

#### 2-Mode Selectable Loudness

Select high or low volume boost level when extraneous noise drowns out your sound system.

	DEH-P7150UB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	DEH-3150UB	DEH-2150UBG	DEH-1150MPG	FH-P6050UB	DEH-P80RSII
5-mode preset equalizer	•	•	•	•	٠	٠	•	•	•
Custom preset equalizer <2 = 2-mode, 1 = 1-mode>	2	1	2	1	1	1	1	2	2
Digital graphic equalizer <16 = 16-band, 7 = 7-band> <l independent="" r="L/R"></l>	7		7					7	16, L/R
2-way crossover: HPF/LPF <l independent="" r="L/R"></l>	•	•	•	•				•	L/R
3-band parametric equalizer		•		•					
Bass Boost	•	•	•	•				•	
Selectable loudness <3 = 3-mode, 2 = 2-mode>	3	3	3	3	2	2	2	3	3
Nuance control	•		•					٠	•

#### **2-DIN Player**



# FH-P6050UB 4-Channel High-Power WMA/MP3/AAC/CD Receiver with USB Direct Connection



#### ■ 3-Line Segmented OEL Display

#### FH-P6050UB

Pioneer's 2-DIN WMA/MP3 player FH-P6050UB features an extra-large, wide display with 3-line Segmented OEL of outstanding contrast and brightness. The 3-line character section offers a clear, uncluttered readout of artist, song title and operation menu data throughout a wide viewing angle range.



# <section-header>Multi-CD PlayersCDX-P1280Image: Construction of the state state

# KEH-P2035

4-Channel High-Power Cassette Receiver

Adapter ready for iPod (external unit control)
 BTB (Bass/Treble Booster)
 -2-mode selectable loudness

1 RCA pre-out (rear)
Radio intercept
Multi-CD control (pause and repeat)

SUPER TUNER

1 RCA

# 

OEL

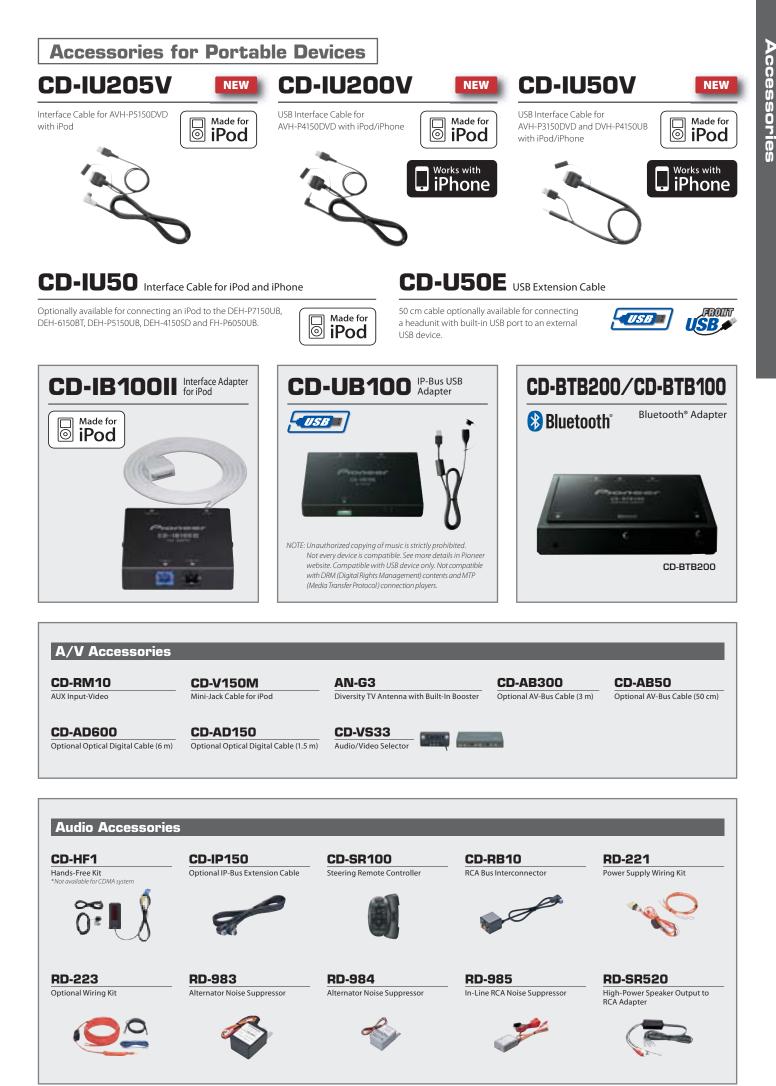
nnect With Your Portable	Any Portable	Full Control for iPod & iPhone	Control USB Device <sup>†</sup>	Bluetooth® Hands-Free	Access SD Card
JDIO/VIDEO	AUX Input	iPod iPhone	USB Mass Storage Class	Mobile Phone	SD memory Card
	Built-In <sup>(1)</sup>	CD-IB100II <sup>(2)</sup>	CD-UB100 <sup>(3)</sup>	CD-BTB200/CD-BTB100	_
AVH-P6050DVD	Built-In <sup>(1)</sup>	CD-IB100II <sup>(2)</sup>	CD-UB100 <sup>(3)</sup>	CD-BTB200/CD-BTB100	_
AVH-P5150DVD	Built-In	CD-IU205V <sup>(2)</sup>	Built-In	CD-BTB200/CD-BTB100	_
AVH-P4150DVD	Built-In	CD-IU200V <sup>(4)</sup>	Built-In	CD-BTB200/CD-BTB100	_
AVH-P3150DVD	Built-In (Front)	CD-IU50V <sup>(4)</sup>	Built-In (Front) <sup>††</sup>	CD-BTB200/CD-BTB100	_
DVH-P4150UB	Built-In (Front)	CD-IU50V <sup>(4)</sup>	Built-In (Front) <sup>††</sup>	CD-BTB200/CD-BTB100	_
DVH-3150UB	Built-In <sup>(1)</sup> (Front)		Built-In (Front) <sup>++</sup>		_
JDIO HEADUNITS					
DEH-P7150UB	Built-In	CD-IU50 <sup>(2)(5)</sup>	Built-In	CD-BTB200/CD-BTB100	
DEH-6150BT	Built-In (Front)	CD-IU50 <sup>(5)</sup>	Built-In (Front) <sup>††</sup>	Built-In	
DEH-P5150UB	Built-In (Front)	CD-IU50 <sup>(5)</sup>	Built-In (Front) <sup>††</sup>	CD-BTB200/CD-BTB100	
DEH-4150SD	Built-In (Front)	CD-IU50 <sup>(5)</sup>	Built-In (Front) <sup>††</sup>		Built-In
DEH-3150UB	Built-In (Front)		Built-In (Front) <sup>††</sup>		_
DEH-2150UBG	Built-In (Front)		Built-In (Front) <sup>++</sup>		
DEH-1150MPG	Built-In (Front)				
FH-P6050UB	Built-In	CD-IU50 <sup>(2)(5)</sup>	Built-In	CD-BTB200/CD-BTB100	_

<sup>(a)</sup> Audio only, <sup>(a)</sup> Does not apply to iPhone, <sup>(b)</sup> External control. <sup>(a)</sup> CD-USO connection cable (for music playback only) also available. <sup>(a)</sup> A3rd or 4th generation iPad requires CD-UB10011. <sup>(b)</sup> Not every device is compatible. See more details in Pioneer website. Compatible with MSC (Mass Storage Class). Not compatible with DMR (Digital Rights Management) contents. <sup>(c)</sup> Plase use CD-USOE USB extension cable if a direct connection causes a USB device to protrude from the headunit in a way that can interfere with driving.

Connection for iPod Table with Pioneer Headunits A: Plays audio A/V: Plays audio and video			Ū	Ō		0		<b>&gt;</b>				Õ	0	3	<b>4</b> 0
Software Version Direct Connection for iPod			2.0	2.0	2.3.0	1.2.1	1.3.0	1.1.2	1.1.5	2.1.1	1.4.1	1.3.1	1.3.1	1.1.3	1.0.2
Model	Interface	Use with	iPh iPhone	ione iPhone 3G	3rd gen.	iPod 4th gen.	5th gen.	iPod classic	iPod 1st gen.	touch 2nd gen.	iPod mini	1st gen.	iPod 2nd gen.	nano 3rd gen.	4th ger
AVH-P7950DVD/AVH-P6050DVD	IP-Bus	CD-IB100II	(1)(2)	(1)(2)	A	A	A	A	A	A <sup>(1)</sup>	A	A	A	A	A <sup>(1)</sup>
	AUX	CD-RM10	Α	А	_	_	A/V <sup>(3)</sup>	_	_	_	_	_	_	_	-
AVH-P5150DVD	Direct Connection	CD-IU205V	(2)	(1)(2)	А	A	A/V	A/V	A/V	A/V <sup>(1)</sup>	А	А	А	A/V	A/V <sup>(1)</sup>
AVH-P4150DVD	USB Direct Connection for Video	CD-IU200V	A/V	A/V	_	_	A/V	A/V	A/V	A/V	_	А	A	A/V	A/V
	USB Direct Connection for Music	CD-IU50	A	A	-	_	A	A	A	A	_	A	А	А	А
AVH-P3150DVD	USB Direct Connection for Video	CD-IU50V	A/V	A/V	_	_	A/V	A/V	A/V	A/V	_	А	A	A/V	A/V
	USB Direct Connection for Music	CD-IU50	A	A	-	_	A	A	A	А	_	A	А	A	А
DVH-P4150UB	USB Direct Connection for Video	CD-IU50V	A/V	A/V	_	_	A/V	A/V	A/V	A/V	_	А	А	A/V	A/V
	USB Direct Connection for Music	CD-IU50	А	A	-	_	A	A	А	A	_	А	А	А	А
DVH-3150UB	AUX	3.5 mm AUX Cable	A	А	А	Α	А	А	A	А	А	А	A	А	А
DEH-P80RSII	IP-Bus	CD-IB100II	(1)(2)	(1)(2)	A	А	A	A	A	A <sup>(1)</sup>	А	А	А	А	A <sup>(1)</sup>
	AUX	3.5 mm AUX Cable	Α	А	_	_	_	_	_	_	_	_	_	_	_
DEH-P7150UB	USB Direct Connection for Music	CD-IU50	_	_	-	-	Α	A	A	А	-	А	А	A	А
	IP-Bus	CD-IB100II	(1)(2)	(1)(2)	А	A	-	_	_	-	А	-	_	-	_
DEH-P5150UB/FH-P6050UB	USB Direct Connection for Music	CD-IU50	A	А	-	_	A	A	A	A	_	А	А	А	А
	IP-Bus	CD-IB100II	_	_	А	А	-	_	_	_	А	_	_	_	_
DEH-6150BT/DEH-4150SD	USB Direct Connection for Music	CD-IU50	A	A	_	_	А	A	A	А	_	A	А	A	А
	AUX	3.5 mm AUX Cable	_	-	А	A	-	_	_	-	A	-	-	-	-
DEH-3150UB/DEH-2150UBG/DEH-1150MPG	AUX	3.5 mm AUX Cable	A	А	А	A	A	А	А	А	А	А	А	A	А

(1) Battery charge function not applicable. (2) A caution that "This accessory is not made to work with iPhone" appears on the display of an iPhone connected to the headunit. When an iPhone or iPhone 3G is connected to the headunit, car speakers may emit noise and interference may occur in transmission of signals sent from and received by the iPhone or iPhone 3G. (3) Athough video may not be browsed via headunit, it may be displayed on the iPod itself. TV out needs to be On. Use iPod for the full video operation. Notes: Since some functions may be limited by the headunit, please refer to operation manual for details. • Some functions may be limited, depending on iPod software version. This chart is based on information valid as of November, 2008. Please ask your nearest dealer for the latest information.

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# PURER PERFORMANCE FOR MAXIMUM PLEASURE

For the ultimate in-car sensation, Pioneer Reference Series (PRS) parts and components are engineered to meet the highest standards of performance and efficiency. Optical Digital Reference (ODR) and Pure Component Systems included in this series reproduce natural linear characteristics for sound as clear as a breath of fresh air.



Four Pioneer car audio products including the DEH-P80RSII and TS-D1720C won 2008 "Readers Choice" honors awarded by readers of Germany's renowned *autohifi* car audio magazine.







# **ODR (Optical Digital Reference) and RS Speaker Systems**

RS-D7RII Component CD Receiver Limited distribution IP-BUS High precision sound master clock circuitry
 Hi-quality CD drive
 Hi-bit conversion
 Digital direct
 Frequency change: 96 kHz to 44.1 kHz
 Source DVD control
 Digital optical input/output
 IP-Bus input/output **S** Auto-slide face
Rotary volume (High quality feel is enhanced by using aluminum for the volume and cross key while adding spinning graved finish on it) •OFC power/ground cable •Dual illumination (white or red selectable) CONTRACT TROCK O 7 23 Inexpressible Pioneer Red illumination **RS-P90** [Limited distribution] Universal Digital Pre-Amplifier

#### DSP Hi-VOLT



Advanced Segment 24-bit D/A Converter
 Digital listening position selector
 Time Alignment
 Parametric bass/treble control
 -31-band L/R independent graphic equalizer
 (I/3 oct) with level control (±12 dB/0.5 dB
 stens)

- 4-way independent L/R crossover network (high/mid/low/subwoofer) —Crossover frequency: 20 Hz to 20,000 Hz

- Crossover nequency. 20 A2 to 20,000 f (1/3 oct.)
   Crossover slope: 0 dB to -72 dB
   Crossover presets: 5
   Gold-plated 8-channel RCA output (high/mid/low/subwoafer)
   Gold-plated screw-type power/ground tarminal;

• The one-sided terminals and the square aluminum bonnet that rotates by every 90 degrees considered for installation • High-performance 32-bit floating binary point type DSP

#### High-Precision Sound Master Clock Circuitry

#### RS-D7RII

The latest integrated circuits require superior clock signal quality to handle digital data accurately without distortion at ever-higher speeds. Dual independent Sound Master Clock Circuitry in the RS-D7RII generates clock waveforms to read and process digital signals with ultra-precision, and eliminate jitter noise in transmission. The result: extraordinarily clear, pure sound.



#### High-Performance SHARC<sup>®</sup> Digital Signal Processors

#### RS-P90

For remarkably precise 32-bit sound processing, the circuitry of the RS-P90 is mounted with three high-performance Analog Devices SHARC® DSPs, for left-channel, right-channel and coefficient calculation.



High-performance SHARC<sup>®</sup> DSP  $\times$  3

# RS-A9

#### Digital Integrated Power Amplifier

- $300 \text{ W} \times 2 (4 \Omega) \text{ (max. power)}$ •High-performance 32-bit floating binary point
- type DSP •Built-in DSP (Digital Signal Processor) (FIR) —31-band L/R independent digital graphic equalizer (±12 dB/0.5 dB steps)

# RS-A7

#### **Digital Power Amplifier**

# **TS-T01RSII**

#### 3.5 cm Component Tweeter

- 3.5 cm tweeter with ion-plated DLC (Diamond-like Carbon)-coated dual arc ring diaphragm High-performance magnetic circuit features lightweight aluminum voice coil with neodymium magnet Zinc die-cast frame

- Old-plated large screw-type terminals
   Use with UD-N01RS112-Way Passive Crossover Network
   Maximum input: 120 W
   Nominal input: 50 W

# **TS-M01RSII**

#### 17 cm Component Mid-Bass Speaker

- 17 cm cone mid-bass speaker with multiple pulp fiber composite diaphragm
  10n-plated DLC (Diamond-like Carbon)-coated titanium center cap
  Corrugated surround with damped coating on front and back edges
  High-Transient Short Voice magnetic circuit features copper ribbon short voice coil with neodymium magnet
  Bottom hold design zinc die-cast one-piece chassis
  Tungsten damper holder with anti-resonance structure
  Gold-plated large screw-type terminals
  Use with UD-NOIRSII 2-Way Passive Crossover Network
  Maximum input: 120 W
  Nominal input: 50 W

# UD-N01RSII

2-Way Passive Crossover Network

#### Large ø140 mm Voice Coil

#### TS-W01RSII

The TS-W01RSII's magnetic circuit structure uses a voice coil with large ø140 mm diameter to drive the center part of the entire speaker cone to improve transient.

Multiple neodymium magnets creating powerful magnetic flux help drive the cone with exceptional strength and accuracy.

The large vent in the center of the speaker back is maximized for fine control to reduce air resistance. The result: more accurate bass reproduction.



Compact Enclosure

We design our subwoofer cones for compact (14 to 28 liters) speaker enclosures.

#### Dual Arc Ring Tweeter Diaphragm

#### TS-TO1RSII

The TS-T01RSII's Dual Arc Ring Diaphragm, based on Pioneer's Super Wide Range Tune innovation, reliably reproduces clear sound audible up to super-high 48 kHz frequency.

The inside and outside of the center drive-type ring diaphragm are shaped differently from each other, and vibrate to varying degrees for various frequencies. These

# DSP

600 W Max. Limited distribution

- •1 optical digital input •3 optical digital outputs (mid/low/subwoofer)
  - - **Common Features**
    - Bridgeable 4/3/2-channel capability
       Current feedback amplifier
       Full balanced system (bridgeable

-Low load impedance capability (4 Ω, 2 Ω to 8 Ω allowable) • Copper-plated chassis • L/R independent power supply • Sound master clock • DAC with rese.

RS-A9

# TS-S01RSII

#### 7.7 cm Component Midrange Speaker

- -Zinc die-cast back basket •Gold-plated large screw-type terminals •Maximum input: 50 W\*/60 W\*\* •Nominal input: 15 W

# TS-W01RSII

#### 25 cm (10") Component Subwoofer

# 25 cm cone woofer with multiple pulp fiber composite diaphragm and integrated center cap Space-saving small-enclosure-type design (recommended enclosure: 14 I to 28 I/0.49 cuft. to 0.99 cuft.) Corrugated fiber surround with damped coating on front and back edges Large-sized ø140 mm voice coil with multiple neodymium magnets Shallow mounting aluminum die-cast basket

- Gold-plated large screw-type terminals
  Maximum input: 300 W
  Nominal input: 150 W

#### High-Quality Mid-Bass Speaker

#### TS-MO1RSII

Ion-plated DLC (Diamond-like Carbon)-coated titanium center cap is superior in rigidity, and concave to suppress resonance in the magnetic circuit.

High-Transient Short Voice magnetic circuit achieves excellent sound linearity from high to mid-range and features a high number of turns of wire in the short lightweight voice coil (for voice coil drivability that is 15 % better than its predecessor).

Corrugated surround with damped coating on front and back edge effectively absorbs unwanted vibration, achieves excellent linearity and reduces interference of cone and surround.



Corrugated surround





300 W Max.

SHARC® DSP chin

frequencies are mixed to achieve smooth characteristics







–3-band L/R independent digital parametric equalizer (±12 dB/0.5 dB steps) –5-mode preset memory

-Time alignment -Digital listening position selector -Parametric bass/treble controls

Digital compression
 -4-way L/R independent digital crossing the second sec

600 W Max. Limited distribution



**HQ Active Component Systems** 



#### The Ultimate in Audio Tech

For Component Single-CD Player **Hi-Bit Conversion** 



The RS-D7RII and DEX-P90RS upgrade the original CD audio signals from 16-bit to 24-bit, and increase CD data resolution by a factor of 256. The result: lower quantization noise, expanded dynamic range, minimal processing error, and superior linearity, delivering sound as it was meant to be reproduced and heard.

#### **For Digital Signal Processor**





RS-A9	RS-P90

Signal output of each speaker can be calibrated in 1/20,000second\* increments, for optimal phasing of sound from the system, according to listener position. Precise equalization and suppression of frequency response disturbance makes for a clearer, more focused soundstage. \*RS-A9: 1/40.000-second

Digital delay processing makes all speakers sound as if they are virtually equidistant from the listener, for a clearer, front-focused soundstage.



### Class-D Amplifiers

### PRS-D2000SPL PRS-D1200SPL PRS-D1200M GM-D8400M GM-D7400M

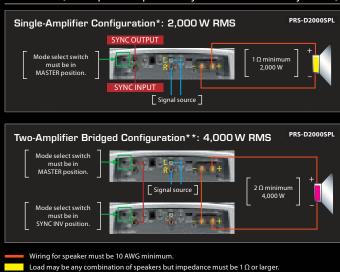
Class-D amplifiers overcome the inefficiencies of traditional Class-A or AB amplifiers. Pioneer's Class-D amps transform very little power into heat while a very high percentage of the power supply (67 %) is transformed into the load. This results in a very compact amp which needs little input power to produce very high output power.

The Class-D amplifier's PWM (Pulse Width Modulator) modulates the original audio input signal with another

signal which has a much higher fixed frequency. The result is a digital signal which contains the input signal and a band of frequency components around the modulation frequency. A LPF (Low Pass Filter) will then filter out the high frequency pulses and the resulting amplified output signal is then sent to the subwoofer and/or speakers.



### MASS (Multiple Amplifier Synchronization System) Connection Examples



Load may be any combination of speakers but impedance must be  $2 \Omega$  or larger

### PRS-D2000SPL PRS-D1200SPL PRS-D1200M

With the PRS-D2000SPL, PRS-D1200SPL and PRS-D1200M's SYNC connection, adjustment of the master amplifier also adjusts all other amplifiers in the cascade. This makes control simpler and more convenient.

\*These are only a few examples of connection configurations for the PRS-D2000SPL. Ask your nearest car stereo installer or dealer about power/ground wiring and installation details for the PRS-D2000SPL, PRS-D1200SPL and PRS-D1200M.



- \*1  $\Omega$  minimum speaker impedance for this configuration or damage will occur. \*\*2  $\Omega$  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.

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Reference Sound Sy	<i>j</i> stems	
DEH-P80RSII Compone	ent CD Player/Receiver	
MOSFET SOW 4 OT MP3 2000 A		per@tymer#D+ DSP EE
	High-quality is D/A converter	
Adapter ready for iPod     USB adapter ready (external unit control)     USB adapter ready (external unit control)     Burr Brown advanced segment-type 24-bit D/A     Converter     Built-in DSP	-Auto EQ for 3-way network — -Auto time alignment •Au -BBE® digital sound processing •Re -Digital listening position selector •33 -BMX (Bitmetric Equalizer) •Le -L/R independent 16-band digital graphic equalizer •Sp	L/R independent 3-way crossover: high/mid/low 3-way digital network uto-slide face tary Commander gold-plated RCA pre-outs (front + rear + subwoofer) vel indicator (L/R independent) ectrum analyzer ulti-language display (English/Spanish/Portuguese)
PRS-D4200F Class-FD 4. Bridgeable	/3/2-Channel e Amplifier 1,200 W Max.	
Class FD ice Control LPF HPF RCA	SPEAKER IN PUT	
300 W × 1 (4 Ω)/150 W × 4 (2 Ω) 600 V	V × 4 (4 $\Omega$ )/150 W × 2 + 600 W × 1 (4 $\Omega$ )/ W × 2 (4 $\Omega$ ) (max. power) eable 4/3/2-channel capability	PRS-D4200F
PRS-D2200T Class-FD 2 Bridgeable	r/1-Channel e Amplifier 1,200 W Max.	
Class FD ice Control LPF HPF RCA	SPEAKER INPUT Bass Boost	
<ul> <li>150 W × 2 (4 Ω)/600 W × 1 (4 Ω)/300 W × 2 (2 Ω)</li> <li>Bridg (continuous power)</li> <li>300 W × 2 (4 Ω)/1,200 W × 1 (4 Ω) (max. power)</li> </ul>	yeable 2/1-channel capability Boost Remote (50 Hz, 0 dB/+6 dB/+9 dB/+12 dB) Go po	Id-plated large block-type wer/ground terminals
Common Features • Variable LPF/HPF (40 Hz to 500 Hz, –12 dB/oct.) • Input level control (400 mV to 6.5 V) • Low load impedance capability (4 Ω, 2 Ω to 8 Ω allowable) • Gold-plated RCA input and output terminals	<ul> <li>Gold-plated large block-type speaker terminals</li> <li>Gold-plated large block-type power/ground terminals</li> <li>All terminals placed on one side</li> <li>Removable terminal/settings cover</li> <li>Speaker level input (1.6 V to 26 V)</li> </ul>	Speaker line input turn-on sensor     High-performance balanced isolator input circuit     High-efficiency MOSFET output section     TVC (Total Vibration Control) technology

### Class-FD ICEpower Amplifiers

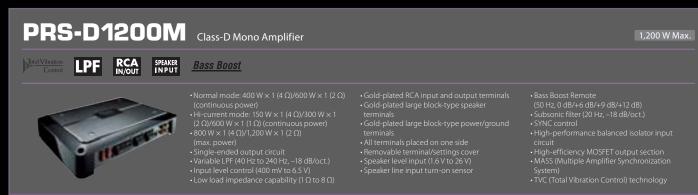
### PRS-D4200F PRS-D2200T

Pioneer brings together its cutting-edge Class-D circuitry and ICEpower digital amplifier technology to create Class-FD (Full Range Class-D) ICEpower amplifiers that deliver superior performance and sound quality in car entertainment. Combining the unsurpassed efficiency of Class-D amps with the ultra-clean sound of Class-AB amplifiers, COM (Controlled Oscillation Modulation) technology not only eliminates unnecessary sensitivity to imperfect power supplies [1]—it compares the amplified PWM (Pulse Width Modulation) signal with the original input signal [2], compensating for any variance and lowering distortion in the process. MECC (Multivariable Enhanced Cascade Control) compensating for load-dependent frequency response, improving this response as this system receives analog signals from the output filter [3]. The result

is truer fidelity featuring tight bass with minimal lag effect; crisp, airy mids and highs; and unsurpassed specifications contributing to qualities that outperform those of other premium-quality amplifiers.

Class FD ice





# GET CLOSER TO NATURE— NEW OPEN & SMOOTH SOUND

With their extra-wide directivity, low tweeter crossover frequency and distortion, plus light, rigid IMPP cones, Pioneer's PRS speakers realize a level of in-car audio quality that deserves its own name: "Open & Smooth" sound—a wide-open sound staging, rich, natural midrange and tweeter output with outstanding smoothness and linearity.



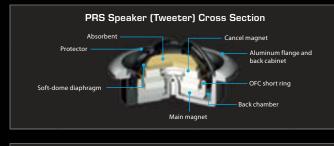
Superior Directivity: Pioneer PRS Speakers Pioneer PRS speakers always maintain more open, smooth,

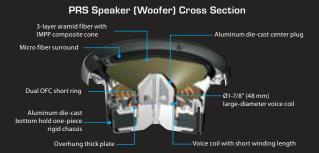


### PRS Speakers

TS-C171PRS TS-C131PRS TS-M171PRS TS-S101PRS TS-T031PRS

Pioneer advances the proud heritage of its IASCA (International Auto Sound Challenge Association) award-winning Premier Reference Series. These speakers' superior response, linearity and sound directivity improve low- and mid-frequency reproduction, while making highs and lows sound smoother and more open.

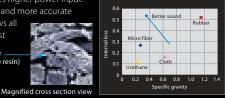




### Micro Fiber Surround: Maximum Musical Response

The strong, high-density micro fiber material surrounding the woofer of a PRS speaker is very light and low in resistance and internal loss characteristics. This enhances linearity of the short winding length of the voice coil, thereby optimizing efficiency. Moreover, micro fiber doesn't stretch so it does a better job than other materials to

control vibration and enables higher power input. The result is faster response and more accurate bass reproduction that allows all music to be heard to greatest advantage. Polyester fiber (polyurethane resin)



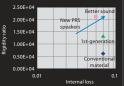
### 2nd-Generation Multilayer Cone: First-Class Sound Reproduction

For the PRS speakers, Pioneer also developed a multilayer woofer cone in an even better formulation, sandwiching composite foamed IMPP using interlaced aramid fiber between a woven carbon-blended aramid fiber layer and a glass fiber layer. This rigid cone structure provides impeccable midrange frequency reproduction and overall sound quality. The cone material is also supremely light and uniform in its physical properties because it is made without adhesives

using an advanced injection molding process.

Aramid fiber layer	
Composite foamed IMPP using	•

Glass fiber layer



Magnified cross section view

39

# PUNCH UP THE POWER, DIVE IN DEEP

It's sensational how such compact components can create such massive impact. Pioneer's Class-D digital amplifiers keep every sound pristine, and perfectly match subs that inherit Pioneer's championship-winning SPL technology to generate punchy, nicely damped bass with the help of light, rigid Basalt/Carbon fiber reinforced IMPP cones.

PRS-D2000SPL

0





diiil

Regional 2007 1st Place dB Drag Extreme 5+ Class (178.9 dB) National 2007 1st Place dB Drag Extreme 5+ Class (179.5 dB) World

World 2007 1st Place dB Drag Extreme 5+ Class (178.9 dB)

World Hecord 1st Place Super Modified 4001 - 8000 (177.7 dB) 1st Place Super Modified 8001 - UP (181.1 dB) 1st Place Port Wars (181.2 dB) 1st Place Bass Olympics (174.9 dB)

2007 1st Place iDBL Ultimate 1 Class (176.2 dB) 2007 1st Place iDBL Ultimate 3 Class (178.2 dB)

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



### **GM-6400F**

### 4/3/2-Channel Bridgeable Power Amplifier

(max. power) •Bridgeable 4/3/2-channel capability

### **GM-5400T**

2/1-Channel Bridgeable Power Amplifier

(continuous power) • 250 W  $\times$  2 (4  $\Omega$ )/760 W  $\times$  1 (4  $\Omega$ ) (max. power) • Bridgeable 2/1-channel capability

NEW 600 W Max.

LPF HPF RCA SPEAKER

NEW 760 W Max.

### LPF RCA SPEAKER Bass Boost

•RCA input terminals •Bass Boost (50 Hz, 0 dB/+6 dB/+12 dB)

•Large screw-type power/ground terminals •Speaker level input (1.6 V to 26 V)

•PWM regulated power supply with MOSFET switching



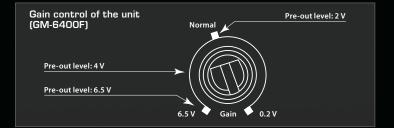
**Common Features** 

### Gain Control

### ALL POWER AMPLIFIERS\* \*Except RS-A9 and RS-A7

Input level control (200 mV to 6.5 V)
 Input level/gain control

The Pioneer GM analog amplifiers are all equipped with the Gain Control, a protective function that prevents malfunction of the unit itself, as well as the speakers, caused by too much output, improper use and improper connection. Even when the amplifiers are connected to the headunits with high-voltage pre-outs, the signal is not clipped or distorted if the gain control is set to proper position, so high S/N (Signal-to-Noise) ratio is realized in the speaker level signal. To ensure continuous audio output, the amplifier's gain control must be set according to the pre-out maximum output level of the headunit. There is no need to decrease the volume of the headunit, as too much output will be controlled.



### **GM-3300T**

### 2/1-Channel Bridgeable Power Amplifier

 $\label{eq:continuous power} \label{eq:continuous power} (continuous power) \\ \bullet 120 \ W \times 2 \ (4 \ \Omega)/300 \ W \times 1 \ (4 \ \Omega) \ (max. power) \\ \bullet Bridgeable 2/1-channel capability \\ \bullet LPF \ (80 \ Hz, -12 \ dB/oct.) \\ \end{array}$ 

Input level/gain control
 Low load impedance capability

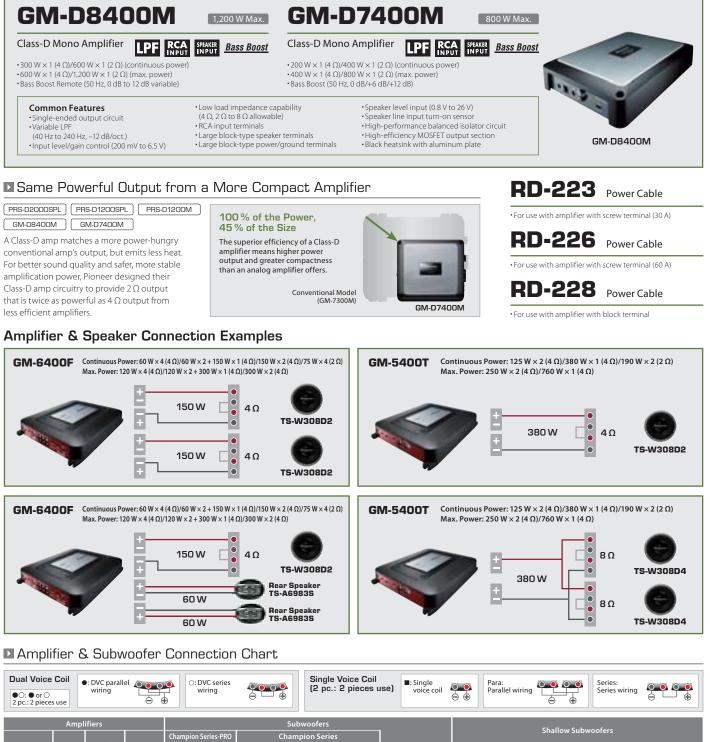
(4 Ω, 2 Ω to 8 Ω allowable) •RCA input terminals

300 W Max.

### LPF RCA SPEAKER

• Large screw-type power/ground terminals • Speaker level input (1.6 V to 26 V) • High-performance balanced isolator circuit • Black heatsink with aluminum plate





	Ampl	ifiers					Subw	oofers				Shallow Subwoofers						
				Champion	Series-PRO		Champi	on Series						Slight		orers		
Product No.	Channel	Load Impedance	Continuous Power	TS-W3002D4	TS-W2502D4	TS-W308D2	TS-W308D4	TS-W258D2	TS-W258D4	TS-W302R	TS-W252R	TS-SW3001S4	TS-SW3001S2	TS-SW2501S4	TS-SW2501S2	TS-SW841D	TS-SW301	TS-SW25
		impedance		1 000 W	800 W	400 W	400 W	350 W	350 W	150 W	120 W	400 W	400 W	300 W	300 W	120 W	250 W	200 W
PRS-D4200F	4-ch.	2 Ω	$150 \text{ W} \times 4$	•	•	2 pc. 🔍	•	2 pc. •O	•	2 pc. Para	2 pc. Para	2 pc. Para		2 pc. Para		2 pc. Para	2 pc. Para	2 pc. Par
		4 Ω	75 W  imes 4	2 pc. 🔵 🔿	2 pc. 🔵 🔿	0	2 pc. •O	0	2 pc. 🔍 🔿				2 pc. Series		2 pc. Series			
	2-ch.	4Ω	$300 \text{W} \times 2$	2 pc. 🔘 🔿	2 pc. 🔵 🔿	0	2 pc. 🔘 🔿	0	2 pc. 🔵 🔿	_	—		2 pc. Series		2 pc. Series	_	_	—
PRS-D2200T	2-ch.	2Ω	$300 \text{W} \times 2$	•	•	2 pc. 💿 🔿	•	2 pc. 🔵 🔿	•	2 pc. Para	_	2 pc. Para		2 pc. Para	_	_	2 pc. Para	2 pc. Par
		4 Ω	$150 \text{ W} \times 2$	2 pc. 🔍	2 pc. 🔍	0	2 pc. •O	0	2 pc. •O		_		2 pc. Series		2 pc. Series			
	1-ch.	4Ω	600  W  imes 1	2 pc. ●○	2 pc. ●○	_	2 pc. 🔍	_	2 pc. 🔍	_	_	_	2 pc. Series	_		_	_	_
PRS-D1200M	1-ch.	1Ω	600  W  imes 1	2 pc. 🔵	2 pc. 🔵	_	2 pc. 🔵	_	2 pc. 🔵	_	_	_	2 pc. Para	-	2 pc. Para	_	_	—
		2Ω	600 W  imes 1	•	•	2 pc. 💿 🔿	_	2 pc. 🔵 🔿	_	_	_	2 pc. Para	_	2 pc. Para	_	_	_	_
		4 Ω	400  W  imes 1	2 pc. 🔵 🔿	2 pc. 🔵 🔿	0	2 pc. 🔵 🔿	_	2 pc. •O	—	—		2 pc. Series	_	2 pc. Series	_	_	—
GM-D8400M	1-ch.	2Ω	600  W  imes 1	•	•	2 pc. 🔍	_	2 pc. 🔍 🔿	_	_	_	2 pc. Para	_	2 pc. Para	_	_	_	_
		4 Ω	$300 \text{W} \times 1$	2 pc. ●○	2 pc. •O	0	2 pc. •O	0	2 pc. •O	_	_		2 pc. Series		2 pc. Series	_	_	—
GM-D7400M	1-ch.	2 Ω	400  W  imes 1	•	•	2 pc. 💿 🔿	_	2 pc. 🔵 🔿	_	_	_	2 pc. Para		2 pc. Para	_	_	2 pc. Para	2 pc. Par
		4 Ω	$200 \text{ W} \times 1$	2 pc. ●○	2 pc. •O	0	2 pc. •O	0	2 pc. •O	_	_		2 pc. Series		2 pc. Series	_		
GM-6400F	4-ch.	2Ω	$75 \text{W} \times 4$	•	•	2 pc. 💿 🔿	•	2 pc. 🔵 🔿	٠	2 pc. Para	2 pc. Para	2 pc. Para		2 pc. Para		2 pc. Para	2 pc. Para	2 pc. Par
		4 Ω	$60 \text{W} \times 4$	2 pc. ●○	2 pc. •O	0	2 pc. •O	0	2 pc. •O				2 pc. Series		2 pc. Series			
	2-ch.	4Ω	150 W × 2	2 pc. 🔍	2 pc. 🔍	0	2 pc. 🔍	0	2 pc. 🔍		_		2 pc. Series		2 pc. Series	_		
GM-5400T	2-ch.	2Ω	190 W × 2	•	•	2 pc. •O	•	2 pc. •O	•	2 pc. Para	2 pc. Para	2 pc. Para		2 pc. Para		2 pc. Para	2 pc. Para	2 pc. Par
		4Ω	$125 \text{ W} \times 2$	2 pc. 🔵 🔿	2 pc. 🔵 🔿	0	2 pc. 🔵 🔿	0	2 pc. 💽 🔿		_		2 pc. Series		2 pc. Series	_		
	1-ch.	4 Ω	$380 \text{W} \times 1$	2 pc. 🔵 🔿	2 pc. •O	—	2 pc. •O	_	2 pc. •O	_	_		2 pc. Series	_	2 pc. Series	_	_	—
GM-3300T	2-ch.	2Ω	75 W × 2	•	•	2 pc. 💿 🔿	•	2 pc. 🔵 🔿	٠	2 pc. Para	2 pc. Para	2 pc. Para		2 pc. Para		2 pc. Para	2 pc. Para	2 pc. Par
		4 Ω	60 W × 2	2 pc. ●○	2 pc. •O	0	2 pc. •O	0	2 pc. •O				2 pc. Series		2 pc. Series			
	1-ch.	4Ω	150 W × 1	2 pc. ●○	2 pc. ●○	0	2 pc. ●○	0	2 pc. ●○	_	_		2 pc. Series		2 pc. Series	_		
															· · · · · · · · · · · · · · · · · · ·			

Caution: To avoid damaging your amplifier/subwoofer system, please make sure that the continuous power output of the amplifier is lower than the nominal power handling of the subwoofer.

Amplifiers & Subwoofers

**Component SPL Subwoofers** 

Pioneer

### SPL champion editi

The pride of a winner takes world-leading DNA



8,000 W Max.

• Massive triple-stack magnet assembly (11 kg: 3,700 g × 3/390 oz.: 8 lbs. 20 oz. × 3)

• Maximum input: 8,000 W • Nominal input: 3,000 W

**Common Features** 

•Composite IMPP cone using interlaced carbon fiber\* •Carbon cloth/foamed acrylic polymer/glass cloth 3-layer rigid •Wide-roll, woven aramid fiber radial rubber surround\* •Overhung surround design\*

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

High-power handling ceramic-coated voice coil wire\*
 Dual 76 mm (3"), high inductance, 6-layer, long voice coils

• Dual aramid damper with woven tinsel wire and damper ring • Precision dual aramid dampers

### **TS-W5102SPL**

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

• Massive triple-stack magnet assembly (9 kg: 3,000 g × 3/320 oz.: 6 lbs. 10 oz. × 3)

•Maximum input: 6,000 W •Nominal input: 2,500 W

Huge back plate and extended pole yoke with vented pole
 Huge 30 mm (1.2") thick top plate
 ADMG (Aero-Dynamic Magnetic Gap) design
 Aluminum die-cast one-piece rigid basket with bottom

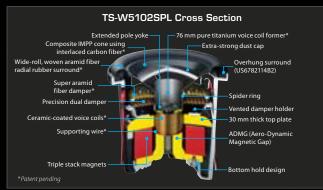
hold design •8-gauge wire terminal

6,000 W Max.

### SPL (Sound Pressure Level) Subwoofer

### TS-W8102SPL TS-W5102SPL

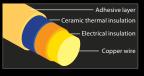
To generate resounding bass, the TS-W8102SPL and TS-W5102SPL subwoofers handle high-power input and extreme sound pressure levels with absolute assurance, thanks to design and construction durable enough to deliver consistently true, rock-steady performance, even at extra-high volume throughout marathon listening sessions.



### **Dual Ceramic-Coated Voice Coils**

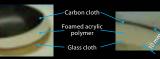
Excess heat generated by subwoofers can compromise electrical-handling

performance, but Pioneer uses ceramiccoated voice coil to double the capacity of its subwoofers to handle input power without short-circuiting. No wonder the Pioneer TS-W5102SPL beat the competition at 2005, 2006 and 2007 dB Drag Racing events.



### Extra-Strong Dust Cap Core with Foamed Acrylic Polymer

Dust caps on the TS-W8102SPL and TS-W5102SPL subwoofers feature a light, durable heat-resistant foamed acrylic polymer core (between carbon-fiber and glass cloth



layers) that is up to about 36 times as strong as conventional materials. The result: greater capacity for extra sound pressure, stability and power in bass reproduction.



honeycomb cloth

### Air Suspension System

e sosrensjon

TS-W3002D4	TS-W2502D4	TS-SW3001S4	TS-SW3001S2	TS-SW2501S4
TS-SW2501S2	TS-SW841D	TS-SW301	TS-SW251	

For its revolutionary 3.25-inch-deep subwoofer, Pioneer created an air suspension system effective within a 70 %-smaller-than-previous enclosure that locks air for a spring-like

effect between main and drive cones moving in unison. 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.



### Bottom Hold Design Aluminum Die-Cast One-Piece Chassis

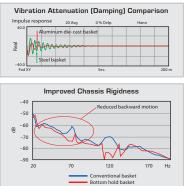
TS-C171PRS TS-C131PRS TS-W8102SPL TS-W5102SPL

Although aluminum die-cast baskets have been around for many years, not all are created equal. Whereas other manufacturers purchase off-the-shelf designs, Pioneer's baskets were designed in-house, from scratch. Die-cast baskets also provide excellent damping characteristics, to attenuate vibration quickly and prevent distortion. Unlike other manufacturers' designs, Pioneer's basket cradles the bottom plate

and motor assembly. During high SPL levels there is a tremendous amount of pressure

placed on the motor assembly. By supporting (cradling) the motor assembly any unwanted flexing or vibrations which can lead to energy loss are prevented.





### Carbon Fiber IMPP Cone

### 

### TS-W8102SPL TS-W5102SPL

Preventing cone failure at high pressure levels requires an extremely rigid yet lightweight cone. So Pioneer developed a patent-pending IMPP cone using a proprietary composite blend of long carbon fibers and injection molded polypropylene. These materials were chosen for their extraordinary strength and lightweight characteristics. The long carbon fibers interlace together to form an incredibly resilient fiber weave, providing strength and rigidity for powerful bass.

### **Microscopic Cross Section View**





Regular IMPP cone

Long carbon fiber reinforced IMPP cone

### Woven Aramid Fiber Radial Surround

TS-W8102SPL TS-W5102SPL TS-W3002D4 TS-W2502D4

The TS-W8102SPL\_TS-W5102SPL, TS-W3002D4 and TS-W2502D4 incorporate a patent-pending Woven Aramid Fiber Radial Surround which improves power handling and reduces distortion. Similar to a radial tire, the surround is constructed of three layers—two consisting of rubber and one of interwoven aramid fiber. The aramid fiber layer is designed with a "honeycomb" weave, which evenly distributes strength throughout the surround material, eliminating any weak points of surround and improving high-power capability. The result is an extremely durable and resilient surround that resists "puckering" (distortion often produced under extreme power conditions).

### Benefits of Woven Aramid Fiber Radial Surround

Improved power handling capability •Reduced distortion (anti-puckering design)
 Improved linear excursion •Louder, more accurate bass

The three layers are formed under a high-pressure, high-temperature process. The result: an extremely durable and high-performance surround.



### Champion series **Dual Voice Coil Type Subwoofers** The pride of a winner takes world-leading DNA **TS-W308D2** NEW 1,400 W Max. 30 cm (12") Component Subwoofer (2 Ω Dual Voice Coil Type) **TS-W308D4** NEW 1,400 W Max. 30 cm (12") Component Subwoofer (4 Ω Dual Voice Coil Type)



### **Common Features** Interlaced Aramid/Basalt fiber reinforced IMPP composite cone

- -3-layer, fiber woven radial surround
  -Single large conex damper with damper ring
   Dual 4-layer, long voice coils (DVC) (2 × 2 Ω: TS-W258D2/2 × 4 Ω: TS-W258D4)
   ø48 mm (2") phenol coated glass cloth voice coil former for higher power

- handling capabilities Double stack high power magnets (2.1 kg/74 oz.)
- Extended and vented pole yoke Integrated single-sided silver binding posts
- Spoke grille compatible (UD-G258)
   Maximum input: 1,200 W
- Nominal input: 350 W

46

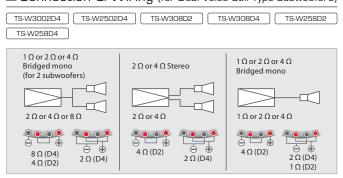
Integrated Single-Sided Silver Binding Posts TS-W3002D4 TS-W2502D4 TS-W308D2 TS-W308D4 TS-W258D2 TS-W258D4 ſ

Pioneer's Dual Voice Coil-type subwoofers have integrated binding posts at a single side to simplify connection with an amplifier. To expand connection applications, the TS-W308D2 and TS-W258D2 even feature a detachable cover and wire for binding posts, so they can incorporate a 2  $\Omega$  Dual Voice Coil instead of a 4  $\Omega$  Single Voice Coil.



### Connection & Wiring (for Dual Voice Coil Type Subwoofers)

TS-W258D4





### Free-Air Type Subwoofers



### Component Subwoofers

<b>TS-W302R</b>	800 W Max.
30 cm (12") Component Subwoofer •Maximum input: 800 W •Nominal input: 150	
<b>TS-W252R</b>	600 W Max.
25 cm (10") Component Subwoofer •Maximum input: 600 W •Nominal input: 120	
Common Features • IMPP composite cone • Aluminum voice coil bobbin	Single nomex damper     Copper round wire long voice coil     Extended and vented pole yoke



The bass response is tight, accurate, controlled and consistent, since it's not affected

by the volume of objects in the car boot. You can put together high-performance

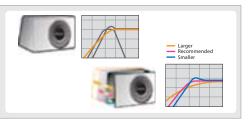
systems featuring superb low-frequency reproduction.

### Subwoofer Enclosures

To have tighter control of bass power, an enclosure system is the perfect solution. Enclosure subwoofers are designed for use in a custom-designed sealed, vented or bandpass enclosure, the size of which is determined by specialized software.

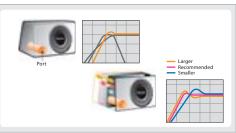
### SEALED ENCLOSURES

From a purely musical standpoint, the sealed enclosure type is as popular as ever. This box type is capable of handling large amounts of power and, in turn, fairly high SPL levels "in car". Size always plays a key role in application and the sealed enclosure variety is excellent for small box applications. Power, however, is required to achieve above average SPL levels. From a purely engineering standpoint, the sealed box lends a "simpler is better" approach to subwoofer application.



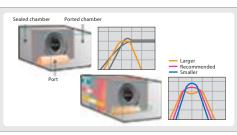
### VENTED ENCLOSURES (BASS REFLEX)

The vented enclosure variant is a balance between several factors. Most notable about vented boxes is the increase in box volume over the sealed variation. Because the vent is considered to be a secondary "output source", the deeper bass frequencies can be extended. While the distortion level above the tuning frequency is quite low, things can get pretty dirty if the enclosure is forced to play below this area. Efficiency and easily obtained lower frequencies would be the biggest benefits of this design. From a purely engineering standpoint, three key elements have to be in "sync" in order for the enclosure to work at its targeted area box + speaker + vent. While more complex than the sealed variation, the vented enclosure has been a very popular approach to car audio low-frequency reproduction.



### 4TH-ORDER BAND PASS ENCLOSURES

The 4th-order band pass enclosure is basically a sealed enclosure with the addition of a ported enclosure in front of the driver, which acts as an acoustical filter. The resulting system radiates sound in a limited bandwidth. Band pass enclosures usually demonstrate a higher sensitivity compared to sealed enclosures. The disadvantage, however, is that it uses more trunk space. 4th-order band pass systems are a bit more flexible in design than sealed or bass reflex enclosures, due to the ability to change many parts of the enclosure as front and back volume, as well as the port length. The benefit of this is that the frequency response as well as the sensitivity of the system can be defined more freely compared to sealed or bass reflex enclosures. Nevertheless, a very decent bass reproduction can be achieved with a well-tuned system.



### Shallow-Type Subwoofers

### BASS THAT REALLY ROCKS

This year we are introducing our new ib-FLAT subwoofers, featuring 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.



- Reinforced cone using C-shaped nodes structure
   Composite IMPP double cone woofer using interlaced carbon
- and ultra long glass fiber
- 3-layer fiber woven radial surround with M-shape cross-section • 4-layer, long voice coil
- Glass cloth voice coil bobbi
- High-energy strontium magnet

### • Aluminum dust cap • T-pole yoke design • Extended and vented pole yoke

Rubber gasket
 Cast aluminum basket with fin-shaped design
 Maximum input: 500 W
 Nominal input: 120 W

1,000 W Max.

800 W Max.



ib-ELA

### **TS-SW301**

### 30 cm (12") Component Subwoofer

Enclosure volume: 14.2 L to 28.3 L
 Maximum input: 1,000 W
 Nominal input: 250 W

### **TS-SW251**

### 25 cm (10") Component Subwoofer

•Enclosure volume: 9.9 L to 19.8 L •Shallow mounting design: 78 mm Vooter •Maximum input: 800 W •Nominal input: 200 W



### Common Features

Double-cone structure with air-suspension control system
 Composite IMPP double cone woofer using interlaced carbon and
 ultra long glass fiber

• 3-layer fiber woven radial surround with M-shape cross-section • 4-layer voice coil • Heat-resistant ABS damper ring • Extended and vented pole yoke •One piece, ABS silver gasket •Bottom hold basket design •Silver push terminal design

### ■ Interlaced Basalt/Carbon Fiber Reinforced IMPP Cone

TS-W3002D4 TS-W2502D4 TS-W308D2	TS-W308D4 TS-W258D2 TS-W258D4 TS-W308F
TS-W258F TS-SW3001S4 TS-SW3001S2	TS-SW2501S4 TS-SW2501S2
To ensure that you get more natural bass, we've	a cone that is lightweight, rigid, well damped, stable
incorporated out new Basalt fiber technology into	in temperature extremes, and more environmentally
our subwoofers. The volcanic-rock fibers create	friendly. In short, this bass really rocks.



### Shallow-Type Subwoofers

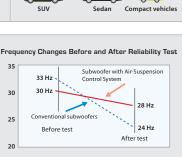
TS-SW3001S4 TS-SW3001S2 TS-SW2501S4 TS-SW2501S2 TS-SW841D TS-SW301 TS-SW251

With enhanced maximum power and handling shallow dimensions, TS-SW subwoofers are more versatile than ever. The Full (30 cm) and Regular (25 cm) sizes can be installed behind and under seats, and the Compact (20 cm) size can even be mounted on rear sidewalls and trays of smaller cars.



### 

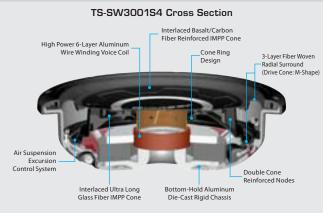
Air-Suspension Control System Thanks to Pioneer's unique Air-Suspension Control System, TS-SW subwoofers offer deep, rich bass in a shallow, compact form. Air is trapped within the composite IMPP<sup>™</sup> double cone, between the main cone and the drive cone behind it.



### **Component Enclosed Subwoofers**



# The pressure of this air varies as the cones move back and forth, resulting in smoother, more precise linearity. The trapped air behaves like a spring, eliminating the need for a conventional spider structure, so the unit can be made shallow enough to fit in a tight space. Inside the enclosure, a drive cone deflects air pressure and a fin-shaped basket smoothly directs air sideways. This makes bass output remarkably stable, despite these units' compact size. The system also enhances durability, as the subwoofers are subjected to smaller frequency changes (and less wear and tear) than conventional subwoofers.





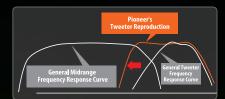
Sound quality adjustment knobs 

# HIGH RESONANCE, LOUD AND CLEAR

Pione

Stunning sensitivity. Natural response. Crisp, resonant sound. Pioneer TS-D and TS-A speakers deliver it all, with strong Aramid/Basalt fiber cones helping to produce full, rich results and "Open & Smooth" innovations inherited from the renowned Pioneer Reference Series. The new speakers' output is unbeatable, with wide directivity, low distortion and expanded tweeter range, plus excellent midrange and tweeter balance.





Wider Response, Lower Crossover and High Sensitivity Pioneer expands lower-frequency response in tweeters for fuller midrange fidelity.



GERAT DES JAHRES



Four Pioneer car audio

products including the DEH-P80RSII and TS-D1720C won 2008 "Readers Choice" honors awarded by readers of Germany's renowned *autohifi* car audio magazine.

TS-A6993S

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13 cm Packaged Component Speaker System

• 13 cm woofer/28 mm soft-dome tweeter • Maximum input: 180 W • Nominal input: 35 W



- Single concerning to low advantage
  Single concerning and low advantage
  Thick woofer basket for lower distortion
  Light weight soft-dome tweeter with neodymium magnet and magnetic fluid
  Rear chamber for lower crossover frequency (tweeter)
  Surface (angled), flush or invisible tweeter mounting kit
- Outboard screw-type crossover (LPF: -12 dB/oct., HPF: -12 dB/oct.)
  Tweeter level control (0 dB/-3 dB)

TS-D1302R TS-D1002R

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

TS-D1720C TS-D1320C TS-D6902R TS-D1702R TS-D1602R To create speaker cone material that performs well at natural sound reproduction, Pioneer engineers take Basalt fibers interwoven with Aramid fibers and combine it with foamed IMPP to create new-generation IMX cones which are light, rigid and moderate inner loss. The process of turning Basalt rock into Basalt fiber consists of pulverizing this natural volcanic rock that is most commonly found on Earth's crust,

melting it at over 2,700° F. and drawing it into long hairbreadth-thin fibers. The foamed IMPP hardens and fuses to the Basalt fibers, creating a one-piece cone. The result: TS-D speakers reproduce natural, detailed sound, are stable in temperature extremes and are eco-friendly.



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

### **TS-D6902R**

6" × 9" 2-Way Speaker

360 W Max.

280 W Max.

260 W Max.

180 W Max.

110 W Max.

•6" × 9" (16 cm × 24 cm) woofer/28 mm soft-dome tweeter •Dual-layer IMX™ (Injection Molded Matrix) Aramid/Basalt fiber composite cone •Large-sized woofer magnet ·Butyl rubber surround for smoother response

- ·Glass-imide voice coil bobbin
- •Extended pole yoke design •Thick woofer basket for lower distortion
- · Light weight soft-dome tweeter with neodymium magnet and magnetic fluid
- · Light weight copper-clad aluminum voice coil wire for tweeter Wave guides for dispersion control
- •Rear chamber for lower crossover frequency
- · Lowered tweeter protrusion for wider installation coverage
- •High-quality built-in crossover design (LPF: –6 dB/oct., HPF: –12 dB/oct.)
- Maximum input: 360 W
   Nominal input: 80 W

### TS-D6902R Cross Section

**Rigid and Light Weight Cone** 

Dual-layer IMX<sup>™</sup> (Injection Molded Matrix) Aramid/Basalt fiber composite cone

### Lower Crossover Frequency

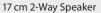
Passive crossover (woofer: -6 dB/tweeter: -12 dB) Rear chamber

### Low Distortion

Light weight soft-dome diaphragm High-power neodymium tweeter magnet

- Thick woofer basket Large-sized woofer magnet

### **TS-D1702R**



• 17 cm woofer/28 mm soft-dome tweeter

•Extended pole yoke design • High-quality built-in crossover design (LPF: –6 dB/oct., HPF: –12 dB/oct.) Rear chamber for lower crossover frequency
 Thick woofer basket for lower distortion •Maximum input: 280 W •Nominal input: 60 W

**TS-D1602R** 

### 16 cm 2-Way Speaker

16 cm woofer/28 mm soft-dome tweeter

- •Extended pole yoke design
- High-quality built-in crossover design (LPF: –6 dB/oct., HPF: –12 dB/oct.)
   Rear chamber for lower crossover frequency
   Thick woofer basket for lower distortion
- •Maximum input: 260 W
- Nominal input: 60 W

**TS-D1302R** 

### 13 cm 2-Way Speaker

• 13 cm woofer/18 mm soft-dome tweeter Rear chamber for lower crossover frequency
 Maximum input: 180 W •Nominal input: 35 W

### **TS-D1002R**

### 10 cm 2-Way Speaker

• 10 cm woofer/18 mm soft-dome tweeter •Rear chamber for lower crossover frequency •Maximum input: 110 W Nominal input: 25 W

### **Common Features**

- Dual-layer IMX<sup>™</sup> (Injection Molded Matrix) Aramid/Basalt fiber composite cone
- ·Butvl rubber surround for smoother response
- Glass-imide voice coil bobbin Single conex damper
- Heat-resistant metal frame with punching hole
   Light weight soft-dome tweeter with neodymium magnet and magnetic fluid
- Wave guides for dispersion control

· Lowered tweeter protrusion for wider installation coverage



TS-D1602R







### **TS-A Series Speakers**

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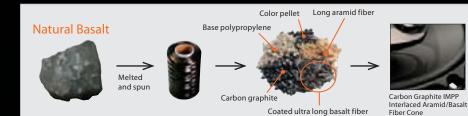
13 cm Packaged Component Speaker System

• 13 cm woofer/23 mm soft-dome tweeter • Maximum input: 180 W



### Carbon Graphite IMPP Interlaced Aramid/Basalt Fiber Cone TS-A6993S TS-A6983S TS-A6973E TS-A6963E TS-A1683S TS-A1673S

This IMPP cone is designed with new basalt fibers interlaced with long aramid fibers to provide strength and rigidity that powerful bass sound requires. Highdensity 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.





### **TS-A6872R**

240 W Max. 

### 6" × 8" 3-Way Speaker

•6" × 8" (16 cm × 20 cm) carbon graphite IMPP cone woofer using interlaced aramid fiber

- •Butyl rubber surround for smoother response •Glass-imide voice coil bobbin
- Copper voice coil
- Single conex damper
- •Extended pole yoke design •33 mm light weight balanced dome midrange with neodymium magnet and magnetic fluid
- •9 mm silver PET film dome tweeter •Shallow basket design for installation versatility
- •Maximum input: 240 W
- Nominal input: 40 W



### **TS-A2503**i

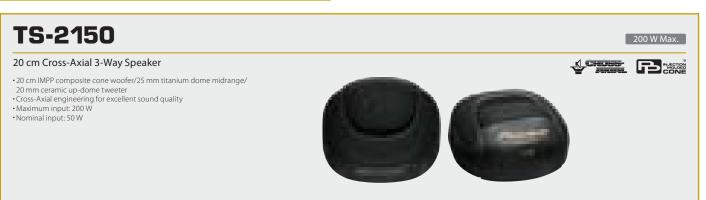




### **TS-G Series Speakers**



### **Cross-Axial Speaker**







• 20 cm water-resistant IMPP cone woofer • 20 cm glass fiber reinforced plastic deep basket •Maximum input: 200 W •Nominal input: 40 W





 16 cm water-resistant IMPP cone woofer • 16 cm glass fiber reinforced plastic deep basket ·Maximum input: 160 W •Nominal input: 30 W

 Gold-plated tinsel wire and terminals · High-quality UV and corrosion-resistant design



 16 cm water-resistant IMPP dual-cone speaker • 16 cm glass fiber reinforced plastic deep basket · Maximum input: 100 W •Nominal input: 25 W

Stainless steel mounting hardware

**Common Features** Waterproof elastomer surround

•Conex damper with elastomer water guard

### **Comparison & Specifications**

### A/V Units Features Comparison

	AVH-P7950DVD	AVH-P6050DVD	AVH-P5150DVD	AVH-P4150DVD	AVH-P3150DVD	DVH-P4150UB	DVH-3150UB	XDV-P650	AXM-P7650
USB/iPod/Bluetooth <sup>®</sup> CONTROL									
Direct connection for iPod (audio & video)			● <sup>(1)</sup>	<ul> <li>(2)</li> <li>(2)</li> </ul>	● <sup>(3)</sup> ● <sup>(3)</sup>	● <sup>(3)</sup> ● <sup>(3)</sup>			
Direct connection for iPhone Adapter ready for iPod <e =="" control="" external="" unit=""></e>	•	•	Е	E	E	E			E
Link Play for iPod			•(4)	•	٠	٠			
USB direct connection <sup>(5)</sup> <f =="" front,="" r="Rear"> USB adapter ready (External unit control)</f>		•	R	R	F <sup>(6)</sup>	F <sup>(6)</sup>	F <sup>(6)</sup>		
Bluetooth <sup>®</sup> adapter ready $\langle E X E Harris Harris Control \rangle$	•	•	•	•	•				Е
unit control> DISPLAY		•		-	•	•			L
TFT active matrix LCD color screen (16:9 WVGA wide) (inch)	7								
TFT active matrix LCD color screen (16:9 wide) (inch)		7	7	7	5.8				
New split-screen IC Built-in GDC (Graphics Display Controller)	•	•		•	•				
Sub-Display (10-character)	٠								
AG (Anti-Glare) coated LCD color screen	•	•	•	•	•				
Picture/contrast adjustment Intelligent dimmer control	•	•	•	•	•				
Touch panel operation display	•	٠	٠	٠	٠				
Touch slide operation				•	•				
Video selector Virtual GUI (Graphic User Interface)	•	•			•				
Selectable screen color	-	-	•	•	•				
Customizable wallpapers				٠	٠				
GUI control with joystick remote control and on-screen display								•	
6 wide screen modes (Just/Full/Cinema/ Zoom/Normal/Auto)	•								
5 wide screen modes (Just/Full/Cinema/									
Zoom/Normal) Fully motorized unit with display angle	•	•	•	•					
adjustment Fully motorized unit with display angle	•		•						
adjustment (5 steps) DVD MEDIA		•		•		_			_
DVD-Audio playback	•								
DVD-Video playback	•	٠	٠	•	٠	•	٠	•	
DVD-R/RW playback <a =="" audio="" format,<br="">V = Video format&gt;</a>	A/V	v	A/V	A/V	A/V	A/V	A/V	v	
DivX® file playback	•		•	•	•	•	٠		
MP3/WMA/AAC playback on DVD	٠		•	•	٠	٠	٠		
Linear PCM digital output								•	
Linear PCM decoder Dolby Pro Logic II decoder	•	•	•	•	•	•	•	•	
Dolby Digital decoder	•	•	•	•	•	•	•	•	
DTS digital output <b =="" built-in="" decoder=""></b>	В	٠	•	•	•	•	•	•	
MPEG-1/-2 decoder	•	•	•	•	•	•	•	•	
192 kHz/24-bit DAC (for audio) 96 kHz/24-bit DAC (for audio)	•	•	•	•	•	•	•	•	
10-bit video DAC	•	•	•	•	•	•	•	•	
Chapter/title/time direct search	٠	٠	٠	٠	٠	•(7)	•(7)	٠	
Chapter/track/disc repeat	•	•	•	•	•	•	•	•	
Bookmark play/eject Bookmark play (6 discs)	•	•	•	•	•	•	•	•	
DVD auto play	٠	•	٠	٠	٠	٠	٠	•	
Audio L/R select (Linear PCM)	•	•	•	•	•	•	٠	•	
Digital direct	•						-		
Playback control (VCD) CD MEDIA	•	•	•	•	•	•	•	•	
CD-R/RW playback	•	٠	٠	٠	•	٠	٠	•	
DivX® file playback	•		•	•	•	•	•		
WMA (Windows Media <sup>™</sup> Audio) playback with WMA Tag <sup>(8)</sup>	•	٠	٠	٠	٠	٠	٠	٠	
MP3 playback with ID3 Tag <sup>(8)</sup>	•	•	•	•	٠	٠	٠	٠	
iTunes AAC playback <sup>(8)</sup>	٠		٠	٠	٠	٠	٠		
Folder/track direct search 1-bit D/A Converter with 8× oversampling	•	•						•	
1-bit D/A Converter with 8× oversampling digital filter	•	٠	٠	٠	٠	٠	٠		
Track scan	•	•	•	•	•	•	•	•	
CD pause Repeat (disc/track)	•	•	•	•	•	•	•	•	
Random play (disc)	•	•	•	•	•	•	•	•	
CD Text	•	•	٠	•	٠	٠	•	٠	
List search (MP3/WMA/AAC)	•	•(9)	٠	٠	٠	•(9)	•(9)		
TUNER Supertuner® IIID+									
Supertuner IIID	-	٠	٠	٠	٠	٠	٠		
BSM (Best Stations Memory)	٠	٠	٠	٠	٠	٠	٠		
Local seek tuning	•	•	•	•	•	•	•		
24-station (18 FM/6 AM) presets	•	•	•	•	•	•	•		
	-			-	-	-	-		
9 kHz/10 kHz AM channel spacing switch AUDIO	•								
9 kHz/10 kHz AM channel spacing switch	8	4	4	4	4	4	4		

		AVH-P7950DV	AVH-P6050DV	AVH-P5150DV	AVH-P4150DV	AVH-P3150DV	DVH-P4150UB	DVH-3150UB	XDV-P650	AXM-P7650
AUDIO (continue										
2 RCA pre-outs	Front + Rear/Subwoofer (selectable) Front + Rear			•		•	•			
1 RCA pre-out	Rear							٠		
High-voltage pre		5	4	4	4	4	-			
Advanced Sound DSP	Built-in DSP (Digital Signal				•	•	•	•		
031	Processor)	•								
	Preset equalizer	5								
	Custom preset equalizer	3								
	Multi-channel 3-band parametric equalizer (L/R independent/common)	•								
	Multi-channel Auto EQ (2-channel/multi-channel) 13-band graphic equalizer	•								
	(L/R independent/common) Digital listening position selector	•								
	Auto time alignment	٠								
	Front 2-way crossover (HPF/LPF)	٠								
EEQ (Easy Equalizer)	EEQ		٠	٠	٠	٠	٠	٠		
(,,	Preset equalizer		5	5	5	5	5	5		
	1-mode custom preset equalizer 3-band parametric equalizer		•		•		•	•		
	3-band equalizer (Bass/Mid/Treble)			-			•	•		
	EQ-EX		٠							
	Bass Boost 2-way crossover (HPF/LPF)		•(10)	•	•	•				
	Selectable loudness					-				
Direct Sub Drive	<3 = 3-mode, 2 = 2-mode>		3	3	3	3	2	2		
Subwoofer contr		٠	٠	٠	٠	٠				
	ligh, M = Mid, L = Low>		H/M/L	H/M/L	H/M/L	H/M/L	H/L	H/L		
	volume/balance controls (Music Studio/Dynamic	•	•	•	•	•	•	•		
	itage/Relax Living)		٠							
SLA (Source leve	l adjuster)	٠	٠	٠	٠	٠	٠	٠		
Spectrum analyz	er		•							
Level indicator Cellular mute			•	•	•	•				
GENERAL	atible (disc format)									
	M/NTSC compatible (display)	•	•	•	•	•				
JPEG on CD-R/RW		•(11)			•	٠	٠	٠		
Rotary volume		•		•			•	•		
Wireless remote direct access rem	controller <10 = 10-key	10	•	•	•	•	•	•	•	
Joystick remote of		•	٠	•	•	•	٠	•	•	•(12)
	vith an optional remote sensor								٠	
Slide down grille	face		٠		•					
Flap-type grille f				-			٠	-		
Pop-up grille fac Detachable Face		(13)		•				•		
Clock <e =="" enter<="" td=""><td></td><td>•</td><td>E</td><td>•</td><td>•</td><td>•</td><td>•</td><td>•</td><td></td><td>•</td></e>		•	E	•	•	•	•	•		•
Full Dot OEL (Org	janic EL) display									٠
RGB key illumina	tion (112 colors)			•	٠	٠				
Dual illumination		٠								
Brightness adjus										•
System control te	lifferent sources) operation		•		•	•	•			
for front and rear Multi-language	guide (English/Spanish/	•	•							
-	litional Chinese) <sup>(14)</sup>	-	-			-				
Display off secur Source CD contro	-	•	•		•		•			
	ol <e =="" control="" external="" unit=""></e>	•	•	•	•	•	E			•
Source DVD cont E = External unit	F	E	F	E	E	E			•	
6-disc CD/DVD c	-		٠						•	٠
<pre>Aulti-channel pr <e <="" =="" external="" pre="" uni=""></e></pre>	ocessor (DEQ-P7650) control it control>		٠	<b>e</b> <sup>(15)</sup>	<b>e</b> <sup>(15)</sup>	•(15)	•(15)			Е
External unit con	trol via IP-Bus	2	2	2	2	2	2			2
RGB input (26-pi	n)		٠		٠					
AV-Bus input		•	•		_	_	_			
	) <f =="" front,="" r="Rear"></f>	R <sup>(16)</sup>	R <sup>(16)</sup>	R	R	F	F	F <sup>(16)</sup>		•(17)
AUX-2 <sup>(18)</sup> Automatic rear v	iew monitoring in reverse a <sup>(20)</sup> )	٠	•	•	٠	٠				
AUX-2 <sup>(18)</sup> Automatic rear v gear <sup>(19)</sup> (by camer Component outp		•	•	•	•	•				

(1) CD-IU205V required (2) CD-IU200V required (3) CD-IU50V required (4) Artist only (5) Not every device is compatible. See more details in Pioneer website. Compatible with USB device only. Not compatible with DRM (Digital Rights Management) contents and MTP (Media Transfer Protocol) connection players. (6) Plases use CD-U50E USB extension cable if a direct connection causes a USB device to protrude from the headunit in a way that can interfere with driving. (7) Except time direct search (8) With CD-ROM and CD-RYRW discs (9) MP3 and WMA list search (10) HPF only (11) JPEG on CD-R (12) DVD remote (13) Detachable lower face (14) Caution only (15) CD-DD25 required (16) Audio only (17) CD-R820 only (18) IP-Bas with CD-RBH0 or CD-R820 (19) Use input only for reverse or mirror image rear view camera. Other use may result in injury or damage. (20) Camera on included

### **DVD/VCD/CD Players Specifications**

	r iay	ers specifica	luons	>							
				AVH-P7950DVD	AVH-P6050DVD	AVH-P5150DVD	AVH-P4150DVD	AVH-P3150DVD	DVH-P4150UB	DVH-3150UB	XDV-P650
LCD MONITOR											
Display				Color liquid crystal display TFT active matrix driving system	_	_	_				
Display size				7-inch (16:9) wide	7-inch (16:9) wide	7-inch (16:9) wide	7-inch (16:9) wide	5.8-inch (16:9) wide	_	_	_
Picture size			(mm)	152.4 × 91.44	156 × 82	154×87	155.2×81.3	128.1 × 71	_	_	_
Picture segment			(pixels)	1 152 000 (800 × 480 × 3)	336 960 (480 × 234 × 3)	336 960 (480 × 234 × 3)	336 960 (480 × 234 × 3)	336 960 (480 × 234 × 3)	-	-	-
VIDEO (composite o	output)										
Output level				1 Vp-p/75 Ω	1 Vp-p/75 Ω	1 Vp-p/75 Ω	1Vp-p/75 Ω				
DVD & CD PLAYER (I	DVD, Sar	npling frequency 9	6 kHz)								
Frequency response	[±1 dB]		(Hz)	5 to 96 000	5 to 44 000	5 to 44 000	5 to 44 000				
5/N ratio [1 kHz, IEC-	A Netwo	rk]	(dB)	102	96	96	96	96	96	96	96
TUNER											
requency range	FM		(MHz)	87.5 to 108	87.5 to 108	87.5 to 108	_				
	AM [1	0 kHz]	(kHz)	530 to 1 640	530 to 1 640	530 to 1 640	—				
	[9	kHz]	(kHz)	531 to 1 602	531 to 1 602	531 to 1 602	—				
FM usable sensitivity	/ [75 Ω, n	nono, S/N: 30 dB]	(dBf)	8 [0.8 µV]	8 [0.8 µV]	9 [0.8 μV]	9 [0.8 μV]	9 [0.8 µV]	9 [0.8 μV]	9 [0.8 μV]	—
AM usable sensitivity	y [S/N: 20	) dB]	(μV)	18	18	25	25	25	25	25	—
AUDIO											
Max. power output*				$50 \text{W} \times 8$	50 W × 4	$50 \text{W} \times 4$	$50 \text{ W} \times 4$	50 W × 4	50 W × 4	50 W × 4	_
Continuous power o	utput			25 W × 8	$22 \text{W} \times 4$	$22 W \times 4$	$22 \text{ W} \times 4$	$22 \text{ W} \times 4$	22 W × 4	$22 \text{ W} \times 4$	_
GENERAL											
Dimensions	DIN	Chassis		$178\times50\times160$	$178\times100\times166$	$180 \times 50 \times 165$	$178\times100\times165$	$178\times100\times165$	$178\times50\times163$	$178\times50\times163$	$178 \times 50 \times 16$
$[W \times H \times D]$ (mm)		Nose		$188 \times 58 \times 36$	$171 \times 96 \times 16$	$188 \times 58 \times 33$	$171 \times 97 \times 9$	$171 \times 97 \times 8$	188  imes 58  imes 21	$188 \times 58 \times 23$	$188 \times 58 \times 2$
	D	Chassis		$178\times50\times165$	_	$178\times50\times165$	_	—	$178\times50\times163$	$178\times50\times163$	$178 \times 50 \times 16$
		Nose		$170 \times 46 \times 31$	_	$170 \times 46 \times 28$	_	—	170  imes 46  imes 21	$170 \times 48 \times 23$	$170 \times 46 \times 1$
	Hide-	away unit (Chassis)		280 × 37 × 171	_	_	_	_	_	_	179 × 28 × 10

'Peak momentary power output

Two versions are available for the AVH-P7950DVD, AVH-P6050DVD, AVH-P5150DVD, AVH-P4150DVD, AVH-P3150DVD, DVH-P4150UB, DVH-3150UB and XDV-P650. Region 4: For Oceania and Latin America Region 3: For Southeast Asia

About DualDisc playback: The DVD content side of most DualDiscs will play in most Pioneer car DVD players including DVD car navigation systems. Please use a Pioneer DVD Audio player to play DVD Audio content on DualDisc. Please note that the insertion or ejection of a DualDisc into/from Pioneer's DVD products is likely to cause scratches to the surface of the DualDisc. Scratched discs may not play. A DualDisc could get stuck in and may not be able to be removed from certain Pioneer products. For car slot-in type DVD players including car navigation systems, there is a possibility of mechanical jam. The non-DVD side of a DualDisc is not compliant with the Compact Disc Digital Audio Specification. Accordingly, the non-DVD side of a DualDisc may not play in Pioneer products.

### **Displays Specifications**

	AVD-W7900
LCD MONITOR	
Display	Color liquid crystal display TFT active matrix driving system
Display size	7-inch (16:9) wide
Picture size (mm)	154×87
Picture segment (pixels)	336 960 (1 440 × 234)
GENERAL	
DIN chassis dimensions [W $\times$ H $\times$ D] (mm)	178 × 118 × 32

### **Hide-Away TV Tuners Specifications**

	GEX-P5750TVP	GEX-P5750TV
TV TUNER		
Color system	TV: PAL/SECAM compatible Video: NTSC/PAL/PAL-M/SECAM compatible	TV: NTSC/PAL-M compatible Video: NTSC/PAL/PAL-M/SECAM compatible
Channel coverage* (ch)	CCIR/B, G, H: VHF 2 to 12 UHF 21 to 69	VHF 2 to 13 UHF 14 to 69
	Indonesia/B, G, H: VHF A to H2 UHF 21 to 69	
	China/D, K: VHF A to K UHF 21 to 69	
	UK, Ireland/I: VHF R1 to R12 UHF 21 to 69	
	OIRT/D, K: VHF 2 to 12 UHF 21 to 69	
	Australia/B, G, H: VHF 0 to 11 UHF 28 to 69	
	South Africa/I: VHF 4 to 11, 13 UHF 21 to 69	
Composite A/V output	Output × 2	Output × 2
GENERAL		
Chassis dimensions [W $\times$ H $\times$ D] (mm)	$172 \times 30 \times 150$	$172\times30\times150$

\*Reception channels and TV reception system standards are set automatically, according to reception area selected.

### A/V Units Terminal Comparison

### **Multi-Channel Processor Specifications**

	DEQ-P7650
AMPLIFIER	
Max. power output*	50 W × 5
Continuous power output	22 W × 5
GENERAL	
Chassis dimensions $[W \times H \times D]$ (mm)	237 × 29 × 171
*Peak momentary power output	

### **A/V Selector Specifications**

		CD-VS33
VIDEO (composite input/	/output)	
Input/output level (PAL/N through outputs from vid		1 Vp-p/75 Ω
GENERAL		
	de-away unit (Chassis)	$160 \times 28 \times 120$
$[W \times H \times D] (mm)$ Co	ntroller	120 × 60 × 32

### **Audio Master Unit Specifications**

		AXM-P90RS
GENERAL		
Dimensions	Display	$165 \times 44 \times 16.4$
$[W \times H \times D] (mm)$	Hide-away unit (Chassis)	252 × 40 × 152

### **Multi-Channel Processor Controller Specifications**

		AXM-P7650
GENERAL		
Dimensions	Chassis	119×37×20
$[W \times H \times D]$ (mm)	Hide-away unit (Chassis)	100 × 28 × 136

	P7950DVD	PEOSODVD	AVH-P5150DVD	P4150DVD	P3150DVD	P4150UB	3150UB	P7650	P650	-P7650	AVD-W7900
	AVH-P	AVH-H	AVH-I	AVH-P4	AVH-F	DVH-P	DVH-	DEQ-P	XDV-P(	AXM	AVD-1
INPUT											
IP-Bus input	•	•	•	•	•	•		•	•	•	
AV-Bus input	•	•							•		
Optical digital input	•							2			
RCA Audio input	2	2 <sup>(1)</sup>	1	1	1	1	1	2		1	2
RCA Video input	2(1)	2(1)	1	1	1	1					2
Audio/Video input (mini jack type)	Audio	Audio	A/V	A/V	A/V <sup>(2)</sup>	A/V <sup>(2)</sup>	Audio <sup>(2)</sup>				
RGB input		•		•							
Rear view camera input <sup>(3)</sup>	•	•	•	•	•						
OUTPUT											
IP-Bus output								•	•(4)		
Optical digital output		•	•	•	•	•	•		•		
RCA pre-out	9(5)	3	2	3	2	2	1	6(6)			
RCA Audio output	1								•		1
RCA Video output	1	1	1	1	1	1	1		2(7)		1

(1) Input 1: Audio/Video, Input 2: Audio/Video or rear view camera (2) On front panel (3) Camera not included (4) Analog for front (5) 9-channel RCA pre-outs (6) 6-channel RCA pre-outs (7) Front + rear

### **Comparison & Specifications**

### **Headunits Features Comparison**

headunit	s Features Comparison																
		B	F	g	•		B	5							=		
		201	B	201	ISO		I I I	N		80	<u> </u>	35		RS	SR		
		P71	915	P51	415	315	515	115	305	512	99d	P2C	L H	064		8	
		DEH-P7150UB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	DEH-3150UB	DEH-2150UBG	DEH-1150MPG	FH-P6050UB	CDX-P1280	CDX-P680	KEH-P2035	RS-D7RII	DEX-P90RS	DEH-P80RSI	RS-P90	DEQ-P90
									Ű.	Ū	Ξ	¥	č			č	
	Aemory Card/Bluetooth® CONTROL		F(1)	<b>F</b> (1)	F(1)	F(1)	<b>F</b> (1)										
	nection <f =="" front=""></f>	•	F <sup>(1)</sup>		•						•						
USB adapter re	ady (External unit control)	•	•	•	•	•									•		
Direct connect	ion for iPod	•(2)	•(2)	•(2)	•(2)				•(2)								
Direct connect			•(2)	•(2)	•(2)				•								
	for iPod (CD-IB100II) <e =="" control="" external="" unit=""></e>	•							•			F	•	F	•		
ist search for i		•										L	•	L	•		
ink Play for iPo		•(3)	•	•	•				<b>(</b> 3)								
	nory card slot (SDHC compatible)		•	•	•				•								
	oth® Wireless Technology		•														
	pter ready <e =="" control="" external="" unit=""></e>	•	-	•					•				Е	Е	Е		
CD PLAYER				-					-				-	-	-		
	oack <s =="" play="" skip="" with=""></s>	•	٠	•	٠	•	٠	•	•	S	S		٠	•	•		
	s Media <sup>™</sup> Audio) playback with WMA Tag <sup>(4)</sup>	•	٠	•	٠	٠	٠	•	•						•		
AP3 playback v		•	٠	•	٠	•	٠	•	٠						•		
Tunes AAC pla		•	٠	•	٠				•						•		
VAV file playba		•	٠	٠	٠	٠	٠	٠	٠						٠		
	search (CD-ROM)	•	٠	٠	٠	٠	٠		٠						٠		
	with $8 \times$ oversampling digital filter $< 24 =$ Multi 24-bit,																
B = Burr Brown		1	1	1	1	1	1	1	1	1	1			24	В		
Digital direct													•	•	•		
rack scan		•	٠	٠	٠	٠	٠	٠	٠				٠	٠	٠		
D pause		•	•	•	•	•	•	•	•	•	•		•	•	•		
rack/manual s	earch									•	٠		•	•			
Disc exist searc	h									•	•						
л = Magazine/		•	•	•	•	•	٠	•	•	М	м		С	С	•		
	M = Magazine, D = Disc>	D	D	D	D	D	D	D	D	M/D	M/D		D	D	D		
Disc title memo	ory (48 titles)	•	٠	٠					•				•	•	٠		
D error code t	ransmission capabilities									•	•						
One-day memo										•	٠						
ast position m	iemory									•	•						
D Text		•	٠	٠	٠	٠	٠	•	•	•	٠		٠	•	٠		
Digital compre									•						•		
3MX (Bitmetric								•									
CASSETTE PLA																	
Radio intercept												•					
UNER																	
upertuner® (II	ID+ = Supertuner® IIID+, IIID = Supertuner® IIID,	IIID	IIID	IIID	IIID	IIID	IIID	IIID	IIID			•	III™	III™	IIID+		
II <sup>™</sup> = Supertur		•	•	•	•	•	•	•	•			•	•	•	•		
SM (Best Stati	-	-	-		-	•		•	-			•	-		•		
ocal seek tuni	-	•	•	•	•	•	•	•	•			•	•	•	•		
	M/6 AM) presets		•	•		•	•	•	•			•	•	9	•		
	M channel spacing switch <9 = 9 kHz only>	•	•	•	•	•	•	•	•			•	9	9	•		
	een al meester als als airentians												•				
ligh precision	sound master clock circuitry													•			
ligh-power	MOSFET 50 W × 4 (max.)												•	•	•		
ngn-power output	$45 \text{ W} \times 4 \text{ (max.)}$	•	•	•	•	•	•	•	•			•			•		
	_ 43 W X 4 (max.) channel RCA output (high/mid/low/subwoofer)											•					
	Front + Rear + Non-fading $\langle G = Gold-plated \rangle$													G			
RCA pre-outs	Front + Rear + Subwoofer $\langle G = Gold-plated \rangle$	•												G	G		
	Front + Rear/Subwoofer (selectable)														G		
nex pre-outs	Front + Rear				•	•			•								
CA pre-out	Rear/Subwoofer (selectable)																
ien pie-out	Rear		•									•					
ligh-voltage p		4		4			-		4					4	5	4	Λ
		4		4					4	1		1	-	-	5	-4	4
-Rucinput/or		1		1					1	1	1	1	-	-			
													•	•		R	C
Optical input/o																ň	L
Dptical input/c Dptical input <	D = with DEX-P90RS, R = with RS-D7RII>																
Optical input/c Optical input < requency cha	D = with DEX-P90RS, R = with RS-D7RII> nge: 96 kHz to 44.1 kHz		<u> </u>	•	-		-						•				
Optical input/c Optical input < requency char Advanced Sour	D = with DEX-P90RS, R = with RS-D7RII> nge: 96 kHz to 44.1 kHz nd Retriever	•	•	•	•	•	•		•				•		•	•	
Optical input/c Optical input < requency char Advanced Sour	D = with DEX-P90RS, R = with RS-D7RII> nge: 96 kHz to 44.1 kHz nd Retriever Built-in DSP (Digital Signal Processor)		•	•	•	•	•						•		•	•	•
	D = with DEX-P90RS, R = with RS-D7RII> nge: 96 kHz to 44.1 kHz nd Retriever	•	•	•	•	•	•	•	•				•	•	•	•	•

### **Headunits Specifications**

						1-DIN Players				Component Ad	ld-on DSP Units
			DEH-P7150UB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	DEH-3150UB	DEH-2150UBG	DEH-1150MPG	RS-P90	DEQ-P90
CD PLAYER											
S/N ratio [1 kHz, IEC-A N	letwork]	dB	94	94	94	94	94	94	94	_	_
TUNER											
Frequency range	FM	MHz	87.5 to 108	_	—						
	AM [10 kHz]	kHz	530 to 1 640	_	_						
	[9 kHz]	kHz	531 to 1 602	_	_						
FM usable sensitivity [75	Ω, mono, S/N: 30 dB]	dBf	9 [0.7 μV]	9 [0.8 μV]	9 [0.7 μV]	9 [0.7 μV]	11 [0.7 μV]	11 [0.7 μV]	11 [0.7 μV]	_	_
AM usable sensitivity [	5/N: 20 dB]	μV	25	25	25	25	25	25	25	_	_
COMPONENT ADD-ON	I DSP UNIT										
Equalization frequency	/	Hz	_	_	_	_	_	_	_	20 to 20 000	20 to 20 000
Equalization range		dB	—	_	_	_	_	_	_	±12	±12
Distortion [1 kHz, 500 r	nV, 20 KLPF]	%	_	—	_	_	—	_	_	0.002	0.005
Frequency response [-	1 dB]	Hz	—	—	_	_	—	_	_	10 to 20 000	10 to 20 000
S/N ratio [IEC-A networ	'k]	dB	—	—	—	_	—	—	_	115	109
Output impedance		Ω	—	—	_	_	—	_	_	220	1 k
Max. output level			_	_	_	—	_	_	—	4.0 V/1 kHz, 1 % dist.	4.0 V/1 kHz, 1 % dist
AUDIO											
Max. power output*			$50 \text{ W} \times 4$	$50 \text{W} \times 4$	$50 \text{W} \times 4$	$50 \text{W} \times 4$	$50 \text{ W} \times 4$	$50 \text{ W} \times 4$	$50 \text{ W} \times 4$	_	—
Continuous power out	put		$22 \text{ W} \times 4$	$22 \text{ W} \times 4$	$22 \text{ W} \times 4$	$22 \text{W} \times 4$	$22 \text{ W} \times 4$	$22 \text{ W} \times 4$	$22 \text{W} \times 4$	—	—
GENERAL											
Dimensions [W $\times$ H $\times$ D	] DIN—Chassis	mm	$178\times50\times165$	$178\times50\times162$	$178\times50\times162$	$178\times50\times162$	$178\times50\times162$	$178\times50\times165$	$178\times50\times162$	$240 \times 59 \times 240$	$191 \times 49 \times 220$
	Nose	mm	$188 \times 58 \times 18$	$188 \times 58 \times 24$	$188 \times 58 \times 17$	$188 \times 58 \times 24$	$188 \times 58 \times 22$	$188 \times 58 \times 15$	$188 \times 58 \times 15$	_	_
	D—Chassis	mm	$178\times50\times165$	$178\times50\times162$	$178\times50\times162$	$178\times50\times162$	$178\times50\times162$	$178\times50\times165$	$178\times50\times162$	—	_
	Nose	mm	$170 \times 45 \times 18$	170  imes 46  imes 24	$170 \times 48 \times 17$	$170 \times 46 \times 24$	$170 \times 48 \times 22$	$170 \times 48 \times 15$	170  imes 48  imes 15	—	_

\*Peak momentary power output

### **Headunits Features Comparison**

		DEH-P7150UB	DEH-6150BT	DEH-P5150UB	DEH-4150SD	DEH-3150UB	DEH-2150UBG	DEH-1150MPG	FH-PGO50UB	CDX-P1280	CDX-P680	KEH-P2035	RS-D7RII	DEX-P90RS	DEH-P80RSII	RS-P90	DEQ-P90
AUDIO (contin	ued)																
DSP/EEQ	Advanced Segment 24-bit D/A Converter															٠	
(continued)	High-performance 32-bit floating binary point type DSP															•	
	High-performance 8× oversampling digital filter													٠			٠
	5-mode equalizer <p =="" preset=""></p>	Р	Р	Р	Р	Р	Р	Р	Р						Р	•	Р
	Auto EQ														٠		
	Auto EQ for 3-way network														•		
	BBE® digital sound processing <sup>(5)</sup>														٠		
	Digital listening position selector														•	•	•
	Time alignment <a =="" auto=""></a>														А	٠	٠
	BMX (Bitmetric Equalizer)														•		
	Digital graphic equalizer <31 = 31-band, 16 = 16-band,	7		-					-						16 1 /0		21.1.1
	7 = 7-band> <l independent="" r="L/R"></l>	/		7					7						16, L/R		31, L/
	31-band L/R independent equalizer															•	
	3-band parametric equalizer <l independent="" r="L/R"></l>		٠		٠											L/R	
	L/R independent 3-way crossover: high/mid/low														•		
	3-way digital network														٠		
	Parametric bass/treble controls															•	•
4-way indepen	dent L/R crossover network (high/mid/low/subwoofer)															•	•
Direct Sub Driv		•	•		•												
Subwoofer con																	
	High, M = Mid, L = Low, 2 = 2-mode selectable>			H/M/L		H/L	H/L	H/L	H/M/L			2					
BTB (Bass/Trebl		FI/IVI/L	T/IVI/L	FI/IVI/L	FI/IVI/L	TI/L	T/L	T/L	FI/IVI/L			2			•		
	le Booster)			-				-						-			
Fader		•	•	•	•	•	•	•	•			•	•	•	•		
	me/balance controls	•	•	•	•	•	•	•	٠			•	•	•	•	•	•
	/treble controls											•		•			
	B = Bass, M = Mid, T = Treble>					B/M/T	B/M/T	B/M/T					•				
SLA (Source lev	/el adjuster)	•	•	•	•	•	•	•	•			•	•	•	•		
Spectrum analy	yzer	•		•											•		
Level indicator	<l independent="" r="L/R"></l>	•		•											L/R		
Cellular mute		•		•					•				•	٠	•		
GENERAL																	
Rotary Commai	nder	•	٠	•	•				•						٠		
Rotary volume						•	٠	٠					٠	٠			
	e controller <10 = 10-key direct access remote, C = Card>	10	10	С	С	С	С	С	С				•		10		
Wired remote c		•	•	•	•	•	٠										
	Auto-slide, F = Flap-type, P = Pop-up>	A	P	Р	P	F	P	Р					А	А	А		
	airline aluminum front panel	~					,							•	~		
Detachable Fac		•	•		•												
Clock <e =="" ente<="" td=""><td></td><td>E</td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td>E</td><td></td><td></td></e>		E	•											•	E		
	rganic EL) display <w =="" white=""></w>	W	•		•	•	•	•	•			•	w	w	W		
		vv											vv	VV	VV		
	ed OEL (Organic EL) display								•								
LCD display (WI			•		•	•	•	•									
	on (white or red selectable)												•				
	= Brightness, C = Contrast>	В		В									C	C	В		
System control		•	•	•	•	•	•	•	•			•	•	•	•		
	e guide (English/Spanish/Portuguese)	•		٠											•		
Display off secu	urity	•	•	•	•				•				•	•	•		
	trol (External unit control)	•		•					•						•		
Source TV cont	rol (Analog tuner control)	•		•					•				•	•	•		
Source DVD cor	ntrol	•		•					•				•	•	•		
External unit co	ontrol via IP-Bus	2		2					2			1	•	2	2		
Direct AUX-in	AUX-1 <f 20="CD-RB20" =="" front,="" only="" r="Rear,"></f>	R	F	F	F	F	F	F	R				20	20	•		
	AUX-2 <sup>(6)</sup>	•		•					•						•		
Gold-plated scr	rew-type power/ground terminals															•	•
	ninals and square aluminum bonnet																-
Copper-plated																-	
													•				-
	ound cable included contal/vertical mounting: 0° to 90° (5 steps switchable) • IP-Bus												•				
output for dired	tion with CD-VC60									٠	٠						
5										6	<i>c</i>						
6 m IP-Bus cabl										•	•						
Uses 12-disc ma	agazine JD-1212S (one included)									٠							
	gazine JD-612V (one included)										•						

(1) Please use CD-U50E USB extension cable if a direct connection causes a USB device to protrude from the headunit in a way that can interfere with driving. (2) CD-IU50 required (3) Artist only (4) With CD-ROM and CD-R/RW discs. (5) BBE: Licensed by BBE Sound, Inc. under USP4638258 and 4482866. BBE and BBE symbol are registered trademarks of BBE Sound Inc. (6) IP-Bus with CD-RB10 or CD-RB20.

### **Headunits Specifications**

			Con	ponent Single-CD Pla	yers	2-DIN Player	Multi-C	) Players	Cassette Player
			RS-D7RII	DEX-P90RS	DEH-P80RSII	FH-P6050UB	CDX-P1280	CDX-P680	KEH-P2035
CD PLAYER									
S/N ratio [1 kHz, IEC-A r	etwork]	dB	_	107	105	94	92	92	_
CASSETTE PLAYER									
Wow & flutter [WRMS]		%	_	_	_	_	_	_	0.13
Tape frequency respor	se [±3 dB]	Hz	_	_	—	—	_	_	30 to 16 000
Tape S/N ratio [IEC-A n	etwork]	dB	_	_	_	_	_	_	52
TUNER									
Frequency range	FM	MHz	87.5 to 108	87.5 to 108	87.5 to 108	87.5 to 108	—	—	87.5 to 108
	AM [10 kHz]	kHz	—	—	530 to 1 640	530 to 1 640	—	—	530 to 1 640
	[9 kHz]	kHz	531 to 1 602	—	—	531 to 1 602			
FM usable sensitivity [7	'5 Ω, mono, S/N: 30 dB]	dBf	9 [0.8 μV]	9 [0.8 μV]	8 [0.7 μV]	8 [0.7 μV]	—	—	11 [1.1 μV]
AM usable sensitivity [	5/N: 20 dB]	μV	18	18	18	18	_	—	20
AUDIO									
Max. power output*			—	—	50 W × 4	$50 \text{W} \times 4$	—	—	$45 \text{W} \times 4$
Continuous power out	put		—	—	$22 \text{W} \times 4$	$22 \text{W} \times 4$	—	—	22 W × 4
GENERAL									
Dimensions [W $\times$ H $\times$ D	] DIN—Chassis	mm	$178 \times 50 \times 160$	$178 \times 50 \times 160$	$178 \times 50 \times 159$	—	$257 \times 94 \times 170^{**}$	$248 \times 66 \times 168^{**}$	$178 \times 50 \times 155$
	Nose	mm	$188 \times 58 \times 20$	$188 \times 58 \times 20$	$188 \times 58 \times 30$	—	—	—	$188 \times 58 \times 20$
	D—Chassis	mm	$178 \times 50 \times 165$	$178 \times 50 \times 165$	$178 \times 50 \times 164$	$178 \times 100 \times 160$	_	-	$178 \times 50 \times 160$
	Nose	mm	$170 \times 45 \times 15$	$170 \times 45 \times 15$	$170 \times 45 \times 25$	$170 \times 94 \times 8$	—	-	$170 \times 48 \times 15$

\*Peak momentary power output \*\*Chassis dimensions only

### **Comparison & Specifications**

### **Power Amplifiers Features Comparison**

	GM-6400F	GM-5400T	GM-D8400M	GM-D 7400M	GM-3300T	BS-A9	RS-A7	PRS-D2000SPL	PRS-D1200SPL	PRS-D4200F	PRS-D2200T	PRS-D1200M	PRS-A900
Bridgeable 4/3/2-channel capability <f =="" class-fd=""></f>	•					•	•			F			•
Bridgeable 2/1-channel capability <f =="" class-fd=""></f>		•			•						F		
Mono amplifier <d =="" class-d=""></d>			D	D				D	D			D	
Current feedback amplifier						•	•						•
Single-ended output circuit			•	•								•	
L/R independent power supply						٠	٠						٠
L/R symmetric layout circuit													•
Full balanced system (bridgeable connection)						•	•						
High-performance 32-bit floating binary point type DSP						•							
Built-in DSP (Digital Signal Processor) (FIR)						•							
Multi 24-bit Burr Brown D/A Converters						•	•						
Variable LPF/HPF (40 Hz to 500 Hz, -12 dB/oct.)										•	•		
Variable LPF (40 Hz to 240 Hz, -24 dB/oct.)								•	•				
Variable LPF (40 Hz to 240 Hz, –18 dB/oct.)												•	
Variable LPF (40 Hz to 240 Hz, -12 dB/oct.)			•	•									
LPF/HPF (80 Hz, -12 dB/oct.) for A and B channels	•												
LPF (80 Hz, -12 dB/oct.)		•			•								
Input level control (400 mV to 6.5 V) <l independent="" r="L/R"></l>					•			•	•	•	•	•	L/R
Input level control (200 mV to 6.5 V)	•	•	•	•									
Low load impedance capability (4 $\Omega$ , 2 $\Omega$ to 8 $\Omega$ allowable)	•	•	•	•	•	•	•			•	•		•
Low load impedance capability $(1 \Omega \text{ to } 8 \Omega)$								•	•			•	
Optical digital input						1	2						
3 optical digital outputs (mid/low/subwoofer)						•							
IP-Bus input/output						•	•						
RCA input and output terminals <g =="" gold-plated=""></g>	• (1)						-	G	G	G	G	G	
RCA input terminals <g =="" gold-plated=""></g>		•	•	•	•								G
Screw-type speaker terminals <g =="" gold-plated=""></g>	•	•	-	-	•	G	G						
Large block-type speaker terminals <g =="" gold-plated=""></g>			• (2)	• (2)	•			G <sup>(3)</sup>	G <sup>(3)</sup>	G <sup>(2)</sup>	G <sup>(2)</sup>	G <sup>(2)</sup>	G <sup>(4)</sup>
Large screw-type power/ground terminals <g =="" gold-plated=""></g>	•	•	-	-	•	G	G	-	-	-	-	-	-
Large block-type power/ground terminals <g =="" gold-plated=""></g>	-	•	• (5)	(5)	•	-	-	G <sup>(6)</sup>	G <sup>(3)</sup>	G <sup>(5)</sup>	G <sup>(5)</sup>	G <sup>(5)</sup>	G <sup>(5)</sup>
Speaker level input (0.8 V to 26 V)								0	0	5	0		J
Speaker level input (1.6 V to 26 V)	•	•	•	•						•		•	
Speaker line input turn-on sensor													
Bass Boost (40 Hz to 120 Hz, 0 dB to +12 dB variable) <r =="" remote=""></r>			•	•				R	R	•		•	
Bass Boost (50 Hz, 0 dB to 12 dB variable) <r =="" remote=""></r>			R					I.	i.				
Bass Boost (50 Hz, 0 dB/+6 dB/+9 dB/+12 dB) <r =="" remote=""></r>		• (7)	n	• (7)							R	R	
Subsonic filter (20 Hz, -24 dB/oct.)											I.	I.	
Subsonic filter (20 Hz, -18 dB/oct.)								•	•				
SYNC control								•					
PWM regulated power supply with MOSFET switching								•				•	
High-performance balanced isolator circuit			•	•	•			•		(8)	(8)	(8)	
High-efficiency MOSFET output section	•	•			•			•					•
Multi Emitter Bipolar Transistor			•	•				•	•	•	•	•	•
MASS (Multiple Amplifier Synchronization System)													•
						•	•	•	•			•	
Sound master clock DAC volume						•	•						
						•	•			•	•	•	
All terminals placed on one side										•	•	•	
Removable terminal/settings cover								•	•	•	•	•	
TVC (Total Vibration Control) technology										•	•	•	•
Copper-plated chassis			~		<i>c</i>	•	•						
Black heatsink with aluminum plate			•	•	•								
Black metallic mesh with silver plate (1) Output for A-channel (2) 12 to 16-gauge (3) 4-gauge (4) 12 to 18-gauge (5) 4 to 8-gauge	•	•											

(1) Output for A-channel (2) 12 to 16-gauge (3) 4-gauge (4) 12 to 18-gauge (5) 4 to 8-gauge (6) 0/1-gauge (7) Bass Boost level: 0 dB/+6 dB/+12 dB only (8) Input circuit

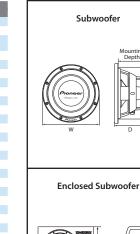
### **Power Amplifiers Specifications**

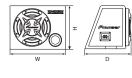
			GM-6400F	GM-5400T	GM-D8400M	GM-D7400M	GM-3300T	RS-A9	RS-A7	PRS-D2000SPL	PRS-D1200SPL	PRS-D4200F	PRS-D2200T	PRS-D1200M	PRS-A900
Max. power	4-channel mo	de	120 W $\times$ 4 (4 $\Omega)$	—	-	_	—	100 W $\times$ 4 (4 $\Omega)$	100 W $\times$ 4 (4 $\Omega)$	-	—	150 W $\times$ 4 (4 $\Omega)$	—	—	100 W $\times$ 4 (4 $\Omega)$
output [14.4 V]	3-channel mo	de	$\begin{array}{c} 120 \; W \times 2 \; + \\ 300 \; W \times 1 \; (4 \; \Omega) \end{array}$	_	_	-	_	$\begin{array}{c} 100 \ W \times 2 \ + \\ 300 \ W \times 1 \ (4 \ \Omega) \end{array}$	$\begin{array}{c} 100 \text{ W} \times 2 \text{ +} \\ 300 \text{ W} \times 1 \text{ (4 } \Omega) \end{array}$	-	-	$\begin{array}{c} 150 \text{ W} \times 2 \text{ +} \\ 600 \text{ W} \times 1 \text{ (4 } \Omega) \end{array}$	-	_	$\begin{array}{c} 100 \text{ W} \times 2 \text{ +} \\ 200 \text{ W} \times 1 \text{ (4 } \Omega) \end{array}$
	2-channel mo	de	$300W\times 2~(4~\Omega)$	$250~W\times2~(4~\Omega)$	-	-	120 W $\times$ 2 (4 $\Omega)$	$300~W\times2~(4~\Omega)$	$300~W\times2~(4~\Omega)$	-	-	$600~W\times 2~(4~\Omega)$	300 W $\times$ 2 (4 $\Omega)$	-	$200~W\times2~(4~\Omega)$
	1-channel mo	de	-	760 W × 1 (4 Ω)		$\begin{array}{l} 400 \text{ W} \times 1 \ (4 \ \Omega) \\ 800 \text{ W} \times 1 \ (2 \ \Omega) \end{array}$	$300 \text{ W} \times 1 \text{ (4 } \Omega)$	_	_	$\begin{array}{c} 1 \; 500 \; W \times 1 \; (4 \; \Omega) \\ 3 \; 000 \; W \times 1 \; (2 \; \Omega) \\ 4 \; 000 \; W \times 1 \; (1 \; \Omega) \end{array}$		-	1 200 W $\times$ 1 (4 $\Omega)$	800 W $\times$ 1 (4 $\Omega)$ 1 200 W $\times$ 1 (2 $\Omega)$	-
Continuous power output	4-channel mo	de	$\begin{array}{c} 60 \text{ W} \times 4 \ (4 \ \Omega) \\ 75 \text{ W} \times 4 \ (2 \ \Omega) \end{array}$		-	-	-		$\begin{array}{l} 50~W\times 4~(4~\Omega)\\ 75~W\times 4~(2~\Omega) \end{array}$	-	_	$\begin{array}{c} 75 \ W \times 4 \ (4 \ \Omega) \\ 150 \ W \times 4 \ (2 \ \Omega) \end{array}$	-	-	$\begin{array}{l} 50 \text{ W} \times 4 \ (4 \ \Omega) \\ 50 \text{ W} \times 4 \ (2 \ \Omega) \end{array}$
[14.4 V]	3-channel mo	de	$\begin{array}{c} 60 \text{ W} \times 2 \text{ +} \\ 150 \text{ W} \times 1 \text{ (4 } \Omega) \end{array}$	—	-	-	-	$\begin{array}{c} 50 \text{ W} \times 2 \text{ +} \\ 150 \text{ W} \times 1 \text{ (4 } \Omega) \end{array}$	$\begin{array}{c} 50 \text{ W} \times 2 \text{ +} \\ 150 \text{ W} \times 1 \text{ (4 } \Omega) \end{array}$	-	—	$\begin{array}{c} 75W \times 2 \ + \\ 300W \times 1 \ (4\ \Omega) \end{array}$	-	-	$\begin{array}{c} 50 \ W \times 2 \ + \\ 100 \ W \times 1 \ (4 \ \Omega) \end{array}$
	2-channel mo	de	150 W $\times$ 2 (4 $\Omega)$	$\begin{array}{l} 125 \ W \times 2 \ (4 \ \Omega) \\ 190 \ W \times 2 \ (2 \ \Omega) \end{array}$	—	—	$\begin{array}{l} 60 \text{ W} \times 2 \ (4 \ \Omega) \\ 75 \text{ W} \times 2 \ (2 \ \Omega) \end{array}$	150 W $\times$ 2 (4 $\Omega)$	$150~W\times 2~(4~\Omega)$	—	—		$\begin{array}{c} 150 \ W \times 2 \ (4 \ \Omega) \\ 300 \ W \times 2 \ (2 \ \Omega) \end{array}$	—	$100~W\times 2~(4~\Omega)$
	1-channel mo	de	-	$380~W \times 1~(4~\Omega)$	$\begin{array}{l} 300 \text{ W} \times 1 \; (4 \; \Omega) \\ 600 \text{ W} \times 1 \; (2 \; \Omega) \end{array}$	$\begin{array}{l} 200 \text{ W} \times 1 \ (4 \ \Omega) \\ 400 \text{ W} \times 1 \ (2 \ \Omega) \end{array}$	150 W × 1 (4 Ω)	_	_	$\begin{array}{c} 750 \ W \times 1 \ (4 \ \Omega) \\ 1 \ 500 \ W \times 1 \ (2 \ \Omega) \\ 2 \ 000 \ W \times 1 \ (1 \ \Omega) \end{array}$	$\begin{array}{c} 500 \ W \times 1 \ (4 \ \Omega) \\ 1 \ 000 \ W \times 1 \ (2 \ \Omega) \\ 1 \ 200 \ W \times 1 \ (1 \ \Omega) \end{array}$	-		$\begin{array}{c} 400 \ W \times 1 \ (4 \ \Omega) \\ 600 \ W \times 1 \ (2 \ \Omega) \\ 600 \ W \times 1 \ (1 \ \Omega)^* \end{array}$	_
Frequency	+0 dB, -1 dB	Hz	10 to 50 000	10 to 50 000	_	_	10 to 50 000	10 to 100 000	10 to 100 000	_	_	_	_	_	10 to 100 000
response	+0 dB, -3 dB	Hz	_	_	10 to 240	10 to 240	-	_	_	10 to 240	10 to 240	10 to 50 000	10 to 50 000	10 to 240	_
	+0.5 dB, -3 dB	Hz	_	—	_	—	—	_	_	—	—	_	—	—	_
Total harmonic d	listortion	%	0.03	0.03	0.3	0.3	0.008	0.002	0.002	0.3	0.3	0.005	0.005	0.03	0.003
S/N ratio [IEC-A r	network]	dB	95	95	80	80	100	105	105	85	80	100	100	92	108
Dimensions (W >	(H×D)	mm	$265 \times 62 \times 346$	$265\times62\times346$	$290 \times 56 \times 200$	$225\times 56\times 200$	$300\times60\times194$	585  imes 330  imes 71	585  imes 330  imes 71	586  imes 282  imes 65	$381 \times 282 \times 65$	$301\times57\times213$	$301 \times 57 \times 213$	$301 \times 57 \times 213$	$282\times65\times371$
*Hi-current mode															

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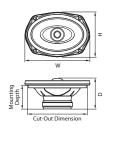
# **Comparison & Specifications**

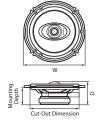
Dimensions





Speakers





### Subwoofers & Speakers Specifications

	Size	Max. Input	Nominal Input	Frequency Response	Sensitivity	Impedance	Dimensions (W × H × D)	Mounting Depth	Cut-Out Dimensions
TS-W01RSII	25 cm	300 W	150 W	25 Hz to 3 800 Hz	86 dB	4Ω	ø276 mm × 94 mm	75 mm	ø238 mm
rs-motrsii	17 cm	120 W	50 W	35 Hz to 12 000 Hz	89 dB	4Ω	ø174 mm × 75 mm	69 mm	ø151 mm
		50 W <sup>(1)</sup>	15 W	70 Hz to 24 000 Hz <sup>(1)</sup>		40	Ø90 mm × 42.5 mm <sup>(1)</sup>	37.5 mm <sup>(1)</sup>	Ø72.5 mm <sup>(1)</sup>
S-S01RSII	7.7 cm	60 W <sup>(2)</sup>	15 W	120 Hz to 24 000 Hz <sup>(2)</sup>	86 dB	4 \	ø90 mm × 67 mm <sup>(2)</sup>	60 mm <sup>(2)</sup>	ø77 mm <sup>(2)</sup>
S-T01RSII	3.5 cm	120 W	50 W	1 000 Hz to 48 000 Hz	95 dB	6Ω	ø68 mm × 64 mm	_	_
S-W12PRS	30 cm	1 200 W	300 W	15 Hz to 2 000 Hz	92 dB	2 Ω or 8 Ω	ø322 mm × 152 mm	133 mm	ø278 mm
S-M171PRS	17 cm	200 W	50 W	25 Hz to 9 000 Hz	88 dB	4 Ω	ø156 mm × 78 mm	67 mm	ø158 mm
S-S101PRS	10 cm	60 W	15 W	60 Hz to 30 000 Hz	86 dB	4 Ω	ø110 mm × 52 mm	46 mm	ø90 mm
S-T031PRS	28 mm	200 W	50 W	1 200 Hz to 32 000 Hz	90 dB	4 Ω	ø55 mm × 27.1 mm	12.2 mm	ø47 mm
S-C171PRS	17 cm	200 W	50 W	25 Hz to 32 000 Hz	88 dB	4Ω	ø156 mm × 78 mm	67 mm	ø140 mm
rs-c131PRS	13 cm	150 W	30 W	35 Hz to 32 000 Hz	88 dB	4Ω	ø129 mm × 67 mm	57.3 mm	ø121 mm
S-W8102SPL	38 cm	8 000 W	3 000 W	15 Hz to 1 500 Hz	91 dB	1 Ω or 4 Ω	ø400 mm × 359.5 mm	312 mm	ø352 mm
S-W5102SPL	30 cm	6 000 W	2 500 W	18 Hz to 2 000 Hz	88 dB	1 Ω or 4 Ω	ø327 mm × 304 mm	266 mm	ø278 mm
CS-W3002D4	30 cm	3 500 W	1 000 W	20 Hz to 150 Hz	90 dB	2 Ω or 8 Ω	ø329 mm × 214 mm	188.8 mm	ø278 mm
TS-W2502D4	25 cm	3 000 W	800 W	20 Hz to 150 Hz	89 dB	2 Ω or 8 Ω	ø283 mm × 193 mm	169 mm	ø238 mm
FS-W308D2	30 cm	1 400 W	400 W	20 Hz to 180 Hz	91 dB	2ΩDVC	ø327 mm × 172 mm	153 mm	ø278 mm
CS-W308D4	30 cm	1 400 W	400 W	20 Hz to 180 Hz	92 dB	4 0 DVC	ø327 mm × 172 mm	153 mm	ø278 mm
FS-W258D2	25 cm	1 200 W	350 W	20 Hz to 450 Hz	90 dB	2 0 DVC	ø277 mm × 162 mm	143 mm	ø238 mm
S-W258D4	25 cm	1 200 W	350 W	20 Hz to 450 Hz	90 dB	4 0 DVC	ø277 mm × 162 mm	143 mm	ø238 mm
FS-W208F	30 cm	1 000 W	300 W	20 Hz to 1 100 Hz	95 dB	40000	ø327 mm × 162 mm	143 mm	ø302 mm
S-W258F	25 cm	800 W	250 W	20 Hz to 1 400 Hz	95 dB 92 dB	4Ω 4Ω	ø327 mm × 162 mm ø277 mm × 150 mm	143 mm 131 mm	ø302 mm ø255 mm
S-W258F S-W302R		800 W 800 W	250 W 150 W	20 Hz to 1 400 Hz 20 Hz to 90 Hz	92 dB 97 dB				
	30 cm					4Ω 4Ω	ø327 mm × 164 mm	145 mm	ø278 mm
FS-W252R	25 cm	600 W	120 W	20 Hz to 110 Hz	95 dB	4Ω	ø277 mm × 154 mm	135 mm	ø238 mm
FS-SW3001S2	30 cm	1 500 W	400 W	20 Hz to 230 Hz	93 dB	2Ω	ø329 mm × 100 mm	81 mm	ø278 mm
S-SW3001S4	30 cm	1 500 W	400 W	20 Hz to 230 Hz	93 dB	4Ω	ø329 mm × 100 mm	81 mm	ø278 mm
FS-SW2501S2	25 cm	1 200 W	300 W	20 Hz to 290 Hz	90 dB	2Ω	ø282 mm × 93 mm	75.1 mm	ø238 mm
rs-SW2501S4	25 cm	1 200 W	300 W	20 Hz to 290 Hz	90 dB	4 Ω	ø282 mm × 93 mm	75.1 mm	ø238 mm
FS-SW841D	20 cm	500 W	120 W	30 Hz to 1 500 Hz	85 dB	4 Ω	ø218.4 mm × 75.2 mm	63.5 mm	ø186 mm
FS-SW301	30 cm	1 000 W	250 W	20 Hz to 114 Hz	91 dB	4 Ω	ø327 mm × 100 mm	86 mm	ø278 mm
FS-SW251	25 cm	800 W	200 W	20 Hz to 144 Hz	89 dB	4 Ω	ø278 mm × 92 mm	78 mm	ø238 mm
FS-WX301	30 cm	800 W	150 W	20 Hz to 400 Hz	95 dB	4 Ω	501 mm $\times$ 389 mm $\times$ 415 mm	-	-
FS-WX11A	13 cm × 21 cm	150 W <sup>(3)</sup>	50 W <sup>(4)</sup>	54 Hz to 200 Hz	101 dB <sup>(5)</sup>	_	$280 \text{ mm} \times 80 \text{ mm} \times 200 \text{ mm}$	_	-
FS-WX22A	20 cm	150 W <sup>(3)</sup>	60 W <sup>(4)</sup>	40 Hz to 200 Hz	101 dB	-	250 mm × 265 mm × 110 mm	-	-
TS-WX206A	20 cm	150 W <sup>(3)</sup>	60 W <sup>(4)</sup>	35 Hz to 200 Hz	107 dB(5)	-	274 mm × 316 mm × 412 mm	_	-
TS-D1720C	17 cm 28 mm <sup>(6)</sup>	260 W	60 W	30 Hz to 33 000 Hz	88 dB	4Ω	ø156 mm × 81.9 mm	64.5 mm 51 mm <sup>(6)</sup>	ø144 mm
TS-D1320C	13 cm 28 mm <sup>(6)</sup>	180 W	35 W	35 Hz to 33 000 Hz	88 dB	4Ω	ø129 mm × 63.4 mm	57.5 mm	ø121 mm
TS-D6902R	6"×9"	360 W	80 W	28 Hz to 30 000 Hz	90 dB	4Ω	237 mm × 106.2 mm × 163 mm	89 mm	220 mm × 151 m
TS-D1702R	17 cm	280 W	60 W	30 Hz to 32 000 Hz	87.5 dB	4Ω	ø156 mm × 81.9 mm	64.5 mm	ø144 mm
TS-D1602R	16 cm	260 W	60 W	35 Hz to 32 000 Hz	88 dB	4Ω	ø161 mm × 80.4 mm	59 mm	ø128 mm
TS-D1302R	13 cm	180 W	35 W	35 Hz to 40 000 Hz	88 dB	4Ω	ø129 mm × 67.8 mm	57.5 mm	ø121 mm
TS-D1002R	10 cm	110 W	25 W	40 Hz to 40 000 Hz	86 dB	4Ω 4Ω	ø125 mm × 46.2 mm	46.5 mm	ø106 mm
TS-D1002R	17 cm	230 W	25 W	40 Hz to 40 000 Hz	90 dB	4Ω 4Ω	ø125 mm × 46.2 mm	62.5 mm	ø106 mm
TS-A1302C	23 mm <sup>(6)</sup> 13 cm	180 W	35 W	36 Hz to 30 000 Hz	90 dB	4Ω	ø129 mm × 58.9 mm	49.5 mm <sup>(6)</sup> 53 mm	ø121 mm
S-A6993S	23 mm <sup>(6)</sup> 6" × 9"	460 W	80 W	30 Hz to 37 000 Hz	92 dB	4Ω	237 mm × 163 mm × 109 mm	85 mm	151 mm × 220 m
rs-A69835	6" × 9"	440 W	80 W	30 Hz to 31 000 Hz	92 dB	4Ω	237 mm × 163 mm × 108 mm	84 mm	151 mm × 220 m
rs-A6973E	6" × 9"	400 W	80 W	30 Hz to 28 000 Hz	91 dB	4Ω	237 mm × 163 mm × 104.6 mm	84 mm	151 mm × 220 m
rs-A6963E	6"×9"	300 W	40 W	30 Hz to 36 000 Hz	91 dB	40	237 mm × 163 mm × 91.6 mm	72 mm	151 mm × 220 m
rs-A6872R	6" × 8"	240 W	40 W	35 Hz to 32 000 Hz	90 dB	4Ω	203.7 mm × 145 mm × 72.5 mm	62 mm	191 mm × 133 m
rs-A2503i	25 cm	420 W	40 W	20 Hz to 31 000 Hz	92 dB	40	ø285 mm × 152 mm	115 mm	ø236 mm
rs-A2003i	20 cm	400 W	80 W	27 Hz to 32 000 Hz	90 dB	40	ø244 mm × 132 mm	96 mm	ø202 mm
S-A1683S	20 cm	280 W	50 W	36 Hz to 28 000 Hz	91 dB	40	ø160 mm × 75 mm	57 mm	ø128 mm
IS-A16835 IS-A16735	16 cm	280 W	50 W	36 Hz to 28 000 Hz 37 Hz to 25 000 Hz	91 dB 91 dB	4Ω 4Ω	ø160 mm × 75 mm ø160 mm × 64 mm	57 mm 44 mm	ø128 mm ø128 mm
		180 W	35 W 30 W	40 Hz to 30 000 Hz	91 dB 90 dB	40			
FS-G1642R	16 cm					4Ω 4Ω	ø158 mm × 55 mm	42 mm	ø142 mm
S-G1612R	16 cm	160 W	30 W	30 Hz to 25 000 Hz	90 dB		ø158 mm × 55 mm	44 mm	ø142 mm
FS-G1342R	13 cm	140 W	25 W	40 Hz to 25 000 Hz	89 dB	4Ω	ø149 mm × 57 mm	46 mm	ø129 mm
S-G1312R	13 cm	130 W	25 W	30 Hz to 25 000 Hz	89 dB	4Ω	ø149 mm × 49 mm	46 mm	ø129 mm
S-G1042R	10 cm	120 W	25 W	35 Hz to 30 000 Hz	87 dB	4 Ω	ø125 mm × 43 mm	43 mm	ø106 mm
S-G1012R	10 cm	110 W	20 W	35 Hz to 29 000 Hz	87 dB	4 Ω	ø125 mm × 43 mm	43 mm	ø106 mm
S-2150	20 cm	200 W	50 W	28 Hz to 28 000 Hz	91 dB	4 Ω	$238\text{mm}{\times}238\text{mm}{\times}176\text{mm}$	88 mm	ø186 mm
FS-S250	40 mm	250 W	50 W	6 000 Hz to 40 000 Hz 3 000 Hz <sup>(7)</sup> /	97 dB	8Ω	ø44 mm × 24 mm	—	-
FS-S20	20 mm	200 W	50 W	1 200 Hz <sup>(8)</sup> to 26 000 Hz	92 dB	8Ω	85.5 mm × 73.5 mm × 32.8 mm	-	-
FS-T110	22 mm	120 W	40 W	2 500 Hz to 30 000 Hz	90 dB	4Ω	ø47.1 mm × 20.5 mm	-	-
rs-T15	20 mm	120 W	40 W	2 500 Hz to 30 000 Hz	90 dB	4 Ω	ø37.5 mm × 18.9 mm	-	-
FS-CX900	6.6 cm	80 W	20 W	80 Hz to 70 000 Hz	85 dB	4 Ω	$98mm \times 120.5mm \times 41mm$	_	-
TS-MR2040	20 cm	200 W	40 W	25 Hz to 30 000 Hz	92 dB	4 Ω	ø230 mm × 115 mm	75 mm	ø186 mm
TS-MR1640	16 cm	160 W	30 W	30 Hz to 30 000 Hz	91 dB	4 Ω	ø175 mm × 84.5 mm	56 mm	ø130 mm
FS-MR1600	16 cm	100 W	25 W	30 Hz to 20 000 Hz	90 dB	4Ω	ø175 mm × 84.5 mm	56 mm	ø130 mm

### Subwoofer Thiele-Small Parameters\*

		TS-W01RSII**	TS-W12PRS**	TS-W8102SPL	TS-W5102SPL	TS-W3002D4	TS-W2502D4	TS-W308D2	TS-W308D4	TS-W258D2	TS-W258D4	TS-W308F	TS-W258F	TS-W302R	TS-W252R	TS-SW3001S2	TS-SW3001S4	TS-SW2501S2	TS-SW2501S4	TS-SW841D	TS-SW301	TS-SW251
Recommended	cu.ft.	0.49 to 0.99	1.0	2.5	1.5	0.80	0.60	1.25	1.25	0.80	0.80	-	-	1.5	1.00	0.65	0.65	0.45	0.45	0.15 to 0.5	0.65	0.45
enclosure	liters	17	28.3	70.8	42.5	22.64	16.98	35.4	35.4	22.6	22.6	-	-	42.5	28.3	18.4	18.4	12.7	12.7	4.2 to 14.2	18.4	12.7
Revc	Ω	3.0	1.8/7.2	3.0	3.0	DUAL3.3	DUAL3.3	DUAL1.5	DUAL3.2	DUAL1.5	DUAL3.0	3.0	3.0	3.0	3.0	1.5	3.0	1.5	3.0	3.3	3.0	3.0
Levc	mH	0.641	0.4/1.61	5.560	5.090	5.55 (8 Ω) 1.39 (2 Ω)	4.80 (8 Ω) 1.20 (2 Ω)	2.18 (4 Ω) 0.65 (1 Ω)	3.76 (8 Ω) 1.30 (2 Ω)	2.2 (4 Ω) 0.63 (1 Ω)	3.59 (8 Ω) 1.07 (2 Ω)	1.237	1.101	1.380	1.370	1.300	2.900	0.880	2.520	0.996	2.4	2.4
Fs	Hz	23.5	24	23.2	29.0	31.4	36.0	33.7	34.5	37.4	40.5	26.3	34.5	28.0	28.9	36.8	35.1	44.4	41.6	67.5	34.9	41.3
Zmax	Ω	50.4	43.8/175	58.56	70.62	157.77 (8 Ω) 38.53 (2 Ω)	133.73 (8 Ω) 32.72 (2 Ω)	99.13 (4 Ω) 24.81 (1 Ω)	177.44 (8 Ω) 45.58 (2 Ω)	96.01 (4 Ω) 19.95 (1 Ω)	147.55 (8 Ω) 38.80 (2 Ω)	28.80	29.30	35.78	47.38	27.39	59.41	21.29	46.51	25.21	28.21	28.77
Qms		5.72	9	5.720	7.600	15.13	14.34	14.11	16.43	11.52	13.64	7.910	9.300	8.120	9.130	13.210	13.800	12.790	13.210	11.159	9.040	9.870
Qes		0.38	0.41	0.330	0.360	0.68	0.78	0.50	0.65	0.50	0.61	0.880	1.170	0.790	0.730	0.880	0.780	1.090	1.000	1.923	1.140	1.150
Qts		0.36	0.39	0.310	0.340	0.65	0.74	0.48	0.62	0.48	0.58	0.800	1.040	0.720	0.680	0.820	0.740	1.000	0.930	1.641	1.020	1.090
Vas	cu.ft.	2.46	3.3	2.479	0.944	0.460	0.240	1.28	1.22	0.620	0.550	3.380	1.670	3.679	2.045	0.634	0.703	0.320	0.363	0.067	0.702	0.345
	liters	69.8	93	70.14	26.72	13.03	6.77	36.16	34.68	17.63	15.47	95.66	47.32	104.12	57.86	17.96	19.90	9.06	10.27	1.89	19.866	9.754
Rms	Ns/m	2.93	2.3	20.367	13.470	5.334	4.602	2.773	2.426	2.920	2.601	2.732	2.040	2.293	1.686	4.492	4.071	3.922	3.576	4.063	6.820	5.430
Mms	g	102	135	800.11	550.50	408.83	291.71	184.95	184.17	143.28	139.43	131.00	87.50	110.82	84.73	256.62	255.35	179.16	179.79	106.67	281.19	206.57
Cms	m/N	3.70E-04	$3.15 \times 10^{-4}$	$6.00  imes 10^{-5}$	$5.350 \times 10^{-5}$	6.29E-05	6.66E-05	1.20E-04	1.20E-04	1.30E-04	1.10E-04	2.800E-04	2.400E-04	3.100E-04	3.600E-04	7.300E-05	8.100E-05	7.200E-05	8.100E-05	$5.207  imes 10^{-5}$	7.400E-05	7.100E-05
BL	T∙m	12.0	9.73/19.45	33.640	30.180	28.38 (8 Ω) 14.19 (2 Ω)	24.16 (8 Ω) 12.08 (2 Ω)	16.07 (4 Ω) 8.04 (1 Ω)	20.37 (8 Ω) 10.14 (2 Ω)	14.68 (4 Ω) 7.34 (1 Ω)	19.39 (8 Ω) 9.65 (2 Ω)	9.350	7.860	8.670	8.650	10.830	15.140	8.790	12.440	9.349	13.09	11.78
Sd	sq. ft.	0.383	0.041	0.988	0.630	0.471	0.337	0.495	0.495	0.337	0.337	0.527	0.377	0.528	0.364	0.533	0.533	0.377	0.377	0.222	0.517	0.369
	sq. m	3.56E-02	0.0456	9.18E-02	5.85E-02	4.37E-02	3.13E-02	4.60E-02	4.60E-02	3.13E-02	3.13E-02	4.90E-02	3.50E-02	4.91E-03	3.38E-02	4.95E-02	4.95E-02	3.50E-02	3.50E-02	2.06E-02	4.80E-02	3.43E-02
Hvc	inch	0.93	1.56	2.392	2.087	1.96	1.68	1.08	1.20	1.21	1.68	1.260	1.209	0.799	0.799	1.055	0.850	0.937	0.815	0.594	1.213	0.900
	mm	23.6	39.50	61	53	49.8	42.7	27.4	30.6	31	42.7	32	31	20.3	20.3	27	22	24	21	15	31	23
Hag	inch	0.354	0.47	1.181	1.181	0.94	0.91	0.39	0.39	0.39	0.91	0.394	0.394	0.236	0.236	0.394	0.394	0.394	0.394	0.315	0.394	0.394
	mm	9	12	30	30	24	23	10	10	10	23	10	10	6	6	10	10	10	10	8	10	10
Xmax	inch	0.287	0.067	0.61	0.45	0.51	0.39	0.34	0.41	0.41	0.45	0.3	0.3	0.35	0.31	0.33	0.23	0.28	0.22	0.14	0.43	0.26
	mm	7.3	1.89	15.4	11.5	12.9	9.8	8.7	10.3	10.4	11.5	8.5	8.5	8.8	7.8	8.4	5.8	7.0	5.5	3.5	10.8	6.6
Parameter values for reference. ** See page 35 or 36 for product details.																						

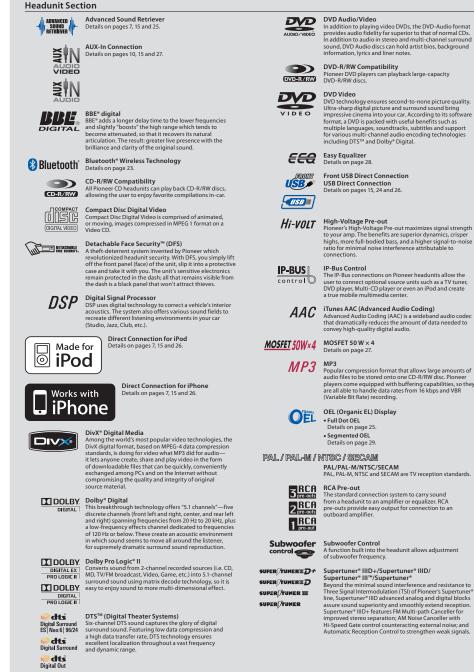
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### Glossarv



	Touch Panel Operation Details on pages 7 and 12.
Nin Writer Reds*	WMA (Windows Media <sup>®</sup> Audio) WMA is a music compression format developed by Microsoft Corporation. It uses the latest coding technologies to compress an original audio track, minimizing file sizes while maintaining good audio quality, even at rates as low as 64 kbps.
Amplifier Sec	tion
Bass Boost	Bass Boost Bass boost offers a choice among bass levels, spanning the range from 0 dB to 12 dB in 2 dB increments, for each speaker (including subwoofer) of a system. This provides more control over the overall balance of sound, to suit listener taste and style of music.
Class FD ice	Class-FD ICEpower Amplifiers Details on page 38.
HPF	High Pass Filter Low-range sound is filtered off according to user-set cut-off frequency. Mid- and high-range sounds are transferred to the speaker.
LPF	Low Pass Filter Mid- and high-range sounds are filtered off according to user-set cut-off frequency. Low-range sound is transferred to the woofer.
RCA INPUT	RCA Input RCA input can be connected with headunit featuring RCA output for preamp signal.
RCA IN/OUT	RCA Input/Output RCA input can be connected with a headunit featuring RCA output for preamp signal. RCA output can be connected with additional amplifiers for a multi-amp system configuration.
SPEAKER IN P U T	Speaker Level Inputs This allows a Pioneer amplifier to be connected to an OEM radio without requiring costly add-on adapters. The added flexibility allows your Pioneer amplifier to be a part of your system as it grows.
Total Vibration Control	TVC (Total Vibration Control) Technology Details on page 37.
Subwoofer &	Speaker Section
	Air Suspension System Details on pages 45 and 49.
ib-FLF	<b>ib-FLAT</b> Details on page 48.
	IMPP (Injection-Molded Polypropylene) Composite Cone Pioneer uses a special injection molding process rather than "pressing" polypropylene speaker cones. This process ensures uniform cone thickness for superior linearity and clarity. What's more, Pioneer's "Composite" technology guarantees the perfect mix of polypropylene and carbon fiber, graphite and other materials to optimize the speaker cone for its specific application (woofers, midranges, tweeters, etc.).
DuPont"	KEVLAR* Brand Fiber Characterized by lightness, strength, and low resonance to powerful input, KEVLAR* Brand Fiber is excellent for speaker diaphragms, helping to produce more detailed, accurate sound.
	<b>Open &amp; Smooth</b> Details on pages 39 and 50.
VICCES VIEW	VCCS (Voice Coil Cooling System) Typically, the longer and louder you play your subwoofer, the hotter it gets. This changes its electrical and mechanical characteristics and adversely affects sound quality. Pioneer's Voice Coil Cooling System (VCCS) draws heat away from the inside of the subwoofer, reducing temperatures by up to 30°C. In the simplest terms, it keeps your sound crisp and your subwoofer from losing its cool.



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